



COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY (CEDs)

1. COMPETITIVE ASSESSMENT
2. TARGET BUSINESS REVIEW
3. STRATEGIC PLAN
4. IMPLEMENTATION PLAN

INDIANAPOLIS REGION, INDIANA

September 2015

MARKET ST

TABLE OF CONTENTS

Project Overview	1
Steering Committee.....	2
1. Competitive Assessment	4
The Indianapolis Identity: Dilemma and Dichotomy	6
Growth within the Indianapolis Region: a Reemerging Core.....	8
Workforce Sustainability: Attracting and Retaining Talent.....	13
Workforce Sustainability: Developing “Homegrown” Talent	19
Education & Incomes: Consequences of Slow Improvement.....	23
Growth & Diversity: The Indianapolis Regional Economy.....	27
Business Climate Considerations	31
Transportation Infrastructure: An Asset and a Challenge.....	34
In Search of Entrepreneurs: Building a Startup Culture.....	37
Quality of Life in the Indianapolis Region.....	42
2. Target Business Review	48
Target Sector Development: A Primer.....	50
Existing Target Sector Initiatives.....	55
The Indy Region’s Targeted Approach to Technology-Driven Economic Development	60
Life Sciences	61
Manufacturing	71
Logistics.....	83
Information Technology.....	91
Sports	100
3. Strategic Plan	108
Educated & Talented Workers.....	110
Innovative & Enterprising Businesses	120
Attractive & Connected Places	131
Vibrant & Inviting Image.....	139
4. Implementation Plan.....	145
Implementation Capacity: Roles and Responsibilities	145
Volunteer Leadership: The Implementation Committee	145
Organizational Leadership: The Indy Chamber	150
Organizational Leadership: Implementation Partners	157
Implementation Schedule.....	159
Budget and Fundraising	169
Performance Measurement.....	173
Appendix A: Pre-Existing Research Relevant to Sector Competitiveness	177
Appendix B: Target Sector Data Tables	178
Appendix C: Best Practices.....	181

PROJECT OVERVIEW

The Indianapolis Regional Comprehensive Economic Development Strategy (CEDS) is a transformative, ten month process that will initiate a coordinated, aggressive multi-year effort to advance the economic opportunity and wellbeing in the Indianapolis region. The Indianapolis Regional Comprehensive Economic Development Strategy will be informed by extensive resident and business input gathered through focus groups, a community survey, and guidance from a Steering Committee composed of key regional business leaders and community stakeholders.

PHASE 1: COMPETITIVE ASSESSMENT

The Competitive Assessment examines the Indianapolis region's trends along three areas of distinction – People, Prosperity, and Place – benchmarking regional performance to peer metros, the state, and the nation. The Competitive Assessment also highlights dynamics specific to the metro's core, Indianapolis-Marion County, and its relationship to surrounding counties. Stakeholder input sessions will augment the perspectives brought by the Steering Committee and serve as an opportunity for diverse constituents to offer solutions and innovative ideas for the comprehensive economic development strategy. Findings from the research phases will frame the challenges and opportunities that need to be addressed in the forthcoming Strategy and Implementation Plan.

PHASE 2: TARGET BUSINESS REVIEW

As leaders of Greater Indianapolis know well, it is imperative that strategic efforts target those areas of economic activity that have the greatest potential to create new jobs for existing and prospective new residents, retain existing jobs, spur innovation, and raise incomes in their community. To this end, the Indy Partnership is at the forefront of regional target marketing efforts whose focus is life sciences; transportation, distribution, and logistics; advanced manufacturing; clean-tech energy; information technology; motorsports; and sports business. *Market Street* will provide refreshed target recommendations by confirming or retiring existing targets as well as identifying niche opportunity areas, entrepreneurship activity, and specific workforce dynamics which should be marketed or mitigated to maximize the region's competitive potential.

PHASE 3: COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY

The Indianapolis Regional Comprehensive Economic Development Strategy will clarify and enhance a Chamber mission to conduct and execute regional and urban economic development through a comprehensive program including recruitment, business expansion and retention, and entrepreneurial and small business programming. The strategy will recognize the holistic elements and various partners required for successful and effective regional economic development, and will serve as a tool unifying constituencies behind a consensus blueprint for strategies and activities that position Greater Indianapolis for continued prosperity.

PHASE 4: IMPLEMENTATION PLAN

Timely and effective implementation is critical to the ultimate success of the Indianapolis Regional Economic Development Strategy. One of the highest priorities of this phase – and in fact the entire planning process – is to clearly outline how the newly merged business units – Develop Indy, Indy Partnership, and the Business Ownership Initiative – work together. The Implementation Plan must also be provided to activate the strategy's objectives day-by-day, month-by-month, and year-by-year until the Strategy's goals are achieved. The Implementation Plan is entirely based on the strategy itself, and any operational realignment of the Indy Chamber that might be recommended would be driven by the specific components included in the strategy.

STEERING COMMITTEE

The strategic planning process is guided by a diverse Steering Committee of leaders from the public, private, and non-profit sectors. These individuals will oversee the entire planning effort, review project deliverables, help identify the region's strategic priorities, build consensus, support implementation when relevant and appropriate, and serve as public advocates for the betterment of the region and its economic development.

Committee Member

David Lewis (Committee Chair)
 Doug Esamann (Committee Co-Chair)
 Michael Williams (Committee Co-Chair)
 Matt Bailey
 Jeb Banner
 Chancellor Charles Bantz
 Teresa Bennett
 Michelle Boyd
 Mayor James Brainard
 Kim Brand
 Michael Browning
 Angela Carr-Klitzsch
 Michael Cloran
 Mayor Andy Cook
 President James Danko
 Christopher Day
 Mayor Tom DeBaun
 Leigh Ann Downes
 Billie Dragoo
 Eric Estes
 Greg Fennig
 Greg Henneke
 Brooke Huntington
 Mike Hurst
 Brad Hurt
 Scott Hutcheson
 David Johnson
 Jim Kaspar
 Cinda Kelley
 Bruce Kettler
 Shannon Kiely Heider
 Kirk Klabunde
 Drew Klacik
 Deborah Lawrence
 Chancellor Kathy Lee

Representing Organization

Eli Lilly and Company
 Duke Energy
 Krieg DeVault LLP
 IU Health
 SmallBox
 Indiana University-Purdue University Indianapolis
 IUPUI Solution Center
 Top Notch
 City of Carmel
 3D Parts Manufacturing
 Browning Inc.
 Chase Bank
 DeveloperTown
 City of Westfield
 Butler University
 2CP, LLC
 City of Shelbyville
 EmployIndy
 RepuCare, Inc.
 Stock Yards Bank & Trust
 Indianapolis Power & Light Company
 American Structurepoint
 EmployIndy
 First Merchants Bank
 Urban Initiatives, LLC
 Purdue University
 Central Indiana Corporate Partnership
 Finish Line
 Hendricks County Economic Development Partnership
 Beck's Hybrids
 Cummins
 First Merchants Bank
 Center for Urban Policy and the Environment IUPUI/SPEA
 Marian University
 Ivy Tech

Committee Member	Representing Organization
Chelsey Manns	Morgan County Economic Development Corporation
President Rob Manuel	University of Indianapolis
Tony Mason	Indianapolis Urban League
Betsy McCaw	Central Indiana Corporate Partnership
Lawrence McCormack	Cummins
Mark Miller	Cornerstone Environmental
Jennifer Milliken	ULI Indiana
Tim Monger	Hamilton County Economic Development Corporation
Cheryl Morphew	Johnson County Development Corporation
John Neighbours	Faegre Baker Daniels
Mike Newbold	Huntington Bank
Brian Payne	Central Indiana Community Foundation
Patty Prosser	OI Career Consultants
Mario Rodriguez	Indianapolis Airport Authority
Dexter Salenda	INZONE
Wayne Schmidt	Schmidt Associates
Tonia Simpson	Corporation for Economic Development
Al Smith	Chase Bank
Rob Sparks	Corporation for Economic Development
Mike Strohl	Citizens Energy Group
Stephen Sullivan	Metropolitan Indianapolis Board of Realtors
Dan Theobald	Shelby County Development Corporation
Adam Thies	City of Indianapolis
David Tucker	Vincennes University
Chris Watts	CVR
John Wechsler	Launch Fishers
Molly Whitehead	Boone County Economic Development Corporation
Joe Whitsett	TWG Development

1. COMPETITIVE ASSESSMENT

As part of the Indy Chamber's ongoing efforts to make the metropolitan area as attractive and supportive as possible for small business growth, existing business expansions, and new business relocations, a Comprehensive Economic Development Strategy (CEDS) process has been initiated in partnership with the City of Indianapolis, the Central Indiana Council of Elected Officials (CICEO) and other regional partners, including financial sponsor JP Morgan Chase. Through honest and well-informed assessments of the region's competitive position and economic growth, this process will result in a new, holistic strategy that will help the region and the aforementioned organizations focus economic development resources in a manner that maximizes efficiency and effectiveness, enhances prospects for quality growth, and increases well-being for business and workers in the Indianapolis region. It will fulfill the requirements of the Economic Development Administration (EDA) to ensure that the region is able to consider all available federal resources through implementation.

This Competitive Assessment is the first step in that process; a critical step in understanding the region's position and the issues that it faces in an increasingly competitive environment for new jobs, talent, and corporate investment. It examines a wide variety of demographic, socioeconomic, economic, and quality of life indicators to tell a story about the region and uncover the key strengths, weaknesses, assets, and challenges that must be leveraged and addressed in order to support a more vibrant future. This quantitative analysis is complemented by a tremendous amount of community input received from interviews, focus groups, and a public survey. In total, more than 2,100 residents, workers, and businesses from the Indianapolis region shared their input to inform this Assessment and the forthcoming Comprehensive Economic Development Strategy (CEDS).

This Assessment presents this research through the lens of ten stories, each containing important insights that should influence the region's strategic priorities as they relate to community, economic, and workforce development. These ten stories are:

1. The Indianapolis Identity: Dilemma and Dichotomy
2. Growth within the Indianapolis Region: A Reemerging Core
3. Workforce Sustainability: Attracting and Retaining Talent
4. Workforce Sustainability: Developing "Homegrown" Talent
5. Education and Incomes: Consequences of Slow Improvement
6. Growth and Diversity: the Indianapolis Regional Economy
7. Business Climate Considerations
8. Transportation Infrastructure: An Asset and a Challenge
9. In Search of Entrepreneurs: Building a Startup Culture
10. Quality of Life in the Indianapolis Region

This assessment examines the issues facing the Indianapolis region by evaluating them through the prism of what *Market Street* believes to be the three critical aspects of a community: its people, their prosperity, and the quality of place. Findings related to these key attributes are incorporated into ten key stories that frame the discussion of the most important issues impacting the Indianapolis region's competitiveness as a place to live, work, visit, and do business. These stories represent themes that emerged from extensive public input provided by the Indianapolis region's residents, businesses, and community leaders, as well as in-depth analysis of data covering regional demographic, socioeconomic, and economic trends.

FOCUS GROUPS AND INTERVIEWS: A thorough assessment of a community's strengths, weaknesses, opportunities, and challenges must be informed by input from the people that live and work in the Indianapolis region. Accordingly, *Market Street Services* conducted a series of focus groups and one-on-one interviews with residents and business leaders in the Indianapolis region during October 2014. The input gathered during these discussions has been summarized and incorporated into this assessment when relevant and appropriate. **Public input – including that which was gathered via focus groups, interviews, and an online survey – is differentiated throughout the report and presented in red text.**

ONLINE SURVEY: In addition to in-person input solicited via focus groups and interviews, an online community survey was open to the public for roughly five weeks from September – October 2014. A total of 2,043 residents responded to the regional survey, providing a tremendous level of input that will help ensure that this Assessment and the forthcoming Comprehensive Economic Development Strategy are well-informed and mindful of the needs, wants, and opinions of residents, workers, and businesses in the Indianapolis region.

DATA SOURCES: A variety of public and private data sources are used throughout this assessment. A great deal of information is drawn from the Census Bureau and other public sources including the Bureau of Labor Statistics (BLS), the Bureau of Economic Analysis (BEA), the National Center for Education Statistics (NCES), the Federal Bureau of Investigation (FBI), the Internal Revenue Service (IRS), and the Indiana Department of Education (IDE). Proprietary data covering economic composition (employment and wages by sector and occupation) are provided by Economic Modeling Specialists, Inc. (EMSI).

GEOGRAPHIES: Through this assessment, the Indianapolis region utilizes the Office of Management and Budget's 2013 Metropolitan Statistical Area definitions unless otherwise noted. As of 2013, the Indianapolis-Carmel-Anderson MSA includes following counties: Boone, Brown, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Putnam, and Shelby. Throughout this report, this area is frequently referred to as the Indianapolis MSA, the Indianapolis metropolitan area, or simply "the region."

In addition to state and national averages, the community's performance is benchmarked against three similarly-sized communities with which the region competes for jobs, workers, and investment; the Columbus, OH MSA, the Denver-Aurora-Lakewood, CO MSA; and the Nashville-Davidson-Murfreesboro-Franklin, TN MSA. These regions represent ideal comparisons from a research standpoint in understanding the community's competitive position. When examining best practice programs, policies, and initiatives that can guide recommendations in the Comprehensive Economic Development Strategy, *Market Street Services* will leverage its database of best practices from communities around the country.

1. THE INDIANAPOLIS IDENTITY: DILEMMA AND DICHOTOMY

Many metropolitan areas throughout the nation have embraced a single, common identity that projects their community into the national and global consciousness. Whether it is Austin's "Keep Austin Weird" slogan that reflects its concentration of young, creative talent, or Nashville's "Music City" moniker reflecting its deep and ever-diversifying music heritage, regions large and small often leverage a distinct identity in order to attract visitors, businesses, and prospective residents. Throughout public input, residents occasionally lamented the lack of strong identity for the region. Many mentioned the Indianapolis 500 as the most recognizable attribute of the community, but acknowledged that this brand association did not reflect and communicate the Indianapolis region's quality of life and why it is such a great place to live. Entrepreneurs expressed a desire for a strong message that could resonate with those engaged in various aspects of startup culture, while young professionals wished for a strong brand so that their friends and family will stop asking them with a puzzled look: "why do you live in Indianapolis?" Although community brands and perceptions are relatively trivial in the realm of community improvement and economic development, they often reflect deep associations with a place and can shape future perceptions. And in a world where the competition for talent is as fierce today as the competition for jobs, regions are increasingly mindful of the ways in which they are perceived – positively and negatively – by the outside world. Very simply, some residents and community leaders believe that a lack of common identity is a key impediment to the region's future economic growth and prosperity.

In the absence of widely recognized identity outside of motorsports, the nation has forged its own image of Indianapolis, one that is often heavily related to the state of Indiana's Hoosier identity. This image is both embraced and at the same time admonished by local residents. On the one hand, "Hoosier Hospitality" is a source of great pride for many residents, recognizing that what makes the Indianapolis region a great place to live and visit is, in part, its welcoming atmosphere. Whether it is a newly relocated resident, a returning visitor, or a small business owner seeking to expand their network residents feel strongly that the Indianapolis region is not only a welcoming place but also a place where businesses, community leaders, and residents are genuinely interested in helping. The immense success of the region's bid, hosting, and community improvement initiatives associated with Super Bowl XLVI in 2012, as well as the numerous sporting events (amateur, collegiate, and professional) that are held, and continue to return, is a testament to the region's welcoming atmosphere: its Hoosier hospitality.

On the other hand, community leaders and residents voiced concern that "Hoosier Hospitality" can sometimes go so far as to "create an inferiority complex." Some believe Indianapolis is increasingly seen as complacent or "too conservative" - a region where things are "good enough." Many also feel the Hoosier brand is engulfed by backward-looking connotations that do not reflect the progressive, innovative, and vibrant region that so many are proud to call "home." Some focus group participants noted that many metropolitan regions are increasingly focused on distancing themselves from their respective state's images, and often, the activities of their legislatures. This point is not without merit; in the absence of a distinct brand, individuals will adopt any message that they can logically associate with a region. Countless community input participants bemoaned the state's "Honest-to-Goodness Indiana" marketing campaign as one that reinforced outdated impressions of the state and its metropolitan regions as home to "a bunch of yokels" with an "aw shucks" mentality. The region's young professionals, who wish to communicate to the rest of the world that Indianapolis is a proactive, forward-thinking region, are

particularly concerned that the “Honest-to-Goodness” slogan is will be associated with the Indianapolis region since it diverges so greatly from the message they hope to send.

And so, there appears to be a troubling dichotomy related to Hoosier brand associations and the manner in which they reflect upon the Indianapolis region. It reflects what many believe to be an engrained element of hospitality and friendliness in the state's culture and the mindset of its residents, an undeniable positive attribute of the state and region's quality of life. But on the other hand, it brings connotations of a conservative place - conservative in the sense that it is not risk-taking, innovative, or forward-thinking - which many believe to reflect poorly on the state and region's economic development efforts. This is not to say that the Indianapolis region embodies these associations. Indeed, almost every focus group and interviewee highlighted the community's successful 2012 Super Bowl bid, the Super Bowl legacy project on the Near Eastside, and the significant investment that occurred throughout the region in preparation for the game as an example of the ambition the region houses. As one stakeholder put it, “we can do the big things well.” The concern from stakeholders is a fear that this ambition is not associated with the region by outsiders.

Without question, identifying and projecting a distinct, positive image is seen as a crucial part of its continued evolution as a globally competitive region. One thing is for certain: a contrived brand is never a successful brand. Developing common themes will take time. Many stakeholders' pointed to the evolution of Nashville's brand when discussing how a region can overcome some negative connotations while still embracing its historical identity. Nashville's wholehearted embrace of country music helped forge a distinct identity, one that just recently began to trouble residents and community leaders who wanted to ensure that Nashville was known for more than just country music, the Grand Ole Opry. There was a fear that certain associations with country music – rural, conservative, and uneducated – whether perceived or actual, were inhibitors to the Nashville region's economic development and talent attraction efforts. The rapidly-growing diversity of the region's music production was aggressively promoted, and residents and business leaders alike have embraced the “Music City” moniker that has come to reflect a region and a brand with more positive associations such as creativity, culture, and youthfulness.

The development of a common theme or identity that represents the present and future of the Indianapolis region, and the unification of the region behind that identity, will take time. More importantly, it will take a track record of successful initiatives, investments, and revealed preferences (i.e. people and businesses moving to the region) that begin to expose precisely what defines the region in 2015 and beyond, and if it is truly different from that which has historically defined the region. When asked what the region's brand should be, focus group participants offered mixed themes: “Sports Capital of the World,” affordability, and an individual's ability to impact the community were frequently mentioned as potential identities. Of these, the region's existing brand identity related to professional, collegiate, and amateur sports is its strongest and most entrenched. But the region's residents and leaders have debated this issue – the lack of a cohesive, positive identity outside of sports – for decades. In the end, the region's brand and positive associations will come from – as nearly all positive community brands do – a proliferation of successes and effectively communicated success stories. This identity dilemma weaves its way through many of the storylines in this Competitive Assessment, including the region's capacity to provide a sustainable pipeline of young talent to local businesses or fostering a vibrant startup ecosystem. Whatever the Indianapolis region's message or brand ends up being, one thing is clear, a region's brand is strongest when the community embraces it.

2. GROWTH WITHIN THE INDIANAPOLIS REGION: A RE-EMERGING CORE

Although the region's residents seem concerned about its identity, and the differences between perceptions and realities, it is clear that these issues have not substantially inhibited the Indianapolis region's growth. While the metropolitan area as a whole remains a destination for many domestic and international migrants, the region's growth is increasingly driven by net in-migration to its core: Indianapolis and Marion County. This trend is consistent with what is being observed around the country in recent years: a return of people and businesses to the urban anchors of metropolitan areas.

Between 2003 and 2013, the Indianapolis region's population grew by 12.8 percent, adding more than 222,000 additional residents to the area. The region's growth more than doubled that of state (6.3 percent) average but when removing the Indianapolis region, the rest of the state only grew by 3.8 percent during the ten-year period. Compared to its high growth benchmark metros, however, the Indianapolis region underperformed. Both Denver (17.4 percent) and Nashville (20.4 percent) grew at a far faster rate indicative of their status as premier destinations in a highly competitive landscape for talent.

FIGURE 1: TOTAL POPULATION (2003-2013)

	Total Population		Change (2003-2013)	
	2003	2013	Net Change	Percent Change
Indianapolis, IN MSA	1,731,781	1,953,961	222,180	12.8%
Columbus, OH MSA	1,742,094	1,967,066	224,972	12.9%
Denver, CO MSA	2,297,441	2,697,476	400,035	17.4%
Nashville, TN MSA	1,459,497	1,757,912	298,415	20.4%
Indiana	6,181,789	6,570,902	389,113	6.3%
United States	289,748,641	316,128,839	26,380,198	9.1%

Source: U.S. Census Bureau

The Great Recession curtailed growth rates in the Indianapolis region as well as the overwhelming majority of metropolitan areas that were historically net attractors of new residents. Very simply, the recession depressed household mobility as those unemployed were unable to find work elsewhere or afford relocation, while others experienced devastating losses to their home values and were therefore unable to escape mortgages that were in many cases "underwater." As will be discussed in detail in the following section covering workforce sustainability, the Indianapolis region is a beacon for residents migrating from elsewhere in the state of Indiana. These migration patterns suggest that, relative to many of its metropolitan competitors, the Indianapolis region struggles to reach a wide, national audience, corroborating community input regarding the adverse impacts of negative perceptions and a somewhat ambiguous brand or regional identity.

Population growth figures mask the important progress the Indianapolis region has made in creating attractive places where people want to live. The region is home to many "up-and-coming" neighborhoods, community centers, and desirable communities. Extensive place-making efforts are occurring throughout the region. In Carmel, the Arts and Design District and the Palladium are two prime examples of the community's place-based development, while Fountain Square, Irvington, and Broad Ripple serve as just a

few examples of the City of Indianapolis' commitment to develop quality amenities and distinct neighborhood experiences for its residents.

While external competition for new residents certainly fuels the region's place making efforts, Indiana's tax structure adds another layer of internal competition between counties fueling place-based development. All of the counties in the state impose a local option income tax with varying rates between residents and nonresidents.¹ Thus, where people choose to reside in the Indianapolis region is tied to, and has an impact on, the distribution of tax resources regionally. Additionally, due to varying property tax rates in the 2000s, lawmakers placed a cap on property taxes. This tax structure has put counties and cities in direct competition, each relying on developing their population base to enhance revenue. **Some focus group participants noted that the "battle over population" and associated tax revenues has heightened Marion County's desire for infill development and neighborhood revitalization to attract more new residents.**

The local tax structure is generating regional tension, but the positive result is a mindful development of the region's quality of place. For now, the region is growing, albeit at a slower pace than many of its competitors, which are among the fastest growing metropolitan areas in the country. The addition of more than 222,000 new residents in a decade represents a growing tax base. In competing for residents, the counties are fighting for a slice of a growing pie, rather than one that is unchanged or shrinking. Some counties, however, are capturing the lion's share of the region's growth, and the geographic distribution of the region's growth is changing substantially. County-level population growth trends suggest that growth is predominantly driven by only four Indianapolis counties: Hamilton, Hendricks, Johnson, and Marion. Combined, these counties represented roughly 76 percent of regional population in 2003, but captured nearly 90 percent of total regional population growth between 2003 and 2013. Hamilton County led the region: the county grew by 35.0 percent over the last decade. Hendricks (29.9 percent) and Johnson County (17.3 percent) also experienced significant population growth at the same time. Marion County (7.2 percent) was the slowest growing of the four counties.

Boone and Hancock counties also grew at a fast pace. Over the decade ending in 2013, Boone County increased its population by 22.9 percent, the third fastest growth rate in the region. Hancock County also experienced double digit growth, gaining 20.7 percent over the same period. Combine, these counties represent 9.9 percent of the region's total population growth between 2003 and 2013.

At the other end of the growth spectrum are several counties who were nearly stagnant over the decade (2003-2013). Cumulatively, Brown, Madison, Morgan, Putnam, and Shelby counties had a net gain of only 2,194 residents, or 0.9 percent of the region's growth. Brown (-0.5 percent) and Madison (-0.9 percent) were the only two counties in the region to experience population loss.

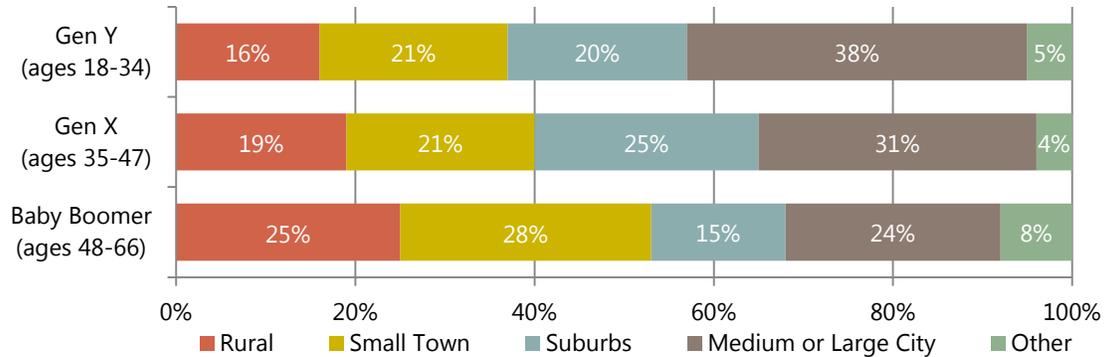
Clearly, regional population is concentrating in pre-existing population centers. And similar to many regions across the country, growth is gravitating towards the region's core. Intra-regional population movements (i.e. county-level growth) reflect the changing generational preferences of the population. Young professionals' typically desire to live in a highly urbanized areas, while many empty nesters from the Baby Boom generation are downsizing from their suburban homes to areas that are more walkable and

¹ The resident income tax is collected based on the person's home county where they reside. A nonresident income tax, on the other hand, is collected only from individuals working in the county but live outside the state.

offer greater amenities in close proximity to their homes. As a result, many regions are witnessing a re-emergence of their core county.

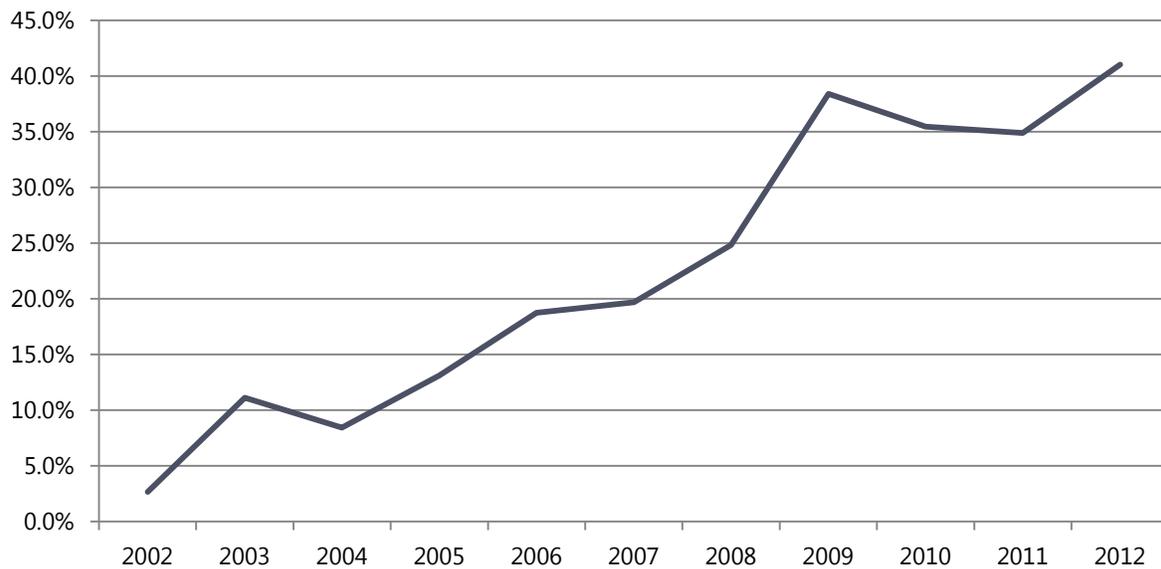
In 2013, the Urban Land Institute surveyed 1,202 adults to determine which types of environments they preferred to live in. One key finding is that members of “Gen Y” (ages 18-34) are more likely to desire to live in a medium or large city (38.0 percent) relative to other generations. These location preferences are influencing the changing composition of growth in the Indianapolis region and across the United States.

FIGURE 2: PREFERENCES REGARDING PLACE OF RESIDENCE AMONG U.S. RESIDENTS (2013)



Source: Urban Land Institute; national survey of 1,202 adults conducted January-February 2013

The following chart helps illustrate the changing nature of population growth in the Indianapolis region, focusing on the concentration of growth in the region’s core county. In 2002, Marion County accounted for just 2.7 percent of the region's population growth. But over the course of the next 10 years, Marion County consistently captured an ever-increasing share, rising to 41 percent of the metropolitan area's growth in 2012. These trends mirror those that have been observed in other highly-competitive metropolitan areas. Nearly identical trends have been observed in the Nashville region, where Davidson County’s share of regional population growth has grown from less than one percent in 2002 to nearly 46 percent in 2012.

FIGURE 3: MARION COUNTY SHARE OF REGIONAL (MSA) POPULATION GROWTH (2002-2012)

Source: Economic Modeling Specialists Intl.

Although many focus group participants pointed to Indianapolis's 2012 Super Bowl as a turning point for downtown Indianapolis and Marion County as destination for new residents, these figures indicate that population was returning well beforehand. Downtown Indy, the non-profit organization that helps facilitate development in Downtown Indianapolis, identifies a number of key milestones that occurred in 2003 and beyond which gives some explanation as to why growth has returned to the core county.

In 2003 alone, thirty development projects were completed, totaling more than \$306 million in investment. Many were residential in nature: completed projects include The Block, Garden Arch Apartments, and Mayleeno Apartments. Over the course of the next decade, anchor institutions invested significantly in the core downtown area and surrounding neighborhoods. Whether it was the \$74 million expansion of the Indianapolis Museum of Art, the construction of the \$625 million Lucas Oil Stadium, or the construction and expansion of the Indianapolis Cultural Trail, it is clear that significant energy and investment was occurring in the region's core county. Revitalization of the Near Eastside has brought in an estimated \$150 million of new investments since 2012. Fountain Square, Broad Ripple, and the development of distinct neighborhood identities were highlighted by focus groups as important developments in the region's core.

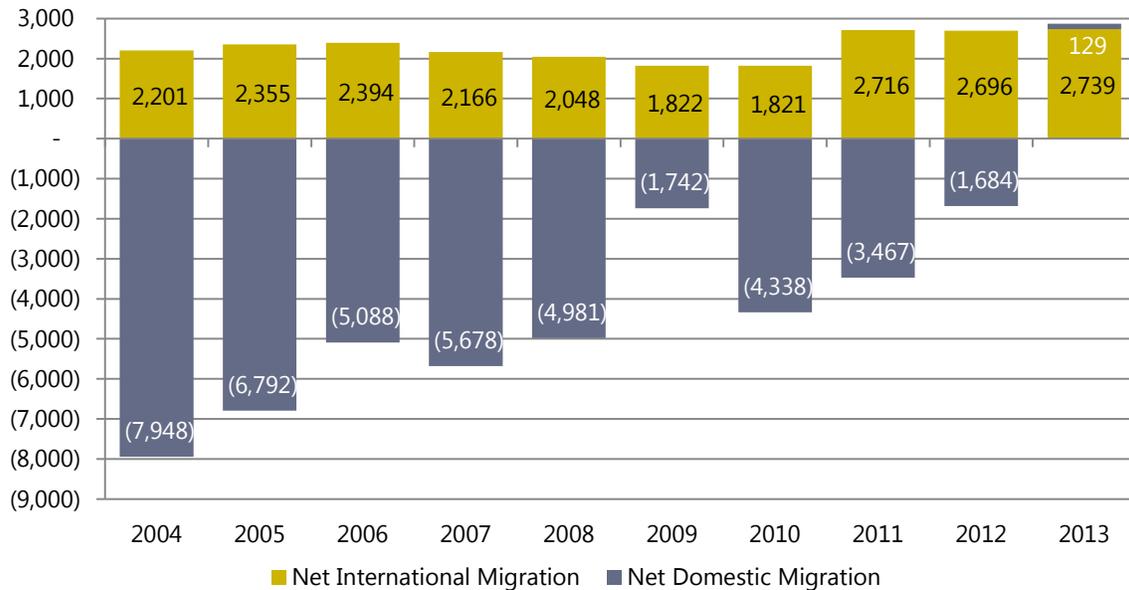
And according to input participants, it is these investments and developments that are increasing the attractiveness of Marion County and the City of Indianapolis at a time when household location preferences are changing. While the population growth figures illustrate that Marion County is clearly gaining an ever-increasing share of the region's population growth, the source of that population growth is vital to understanding the City's relative attractiveness to households in the region and those that may be relocating from outside the region.

Population change is driven by two primary components of population growth: natural change (births minus deaths) and net migration (number of new residents moving into the community minus the number of existing residents moving out of the community). Migration can be further broken into domestic

migration (that which originates within the United States) and international migration (that which originates outside the United States).² Much of the growth within Marion County has historically been driven by natural population change (births minus deaths). But recent data from the Census Bureau and the Internal Revenue Service indicate that Marion County is increasingly attracting new domestic and international migrants.

Marion County, like many other central counties in metropolitan areas, has historically been a destination for international in-migrants. However, at the turn of the new millennium, Marion County was hemorrhaging population to other parts of the country; it was a net exporter of people. Between 2003 and 2004, Marion County experienced a net out-migration of 7,948 residents, meaning nearly 8,000 more people left Marion County for some other part of the country than the number of people choosing to relocate to Marion County from some other part of the country. Leading up to the recession, Marion County was showing signs of progress. Net out-migration gradually declined in size and by 2013 the County was actually a net attractor of new residents from other parts of the country for the first time in decades.

FIGURE 4: NET MIGRATION, MARION COUNTY (2003-2013)



Source: U.S. Census Bureau

The median age of in-migrants from outside the state of Indiana to Marion County has declined from 30.7 to 28.9 between 2008 and 2013, reflecting the increased mobility of and job prospects for recent graduates and young professionals following the Great Recession. The median income of the out-of-state in-migrants has fallen, perhaps indicative that many more young people are moving to Marion County without income and in search of their first job. This contrasts with trends observed in the Nashville region’s core county, Davidson, where the median age of out-of-state in-migrants fell but the median income rose considerably. In short, there is little evidence to suggest that a “wealth shift” is occurring alongside a “population shift.”

² Components of population change data also includes a “residual,” which represents the change in population that cannot be attributed to any specific demographic component.

In contrast to Marion County, net domestic migration in Hamilton County has steadily deteriorated over the past ten years. During the 2003-2004 period, Hamilton County gained 7,948 net new migrants. By the 2012-2013 period, net domestic migration into Hamilton County (4,089) was nearly half that amount. Make no mistake: domestic migration remains exceptionally strong in Hamilton County. There is no doubt that it is a destination of choice for families and individuals relocating to the region. However, the data indicate that it is no longer the region's sole magnet for domestic migrants. In 2003, Hamilton County captured an incredible 88 percent of the region's net in-migration. By 2013, that share had fallen to 31 percent.

As previously mentioned, these trends mirror those that have been observed around the country. Individuals are increasingly demonstrating a preference for metropolitan living, and within those metropolitan regions, the migration patterns illustrate their preferences for more urban settings. Understanding the location preferences of both current and prospective future residents, combined with shaping the built environment to better suit these preferences, is crucial for metropolitan regions across the United States. The Indianapolis region is no exception. Suburban and exurban areas must take note of the fact that people are voting with their feet. The mass exodus from urban areas to suburban and exurban areas in the 1980s and 1990s is unquestionably beginning to reverse direction in many regions. But this does not necessarily foretell a downfall for suburban and exurban areas. Rather, it demonstrates the need to create environments with attributes that are commonly found in cities, including greater density and mixed-use environments, walkability, entertainment and nightlife, and public transportation.

3. WORKFORCE SUSTAINABILITY: ATTRACTING AND RETAINING TALENT

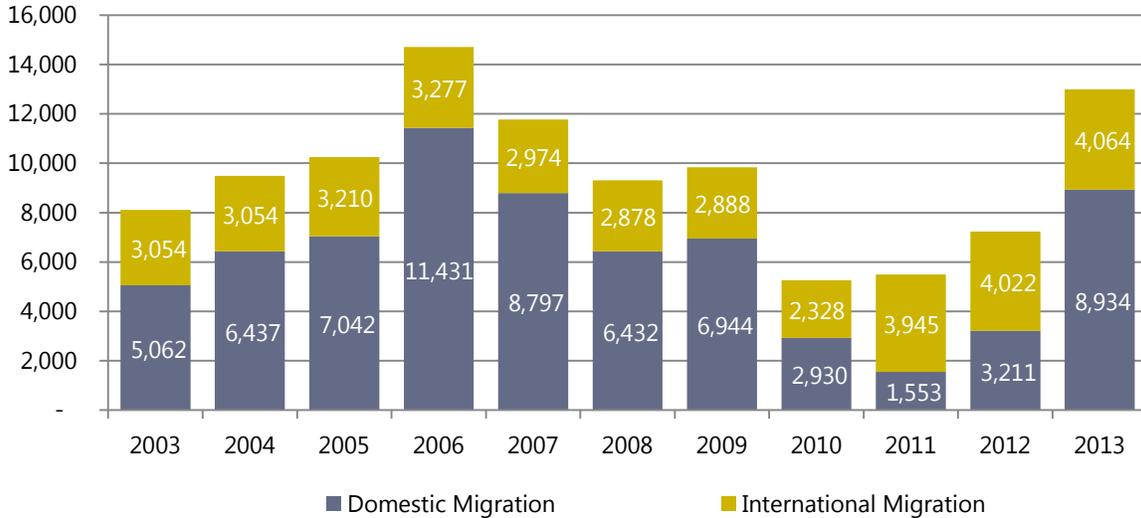
The previous section of this Assessment examined the changing composition of growth within the region, acknowledging that the preferences of younger generations are greatly influencing these intra-regional dynamics. Successful cities and regions have transformed themselves into talent magnets, leveraging their quality of life, opportunities to empower young entrepreneurs and professionals, and capacity to create a built environment where people want to live. While the Indianapolis region is growing is unquestionably attracting more new residents than it is losing each year, it is questionable as to whether it has obtained status as a magnet for the highly-educated talent that is so coveted in the 21st century economy.

In February 2014, *Area Development* magazine released the results of its annual Corporate Survey. The magazine asked 240 executives from various business sectors to rate how important different business concerns are to their location decisions. For the first 27 years of the survey being conducted, highway accessibility and labor costs ranked as the top factors in corporate location decisions. However, in the most recent ranking from 2014, "availability of skilled labor" topped the list, with 95.1 percent of respondents rating it as "very important" or "important." The line between "economic development" and "workforce development" is increasingly blurred as the availability of skilled labor is dominating the debate in nearly every major metropolitan area regarding how to effectively position themselves for growth.

Simply put, tomorrow's successful regions will be those that are able to attract, retain, and develop a talented workforce. **Although the Indianapolis region is growing, many stakeholders described the region's ability to attract and retain residents living outside of the state of Indiana as difficult or challenging.** And while *intra*-regional (within the region) migration trends discussed in the preceding section helped illuminate changing composition of growth within the region, it is *inter*-regional migration (or migration between regions) that illuminates how successful an area is in attracting and retaining a workforce. After all,

labor forces are regional in nature and employers draw from a labor shed that has little conformity to municipal or county borders.

FIGURE 5: NET MIGRATION, INDIANAPOLIS METROPOLITAN AREA (2003-2013)

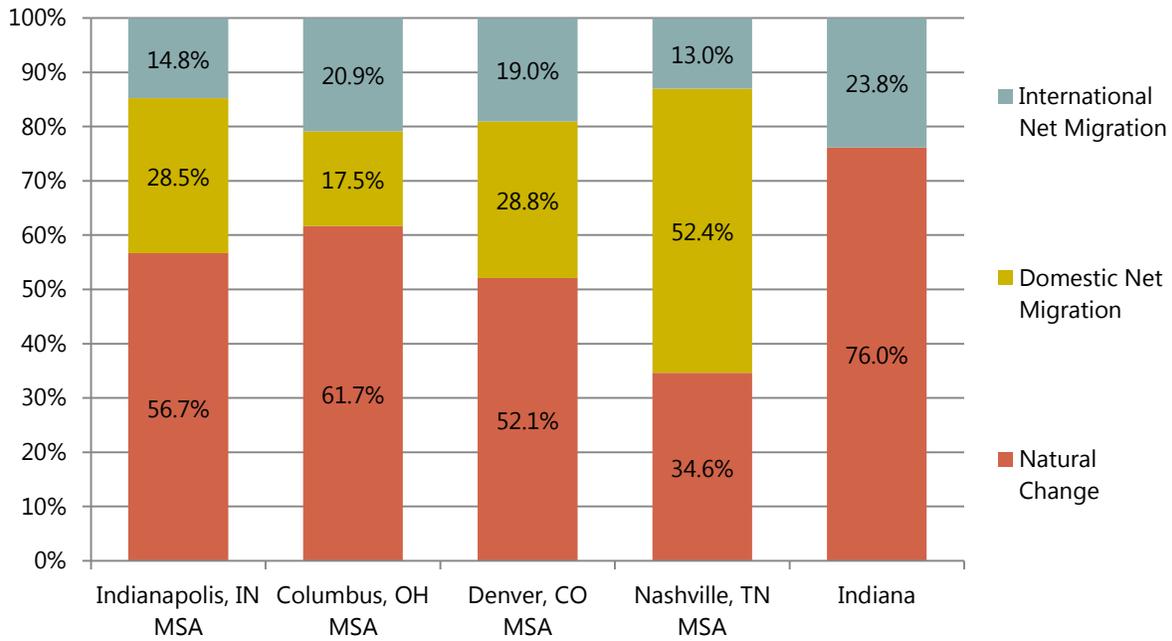


Source: U.S. Census Bureau

Net migration to the Indianapolis region as a whole declined at the onset of the Great Recession, again reflecting the reduced mobility of residents seen nationwide. However, as the economy began to recover, and more importantly, as households recovered, migration resumed. Recent data shows that the Indianapolis region was a beneficiary of the nation’s increased mobility post-recession. In 2010, net migration to the Indianapolis region reached its lowest point in the decade, experiencing a historically small net gain of 5,258 new residents. By 2013, the region attracted roughly 13,000 net new residents to the area, more than double what it had three years prior and its largest net gain since 2006.

Furthermore, domestic and international migration is increasingly becoming a driving force of population growth in the Indianapolis region, a positive sign of the community’s ability to attract new residents from outside of the region. However, the region still has considerable ground to gain on competitor regions such as Denver and Nashville in this regard. The more rapid population growth experienced in the Denver and Nashville metropolitan areas (17.4 percent and 20.4 percent between 2003 and 2013, respectively, as compared to 12.8 percent in the Indianapolis region) was more heavily driven by net in-migration. Between 2003 and 2013, 43.3 percent of the Indianapolis region’s growth was attributable to net in-migration with the remaining 56.7 percent being attributable to natural change (births minus deaths). During the same period, net in-migration accounted for 47.9 percent and 65.4 percent of population growth in the Denver and Nashville regions, respectively.

FIGURE 6: CUMULATIVE COMPONENTS OF POPULATION CHANGE (2003-2013)



Another key differentiator between more rapidly growing regions such as Denver and Nashville is the fact that much of the domestic in-migration coming to these regions originates from outside the state. In contrast, a majority of those moving to the Indianapolis region come from within the state of Indiana. As illustrated in Figure 7, domestic migration accounted for none of the state’s population growth between 2003 and 2013. This is due to the fact that the state of Indiana was actually a significant net exporter of people, losing 28,382 residents to other parts of the country between 2003 and 2013.

The Internal Revenue Service’s (IRS) Statistics of Income program provides insight into the migration patterns of taxpayers. This data is compiled from information on individual tax returns that have been stripped of personal identifying information, assigned a unique identifying number, and coded to a street address and ZIP code. If an individual moves from one county to another between tax years, the program categorizes this individual as a migrant between counties. There is some significant lag in the data that is compiled and published by the IRS, but it nonetheless provides some compelling insights into the places from which new residents are moving, and the places to which existing residents are relocating.

FIGURE 7: NET SOURCES & DESTINATIONS FOR MIGRANTS, INDIANAPOLIS REGION (2005-2011)

Top Sources	Net In-Migrants	Top Destinations	Net Out-Migrants
Lake County, IN	4,343	Maricopa County, AZ	-673
Allen County, IN	2,544	Lee County, FL	-650
Delaware County, IN	2,475	Tarrant County, TX	-540
St Joseph County, IN	2,180	Hillsborough County, FL	-476
Tippecanoe County, IN	2,169	Harris County, TX	-433
Vigo County, IN	1,444	Bexar County, TX	-422

Howard County, IN	1,425	Owen County, IN	-343
Cook County, IL	1,255	Wake County, NC	-342
Monroe County, IN	1,235	Travis County, TX	-326
Los Angeles County, CA	1,202	King County, WA	-308

Source: Internal Revenue Service

Many of the Indianapolis region's top sources of new residents are other population centers within the state of Indiana, likely reflecting the fact that the Indianapolis region has provided more plentiful job opportunities than the rest of the state.

To give these figures some context, the majority of the Nashville region's top sources of in-migrants are other large metropolitan regions throughout the country such as Southern California (Los Angeles, Orange, San Diego, Riverside, and San Bernardino counties), Chicago (Cook County), Detroit (Wayne and Oakland counties) and South Florida (Broward, Miami-Dade, and Palm Beach counties).

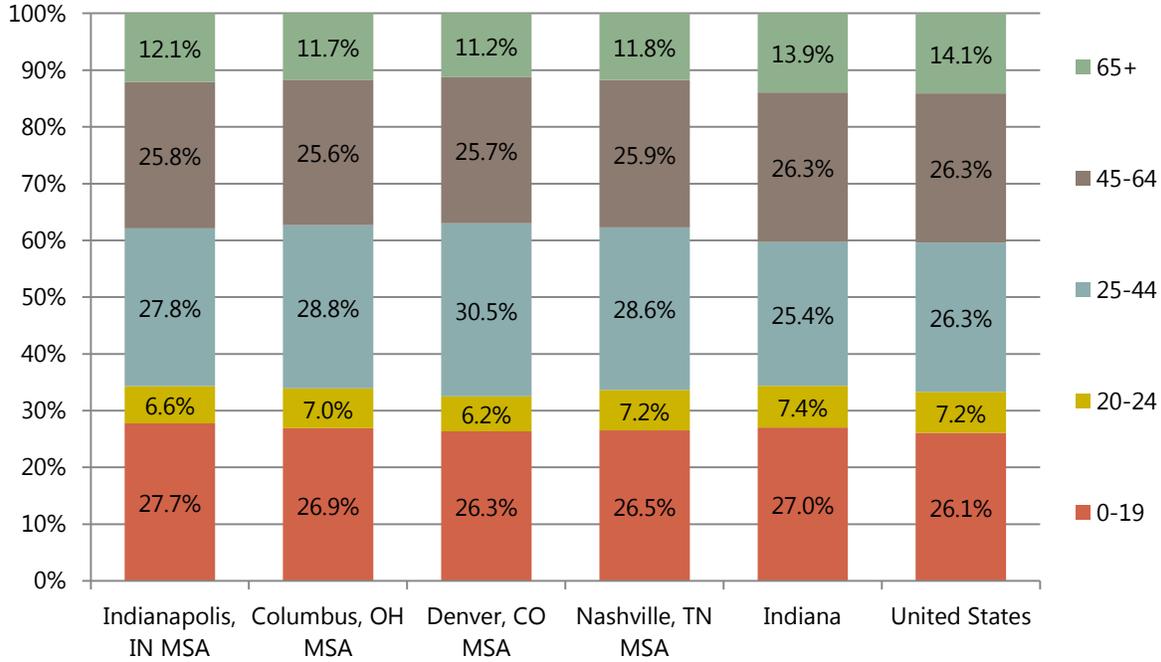
Out-migration destinations paint a less clear picture. The region is a net exporter to Maricopa County, AZ (Phoenix); Tarrant County, TX (Fort Worth); Hillsborough County, FL (Tampa); Harris County, TX (Houston); Wake County, NC (Raleigh); and Travis County, TX (Austin). While some of these counties are sun rich retirement destinations such as Lee County, FL and Maricopa County, AZ, retirement trends do not fully explain migration patterns to certain metropolitan markets. The remaining top destinations are among the fastest growing job markets in the country – places that are unquestionably winning the battle for talent, including Raleigh (Wake County), Austin (Travis County), Dallas-Fort Worth (Tarrant County), and Houston (Harris County).

Nurturing a sustainable workforce requires more than just attracting new residents to the region and retaining those that are already there. As the Baby Boom generation exits the workforce, the age composition of the region's population is just as important as the region's capacity to attract new migrants into the community. Some communities with unfavorable age composition (more older workers than younger workers) are able to overcome potential shortages born from Baby Boom retirements through positive levels of net in-migration. Other regions, particularly surrounding areas in the nation's "Rust Belt," are facing a significant challenge born from disadvantageous age dynamics coupled with a persistent wave of out-migration.

The migration data has illustrated that the region is attracting more new residents than it is losing to other parts of the country – a clear positive in terms of workforce sustainability. And fortunately, the age dynamics in the Indianapolis region indicate the region is in a position of relative strength when compared to the average American Community. As of 2013, the percentage of the population aged 45-64 (those at or approaching retirement age in the coming decade) represent exactly the same share of U.S. population as those aged 25-44 (individuals that will moving into more experienced positions as older workers retire). The Indianapolis region is home to a 25-44 population that is two percentage points larger than its 45-64 population. The region's benchmark metros share similarly advantageous age dynamics. The Denver region's share of prime age workers (30.5 percent) is 4.8 percentage points higher than the percentage of residents between the ages of 45 and 64 (25.7 percent). Indianapolis and the three comparison regions all possess a strong pipeline of young workers who are central to lessening the impact of the soon-to-be retiring Baby Boom generation. By comparison, the state of Indiana as a whole is facing

disadvantageous age dynamics whereby there are more older workers aged 45-64 than those aged 25-44. Acknowledging that these figures for the state include the Indianapolis metropolitan area, clearly the rest of the state is facing even deeper concerns.

FIGURE 8: AGE DISTRIBUTION, INDIANAPOLIS REGION (2013)

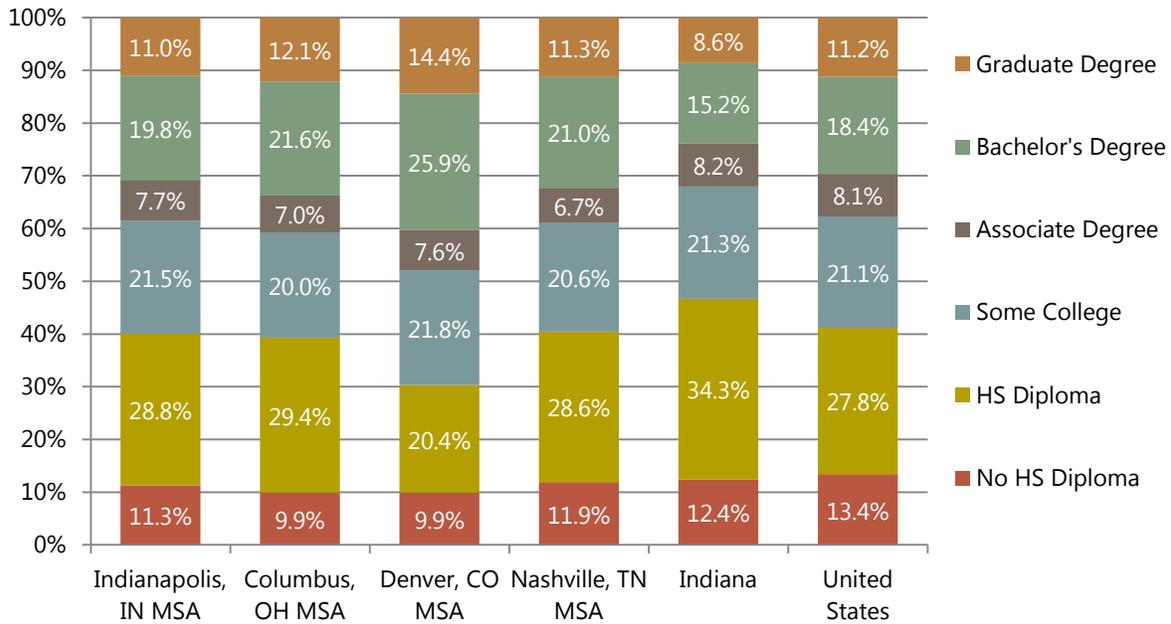


Source: U.S. Census Bureau

Combined with what appears to be a consistent ability to attract domestic and international migrants, the positive age composition helps illustrate that the region has a relatively sustainable workforce from a quantity perspective. However, the data provide some reason to be concerned that the region may simply be a talent magnet for residents from other Indiana population centers while struggling to attract new residents and workers from other major metropolitan regions. Furthermore, a variety of data covering educational attainment of existing residents and in-migrants illustrates that the region may be falling behind its peer regions in the competition for high quality talent.

Residents of the state of Indiana and the Indianapolis region have immense opportunity to expand their skill set and receive an advanced education; the subsequent section will examine this higher education capacity in greater detail. Yet, these opportunities do not necessarily translate into higher concentrations of highly educated workers across the region. In 2013, 30.8 percent of residents in the Indianapolis region possessed a bachelor’s degree or higher, just slightly above the national average (29.6 percent) and trailing the Columbus (33.7 percent), Nashville (32.3 percent), and Denver (40.3 percent) metropolitan areas. Perhaps more troubling, data from the Census Bureau suggests that the region has made little progress in raising educational attainment levels of adults.

FIGURE 9: EDUCATIONAL ATTAINMENT OF ADULTS AGED 25+, INDIANAPOLIS REGION (2013)



Source: U.S. Census Bureau

Between 2008 and 2013, the percentage of residents with a bachelor’s degree or higher increased by just 0.1 percentage points, from 30.7 percent to 30.8 percent – the slowest gain of all comparison geographies. Both Denver and Nashville were able to balance population expansions while also ensuring that they attract and retain quality workers; their percentage of residents who possessed a bachelor’s degree or higher rose 2.8 percentage points and 2.9 percentage points respectively (the national average was 1.9 percentage points). On the other end of the spectrum, the region was unable to successfully reduce the percentage of the population with no high school diploma at a time when other regions and the country as a whole made great strides. Over the same five-year period, the Indianapolis region reduced the percentage of residents with no high school diploma by just 0.1 percentage points during a time when the average American community reduced its share with no high school diploma by 1.6 percentage points.

Recently published studies do give optimism for educational attainment levels in the Indianapolis region, albeit over a longer time frame and narrower subset of the regional population. Building off of research completed in 2004, Joe Cortright’s *The Young and Restless and the Nation’s Cities* 2014 report analyzes where highly educated young professionals (aged 25 to 34 year olds) throughout the United States are choosing to locate.³ The study finds that the percentage of young professionals holding a bachelor’s degree or higher in the Indianapolis region grew by 30.5 percent between 2000 and 2012 – the 20th fastest growing metropolitan area of the 51 metros studied in the report. With its 20th place position, the Indianapolis region outranked Columbus (30th) but performed below Nashville (7th) and Denver (8th).

³ Please note that *The Young and Restless and the Nation’s Cities Report* utilizes the Office of Management and Budget’s 2009 definition for the Indianapolis region (Indianapolis-Carmel, IN MSA). As a result, these figures do not include Madison County, IN.

FIGURE 10: EDUCATIONAL ATTAINMENT OF IN-MIGRANTS (2013)

	No HS Diploma	HS Diploma	Some College or Associate's Degree	Bachelor's Degree	Graduate Degree
Indianapolis, IN MSA	11.6%	26.9%	28.2%	19.6%	13.6%
Columbus, OH MSA	8.3%	27.7%	24.1%	25.5%	14.3%
Denver, CO MSA	8.9%	18.0%	29.0%	29.5%	14.7%
Nashville, TN MSA	8.1%	22.7%	26.0%	27.4%	15.7%
Indiana	12.6%	29.8%	29.4%	17.6%	10.6%
United States	11.8%	23.3%	28.6%	22.1%	14.2%

Source: U.S. Census Bureau

Although the region has seen gains in its educated young professional population, recent migration data does suggest that it is struggling considerably relative to its peers when it comes to the attraction of new residents with a college or advanced degree. Only 33.2 percent of domestic migrants (individuals moving to the region from other locations in the United States) between 2012 and 2013 possessed a bachelor's degree or higher. In comparison, Denver (44.2 percent) and Nashville (43.1 percent) continue to attract highly educated migrants who have attained a bachelor's degree or higher education. The educational attainment distribution of current Indianapolis in-migrants bears striking resemblance to the education distribution of the region's overall population, whereas the region's competitors are attracting new residents that are consistently more highly-educated than their existing residents – a primary reason why they were able to elevate educational attainment rates while the Indianapolis region struggled.

These struggles to elevate educational attainment rates and attract highly-educated new residents may hamper the region's ability to produce a sustainable workforce for employers seeking a large and expanding pool of highly-skilled workers. Furthermore, the competition has made greater strides in recent years and the gap is widening. And so, the Indianapolis region will need to heavily focus on talent development – in addition to talent attraction and retention – in the years ahead if it wishes to remain in the conversation with some of the country's most highly-competitive regions for new jobs and investment.

4. WORKFORCE SUSTAINABILITY: DEVELOPING "HOMEGROWN" TALENT

Talent attraction is only one key to the workforce sustainability puzzle; developing a "homegrown" talent pipeline is even more critical. Central to talent development is a dedicated, connected continuum of education: pre-K, primary, secondary, and higher education institutions. A connected talent pipeline not only involves transforming a newly borne resident into a degree-holding or career-ready graduate, but also providing educational and training opportunities to current residents who wish to improve their employability through skills acquisition.

When asked, "In your opinion, please indicate the degree to which you believe that the region has been successful in the following areas," only 26 percent of business leaders (those who self-identified themselves as business owners, executives, or managers that make hiring decisions) responding to the community survey described the region's efforts to "develop a sustainable, skilled workforce" as successful or very successful, with 27 percent evaluating these efforts as unsuccessful or very unsuccessful.

By comparison, 37 percent of business leaders in the Nashville region evaluated their efforts as successful or very successful, with just 12 percent indicating that they have been unsuccessful or very unsuccessful. Nonetheless, the Nashville business community and its regional economic development partnership (Partnership 2020) have prioritized workforce development for decades; “Talent Development” has been a cornerstone of their strategic planning efforts since the 1990s.

One area of commonality among the Nashville and Indianapolis regions in terms of talent development is a focus on extending access to early childhood education, particularly within the core, urban school district. Investing in early childhood education has been extensively researched in recent years and decades. A variety of studies have demonstrated that those attending high-quality preschools are more likely to have increased performance on standardized tests, improved employment opportunities, higher lifetime earnings, and are less likely to be incarcerated, among many other measured benefits. The long-term benefits of pre-K have also been shown to have a good return on investment for communities and providers by way of future savings on remedial education and social assistance programs. In terms of early childhood education, the region has only recently begun to make slow, forward progress. The state of Indiana is preparing to launch an early childhood education pilot program for 4-year-olds in Marion County along with four other Indiana communities. Moreover, the Eli Lilly and Company Foundation has committed to raise millions in private monies to support expansion of early childhood education in the region as well as the state of Indiana.

According to the National Association for the Education of Young Children (NAEYC), there are 56 NAEYC accredited programs in the Indianapolis region, or roughly 0.3 per every 10,000 residents which is slightly higher than the national average (0.2). Nevertheless, in 2013, Indiana was one of only ten states that did not have a state-funded preschool program. Each of the region’s benchmark metros benefits from a preexisting state-funded preschool program. The aforementioned pilot program is intended to launch in early 2015 and serve low-income children in Marion, Allen, Lake, and Vanderburgh counties. Jackson County is expected to begin enrollment in 2016. The Family and Social Services Administration, which will oversee the program, expects that it will serve approximately 2,000 children – roughly 20 percent of the children that the administration estimates are eligible.

Local stakeholders expressed concern that the state’s commitment is not sufficient to match the City of Indianapolis’ current need. Mayor Ballard is currently seeking to build a \$50 million pre-K program in the City of Indianapolis in an effort to provide early childhood education for those that will not be served under the pilot program. The Lilly Endowment pledged matching funds in order to support the effort, so long as the City earmarks \$5 million dollars in funding per year. At the moment, City Council has committed \$1.7 million of the \$5 million to trigger matching funds from the Endowment. It was clear from conversations with a variety of stakeholders in the community that improving access to early childhood education is perceived to be vitally important to the region’s future competitiveness and quality of life.

On the whole, K-12 schools throughout the region were regarded positively by focus group participants. But many expressed concerns regarding the impact of property tax caps on local school districts. Some stakeholders have indicated that certain suburban school districts in the region have necessarily sold physical assets and discontinued certain services as a result of the policy changes and their timing (as the Great Recession began to take hold).

Nonetheless, community stakeholders across the region indicated that the region is home to many high performing school districts – graduation rates and SAT scores support this sentiment. Online survey respondents further corroborated this viewpoint; 77.0 percent of respondents with a child in a regional school district either agreed or strongly agree with the statement “children in this district receive a high-quality education.” By comparison, just 56 percent of respondents in the Nashville region agreed or strongly agreed with this statement.

FIGURE 11: GRADUATION RATES, LARGEST REGIONAL SCHOOL DISTRICTS (2009-2013)

County	School District/Corporation	2009-10 Graduation Rates	2012-13 Graduation Rates	Percentage Point Change
Boone County	Zionsville Community Schools	98.3%	97.2%	-1.1%
Brown County	Brown County School Corporation	89.3%	91.2%	1.9%
Hamilton County	Carmel Clay Schools	89.6%	96.9%	7.3%
Hamilton County	Hamilton Southeastern Schools	92.3%	94.0%	1.7%
Hamilton County	Noblesville Schools	93.4%	93.0%	-0.4%
Hancock County	Greenfield-Central Com Schools	90.4%	86.3%	-4.0%
Hendricks County	Avon Community School Corp	93.3%	96.8%	3.5%
Johnson County	Center Grove Com School Corp	93.3%	92.7%	-0.5%
Madison County	Anderson Community School Corp	59.6%	81.2%	21.6%
Marion County	Indianapolis Public Schools	62.6%	68.3%	5.7%
Marion County	M S D Lawrence Township	85.0%	87.0%	2.0%
Marion County	M S D Perry Township	85.2%	91.7%	6.5%
Marion County	M S D Pike Township	89.5%	92.0%	2.5%
Marion County	M S D Warren Township	84.2%	83.4%	-0.8%
Marion County	M S D Washington Township	87.8%	81.5%	-6.4%
Marion County	M S D Wayne Township	84.4%	87.2%	2.7%
Morgan County	M S D Martinsville Schools	83.8%	83.3%	-0.5%
Putnam County	Cloverdale Community Schools	75.0%	91.7%	16.7%
Shelby County	Shelbyville Central Schools	85.9%	93.8%	7.9%
	<i>Indiana State Average</i>	77.3%	88.3%	11.0%

Source: Indiana Department of Education
Note: Graduation rates are based on four-year cohort status.

The preceding table provides the graduation rates for the school districts with the highest enrollment in each county and for those with an enrollment of greater than 9,000 students. Eleven out of these nineteen most populous school districts performed highly – over 90 percent of their eligible graduates received a diploma. Regional graduation rates do vary, from the lowest performing school district, Indianapolis Public Schools (68.3 percent graduation rate), to 97.2 percent at Zionsville Community Schools.

While K-12 educational offerings in the region are generally held in high regard, focus group participants, interviewees, and survey respondents all expressed concern about the current condition of Indianapolis Public Schools (IPS); many indicated that the school district is facing an immense challenge, and its relative success in meeting the needs of a changing and diverse student population is critical to the region’s long-term prosperity. Over 44.0 percent of online survey respondents with children who are or have been enrolled in the IPS system agreed or strongly agreed with the statement “the quality of our public schools

inhibit our community's growth." More worryingly, only 14.6 percent of these same respondents agreed or strongly agreed with the statement "children in this district receive a high-quality education." But these concerns for the schools serving the urban core of the region are no different from those that are expressed by stakeholders in other regions. And while many other regions lack considerable optimism for these core school districts, stakeholders in the Indianapolis region are, generally-speaking, relatively optimistic that IPS is moving in a positive direction under new leadership. Online survey respondents echoed this viewpoint.

In the 2011-12 schools year, 63.8 percent of students were eligible for free and reduced lunch in Marion County. Further disconcerting, the percentage free and reduce price lunch eligible students increased between the 2006 and 2011 school years by 20.4 percent. While school districts across the country saw this number increase throughout the recession, the situation is worrisome nevertheless.

However, recent improvement in graduation rates is a positive sign for the region. The increased performance in the graduation rates at Anderson and Cloverdale Community Schools is a clear testament to the improvements education and community leaders have made and signal the community's commitment to increasing student achievement. Although IPS has shown some improvement since the 2009-10 school year, increasing its graduation rate by 5.7 percentage points, with less than seven out of every ten students graduating in four years, it still has ground to cover.

Average SAT scores largely reflect trends in graduation rates; those school districts with high graduation rates tended to have high average SAT scores also. One concerning trend is that the percentage of students taking the test varied widely. School districts, such as Zionsville, Carmel Clay, and Hamilton Southeastern had over 90 percent of graduates taking the test, while less than half of graduates at Indianapolis School District and MSD Pike Township took the SAT. Most colleges require either SAT or ACT scores to get accepted. Further analysis revealed that the lower percentage of SAT test takers could not be explained by the fact that students in these districts may prefer to take the ACT instead – participation in the ACT test was even lower than the percentage of graduates that took the SATs in these districts. Simply put, students who do not take the SAT or ACT have limited potential to access higher education resources, where many of these institutions and community colleges require standardized testing as an application requirement to attend the fall semester after high school graduation. Although many students may have no intentions of pursuing higher education following their graduation – and indeed, the majority of the nation's fastest-growing occupations do not require four-year degrees – fulfilling this basic requirement is important in terms of ensuring that high school students have access to choices following graduation.

Entering the region's higher education system is clearly just one of many choices. In 2013, regional higher education institutions – those within a 50 mile radius of downtown Indianapolis – conferred 55,268 degrees ranging from a two year certificate to a doctoral degree. Without question, the region has access to an immense pool of educated talent; higher education institutions in Columbus (31,914 degrees), Denver (39,728), and Nashville (22,891) conferred far fewer degrees. Even so, the Indianapolis region must be mindful that much of the training capacity exists outside of its official metropolitan borders. Indiana University-Bloomington and Purdue University accounted for 39.0 percent of the aforementioned total degree capacity. The higher education capacity in the comparison regions is more heavily concentrated in the heart of the metropolitan area.

Regardless, the larger region and its higher education institutions are clearly producing a comparatively large pipeline of "homegrown" talent. But from the standpoint of workforce sustainability, this immense capacity is only an advantage to the degree to which the region succeeds in retaining these graduates.

Aside from pure capacity, a number of focus group participants have cited other positive attributes of the higher education system. Some noted that institutions have worked well together to advance a variety of key initiatives. Stakeholders pointed to the recent standardization of common core curriculum as a positive direction forward. Under the arrangement, students are able to take classes at any of the region's school systems; a positive arrangement, particularly, for the region's smaller higher education institutions. A common course numbering system was adopted by all public institutions in May 2013. Others cited growth in residential housing for students, expanding enrollments, and new instructional and research facilities.

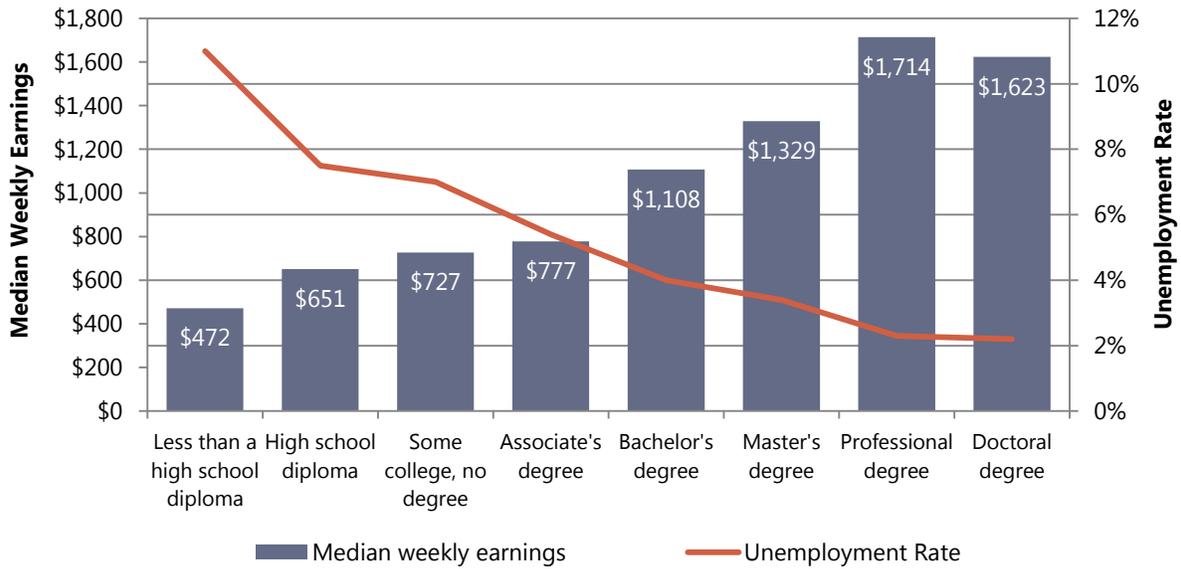
But stakeholders also cited a number of challenges impacting higher education institutions. Higher education focus group participants pointed to a lack of business community involvement as a concern for their institutions. However, many Steering Committee members believed that this was an area of significant strength for the region; that the region has much to be proud of in terms of its business-academic partnerships. Public transportation was also highlighted as a negative. Students, particularly those enrolled at higher education institutions in a suburban or exurban community, expressed difficulty in reaching the central city. For many of the higher education institutions, bus service is only provided through multiple bus companies with varying schedules. Higher education stakeholders noted that some of their students face regular 90 minute commutes to travel into or out of the city. This is particularly concerning because students often desire to attend classes at other universities in the region, such as Indiana University/Purdue University-Indianapolis (IUPUI) or otherwise wish to have access to the amenities located in downtown Indianapolis.

From a talent development perspective, the region has immense potential to train and develop local talent, to produce tomorrow's best and brightest worker. Connecting a pipeline of young talent, from cradle to career, will require that the region's numerous actors in the education space align resources and efforts to fully maximize the region's potential. Such an alignment will not only ensure that regional businesses have access to a sustainable supply of talent but will also ensure that local residents obtain economic opportunity that may not have otherwise been available to them.

5. EDUCATION & INCOMES: CONSEQUENCES OF SLOW IMPROVEMENT

Educational attainment is the single greatest predictor of an individual's lifelong earning potential. As a result, educational attainment is more than simply a workforce sustainability concern: it is central to raising standards of living for all residents within a given region. Despite the fact that some regions of the country remain mired in a sluggish economic recovery with stubbornly high joblessness, only four percent the nation's labor force that holds a bachelor's degree was unemployed in 2013 according to data published by the Bureau of Labor Statistics. The unemployment rate for those with less than a high school diploma (11 percent) was almost double that of the national average for all workers (6.1 percent). Along with higher unemployment rates, those with less than a high school education experience significant earnings disparity. The annual median wage for a full-time worker with less than a high school degree was \$24,544 in 2013. Conversely, the annual median wage for a full-time worker with a bachelor's degree was \$57,616 per year, more than twice the annual median wage of an individual without a high school diploma.

FIGURE 12: EARNINGS AND UNEMPLOYMENT BY EDUCATION, UNITED STATES (2013)



Source: Bureau of Labor Statistics
 Note: Data are for persons over the age of 25. Earnings are for full-time wage and salary workers.

This Assessment has previously highlighted the comparatively little progress that the Indianapolis region has made in increasing adult educational attainment levels in recent years. While the share of the population with a bachelor’s degree or higher has increased in Columbus by 0.9 percentage points, in Denver by 2.8 percentage points, and in Nashville by 2.9 percentage points, Indianapolis has only seen its proportion with a bachelor’s degree or higher increase by 0.1 percentage points. What little improvement has occurred can be solely attributed to the growing percentage of residents who possess a graduate degree. The region’s share of residents with a bachelor’s degree actually fell by 0.4 percentage points. Meanwhile, the region has made little improvement (-0.2 percent) in the percentage with no high school diploma.

FIGURE 13: PERCENTAGE POINT CHANGE IN EDUCATIONAL ATTAINMENT (2008-2013)

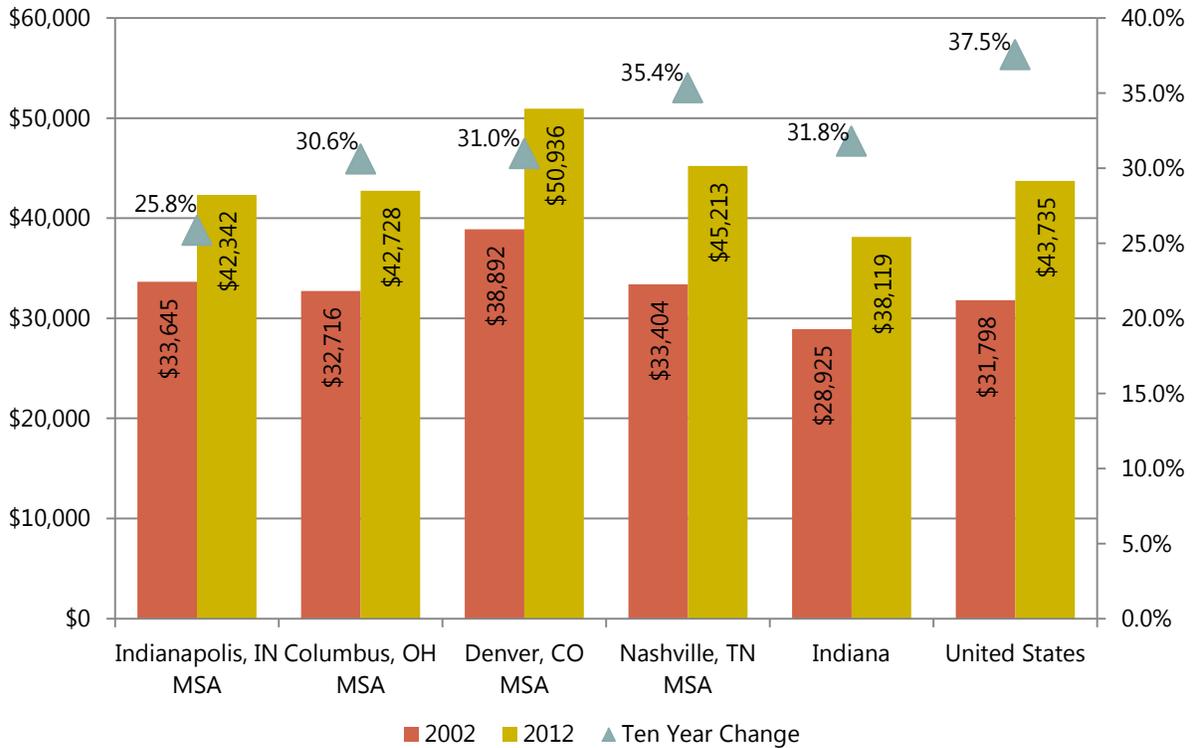
	Less than high school	High school graduate	Some college	Associate's degree	Bachelor's degree	Graduate or Professional degree
Indianapolis, IN MSA	-0.2%	-1.5%	1.0%	0.6%	-0.4%	0.5%
Columbus, OH MSA	-0.6%	0.1%	-0.8%	0.4%	0.2%	0.7%
Denver, CO MSA	-1.5%	-1.8%	-0.1%	0.6%	1.4%	1.4%
Nashville, TN MSA	-2.4%	-0.3%	-0.8%	0.7%	1.4%	1.5%
Indiana	-1.4%	-0.8%	0.6%	0.7%	0.4%	0.5%
United States	-1.6%	-0.7%	-0.2%	0.6%	0.9%	1.0%

Source: U.S. Census Bureau

Consequently, compared to its benchmark metropolitan areas, the Indianapolis region made less progress in raising standards of living (as defined by per capita income). Between 2002 and 2012, the

region’s per capita income increased by just 25.8 percent, trailing all comparison geographies including the state of Indiana.

FIGURE 14: PER CAPITA INCOME (2002-2012)



Source: Bureau of Economic Analysis

The Bureau of Labor Statistics’ consumer price index (CPI) provides context regarding how per capita income growth has performed against the rate of inflation. If nominal income growth trails the rate of inflation, no real income growth has occurred and standards of living deteriorate. Over the ten year period from 2002 to 2012, per capita income and average prices have grown at relatively the same rate (25.8 percent income growth as compared to 25.2 percent increase in the Midwest urban market CPI). Accordingly, individuals and households in the region have experienced little to any real improvement in standards of living in the most recent decade.

Given the sluggish income growth relative to its peer metropolitan areas, it is not surprising to see that poverty rates have also increased at a comparatively high rate. In 2002, the region’s poverty rate fell in the middle of the pack of its competitor metros, and was more than a full three percentage points lower than the national rate. But over the ten-year period from 2002 to 2012, the region’s total poverty rate increased by 5.9 percent percentage points – the highest of all the comparison geographies and more than two percentage points higher than the nationwide increase. Child poverty experienced a correspondingly large increase as well, nearly doubling from 11.3 percent to 21.1 percent. While just slightly more than one in ten children resided in poverty in 2002 across the Indianapolis region, more than one in five children lived in poverty in 2012. These are incredibly troubling trends that illustrate the critical link between educational improvement, personal income, and overall community well-being.

FIGURE 15: TOTAL AND CHILD POVERTY RATES (2002-2012)

	Total Poverty (All Ages)			Child Poverty (Ages 0 -17)		
	2002	2012	Change	2002	2012	Change
Indianapolis, IN MSA	8.9%	14.8%	5.9%	11.3%	21.1%	9.7%
Columbus, OH MSA	9.7%	15.4%	5.6%	10.9%	17.5%	6.6%
Denver, CO MSA	8.5%	12.6%	4.1%	10.9%	17.5%	6.6%
Nashville, TN MSA	10.7%	14.6%	3.9%	14.1%	20.7%	6.7%
Indiana	9.6%	15.5%	5.9%	11.9%	22.1%	10.2%
United States	12.1%	15.9%	3.8%	16.7%	22.6%	5.9%

Source: U.S. Census Bureau

For all the talk and focus that is placed on job creation, the ultimate goal of economic development is personal wealth creation. Attracting job opportunities to the region will require a highly skilled, knowledge-based workforce to meet future employers' demands; an available, highly educated workforce is critical to the region's ability to support economic diversity and continue to drive regional innovation. But economic prosperity is not simply derived from "high wage" job creation or those with advanced degrees. The placement of a previously unemployed individual with limited skills in a job requiring little formal education takes an individual earning zero income (aside from social assistance) to potential self-sufficiency. The attainment of a high school diploma for an individual that is considering dropping out will change their lifetime employment prospects. Quite clearly, the region's struggles in improving educational attainment levels have impacted personal and collective, community well-being. Both from the standpoints of workforce sustainability and economic prosperity for all, it is clear that the region must keep pace with its peer benchmark metros, in terms of rising educational attainment levels, to maintain future competitiveness and ensure all of the region's residents have access to its highly regarded quality of life.

6. GROWTH & DIVERSITY: THE INDIANAPOLIS REGIONAL ECONOMY

Although the Indianapolis region has lagged behind its peer communities in terms of population growth, improvements in educational attainment, and per capita income growth, the overall economic climate of the Indianapolis region is positive. Its economic diversity is a strength, yet certain characteristics of its changing economic composition – most notably the decline of its manufacturing sector – is concerning as goods production is historically a source of high wage employment opportunity for those with little or no formal education beyond high school, a group that comprises more than 40 percent of the region’s adult population.

Generally speaking, the Indianapolis region weathered the Great Recession comparatively well. Between 2007 and 2009, total employment in the Indianapolis region declined by 3.7 percent, a smaller decline than all comparison geographies except Denver (-2.9 percent). Over a ten year that includes the Great Recession and subsequent recovery (2003 – 2013), the Indianapolis region added 66,043 jobs. Meanwhile, the rest of the state of Indiana lost more than 50,000 jobs.

FIGURE 16: TOTAL EMPLOYMENT, 2003-2013

			Recession (2007-2009)		Post-Recession (2009-2013)		10-Year (2003-2013)	
	2003	2013	Net Change	% Change	Net Change	% Change	Net Change	% Change
Indianapolis MSA	942,976	1,009,019	-36,707	-3.7%	48,508	5.1%	66,043	7.0%
Columbus MSA	989,203	1,030,690	-40,176	-3.9%	49,755	5.1%	41,487	4.2%
Denver MSA	1,277,136	1,408,825	-40,148	-2.9%	81,663	6.2%	131,689	10.3%
Nashville MSA	825,997	914,631	-46,780	-5.2%	60,879	7.1%	88,634	10.7%
Indiana	3,120,602	3,136,025	-202,596	-6.3%	120,227	4.0%	15,423	0.5%
United States	144,264,213	149,927,264	-7,047,985	-4.6%	4,303,799	3.0%	5,663,051	3.9%

Source: Economic Modeling Specialists, Inc. (EMSI)

Not surprisingly, this growth has not been spread equitably throughout the region. In terms of total employment, counties in the Indianapolis region can be divided into three categories: rapid growth, moderate growth, and low to no growth.

Leading the region’s economic growth are the rapid growth counties: Boone, Hamilton, and Hendricks counties. Combined, these three counties account for 86.7 percent of net new jobs created over the last decade (2003-2013). All three counties were relatively unaffected, as far as total employment is concerned, by the Great Recession. Boone (4.0 percent) and Hendricks (5.2 percent) counties both saw significant job growth during the Great Recession (2007-2009), countering the harshest economic climates in decades. All three counties have witnessed an extraordinary post-recession recovery, driving regional employment growth as a whole. Boone County grew by 18.8 percent while Hendricks County (12.5 percent) and Hamilton County (8.0 percent) outpaced the region’s overall growth (5.1 percent).

The region’s medium growth counties include Hancock and Johnson. These counties have exhibited strong post-recession recoveries. After employment declined by 4.0 percent during the Great Recession (2007-2009), Hancock County grew by 8.9 percent post-recession, adding 1,901 new jobs to the local

economy. Johnson County experienced a similar trend. After losing 4.0 percent of its total employment during the recessionary period, Johnson County grew by 10.8 percent over the last four years (2009-2013).

Growth within the retail trade and food services sectors (sectors that typically accompany population growth) have driven much of the gains in these high and medium growth counties, but not exclusively. Manufacturing, transportation and warehousing, and professional, scientific, and technical services have also shown gains in some of these counties.

At the other end of the spectrum are the region's low to no growth counties. With the exception of Madison and Putnam who suffered pre-recession employment declines, the Great Recession was a crucial turning point for Brown, Marion, Morgan, and Shelby counties. All four counties were growing up until the Great Recession's impact rippled throughout the nation and across the globe. These low to no growth counties experienced post-recession recoveries that ranged from lackluster to non-existent. Marion County is a prime example. After growing by 1.4 percent before the recession (2003-2007), total employment in Marion County declined by 5.1 percent during the recession (2007-2009). Marion County remains mired in a relatively sluggish recovery. The county's total employment grew by just 3.4 percent since the Great Recession (2009-2013). Morgan and Shelby counties performed similarly, with employment growth up until the recession, steep employment loss during the recession, and comparatively lackluster job growth post-recession. Other communities within the region were not so lucky, Brown and Madison counties both continue to lose jobs as the region as a whole recovers. Total employment in Brown County declined by 6.5 percent post-recession while Madison County (-3.0 percent) suffered a less significant decline.

Overall, job growth across the region is unquestionably robust. However, given the region's challenges in elevating incomes over the last decade, it is important to examine the composition of that growth by sector. And generally speaking, business sectors where wages are lower than the regional average have driven job creation across the region. Over the last ten years (2003-2013), 84 percent of net new job creation across the region occurred in business sectors whose average annual earnings (wages and supplements) were below the regional average for all sectors (\$54,663).

This is not to say that job growth is not occurring in sectors that provide regional workers with high earnings potential. For example, health care and social assistance employers added 16,552 jobs regionally, a gain of 15.2 percent during this time period. In comparison, the national healthcare and social assistance sector grew by just 10.2 percent. Employees of the regional healthcare and social assistance sector earned, on average, \$58,902 per year, or \$4,239 per year more than the regional average (\$54,663). Further, health care is one of the few sectors in which average regional earnings exceed the national average. Other growing, high earning potential sectors include professional, scientific, and technical services (10,145 jobs added between 2003 and 2013; \$82,693 average annual earnings) and transportation and warehousing (10,189 jobs added; \$50,630).

Substantial employment losses in Indianapolis's manufacturing sector (-20.7 percent between 2003 and 2013), wholesale trade (-2.8 percent), and finance and insurance (-8.0 percent) are concerning especially given the average earnings for workers in these sectors. One out of every five manufacturing jobs that existed in the Indianapolis region in 2003 is no longer in the regional economy today. Steep losses in the region's motor vehicle parts manufacturing sector are partly to blame, accounting for 8,765 jobs lost in the

manufacturing sector alone (-23,035). Pharmaceutical and medicine manufacturing (-1,595), plastics product manufacturing (-1,847), and engine, turbine, and power transmission equipment (-1,825) were also large contributors to job losses in the region's manufacturing sector. These declines are especially concerning given that regional manufacturing workers, on average, earned \$91,404 per year.

Continued decline in high wage sectors may further limit the Indianapolis region's capacity to raise standards of living for its residents. Moreover, manufacturing is typically a source of high wage employment opportunity for workers without a high school diploma or four-year degree. The decline of the manufacturing sector may cause workers with lower levels of educational attainment to seek out employment opportunity in lower wage sectors such as retail trade (\$32,075 average annual earnings) or transportation and warehousing (\$50,630). Alternatively, they could look for work outside the region. Fortunately, certain skill sets within manufacturing and transportation/distribution sectors are somewhat transferable, but clearly the earnings are not comparable in many instances. Without question, the changing composition of jobs partially explains the region's troubles in elevating incomes.

FIGURE 17: EMPLOYMENT BY SECTOR, INDIANAPOLIS REGION (2003-2013)

Sector	Jobs (2013)	Net Change in Jobs (03-13)	% Change in Jobs (03-13)	US % Change in Jobs (03-13)	LQ (2013)	Annual Earnings (2013)	Earnings % of US (2013)
Ag./Forestry/Fishing/Hunting	4,694	(258)	-5.2%	-2.9%	0.37	\$35,237	110.9%
Mining/Quarrying/Oil/Gas Extract.	594	(177)	-23.0%	60.3%	0.11	\$62,874	54.9%
Utilities	3,648	(157)	-4.1%	-4.8%	0.99	\$131,238	102.1%
Construction	52,150	(7,623)	-12.8%	-12.6%	1.01	\$57,913	106.3%
Manufacturing	88,044	(23,035)	-20.7%	-17.5%	1.07	\$91,404	120.6%
Wholesale Trade	42,359	(1,223)	-2.8%	1.4%	1.07	\$70,711	89.6%
Retail Trade	102,182	351	0.3%	-0.5%	0.97	\$32,075	96.6%
Transportation and Warehousing	54,989	10,189	22.7%	6.6%	1.69	\$50,630	88.1%
Information	16,558	(254)	-1.5%	-15.0%	0.87	\$80,658	80.8%
Finance and Insurance	45,921	(4,020)	-8.0%	-1.3%	1.11	\$85,740	82.3%
Real Estate/Rental/Leasing	17,195	(346)	-2.0%	-5.0%	1.04	\$50,068	95.7%
Professional/Scientific/Tech. Svcs.	53,909	10,145	23.2%	18.2%	0.86	\$82,693	91.9%
Mgmt of Companies/Enterprises	11,412	132	1.2%	24.5%	0.82	\$112,098	86.4%
Administrative and Support*	79,235	21,346	36.9%	8.9%	1.29	\$34,408	88.3%
Educational Services (Private)	21,436	7,832	57.6%	25.4%	0.84	\$37,669	86.0%
Health Care and Social Assistance	125,293	29,864	31.3%	24.6%	1.01	\$58,902	109.7%
Arts/Entertainment/Recreation	15,828	1,229	8.4%	11.3%	0.96	\$47,165	133.1%
Accommodation/Food Svcs.	84,842	11,577	15.8%	16.1%	1.03	\$18,202	86.1%
Other Svcs. (excl. Public Admin.)	53,741	3,080	6.1%	2.3%	1.09	\$28,446	98.7%
Government	134,988	7,410	5.8%	1.8%	0.83	\$59,274	86.8%
Unclassified Industry	<10	-	-	-6.9%	-	\$20,051	32.3%
Total, all sectors	1,009,019	66,043	7.0%	3.9%	-	\$54,663	-

Source: Economic Modeling Specialists Inc. (EMSI)

Note: Location quotients (LQs) are a ratio of the region's share of employment in a given business sector divided by that same sector's share of total national employment. A location quotient greater than 1.0 indicates that the region's share of employment in a given sector is greater than the average American community, and may be a sign that the region affords businesses in this sector with some level of competitive advantage.

On the positive side, the regional economy is relatively diverse; no one business sector in the Indianapolis region dominates the regional economy. Dependence on a single, or a few, economic sectors increases a region's susceptibility to adverse economic conditions which impact a single, or a few, economic sectors. For example, the decline in the United States' steel sector caused significant job losses in many communities throughout the United States who depended upon steel manufacturing activity as their primary employment source. Gary, Indiana, for instance, remains in economic duress as a result of U.S. Steel shuttering its operations in the community. Diversity is critical to ensuring future economic prosperity and sustainability.

At the same time, the promotion of specialization in certain sectors, particularly those that are projected to expand in the decades to come, can help position the region for greater economic prosperity. Location quotients (LQs) are frequently used to evaluate the relative specialization of a regional labor force. Location quotients (LQs) are a ratio of the region's share of employment in a given business sector divided by that same sector's share of total national employment. A location quotient greater than 1.0 indicates that the region's share of employment in a given sector is greater than the average American community, and may be a sign that the region affords businesses in this sector with some level of competitive advantage.

Transportation and warehousing (LQ = 1.69) is the Indianapolis region's most concentrated sector, driven largely by the presence of Federal Express' national distribution hub and the associated economic activity that it has attracted and generated. Other concentrated sectors of the economy, albeit less so, include administrative and support services (29 percent more concentrated than the national average) and finance and insurance (11 percent). While the region possesses just three highly concentrated employment sectors, employment growth trends do indicate that certain sectors are gaining specializing relative to the average American community, potentially evidence of growing competitive advantage.

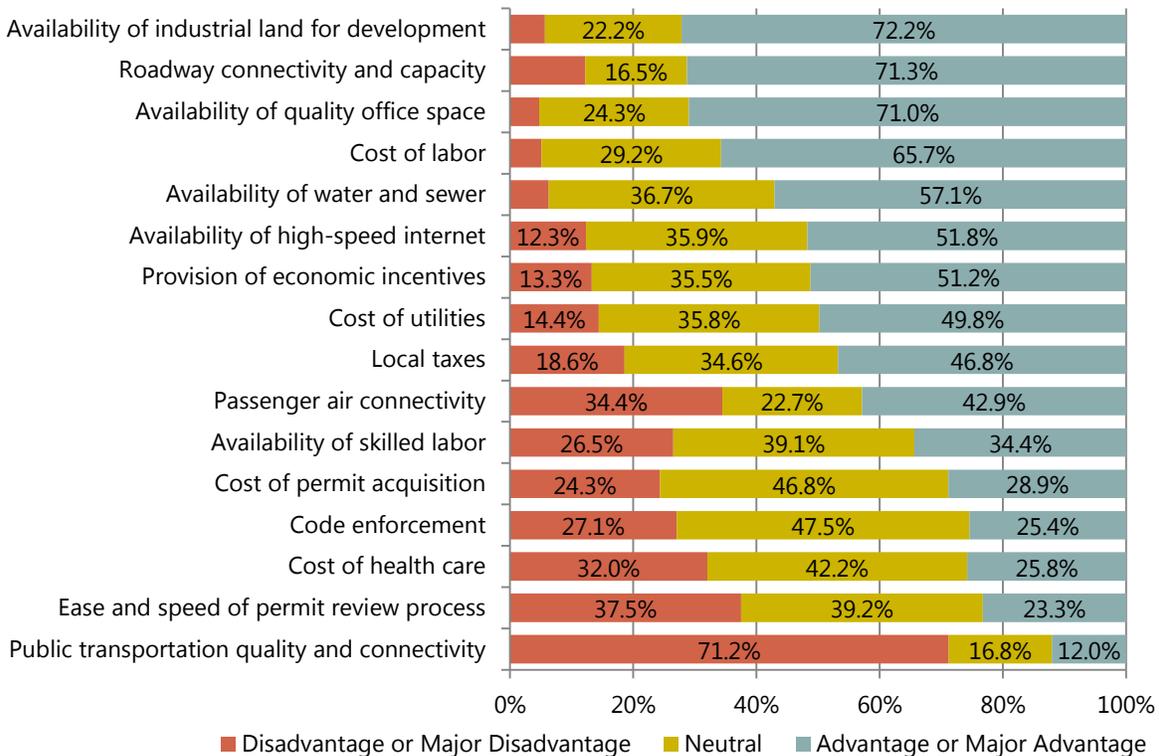
Ten-year growth rates in health care and social assistance (31.3 percent regionally vs. 24.6 percent nationally); professional, scientific, and technical services (23.2 percent vs. 18.2 percent), transportation and warehousing (22.7 percent vs. 6.6 percent), and administrative and support services (36.9 percent vs. 8.9 percent) are outpacing their respective national growth rates, indicative of rising specialization in the region. The forthcoming Target Business Review will examine economic composition in much greater detail with an eye towards those sectors which can provide the greatest opportunities for future job and wealth creation in the Indianapolis region.

7. BUSINESS CLIMATE CONSIDERATIONS

The Indianapolis region’s economic growth is, in part, due to its competitive business climate supported regionally and within the state of Indiana. The region is increasingly viewed as a significant competitor for corporate relocations by regions such as Nashville, Raleigh, and others that seek to build on their health care and life sciences activities. Across a number of business climate factors, from tax rates to office space, business costs were generally low in the Indianapolis region compared to its benchmark peers. However, business leaders and entrepreneurs also find that the strength of the regional business climate is, in part, due to the strong social networks forged by the business community.

Business leadership participating in public input generally noted that the business climate in Indianapolis is more favorable than many other metropolitan areas in which they’ve worked. Focus group participants frequently mentioned the “openness” of the business community and its willingness to help one another, praising this interconnectedness of the business community and acknowledging its impact on their commitment to the region and its betterment. In fact, just 3.5 percent of business leaders responding to the survey indicated that it was likely that their business would relocate outside of the Indianapolis region in the next five years. Further, 68.6 percent indicated that they are likely or highly likely to add employees in the Indianapolis region in the next five years. These figures are nearly identical to the responses received by business leadership in the Nashville region during a similar survey conducted in July 2014.

FIGURE 18: SURVEY RESULTS – “PLEASE RATE THE FOLLOWING ELEMENTS OF THE INDIANAPOLIS REGION’S BUSINESS CLIMATE ACCORDING TO THE DEGREE TO WHICH EACH IS AN ADVANTAGE OR DISADVANTAGE TO EXISTING BUSINESSES.”



Source: Market Street Services; Indianapolis Regional CEDS Survey (2014)

Question was presented to 897 individuals that self-identified themselves as owners, executives, or managers at their place of employment.



Aside from this openness, a variety of other more measurable attributes are contributing to stakeholders' positive perceptions of the regional business climate. Business leaders responding to the online survey indicated that interstate connectivity, available industrial land, quality office product, and costs of labor were key factors contributing to the region's positive business climate.

Much of the business climate data for the Indianapolis region supports stakeholders' perceptions. Across a wide array of business climate factors, from state tax climate to electricity costs, the Indianapolis region ranks competitively in many areas, but there are also number of reasonable concerns:

LABOR COSTS: Labor costs are generally favorable, with average wages across all sectors roughly \$4,000 lower than the national average. However, the prevailing average manufacturing wage is comparatively high (roughly seven percent higher than the national average). Manufacturing operations in the Indianapolis region are, however, concentrated in subsectors such as pharmaceutical and jet engine turbine manufacturing that typically pay above average manufacturing wages. This is to say, that while manufacturing employees do earn comparatively higher wages, they also likely possess more specialized skills. Focus group participants from the manufacturing sector were generally concerned that labor costs would curtail the region's capacity to maintain manufacturing operations. However, just 6.5 percent of survey respondents from the manufacturing sector indicated that labor costs were a disadvantage or major disadvantage. This is one, if not the only, area of public input where certain sources of input were in direct conflict with one another.

LABOR PRODUCTIVITY: One reasonable explanation for the comparatively high manufacturing wage, in addition to the fact that many dominant subsectors require more specialized skills, is the fact that labor productivity is exceptionally high in the region. When measuring output (gross metropolitan product) per employee in the Indianapolis region, the average workers supports more than \$119,000 in output, far exceeding the national average (\$101,688). But when examining output per dollar of wages paid, the region's workers produce \$3.01 in output for every dollar in wage paid. This greatly exceeds the national average (\$2.35) and is higher than all comparison regions ranging from \$2.16 to \$2.80).

OFFICE AND INDUSTRIAL SPACE: Office space is relatively affordable (\$15.84 per square foot; 2nd lowest among the four regions analyzed) but industrial space is comparatively high (\$6.06 per square foot; 2nd highest among the four regions analyzed). Comparatively high costs for industrial space, along with higher than average labor costs, may place unsustainable financial pressures on regional manufacturers further exacerbating employment declines within the sector. However, it is likely that the relatively high lease rates for industrial and warehouse space may come down in the near future as more speculative development picks up. Such construction of speculative space came to a halt during the Great Recession, placing some upward pressure on rents for existing space.

UTILITY RATES: Average commercial and industrial utility rates are competitive with nearby states and those that are offered by providers in the competitor regions.

SITE SELECTOR PERCEPTIONS: The state of Indiana ranks favorably in a variety of business climate rankings compiled from interviews with corporate executives and site selection consultants. While these rankings are largely based on opinion, there are nonetheless relevant to the discussion of how the region is perceived by outsiders. *Site Selection* magazine placed the state of Indiana 7th in the country in their 2013

Top Business Climate Rankings while *Area Development* magazine also ranked Indiana 7th in its 2014 Site Consultants Survey.

TAX CLIMATE: The region is competitive relative to its peer metros in terms of corporate tax burden. KPMG, an audit, tax, and advisory services firm, recently assessed 74 cities in the United States based on the total tax costs borne by businesses within a city. The assessment resulted in the total tax index, a measure which combines corporate income tax, other corporate taxes, and statutory labor costs into a single index value. An index value of 100 represents the United States baseline rate, as calculated by KPMG. With an effective tax rate of 58.3 percent, the city of Indianapolis holds the 26th lowest total tax index out of the 74 United States cities studied by KPMG. The city's tax rate outperformed both Denver (62.8 percent) and Nashville (60.3 percent), while the city of Columbus went unranked.

FIGURE 19: KPMG COMPETITIVE ALTERNATIVES TOTAL TAX INDEX (2014)

	Total Tax Components				Total Tax Index	
	Corporate Income Tax	Other Corporate Taxes	Statutory Labor Costs	Total Effective Tax Rate	Index Value	Rank
Indianapolis, IN	29.4%	10.7%	18.1%	58.3%	86.7	26
Columbus, OH*	-	-	-	-	-	-
Denver, CO	28.4%	14.3%	20.1%	62.8%	93.4	52
Nashville, TN	29.9%	11.1%	20.3%	60.3%	89.7	37

Source: KPMG

*KPMG did not provide data for the City of Columbus, OH.

While the City compares relatively favorably to certain comparison communities in terms of total tax burden, the City and region are at a disadvantage relative to competitors in other states where local communities have home rule, the ability to raise local option sales taxes, and in turn, greater flexibility to finance local needs from infrastructure systems to public schools to public transportation. This has, in part, contributed to a structural deficit in the City of Indianapolis and other jurisdictions.

Although this lack of local control in revenue generation is clearly an inhibitor to the region's ability to provide the highest-quality infrastructure and services to its residents, the Indianapolis region provides a relatively competitive environment to attract, retain, and expand businesses. However, the region's greatest strength and weakness, from a business climate perspective, is arguably the region's transportation infrastructure. The following section will examine this dichotomy in greater detail.

8. TRANSPORTATION INFRASTRUCTURE: AN ASSET AND A CHALLENGE

Without question the Indianapolis region holds a significant competitive advantage for moving *goods* and raw materials around the nation and across the globe. However, it is the region's capacity to move *people* within the region via alternative modes of transportation that is comparatively underdeveloped.

The region's central location was frequently identified by focus group participants as a key competitive advantage. Further, 72.4 percent of business leaders responding to the online survey cited the region's roadway connectivity and capacity as an advantage or major advantage, the second most favorably rated element of the region's business climate. And without question, the presence of Federal Express' distribution facility affords businesses within the Indianapolis region with air cargo capacity that is bettered by only two regions in the country: Memphis (home to Federal Express' international hub) and Louisville (home to United Parcel Service's international hub).

The FedEx Express facility and Indianapolis International Airport are clearly catalysts for distribution and logistics firms choosing to invest in the Indianapolis market. Amazon recently opened a fulfillment center proximate to the airport and AmeriPlex-Indianapolis is a 6 million square feet business park occupied by a variety of companies such as Allison Transmission and PepsiCo. With a multitude of speculative warehousing facilities proximate to Indianapolis International Airport, it is likely that distribution and logistics firms will find ample product to locate or expand their operations in the region.

FIGURE 20: PRIMARY AIRPORT STATISTICS (JUNE 2009-JUNE 2014)

	Nonstop Destinations	Passenger Departures			Freight	
		Total (2014)	Per 1,000 Residents	5-Yr Change	Total Freight** (2014)	5-Yr Change
Indianapolis, IN MSA	35	3,505,000	1.8	-8.0%	1,990,000,000	10.8%
Columbus, OH MSA	29*	3,044,000	1.5	-1.6%	10,000,000	-16.7%
Denver, CO MSA	114	24,796,000	9.1	9.1%	509,000,000	-1.9%
Nashville, TN MSA	52	5,142,000	2.9	17.9%	86,000,000	4.9%

Source: Bureau of Transportation Statistics

*Passenger only, does not include seasonal flights

**Figures are in pounds.

In terms of passenger air service, the region offers the third highest number of non-stop destinations (35) among the competitor metros. Accounting for the region's various population sizes, the Indianapolis International Airport (1.8 passengers per 10,000 residents) handled fewer passengers than Nashville (2.9) and Denver (9.1). However, it is important to recognize that total departures at hub airports – such as Denver International Airport (national or regional hub for United Airlines, Frontier Airlines, and others) – are inflated by the number of individuals making connections through the airport. While Denver's status is important to acknowledge as hub airports are, generally speaking, able to provide greater direct connectivity to residents and businesses (as evidenced by the considerably larger number of nonstop destination at Denver International), total passenger departures does not reflect the relative utilization of the airport as an origin and a final destination for passengers. Data reported by the Indianapolis International Airport reveals that per capita origins and destinations in 2014 (2.03) were much closer to competitor airports in Nashville (2.39) and Denver (6.08) than the ratios of total per capita passenger enplanements as reported in the table above.

Along with the airport, the region is also adequately served by rail. CSX is the region's primary provider connecting the Indianapolis market to other rail providers within the state of Indiana – Norfolk Southern also has a significant transportation network proximate to the region along with providing time saving east-west connections to Chicago and other metropolitan markets. Combined with an interconnected network of roads, businesses within the Indianapolis region benefit from a highly interconnected transportation network with many quality options.

Focus group participants admitted that the upkeep of the local road and highway network is an issue, citing an abundance of potholes as a primary concern. With survey respondents evaluating roadway capacity and connectivity as a key competitive advantage, it is clear that maintenance of this capacity is where residents and businesses expect to see focused investment. As distribution and logistics firms continue to locate and expand in the area, it is crucial that the region maintain the quality of its road and bridge infrastructure to ensure that both residents and businesses are able to move inter- and intra-regionally.

Almost every focus group identified the lack of mass transportation options and the "infrequent" and "unreliable" service of IndyGo as a major competitive disadvantage. Different constituencies voiced their concern in different ways. For instance, higher education leaders expressed concern about their ability to attract students who desire an interconnected urban experience where a car is not a requirement to move about the region. Entrepreneurs, on the other hand, voiced difficulty competing against highly urbanized areas with extensive public transportation infrastructure for start-up workers, while young professionals asserted that the dearth of public transportation directly diminished their quality of life. Others lamented the recently-discontinued commuter bus service provided by the Central Indiana Regional Transportation Authority (CIRTA) between Carmel and Indianapolis; the line was unable to generate enough local revenue to overcome the loss of significant federal funding in the last year.

Stakeholders, however, did point out positives. Pacers Bike Share, a downtown bike share program that features 250 bikes and 25 stations, and BlueIndy, an all-electric car share program, were seen as positive improvements to the region's accessibility and mobility. Moreover, community stakeholders noted that the upcoming transportation referendum could be a catalyst for improving the region's overall connectivity.

FIGURE 21: PRIMARY PUBLIC TRANSIT OPERATIONS (2012)

	General Information		Bus Usage Data				
	Service Population	Service Sq. Miles	Total Fare Revenues	Annual Passenger Miles	Annual Unlinked Trips	Annual Miles Per Resident	Annual Trips Per Resident
Indianapolis, IN MSA	911,296	396	\$10,358,182	42,422,076	9,981,918	46.6	11.0
Columbus, OH MSA	1,081,405	337	\$19,283,371	70,809,418	18,423,352	65.5	17.0
Denver, CO MSA	2,619,000	2,326	\$82,690,545	402,936,225	76,716,999	153.9	29.3
Nashville, TN MSA	626,681	484	\$9,597,966	47,124,618	9,273,784	75.2	14.8

Source: National Transit Database

*Includes data for bus transportation only – rail, demand response, and other modes are excluded.

In terms of size as measured by its service area, IndyGo, the region's primary public transportation organization, is fairly comparable to respective transportation systems in Columbus and Nashville. However, in terms of usage, IndyGo trails its competitors. Indianapolis' annual passenger miles totaled just 42.4 million in 2012. Columbus (70.8 million passenger miles) and Nashville (47.1 million) were more heavily utilized. Accounting for population size, the average Indianapolis resident utilized public transit just 11 times in 2012. Residents of Columbus (17.0 trips per resident per year) and Nashville (14.8 trips) tended to use their respective public transportation systems more frequently.

The Denver Regional Transportation District remains the outlier of the comparison benchmarks. Leaders within the Denver area made a significant commitment to constructing a true, regional public transportation network at significant cost borne by the entire region. By 2012, The Denver Regional Transportation District covered 2,326 square miles and provided service to 2.6 million residents. Annual passenger miles totaled 402 million, or 153.9 miles per resident per year. The average Denver resident accessed public transportation service 29.3 times in 2012. As these figures suggest, Denver's transportation network is a best-in-class system and the envy of many communities plagued by high traffic or an otherwise disconnected urban landscape.

Survey respondents overwhelmingly identified public transportation as the biggest economic development challenge limiting the region's ability to grow quality jobs and elevate standards of living. The following graphic displays differently sized words – the size of the word is based on the frequency in which they were used in the open-ended survey response. For instance, "public transportation" was used 135 times while "workforce" was used 59 times.

FIGURE 22: SURVEY RESULTS – "FROM THE STANDPOINT OF ECONOMIC DEVELOPMENT, WHAT DO YOU BELIEVE TO BE THE BIGGEST CHALLENGE FACING THE INDIANAPOLIS REGION AS IT SEEKS TO GROW QUALITY JOBS THAT ELEVATE STANDARDS OF LIVING FOR ITS RESIDENTS?"



Source: *Market Street Services*; Indianapolis Regional CEDS Survey (2014)

Public transportation and place making are intricately linked. Walkable neighborhood centers and mixed-use development, increasingly desired by the millennial generation, are greatly assisted by a diverse array of transportation options that connect residents and visitors to different areas of a region. Many communities across the country have developed "complete streets" initiatives to better balance all modes of transportation including walking, biking, and automobile transportation. This is all to say that the diversity of transportation options impact residents' real, and perceived, quality of life. As the Indianapolis region competes for talent with major metropolitan areas who boast significant public transportation infrastructure, such as Denver, the region's employers could find it increasingly difficult to attract prospective workers, especially the highly sought after millennial generation.

9. IN SEARCH OF ENTREPRENEURS: BUILDING A STARTUP CULTURE

Entrepreneurs and technology stakeholders in focus groups were especially apt to draw the connection between public transportation and talent attraction/retention relative to other stakeholders in the community. A 2014 report by Jones Lang LaSalle titled “High-Technology Office Outlook” identified the absence of public transportation as a negative for the Indianapolis region’s entrepreneurial ecosystem. Communities with the most vibrant startup cultures are often among those with that have been most successful at attracting and retaining top talent. This should come at no surprise. In this respect, regions are in intense competition for workers who are highly skilled, willing to accept significant personal and financial risks, and are prone to either start up a business or work for a fledgling, high growth company. Regions that are competitive for this talent provide quality of life amenities sought after by these highly mobile workers and are widely regarded as a place to live as well as start an entrepreneurial venture. The Indianapolis region’s entrepreneurs and community stakeholders drew strong linkages between the region’s quality of life, its brand recognition, and their ability to attract and retain tomorrow’s startup talent.

Stakeholders from the technology and startup communities noted that, while on college campuses within the state of Indiana, they regularly compete with tech companies from other markets that are willing to fly out prospective talent to let them experience the region’s quality of life for the weekend, all expenses paid. These companies leverage not only their assets, whether it is R&D facilities or state-of-the-art workspaces, but also their region’s lifestyle. Make no mistake – to obtain tomorrow’s best and brightest, the Indianapolis region is in direct competition with metropolitan areas that are larger and able to offer significant entertainment and cultural amenities, as well as mass transit, to attract startup and tech talent.

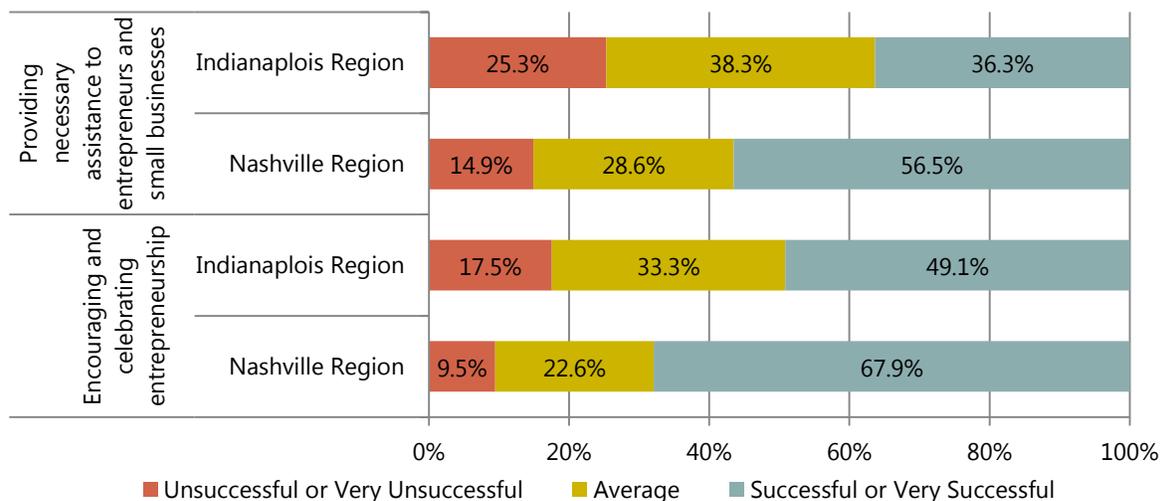
But among the startup community, there is optimism that the region is not only developing attractive amenities but building a startup support system that can help advance the proliferation of more successful small businesses. Organizations such as Speak Easy, TechPoint, the Verge, and Launch Fishers were highlighted as key assets to the region’s emerging entrepreneurship culture. Entrepreneurs also noted that they are able to impact the region in a meaningful way; business leaders and decision makers are willing to sit down with entrepreneurs to openly discuss ideas or plans whether it deals with a new startup or the community at large. This is unquestionably a positive aspect of the region’s corporate culture. But as mentioned in the opening section to this Assessment, concerns abound that the region and the state of Indiana as a whole is not viewed as place that is innovative or “culturally sophisticated.”

Although proud of the growing organizational capacity, entrepreneurs noted that this capacity and culture that it seeks to develop it’s highly fragmented. Focus group participants noted a distinct absence of a single organization that coordinates the regional entrepreneurship community, serves to promote entrepreneurs locally and nationally, and acts as a one-stop shop for entrepreneurial services. While many focus group participants identified the Business Ownership Initiative (BOI) as an important asset for the community’s entrepreneurial culture, others found that the services it offers are “too basic” for certain sectors or particularly high growth, high risk ventures.

Overall, the respondents to the online community development survey rated the region’s ability to champion and support entrepreneurship favorably. As the chart below shows, nearly half of all survey respondents (49.1 percent) rate the region’s ability to encourage and celebrate entrepreneurship as

successful or very successful, whereas just 17.5 percent felt that the region was unsuccessful or very unsuccessful in this regard. Survey respondents rated the region’s capacity to provide necessary assistance to entrepreneurs and small businesses less favorably. Only 36.3 percent of respondents thought the region successfully or very successfully furnished this assistance. The same question was posed to business leadership in the Nashville region during a survey conducted in July 2014. Across both areas, Nashville’s business leadership evaluated their climate for entrepreneurship much more favorably than their counterparts in the Indianapolis region.

FIGURE 23: SURVEY RESULTS – “IN YOUR OPINION, PLEASE INDICATE THE DEGREE TO WHICH YOU BELIEVE THAT THE REGION HAS BEEN SUCCESSFUL IN THE FOLLOWING AREAS.”



Source: Market Street Services; Indianapolis Regional CEDS Survey (2014); Nashville Regional Economic Development Survey (2014)
 Note: Along with all business climate questions, this question was only presented to executives, managers, and business owners in each region.

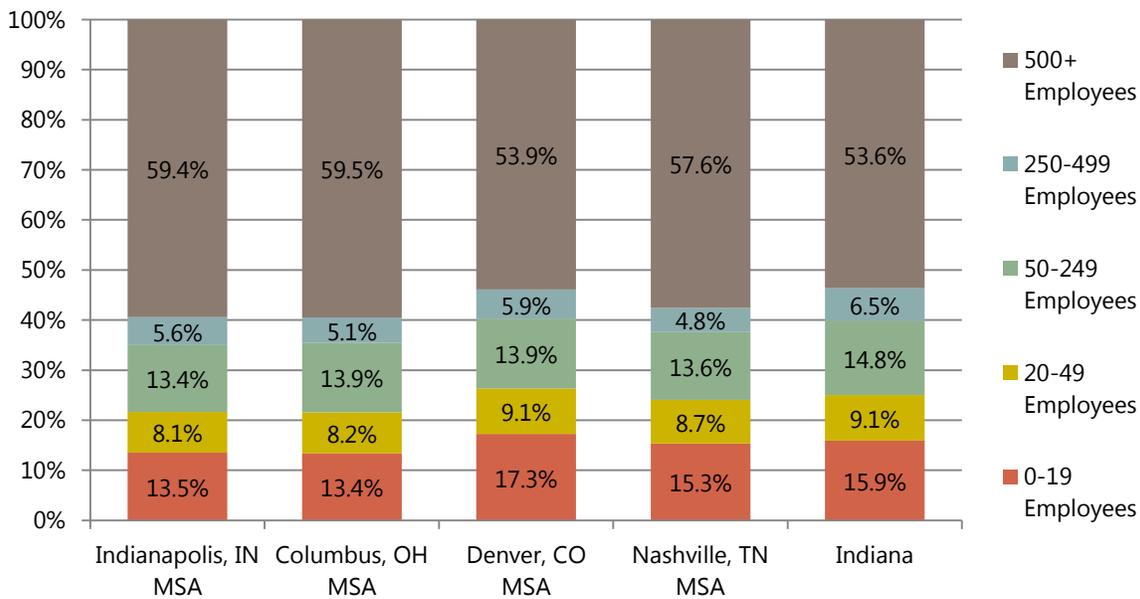
A variety of data points support stakeholder assertions that the region’s entrepreneurial culture is still in an emerging stage of development. No single indicator perfectly captures entrepreneurship activity and culture in a regional economy. Instead, many factors combine to provide a glimpse at entrepreneurial activity, including self-employment, the types of firms contained within the local economy, and venture capital and commercialization activity in the region. Across a variety of metrics, the Indianapolis region’s entrepreneurship ecosystem appears underdeveloped relative to its peer communities. This is not to say that Indianapolis cannot be known as a hotbed for innovation and entrepreneurship, or that the region is without numerous success stories. Rather, it suggests that the region has significant ground to cover if it wishes to gain national recognition as a premier location for startups.

SELF-EMPLOYMENT: According to EMSI, roughly 52,190 Indianapolis workers were self-employed, representing 5.2 percent of the region’s total workforce. Self-employment represented a larger share of the Denver (6.7 percent), Nashville (7.1 percent), and the national (6.6 percent) workforce. Self-employment is not the sole indication of entrepreneurship, but it does serve as proxy metric for the local workforce’s proclivity to start their own business or assume some level of personal risk. Understanding the types of firms that workers gravitate towards provides further insight into the region’s entrepreneurship ecosystem.

FIRM SIZE: The subsequent chart leverages employment data published by the Census Bureau through its Quarterly Workforce Indicators program. The data offers insight into the types of firms that comprise the majority of employment and the extent to which workers favor small firms. As the results show, relative to its benchmark communities and the nation, the Indianapolis region’s workers tend to be employed in large enterprises with 500 employees or more.

Roughly 60 percent of the region’s employees work for firms with 500 or more employees. But of course, many of these large enterprises are the consequence of successful “homegrown” entrepreneurial endeavors; others still may adopt an internal culture of entrepreneurship. Nevertheless, the high percentage of employment concentrated in 500+ employee firms does corroborate internal and external perceptions that the region’s entrepreneurship ecosystem is still developing. Consequently, small firms (0 to 19 employees) represented a larger share of total employment in both Denver (17.3 percent) and Nashville (15.3 percent) in the second quarter of 2013. Indianapolis (13.5 percent) possessed a much smaller percentage of its total employment in firms within this same size range. Overall, the distribution of its employment by firm size is remarkably similar to that of the Columbus, Ohio region.

FIGURE 24: EMPLOYMENT BY FIRM SIZE, 2Q2013⁴



Source: U.S. Census Bureau

FIRM AGE: Indianapolis employees are also more likely to be employed in older, established firms, consistent with the data on firm size. As of the second quarter of 2013, 84.1 percent of the region’s workforce was employed at firms aged 11 years or older in the second quarter of 2013. Only 8.8 percent of the Indianapolis region’s workforce is concentrated in young firms (aged 0 to 5). Employees in Denver (11.0 percent) and Nashville (11.5 percent) are more likely to be employed within young firms (ages 0 to 5 years).

⁴ Note that the state of Massachusetts does not participate in the U.S. Census Bureau’s Quarterly Workforce Indicators program, thus, national figures are unavailable.

VENTURE CAPITAL: Along with concerns related to talent attraction and the impact of quality of place, small business owners and technology workers participating in public input expressed similar levels of concern about the relative lack of venture capital available to firms in the region and the state. The data substantiates these claims. Of 34 communities studied by Jones Lang LaSalle in its “High-Technology Office Outlook,” only four communities witnessed venture capital investment lower than Indianapolis (\$6.5 million) in the second quarter of 2014. Data from the National Venture Capital Association further alludes to the dearth of investment in the state, signaling a shortage of venture capital investment. Perhaps of greater concern than the overall low levels of venture capital investment is the comparatively small share that is sourced from local venture capital investors. Just 13.7 percent of venture investments in the state of Indiana in 2013 originated from investors located within the state. Many regions have struggled with the fact that providers of venture capital will often require a firm receiving investment to relocate to their home territory so that they can be proximate to other resources including the hands-on management expertise and mentorship of serial entrepreneurs and venture capitalists. Simply put, many entrepreneurs will choose to relocate their business to “follow the money” to locations in California, New York, and Massachusetts, among others.

FIGURE 25: SOURCES OF VENTURE CAPITAL INVESTMENTS BY STATE (2013)

	Venture Capital Investments (\$millions)			% of Total	
	Out of State	In-state	Total	Out of State	In-state
Indiana	\$22.0	\$3.5	\$25.5	86.3%	13.7%
Ohio	\$245.0	\$56.7	\$301.7	81.2%	18.8%
Colorado	\$316.3	\$115.0	\$431.3	73.3%	26.7%
Tennessee	\$78.9	\$30.4	\$109.3	72.2%	27.8%

Source: National Venture Capital Association

Furthermore, although the data illustrate that total investment in Indiana-based companies has risen over time in recent decades (from an average of \$12 million annually between 1985 and 1990 to \$64 million from 1995-2000 to \$84 million from 2005 to 2010), the state’s relative position has changed little. The state of Indiana ranked 23rd in total venture capital investments in 1990, 28th in 2000, and 25th in 2010. On a per capita basis, the state comes out even lower (35th in 2010).

HIGHER EDUCATION AND ITS ROLE IN THE INNOVATION ECOSYSTEM: Research-intensive higher education institutions are also heavily engaged in innovative activity. Certainly, Indiana University, Purdue University, and Ball State University are assets to the region. However, it is difficult to ascertain from the available data the extent to which these institutions’ technology development and subsequent commercialization contributes to the region’s economic output. Based on the manner in which research and commercialization activities are classified – by institution, not campus – it is difficult to distinguish which activities occur in the Indianapolis region and how much of this activity occurs within the institution’s main campus location. The Association of University Technology Managers (AUTM), the primary source for university commercialization data, did not disclose commercialization activity data for any campuses principally located in the Indianapolis region. Figures for Ball State University, Indiana University, and Purdue University are provided in order to provide context.

Universities proximate to Indianapolis were relatively productive in a variety of commercialization measures: new startups, invention disclosures, patent activity, and licensing activity. Of the three comparison regions, the Denver metropolitan area (home to the following reporting institutions: University of Colorado, Colorado School of Mines, and Colorado State University) is clearly the closest competitor. Data for the Columbus region reflects activity at Ohio State University and Ohio University, while data for the Nashville region only reflects the activity at Vanderbilt University. **Despite these comparatively favorable figures, stakeholders occasionally mentioned a desire to see greater emphasis placed on commercialization and particularly business-academic partnerships in a variety of fields.**

FIGURE 26: UNIVERSITY COMMERCIALIZATION ACTIVITY (2013)

	Total Research Expenditures	Licenses and Options Executed	Startups	Invention Disclosure	U.S. Patents Issued	New Patent Apps	License Income Received
Ball State University	\$11,740,000	0	0	16	0	2	\$0
Indiana University	\$453,713,330	38	13	202	12	141	\$7,102,376
Purdue Research Fndn	\$627,486,000	77	5	356	52	175	\$4,855,772
Indianapolis, IN MSA	\$1,092,939,330	115	18	574	64	318	\$11,958,148
Columbus, OH MSA	\$966,517,517	33	9	349	50	408	\$2,884,879
Denver, CO MSA	\$1,246,926,423	85	18	373	52	393	\$34,005,837
Nashville, TN MSA	\$536,586,634	62	5	190	40	105	\$10,013,743

Source: Association of University Technology Managers

As the region focuses on developing a more robust startup culture, keeping what activity does emerge from the region is of vital importance. And as previously mentioned the region is home to many such success stories. Relative to more established, larger enterprises, startups and entrepreneurs are remarkably footloose. And this is precisely why entrepreneurs and technology sector stakeholders are as concerned, if not more concerned, about the region's image and a variety of quality of life factors – not simply its business climate or available small business resources.

10. QUALITY OF LIFE IN THE INDIANAPOLIS REGION

Community stakeholders spoke with pride about the Indianapolis region, and those who have lived in the region love its quality of life. To many residents, the Indianapolis region is a hidden gem – offering an affordable quality of life with many of the amenities that are generally reserved for metropolitan areas four to five times its size. The Indianapolis Symphony Orchestra, the Carmel Symphony Orchestra, the Children’s Museum of Indianapolis, the Indianapolis Motor Speedway, Lucas Oil Stadium, a new expansion at the Indianapolis Zoo, the NCAA Hall of Champions, and the Indianapolis Museum of Art are just a small selection of the many arts, entertainment, and cultural assets housed in the Indianapolis region. This list is growing every year, and this growth in amenities has been praised by those who see them as not only being of benefit to residents, but clearly of benefit in helping mold positive impressions for visitors to the region. After all, each visitor is a potential new resident, business owner, investor, or champion for the region and what it has to offer.

Many stakeholders demonstrated strong pride in their community and the life it affords them. The trouble is, however, relaying this pride to outside audiences. A few different stakeholders representing large employers in the region mentioned the old adage that “if you can get them here, they’ll take the position.” And without question, many visitors are leaving the region with positive impressions that are changing potentially ambivalent or even negative perceptions that were previously held.

FIGURE 27: SURVEY RESULTS – “IN YOUR OPINION, WHAT IS THE INDIANAPOLIS REGION’S GREATEST STRENGTH AS A PLACE TO LIVE, WORK, VISIT, AND DO BUSINESS?”



Source: *Market Street Services*; Indianapolis Regional CEDS Survey (2014)

Along with the region’s large cultural and entertainment amenities, focus group participants tended to gravitate toward neighborhood life when discussing which aspects of the region most enhanced their quality of life. Whether it is the Arts and Design District in Carmel, or Broad Ripple and the revitalizing Fountain Square, many residents were excited about continued investment in the region’s neighborhoods as well as the region’s place making proclivity. There was an overwhelming amount of discussion in focus groups and immense number of comments on the online survey that emphasized a desire for continued investment in place-making and developing distinct neighborhood identities. Most of this discussion

centered upon the City of Indianapolis but many also acknowledged the need for suburban and exurban areas in the region to recognize that the attributes of unique neighborhoods in the City of Indianapolis - be it walkability, nightlife, proximity to places of employment, or access to places to gather, among many others –must be embraced in future developments if these areas wish to remain competitive for new residents, particularly young professionals, that are gravitating towards these environments in the City of Indianapolis.

COST OF LIVING: When asked about the region’s greatest strength, community stakeholders and business leaders frequently cited “cost of living” as one of if not the region’s single greatest strength or asset. Often times, perceived value can be more influential than the actual cost of living in a resident’s relocation decision. Furthermore, the relatively low cost of single family housing (discussed in the subsequent paragraphs) in the region remains an attractive selling point, especially to prospective residents making a relocation decision. Nearly 60 percent of survey respondents rated the region’s overall cost of living as above average or excellent.

According to the Council for Community and Economic Research (C2ER), the Indianapolis region’s cost of living is well below the national average. In 2013, the region’s cost of living index stood at 93.8 (where a value of 100 equals the national average). However, the region’s overall cost of living was comparatively higher than Columbus (87.2) and slightly elevated compared to Nashville (90.8). More concretely, an Indianapolis resident earning \$50,000 would only need to receive an annual salary of \$47,416 in Columbus or \$47,646 in Nashville, to achieve the same quality of life standards to which they are accustomed. Driving up the region’s overall cost of living were higher health care (95.1), transportation (101.3), and miscellaneous goods and services (99.7) costs relative to the index value for all items (93.8). Housing emerged as a clear area of relative affordability when compared to the nation, but again, the Nashville and Columbus markets are similarly affordable by this measure. The high cost of housing in the Denver region is a clear differentiator in a market that is otherwise relatively similar to the average U.S. city.

FIGURE 28: C2ER COST OF LIVING INDEX (2014 Q2)

	All Items	Groceries	Housing	Utilities	Trans.	Health Care	Misc.
Indianapolis, IN MSA	93.8	92.6	81.9	96.9	101.3	95.1	99.7
Columbus, OH MSA	87.8	91.2	77.3	96.1	97.6	96.6	87.0
Denver, CO MSA	107.0	99.9	125.8	98.1	100.8	101.3	101.0
Nashville, TN MSA	90.8	97.2	76.0	92.0	92.6	84.3	99.6

Source: Council for Community and Economic Research (C2ER)

SINGLE FAMILY HOUSING: C2ER uses a specific measure for single-family home value in order to ensure apples to apples comparison for each metropolitan area it tracks. As a result, the affordability of home values covered in the cost of living index covers only a subset of a region’s housing market. The National Association of Realtors (NAR) utilize a more complete view of the housing market, hence a degree of discrepancy between the home affordability data. NAR evaluates the cost of housing (median existing single-family home price) relative to incomes (median household incomes) to arrive at its measure of housing affordability. Specifically, it measures the degree to which a family earning the area’s median income has sufficient income to qualify for a mortgage on a median-priced home assuming a 20 percent

down payment at prevailing market interest rates. An index value of indicates that the median income-earning family has just enough income to qualify for a mortgage on the median priced home, while a value above 100 signifies that a family earning the area median income earns more than enough income to qualify for a mortgage on a median-priced home. For example, a composite housing affordability index (HAI) of 160.0 means a family earning the area median income has 160% of the income necessary to qualify for a conventional loan covering 80 percent of a median-priced existing single-family home.

According to NAR, a family earning the median household income in the Indianapolis region possesses more than two times the income needed to qualify for a mortgage on a median-priced single family home, assuming a 20 percent down payment. With an index value of 262.5 in 2013, single-family housing in the Indianapolis metropolitan area is more affordable than all comparison areas relative to regional incomes. Comparison index values ranged from a low of 146.6 in Denver to a high of 255.7 in Columbus). Clearly, the affordability of single-family housing is one the region's greatest selling points in the competition for young talent that may be seeking their first home.

RENTAL AFFORDABILITY: Despite the high affordability of single-family homes, the region's affordability of rental housing is deteriorating, consistent with national trends. Generally speaking, demand for rental housing (particularly in the urban cores of metropolitan areas) is rising rapidly and even high rates of development in most center cities has failed to keep rents affordable for many young professionals that seek to live in these environments and may not be ready for or interested in home ownership. Accordingly, rental affordability is of increasing importance to metropolitan regions, and especially their central cities, as they seek to become strong attractors (and retainers) or young talent.

Over the last five years, the percentage of renters paying 30 percent or more of their household income on rent, the rental affordability definition used by the Department of Housing and Urban Development, rose by 14.2 percentage points in the Indianapolis – the highest rate of growth of all comparison metros. In 2012, 54.8 percent of renters in the Indianapolis region expended 30 percent or more of their income on rent. In contrast, a smaller, but still significant, portion of Denver (53.9 percent) and Nashville (52.5 percent) area residents expended 30 percent or more of their income on rent. Both metropolitan areas also enjoyed a less substantial percentage point increase in the number of residents paying 30 percent or more of their income on rent, 9.0 percentage points and 10.4 percentage points, respectively. Increasing rents, especially if they outpace income growth, could curtail the revitalization and renewed desire to live in the city of Indianapolis. The region's greatest value propositions to prospective new residents and employees is its housing affordability, and within the rental segment, this proposition may be diminishing relative to its peer metropolitan areas across the nation.

CRIME: Another critical aspect of impacting quality of life that could potentially curtail the redevelopment and revitalization of the region's core city is crime. Residents frequently discussed the region's high crime as a key weakness of the region. While crimes were said to be isolated in "pockets" in the Indianapolis region, many noted that crime, both real and perceived, could impact the flow of people moving to the city of Indianapolis and influence relocation decisions for prospective residents considering relocation to the region.

Central cities are frequently associated with higher crime rates relative to suburban communities that form around them. A wide array of factors can cause higher crime rates within the core central city, ranging from

increased population density to concentrated poverty endemic to many central cities. Not surprisingly, the City of Indianapolis is no exception. The City's violent crime rate is nearly double the regional average. In 2012, 118.5 violent crimes were committed in 2012 for every 10,000 city of Indianapolis residents. Of the comparison central cities, only the City of Nashville, TN (121.6 violent crimes per 10,000 residents) possessed a higher central city crime rate.⁵ Property crime rates followed a similar trend; the property crime rate in the City of Indianapolis (559.2 crimes per 10,000 residents in 2012) was the second highest of the core cities in the benchmark metros – only the City of Columbus, OH (622.7 crimes per 10,000 residents) possessed a higher property crime rate.

Crime rates have been falling nationwide for years and the Indianapolis region has experienced similar progress, both regionally and within the central city. Overall trends for the region are comparable to the rate of improvement experienced in the Denver metropolitan area but trail the rate of improvement witnessed in the Nashville region. The rate of violent crime within the Indianapolis region declined by 8.1 percent – both Columbus (-18.6 percent) and Nashville (-18.5 percent) saw a faster rate of decline in their region. Property crime rates within the Indianapolis region also declined at a comparatively slow pace. Property crime rates within the Indianapolis region fell by 13.5 percent – underperforming relative to all benchmark metros but outperforming the state (-10.8 percent) and nation (-12.4 percent).

FIGURE 39: VIOLENT AND PROPERTY CRIME RATES, INCIDENTS PER 10,000

	Violent Crime Rate			Property Crime Rate		
	2007	2012	Change	2007	2012	Change
Indianapolis MSA	65.2	60.0	-8.1%	416.7	367.3	-13.5%
Anderson, IN	35.5	48.1	35.5%	512.5	509.5	-0.6%
Carmel, IN	4.7	1.3	-71.2%	162.6	98.8	-64.7%
Indianapolis, IN	123.4	118.5	-4.0%	630.8	559.2	-12.8%
Columbus MSA*	44.5	36.3	-18.6%	460.6	417.9	-10.2%
Columbus, OH	85.2	65.8	-22.7%	699.6	622.7	-12.4%
Denver MSA	36.6	33.8	-7.8%	315.8	274.7	-15.0%
Aurora, CO	54.8	42.5	-22.5%	383.3	298.5	-28.4%
Broomfield, CO	9.9	5.2	-48.0%	269.4	208.6	-29.2%
Denver, CO	61.9	61.6	-0.6%	390.8	371.4	-5.2%
Lakewood, CO	44.4	46.2	4.0%	425.9	458.0	7.0%
Nashville MSA	81.7	66.6	-18.5%	367.2	292.4	-25.6%
Franklin, TN	18.4	14.3	-22.2%	178.1	159.3	-11.8%
Murfreesboro, TN	71.8	62.5	-13.0%	434.8	356.9	-21.8%
Nashville, TN	150.9	121.6	-19.4%	557.7	419.6	-32.9%
Indiana	33.4	34.6	3.6%	339.7	302.9	-10.8%
United States	46.7	38.7	-17.1%	326.4	285.9	-12.4%

Source: Federal Bureau of Investigation

*The Federal Bureau of Investigation did not report data for the Columbus, OH MSA in 2012. Crime statistics from 2011 were used as a substitute for this geography.

⁵ It is important to note that both the city of Indianapolis and the city of Nashville are both consolidated city/county governments. Thus, city boundaries cover extensive geographies. For example, the land area of the City of Indianapolis is roughly double the size of the City of Denver.

As these data show, the Indianapolis region's crime rate is more than just a perception issue. Crime rates are in fact quite high, both regionally and within the central city. While no single factor explains a region's challenges in overcoming crime, the region's relatively high poverty rate may in part contribute to the region's elevated crime rates and slower declining crime rates over the last five years. Ensuring that economic development, revitalization, and other community investments are equitable in reaching those individuals currently at the bottom of the economic ladder may prove fruitful in improving real, and perceived, public safety. To be certain, various investments in recent years in traditionally high-poverty, high-crime areas of the region is a sign that there is a commitment to addressing equitable redevelopment and elevating standards of living for all. But the data on poverty, educational attainment, crime, and student performance are among a variety of indicators that clearly demonstrate that more work is to be done.

Fortunately, the region's residents, businesses, and community leadership seem to acknowledge that this is a clear priority despite the fact that, in the minds of many, perceptions about the region's central city have improved greatly since the reinvestment of the urban core. Long-time Indianapolis residents have witnessed substantial progress, especially in downtown Indianapolis, in terms of the area's overall safety. Still, only 47.4 percent of online respondents who lived in an urban area in Indianapolis rated their sense of personal and property safety as above average or excellent. In contrast, suburban (78.7 percent) and rural (83.4 percent) respondents were quick to rate their sense of personal and property safety as above average or excellent. The geographic disparity between sense of personal and property safety becomes more apparent when survey respondents were asked about potential barriers to living in downtown. When survey respondents indicated that they would not consider living in downtown Indianapolis, they were asked to indicate "the primary reasons why (they) would not consider living in downtown Indianapolis or another neighborhood within three miles of the city's center." More than 57 percent of respondents cited "personal or property safety concerns."

GEOGRAPHIC VARIATION IN OPINIONS: Although much of the focus from input participants was placed on the City of Indianapolis, it was clear that other communities throughout the Indianapolis region provide their residents with strong quality of life amenities, whether they live in an urban, suburban, or rural setting. Responding to quality of life offerings provided by the region as a whole, survey respondents ranked the entertainment, sports, and recreational amenities (76.8 percent of respondents providing an above average or excellent rating), cultural and arts facilities and programs (65.5 percent), and shopping and dining opportunities (63.7 percent) highly. Residents of urban areas were more likely to rate cultural and arts facilities and programs highly (55.3 percent above average or excellent) whereas suburban (39.6 percent) and rural (29.3 percent) were more apt to furnish a lower rating. A nearly equal percentage of suburban (48.3 percent) and urban (56.4 percent) rated accessibility of sidewalks and piking paths as either above average or excellent. Moreover, a similar share of suburban (63.4 percent) and urban (62.2 percent) residents provided a similar rating to shopping and dining opportunities. Residents of rural areas were, not surprisingly, more likely to rate shopping and dining opportunities lower (39.8 percent responding above average or excellent).

No matter their geographic location, it is quite clear that Indianapolis residents take great pride in their community and readily tout the region's ability to provide them with a great quality of life. When asked about the region's greatest strength residents frequently cited "cost of living" as a key strength for the region, but so too did they frequently cite the region's sense of community and the region's people as a

key strength. Focus group participants echoed this sentiment, many of the business professionals in the Indianapolis region, whether a seasoned manager or a new entrepreneur, were quick to point out the amount of access afforded to them by the community. It is this high degree of perceived social capital, along with the vast array of amenities and low costs, which combine to help make Indianapolis a compelling place to start a family, business, and/or career.

COMPETITIVE ASSESSMENT: CONCLUSION

This Competitive Assessment presented a thorough review of the region's key strengths, weaknesses, opportunities, and challenges, as viewed through the lens of ten stories that are informed by extensive quantitative and qualitative input. These ten stories, which contain important insights that should influence the region's strategic priorities as they relate to community, economic, and workforce development, are:

1. The Indianapolis Identity: Dilemma and Dichotomy
2. Growth within the Indianapolis Region: A Reemerging Core
3. Workforce Sustainability: Attracting and Retaining Talent
4. Workforce Sustainability: Developing "Homegrown" Talent
5. Education and Incomes: Consequences of Slow Improvement
6. Growth & Diversity: the Indianapolis Regional Economy
7. Business Climate Considerations
8. Transportation Infrastructure: an Asset and a Challenge
9. In Search of Entrepreneurs: Building a Startup Culture
10. Quality of Life in the Indianapolis Region

Collectively, these stories have evaluated a region that continues to add new residents, with the region's core county – Marion – capturing an increasingly large share of regional growth over the course of the last decade. It is a region that has successfully attracted and retained residents, but migration patterns illustrate that most of these individuals are coming from other parts of the state of Indiana. These migration flows help validate concerns expressed by countless community input participants that the region may not have attractive brand associations outside the state. And while the region is preparing for investments in early childhood education and is home to considerable higher education assets, the region's adult population has not elevated educational attainment rates at a time when the competition is making considerable progress. These trends, coupled with job growth that is somewhat concentrated in sectors playing below average wages, has resulted in a decade of little to no real (inflation-adjusted) income growth. If the community is to elevate incomes by way of higher-wage job creation, and attract the kinds of individuals that can help build an emerging startup culture, it will need to continue to invest in the elevation of adult education and skills attainment, as well as quality of life attributes that are attractive to younger and more highly-educated workers. This includes but is by no means limited to a continued emphasis on educational improvement initiatives, redevelopment and revitalization, crime reduction, and public transportation.

The next step in the research process – the Target Business Review – will examine economic composition in greater detail, identifying those sectors that are best positioned to drive future job and wealth creation in the Indianapolis region. Ultimately, it seeks to identify the areas where limited economic development

resources should be focused to maximize return on investment and community impact. Following the Steering Committee's review of the various research deliverables, the *Market Street Services* team will begin working with the Committee to identify the appropriate strategies to address the issues identified in this Competitive Assessment and the forthcoming Target Business Review. These recommendations – which will comprise the Indianapolis Regional Comprehensive Economic Development Strategy (CEDS) – will be accompanied by an Implementation Plan that identifies *how* these strategic recommendations should be collaboratively pursued by a set of regional partners in an effective and efficient manner.

2. TARGET BUSINESS REVIEW

As part of the Indy Chamber's ongoing efforts along with a variety of partners to make the metropolitan area as attractive and supportive as possible for small business growth, existing business expansions, and new business relocations, a Comprehensive Economic Development Strategy (CEDS) process has been initiated. This Target Business Review is the second stage in that process; a critical step in understanding the region's potential to create new jobs and wealth for its residents through targeted economic development activities.

A targeted sector – or simply a “target” – is any type of business activity that is strategically pursued by an economic development organization and its partners for growth and development. That is to say, a “target” is an area where financial and staff resources, and the programs and policies they support, are specifically focused. “Targets” are often those segments of an economy where competitive advantages exist, prospects for future growth are greatest, and return on investment is likely highest. However, many economic regions choose to target business sectors that are not presently concentrated in their community or characterized by existing competitive advantages. This may be because such activities are rapidly expanding, exhibit potential to become clusters in the years and decades to come, or align with other strategic objectives of the community. In this regard, the process of identifying and subsequently supporting target sectors is one that must acknowledge a region's historical strengths while also being forward-looking and seeking to capitalize on emerging opportunities. Investment in these emerging opportunities may not provide immediate benefits in the form of job creation, but such targeted investments are necessary to prepare regional economies for the jobs of the future and not simply the jobs of today.

This report seeks to fulfill these objectives while also promoting alignment of various targeted economic development activities throughout the region and state. The Indy region and the state of Indiana are fortunate to be home to some of the highest-capacity and well-funded cluster development efforts in the country. And in addition to the work of the Indy Chamber in promoting targeted, regional economic development, the Indy region is also fortunate to be home to many local economic development organizations (LEDOs) that are devoting resources to core economic development programs supporting locally prioritized target sectors. With so many resources invested from the public, private, and non-profit sectors in targeted economic development throughout Central Indiana, it only sensible that the Indy Chamber seek to align its targeted economic development programs – and the supporting recommendations contained within the forthcoming CEDS – with the targeted activities of its many important partners across the region and state. And so, while this report cannot possibly replicate the extensive amount of research that has been conducted by these partners on their various target sectors,

nor does it seek to supersede this research and corresponding recommendations, it does seek to provide a framework for the Indy Chamber to conceptualize where the region's strengths lie, where various partners are currently investing resources, and where future investments can best support near- and long-term prosperity. This framework is one that can ideally inform the ongoing programmatic efforts of the Indy Chamber, inclusive of the implementation of strategic recommendations related to target sector development that will be included in the forthcoming CEDS.

This report also seeks to provide a brief update on the current performance of the sector in the Indy region and nationwide, in addition to insights into the strengths, weaknesses, opportunities, and challenges facing businesses in each target sector. This analysis and discussion is based on qualitative and quantitative input, including original research conducted as a part of this CEDS process (data analysis, interviews, focus groups, and surveys) as well as an immense amount of pre-existing research covering sector-specific trends and needs.⁶ In this regard, this report is intended to be a research document. While the research findings have important strategic implications, any recommended strategies and tactics (programs, policies, initiatives, or investments) to support a target sector's growth and development will be included in the forthcoming CEDS.

⁶ A list of the various pre-existing studies and reports reviewed when conducting this research can be found in Appendix A.

TARGET SECTOR DEVELOPMENT: A PRIMER

Communities across the country are pursuing differentiated economic development strategies that seek to support the development of “targeted” business sectors which may benefit from specific competitive advantages afforded by the community, its location, and its asset base. The practice of “targeting” has grown as communities have witnessed the advantages that are afforded to the companies by such agglomerations or “clusters.”

KEY CONCEPTS RELATED TO TARGET SECTOR DEVELOPMENT

CLUSTERS: Agglomerations – or “clusters” – represent groups of interrelated businesses that choose to co-locate for one reason or another. The historical growth of clustered economic activity in areas such as the Silicon Valley, Route 128 in Massachusetts, and the Research Triangle Park in North Carolina are oft-cited and well developed case studies for other regions across the nation as they strive to develop similar agglomerations of related businesses. But there are countless examples of such clusters around the country and the world. Clustering can occur among competing or cooperative firms with a variety of different catalysts supporting these agglomerations. A group of suppliers may choose to locate in proximity to a major manufacturer for research and development efficiencies and reduced transportation costs. For example, an immense aerospace cluster has developed around the Boeing Integrated Defense Systems operations in St. Louis, Missouri. Other firms may co-locate in a specific area in order to take advantage of a specialized labor pool or to be in close proximity to specific infrastructure. Many economic regions have developed niche clusters in areas with few global competitors; the motorsports industry in Indianapolis, Greek yogurt production in Central and Upstate New York, and the clustering of vendors around Walmart’s headquarters in Northwest Arkansas are all such examples.

While the factors that have led to clustering vary tremendously by region and sector, such agglomerations occur over time because a location has an asset base that affords the sector and the companies that operate within them some form of competitive advantage. The competitive advantages derived by these firms often result in comparatively high potential for employment growth and wealth creation. As the cluster grows, so too do the benefits afforded to the companies within the cluster: the available workforce grows, the potential for collaboration expands, competition may drive down costs, and buyer and supplier networks expand, among other potential impacts.

TARGETS: Even so, many communities and economic regions choose to strategically target sectors of economic activity that may not currently be characterized by a strong agglomeration – or “cluster” – of related businesses. A targeted sector – or simply a “target” – is any type of business activity that is strategically pursued by an economic development organization and its partners for growth and development. That is to say, a “target” is an area where financial and staff resources, and the programs and policies they support, are specifically focused. “Targets” are often those segments of an economy where competitive advantages exist, prospects for future growth are greatest, and return on investment is likely highest. A “target” can be a single business sector with high growth potential or a “cluster” of businesses in related sectors. But as previously mentioned, many choose to target business sectors that are not presently concentrated in their community or characterized by existing competitive advantages. This may be because

such activities are rapidly expanding, exhibit potential to become clusters in the years and decades to come, or align with other strategic objectives of the community.

STRATEGIC CONSIDERATIONS FOR TARGET SECTOR DEVELOPMENT

UNDERSTANDING YOUR ASSET BASE: Strategic targeting is predicated upon a solid understanding of a community's strengths and weaknesses, specifically as they relate to the needs of specific business sectors and the companies that operate within these sectors. The factors that medium to large companies consider when evaluating a community as potential location for a new facility are often referred to as site location factors, site selection factors, or site considerations. These factors vary tremendously by sector. For example, data center operations typically seek locations with low natural disaster risk, affordable and abundant water necessary for cooling, and redundant and exceptional fiber-optic, broadband infrastructure, among other attributes. Corporate headquarters typically seek locations with a well-educated workforce, exceptional passenger air connectivity, and abundant amenities. Accordingly, communities that are able to offer such characteristics are better positioned to attract these kinds of operations. Understanding the community's asset base – inclusive of a wide variety of these potential site location factors – is critical to understanding the community's competitiveness for various business sectors. Likewise, an understanding of its deficiencies in terms of such site location factors will help the community identify areas that need further investment if the community wishes to transform such deficiencies into future assets.

A HOLISTIC APPROACH: Targeted businesses sectors that exhibit an existing concentration or agglomeration of establishments with similar activities have likely flourished in the community because it has an attractive asset base which aligns with the sector's primary site location considerations. Other sectors that share similar site location factors may not currently be concentrated in the community, but the presence of the aforementioned asset base makes the community an attractive location for such activity. Accordingly, such sectors represent opportunities where the community may be particularly successful in marketing and recruitment efforts that seek to attract new corporate investments or relocations that would benefit from the community's existing asset base.

For decades many communities and their economic development organizations have exclusively associated "economic development" with "business recruitment." While the recruitment of new companies is an important component of any targeted economic development program, it is only one leg of the stool. The growth of regional economies and their target business sectors are overwhelmingly driven by existing businesses and entrepreneurs. A variety of studies have shown that between 70 percent and up to 95 percent of the country's job creation over various time periods has been attributable to the expansion of existing companies. While new investments generate ribbon cuttings and headlines, existing businesses and entrepreneurs are creating the majority of jobs in our country. Accordingly, any effort to develop target sectors and nurture employment growth within them must focus upon the needs of existing businesses as well as entrepreneurs.

Holistic economic development must also focus on developing the asset base that supports the competitiveness of target business sectors and the companies that operate within them. This is necessary to alleviate barriers to expansion for existing companies and mitigate any potential risks that could lead to layoffs or business closures. But such strategies that focus on developing the community's asset base also

contribute to long-term viability of the community as a location for a more diverse array of sectors, including sectors that the community is not currently competitive for in today's climate but which it hopes to develop in future decades.

THINKING REGIONALLY, ACTING COLLABORATIVELY: Economic clusters develop regionally; the advantages that are afforded to clustered businesses from their agglomeration (external economies of scale and network effects) are rarely restricted to specific jurisdictions.⁷ Furthermore, the asset base (specialized labor, transportation networks, etc.) that attracts clustered businesses is often accessible throughout a region, with accessibility rarely restricted by jurisdictional borders.

However, individual communities within a larger economic region clearly have distinct asset bases and differentiated marketable attributes that make them particularly appealing to certain types of business activities. Further, while there are often significant resources devoted to economic development at a regional level in most of the nation's largest metropolitan areas (often via a regional, public-private partnership or regional chamber of commerce), the majority of economic development expenditures are highly localized (via a local government, local economic development organization, local chamber of commerce, development authority, etc.). Accordingly, many of these individual communities have identified their distinct assets and marketable attributes, and developed a corresponding set of local target sectors. These local targets may at times align with regional targets but will often feature specific sectors that may not be a focus of regional efforts but deserve local attention given the community's distinct assets and attributes. For example, a regional economic development organization may not proactively target regional economic development resources towards the development of Warehousing and Distribution activities, but an outlying county within the region that lies at the confluence of three interstates may view Warehousing and Distribution as a highly appropriate target sector. On the other hand, certain regional targets may not be appropriate for some local communities. For example, a city lacking any available Class A office space and a relatively weak fiber optic network may not be a suitable location for Information Technology or Corporate Headquarters operations.

All of this is to say that regional economic development operations and their target sectors must be mindful of localized asset bases and locally-defined target sectors. While regional target sectors will guide the manner in which certain regional economic development resources are targeted, these targets should not be viewed as an exclusive definition of the opportunities that can, should, and will be pursued by regional economic development practitioners. These practitioners should always respond appropriately and professionally to the inquiries of prospective and existing employers – regardless of their sector – to help meet their needs and facilitate their growth in the region. When evaluating where a prospective new employer (a potential relocating company) may find a suitable site within the region, it is important for regional economic development practitioners to, again, be mindful of the distinct assets and locally targeted sectors of individual communities within the region. Regional targets will overlap many local targets, and objectives of regional target sector development should be derived, in part, from local target sector development objectives. When conducting proactive marketing, advocacy, existing business outreach, and other economic development initiatives, regional economic development practitioners should work with local communities and their economic development organizations to identify ways in

⁷ "External economies and scale" and "network effects" refer to the power of agglomeration or "clustering" and the manner in which they produce efficiencies for clustered businesses. While "internal economies of scale" occur within an individual enterprise when costs decline as output increases, "external economies of scale" occur when costs (transportation, labor, communication/collaboration, and other business costs) decline for all businesses in area due to agglomerative effects.

which expenditures can be optimized, efficiencies can be gained, and communication can be enhanced. This should be done on a regular basis to ensure that new economic activity is directed to communities that are a good fit for both the prospective company in terms of its location needs, and the community in terms of its economic development objectives.

TARGET SECTOR ANALYSIS: APPROACH AND METHODS

There are many methods used to identify economic development targets. Some approaches are based on incomplete or strictly industry-focused (business sector-focused) methodologies. Such methodologies ignore a variety of important issues from workforce attributes to educational assets to geographic advantages, all of which are vital to businesses. *Market Street's* approach to target identification is rooted in a more complete examination of the region's strengths and opportunities, including talent—the occupations and types of knowledge that support the region's business activities—as opposed to strictly focusing on business sector composition and growth. This comprehensive, interrelated approach stands in contrast to the traditional “top down” approach long utilized in cluster identification and analysis. It recognizes the ever-increasing importance of talent and workforce sustainability to the business community. It is complemented by an evaluation of the region's business climate, networks, infrastructure, research assets, educational programs, and many other factors that influence site location decisions.

CLASSIFICATION: Our approach does not define targets strictly based on North American Industry Classification System (NAICS) codes or Standard Occupational Classification (SOC) codes. Though these codes are used to help quantify important trends and activity within each target, they should not be interpreted as rigid definitions of the composition of economic activity within a given target. Classification systems do not adequately capture certain niche technologies and opportunities that may deserve strategic attention in certain communities.

GEOGRAPHY: The research related to business sector and occupational composition within this report is based on analysis of trends observed in the Indianapolis, IN metropolitan statistical area (MSA), referred to as the Indianapolis region. The MSA defined by the federal Office of Management and Budget (OMB) in February 2013 is comprised of the following counties in Indiana: Boone, Brown, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Putnam, and Shelby.

LOCATION QUOTIENTS: Location quotients (LQs) are used to measure the relative concentration of local employment in a given business sector or occupation. When applied to business sector employment, they measure the ratio of a business sector's share of total local employment to that business sector's share of total national employment. A business sector with LQ of 1.0 is exactly the same share of total local employment as that business sector's share of national employment. When a local business sector has a location quotient greater than 1.0, it signals that the business sector is more heavily concentrated in the metro than it is nationwide. Those business sectors with relatively high LQs are often assumed to benefit from one or more sources of competitive advantage derived from locating in the area being examined. Location quotients can also be applied to occupational employment in the same manner that they are applied to business sector employment, helping to determine which occupations and corresponding skill sets—irrespective of the business sectors that employ them—are highly concentrated in the local workforce.

INTER-INDUSTRY LINKAGES: Data covering inter-industry purchases provides insight into the degree to which firms benefit from co-location and the ability to purchase products and services from local suppliers. When firms purchase goods from suppliers outside the region, money is leaving the region. When this leakage is reduced, employment and income multipliers rise. That is to say, when leakage is reduced and clustered firms are sourcing locally, the economic impact of each new job created is maximized.

DATA SOURCES: Unless otherwise noted, all quantitative data contained in this report is sourced from Economic Modeling Specialists International (EMSI), an industry-leading provider of proprietary data, aggregated from

public sources such as the U.S. Census Bureau, the U.S. Bureau of Labor Statistics, the U.S. Bureau of Economic Analysis, the National Center for Education Statistics, CareerBuilder, and many others.

TARGET BUSINESS REVIEW

The remainder of this report provides some important background information on the state of existing sector-focused economic development efforts in the region and across the state before presenting a framework for conceptualizing the various economic activities and new technologies that are currently being targeted for growth and development by a variety of partners at the local, regional, and state level. This framework is one that can ideally inform the ongoing programmatic efforts of the Indy Chamber, inclusive of the implementation of strategic recommendations related to target sector development that will be included in the forthcoming CEDS. Profiles of each identified target sector are also included, incorporating qualitative and quantitative analysis of sector trends and associated strengths, weaknesses, opportunities, and challenges. While this analysis is not a comprehensive literature review, it does attempt to incorporate the key findings from pre-existing research completed on the region's economic competitiveness and the trends and issues facing specific sectors. It concludes with a brief statement regarding the next steps in the strategic planning process and is accompanied by appendices covering existing research reviewed (Appendix A) and data tables (Appendix B).

Existing Target Sector Initiatives

INDIANA ECONOMIC DEVELOPMENT CORPORATION (IEDC)

Although it does not specifically refer to the practice of targeting specific sectors, the Indiana Economic Development Corporation (IEDC) identifies the following industry sectors on its website as those that "define the state as a world-class center of research and manufacturing:" life sciences, automobiles, energy, and national security. IEDC also utilizes its website to promote the fact that the state is leading the way in the form of "breakthroughs in oncology, surgery, medicine, wind power, biofuels, motorsports and strategic technology." This differentiation alludes to some of the state's historical strengths as well as some of its emerging areas of specialization, or areas where it leads in the research and development of new technologies.

Finally, the following industry sectors are profiled on the IEDC website for the purposes of informing external audiences (such as potential investors, entrepreneurs, corporate decision makers, site selectors, or new residents) about the economic opportunities and supportive initiatives that exist within the state: life sciences, advanced manufacturing, motorsports, defense and national security, logistics, information technology, agriculture, energy, and film. Clearly much of this activity is concentrated in the Indy region, and these sectors align closely with the target sectors identified by LEDOs in the region.

IEDC partners with many local and regional economic development organizations to help achieve their individual, community- and region-specific economic development goals and objectives. It is an active partner and sponsor of many sector-specific initiatives that are implemented across the state and in specific economic regions. Its Regional Cities Initiative will encourage metropolitan areas to develop

strategic plans that promote talent retention and attraction, and will provide financial support for the implementation of specific regional initiatives. The research findings and resulting recommendations from this CEDS process will help position the Indy Region for such investments.

CENTRAL INDIANA CORPORATE PARTNERSHIP (CICP) & ASSOCIATED SECTOR INITIATIVES

Since its genesis in 1999, the Central Indiana Corporate Partnership (CICP) has brought together key leadership from the state's business community and various institutions to advance a "strategic and collaborative effort dedicated to the region's continued prosperity and growth." This mission has resulted in an immense amount of investment in a variety of sector-based initiatives, many of which have spawned further non-profit and for-profit entities to advance specific objectives. Each initiative and its various stakeholders are tasked with "catalyzing development in its sector through collaboration between the public and private sectors and many university stakeholders." These initiatives were born largely from a 2001 report produced by CICP in partnership with the Battelle Memorial Institute that identified life sciences, advanced manufacturing and logistics, and technology as core clusters of economic activity in Central Indiana that deserved targeted and proactive strategic attention. Further research helped identify other opportunity areas, and today, five sector-specific initiatives have been launched. These initiatives and the corresponding sectors of economic activity upon which they focus are listed below in chronological order according to the year in which they were founded:

- ✓ 2004: BioCrossroads (Life Sciences)
- ✓ 2004: Conexus Indiana (Logistics and Advanced Manufacturing)
- ✓ 2007: TechPoint (Technology)
- ✓ 2009: Energy Systems Network (Alternative Energy Technology)
- ✓ 2014: AgriNovus Indiana (Agricultural Innovation)

Each of these initiatives necessarily operates as a collaborative endeavor that seeks to leverage the resources, expertise, and leadership of various organizations throughout the region and across the state. Through CICP and the work of the various stakeholders engaged in each of the aforementioned initiatives, the Indy region and the State of Indiana have unquestionably built a foundation for cluster development activities – and a track record of successful implementation – that is envied and rarely emulated by many competing regions around the country.

INDIANA SPORTS CORP

Tourism is a critical component of many state and regional economies. Similar to many other export-oriented sectors, tourism generates substantial economic impacts by attracting expenditures (and associated tax revenues) from outside the state or region. Even still, many economic development organizations do not explicitly focus on tourism development as a core economic development program. This largely reflects the historical focus of economic development organizations in decades passed on business recruitment activities, whereas convention and visitors bureaus (also known as destination marketing organizations) are often formed to take the lead on visitor attraction and customer service.

However, many states and regions have launched organizations to specifically focus on a segment of the tourism economy; sports commissions are among the most common. The Indiana Sports Corp is not only the nation's first sports commission but is widely considered to be the most successful, and is studied as a best practice around the world. It has led targeted efforts to attract an immense number of youth, amateur, and professional sporting events to the Indy region for more than three decades.

INDY CHAMBER

The Indy Chamber currently identifies seven targeted industries that its staff supports by providing assistance to entrepreneurs and established companies considering relocation or expansion within the Indy region. The Chamber is actively engaged in a variety of collaborative initiatives, including those advanced by IEDC, CICP, and the various sector initiatives mentioned above. The seven industries currently identified by the Chamber as target sectors are:

1. Advanced Manufacturing
2. Clean Technology
3. Digital Technology
4. Life Sciences
5. Logistics
6. Motorsports
7. Emerging Industries (including Defense and Aerospace, Fashion, Food and Drink, and Sports)

LOCAL ECONOMIC DEVELOPMENT ORGANIZATIONS (LEDOs)

The following matrix summarizes the various target sectors identified by local economic development organizations (LEDOs) in each of the nine counties served by the Indy Chamber. While certain LEDOs may refer to a sector with a slightly different title (i.e. food manufacturing vs. food and beverage), *Market Street* has grouped similarly named target sectors into key groups of economic activity to illustrate intra-regional similarities and differences in strategic sector focus at the county level.

	Boone	Hamilton	Hancock	Hendricks	Johnson	Marion	Morgan	Shelby
Life Sciences	X	X	X	X		X		
Manufacturing	X	X	X			X	X	X
Food and Beverage	X				X			X
Motorsports		X		X		X		
Defense					X	X		
Clean Technology						X		
Logistics	X		X	X		X	X	X
Information Technology		X			X	X		
Corporate Headquarters	X							
Prof. & Bus. Support Services	X	X	X					
Agriculture		X	X				X	
Healthcare Services							X	

Sources: Various local economic development organization websites

Notes: Madison County (Corporation for Economic Development) has not been included as it does not explicitly identify target sectors or sector strengths on its website. Morgan County (Morgan County Economic Development Corporation) sector strengths have been culled from website content and conversations with Morgan County Economic Development staff.

Recommended Conceptual Framework: A Targeted Approach to Technology-Driven Economic Development

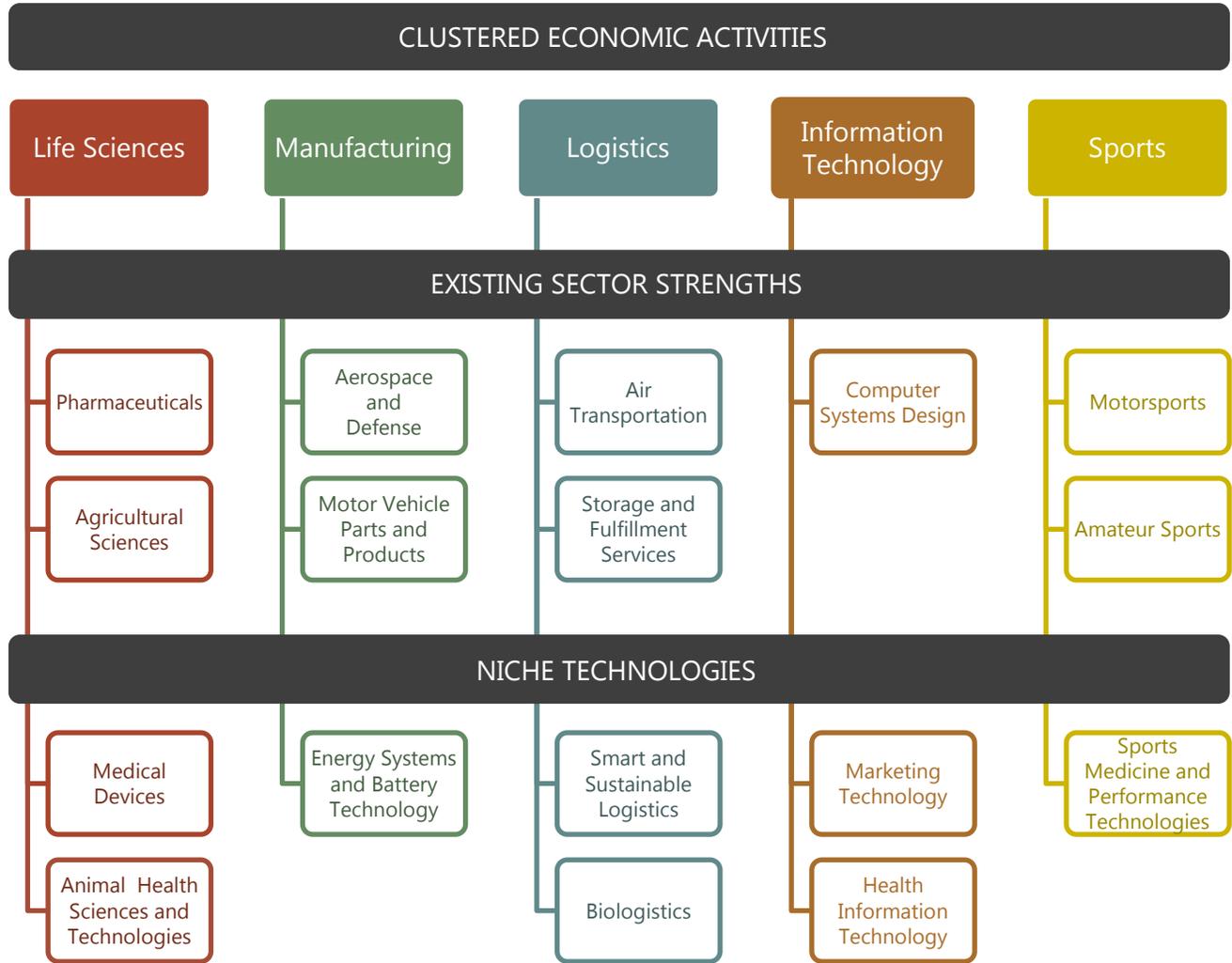
It is clear from the preceding review that there is tremendous overlap in the sectors of economic activity that are currently being targeted at the state, regional, and local level. There appears to be overwhelming support for and pursuit of life sciences, manufacturing, and logistics activities. While the region is home to certain concentrated manufacturing subsectors, there is value in continuing to pursue a diversified set of manufacturing activities that provide important middle-skill employment opportunities. There also seems to be broad acknowledgement that information technology and services are rapidly-expanding, both nationally and regionally; it is a sector whose growth requires significant strategic attention if this growth, and associated economic impacts are to be maximized. It is also a sector whose growth could also support other regional objectives such as the retention of college graduates.

And finally, the concentration of sports activities and sports-related expertise in areas ranging from open wheel racing to major event hosting and sports governance and management to sports medicine and injury research, the region has earned the titles of “the Motorsports Capital of the World” and “the Amateur Sports Capital of the World.” A targeted focus on all sports activities – from events to the manner in which the region’s scientific expertise can influence sports research, medicine, and technologies – could support multiple regional objectives that could be addressed by the forthcoming CEDS. Such objectives include but are not limited to economic development through tourism promotion, talent retention and attraction through sports amenity improvement, and regional brand recognition. It is time that the Indianapolis region is known simply as “the Sports Capital.”

These five areas – life sciences, manufacturing, logistics, information technology, and sports – reflect the region’s core, clustered economic activities. Each cluster is supported by a few existing sector strengths. These reflect the region’s areas of historical strength and concentrated employment which, in many cases, is supported by the presence of one or more major “anchor” employers. But this analysis is intended to be forward-looking, and not simply a review of the region’s pre-existing strengths. It is clear that the region’s leadership, embodied by the CEDS Steering Committee, is committed to a collaborative approach to regional economic development that emphasizes the role of technology development and innovation in promoting the region’s long-term prosperity. Accordingly, the conceptual framework that follows also incorporates a set of niche technologies for which the Indy region is currently, or is poised to become, a market leader in terms of research, development, and commercialization.

Collectively, these existing sector strengths and niche technologies are supported by an immense amount of existing assets and initiatives, many of which have been discussed and reviewed in the preceding section. It is clear that the region has supported, and intends to continue supporting a targeted approach to technology-driven economic development. The conceptual framework that follows is intended to reflect this reality and provide the Indy Chamber and its regional partners with a structure for evaluating sector-specific needs and pursuing differentiated, sector-specific strategies. Any such new strategies (to be identified in the forthcoming CEDS) must be pursued in collaboration with local, regional, and state partners that are already pursuing a variety of targeted initiatives that are supportive of, and in alignment with, the clustered economic activity, existing sector strengths, and niche technologies identified in the framework that follows.

THE INDY REGION'S TARGETED APPROACH TO TECHNOLOGY-DRIVEN ECONOMIC DEVELOPMENT



Each of the five clustered economic activities is profiled in the following report. Included in each profile is an analysis of regional employment and occupational trends, locational considerations, and strategic considerations relevant to the growth and development within each sector. Each profile includes a review of niche technologies for which the region for which the region is currently, or poised to become, a market leader, as well as a discussion of national and global industry trends, highlighting niche sectors and technologies that may be relatively underdeveloped in the region (and therefore not identified as a current niche technology) but may be promising long-term growth opportunities for the region, its businesses, and its academic research community. Collectively, these profiles attempt to complement, rather than duplicate, the existing research on sector competitiveness and strategic needs that has been completed by various partners. While an exhaustive literature review of this pre-existing research is outside the scope of this

report, this report does attempt to capture many of the key findings from this research as it is important that such findings inform the forthcoming CEDS.

LIFE SCIENCES

DEFINITION: Life sciences establishments are engaged in the manufacture of medicines, medical equipment, and other therapeutic medical devices. Within the Indianapolis region, life sciences activity is dominated by the pharmaceutical and medicine manufacturing subsector which accounts for nearly half of all target sector employment. Other life sciences activities include the manufacture of medical devices, research and development activities, and support services responsible for transporting medical supplies, and other related activities.

Life sciences businesses in the Indianapolis region are primarily engaged in the following historical sector strengths:

- ✓ **Pharmaceuticals:** Eli Lilly and Company is a global pharmaceutical company who discovers and brings life-changing medicines to those who need them. With its global headquarters located in the Indianapolis region, Eli Lilly and Company is the region's largest, global life sciences employer.
- ✓ **Agricultural Sciences:** Dow AgroSciences is the region's largest agricultural sciences employer. DowAgro designs products and services that solve pressing crop production problems and boost agricultural productivity.

NATIONAL TRENDS: Life sciences companies throughout the globe have been negatively impacted by a variety of factors that inhibit growth and competitiveness, including but not limited to expiring patents, declining R&D productivity, continued proliferation of generic competition, regulations that lead to lengthy development and drug approval processes, excessive reporting requirements, and declining federal funding for academic research and development. These challenges and others have resulted in sector consolidation, through mergers and acquisitions, and outsourcing. Over the last decade (2004-2014), pharmaceutical and medicine manufacturers reduced their workforce by 2.5 percent, or -7,354 workers.

KEY SITE CONSIDERATIONS: Highly-educated science, technology engineering, and mathematics (STEM) workforce; research universities; talent pipeline (life science degrees and certificates); lab and production space; proximity to R&D and clinical trials capacity; proximity to strong life sciences startup community and supportive resources; quality of life; tax climate and incentives; transportation and distribution networks.

COMPETING REGIONS: Due to the presence of large multinational life sciences companies, the Indianapolis region competes directly with similar global life sciences hubs including but not limited to Boston, MA; San Diego, CA; the San Francisco Bay Area, CA; Raleigh-Durham, NC; Philadelphia, PA; St. Louis, MO.

EXISTING SECTOR STRENGTHS

- ✓ **PHARMACEUTICALS:** Pharmaceutical manufacturing encompasses firms that manufacture biological or medicinal products; process botanical drugs and herbs, isolate active medicinal principals from botanical drugs and herbs, and manufacture pharmaceutical products intended for internal and external consumption. The region boasts a highly concentrated pharmaceutical

workforce, driven largely by the presence of Eli Lilly. At more than seven times the national average, few metropolitan areas possess a more highly concentrated pharmaceutical workforce than the Indianapolis region. In fact, although the region represents just 1.1 percent of total national employment (regardless of sector), it represents 4.9 percent of all pharmaceutical product manufacturing employment and 6.4 percent of pharmaceutical product output in the United States. Total regional output (sales) from the sector (\$11.1 billion in 2013) was nearly double the level of output in the Raleigh-Durham-Cary Combined Statistical Area (\$5.7 billion), home to the Research Triangle Park and many leading pharmaceutical and life sciences companies such as GlaxoSmithKline, Novartis, Pfizer, Merck, Monsanto, Bayer CropScience, Biogen Idec, and many others.

- ✓ **AGRICULTURAL SCIENCES:** In a first of its kind study, *Innovative Agbioscience in Indiana*, a report sponsored by the Central Indiana Corporate Partnership (CICP), Battelle identified four key innovation sectors of opportunity within the state of Indiana's Agbioscience sector. Given the presence of Dow AgroScience it is little surprise that the region has developed a workforce with significant expertise in plant science and crop protection. While the Battelle report identified opportunities for the entire state of Indiana, this subsector is highly competitive regionally. Pesticide, fertilizer, and chemical manufacturing employment is more than 7.1 times as concentrated regionally as the average community nationwide. To put this into context, only three other metro areas with more than 1,000 employees in this sector possessed a more concentrated workforce. Battelle estimates that the market for agricultural biotech (including transgenic seeds) will reach \$24.8 billion by 2017 with annual compounded growth of approximately 11.4 percent per year.⁸ The Department of Food Science at the Purdue University College of Agriculture is a tremendous resource supporting workforce competitiveness and research in the areas of food chemistry, safety, production, and nutrition. The College has numerous research centers devoted to plant and food science, including the recently developed the Agricultural Innovation Agricultural Innovation and Commercialization Center (AICC). The St. Louis region, home to Monsanto and many other supportive assets for plant science including the Donald Danforth Plant Science Center and the CORTREX innovation district, is a strong competitor.

NICHE TECHNOLOGIES

- ✓ **MEDICAL DEVICES:** Businesses within the medical devices sector rely on a confluence of technologies, including biotechnology, microelectronics, instrumentation, software development, and telecommunications. Firms can specialize in one area of the sector's value chain (R&D, regulatory approval, suppliers, manufacturing, sales), or can comprehensively work to find new discoveries and bring them to market. Nationally, medical equipment and supplies manufacturers and electromedical-related manufacturers employed 403,785 workers in 2014. Future employment prospects for the sector are positive but not extraordinary; national employment is projected to increase by 19,079 jobs, or 5.0 percent, over the next ten years. Regionally, the primary subsector capturing medical device manufacturing (medical equipment and supplies manufacturing and

⁸ Battelle Technology Partnership Practice. "Innovative Agbioscience in Indiana: A Baseline Assessment." AgriNovus Indiana of the Central Indiana Corporate Partnership, Inc. October 2014.

navigational, measuring, electromedical, and control instruments manufacturing) employed 3,964 workers in 2014 who earned an average of \$68,353 annually. Potential growth areas within the medical devices sector include wireless-enabled medical devices among other technologies. Warsaw, located in northern Indiana, is widely regarded as the Orthopedic Capital of the World as home to the headquarters of three of the five largest orthopedic medical device manufacturers in the world. Although located outside the Indy region, the Warsaw cluster and its supportive Orthoworx initiative bring visibility to the sector for the entire state of Indiana.

- ✓ **ANIMAL HEALTH SCIENCES AND TECHNOLOGIES:** Animal health is another agbioscience innovation area identified in the Battelle report. Animal health (veterinary) and nutrition products was highlighted as a key opportunity area for the state of Indiana due to the state's very high level of academic publishing activity as well as its patent generation capability. Battelle estimates that the animal health and nutrition products market will reach \$117.8 billion by 2018, or 6.4 percent on a compound annual basis.⁹ Moreover, with Eli Lilly's recent purchase of Novartis Animal Health, Eli Lilly's Elanco became the world's second largest animal health company by global revenue. There are a few regions focusing heavily on animal sciences as a niche with Kansas City and its KC Animal Health Corridor initiative being one of the most notable example's.

INDUSTRY TRENDS: POTENTIAL FUTURE OPPORTUNITIES

The life sciences are innovation-dependent sectors whose technologies and treatments continually adapt to changing demand from patients and healthcare providers. As the Indianapolis region actively targets life sciences operations, it must remain vigilant to shifting life sciences climates and adapt its targeting efforts as a result. The following trends highlight, but by no means encompass, potential future life sciences opportunities:

- ✓ **PRECISION MEDICINE:** Physicians are developing patient specific treatments that seek to utilize the patient's own immune system and/or target specific genetic code within the patient to treat cancers and other life threatening diseases. For example, the MIT Technology Review reports that a team of researchers utilized 3-D printing to model a patient's heart to reduce complications and ensure an exact fit between patient and medical device. Precision medicine technologies that individualize medical treatments could significantly impact future life sciences practices. Healthcare providers, such as the Mayo Clinic, and private corporations, such as Roche, have made sizable investments and realigned internal resources to further develop and implement patient-specific treatments. In December 2014, Roche acquired genomic informatics company, Bina Technologies, and committed an additional \$1 billion for a majority stake in Foundation Medicine Inc., a firm that sequences cancer genomes.^{10,11} The federal government has also voiced strong support for precision medicine research; during the 2015 State of the Union address, the President pledged \$215 million for precision medicine research.

⁹ IBID

¹⁰ PRNewswire. "Roche acquires Bina Technologies and enters the genomic informatics market." PRNewswire. December 19th, 2014.

¹¹ Chen, Caroline. "Roche plans \$1 billion stake in foundation genomics firm." Bloomberg Business. January 12th, 2015.

- ✓ **NUTRACEUTICALS:** Nutraceuticals are the food, or parts of food, that provide medical or health benefits, including the prevention and treatment of disease.¹² Nutraceuticals cover a wide range of products including dietary supplements, foods that provide a medical benefit, such as probiotic yogurt, and medicinal foods that include health bars with added medications. While vitamin supplements and probiotic yogurt have become established diet staples, entrepreneurs continue to disrupt the nutraceuticals market. For example, one startup, Soylent, seeks to completely transform food consumption with their liquid meal replacement technology. A product of Y Combinator, a famous San Francisco-based startup accelerator, Soylent manufacturers a powder that contains the same nutritional value provided by traditional meals. The startup recently secured \$20 million in Series A funding led by venture capital firm Andreessen Horowitz.¹³ Regional nutraceutical companies include Algaeon, a Biocrossroads firm that cultivates algae for use in nutraceutical and micronutrient markets. A market analysis by RNCOS Business Consultancy Services projects the nutraceuticals market to reach \$75.9 billion by 2018.¹⁴
- ✓ **CONTRACT RESEARCH ORGANIZATIONS:** Contract research organizations (CROs) are positioning themselves in long-term strategic alliances with their clients, orienting toward partnerships rather than outsourced services. While many alliances are in developing markets, domestic CROs hold a dominant competitive position globally with Big Pharma as the largest client base. Biotechnology and life science research and development employment alone totaled nearly 600,000 workers nationally in 2014 with average annual earnings of \$132,503 according to EMSI. Projections estimate that biotechnology and life sciences research and development employment will reach an estimated 694,012 by 2024 – a 16.2 percent increase. The potential development of the Indiana Biosciences Research Institute (discussed further in the Strategic Considerations section) could help catalyze additional contract research opportunities in the region.

LIFE SCIENCES: BUSINESS SECTOR EMPLOYMENT TRENDS

The Indianapolis region's life sciences sector provides residents with enormous opportunity compared to the regional economy as a whole. On average, workers within the sector earned more than two times the regional average. Given the significant impact this business sector has on residents' standards of living, it is crucial that the life sciences continues to be nurtured. During the last decade (2004 – 2014), regional life sciences employment declined by -4.1 percent.

- ✓ **Job growth in the region's life sciences sector has been hampered by patent expirations.** In April 2013, Eli Lilly and Company announced layoffs impacting their Bio-Medicines Business Unit Sales Organization and Lilly's Diabetes Business Unit Sales Organization as a result of patent expirations and generic competition impacting two of their bestselling pharmaceuticals, Evista and Cymbalta.¹⁵ Without a short term solution to replace this lost revenue, Eli Lilly and Company reduced its regional workforce by 1,624 positions.¹⁶ Roche Diagnostics Corp. has also been

¹² National Nutraceutical Center. "What are Nutraceuticals?" Clemson University. Accessed January 29th, 2015.

¹³ Gayomali, Chris. "Soylent announces \$20M Series A, led by Andreessen Horowitz, to deal with massive backlog." Fast Company. January 14th, 2015.

¹⁴ PRNewswire. "US Nutraceuticals Market Outlook 2018." July 16th, 2014.

¹⁵ McCarthy, Erin. "Eli Lilly Profit Falls 39% on Patent Expirations." Wall Street Journal. July 24, 2014.

¹⁶ Martin, Sabrina. "Notice of Reductions in Force." Eli Lilly and Company. April 26th, 2013.

impacted by shifting healthcare compensation surrounding its blood glucose monitors.¹⁷ Roche Diagnostics Corp announced an undisclosed reduction in its regional workforce. Employment growth supporting expansion of other activities has counteracted some of these layoffs, resulting in ten-year employment loss of 3.1 percent in pharmaceutical and medicine manufacturing, roughly equivalent to national trends (-2.5 percent).

- ✓ **Research and development employment historically housed in large pharmaceutical organizations are shifting to contract research organizations.** While it is difficult to fully capture this shift, between 2004 and 2014, scientific research and development employers added 422 jobs regionally, a gain of 21.1 percent. The research and development partnership between Covance Laboratories and Eli Lilly is indicative of the rising importance of CROs. In 2008, Eli Lilly sold a 600,000 square foot research and development facility located in Greenfield, Indiana to Covance as part of a 10 year deal to deliver new pharmaceuticals to market in a faster and more cost effective manner.¹⁸
- ✓ **Recent layoff announcements cast a short-term shadow over the sector; however, scientific research and development services along with wholesaling activity displayed strong growth trends.** Over the last decade (2004-2014), scientific research and development services (21.1 percent) and drugs and druggists' sundries wholesalers (29.8 percent) experienced strong growth over the last decade.
- ✓ **Growth projections, while favorable in a number of life sciences subsectors, do not fully capture growth potential in the regional life sciences sector.** Federal employment classification lags behind new technologies and business practices. As a result, growth potential in new niche sectors, such as animal health sciences, are often underreported or not adequately captured in projected employment data. Moreover, given the region's investment in new technology development as well as new business acquisitions, it is difficult to accurately project future employment growth for the pharmaceutical and medicine manufacturing and medical equipment and supplies manufacturing sector.
- ✓ **Despite growth over the last decade, the region's sciences research and development employment is underdeveloped relative to all of its competitor metropolitan areas as well as the average community nationwide.** San Diego, CA (4.7 times as concentrated as the average community nationwide); Boston, CA (3.9 times); San Francisco, CA (3.6 times); Philadelphia, PA (2.2 times); and Raleigh (1.3 times) possess strong private sector research and development activity in the life sciences, supporting largely by an abundance of startups on one end of the spectrum, and relatively large contract research organizations (CROs) on the other end of the spectrum. Research and development employment in the Indianapolis region (LQ = 0.5) is less than concentrated than what is observed in the average community nationwide, and considerably lower than what is observed in competing regions. While much of the region's private R&D capacity is likely classified within the pharmaceutical and medicine manufacturing sector, the scale of the region's private

¹⁷ Indiana Department of Workforce Development. "Current WARN Notices." State of Indiana. December 1, 2014.

¹⁸ Wang, Shirley S. "Eli Lilly Signs R&D Pact with Covance." Wall Street Journal. August 7th, 2008.

research and development capacity is comparatively small albeit growing, relative to peer metropolitan areas.

- ✓ **The Indianapolis region's life sciences sector is export oriented, contributing positively to the region's economic base.** In 2013, the average life sciences worker in the Indianapolis region produced \$569,338 worth of exports. In 2013, the Indianapolis region exported \$19.3 billion worth of life sciences goods and services. The majority of this export activity was driven by pharmaceutical preparation manufacturing (\$10.2 billion). For every one dollar of life science export, around 53 cents were related to the pharmaceutical preparation manufacturing sector. Other large export-oriented sectors include pesticide and other chemical manufacturing (\$1.8 billion) and in-vitro diagnostic substance manufacturing (\$2.2 billion).
- ✓ **Between 2004 and 2014, the employment in the region's agricultural sciences niche declined by 13.5 percent. Despite these job losses, the agricultural sciences sector remains heavily concentrated within the Indianapolis region.** In 2014, agricultural sciences employment was more than 7 times as concentrated in the region than the average community nationwide. This level of concentration indicates specialized locational advantages within the Indianapolis region relative to other metro areas across the country. St. Louis, home to Monsanto and many other crop science companies, is likely the region's top competitor for talent and jobs in this area. According to a 2012 Batelle/BIO report, agricultural sciences is characterized by leveraging advances "in biochemistry and biotechnology for producing products involved in crop protection, advanced seed, agricultural processing, bio-fuels, biodegradable materials from plant-based feedstock, sustainable industrial oils, lubricants and enzymes and bio-based catalysts for industrial processes." DowAgroSciences which produces insecticides, herbicides, fungicides, fumigants, nitrogen stabilizers, and seeds, traits, and oils, and Elanco, Lilly's animal health division, are at the heart of the region's agricultural sciences niche.

LIFE SCIENCES: OCCUPATIONAL EMPLOYMENT TRENDS

Compared to the national economy, the region's life sciences workforce is more focused towards occupations that require at least a bachelor's degree education.

- ✓ **Six of the top ten (most common) life sciences occupations within the Indianapolis region require at least a bachelor's degree education.** The high educational requirements indicate that life sciences activity within the Indianapolis region encompasses more than simply manufacturing pharmaceutical goods and medical devices. The higher concentrations of natural science managers (3.1 percent of the total life sciences workforce vs. 1.0 percent nationally); chemists (3.1 percent vs. 1.8 percent); and biological technicians (3.1 percent vs. 1.4 percent) compared to the national average suggests that the region's workforce composition engages in high-value add activities relative to the life sciences sector in the average community nationwide. This is not surprising given the relatively high labor productivity (output and exports per worker) observed in the business sector analysis.
- ✓ **Production-related occupations were more heavily hit by employment losses than their more service and research-oriented counterparts in the life sciences sector.** Packaging and filling

machine operators and tenders (-9.1 percent), team assemblers (-27.2 percent), and first-line supervisors of production and operations workers (-11.9 percent) suffered significant declines relative to the other top ten life sciences occupations.

- ✓ **Life sciences occupations offer immense earnings potential for residents with a STEM-related bachelor's degree education or higher in a variety of different fields leveraging a variety of different educational backgrounds.** High paying occupations include medical scientists (\$92,837 median annual earnings); technical and scientific product sales wholesale trade and manufacturing representatives (\$79,408); natural science managers (\$54,230); and chemists (\$53,860).
- ✓ **Pending retirements over the next twenty years will have an adverse impact on the life sciences sector.** From manufacturing activities to research and development, core life sciences occupations within the Indianapolis region are projected to encounter workforce shortages over the next twenty years. Subtracting the number of potential retirees (those aged 45 and over) from their likely replacements (aged 25 to 44) yields an estimate of the number of unfilled vacancies for more experienced positions that will be created by retirements. Production specific occupations that are projected to encounter workforce shortages as the retirements begin to occur include first-line supervisors of production and operating workers (-607 potential unfilled vacancies); inspectors, testers, sorters, samplers, and weighers (-508); technical and scientific wholesale and manufacturing sales representatives (-189); and packaging and filling machine operators and tenders (-34).
- ✓ **Workforce sustainability concerns are partially alleviated by the region's immense life sciences training capacity. But this capacity is only an advantage to the degree to which the region can retain these graduates.** In 2013, higher education institutions within the Indianapolis region conferred 856 degrees that lead to opportunities in the region's ten most common life sciences occupations. Higher education institutions displayed strong capacity to train general biology and biological sciences (274 degrees conferred in 2013) and general chemistry (129 degrees) bachelor's degree holding students.

STRATEGIC CONSIDERATIONS

- ✓ **STEM WORKFORCE:** Only 30.8 percent of residents in the Indianapolis region possess a bachelor's degree education in 2013, roughly 0.8 percentage points higher than the national average. While outperforming the national average, many of the nation's large life sciences clusters possess a far more highly educated population. For instance, 42.0 percent and 42.9 percent of residents in the Raleigh, NC and Boston, MA metro areas hold a bachelor's degree education or higher, respectively. Furthermore, as illustrated in the Competitive Assessment, the region has struggled to improve adult educational attainment levels in recent years, falling further behind its competition.
- ✓ **TALENT ATTRACTION AND RETENTION:** Average earnings in the region's core life sciences subsectors are considerably higher than the national average for the same activities, providing a strong and marketable incentive for talent attraction and retention. Of the ten subsectors that compose the region's life sciences sector, four paid average annual earnings above the regional

average. High earnings sectors include pharmaceutical and medicine manufacturing (\$190,089 average annual earnings) and pesticide, fertilizer, and other agricultural chemical manufacturing (\$140,064). With the exception of research and development in physical, engineering, and life sciences, the three remaining high earnings sectors paid well above the national average, ranging between 11.1 to 37.6 percent above the national average. These positive wage differentials are an attractive value proposition for attracting talent into the area, especially given the region's low cost of living (especially compared to its larger competitor metros).

- ✓ **PROXIMITY TO RESEARCH INSTITUTIONS:** Life sciences companies located in the Indianapolis region have access to a number of higher education research institutions who attract significant Federal life sciences funding. In FY 2011, the latest figures available, the Indiana University/Purdue University-Indianapolis received \$284 million in federal funding for life sciences research according to the National Science Foundation (NSF), while Purdue University spent \$201 million in the life sciences area. Although immense relative to many other regions, this level of life sciences R&D funding is generally exceeded in most of the Indy region's key competitors. Generally speaking, federal funding for academic research is on the decline.
- ✓ **INDIANA BIOSCIENCES RESEARCH INSTITUTE:** In 2012 and 2013, BioCrossroads helped to facilitate to community discussion around collaboration and engagement among Indiana's leading life science stakeholders. From these conversations several important themes emerged. It was acknowledged that many of the State's leading life science companies were involved with collaborations around the country and around the world, but not so much in Indiana. One of the reasons identified was talent, and it was from these early discussions that the idea for the Indiana Biosciences Research Institute (IBRI) emerged as a catalyst and focal point for talent attraction, innovation and collaboration. The Institute is geared to (i) augment and supplement the capabilities of the State's leading corporate and university research activities, (ii) attract world class talent, (iii) catalyze engagement around a critical mass of research in the area of nutrition, diabetes, obesity, and cardiovascular disease in which all the leading life science corporate and university stakeholders have significant interest; and, (iv) catalyze innovation more broadly across multiple industry sectors for the region by being the initial driver and anchor for an innovation district at 16 Tech similar to other leading innovation districts around the country like Cambridge MA, San Francisco and Cortex in St. Louis MO. The IBRI is the "big idea" behind which the State and Indiana's life science sector is aligning - \$50 million raised to date - to advance the sector and help transform Indiana to an innovation driven economy.
- ✓ **PURDUE RESEARCH PARK OF INDIANAPOLIS:** Purdue University recently constructed its Purdue Research Park of Indianapolis within the 1,500 acre AmeriPlex-Indianapolis development. The research park includes many of the amenities sought after by life sciences companies including complete laboratory facilities, consulting opportunities and research partnerships with Purdue faculty, and arrangements to purchase small quantities of chemical and metal goods from Purdue. The Park is home to the Purdue Technology Center of Indianapolis.
- ✓ **BUSINESS RETENTION AND EXPANSION:** Employment losses within the core pharmaceutical manufacturing subsector highlight the need for business retention and expansion strategies that will identify and address the core impediments preventing life sciences companies from growing

within the region. This is not to say that business attraction strategies should be abandoned, but stakeholders should, instead, take a balanced approach to fostering employment growth in the sector. The presence of a few major employers that constitute a relatively large share of total employment in the sector further reinforces the need for focused and consistent business retention outreach; mass layoffs or the relocation of certain operations could have devastating effects on the sector and the region as a whole.

- ✓ **SMALL BUSINESS ACTIVITY:** Given the presence of Eli Lilly, it is not surprising that the average establishment size in pharmaceuticals and other basic chemical compound manufacturing is relatively high in the Indianapolis region when compared to the national average for these life science subsectors. However, other areas of the life sciences cluster in the Indianapolis region are particularly oriented towards small business when compared to the average American community and other competing regions, specifically, the medical instrument and surgical supplies manufacturing subsectors. The average establishment in these two subsectors employs 44 individuals in the Indianapolis region, as compared to 59 nationwide and 76 in the Boston metropolitan area, a region that is known for its highly entrepreneurial life sciences activity.
- ✓ **AVAILABILITY OF CAPITAL:** Life sciences entrepreneurs are afforded some supportive funding opportunities, such as the Indiana Future Fund, the INext Fund, the Hoosier Healthcare Innovation Challenge, and the BioCrossroads New Venture Competition. However, as illustrated in the Competitive Assessment, the region and state are currently at a significant disadvantage relative to peer regions as it related to venture capital capacity. Furthermore, many competing areas have a larger network of serial entrepreneurs and “dealmakers” in the life sciences arena. Many other studies, including a Battelle report for BioCrossroads entitled “Re-Examining the Need for Innovation Capital to Advance Life Science Development in Indiana” has highlighted the challenges in the state and suggested a variety of potential actions to support the enhancement of the capital environment from the modification of tax credits for research and development and venture capital investments to the development of more university-sponsored seed funds.
- ✓ **IMPORT SUBSTITUTION AND SUPPLIER RECRUITMENT:** Import substitution is an economic development strategy in which products currently imported to the local economy are replaced by locally produced products. Moreover, many communities throughout the nation leverage large institution purchasing power to enhance local economic growth. Leveraging import substitution, and closing supply chain leakages, can result in increased economic activity. Attracting manufacturers into the region, or developing capacity regionally, may increase the economic impact of the region’s life sciences sector by capturing purchases that are currently made outside of the Indianapolis region. Such import substitution strategies (or targeted recruitment strategies) must be heavily informed by life sciences stakeholders, who can often identify the most fruitful supplier relationships and assess capacity to close supply chain leakages.
- ✓ **CLUSTER DEVELOPMENT NETWORKS AND CAPACITY:** The region has benefitted greatly from the deliberate cluster development actions born from the BioCrossroads initiative developed in 2002. Among its many efforts, BioCrossroads has helped advance commercialization and translation research while also working to develop new funding mechanisms for life sciences entrepreneurs. It

launched IndyHub (a talent retention initiative), I-STEM (a K-12 career education initiative), and BioCrossroads LINX (an initiative that, in part, supports local-sourcing within the life sciences supply chain). The various initiatives of BioCrossroads and its immense private sector support have been studied by other life science clusters around the country.

- ✓ **REGIONAL CONSIDERATIONS:** Life sciences companies benefit greatly from collocating near to hospitals, research universities, and laboratories (especially if jointly owned). As a result, many life sciences companies choose to locate in dense urban environments where they have access to large patient populations, university assets, and cutting edge research laboratories. Life sciences firms in the Indianapolis region are no exception. In 2014, approximately 83.3 percent of all life sciences employment within the Indianapolis region was located in Marion County. Hamilton (7.3 percent of total regional life sciences employment) and Hancock (4.2 percent) represented the next highest percentage of regional life sciences employment. This is not to say that the high concentration of life sciences employment in Marion County precludes other counties within the region from targeting life sciences companies. However, it is important to note that certain life sciences functions, such as wholesaling or production, are more suitable for the region's outlying counties compared to functions that benefit from agglomerative effects provided by a central city and proximity to its research institutions (i.e. research and development). As highlighted in the introductory section covering Existing Target Sector Initiatives, five counties within the Indianapolis region actively target life sciences or a closely related field: Boone, Hamilton, Hancock, Hendricks, and Marion.

MANUFACTURING

DEFINITION: Manufacturing is a historical backbone of the state's economy and has consistently ranked first in the country in the percentage of total state output derived from manufacturing. The state's manufacturing industry has received an "A" health rating for six consecutive years in the annual Manufacturing and Logistics Report produced by the Ball State Center for Business and Economic Research. Regional manufacturing activity encompasses a wide variety of manufacturing subsectors including fabricated metals; nonmetallic mineral products; primary metals; machinery; transportation equipment; computer and electronic products; electrical equipment, appliances, components; petroleum and coal products; plastics and rubber; and other miscellaneous goods. The region is home to historical strengths in the automobile and aerospace product and parts production, and these historical strengths have combined with a rich history in motorsports technology development to position the Indy region well for technology development in a few niche areas such as fuel efficiency and battery technologies.

As the nation's manufacturing sector continues to adjust to global competition, the region is making significant efforts to reorient its manufacturing portfolio. Energy Systems Network, a CICP spin-off, has developed a number of initiatives to support sustainable technologies regionally. At the same time, Conexus Indiana, an initiative to capitalize on emerging opportunities in advanced manufacturing and logistics, is ensuring that the state of Indiana as well as the region is supplier with the next generation of technology-oriented manufacturing talent.

LOCAL COMPANIES: The following is a limited but representative list of local companies:

- ✓ **Motor Vehicle Products and Parts:** Allison Transmission, Keihin Indiana Precision Technology, Ryobi Dei Casting USA.
- ✓ **Aerospace and Defense:** Rolls-Royce, Raytheon Technical Services, Hawker-Beechcraft.

NATIONAL TRENDS: Increasing global competition, especially from low labor cost countries, new regulations, automation, and cyclical fluctuations in demand are among the many factors that have contributed to the well documented decline of manufacturing activity (and employment) in the United States. Between 2004 and 2014, manufacturing employers within the United States reduced their payrolls by more than 1.1 million jobs, a decline of 11.7 percent. But other trends suggest that manufacturing will still play an important role in the country's future. The business case for making products in the United States is buoyed by concerns over intellectual property protection and increased transportation costs that have forced many firms to consider shortening their supply chains.

KEY SITE CONSIDERATIONS: Available sites and buildings; competitive labor costs; abundant water; access to skilled talent; flexible, responsive, and high-capacity technical college and training systems; proximity to inputs, suppliers, markets, and transportation networks; redundant and cost-effective power grid.

COMPETING REGIONS: Prime transportation equipment manufacturing competitors include historically strong regions such as Detroit, MI and Seattle, WI as well as numerous automotive manufacturing concentrations throughout the Midwest, rising Southern metropolitan anchors for automotive manufacturing such as Nashville, TN and Greenville, SC, and other aerospace-related clusters in metropolitan areas such as St. Louis, MO and Charleston, SC.

EXISTING SECTOR STRENGTHS

- ✓ **AEROSPACE AND DEFENSE:** After a period of significant turmoil caused by the Great Recession, rising fuel prices, decreased defense spending, and industry consolidation, the aerospace and defense sector is emerging in a stronger position nationally. Compared to other manufacturing subsectors, aerospace and defense has appeared comparatively resilient. However, much of this stability has come from a growth in defense contracts awarded during wartime periods in the 2000s. In fact, according to the Kelley School of Business report entitled “Building National Security: The Economic Impact of Indiana’s Defense Industry” the number of defense contractors across the state of Indiana grew from 362 in 2001 to 1,073 in 2005.

Across the Indy region, between 2004 and 2014, aircraft engine and engine parts manufacturers only shed 117 jobs (a decline of 2.5 percent) while other aircraft parts and auxiliary equipment manufacturers added 104 jobs (an increase of 33.1 percent) regionally. Boeing’s 2014 Current Market Outlook projects that global demand for airplanes will rise by more than four percent.¹⁹ Over the next twenty years, the company expects global airplane demand to reach 36,700 units, worth over \$5.2 trillion.²⁰ Concerns over fuel efficiency, desire to replace aging fleets, and growing air travel demand in Asia were seen by Boeing as key factors driving future global demand.

Regional aerospace and defense firms are primarily engaged in the manufacture of aircraft engine and parts, other aircraft parts, and navigation, guidance, aeronautical, and nautical systems and instrument manufacturing. It should also be noted that GE’s \$100 million jet engine assembly operation locating in West Lafayette could enhance the attractiveness of the Indianapolis region to aerospace and defense manufacturers that supply GE’s assembly operations or seek to leverage the workforce that has supported this operation. While the investment is outside of the Indianapolis region, it is likely that many GE employees will live within the region’s borders, thereby enhancing the prospective pool of talent available to relocating and expanding facilities.

- ✓ **MOTOR VEHICLE PARTS AND PRODUCTS:** Regional motor vehicle parts and products firms are primarily engaged in the manufacture of motor vehicle gas engine and parts, electrical equipment, steering and suspensions, transmissions and power trains, and seats and internal trimming. It should also be noted that the Indianapolis region benefits directly from the vast number of motor vehicle parts and products manufacturing operations proximate to, but not within the region. For instance, many workers employed at Subaru of Indiana Automotive, Inc.’s facilities in Tippecanoe likely live in the Indianapolis region, making the region more attractive to prospective motor vehicle parts and product manufacturers. The Great Recession had an adverse impact on the region’s motor vehicle parts and products manufacturing sector. Employment declines over the last decade (2004-2014) in motor vehicle electrical and electronic equipment manufacturing (-89.7 percent), motor vehicle transmission and power train parts (-44.1 percent), and motor vehicle steering and suspension manufacturing (-53.7 percent) are particularly alarming. While a portion of these employment losses may be due to employment reclassification, a process whereby employment isn’t actually lost but reallocated to another business sector, Worker Adjustment and

¹⁹ Boeing. “Current Market Outlook: 2014-2033.” Boeing. Accessed January 31st, 2015.

²⁰ IBID

Retraining Notifications (WARN) and general news reports do provide evidence that not all the job losses within these sectors can be attributed to employment reclassifications; there have been substantial layoff announcements during this time frame. Input participants have noted that OEM restrictions of the location of parts suppliers has partially contributed to a shift in production towards southward down I-65, while others have noted that the industry as a whole appears to be continuing to shift production to other parts of the United States (notably the Southeast) and other parts of the world (such as Mexico and Brazil).

A handful of trends are influencing the future of auto parts production and motor vehicle technologies. An ever-increasing emphasis on fuel efficiency and emissions reduction has been complemented by increasing incentives for electric vehicles and investments in battery technologies. The industry remains focused on innovations that in materials sciences that improve safety and performance through integration of stronger yet lighter materials.

Notably, many such technological innovations are occurring first in shops devoted to motorsports, a clear advantage and differentiator for the Indianapolis region. As highlighted in a study by the Purdue Center for Regional Development (PCRD) entitled "Race to the Future: The Statewide Impact of Motorsports" the region is also differentiated from its prime motorsports competitors (Charlotte and London) due to the fact that it is proximate to a large transportation equipment manufacturing cluster outside of the motorsports niche. This PCRD study highlighted a number of examples of technology transfer between the motorsports industry and other sectors/applications. These include the applicability of race helmet design to concussion prevention in football helmet design; the durability of windshields developed for motorsports and their applications to agricultural equipment; the application of studies of drag and airflow in motorsports on fuel efficiency for a variety of commercial vehicles, and; chassis design for drag racing that has been applied to component mounting concepts for cars, tractors, and even iPads. Even still, despite these examples, input participants that informed the PCRD study and this CEDS process have highlighted technology transfer from the motorsports sector as challenge that is born largely from the pace of innovation in motorsports and the relative lack of time to seek patent protection. The PCRD study provides an exceptionally comprehensive technical definition of the motorsports cluster based on quantitative and qualitative analysis of supply chains, and is a valuable resource for understanding the specific issues facing this subsector.

NICHE TECHNOLOGIES

- ✓ **ENERGY SYSTEMS AND BATTERY TECHNOLOGY:** Energy systems and technologies encompass many environmentally friendly energy and energy storage systems including renewable energy power generation, environmentally friendly fossil fuels, energy storage technologies, and efficient power grids. However, much of the region's expertise in this area is related to, or born from, its expertise in motorsports and automotive technologies. And while it has been noted in other research that the market's transition to electronic vehicles could threaten the state's historical strength in traditional powertrain, as previously mentioned the Indy region also clearly has an advantage over many other centers of automotive assembly that are not home to the immense research and development activity that is associated with motorsports. And the region has some

valuable assets from the Auto Research Center to various centers at Purdue and Indiana University that focus on battery technology and fuel efficiency.

Energy Systems Network is a transformative asset to the region's energy systems and technology niche focused on bringing alternative energy technology solutions to market, using innovation to confront global energy challenges with systems-level solutions. ESN initiatives include: Project Plug-In – an first-of-its-kind project that is adding more than 100 electric vehicles to the region's government and corporate fleets; Hoosier Heavy Hybrid Partnership – an effort to fully integrate hybrid power systems for light, medium, and heavy duty vehicles; and the Battery Innovation Center – an initiative to accelerate the advanced battery market by forging connecting manufacturers with the researchers, government agencies, and Fortune 500 companies. Each project represents opportunities for manufacturers, particularly in the automotive sector, to gain a significant head start in the sustainable technology market.

INDUSTRY TRENDS: POTENTIAL FUTURE OPPORTUNITIES

Technology continues to permeate throughout every business sector, manufacturing is no exception. Once thought of as a "low-tech" business sector, manufacturing operations today are increasingly advanced in their integration of robotics, "smart" manufacturing technologies, and automated processes. Regions targeting manufacturing must be vigilant of new technologies and shifting manufacturing trends including, but certainly not limited to, the following:

- ✓ **ADDITIVE MANUFACTURING:** Additive manufacturing, commonly referred to as 3-D printing, is transforming the production process. Entrepreneurs throughout the nation are disrupting manufacturing business sectors – shortening the iterations between prototypes and personalized finished goods built to customer specifications. There are countless examples of the manner in which 3-D manufacturing is changing how, and even what, we are able to produce. For example, team of researchers at Washington University, the University of Illinois at Urbana-Champaign, and Northwestern University are utilizing 3-D printing to produce tailor-made heart implants.²¹ Aerospace and automotive companies are further leveraging additive manufacturing for prototyping and testing composites. Sales of additive manufactured products may reach \$6.5 billion by 2019 according to a market analysis by Wohlers Associates.
- ✓ **THE INTERNET OF THINGS AND WEB-ENABLED AUTOMOBILES:** Aided by the steady cost decline of sensors, processors, and networking technologies, the internet of the things, essentially web connected appliances and products, has become viable. From smart fridge technologies to thermostats adjust their temperature based on input from a smart phone, web connected technologies have found their way into many common household consumer products. The total economic impact of these web connected devices are immense, General Electric estimates that the industrial internet of things could add \$10 to \$15 trillion to global GDP over the next twenty years

²¹ Bourzac, Katherine. "Heart Implants, 3-D Printed to Order." The MIT Technology Review. March 4th, 2014.

while Cisco Chief Executive Office, John Chambers, estimates that the internet of things is a \$19 trillion global opportunity.^{22, 23}

Summarizing the latest Consumer Electronics Show, Bloomberg Businessweek noted in a recently published article titled “Putting the Mobile into Automobile,” that technology adoption in automobiles is proliferating. As cited in the article, a recent survey by consulting firm Accenture found that 39 percent of U.S. car buyers cited technology as a top selling point, more than triple the 14 percent who care about horsepower and handling.²⁴ From GPS navigation to app-based services, automobiles are mimicking mobile devices. The Consumer Electronics Association (CEA) estimates that the hardware and software market for automobiles is an \$11.3 billion business.

- ✓ **AUTOMATION, ROBOTICS, AND THE NATURE OF THE WORKPLACE:** According to data from the Bureau of Labor Statistics, manufacturing employment has declined by 32.2 percent since 1990. Over the same time period, manufacturing productivity (measured by output per hour) more than doubled (115.3 percent). The divergence between labor and productivity has a number of sources; however, it is clear that manufacturers across the country are supplementing automated machinery for labor – ensuring that they are cost competitive relative to manufacturing operations in low labor cost countries. This is changing the nature of the workplace and accordingly, the nature of workforce requirements. Manufacturers in a variety of subsectors are increasingly leveraging computer numerical control (CNC), coordinate measuring machine (CMM), and computer aided design (CAD) systems while focusing on process improvements (Six Sigma, lean manufacturing, etc.). They are also continuing to adopt radio frequency identification (RFID) to track products and parts on the floor of the production facility. The GE Aviation facility in Lafayette that broke ground last year will implement RFID parts tracking during the production process.

MANUFACTURING: BUSINESS SECTOR EMPLOYMENT TRENDS

Manufacturing activity within the Indianapolis region covers a wide range of activities, from fabricated metal products to chemical manufacturing – most notably the presence of major pharmaceutical operations in the region. Along with pharmaceutical manufacturing, the region is also intricately tied to the transportation equipment manufacturing sector.

- ✓ **Overall, regional manufacturing activity is twenty percent more concentrated than the average community nationwide.** Areas of regional specialization include transportation equipment (30 percent more concentrated than the national average), nonmetallic mineral product (50 percent), fabricated metal product (20 percent), and primary metal (20 percent) manufacturing.
- ✓ **Although employment opportunities in the sector are relatively concentrated and provide exceptionally high earnings potential, these opportunities are dwindling regionally.** Between 2004 and 2014, regional manufacturers shed -17,269 jobs, or almost a fourth of their workforce. Four sectors accounted for over 80 percent of total employment losses in the sector: plastics and

²² GE Reports. “Analyze This: The Industrial Internet by the Numbers and Outcomes.” General Electric. October 7th, 2013.

²³ Chambers, John. “Are you ready for the internet of everything?” World Economic Forum. January 15th, 2014.

²⁴ Naughton, Keith. “Putting the Mobile Into Automobile.” Bloomberg Businessweek. January 12th-16th, 2015.

rubber product (-40.7 percent), transportation equipment (-37.2 percent), computer and electronic product (-32.1 percent), and machinery (-20.5 percent) manufacturing.

- ✓ **Employment prospects over the next ten years are less dire.** Employment projections by EMSI find that regional manufacturing employment will decline by an additional 1,727 jobs, or -2.5 percent, between 2014 and 2024. Given the relatively small employment decline; it is not out of the question that a major relocation, expansion, or economic development intervention could return the sector to growth.
- ✓ **The region's motor vehicle parts and products sector has been particularly hard hit by both the Great Recession and inter-industry trends.** As major automotive manufacturers continue to shift their operations to right-to-work states, many automotive suppliers and motor vehicle companies have chosen to locate near new facilities – first tier suppliers are increasingly required to co-locate in close proximity to the main assembly operation to better synchronize the automotive assembly process. These linkages – the buyer-supplier relationships that so often define industry clusters – increase a region's collective susceptibility to cyclical fluctuations and changes impacting the primary manufacturer (original equipment manufacturer), both positive and negative.
- ✓ **Transportation equipment manufacturers' post-recession recovery is slow, but positive.** Total employment in the subsector reached its lowest point in 2011, with only 13,801 jobs in the sector during that year. Since this trough, transportation equipment manufacturing employers added a combined 598 jobs, a gain of 4.3 percent. Over the next ten years (2014-2024), transportation equipment employment is projected to reverse course, declining by 5.8 percent. Again, the small decline (-837 jobs) could be offset by a major relocation, expansion, or positive economic trends.
- ✓ **After a period of significant turmoil caused by the Great Recession, rising fuel prices, decreased defense spending, and industry consolidation, the aerospace and defense sector is emerging in a stronger position nationally.** Compared to other transportation equipment subsectors, aerospace and defense is comparatively resilient. Between 2004 and 2014, aircraft engine and engine parts manufacturers only shed -117 jobs (a decline of -2.5 percent) while other aircraft parts and auxiliary equipment manufacturers added 104 jobs (an increase of 33.1 percent). Boeing's 2014 Current Market Outlook projects that global demand for airplanes will rise by more than four percent. Over the next twenty years, the company expects global airplane demand to reach 36,700 units, worth over \$5.2 trillion. Concerns over fuel efficiency, desire to replace aging fleets, and growing air travel demand in Asia were seen by Boeing as key factors driving future global demand.
- ✓ **Despite the troubling trends of the last decade, automotive and aerospace manufacturing hold relatively strong growth prospects in the future.** Across the United States, manufacturing employment is projected to only rise by one percent between 2014 and 2024. Projected decline in numerous manufacturing subsectors (such as furniture, textiles, paper products, and even computer equipment) is counteracted by projected growth in transportation equipment. In fact, the motor vehicle body manufacturing (projected national growth of nine percent between 2005 and 2014), motor vehicle parts manufacturing (four percent), and aerospace product and parts manufacturing (four percent) subsectors account for 88 percent of all projected manufacturing employment growth in the United States over the course of the next decade. In light of these

trends, a refocused Advanced Manufacturing target that is more narrowly defined to encompass growing opportunities in transportation equipment is sensible.

MANUFACTURING: OCCUPATIONAL EMPLOYMENT TRENDS

Manufacturing occupations cover a wide gamut of activity within the sector, ranging from front-line assembly workers to mechanical engineers.

- ✓ **Six of the top ten manufacturing occupations required a high school diploma or GED, and many operations are increasingly reliant on advanced degrees to program, operate, and maintain machinery and processes.** Because of the low educational attainment requirements for many of these occupations, this business sector is an important source of employment opportunity for residents who possess little to no formal education beyond a high school diploma. But as manufacturing companies continue to adopt new automation technologies, educational requirements will increase and the next generation of production workers will need to be better prepared for a variety of tasks and skills including mathematics, engineering, and problem-solving.
- ✓ **Certain manufacturing skill sets are more concentrated regionally compared to the average community nationwide, an important competitive advantage.** Computer-controlled machine tool operators (2.4 percent of total regional employment vs. 1.6 percent of total national employment); mechanical engineers (2.0 percent vs. 1.5 percent), and first-line supervisors of production and operating workers (3.7 percent vs. 3.5 percent) are more concentrated regionally relative to the national average, giving the region a potential advantage in attracting manufacturers actively seeking these skill sets.
- ✓ **Consistent with business sector data showing employment losses in many subsectors, the occupational employment figures illustrate that job losses have occurred in the ten most common occupations supporting the manufacturing sector over the ten year period from 2004-2014.** Occupations particularly hard hit include team assemblers (-29.3 percent), machinists (14.7 percent), mechanical engineers (-19.6 percent), and industrial engineers (-20.8 percent). These employment declines could deter new talent from entering the manufacturing sector, further exacerbating the impact of Baby Boom retirements on any subsectors that are potentially poised for expansion.
- ✓ **Manufacturing occupations are a source of high earnings opportunities for individuals regardless of educational attainment.** For workers at with a high school education or less, machinists (\$39,139 median annual wage); inspectors, testers, sorters, samplers, and weighers (\$34,259), and computer-controlled machine tool operators (\$32,157) offered a high wage relative to skill level. For workers with a bachelor's degree education, mechanical engineers (\$77,423 median annual wage) and industrial engineers (\$73,358) were highly paid occupations. Moreover, a recent report by Ball State University, sponsored by Conexus Indiana, notes that the gap between new employee and existing employee pay has lessened significantly since the Great

Recession – the tighter labor market conditions could further drive wage growth in the future, especially as the baby boom generation begins to retire.²⁵

STRATEGIC CONSIDERATIONS

- ✓ **GEOGRAPHIC LOCATION:** The Indianapolis region’s central location in the United States provides local manufacturers with significant logistical advantages. In terms of shipping final products to end-users, approximately 50 percent of the United States population is within a one-day truck drive of central Indiana. As for obtaining raw materials, the Indianapolis region’s proximity to the Great Lakes ports facilitates obtaining bulky raw materials with some degree of ease. Further facilitating the flow of raw materials and finished goods is the state of Indiana’s extensive rail transportation network. Coastal metropolitan areas in close proximity to major ports will possess a competitive advantage over the region as manufacturing, especially automotive and aerospace subsectors, relies on the transport of especially high-weight inputs and final products. The 2013 Indiana Manufacturing Survey conducted by Katz, Sapper & Miller and the Kelley School of Business at Indiana University indicated that 83 percent of responding manufacturing that planned to open a new facility in 2014 in Indiana cited the state’s “central location” as an advantage.
- ✓ **PROXIMITY TO INPUTS, MARKETS, AND TRANSPORTATION NETWORKS:** Five major automobile manufacturers have significant operations located within the state of Indiana. Within the state alone, local transportation equipment manufacturers have access to large manufacturing operations including Chrysler, General Motors, Honda, Subaru, and Toyota plants. However, the growth of major manufacturing operations in the Southeast in the last two decades speaks not only to its competitive environment for labor, but also the desire of many major manufacturers to actually locate *away* from other competing major manufacturers that could poach talent from a relatively tight labor pool. In this regard, automotive cluster increasingly develop around a single manufacturer and its supplier network rather than multiple major manufacturers (although exceptions certainly exist).
- ✓ **SITES AND BUILDINGS:** Major manufacturers, particularly original equipment manufacturers (OEMs), often require significant space to accommodate their manufacturing and assembly operations. The OEM automotive factories today typically locate on “mega sites” – those sites with 1,000 or more contiguous acres. Indiana Shovel Ready is a designation, provided through the Office of Community and Rural Affairs, which indicates to site selection consultants and corporate relocation professionals that sites are ready for economic development. Indiana recognizes three tiers of readiness: Shovel Ready, Shovel Ready Silver, and Shovel Ready Gold. Currently, sixteen Indianapolis sites are certified under the program – only five are above 100 acres in size. An additional four sites are certified shovel ready under Duke Energy’s site readiness program. Due to the sheer size of many manufacturing operations, especially those in the transportation equipment sector, expanding the amount of certified sites under the program (particularly for larger sites) could enhance the region’s competitiveness for larger manufacturing operations. That being said, the region has an abundance of sites capable of accommodating suppliers to these OEMs –

²⁵ Hicks, Michael J.; Devaraj, Srikant. “Manufacturing and Labor Market Frictions.” Conexus Indiana. June 2014.

producers of various automotive and aerospace products and parts. Relocating and expanding transportation equipment manufacturers could repurpose pre-existing facilities provided they meet their criteria and environmental remediation is not a significant obstacle. Anderson, Indiana has successfully reutilized former GM plants for other manufacturing purposes. The Indy FastTrack Action Plan examines the highest and best use for four facilities that are targeted for redevelopment including the GM Stamping facility (planned mixed-use development), and three other facilities (Chrysler Foundry, Ford Visteon, and Navistar) that are viewed as suitable for industrial redevelopment.

- ✓ **IMPENDING RETIREMENTS AND LABOR SHORTAGES:** Many of the top ten manufacturing occupations will encounter significant workforce sustainability concerns in the years ahead, especially given existing national shortages. For instance, more than half (1,764 workers) of the region's machinists will retire by 2034. Given that there are only 1,161 machinists aged 25 to 44 who are likely to replace these workers, the region could encounter a shortfall of 603 machinists by 2034. Growth demands for machinists could further aggravate the shortage. Other occupations that are slated to experience shortages include those that require significant institutional training and development. Mechanical engineers (-13 potential unfilled vacancies) and industrial engineers (-279 vacancies) National shortages in each of these occupations will further fuel competition for this talent. Such competition will favor regions with an already embedded workforce making them attractive to relocating transportation equipment manufacturing businesses.

An immense amount of pre-existing research has focused on the region and state's workforce sustainability concerns, with particular focus on production and STEM-related occupations in manufacturing and technology-intensive sectors. There are concerns are every skill level and required educational background. The 2013 Indiana Manufacturing Survey found that 57 percent of respondents encountered what they would characterize as a "moderate to serious shortage" of skilled production workers, and 31 percent encountered a moderate to serious shortages of scientists and engineers. Many others characterized the situation as simply a "low" or minor shortage. Of those indicating that they planned to open a manufacturing facility in the state in 2014, only 17 percent characterized the state's workforce as an advantage.

As highlighted in the previously-mentioned PCRD report, manufacturers of motor vehicle technologies have cited concerns about impeding baby boom retirements and difficulties finding enough qualified workers with a variety of high-demand technical skills. Such in-demand skills include 3d and computer-aided manufacturing, aerodynamic engineering, tungsten inert gas (TIG) welding, computer numerical control (CNC) machines, flow analysis, and custom fabrication.

The Strategic Plan for Indiana's Automotive Industry produced by Conexus and the Indiana Automotive Council echoed many of these same conclusions for the broader automotive products and parts manufacturing sectors. Key weaknesses related to workforce capacity that were highlighted by the report include the aging of the workforce, a relative lack of engineers remaining in Indiana.

- ✓ **HIGHER EDUCATION CAPACITY:** In 2013, regional higher education institutions conferred 408 degrees that support the ten most common manufacturing occupations. For training capacity at

the sub-bachelors level, Ivy Tech Community College offers a variety of manufacturing-related programs. From manufacturing engineering technology and technicians to machine tool technology and machinists degrees, Ivy Tech Community College offers a variety of programs supporting transportation equipment manufacturing. Little input was received from stakeholders in the manufacturing sector regarding the flexibility and/or quality of programs at Ivy Tech. At the bachelors-level, IUPUI conferred 88 bachelors and 20 masters-level mechanical engineering degrees. The School of Aeronautics and Astronautics at Purdue is highly regarded; its undergraduate and graduate degree programs frequently rank in the top 5 or 10 nationally in a variety of publications. The University's other engineering programs also frequently rank in the top 10 nationally and it is home to the only motorsports engineering program in the country. The University and Rolls Royce have developed a close partnership, with Purdue providing Rolls Royce employees with continuing education opportunities.

Input received from the manufacturing sector and summarized in various studies (see Appendix A) have resulted in similar conclusions regarding the region's talent pipeline. As discussed in the next paragraph, there is general concern that there is insufficient interest in STEM-related career clusters at the high school level. At the sub-baccalaureate/two-year level, many employers have observed that workers are enrolling in relevant technical programs but many fail to receive valuable certifications. And at baccalaureate institutions, there is concern that, despite the high quality of many programs, the number of graduates from these engineering programs that choose to stay in Indiana is insufficient.

- ✓ **PROMOTING INTEREST IN MANUFACTURING CAREERS:** Stigmas attached to the manufacturing sector and negative perceptions about future employment opportunities within manufacturing must be overcome in order to ensure that a sustainable pipeline of talent exists to support the region's transportation equipment manufacturers. The "Hire Up Indy!" report produced by Employ Indy highlighted a disconnect between enrollments in career and technical education (CTE) in the region's schools and the region's clusters of economic activity, born largely from a disconnect between the choices that students are making and the needs of regional employers. Specifically, it was cited that more than three times as many students in Central Indiana were enrolled in cosmetology and culinary arts programs than in STEM-focused clusters. This report reinforced a conclusion that helped spawn Conexus Indiana, a statewide initiative that focuses heavily on improving interest among young people in STEM-related fields, connecting employers to classrooms, and ultimately increasing the pipeline of young talent entering technical training and higher education programs in fields that support manufacturing and logistics. Others in region are also focused on improving interest in manufacturing careers and other STEM-related fields in partnership with regional school systems. This includes but is not limited to local employer 3D Parts Manufacturing that has partnered with the TechPoint Foundation for Youth to place small 3D printers in classrooms at ten schools around the state.
- ✓ **LABOR COSTS FOR PRODUCTION OCCUPATIONS:** Compared to the average community nationwide, manufacturing occupations within the region are typically cost competitive. For instance, regional team assemblers earned a median annual wage of \$26,895, almost 5 percent below the national average. Only two of the top ten occupations by employment paid an average median wage above the national average. Both first-line supervisors of production and operating

workers (\$55,799, 2.9 percent above the national average) and cutting, punching, and press machine setters, operators, and tenders (\$32,056, 7.0 percent above) paid in excess of the national median.

- ✓ **COMPARATIVELY LOW WAGES FOR ENGINEERS:** Prevailing wages for a variety of engineering occupations (mechanical engineers, aerospace engineers, industrial engineers, and a variety of technicians and technologists) are lower than the national average. With a relative abundance of these workers already in employed, a strong pipeline emerging from regional degree-granting institutions, and competitive labor costs, the Indy region should be particularly attractive for manufacturing operations that require a relatively large number of engineers for production optimization, research and development, or otherwise. However, comparatively low wages could be a deterrent to talent attraction and retention efforts and input received from manufacturers in a variety of previously assembled studies has indicated that they are regularly forced to recruit engineers from out of state to fill vacant positions.
- ✓ **ACCESS TO RESEARCH UNIVERSITIES:** Proximity to research universities with related aerospace and defense capabilities provides long-term R&D partnership opportunities along with professional development options for workers. The partnership between Rolls Royce and Purdue University is indicative of relationships that aerospace manufacturers typically forge with higher education institutions. Over their history, Rolls Royce and Purdue University have been involved in 25 partnerships, ranging from research, internships, and continuing education programs for Rolls Royce employees. Perhaps the most notable is Purdue University's Rolls-Royce University Technology Center in High Mach Propulsion. Such partnerships attach aerospace and defense companies to the local community while also providing new research and technologies that will fuel the sector's continued growth.
- ✓ **BUSINESS RETENTION AND EXPANSION:** Given the significant employment declines within the sector over the last decade, it is clear that the region's manufacturing sector, and particularly its transportation equipment manufacturing subsectors (motor vehicle product and parts, and aerospace and defense), require extensive business retention and expansion efforts. Rather than attracting new target sector companies into the region, business retention and expansion activities focus on identifying and removing barriers to a manufacturer's growth. Such efforts may encompass assistance related to workforce development, advocacy and legislative affairs, permitting and regulatory affairs, infrastructure development, etc.
- ✓ **INDY RACING LEAGUE (INDYCAR) IMPACT:** IndyCar racing history in the Indianapolis region is storied, dating all the way back to the early 1900s. While IndyCar has unquestionably attracted new visitors into the region and broadly marketed Indianapolis to a national audience, it goes without saying that IndyCar has also had a profound effect on the development of the automotive industry. Innovations developed by IndyCar racing companies that later made their way into commercial use include, but are certainly not limited to, the rear view mirror, crash data recorders, renewable ethanol fuel, and hydraulic brakes.²⁶ More recently, Dorel, a Columbus, Indiana car seat manufacturer, partnered with Bald Spot Sports, an IndyCar company who builds customized

²⁶Carney, Dan. "Top 10 IndyCar technologies." NBC News. 2013.

cockpits to withstand significant physical force.²⁷ Dorel utilized this partnership to implement changes in their car seat construction, improving the foam padding to better enhance child safety. Simply put, the technologies developed in IndyCar can have a profound impact on the competitiveness of regional transportation equipment manufacturers. Forging new and stronger relationships could be a boon to the growth prospects in the sector.

- ✓ **IMPORT SUBSTITUTION AND TARGETED RECRUITMENT:** Transportation equipment manufacturing operations typically rely on a whole host of raw materials and intermediate goods from first, second, and third tier suppliers. As a result, identifying the relationships between transportation equipment manufacturers and their suppliers could help determine potential business attraction targets, provided the manufacturer yields a benefit from having the supplier in closer proximity. Locally sourcing products maximizes the economic impact of regional business purchasing decisions. Although a number of supplier relationships could be forged, data indicates that a large percentage of the transportation equipment sector's expenditures on machining (via machine shops), metal stamping, and custom fabrication leaves the region. For example, only one quarter (25.1 percent) of the transportation equipment niche's \$122 million in annual expenditures on machining was sourced from machine shops within the region. Efforts to promote local sourcing of inputs and custom fabrication/machining services when viable could help recapture lost economic activity in the form of jobs, investment, and wages. Simply put, whenever a transportation equipment manufacturer chooses to source a product or service outside of the Indianapolis region it represents lost economic activity that could have occurred locally. Often times, manufacturers are unaware of the options available to them within the region. Other times, regional suppliers are unable to provide a comparable product at or below cost. Determining these barriers to regional supplier relationships is crucial to recapturing this lost economic activity.
- ✓ **EXPORTS AND PRODUCTIVITY:** Because of the export-oriented nature of manufacturing activity, the sector tends to have a larger economic impact compared to other business sectors and is an important sector in terms of importing wealth from across the globe. In 2013, the Indianapolis region's transportation equipment manufacturing sector produced more than \$7.7 billion in exports to locations outside the region (domestic and international), or \$507,323 worth of exports per worker. Compared to many competitor regions, the Indy region is exceptionally productive. Transportation equipment manufacturing workers in the Charleston, SC metro area (\$517,370) produced a marginally higher amount of exports per individual work; certainly the recently located Boeing facility has been a boon to output in that region's transportation equipment manufacturing sector. Other areas that are more heavily oriented towards automotive production – Detroit, MI (\$429,546 exports per worker), Greenville, SC (\$461,574), and Nashville, TN (\$339,821) – tended to produce fewer exports per worker on average. Given the relatively high wages within the sector, it is important that the Indianapolis region relay its value proposition, in terms of productivity, to potential relocating and expanding companies. Businesses may see value in providing a higher salary to transportation equipment manufacturing workers in the region so long as it is accompanied by higher output or other production benefits.

²⁷ Bigelow, Pete. "How IndyCar technology wound up in your kid's car seat." Autoblog. May 23, 2014.

- ✓ **REGIONAL CONSIDERATIONS:** Of the 11 counties that compose the Indianapolis-Carmel-Anderson, MSA, seven experienced post-recession (2009-2014) employment gains. Counties with sizable growth in their transportation equipment manufacturing employment includes Hancock (402 jobs, 47.8 percent), Morgan (321 jobs, 121.3 percent), and Johnson (310 jobs, 26.7 percent) counties. These positive post-recession employment trends suggest that transportation equipment manufacturing is a viable target for many of the region's counties. Many transportation equipment manufacturers rely on an integrated transportation network that allows them to obtain raw materials and transport their final goods up the value chain. As a result, interstate access (which all but Brown County enjoys) as well as large available sites is key to attracting new transportation equipment manufacturers and expanding existing facilities. Of the region's eight counties that currently target specific economic sectors, only one (Putnam County) actively targets automotive parts and assemblies. Six other counties (Boone, Hamilton, Hancock, Marion, and Shelby) target some type of manufacturing activity, ranging from "advanced manufacturing" to "innovation-based manufacturing."

LOGISTICS

DEFINITION: Logistics companies within the Indianapolis region are primarily involved in transportation and distribution activities – linking raw material producers, product manufacturers, retailers, and end consumers together. Within the Indianapolis region, logistics activities are concentrated in two historically strong sectors: air transportation and storage and fulfillment services. In addition to these two core areas, economic activity captured within the business sector includes wholesaling, rail and road transportation, and freight transportation arrangement.

LOCAL COMPANIES: The following is a partial but representative list of local companies operating within the logistics sector:

- ✓ **Air Transportation:** Operating its second largest hub in the world, FedEx Express is the region's preeminent air transportation firm.
- ✓ **Fulfillment Services:** Retail oriented operations include Amazon, Inc., and Medco/Express Scripts while manufacturing oriented fulfillment operations include Q-Edge and CNH-Caterpillar logistics.
- ✓ **Warehousing and Distribution:** There are numerous distribution facilities located within the Indianapolis region including but by no means limited to Finish Line Inc., Target Distribution Center, and Celadon Group, Inc.

NATIONAL OUTLOOK: Between 2014 and 2024, national employment in the logistics sector is anticipated to grow by 12.0 percent, an addition of nearly 1.1 million jobs.

KEY SITE CONSIDERATIONS: Large available sites, appropriate existing buildings (clear height, truck doors, etc.), access to transportation networks, proximity to manufacturers, markets, and ports, and, increasingly, high quality information technology infrastructure.

COMPETING REGIONS: Numerous metropolitan areas are competitive for logistics activities. In terms of proximate competitors, the Indianapolis region directly competes with markets such as Cincinnati, OH; Columbus, OH; Louisville/Jefferson County, KY-IN; Memphis, TN; St. Louis, MO-IL; and Chicago, IL-IN-WI.

EXISTING SECTOR STRENGTHS

- ✓ **AIR TRANSPORTATION:** Anchored by the FedEx's second largest distribution facility in the world, the region's air transportation sector has seen tremendous growth over the last decade. Between 2004 and 2014, scheduled air transportation employers added 3,358 workers to their payroll, more than doubling (131.6 percent) employment within the niche sector. In an environment where logistics companies are seeking to reduce costs as well as deliver their products to their customers as quickly as possible, quality air transportation service is a boon to logistics businesses. Co-location of warehousing and distribution operations in and around the Indianapolis International Airport indicates this pull factor spurred by air transportation services. Air transportation employers paid an average annual wage of \$59,702, or \$5,191 dollars above the regional average (\$54,511).
- ✓ **STORAGE AND FULFILLMENT SERVICES:** Businesses in the storage and fulfillment services niche are engaged in the operation of warehousing and storage facilities for general merchandise, refrigerated goods, and other warehouse products along with e-commerce operations that sell retail products over the internet. Over the last two years, the Indianapolis region witnessed strong investment in its logistics sector by outside firms: major relocations include Newegg, Inc.; Purity Wholesale Grocers, Gordmans Inc., and Walmart among others.

Storage and fulfillment openings, relocations, and expansions positively impacted regional logistics employment over the last decade. By 2014, the warehousing and fulfillment services sector employed roughly 21,500 workers in the Indianapolis region, growing by 81.0 percent over the last decade. The storage and fulfillment services niche (\$44,567) paid an average annual wage well below the regional average (\$54,111).

NICHE TECHNOLOGIES

- ✓ **SMART AND SUSTAINABLE LOGISTICS:** As highlighted in the manufacturing sector, the Energy Systems Network is committed towards implementing clean logistics technologies, particularly as it relates to last mile operations. Through the Hoosier Heavy Hybrid program, the Energy Systems Network seeks to fully integrate hybrid powertrain systems that utilize high performance components and plug-in hybrid technology for light, medium, and heavy duty trucks.²⁸ Hoosier Heavy Hybrid is a partnership between industry leaders including Cummins, the Delphi Corporation, Allison Transmission, Remy International and Duke Energy. These types of cooperative efforts within the region, including IndyBlue, are examples of the potential impact of smart and sustainable technologies in the logistics sector.

²⁸ Energy Systems Network. "Hoosier Heavy Hybrid." Energy Systems Network. Accessed February 3rd, 2015.

Across the country, innovation is also occurring in areas that improve environmental and operational efficiency through the integration of GIS, RFID, and other technologies in the cargo storage and transportation processes. Sensor-enabled refrigeration systems are better controlling temperature, humidity, and other variables that impact cost and perishability. Mobile technologies are enabling delivery drivers to eliminate paperwork that often consumed a large amount of time during delivery and pick-up.

- ✓ **BIOLOGISTICS:** Given the adaptations in the life sciences sector, it is no surprise that the nature in which medical products and treatments are transported across the globe is evolving. A report by DHL, a global logistics firm that operates in 220 countries, identifies three life sciences supply chain alterations: 1) evolving temperature management requirements, 2) product bundles, and 3) growing demand to rapidly deploy life sciences products in response to disasters or outbreaks across the globe.²⁹ The changing logistical needs of the life sciences sector could give rise to new startups that address, or disrupt, these supply chain challenges. And whether it is shipping perishable medical materials quickly to the customer or obtaining raw materials for the pharmaceutical production process, the Indy region affords existing and prospective future companies with a variety of advantages, from existing life sciences and logistics workforce expertise to infrastructure advantages such as abundant land and warehouse space in proximity to the FedEx distribution hub. A number of medical logistics companies have located in and around the airport including BioStorage Technologies, Inc., a company responsible for transporting tissue and blood samples. WellPoint's expansion of its NextRX division (a division that was subsequently acquired and further expanded by Express Scripts) near the airport and Medco's announcement that it will open the world's largest automated pharmacy in Whitestown are other tremendous examples of the sector's potential in Indianapolis.

INDUSTRY TRENDS: POTENTIAL FUTURE OPPORTUNITIES

Logistics is a highly competitive, razor-thin margin business. To maintain competitiveness and profitability, logistics businesses continually search for new technologies and business costs that increase efficiency or reduce costs. Moreover, market disruptors, such as Amazon, continue to upend the traditional logistics business model – prompting other logistics businesses to adopt automation and inventory management systems that rival market disruptors.

- ✓ **FULFILLMENT AUTOMATION:** To increase fulfillment accuracy and efficiencies, logistics and order fulfillment companies are increasingly adopting robotics and inventory tracking technologies. Amazon's \$775 million acquisition of Kiva Systems, a robotics company specializing in order fulfillment, is indicative of this movement. At the time of the acquisition, Kiva Systems founder, Mick Mountz, told TechCrunch that their robotics technology was two to four times more productive than legacy order fulfillment technologies.³⁰ A recent report by London-based

²⁹ Kuckelhaus, Markus; Terhoeven, Michael. "Key logistics trends in life sciences 2020+: A DHL perspective on how to prepare for future growth." DHL, Inc. April 22nd, 2013.

³⁰ Rao, Leena. "Amazon acquires robot-coordinated order fulfillment company Kiva Systems for \$775 million in cash." TechCrunch. March 19th, 2012.

WinterGreen Research suggests that the market for logistic robotics could reach \$31.3 billion by 2020, up from \$16 billion in 2014.³¹

- ✓ **SAME DAY DELIVERY:** The notion of e-commerce businesses as a supplement to traditional retail operations has long passed, e-commerce firms such as Overstock.com and Amazon are direct competitors. To finally upend traditional retail businesses, e-commerce companies are edging closer towards same day delivery. As a result, e-commerce companies are building out their warehousing and distribution facilities across the country in major markets that have ample access to air transportation infrastructure and are proximate to major customer markets. Business Insider estimates that the value of goods ordered through same day delivery will reach \$4.0 billion in the nation's 20 largest cities alone by 2018.³²
- ✓ **"LAST MILE" DELIVERY:** One of the biggest challenges in the logistics industry is the "last mile" delivery, a term used for the portion of the supply chain that involves delivering the product to the final customer. FedEx and United Parcel Service have developed technology infrastructure to route the most efficient path for their delivery trucks, leading to headline articles reading "Why UPS drivers don't make left turns." In an attempt to solve the "last mile" challenge, DHL, Google, and Amazon have identified autonomous drones as a viable solution in the future. While the industry waits for FAA regulations, many are investing in drone technologies in hopes to finally solve the complex challenges of last mile delivery.

LOGISTICS: BUSINESS SECTOR EMPLOYMENT TRENDS

The strength of the region's logistics sector is partly tied to the continued investment at the Indianapolis International Airport, as evidenced by the numerous logistics firms that have collocated within its vicinity.

- ✓ **Employment concentrations within the Indianapolis region suggest regional specialization in air transportation, fulfillment services, and warehousing and distribution.** Scheduled air transportation employment is nearly two times (LQ = 2.1) as concentrated regionally as the average community nationwide. High location quotients (LQ > 1.00) in warehousing and storage (LQ = 2.7) and electronic shopping houses (3.2) denote that local logistics firms within these subsectors benefit from a highly concentrated talent pool.
- ✓ **Growth in the Indianapolis region's logistics sector has far outpaced national growth rates over the last decade.** Between 2004 and 2014, the region's logistics sector added 19,157 workers, a gain of 24.3 percent. Over the same time period, national employment grew by just 12.0 percent. The sector also demonstrated relative resilience during and following the Great Recession. During the Great Recession (2007 to 2009), logistics firms in the regions shed -3,323 employees over the two year period. However, the sector's recovery regained employment well in excess of the job lost during the Great Recession. Regional logistics firms have added 15,934 employees (19.3 percent) since the recession, far outpacing the national growth rate (9.1 percent).

³¹ Modern Materials Handling. "Research suggests near doubling of logistics robot market by 2020. Modern Materials Handling. December 24th, 2014.

³² Smith, Cooper. "Same-day delivery: e-commerce giants are battling to own the 'last mile.'" Business Insider. November 7th, 2014.

- ✓ **Over the last decade (2004-2014), logistics employment has shifted from the region's core county (Marion) to its outlying counties.** In 2004, nearly 67.0 percent of logistics employment was located in Marion County. By 2014, Marion County (57.4 percent) represented a smaller, but still significant portion of the region's total logistics sector. Logistics employment has largely shifted three primary counties: Hendricks, Hamilton, and Boone. The rate of job growth has been particularly robust in Boone County with employment tripling over the last decade (2004-2014). Growth has been similarly strong in both Hendricks (83.0 percent) and Hamilton (46.1 percent) counties.

LOGISTICS: OCCUPATIONAL EMPLOYMENT TRENDS

- ✓ Business sector data illustrates that wage rate within the Indianapolis region's logistics sector are considerably lower than the national average as well as many of its proximate peer competitors. While lower wages can undermine a region's ability to attract top talent in certain sectors, an analysis of occupational data reveals that the lower wage rates are largely due to the occupational composition of the region's logistics sector. Generally speaking, earnings within the region's logistics sector are lower, in part, because of its orientation towards inbound product handling and order fulfillment as opposed to the external or outbound marketing and sales functions of wholesalers and distributors. Laborers, freight, stock, and material movers (6.6 percent), industrial truck and tractor operators (4.4 percent), and stock clerks and order fillers (2.7 percent) represent comparatively large shares of total logistics sector employment, relative to the average community nationwide. Earnings within eight of the ten top logistics occupations are well below the regional median wage (\$41,496).
- ✓ **Nine out of the region's ten most common (largest) logistics occupations experienced significant employment growth over the last decade.** Employment gains in customer service representatives (46.5 percent); laborers, freight, stock, and material movers (33.7 percent), shipping, receiving, and traffic clerks (28.7 percent), industrial truck and tractor operators (28.0 percent), and heavy and tractor-trailer truck drivers (25.2 percent) represent viable, growing employment opportunities for local residents lacking formal education beyond high school.

STRATEGIC CONSIDERATIONS

- ✓ **AGE OF WORKFORCE:** Low barriers of entry into logistics occupations (i.e. educational attainment requirements for entry workers) reduce short-term workforce sustainability concerns. These concerns are highlighted by the sector's age structure (i.e. the gap between those aged 45 and over who will retire over the next twenty years and those aged 25-44 who will be needed to replace retirees in more experienced, senior positions). Over the next twenty years, only five of the top ten logistics occupations are projected to experience workforce shortages as retirements shrink the regional labor pool.

Heavy and tractor-trailer truck drivers (-2,805 projected shortage), non-technical and scientific wholesale and manufacturing sales representatives (-1,008 projected shortage), technical and scientific wholesale and manufacturing sales representatives (-189 projected shortage), light truck

or delivery services drivers (-663 projected shortage), and general office clerks (-1,360 projected shortage) will be particularly hard hit especially given the fact that the national labor pool in all five occupations are projected to shrink over the next twenty years. Combined, over 6,025 unfilled vacancies could be created by retirees regionally – nationally over 545,000 unfilled vacancies could be created as workers within these five occupations retire. Conexus Indiana has taken a leadership role in addressing future talent sustainability challenges in the logistics and manufacturing sectors. One of its primary initiatives, Hire Technology, is a two year advanced manufacturing and logistics program delivered through Indiana high schools and career centers. To date, the Hire Technology initiative has received significant support from the private sector; the Lilly Endowment and Chase have provided sizable grants to support the program.

- ✓ **EDUCATION, TRAINING, AND THE TALENT PIPELINE:** In 2013, higher education institutions within the state of Indiana furnished just 237 logistics and transportation-related degrees in fields that would be sought after by firms looking to fill vacancies. Indiana University – Purdue University-Indianapolis’s Kelly School of Business offers a four year Supply Chain Management major while Ivy Tech Community College offers certificate, associates, and online supply chain management degrees along with a commercial driver’s license (CDL) training program. Vincennes University offers an eight-week tractor-trailer driver certificate program along with as well as a two year supply chain management degree. Purdue University demonstrated strong capacity at the bachelor’s degree and above level and Ball State has a relatively new Logistics and Supply Chain Management program.

Although there an abundance of programs, the Conexus Indiana Logistics Council’s report “Delivering Indiana’s Logistics Future” highlighted concerns from stakeholders that the region’s “assorted logistics education curriculum (is) not meeting industry needs.” Specifically, four-year logistics degree supervisors were cited as an area where substantive workforce shortages exist. Given the likelihood of continued expansion in the sector, it will be critical that higher education institutions are responding to the needs of industry. IUPUI has recently completed a strategic planning process whereby various industry-focused committees helped define curriculum and programmatic needs.

- ✓ **PROXIMITY TO MANUFACTURERS, MARKETS, AND PORTS:** Due to its central location in the United States, logistics companies are within a four hour drive time of five major metropolitan markets (Chicago, IL; Cincinnati, OH; Columbus, OH; Louisville, KY, and St. Louis, MO) and an eight hour drive time of nine additional major metropolitan markets (Birmingham, AL; Charleston, WV; Cleveland, OH; Des Moines, IA; Kansas City, MO; Memphis, TN; Milwaukee, WI; and Pittsburgh, PA). Along with access to these markets, the Indianapolis region is connected to three ports in the state of Indiana, the Port of Indiana – Burns Harbor, the Port of Indiana – Jeffersonville, and the Port of Indiana – Mount Vernon. Together with the robust manufacturing economic in the Indianapolis region, logistics firms are well linked to their customer base.
- ✓ **INTERSTATE ACCESS AND ROAD TRANSPORTATION NETWORKS:** The Indianapolis region is served by an extensive road network. Regional logistics companies can access four major highways: I-65, I-69, I-70, and I-74. The state is home to the most expansive interstate system by a variety of measures. However, it recognizes that this is an advantage that it cannot afford to lose,

and many high-priority road transportation projects have been identified and pursued in recent years. These include but are not limited to: construction of I-69 between Indianapolis and Evansville; US 31 conversion from Indianapolis to South Bend, and; the development of the Indiana Commerce Connector. Other major projects located outside the region that impact its competitiveness and ability to easily facilitate the movement of goods include the Ohio River Bridges projects between Indiana and Kentucky in Louisville and the construction of the Illiana Expressway. Each of these projects have been highlighted in the Indiana Multimodal Freight and Mobility Plan and the Report to Governor Pence from the Blue Ribbon Panel on Transportation Infrastructure.

- ✓ **RAIL AND INTERMODAL:** CSX and Norfolk Southern operate two switching yards in the region; the CSX facility is located in Madison County while the Norfolk Southern facility is located in Hendricks County. Canadian Northern provides service to the region as well. Various studies have noted that expanded intermodal capacity is critical to the region's sustained competitiveness for logistics and manufacturing operations. It has been noted that the region is partially reliant on intermodal facilities around Chicago, and absent significant additional capacity at existing yards, or the development of new facilities, the region and state may remain largely a "pass through" for intermodal activity. As intermodal volume continues to grow, railroads seek to improve their position to handle such cargo through improvements that reduce idle time and increase speed while in transport.
- ✓ **AIR FREIGHT CAPACITY:** Without question, Indianapolis International Airport is a critical asset and offers an immense value proposition to logistics companies within the Indianapolis area. The numerous warehouses and distribution facilities that have chosen to co-locate next to the airport serves as a testament to its value. The Indianapolis International Airport continues to attract investment; Browning/Duke Realty recently announced a joint venture to develop a new 936,510 square-foot building in AllPoints Midwest, its industrial development near the airport.³³ Once construction is complete, the project will be the only facility in greater Indianapolis to offer more than 770,000 square feet of contiguous space. The pull of the Indianapolis International Airport is, in no small terms, largely due to the location of the world's second largest FedEx distribution facility. Proximity to the FedEx distribution facility may be attractive to online retailers, particularly those who wish to offer same day service to their customers. Air transportation, as a result, is central to the continued success of the region's logistics sector. It has been noted that expansion of international air cargo service could help diversify the nature of the region's wholesale trade, distribution, and manufacturing opportunities.
- ✓ **AVAILABLE SITES AND BUILDINGS:** In 2014, Cassidy Turley, a local Indianapolis real estate services firm, declared Indianapolis one of the nation's top five Industrial space markets in the nation, placing it among Dallas, Chicago, Phoenix, and Atlanta.³⁴ Over the years, distribution centers have been growing as the nature of the supply chain evolves. In 1998, less than five percent of new warehouses were over 500,000 square feet; by 2006, warehouses larger than

³³ Duke Realty Communications. "Browning/Duke Realty announce construction of new 936,510 SF industrial building." Duke Realty. August 11, 2014.

³⁴ Chris Sikich. "Industrial space magnet: Indianapolis one of hottest markets in nation. IndyStar. April 14, 2014.

500,000 square feet comprised nearly 25 percent of all construction starts.³⁵ Today, major projects are commonly 500,000 square feet or bigger, with many exceeding the one-million square foot mark. The Indianapolis region is home to a number of large distribution facilities. Prime Distribution Services, a distribution company that services retailers, operates a 1.2 million square foot warehouse at its Plainfield headquarters. Wal-Mart Stores Inc. is slated to open a 1.2 million square foot distribution in Plainfield, located in the AllPoints Midwest industrial park by year-end. Projects of this magnitude require large regularly shaped sites that can easily accommodate the facility, parking areas, approach roads, retention ponds, and other necessary infrastructure. In addition to growing horizontally, distribution centers also have increasingly high ceilings. "Clear height" refers to the distance between a building's floor and any overhead obstructions, such as girders or structural supports. In decades past, clear heights were commonly 24 feet or even lower. But in recent years, the standard has evolved, with 32 feet now being the popular standard.³⁶ The changes have rendered many older facilities obsolete for larger distribution and warehousing operations. Speculative warehouse development seems to be picking up in the wake of a slowdown during the Great Recession. Considerable capacity to support expansion still exists in the primary submarket surrounding the airport. As biologistics grows, so too will the demand for refrigerated storage (and transportation) as "cold chain" management is of vital importance to many biological products.

- ✓ **CHANGING TECHNOLOGIES AND WORKPLACE REQUIREMENTS:** As fulfillment services companies continue to push towards same-day delivery, the quality and proximity to significant global courier delivery facilities will be critical. So too is ensuring that fulfillment services firms have access to a knowledge-based workforce as inventory management systems and robotics continue to make their way into warehousing and distribution operations. Thus, while many of the fulfillment occupations require only a high school diploma or less, fulfillment service workers must know how to operate computer controlled devices and, in some cases, possess basic knowledge of computer programming. Many materials movers are now operating machines rather than moving goods by hand – the demands are increasingly cerebral and decreasingly physical. Further, as robots find their way into warehousing and distribution operations, front-line order fulfillment workers, stock clerks, and forklift operators may find themselves in competition, if not outright replaced, by automation technologies. Ensuring that the local transportation and distribution workforce continues to improve its skill set, especially in computer programming or computer controlled equipment operation, could partially alleviate the impact of future automation.

Once a relatively low-tech business sector, the big data revolution is transforming the logistics sector. Companies can now more accurately forecast demand by tracking customer browsing habits and ensuring sufficient stock at the warehouses in their area. The amount of data today's logistics companies acquire from customers creates many opportunities for big data marketing analytics that can obtain actionable information for regional transportation and distribution firms.

³⁵ Andreoli, Derik, Goodchild, Anne, and Vitasek, Kate. "The rise of mega distribution centers and the impact on logistical uncertainty." *Transportation Letters: The International Journal of Transportation Research*. 2010.

³⁶ "Industrial Buildings Go to New Heights." *Industrial Developments International*. October 2010.

- ✓ **IMPORT SUBSTITUTION:** One opportunity for forging stronger relationships between life sciences, manufacturing, and logistics firms exist in the region's wholesale trade agents and brokers sector (NAICS 42512). Wholesale trade agents and brokers act on behalf of buyers and sellers in the wholesale distribution of goods – these third party participants do not take ownership of physical goods but do receive commission or fees attached to their services. Assisting local life sciences and manufactures in sourcing these services locally (or attracting their current suppliers) could begin to capture lost economic activity that the region currently experiences.
- ✓ **REGIONAL CONSIDERATIONS:** Logistics is truly a regional target with ample, widespread opportunities for job creation. With the exception of Brown County, each of the Indianapolis region's counties possess direct access to an interstate – often a critical location factor for many logistics firms. Hendricks, Morgan, and Boone counties may particularly be well suited for the target, given their proximity to the Indianapolis International Airport. Of the nine counties with targeted sectors listed on their website, six currently target the logistics sector and associated transportation and distribution activities: Boone County, Hancock County, Hendricks County, Marion County, Putnam County, and Shelby County. While the Indianapolis region has ample space to continue to construct warehousing and distribution facilities, some are concerned that some markets within the Indianapolis region is reaching build out. In the same previously-referenced article, the IndyStar reports, "brokers and developers, though, say that while land and space in Plainfield is attractive, it's becoming increasingly difficult to find." The dwindling supply of land around the airport may push warehousing and distribution facilities further from their ideal location. Ensuring uncongested, high quality road infrastructure connecting these sites to interstates and the airport will be increasingly important to serve these types of businesses.

INFORMATION TECHNOLOGY

DEFINITION: The information technology sector offers significant growth opportunity for the Indianapolis region as it represents an area of immense growth nationally and globally. The sector encompasses providers of information services (computer systems design, data processing and hosting, cybersecurity services, etc.) and developers of information technologies (i.e. software). But the sector's reach expands beyond these traditional areas as nearly every type of business has information management, storage, analysis, and technology needs. The Indy region has carved out a strong niche in the area of marketing technology and given the region's strong medical community, history in the life sciences, and experience developing a deploying electronic medical records (EMR) systems, is well positioned to capture some of the nation's demand and corresponding investment associated with health information technology.

LOCAL COMPANIES: The following is a limited, but representative list of local companies by niche sector:

- ✓ **Computer Systems Design:** Large employers within the sector include Interactive Intelligence, Inc., Expidant, Q-Edge Corporation, and DSS Consulting.
- ✓ **Marketing Technology:** Among the most widely known marketing technologies in the region are ExactTarget (a Salesforce company), Angie's List, Oracle (who recently acquired Compendium), and Aprimo (a Teradata company).

- ✓ **Health Information Technology:** Companies within the health information technology space tend to be small startups such as hc1.com, a health it company that connects health systems, labs, and radiology groups together via cloud technology, and PolicyStat, a Carmel-based company that specializes in policy and procedure management solutions for healthcare providers.

NATIONAL TRENDS: The nation's information technology sector is at the forefront of global innovation; its technologies permeate throughout all aspects daily life. It should be no surprise then that information technology firms have been critical to the nation's post-recession recovery. Since 2009, the nation's added nearly 500,000 IT jobs, a gain of 10.7 percent. While few can predict the future of the sector, it is difficult to be anything but optimistic – much as been absorbed since the technology bubble burst in the early 2000s. Moreover, technology products have significant room to expand, entering product and business sectors generally considered to be "low" tech such as the oil and gas, utilities, and taxi cab services.

KEY SITE CONSIDERATIONS: Fiber optic capacity; reliable cost effective power grid; low probability for natural disasters; flexible higher education institutions prepared to adjust training capacity based on the latest practices; highly educated workforce; healthy entrepreneurship ecosystem; venture capital access.

COMPETING REGIONS: In terms of businesses, the Indianapolis region competes directly with proximate information technology markets throughout the Midwest. These regions include Des Moines, IA; St. Louis, MO-IL; Columbus, OH; Detroit, MI; and Kansas City, MO-KS. In terms of talent, regional information technology stakeholders find that IT talent graduating from Indiana higher education institutions are frequently captured by the large west and east coast information technology markets such as San Francisco, CA and Boston, MA-NH.

EXISTING SECTOR STRENGTHS

- ✓ **COMPUTER SYSTEMS DESIGN:** Computer systems design companies offer a wide range of technology expertise to their customers and tend to engage in four primary activities: 1) writing, modifying, testing, and supporting software to meet the needs of a particular customer; 2) planning and designing computer systems that integrate computer hardware, software, and communications technologies; 3) on-site management and operation of clients' computer systems and/or data processing facilities; and 4) other professional and technical computer-related advice and services. Interactive Intelligence, a local Indianapolis software company, is indicative of firms in the computer systems design niche. As a global provider of call center technologies, Interactive Intelligence provides an all-in-one contact center platform for multichannel interactions – either onsite or via the cloud. Roughly one out of every two information workers in the Indy region is employed in the computer systems design subsector which is projected to grow by 53.3 percent nationwide over the course of the next decade.

NICHE TECHNOLOGIES

- ✓ **MARKETING TECHNOLOGY:** The Indianapolis region has quickly emerged as a hotbed for the development of marketing technology suites and platforms. Marketing technology businesses exist at the intersection of advertising and technology, offering diverse solutions to their customers. Certain platforms focus on customer-facing solutions that improve the customer/user

experience and engagement with the business, whereas others focus on supporting the businesses' integrated, external marketing and promotion needs. There also countless applications of analytics as it relates to marketing, from social media to web-use to consumer behavior analytics.

Salesforce's 2013 acquisition of ExactTarget, a leading cloud marketing platform, represented a single \$2.5 billion transaction. According to TechPoint, the Indy region has seen a dozen tech acquisitions and IPOs representing a total of \$4.5 billion in activity – Angie's List Inc.'s IPO and Teradata's \$525 million acquisition of Aprimo, a local startup, were other notable marketing technology transactions. Given the volume of market activity, as well as the numerous technology assets located regionally, focused on developing marketing technology businesses, this target niche is positioned for growth.

- ✓ **HEALTH INFORMATION TECHNOLOGY:** Health information technology is another rapidly-growing field that has garnered tremendous attention given the expansion of healthcare coverage through state and federal exchanges and the ever-present focus on reducing costs while increasing efficacy. The state of Indiana as well as the Indianapolis region has made significant investments and commitments to promote health information technology. The launch of the Indiana Health Information Exchange (IHIE) in 2004 was a critical step in establishing the region as a potential market leader in health IT; the IHIE is the largest exchange in the nation, and its development was supported by BioCrossroads and the Regenstrief Institute, among many other state and local partners from the public, private healthcare, and non-profit healthcare community. The Regenstrief Institute has been conducting research on electronic medical records (EMR) systems for decades and is a global leader in the field.

The Indiana Enterprise Fund is a special purpose venture fund specifically focusing health information technologies. The Hoosier Healthcare Innovation Challenge is a statewide competition that gives technology professionals the opportunity to solve some of the largest challenges facing the healthcare sector. The challenge has spawned a number of successful businesses such as CreateIT, a local company that connects physicians and patients through mobile devices. In all, CreateIT was awarded a \$16,000 cash prize as well as in-kind assistance including legal, regulatory, financial, and product development services from the Hoosier Healthcare Innovation Challenge.

The subsector's future growth is supported by a variety of programs throughout the region from certificates to doctoral programs. The Indiana School of Informatics offers bachelor's and master's degrees in health information administration, and a doctoral program in health informatics.

INDUSTRY TRENDS: POTENTIAL FUTURE OPPORTUNITIES

Due to the ever changing nature of the information technology, it is difficult to predict which technologies will prove dominant in the future and which will be supplanted by innovations not yet discovered. It is clear, however, that the IT revolution will continue to wind its way into every business sector. The following highlights a handful of impactful technologies:

- ✓ **SOFTWARE AS A SERVICE:** Cloud computing has greatly altered the way customers access software programs as well as how businesses deliver software to their market base. Microsoft, for

instance, is shifting the way it sells its popular Microsoft Office suite, the new product dubbed Office 365, offers the same Microsoft Office suite via the cloud – allowing individuals to access the suite across multiple devices. PricewaterhouseCoopers estimates that software as a service revenue will grow 20 percent on an annual compounded basis throughout the next decade.³⁷

- ✓ **SOCIAL MARKETING:** Major brands are shifting their marketing strategies to ensure they reach their target audience and customer base on multiple channels. A survey of internet users by PricewaterhouseCoopers found that 60 percent of respondents use social media to follow, discover, and give feedback on a brand.³⁸ Whether it is Starbucks or e-commerce sites such as Amazon, retail-based businesses have dedicated staff capacity to manage customer social media interactions. Opportunities abound for not only helping companies manage their social media traffic, but also to analyze social media data to better understand their customer base.
- ✓ **MOBILE APP DEVELOPMENT:** According to the Pew Charitable Trust, 90 percent of American adults possess a cell phone while 58 percent of adults possess a smart phone.³⁹ More interestingly, the adoption of mobile technology crosses income brackets according to the Pew survey – 84 percent of individuals with an income of \$30,000 a year or less owned a cellphone while 47 percent owned a smartphone. For comparison, 61 percent of survey respondents who earned between \$50,000 and \$74,999 a year owned a smartphone. Mobile devices are an affordable web-enabled technology; as a result, companies in the mobile space have access to a wide, global audience.
- ✓ **BIG DATA ANALYTICS:** IBM estimates that 2.5 exabytes of data – enough to fill 5 million 500 gigabyte hard drives – was generated every day in 2013.⁴⁰ Twitter alone generates 12 terabytes of tweets every day. All this data represents an immense opportunity to transform this data into valuable insights into customer habits as well as business operations. Perhaps the largest challenge facing the big data analytics industry is the dearth of data scientists who have the skill sets to transform the data into actionable results.

INFORMATION TECHNOLOGY: BUSINESS SECTOR EMPLOYMENT TRENDS

Regional information technology activity covers a diversity of IT operations, but is primarily composed of computer systems design and related services which accounts for roughly half of total regional employment. The target sector represents immense growth opportunity for the Indy region and offers the region's residents with high earnings opportunities.

- ✓ **The region's information sector has grown substantially over the last decade.** Between 2004 and 2014, information firms added more than 6,000 workers to their payrolls – a gain of 27.7 percent. The computer systems design and related services accounted for the vast majority of the

³⁷ Casey, Thomas J.; Hagen, Henning. "2015 Technology Industry Trends: Computer hardware and software firms must choose between profit margins and revenue growth while eyeing new delivery models." PricewaterhouseCoopers. Accessed February 3rd, 2015.

³⁸ PricewaterhouseCoopers. "10 myths of multichannel retailing." PricewaterhouseCoopers. Accessed February 3rd, 2015.

³⁹ Pew Research Center. "Mobile Technology Fact Sheet." Pew Charitable Trusts. Accessed February 3rd, 2015.

⁴⁰ Wall, Matthew. "Big Data: Are you ready for blast-off?" BCC World News. March 3rd, 2014.

computer-related job growth. Alone, the sector added 6,501 jobs from 2004 to 2014, a gain of 86.7 percent. Other fast growth information technology subsectors include wireless telecommunications carriers (47.8 percent); data processing, hosting, and related services (57.0 percent), and other information services (188.5 percent) which includes internet web portals and publishing. Similar, and often more rapid growth rates have been observed in other regions that are highly-competitive for a diverse array of IT sectors (such as the Research Triangle) and others whose growth has been fueled by more specialized technologies such as health IT (i.e. Nashville).

- ✓ **The information sector is projected to expand substantially over the next decade.** EMSI projects that the region's information employers will add 9,242 jobs by 2024, a gain of 31.0 percent. Computer systems design and related services will extend its strong growth, adding 7,455 jobs over the ten year period.
- ✓ **Only one information subsector paid an average annual wage below the regional average (\$54,511).** On average, the regional information technology worker earned \$74,555 annually. Scientific research and development services (\$121,253 average annual wage) and computer systems design and related services (\$108,956) were the two highest paying information technology sectors. Only "other professional, scientific, and technical services" (\$41,663 average annual wage) paid below the region's prevailing average. This subsector captures activities such as market research and polling.
- ✓ **From a labor cost standpoint, the region's information technology workforce is cost competitive.** Overall, labor costs for the average regional information technology worker is roughly 20 percent lower than the average community nationwide. Relative labor costs were particularly low for data processing, hosting, and related services (19.4 percent below the national average annual wage), other information services (62.0 percent), and advertising, public relations, and related services (22.8 percent). Every information technology subsector paid below the national average. For a two subsectors, however, this difference is negligible.

INFORMATION TECHNOLOGY: OCCUPATIONAL EMPLOYMENT TRENDS

The region's information technology employment is dependent upon a variety of skills and specialized knowledge. Software applications developers, computer systems analysts, computer programmers, and computer user support specialists are just a small subset of the many distinct information technology occupations contained regionally.

- ✓ **Rapid growth occurs throughout many of the region's most common information-related occupations.** Of the ten information technology occupations, five experienced employment growth above 50 percent. Software application developers (87.4 percent), computer systems analysts (84.1 percent), computer user support specialists (76.1 percent), computer programmers (67.4 percent), and software systems developers (61.5 percent) are indicative of the information technology skill sets rapidly growing in the region.
- ✓ **Of the top ten information-related occupations, only two suffered employment declines over the last 10 years.** Both occupational categories were related to the telecommunications sector. Telecommunications equipment installers and repairers except line installers (-24.8 percent) and

telecommunications line installers and repairers (-33.4 percent) suffered heavy employment declines.

- ✓ **Computer systems analysts, computer programmers, and computer user support specialists are highly concentrated regionally relative to the average community nationwide.** Computer systems analysts represented 5.7 percent of the regional information technology workforce whereas it only composed 4.2 percent of the nation information technology workforce. Computer programmers (4.3 percent vs 3.3 percent nationally) were likewise regionally concentrated. Information technology businesses utilizing these skill sets may find the Indianapolis region attractive from a workforce availability standpoint.
- ✓ **Within the state of Indiana, the information technology workforce is centralized in the Indianapolis region.** A recent workforce analysis by TechPoint revealed that 48.0 percent of the state of Indiana's computer-related jobs are located in the Indy region. Fort Wayne represented the state's next most concentrated workforce, composing just 8.0 percent of state computer-related employment.⁴¹
- ✓ **Regional median earnings were below the national median in nine of top information technology occupations.** Among the largest median earnings differentials included computer programmers (16.2 percent below the national median), software applications developers (10.8 percent), and computer systems analysts (8.9 percent). As noted by the TechPoint workforce study, 71 percent of college students who decline full-time employment offers following their internships do so because of compensation and/or location according to surveyed companies.⁴² Moreover, TechPoint notes that "surveyed companies identified compensation as the most important factor in their employment decision."⁴³ It is clear that lower wages impact the region's ability to attract and retain tech talent; however, poor communication regarding the region's low cost of living is also an influence.

STRATEGIC CONSIDERATIONS

- ✓ **IN-DEMAND TECHNICAL SKILLS AND OCCUPATIONS:** TechPoint has conducted multiple surveys to examine the region's technology workforce and the current needs of the region's technology employers. In a recent survey of 26 companies, TechPoint identified key regional information technology skill gaps. The predominant current skill needs of regional IT companies centered around two technologies: SQL and JavaScript.⁴⁴ Future skill needs covered a host of programming skill sets including CSS3, HTML5, and PHP. Surveyed companies described SQL, JavaScript, CSS3, HTML5, and .Net skills as their highest recruitment priorities. Graphic design was cited as the most frequently outsourced job function.

⁴¹TechPoint. "Technology Workforce Report #2: Defining the demand – the tech skills central Indiana companies need to grow." TechPoint. November 2014.

⁴² IBID

⁴³ IBID

⁴⁴ TechPoint. "Technology Workforce Report #2: Defining the demand – the tech skills central Indiana companies need to grow." TechPoint. November 2014.

When asked to identify those occupations that they anticipated hiring in the next year (a period which covered most of 2014) 60 percent of responding employers indicated that they would be looking to hire database administrators in the next 12 months. Interestingly, despite citing graphic designers as the most frequently outsourced job function, 60 percent of employers also indicated that they anticipated hiring graphic designers in the next 12 months. Slightly fewer (56 percent) indicated that they intended to hire web developers, with 48 percent indicating that they intended to hire network and systems analysts.

- ✓ **TALENT PIPELINE:** While higher education institutions in the region, and the state of Indiana more broadly, produce a sizable number of graduates with computer-related degrees, companies within the region experience difficulty retaining these graduates. In total, higher education institutions produced 4,085 computer and information sciences and support services graduates in 2013. Ivy Tech, Butler University, Vincennes University, Franklin College, Indiana University/Purdue University – Indianapolis; Indiana University, Purdue University, and Rose-Hulman Institute of Technology demonstrated strong capacity to produce computer-related talent. However, discrepancies between graduating talent and labor market needs still exist. As TechPoint notes, 65 percent of surveyed companies perceive a skills gap between their computer-related job openings and the available workforce. Moreover, two-thirds found that real-world experience and/or internship experience would improve the quality of graduating talent.⁴⁵

However, the study also found that employers' hiring demands by experience level are varied, with 23 percent of anticipated hiring being recent graduates, 28 percent entry-level with less than five years of experience, 30 percent with 5-10 years of experience, and 19 percent with more than 10 years of experience. Given that just one in four anticipated hires are recent graduates, and one in two have less than five years of experience, the region cannot rely on its locally-produced talent pipeline to provide the region's employers with the more experienced talent that they require. Furthermore, while internships have proven to be a highly effective method of retaining recent college graduates in many communities, some evidence from the TechPoint study may suggest that many internships in the information sector are not as effective at retaining graduates through full-time employment offers as many might expect. According to the study, all surveyed companies indicated that they hired interns but just 51 percent extend full-time offers to those interns. Of those receiving offers, 59 percent accepted. And so, roughly one in four interns ultimately accepts a full-time position with the company where they interned. Programs such as the Orr Fellowship provide unique experiences in community service and leadership development that help create potentially lasting connections to a region beyond employment that increase the likelihood that a recent graduate remains in the region.

- ✓ **COLLEGE AND CAREER PATHWAYS:** The Hire Up Indy! report produced by EmployIndy in 2014 found that just 181 out of 5,003 CTE graduates (3.4 percent) in Central Indiana in the 2011-2012 school year completed the Information Technology cluster. By comparison, 172 students completed the Law and Protective Service cluster in Central Indiana. For further context, 8.7 percent of students in Metro Nashville Public Schools completed the Technology Engineering career cluster in the 2012-2013 school year.

⁴⁵ IBID

- ✓ **INFORMATION TECHNOLOGY PRODUCTIVITY:** Indianapolis information technology workers were among the most productive compared to its competitor regions. Regional output per employee was nearly \$168,000 in 2014. Workers in the information sectors in nearby regions such as Kansas City (\$124,254 gross regional product per employee), St. Louis (\$123,830), and Columbus, Ohio (\$109,265) were comparatively less productive. Linking the region's relative IT workforce productivity, its relatively low IT labor costs, and low tax climate could make a strong case for relocating or expanding information technology businesses.
- ✓ **CROSS-CLUSTER OPPORTUNITIES:** Opportunities to strengthen linkages between the information sector and other targeted sectors abound. Areas of opportunity include the life sciences, particularly in data-intensive genetic research and development, as well as logistics, whose operations often require up-to-the-second order forecasts and location data.
- ✓ **ENTREPRENEURIAL ECOSYSTEM:** As identified in the Competitive Assessment, startup and technology stakeholders are optimistic about the region's capacity to advance the proliferation of successful startups. Speak Easy, TechPoint, the Verge, and Launch Fishers are often identified by local stakeholders as key assets to the region's emerging entrepreneurship culture. These co-working and incubation spaces are highly collaborative; many allow members of other co-working spaces to use their facilities. Entrepreneurs did, however, note during focus group sessions that the entrepreneurship ecosystem in the region lacks a single organization that coordinates regional entrepreneurship activities, promotes entrepreneurs locally and nationally, and acts as a one-stop shop for entrepreneurial services.
- ✓ **ACCESS TO CAPITAL:** Tech entrepreneurs leverage capital markets to finance costs related to startup their business and reaching scale. As a result, access to capital is an important piece of the entrepreneurial ecosystem. Without available capital, entrepreneurs may encounter significant pressure to acquire capital from outside markets – potentially increasing startup friction. In adverse conditions, entrepreneurs may also choose to relocate their operations more proximate to markets where capital is more easily accessible or where their funders are located. With that said, access to capital is of primary concern to every entrepreneurial ecosystem – Indianapolis is no exception. Even so, entrepreneurs did express concern about capital availability. An information technology analysis by Jones Lang LaSalle found that the only four other regions (out of 34 studied in the report) experienced lower venture capital activity than the Indianapolis region. The Competitive Assessment highlighted the fact that the region and state are currently at a significant disadvantage relative to peer regions as it related to venture capital investment activity in recent decades. Many studies, including a Battelle report for BioCrossroads entitled "Re-Examining the Need for Innovation Capital to Advance Life Science Development in Indiana" has highlighted the challenges in the state and suggested a variety of potential actions to support the enhancement of the capital environment from the modification of tax credits for research and development and venture capital investments to the development of more university-sponsored seed funds.
- ✓ **REGIONAL CONSIDERATIONS:** Many information technology businesses require little in the way of infrastructure; reliable power and broadband capacity are critical, however. As a result, information technology represents an area of opportunity for all counties within the Indy region due to relative location flexibility. Still, the target sector remains highly concentrated in Marion and Hamilton counties who, combined, represent 85.6 percent of

total regional employment in the information sector. Information is a growth industry for the vast majority of counties within the Indianapolis region. Only Johnson County (-31.0 percent) experienced a decline in information technology employment over the last decade.

SPORTS

DEFINITION: Throughout focus group sessions, local stakeholders within the Indianapolis region identified sports as a catalyst for development and positive change throughout the region. The region has a rich history of hosting professional and amateur sporting events – 2015 will mark the 22nd time that portions of the NCAA men’s basketball tournament will be held in the City – along with professional motorsports events, most notably the Indianapolis 500. In the Indy region, the Sports sector covers a wide array of economic activity, including spectator sports, hotel accommodations, sports medicine, and a host of other hospitality-related services supporting travelers and tourists. It also captures immense employment and activity associated with a variety of associations, conferences, and governing bodies associated with professional, collegiate, and amateur sports. It is also an activity that connects to other areas of the region’s economy and workforce. Motorsports technology development (as discussed in the manufacturing profile) is clearly born from the history of racing in the region. Sports medicine and performance technologies connect to the region’s medical research, healthcare, and life sciences communities, as well as its growing information technology sector as big data holds many applications to sports.

The practice of targeting “sports” is one that largely differs from that of other target sectors in that – in addition to support for research and technology development in some of the area’s described above – a key area of strategic emphasis for the sports cluster is the attraction of travelers and tourists that consume or perform at sporting events. And just as the development of physical assets such as industrial parks, intermodal facilities, and interstates supports the region’s competitiveness for manufacturing and logistics activities, the development of physical assets such as athletic complexes, sporting venues, and hotels support the attraction of sports-related tourism. Accordingly, while the Indy region’s existing strengths lie in the areas of amateur sports and motorsports, the development of a more comprehensive sports identity will necessitate efforts to diversify the region’s professional sports offerings and develop complementary assets such as hotels and event facilities that not only support sports tourism but more diverse tourism opportunities as well. Clearly, sports has the potential to help the region develop a more solid economic and cultural identity – an identity that relates to quality of life offerings and therefore supports economic development and talent retention and attraction objectives associated with all target sectors.

SPORTS EVENTS: Sporting events continue to drive the Indianapolis region’s sports economy, upcoming and regular sporting events to be held in the Indianapolis region include:

- ✓ **Amateur Sports:** The NCAA’s Division I Men’s Final Four Basketball Championship, the NCAA Men’s and Women’s Division II Swimming and Diving Championship, and the IHSS Boys State Finals for baseball, basketball, football, swimming, and wrestling.
- ✓ **Motorsports:** The Indy 500, Brickyard 400, Red Bull Indianapolis GP, OneAmerica 500 Festival Mini-Marathon, and the Performance Racing Industry Show.

NATIONAL INDUSTRY PERFORMANCE: In contrast to other forms of entertainment, sports have remained largely unaffected by the impact of content digitization. Where other forms of entertainment can be paused, recorded, and watched at a later time, sports are best viewed live – providing advertisers with a large, active audience. According to Nielson, a global leader in consumer market research, found that 255

million people in the U.S. collectively watched over 33 billion hours of national sports programming in 2013.⁴⁶ According to Variety Magazine, 97 percent of TV sports programming was viewed live in 2012.⁴⁷ As a result, content providers such as ABC, NBC, Fox, and other cable broadcasters have developed a seemingly unquenchable thirst for the rights to televise these sporting events. Viewership of motorsports is less robust, with the Indy Racing League consistently losing viewership over the last two decades.

KEY SITE CONSIDERATIONS FOR MAJOR SPORTING EVENTS: Airport accessibility and capacity, large facilities to host major events, age and quality of facilities, hotel capacity, medical and treatment services, quality restaurants and other dining options, climate, and distance of venue(s) from attractions and airport.

COMPETING REGIONS FOR MAJOR SPORTING EVENTS: Atlanta, GA; Dallas, TX; Los Angeles, CA; Miami, FL; and New Orleans, LA.

COMPETING REGIONS FOR MOTORSPORTS: Charlotte, NC (primary domestic competitor); Austin, TX (emerging domestic competitor); London (global competitor)

EXISTING SECTOR STRENGTHS

- ✓ **MOTORSPORTS:** The previously-referenced cluster analysis of the state of Indiana's motorsports sector by the Purdue Center for Regional Development found that motorsports directly employs 23,000 individuals across the state and supports an additional 421,000 jobs indirectly.⁴⁸ These jobs offer high earnings potential: Purdue University estimates that jobs within the motorsports cluster pay an average annual wage of approximately \$68,000.⁴⁹ However, the majority of these jobs are related to technology development and manufacture – the type of activity that is captured by the motor vehicle parts and products sector in the region's manufacturing cluster. But from the standpoint of spectator sports and tourism, motorsports activity in the region spans from the rich history of the Indy Racing League and Indianapolis Motor Speedway to NHRA drag racing. Along with serving as host to the Indianapolis 500, Angie's List Grand Prix of Indianapolis, the Brickyard Vintage Racing Invitational, the Crown Royal 400 at the Brickyard, and the Red Bull Indianapolis GP are also held at the Indianapolis Motor Speedway. Although Charlotte is home to a similar cluster that has developed around NASCAR, and London around Formula One, no region is more synonymous with racing and motorsports than Indianapolis. Accordingly, the region has earned its reputation as the "Racing Capital of the World."
- ✓ **AMATEUR SPORTS:** The Indy region has also earned its reputation as the "Amateur Sports Capital of the World." With the headquarters of numerous associations and governing bodies, the region has a unique concentration of expertise in the management and governance of amateur sports and their sporting events. The region is home to the headquarters of the National Collegiate Athletic Association (NCAA), the National Federation of State High School Associations, USA Track & Field, USA Diving, USA Gymnastics, and numerous collegiate athletic conferences including the

⁴⁶ The Nielsen Company. "Year in the Sports Media Report: 2013." The Nielsen Company. 2013.

⁴⁷ Todd Spangler. "Sports Fans: Get Ready to Spend More Money to Watch Your Favorite Teams." August, 13, 2013.

⁴⁸ Hutcheson, Scott; Lewellen, Lee; Kumar, Indraneel; Zhalnin, Andriy; Klacik, Drew; Weisenbach, Tom. "Race to the future: The statewide impact of motorsports in Indiana." Purdue Center for Regional Development. September 2012.

⁴⁹ IBID

Horizon League, the Great Lakes Valley Conference, and the Heartland Collegiate Athletic Conference. Amateur sports is a growing business, spurred by lucrative television broadcasting rights. According to the IndyStar, the NCAA alone received more than \$400 million dollars in television revenue. By 2013, the NCAA's television revenue swelled to \$726 million – a gain of roughly 81.5 percent.⁵⁰ The Indianapolis region, with its well-developed traveler accommodations and numerous sporting venues, is strongly positioned to benefit from the growth within the amateur sports sector.

NICHE TECHNOLOGIES

- ✓ **SPORTS MEDICINE AND PERFORMANCE TECHNOLOGY:** Another high value opportunity within the sports sector lays at the intersection of sports, healthcare, and technology. Healthcare is critical to the sports sector, if for no other reason than to treat and prevent injuries that occur in practice or in the competitive environment. The state has a rich history in developing orthopedics and other medical devices with applications to athletic performance and sports injuries and recovery. Companies are constantly innovating in ways to improve athlete performance. This includes research and development in areas related to hardware and equipment; just as motorsports companies are highly-focused on the latest technologies, so too are companies that produce athletic wear, footwear, and equipment from bicycles to helmets to lacrosse sticks. And with such focus on increased performance comes a necessary focus on safety.

These areas – sports medicine and performance technologies – reflect a growing niche for the Indianapolis region that helps diversify the region's sports identity. Among the region's assets supporting sports medicine and related research are the Datalys Center for Sports Injury Research, the American College of Sports Medicine, and the NCAA's Sports Science Institute. There is already a solid base of researchers devoted to concussions, an area of growing concern in a variety of sports, particularly football.

INDUSTRY TRENDS: POTENTIAL FUTURE OPPORTUNITIES

From internet streaming to the rise of electronic sports (esports), the sports sector is adjusting to audiences who want the experience of a live game from comfort of their home as well as sports broadcasters who are seeking to captivate wider audiences.

- ✓ **GLOBAL SPORTS:** Sporting events are rapidly becoming global phenomena. While large sporting events, such as the Super Bowl and the World Cup, receive significant international attention, sports is increasingly a melting pot as broadcasters search for a captive audience. NBC Sports, for instance, owns the exclusive rights to broadcast English Premier League games in the United States – on the final day of the league's season NBC live broadcasts matches across ten of its network channels. BeIN Sports, a global network sports channel jointly owned and operated by the Qatar Sports Investments, similarly live broadcasts soccer matches from around the globe including French, Spanish, German, and Italian leagues. As European soccer is penetrating into the U.S. market, the National Football League is making great strides to captivate European audiences.

⁵⁰ Alesia, Mark. "NCAA approaching \$1 billion per year amid challenges by players." IndyStar. March 27th, 2014.

In 2015, the NFL announces that it will host three NFL league matches in London and tied participation to Super Bowl host bids. Sports such as rugby that have historically had little following in the United States are gaining popularity as “rugby sevens” (and other sports) have been introduced as new Olympic competitions.

- ✓ **ESPORTS AND COMPETITIVE GAMING:** The current popularity of eSports is largely due to the League of Legends, a multiplayer online game that quickly emerged as the most played PC game in North American and Europe in terms of hours played by its users. While past video games set the foundation for competitive gaming, League of Legends transformed competitive gaming into sport. According to the Riot Games, the game company behind League of Legends, over 32 million viewers watched the Season 3 World Championship finals – at peak 8.5 million fans watched concurrently.⁵¹ ESports has also witnessed significant growth over the last year – Riot Games reports that the Season 2 World Championship finals were watched by only 8.5 million fans – 1.1 million concurrently.⁵² ESPN, the national sports broadcaster, has taken note. In 2014, ESPN broadcast the final games of the Dota 2 championship.⁵³ ESports competitions would be a logical complement to the region’s portfolio of competitive offerings outside of traditional sports; the region is currently home to GEN CON, the nation’s largest tabletop gaming (board games, card games, etc.) convention drawing in excess of 50,000 visitors in recent years.

SPORTS: BUSINESS SECTOR EMPLOYMENT TRENDS

Generally speaking, much of the economic benefit and impact associated with sports activity is captured within tourism-related sectors such as hotel accommodations, restaurants, car rental facilities, and so forth. This “indirect” employment is derived from primary or “direct” employment in sectors such as spectator sports, which includes the sports teams/clubs and racetracks subsectors. The Indianapolis region is also home to considerable employment attributable to amateur sports associations and conferences from the National Collegiate Athletic Association (NCAA) to the Horizon League to USA Gymnastics.

- ✓ **The spectator sports subsector exhibited significant employment decline in the last decade, actually losing roughly 1,000 employees.** This came at a time of national growth in subsector employment and during a period which followed the launch of the Indy Fever (WNBA) and captured the launch of the Indy Eleven soccer team (NASL) and the Indy Fuel hockey team (ECHL). Leading the sector’s decline is the racetracks subsector which shed 55 percent of its 2004 employment base (1,732 jobs) by 2014 (774 jobs) during a time of 18 percent national decline. While there have been substantial layoffs at the Speedway and associated employers such as the Indy Racing League (IRL) during this time, *Market Street* cannot find anecdotal evidence to support such a sizeable decline in racetrack employment. Meanwhile, stagnation in the spectator sports employment can also be attributable to the response of professional sports teams to declining attendance and revenues during the Great Recession.

⁵¹ Redbeard. “One World Championship, 32 million viewers.” Riot Games. 2014.

⁵² IBID

⁵³ Schwartz, Nick. “ESPN embraces eSports, broadcasts Dota 2 championship ‘The International.’” USA Today. July 21st, 2014.

- ✓ **Although employment in primary sectors such (spectator sports) has declined, tourism-related sectors that benefit from the region's ability to host sporting events – most notably the hotel accommodations sector – have expanded.** Employment at the region's hotels sector has grown by 8.0 percent in the last decade, as compared to 6.3 percent nationwide.
- ✓ **Low earnings potential is endemic to the nation's sports sector, Indianapolis is no exception.** In 2014, the average sports sector worker earned an average of \$44,186 dollars annually, roughly 4.2 percent above the national average. Service-related sports businesses were particularly low wages. Restaurants and other eating places (\$17,025), special food services (\$21,317), and traveler accommodations (\$26,815) paid average annual earnings well below the regional average (\$54,511). Although targeted business sectors tend to focus on those who pay their workers a living wage and thereby raise standards of living, the region's sports sector garners other immeasurable benefits: quality of life enhancements, national recognition, and earned media. These benefits do, however, come at a cost.

STRATEGIC CONSIDERATIONS

- ✓ **RISING CAPACITY AND AWARENESS:** The Indianapolis region is home to a number of world class events that support amateur sports. Lucas Oil Stadium's 73,000 seats provide significant capacity to host extremely large events, including the Big Ten Football Championship. Bankers Life Fieldhouse and Victory Field offer venue space for events with smaller capacity requirements. Along with these venues, hotel accommodations, vibrant downtown areas, and proximate entertainment options play supporting roles that are crucial to the success of any amateur sporting event. According to a market analysis by Indianapolis Downtown Inc., 250 new restaurants, retail, and entertainment establishments have opened in downtown Indianapolis since 2007, with over 50 such businesses opening annually. Moreover, the region's downtown area exhibits significant hotel accommodation capacity. From the Alexander's 209 guest room boutique hotel to the JW Marriot's 1,005 room hotel, the Indianapolis region's hotel space is capable of handling any major national sporting event. These developments and others have helped build an environment for travelers and tourists that supported the region's recognition by USA Today's 10Best Reader's Choice award as the "best convention city" in 2014.
- ✓ **AIRPORT ACCESSIBILITY AND CAPACITY:** Event site selectors regularly eliminate certain cities for prospective events completely based on the accessibility, capacity, and quality of their airport. With over 37 nonstop destinations, the Indianapolis International Airport is accessible by air from many of the nation's major metropolitan markets. The Indianapolis International Airport continues to add nonstop destinations; the airport recently announced the addition of Los Angeles International Airport and Boston Logan International Airport to their nonstop service. In 2014, the Indianapolis International Airport handled 3.5 million departures. While the airport displays far more capacity to handle freight traffic, its facilities, including the newly constructed Col. H. Weir Cook Terminal, is capable of handling demand generated by sporting events in region.
- ✓ **HOTEL ACCOMMODATIONS:** According to Indianapolis Downtown Inc., the Indianapolis downtown area alone boasts 7,200 hotel rooms. Major hotel accommodations are the Conrad Indianapolis, Crowne Plaza Indianapolis Downtown, the Alexander, Embassy Suites, Hampton Inn

Downtown Indianapolis, Hilton Indianapolis, Indianapolis Marriott Downtown, Omni Severin Hotels, and Sheraton Indianapolis City Center. Hotels throughout the region regularly handle large conventions and meetings ranging from the 88,000 Indiana Black Expo Summer Celebration to the 14,000 American Chemical Society conventions.

- ✓ **DECLINING VIEWERSHIP AND INCREASING COMPETITION FOR MOTORSPORTS:** While NASCAR has dominated the domestic motorsports market in terms of viewership in recent decades, viewership of the Indy Racing League has steadily declined. Meanwhile, domestic interest in Formula One, another form of open-wheel racing that has long dominated the international motorsports arena, is gaining popularity in the United States. This comes at a time when the Circuit of the Americas, home to the United States' only Formula One race, the United States Grand Prix (which was previously hosted in Indianapolis from 2000 – 2007), has opened in Austin, Texas. Manufacturers are already beginning to establish research and development operations in and around Austin, giving many a reason to believe that Austin will emerge as a significant competitor for automotive racing technology development. Indy Racing is such an integral component of the region's history but it is important that the region be mindful of the trends facing IndyCar as it enters 2015, with an understanding of how these trends could adversely impact the economy and the region's identity as it relates to motorsports.
- ✓ **THE IMPACT OF SPORTS ON QUALITY OF LIFE:** Hosting a successful sporting event is more than handling a large number of travelers and guaranteeing the event occurs without any complications. Successful sporting events leave the traveler with a great impression of the host city, potentially leading to future visitation. Quality restaurants, entertainment districts, and attractions assist in forging this lasting impression. Indianapolis offers many options for entertainment outside of the main sporting event. Attractions include but are by no means limited to the NCAA Hall of Champions, the Indianapolis Zoo, the Eiteljor Museum of American Indianans and Western Art, and the Children's Museum of Indianapolis. Along with these attractions, the Indianapolis region is home to high quality cultural developments including the Canal and White River State Park, Indiana Avenue, Mass Ave, the Wholesale District, the Center for the Performing Arts at the Palladium, Broad Ripple, and the Carmel Arts and Design District among others.

Given the low earnings potential offered by sports employment opportunities, the region must carefully weigh the development of the sports and sport-related employment in relation to the region's other objectives. Put simply, the region's sports sector and its indirectly supported activities (such as accommodations, food service, and entertainment) will not be a source of high wage job opportunities for the average Indianapolis resident. As a result, the region must view the sports sector in terms of enhancing the region's quality of life, improving local amenities, and marketing the region to prospective residents and businesses. It will also be an important source of job opportunities for many lower-skill residents.

- ✓ **SPORTS AND THE INDIANAPOLIS' REGION'S IDENTITY:** As highlighted in the Competitive Assessment, identifying and projecting a distinct, positive image is seen as a crucial part of its continued evolution as a globally competitive region. One thing is for certain: a contrived brand is never a successful brand. Developing common themes will take time. Many stakeholders' pointed to the evolution of Nashville's brand when discussing how a region can overcome some negative

connotations while still embracing its historical identity. Nashville's wholehearted embrace of country music helped forge a distinct identity, one that just recently began to trouble residents and community leaders who wanted to ensure that Nashville was known for more than just country music, the Grand Ole Opry. There was a fear that certain associations with country music – rural, conservative, and uneducated – whether perceived or actual, were inhibitors to the Nashville region's economic development and talent attraction efforts. The rapidly-growing diversity of the region's music production was aggressively promoted, and residents and business leaders alike have embraced the "Music City" moniker that has come to reflect a region and a brand with more positive associations such as creativity, culture, and youthfulness. The Indianapolis region can emulate Nashville in promoting an evolution of its identities as a motorsports capital and/or an amateur sports capital into simply a "Sports City" much in the same way that Nashville successfully advanced its identity as the "Music City" and not simply a capital for country music.

- ✓ **EMERGING SPORTS:** While certain professional and amateur sports continue to gain popularity, many are losing viewership and popularity among youth. It will be important for the region's leadership in sports promotion to be mindful of which sports are gaining popularity and the degree to which the region is positioned to capture future opportunities. Soccer's rise in popularity in the United States is well documented, and the attendance and support for the Indy Eleven is a testament to this emergence. But other sports such as lacrosse as gaining a foothold in areas of the country where the sport may not have been historically popular. Others, such as rugby, are gaining popularity due their inclusion in the Olympics.
- ✓ **YOUTH SPORTS:** Youth sports represent a tremendous tourism opportunity for regions with world-class facilities. The Indianapolis region is fortunate to have a variety of facilities that fit this bill and make it a logical destination for major tournaments in a variety of sports. The City of Westfield's 400-acre Grand Park is an incredible addition to the region's asset base. It will help the region to compete with other areas that have recently developed similar, expansive, mixed-use athletic facilities.
- ✓ **PROFESSIONAL SPORTS:** The region is currently fortunate to be home to two (NFL and NBA) of the "big four" professional sports (NFL, NBA, MLB, and NHL). The rapid growth in popularity of professional soccer in the United States is no more evident than in Indianapolis where the Indy Eleven have gained a steady following in their short existence. Recently announced plans for a new stadium with met with great enthusiasm by fans as a new stadium will greatly increase the team's likelihood of earning an MLS. As of 2013, the average attendance at MLS games was more than 19,000, exceeding the average attendance for the NBA and NHL. The popularity of soccer in the United States shows no signs of slowing down among nearly every demographic group. A third major professional sports franchise would be a welcome addition to the region's sports portfolio.
- ✓ **COLLABORATORS:** Clearly the promotion of sporting activities, the recruitment of sporting events, and the development of complementary amenities and services (such as hotels, cultural assets, etc.) are activities that do not typically align with the day-to-day activities of economic development practitioners that are focused more heavily on attracting new business, helping existing businesses expand, and nurturing a competitive climate for business. The Indiana Sports Corp, Visit Indy, the Indianapolis Motor Speedway, and many other organizations are actively

engaged in promoting sports and the associated economic impacts on a daily basis. These entities can and should take the lead in the targeted development of sports, but the Indy Chamber has a role to play in communicating the widespread value of sports in terms of economic impact, quality of life, and regional identity, and convening various partners to evaluate and advance cross-sector opportunities (such as motor vehicle technology development, sports medicine, etc.). Meanwhile, local governments are developing athletic complexes that support youth and amateur sport competitions, and are investing in trail systems and other public spaces that promote recreation and public health.

- ✓ **REGIONAL CONSIDERATIONS:** Large sporting events are more likely to be located within the region's central core area. Travelers often remain near to the event space as well as their hotels. As a result, events at Lucas Oil Stadium and the Indianapolis Motor Speedway are more likely to impact the region's central downtown area compared to events held at other venues in the region. As the region continues to expand its public transportation system, trail networks, and alternative transportation modes such as BlueIndy, it is likely that travelers visiting the Indianapolis region for an event within the central county/city will have a broader economic impact on the region. Place-based developments, such as the Carmel Arts and Design District in Hamilton County, certainly appeal to prospective sports travelers. Motorsports activity is also concentrated outside of Marion County.

3. STRATEGIC PLAN

The two research reports summarized in the preceding sections – the Competitive Assessment and Target Business Review – as well as input from more than 2,100 residents, workers, and businesses in the Indianapolis region, and the guidance of an engaged Steering Committee, have collectively informed the creation of this draft of the Indianapolis Regional Comprehensive Economic Development Strategy (CEDS).

This research and input has clearly indicated that the Indianapolis region has much to be proud of, particularly its strong economic growth at a time when many of its neighboring and nearby Midwestern metropolitan areas face economic stagnation and decline. But it has also highlighted a number of challenges that the region must face if it seeks to become the well-educated, innovative, and highly livable region that so many described in their vision for the future of the region.

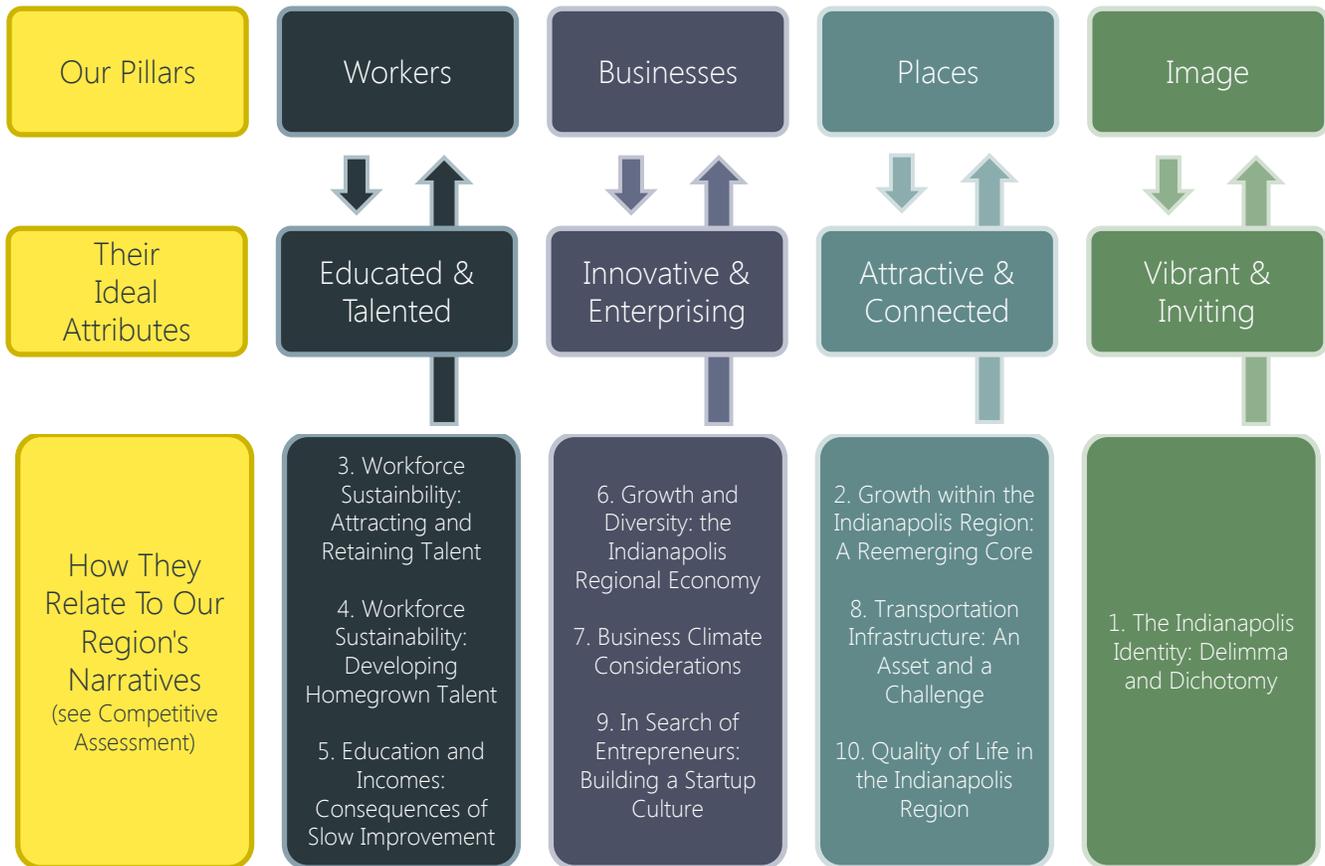
The Competitive Assessment drew attention to issues such as the region's struggles to carve out a positive image and identity that reflects what the region has to offer and is differentiated from historical connotations associated with the state of Indiana. It illustrated the struggles that the region has endured in recent years in elevating educational attainment levels and attracting and retaining top talent from outside the state. It provided evidence of the lack of a widespread entrepreneurial culture and support system, despite some well-known entrepreneurial success stories. And it acknowledged the influence of specific transportation assets and deficiencies that shape the region's livability and competitiveness for corporate investment and young talent.

These themes – issues related to image and identity, education and workforce, innovation and entrepreneurship, and livability and connectivity – were also pervasive in the review of challenges facing the region's target business sectors. While all target sectors are impacted by these issues in some manner, some sectors are more keenly sensitive to and focused on certain issues, such as innovation within the context of Life Sciences, workforce in the context of Manufacturing and Information Technology, transportation connectivity in the context of Logistics, and image and identity within the context of Sports. The Target Business Review also revealed the immense capacity that currently exists in sector-focused initiatives throughout the region and state. The Indianapolis region is home to numerous pre-existing efforts related to target sector development, as well as many other ongoing strategic planning initiatives that this CEDS can complement, and with which this CEDS must be aligned.

If one thing is clear, the Indianapolis region needs a collaborative, cooperative approach to strategic economic development planning and implementation. This was abundantly evident in the stakeholder input phase. Furthermore, it is clear from the research phase – specifically the ten stories contained within the Competitive Assessment and the challenges identified in the Target Business Review – that four primary pillars exist as the foundation to the region's collaborative, cooperative approach to regional economic development: talented and well-educated workers, innovative and entrepreneurial businesses, well-connected and attractive places, and a vibrant and inviting image.

As these four pillars serve as the foundation of the region’s prosperity, so too are they the foundation of its Comprehensive Economic Development Strategy (CEDS). Accordingly, the recommendations contained within this strategy are organized in four sections corresponding to each pillar. The following graphic conveys how the strategy’s four pillars are connected to and derived from the research findings.

OUR STRATEGIC FRAMEWORK



Within each pillar of this strategy are a set of strategic objectives that guided the development of specific tactical recommendations and provide context for ongoing refinement and modification of these tactical recommendations by the Steering Committee, the Indy Chamber, and its various implementation partners in the years to come. Each tactical recommendation is supported by a few statements related to its justification for inclusion, a brief discussion of the appropriate actions that could be undertaken, and the identification of best practices when relevant. Best practices are programs, policies, initiatives, or investments that have proven successful in other communities and regions around the country facing similar challenges as the Indianapolis region or seeking to capitalize on similar opportunities. Detail descriptions of referenced best practices are included in an Appendix.

Although specific organizations are referenced throughout this draft strategy, these references are by no means an exhaustive or exclusive list of the many organizations that can and should be engaged as partners in facilitating collaborative implementation. The Implementation Plan includes a comprehensive list of the various partners that can and should be engaged in supporting the implementation of each individual recommendation.

comprehensive list of the various partners that can and should be engaged in supporting the implementation of each individual recommendation.

1. Educated & Talented Workers

EXCERPTS FROM THE COMPETITIVE ASSESSMENT:

“...tomorrow’s successful regions will be those that are able to attract, retain, and develop a talented workforce. Although the Indianapolis region is growing, many stakeholders described the region’s ability to attract and retain residents living outside of the state of Indiana as difficult or challenging.”

*“Combined with a favorable age composition, the region’s migration patterns imply that its workforce is relatively sustainable from a **quantity** standpoint. However, the region is clearly falling behind its peers from a **quality** standpoint...In 2013, 30.8 percent of residents in the Indianapolis region possessed a bachelor’s degree or higher, just slightly above the national average (29.6 percent) but trailing the Columbus (33.7 percent), Nashville (32.3 percent), and Denver (40.3 percent) metropolitan areas...Furthermore, those new residents moving into the region are considerably less educated than their counterparts moving into the Denver and Nashville metros.”*

“As a result, the region has failed to substantively elevate adult educational attainment levels in recent years, falling further behind its competition. Between 2008 and 2013, the percentage of residents with a bachelor’s degree or higher increased by just 0.1 percentage points as compared to 2.8 and 2.9 percentage points in Denver and Nashville, respectively... (and) the region was unable to successfully reduce the percentage of the population with no high school diploma at a time when other regions and the nation as a whole made great strides... Consequently, compared to its benchmark metropolitan areas, the Indianapolis region made less progress in raising standards of living (as defined by per capita income).”

“These struggles to elevate educational attainment rates and attract highly-educated new residents may hamper the region’s ability to produce a sustainable workforce for employers seeking a large and expanding pool of highly-skilled workers. Furthermore, the competition has made greater strides in recent years and the gap is widening. And so, the Indianapolis region will need to heavily focus on talent development – in addition to talent attraction and retention – in the years ahead if it wishes to remain in the conversation with some of the country’s most highly-competitive regions for new jobs and investment.”

REGIONAL OBJECTIVES:

- ✓ Invest in the next generation through early childhood education (pre-K).
- ✓ Promote youth interest in growing careers in target business sectors.
- ✓ Improve high school graduation rates and college readiness.
- ✓ Ensure that target sectors are supported by necessary training and degree programs.
- ✓ Retain our best and brightest college graduates.
- ✓ Attract top talent from around the world.

OVERVIEW: TACTICAL RECOMMENDATIONS

1. Launch a collaborative and employer-driven workforce initiative that seeks to align and enhance numerous, often disconnected efforts to advance a continuum of educational and training opportunities supporting target sector development.
2. Advance long-term funding solutions for early childhood education programs statewide.
3. Evaluate the viability of one or more large scale investments that seek to increase youth interest in manufacturing, technology, and STEM-related careers by exposing them to emerging technologies and 21st century production processes and increasing the opportunity for new vocational certification programs and apprenticeships.
4. Support efforts to retain college graduates by implementing programs that encourage and provide community service, leadership, and internship opportunities for college students and recent graduates.
5. Evaluate the viability of developing a public-private partnership to support enhancements in college and career counseling capacity and training at regional high schools and ensure programs are aligned with current and future labor market trends.
6. Enhance outreach and wraparound services and evaluate sustainable funding mechanisms for programs, such as the 21st Century Scholars program, in order to increase access to and completion rates at two- and four-year colleges and universities for those with financial need.
7. Develop and implement a multi-faceted talent attraction campaign as a component of a comprehensive new regional marketing program.

TACTICAL RECOMMENDATIONS: EDUCATED & TALENTED WORKERS

1. Launch a collaborative and employer-driven workforce initiative that seeks to align and enhance numerous, often disconnected efforts to advance a continuum of educational and training opportunities supporting target sector development.

In February 2014, Area Development magazine released the results of its annual Corporate Survey and for the first time in the survey's 27 years, "availability of skilled labor" topped the list of most important site location factors. The line between "economic development" and "workforce development" is increasingly blurred as the availability of skilled labor is dominating the debate in nearly every major metropolitan area regarding how to effectively position themselves for growth. As the Competitive Assessment and Target Business Review revealed, workforce sustainability and quality are among the region's greatest competitive concerns. There is general concern that there is insufficient interest in STEM-related career clusters at the high school level. At the sub-baccalaureate/two-year level, many employers have observed that workers are enrolling in relevant technical programs but many fail to receive valuable certifications. And at baccalaureate institutions, there is concern that, despite the high quality of many programs, the number of graduates from certain programs that choose to stay in Indiana is insufficient.

There have been numerous studies of sector-specific workforce issues in recent years, and there are an immense number of pre-existing initiatives that seek to promote the alignment of technical training and degree programs with the needs of employers. These initiatives are happening at the local, regional, and state level, and often fragmented at various stages in the continuum of education with certain initiatives focusing on career and technical education (CTE) in secondary education, others on technical training, and others on four-year and advanced degree programs. There is a clear need for a single initiative, driven by regional employers, that seeks to coordinate these various initiatives and align often disparate sources of funding behind a consensus blueprint for targeted workforce development in the region.

If not readily apparent through the research and input received in this CEDS process, the foundation and justification for such an initiative has been laid through the recommendations of many of the aforementioned pre-existing efforts. For example, the Region 5 Works Council recently released a report recommending the establishment of "sector-based Skill, Knowledge, and Experience (SKE) Panels." The Indiana Career Council's first objective in its recently-released Strategic Plan is to "provide a seamless system of partners that provides worker-centric and student-centric services." Because it is often difficult for higher education institutions to rapidly respond to the ever-changing needs of employers through new program creation or realignment, there is tendency for many regions to constantly discuss the challenges facing their targeted businesses yet fall short in the area of taking action. There has been much discussion in the Indy region; the challenge now is to bring focus and alignment to these discussions. The Central Indiana Corporate Partnership (CICP) and the Indy Chamber have indicated interest and willingness in supporting such a collaborative and coordinated effort in partnership with the business community.

It is past time for a coordinated effort to identify the highest priority needs across the region, align employer demands with various funding streams (public, private, and non-profit), and produce necessary results. The first step in such an effort to inventory and summarize the pre-existing research related to sector-specific needs, a task that has already been initiated in this CEDS process with the completion of the Target Business Review, and compile information on the various initiatives that are already underway in the region. But it is important that these efforts are not simply derived from the target sectors identified in this CEDS process but also the immense capacity that currently exists in various sector-focused initiatives throughout the region and state (a comprehensive list of the pre-existing research that has been conducted related to target sector workforce needs can be found in Appendix A to the full Target Business Review).

The pre-existing research is immense and there are some areas of consensus in terms of these highest priority needs for specific target sectors. These include but by no means are limited to the following:

Manufacturing:

- ✓ Generating youth interest in manufacturing careers, engineering, and STEM pathways
- ✓ Retirement impacts associated with machinists, mechanical engineers, industrial engineers, and engineering technicians and technologists
- ✓ Training for high-demand skill sets such as 3D and computer-aided manufacturing, aerodynamic engineering, tungsten inert gas (TIG) welding, computer numerical control (CNC) machine operation, flow analysis, and custom fabrication
- ✓ Retention of engineers graduating from Indiana colleges and universities

Logistics:

- ✓ Existing and ever-expanding shortages of truck drivers due to rising demand, impending retirements, restrictions on drive time, and little interest among youth
- ✓ Retirement impacts associated with wholesale trade sales representatives and clerical positions
- ✓ Four-year degree production to support a pipeline of qualified managers and supervisors in logistics, supply chain management, and operations management

Information Technology:

- ✓ High-priority skill sets with immediate needs in terms of supply and experience: SQL and JavaScript
- ✓ Existing and future demand will drive greater needs for those with CSS3, HTML5, and PHP experience
- ✓ Occupations in high demand among existing employers include database administrators, web developers, and network and systems analysts

Further research and input is needed to determine areas of consensus related to priority workforce needs for life sciences companies in the region, as well as other target sectors and niche technologies.

Following the completion of a comprehensive inventory and evaluation of 1) existing research on sector-specific workforce needs and 2) existing education and training programs supportive of sector-specific workforce needs, the next appropriate step in such an effort is to assemble a group of key leaders from relevant partners (business, education and training, non-profit institutions, etc.) that implement and fund targeted education and workforce development programs to work with professional staff at the CICIP, the Indy Chamber, and other relevant partners. This group would oversee the initiative and be tasked with identifying existing initiatives that are both impactful and scalable, as well as designing new, collaborative initiatives that address existing gaps in the region's workforce development system. Ultimately, its objective should be to maintain a process of regular evaluation and realignment to ensure that investments are coordinated, focused, and well-informed.

2. Advance long-term funding solutions for early childhood education programs statewide.

Investing in early childhood education has been extensively researched in recent years and decades. A variety of studies have demonstrated that those attending high-quality preschools are more likely to have increased performance on standardized tests, improved employment opportunities, higher lifetime earnings, and are less likely to be incarcerated, among many other measured benefits. The long-term benefits of pre-K have also been shown to have a good return on investment for communities and providers by way of future savings on remedial education and social assistance programs. In terms of early childhood education, the Indianapolis region has only recently begun to make slow, forward progress. The state of Indiana is preparing to launch an early childhood education pilot program for 4-year-olds in Marion County along with four other Indiana communities. Moreover, the Eli Lilly and Company Foundation has committed to raise millions in private monies to support expansion of early childhood education in the region as well as the state of Indiana.

Nevertheless, in 2013, Indiana was one of only ten states that did not have a state-funded preschool program. Many of the region's peer metros benefit from a preexisting state-funded preschool program. Local stakeholders expressed concern that the state's commitment is not sufficient to match the City of Indianapolis' current need. It was clear from conversations with a variety of stakeholders in the community that improving access to early childhood education is perceived to be vitally important to the region's future competitiveness and quality of life. The immense commitment from private funders (principally the Lilly Endowment) and local investment in the Indianapolis area are a positive step, but stakeholders clearly expect more substantive and expansive investment in access to early childhood education throughout the region's school districts. Accordingly, efforts to secure additional state and local funding for pre-K expansion in the Indy region should remain a focus of legislative agenda in the years to come. With local funding opportunities limited and disparate, an emphasis on the expansion of sustainable statewide funding is logical priority.

3. Evaluate the viability of one or more large scale investments that seek to increase youth interest in manufacturing, technology, and STEM-related careers by exposing them to emerging technologies and 21st century production processes and increasing the opportunity for new vocational certification programs and apprenticeships.

Stigmas attached to the manufacturing sector and negative perceptions about future employment opportunities within manufacturing have received heightened attention nationwide in recent years; such stigmas must be overcome in order to ensure that a sustainable pipeline of talent exists to support the nation's and the Indy region's manufacturers. The "Hire Up Indy!" report produced by Employ Indy highlighted a disconnect between enrollments in career and technical education (CTE) in the region's schools and the region's clusters of economic activity, born largely from a disconnect between the choices that students are making and the needs of regional employers. Specifically, it was cited that more than three times as many students in Central Indiana were enrolled in cosmetology and culinary arts programs than in STEM-focused career clusters. This report reinforced a conclusion that helped spawn Conexus Indiana, a statewide initiative that focuses heavily on improving interest among young people in STEM-related fields, connecting employers to classrooms, and ultimately increasing the pipeline of young talent entering technical training and higher education programs in fields that support manufacturing and logistics. Others in the region are also focused on improving interest in manufacturing careers and other STEM-related fields in partnership with regional school systems. This includes but is not limited to local employer 3D Parts Manufacturing that has partnered with the TechPoint Foundation for Youth to place small 3D printers in classrooms at ten schools around the state. Stakeholders applauded such initiatives but encouraged the region to think bigger and bolder about ways to expose students to the rapidly-changing technologies that characterize many of today's production processes.

Once a coordinated workforce initiative has been put in place (see tactical recommendation #1 from this pillar of the CEDS), consideration should be given to creative investments that can help drive more students to choose STEM-related career clusters in secondary education. Potential ideas include but are by no means limited to:

- ✓ the development of a corporate-sponsored “Technology Wing” at the Children’s Museum of Indianapolis that illustrates how various products in the region;
- ✓ the development of a network of makerspaces (also known as fab labs, hackerspaces, etc.) at high schools throughout the region;
- ✓ the development and expansion of summer engineering and technology camps and/or academies at institutions of higher education, particularly those that partner with regional employers;
- ✓ partnerships between school systems and manufacturers in the region that enable youth at-risk of failing to complete their high school diploma while engaging in part-time work in manufacturing;
- ✓ the development of an “Adventures in Technology” immersion program that provides high school students with the opportunity to spend a few weeks working in teams to develop or reverse engineer a product with guidance and mentorship from local employers.

BEST PRACTICE: ADVENTURES IN TECHNOLOGY, CATALYST CONNECTION & PITTSBURGH TECHNOLOGY COUNCIL (PITTSBURGH, PA)

BEST PRACTICE: 12 FOR LIFE, SOUTHWIRE & CARROLL COUNTY SCHOOLS (CARROLL COUNTY, GA)

4. Support efforts to retain college graduates by implementing programs that encourage and provide community service, leadership, and internship opportunities for college students and recent graduates.

Conventional wisdom holds that internships are a highly effective method to retain recent college graduates. They can help develop professional network, establish ties to a specific employer, and provide experience living and working in the region. However, some evidence exists from a recent TechPoint study that may suggest that certain internships in the information sector are not as effective at retaining graduates through full-time employment offers as many might expect. According to the study, all surveyed companies indicated that they hired interns but just 51 percent extend full-time offers to those interns. Of those receiving offers, 59 percent accepted. And so, roughly one in four interns at the surveyed companies ultimately accepts a full-time position with the company. Nonetheless, the expansion of internship opportunities was one the most frequently cited tactics by stakeholders when asked how the region can best support graduate retention. In addition to internships, programs that provide opportunities to become engaged in the community and create lasting, meaningful connections to a place through volunteer service can also aid graduate retention.

The region should encourage participation in existing internship and service-oriented programs while also seeking to identify new investments that can expand such opportunities in the region. Existing initiatives to support and study as models within the region include but may not be limited to:

- ✓ **TechPoint’s Xtern program:** TechPoint’s Xtern program provides a unique summer internship experience for a group of talented recent graduates that includes professional development and free downtown housing for the duration the program.

- ✓ **The Orr Fellowship:** The Orr Fellowship is a highly-competitive program that selects the best and brightest applicants to participate in a two-year program that provides fellows with work experience with partnering employers, executive-level mentorship on issues related to management and entrepreneurship, community service opportunities, and leadership development curriculum. The Orr Fellowship is truly a best practice program and one whose components can serve as a model for potential new initiatives.

Potential new and expanded initiatives to evaluate could include:

- ✓ **An “Intern in Indy” campaign:** Such a campaign could be a cornerstone of the region’s talent retention efforts, challenging regional employers to develop one or more paid summer internships for recent college graduates and creating a web portal to promote and match candidates with available internships. This campaign could be led by the comprehensive workforce initiative (discussed in recommendation #1 in the Educated and Talented Workers pillar) or the comprehensive marketing program (discussed in recommendation #1 in the Vibrant and Inviting Image pillar) and could be done in collaboration with Indiana Internet.
- ✓ **College Crews:** IndyHub and various young professionals organizations in the region could be engaged alongside regional colleges and universities to evaluate their interest in developing a network of issue-oriented “College Crews” that promote and organize volunteer initiatives among college students to impact issues of importance to the Indy region. These crews could take on projects related to community beautification, revitalization, public education, transportation and mobility, community awareness, and many others.
- ✓ **IndyCorps:** IndyCorps would be a substantive new initiative for the region that would require considerable collaboration and support from the existing non-profit community to coordinate and implement. The premise is to create a program that would pair recent college graduates in paid employment and community service opportunities with various public sector and non-profit entities that are affecting change in the region. It would provide an experience similar to the Orr Fellowship but geared towards community service and stewardship as opposed to entrepreneurship. College juniors and seniors interested in public service careers could be targeted for a year-long program whereby they would commit to working with a specific community or multiple communities after graduation. In addition to their salary, participants could receive an end-of-program award that is could be applied to additional education in the Indy region and/or student loan repayment. IndyCorps member could work on specific projects in a variety of areas (poverty reduction, redevelopment and revitalization, public education, parks and recreation, economic development, etc.) that would support community objectives outlined in local and regional strategic plans. The program would ideally leverage lessons learned from CityCorps, the young professional engagement component of Indianapolis-Marion County’s Plan 2020.

5. Evaluate the viability of developing a public-private partnership to support enhancements in college and career counseling capacity and training at regional high schools and ensure programs are aligned with current and future labor market trends.

The American Counseling Association recommends a ratio no higher than 250 students per counselor. Data from the American School Counselor Association indicated that the ratio of students to college and career guidance counselors in the state of Indiana was 620:1 in the 2011-2012 school year. Only six states had a ratio higher than the state of Indiana. Input participants noted that many students, particularly those from lower income

backgrounds, lack the necessary advice outside of their household to support, evaluate, and pursue their college and/or career aspirations. This often includes guidance on navigating a complex process of identifying and applying for necessary financial aid. The cost of tuition coupled with a lack of understanding about available forms of financial aid can be pervasive yet manageable deterrents for many families whose children have the potential to attend college and therefore greatly increase their lifelong earning potential. Although the counseling capacity concerns are heightened in the state of Indiana, the state and region are by no means alone in facing this issue.

Potential exists for the Indy region to develop a national model to address such shortages by establishing a public-private partnership that leverages paid staff and volunteers to help overcome the aforementioned counseling capacity concerns while also providing professional development opportunities to maintain high-quality counseling region-wide. Full-time college and career counselors at the partnership could rotate between schools in a given district on a weekly basis, augmenting the existing capacity that is provided by the district and school. Such a model could be customized to meet the needs of specific districts, acknowledging that some districts will have greater needs than others, and the needs will vary by district in terms of the demands associated with personal guidance counseling vs. college and career counseling. Potential also exists for the partnership to be supported by a network of volunteers that are willing and able to lend their time on weekends to families that need guidance applying for financial aid, may lack knowledge of the process and what is available, and/or lack the financial literacy to pursue applications on their own. Such an element could be modeled after the Financial Aid Saturdays program that was launched in Austin, Texas to help families in need complete Free Application for Federal Student Aid (FAFSA) and other forms of financial aid.

BEST PRACTICE: FINANCIAL AID SATURDAYS, AUSTIN CHAMBER OF COMMERCE (AUSTIN, TX)

6. Enhance outreach and wraparound services and evaluate sustainable funding mechanisms for programs, such as the 21st Century Scholars program, in order to increase access to and completion rates at two- and four-year colleges and universities for those with financial need.

The cost of attending college continues to rise across the country and many communities, regions, and states are beginning to take action to ensure that price is not a barrier to their efforts to expand degree attainment and enhance workforce preparedness. Many of these efforts focus on providing gap financing or “last dollar” funding to permit students to attend public, two- or four-year institutions free of charge. Initiatives such as the Kalamazoo Promise, the State of Tennessee’s Drive to 55 and its associated Tennessee Promise, and the Tulsa Achieves initiative of the Tulsa Community College are just a few examples of such initiatives that are operating at various scales across the country.

Input participants were quick to note that, when discussing workforce development needs, it is important to be mindful of the fact that many of the fastest-growing occupations in the country and those with the highest projected demand in the coming decade require some education and training beyond a high school diploma but do not require a bachelor’s degree. And many of these same individuals emphasized that other states were making significant investments to expand access to two-year degree programs at community and technical colleges. President Obama announced a desire to advance a plan to extend two years of free community college to all students completing high school with a 2.5 grade point average (GPA) or higher. This plan was recently touted during a trip to Indianapolis in February 2015, bringing additional spotlight to the issue in the state. While the federal government would assume the majority of the burden under the President’s plan, many have expressed skepticism about its viability to gain bipartisan support, while others acknowledge that the burden of states could be immense as well.

Nonetheless, stakeholders in the region expressed a desire to see Indiana evaluate opportunities to increase access to two- and four-year degree opportunities by potentially adjusting eligibility requirements for existing programs in the state (notably the 21st Century Scholars program) or providing new mechanisms that align with federal plans and help Indiana keep pace with states such as Tennessee that are expanding access through free community college measures, and others such as Mississippi and Oregon that continue to evaluate similar proposals and implement other measures. Leadership in the Indy region should work to advance the discussion in the state of Indiana. As the home to one of the only statewide community college systems in the country, the state is in a position to lead. But it will also need to invest in complementary services that help ensure 21st Century Scholars, and other college applicants, are adequately supported in their efforts to complete high school. That is to say, expanded access should be complemented by investments that help increase the likelihood of high school completion and college matriculation.

7. Develop and implement a multi-faceted talent attraction campaign as a component of a comprehensive new regional marketing program.

See fourth pillar of this strategy (Vibrant and Inviting Image) for a discussion of the comprehensive new regional marketing program and its talent attract component.

2. Innovative & Enterprising Businesses

EXCERPTS FROM THE COMPETITIVE ASSESSMENT:

"Although the Indianapolis region has lagged behind its peer communities in terms of population growth, improvements in educational attainment, and per capita income growth, the overall economic climate of the Indianapolis region is positive... Over a ten year that includes the Great Recession and subsequent recovery (2003 – 2013), the Indianapolis region added 66,043 jobs. Meanwhile, the rest of the state of Indiana lost more than 50,000 jobs... Its economic diversity is a strength, yet certain characteristics of its changing economic composition – most notably the decline of its manufacturing sector – is concerning..."

"Overall, job growth across the region is unquestionably robust. However, given the region's challenges in elevating incomes over the last decade, it is important to examine the composition of that growth by sector. And generally speaking, business sectors where wages are lower than the regional average have driven job creation across the region... Without question, the changing composition of jobs partially explains the region's troubles in elevating incomes."

"...among the startup community, there is optimism that the region is not only developing attractive amenities but building a startup support system that can help advance the proliferation of more successful small businesses... Although proud of the growing organizational capacity, entrepreneurs noted that this capacity and (entrepreneurial) culture that (they) seek to develop is highly fragmented. Focus group participants noted a distinct absence of a single organization that coordinates...and acts as a one-stop shop for entrepreneurial services."

"Across a variety of metrics, the Indianapolis region's entrepreneurship ecosystem appears underdeveloped relative to its peer communities. This is not to say that Indianapolis cannot be known as a hotbed for innovation and entrepreneurship, or that the region is without numerous success stories. Rather, it suggests that the region has significant ground to cover to gain national recognition as a premier location for startups."

"Along with concerns related to talent attraction and the impact of quality of place, small business owners and technology workers participating in public input expressed similar levels of concern about the relative lack of venture capital available to firms in the region and the state. The data substantiates these claims."

REGIONAL OBJECTIVES:

- ✓ Develop a culture that encourages and celebrates entrepreneurship.
- ✓ Provide necessary support services and an environment for businesses to thrive.
- ✓ Increase access to capital to support startup growth.
- ✓ Encourage technology transfer and applied research partnerships.
- ✓ Help existing businesses expand in the Indy region.
- ✓ Attract new businesses in targeted sectors.

OVERVIEW: TACTICAL RECOMMENDATIONS

1. Establish a physical and virtual “front door” for entrepreneurial and small business support services.
2. Issue the “Billion Dollar Challenge” – an initiative to recapture \$1 billion of the roughly \$94 billion in business expenditure that leaves the Indy region each year by helping existing firms identify local alternatives to non-local suppliers of goods and services.
3. Advance development of the Indiana Biosciences Research Institute (IBRI).
4. Advance the development and preparation of 16 Tech and other regional innovation districts.
5. Expand the Indy Chamber’s existing microlending program to make it available to entrepreneurs outside of Marion County.
6. Form a Capital Alliance comprised of key stakeholders from the private equity, technology, and startup communities to develop a collaborative strategy to expand the supply of angel, venture, and other forms of capital in the Indy region.
7. Implement the Metro Indianapolis Export Plan to support and grow existing exporters and encourage small- and medium-enterprise (SMEs) to enter the export market.
8. Coordinate a comprehensive, collaborative, and professionally-staffed regional business retention and expansion (BRE) outreach program.
9. Support a variety of state policy priorities that can improve the region’s capital environment and incentives for innovation.

TACTICAL RECOMMENDATIONS: ENTERPRISING & INNOVATIVE BUSINESSES

1. Establish a physical and virtual "front door" for entrepreneurial and small business support services

As noted in the Competitive Assessment, there is optimism that the region is in the early stages of building a startup support system that can help advance the proliferation of more successful small businesses. Organizations such as Speak Easy, TechPoint, Verge, and Launch Fishers were among those highlighted by input participants as key assets to the region's emerging entrepreneurship culture. Although proud of the growing organizational capacity, focus group participants noted a distinct absence of a single organization that coordinates the regional entrepreneurship community and acts as a one-stop shop for entrepreneurial services. These observations were also reflected in survey results with just 36.3 percent of all responding business owners and executives indicating that the region has been successful or very successful at "providing necessary assistance to entrepreneurs and small businesses." By comparison, 56.5 percent of business owners and executives in the Nashville are felt that their region had been successful or very successful in this endeavor.

Just as it is past time for the region to launch a comprehensive, coordinated workforce initiative, so too is it past time that the region had a definitive "front door" – both virtual and physical – to serve as a gateway to the region's various entrepreneurial and small business support services. The Indy Chamber and its Entrepreneur Services are well-positioned to lead this effort and serve as a catalyst for other new initiatives that enhance the region's startup ecosystem. The Indy Chamber has an important role to play in the region as a convener, coordinator, and a facilitator; it can help start initiatives that other entities ultimately manage or administer. Despite the fact that their core missions focus on supporting the needs of their community's businesses, many chambers of commerce across the country struggle to have meaningful impact on their startup environment and actually shy away from the provision of necessary support services that some view as outside the scope of their mission, their sphere of influence, or budgetary constraints. The Indy Chamber must continue to lead in this area, and must work diligently to expand its sphere of influence from some of its bedrock services that cater to small and medium enterprises (SMEs) to other areas that support innovation driven enterprises (IDEs) and gazelles. Accordingly, its approach to service delivery is one that should be segmented along these lines and others. One of the first steps that should be taken is the completion of a social network map of all resources currently available to entrepreneurs in the Indianapolis region to identify opportunities to close gaps and better align existing resources.

From there, a service delivery model should be segmented in a manner that acknowledges fundamental differences in needs between traditional small and medium enterprises (SMEs), innovation driven enterprises (IDEs), and gazelles. The Ewing Marion Kauffman Foundation helped differentiate between SMEs and IDEs in its 2013 report "A Tale of Two Entrepreneurs."

- ✓ **Traditional small and medium enterprises (SMEs):** Kauffman defined SMEs as those enterprises "serving local markets with traditional, well-understood business ideas and limited competitive advantage." As Kaufmann acknowledges, "SMEs are the life blood of many economies." But they are predominantly local-serving enterprises and have comparatively limited new wealth-creation potential when compared to their IDE counterparts.
- ✓ **Innovation driven enterprises (IDEs):** Kaufmann defines IDEs as those enterprises that "pursue global opportunities based on bringing to customers new innovations that have a clear competitive advantage and high growth potential." Kaufmann is careful to clarify that IDEs are not necessarily "technology-driven" enterprises, as innovation can occur in a variety of ways, from process to businesses models to services, and not simply technologies. They acknowledge that IDEs are more global-focused and export-

oriented, more likely to be led by a multi-disciplinary team well-educated individuals, and more heavily reliant on external and non-traditional sources of capital.

- ✓ **Gazelles:** Gazelles are generally defined as those companies with at least \$1 million in revenue and an annual growth of at least 20 percent. Given this relatively broad definition, these companies can vary in size and in some cases may not be considered "small." Nonetheless, many IDEs and some SMEs qualify as gazelles, and these companies merit focused attention to support their continued growth and ability to create jobs and new wealth for the region.

Second, the service delivery model should be segmented along virtual and physical lines; that is to say, certain services and initiatives should be delivered virtually via the internet while others should be fulfilled face-to-face.

- ✓ **Creating a virtual front door:** Stakeholders from the startup and technology communities repeatedly emphasized during public input that the region needs a virtual front door that includes a network map of the region's startup ecosystem and various support services. An effective website serving as this virtual front door is one that provides existing and potential future entrepreneurs with critical information about how to start a business in the region, but perhaps more importantly, provides clear connections to the wide variety of resources – via the aforementioned network map – that are available in the region. Stakeholders have noted that an effective ecosystem and network map would be statewide and not simply regional; acknowledging that the Indy region is a priority, some felt that there could be overlap in available services across the state and with other regions.
- ✓ **Creating a physical front door:** Stakeholders also acknowledged that the region lacked a physical front door to serve as a gateway for existing and prospective entrepreneurs seeking hands-on assistance. Some may find the most appropriate provider(s) of assistance using a virtual front door, but others may need face-to-face interaction with an advisor or mentor that can best understand their needs and then direct that person to the most appropriate provider(s). Again, the Indy Chamber and its Entrepreneur Services are well positioned to serve a "gateway" function to the region's full spectrum of partners in the startup ecosystem. In this regard, it serves as a "welcome mat" of sorts.

Third, services delivered should be segmented according to the key connections that entrepreneurs need, including but not limited to connections to key resources, capital, and customers.

- ✓ **Resources:** Entrepreneur Services currently houses a number of critical resources for the region's small businesses, including but not limited to mentorship, advising, and microlending programs; the Central Indiana Small Business Development Center (C-ISBDC), the Central Indiana Women's Business Center, the Indiana Procurement Technical Assistance Center (PTAC), and the Hispanic Business Council. Stakeholder input and steering committee guidance has indicated a desire to see expanded resources including but not limited to:
 - Additional mentorship, advising, and coaching services
 - A proactive effort to identify gazelles and coordinate resources to accelerate their growth
 - Hands-on assistance with federal Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) grant applications
- ✓ **Capital:** Entrepreneur Services currently administers a roughly \$2 million microloan fund. Stakeholders acknowledged that this represented an important resource for SMEs in the region, and one that should be expanded if resources are available. Based on stakeholder input, service delivery should be focused on the following:
 - Maintaining and expanding the microloan program

- Establishment of a no-strings-attached competitive grant competition for startups
 - Support for the formation of a Capital Alliance (see recommendation #6 in this pillar).
 - Informing the development of legislative agenda related to incentives for innovation and entrepreneurship (see recommendation #9 in this pillar).
- ✓ **Customers:** Connecting entrepreneurs to customers is another important function of Entrepreneur Services. PTAC currently helps in this regard but stakeholders have indicated that a variety of initiatives could encourage local-sourcing and provide business development opportunities for the region's small businesses, both SMEs and IDEs, including but not limited to:
- Launching the recommended "Billion Dollar Challenge" (see recommendation #2 in this pillar
 - Working with large employers to provide vendor lists and utilize these lists to mine information that can be used to develop new business relationships
 - Helping small companies that receive large contracts to manage capital and inventory effectively to minimize risk associated with the derivation of a large share of revenue from a single source.

2. Issue the "Billion Dollar Challenge" – an initiative to recapture \$1 billion of the roughly \$94 billion in business expenditure that leaves the region each year by identifying local alternatives to non-local suppliers of goods and services.

According to estimates from Economic Modeling Specialists Inc. (EMSI), roughly \$94 billion in business expenditures left the Indianapolis metropolitan area in 2014, with this leakage spread across a wide variety of sectors and economic activities. For example, only one quarter (25.1 percent) of the transportation equipment niche's \$122 million in annual expenditures on machining was sourced from machine shops within the region. The potential economic impact associated with recapturing just a small portion of the combined \$94 billion in leaked expenditure is immense.

Communities across the country have, for many decades, promoted "buy local" campaigns that encourage residents to patronize local businesses. A local-sourcing challenge targeting area businesses would apply this same concept to business expenditures as opposed to consumer expenditures, helping to reduce the aforementioned leakage of expenditure – and associated impacts such as jobs, wages, and tax revenues – to businesses located outside the community. Such an initiative would also support a principal objective of the Indianapolis "Anchor Institutions" Study to promote local-sourcing among anchor institutions.

The "Billion Dollar Challenge" would implore businesses from the Indianapolis region to evaluate their supplier network and seek to identify one or more regional alternatives to a supplier located outside the region. Such alternatives could be providers of specific inputs (goods) to manufacturing processes or business services such as tax preparation, legal advice, and software development. The Indy Chamber and relevant partners could utilize their membership databases and inventories of area businesses to develop a comprehensive database of regional businesses and the goods or services that they provide. This database could then be used by economic development staff at the Indy Chamber and its various LEDO partners to help individual businesses identify and connect with providers of goods and/or services that could potentially be an alternative to a current supplier that is located outside the region. Partners in the technology community could be engaged to evaluate the viability of developing an electronic data interchange (EDI) to support local sourcing – a portal allowing companies to identify alternative suppliers and complete transactions using a standard format for the exchange of information. Once the database and other supportive resources are developed, an outreach and public relations campaign could launch the program, issuing the challenge to the region's business community.

Major employers could be encouraged to show leadership as “early adopters” of the challenge. All participating businesses could be recognized and honored for “accepting the challenge” in some way.

3. Advance development of the Indiana Biosciences Research Institute (IBRI).

As highlighted in the Competitive Assessment, only 30.8 percent of residents in the Indianapolis region possess a bachelor’s degree education in 2013, roughly 0.8 percentage points higher than the national average. While outperforming the national average, many of the nation’s largest and most competitive life sciences clusters possess a far more highly educated population. For instance, 42.0 percent and 42.9 percent of residents in the Raleigh, NC and Boston, MA metro areas hold a bachelor’s degree education or higher, respectively. Furthermore, these regions are home to immense public, private, and non-profit research institutions and facilities that promote public-private partnerships, support life sciences research and development, produce new discoveries, and help enable technology transfer, commercialization, and new firm creation from university research activities, among many other benefits.

In 2012 and 2013, BioCrossroads helped to facilitate community discussion around collaboration and engagement among Indiana’s leading life science stakeholders. From these conversations several important themes emerged. It was acknowledged that many of the state’s leading life science companies were involved with collaborations around the country and around the world, but not so much in Indiana. One of the reasons identified was talent, and it was from these early discussions that the idea for the Indiana Biosciences Research Institute (IBRI) emerged as a catalyst and focal point for talent attraction, innovation, and collaboration. The Institute is geared to:

- ✓ augment and supplement the capabilities of the state’s corporate and university research activities;
- ✓ attract world class talent;
- ✓ catalyze engagement around a critical mass of research in the area of nutrition, diabetes, obesity, and cardiovascular disease in which all the leading life science corporate and university stakeholders have significant interest; and,
- ✓ catalyze innovation more broadly across multiple industry sectors for the region by being the initial driver and anchor for an innovation district at 16 Tech.

The IBRI is the “big idea” behind which the State and Indiana’s life science sector is aligning - \$50 million raised to date - to advance the sector and help transform Indiana to an innovation driven economy. Its development is central to the long-term success of 16 Tech as an innovation district, as IBRI can be the catalyst that attracts complementary investments, support services, and economic activity. Every effort should be made to align regional and state leadership behind the IBRI concept, its expeditious development, and necessary complementary initiatives that will help enable its early success. This includes but not limited to collaborative fundraising efforts, identification and acquisition of the appropriate site/real estate, and the identification and targeted recruitment of lead researchers and research teams.

4. Advance the development and preparation of 16 Tech and other regional innovation districts.

The “cluster” concept is predicated on the fact that companies in certain business sectors tend to congregate and co-locate in a specific geographic area to take advantage of specific assets such as infrastructure (ports, intermodal facilities), talent (specific skill sets), and higher education resources, as well as to reduce transaction and transportation costs between buyers and suppliers, among many other reasons. Similarly, startups and applied researchers derive benefits from co-location: sharing ideas, forging collaborative research and development partnerships, transferring knowledge, taking advantage of shared spaces to reduce overhead costs, and utilizing

specific startup support services concentrated in a given location (such as an incubator). Communities across the country have recognized this trend and have sought to concentrate startup activity, applied research activity, and relevant support services in “innovation districts” or “entrepreneurial districts.”

While there are many business and technology parks throughout the region that are home to growing companies, the region lacks a true “innovation district” that is immediately proximate to some of the metro area’s largest research universities, life sciences assets, established and startup companies, and quality of life amenities. 16 Tech – an area along and around 16th Street that is roughly bound by the White River to the west, Sidney and Lois Eskenazi Hospital and IUPUI to the south, and I-65 and IU Health Methodist Hospital to the east – is envisioned as an innovation district supporting the life sciences and information technology sectors.

As with IBRI – which has the potential to catalyze development in 16 Tech – every effort should be made to align local, regional, and state leadership behind 16 Tech and its incremental development. The region should promote the clustering of new assets and providers of support services for startups and applied, support necessary infrastructure development and site preparations, and evaluate a variety of methods to support the maintenance and continued development of the district, potentially including tax increment financing (TIF). Regional leadership should study the successful elements of other regional innovation districts including early models such as the Research Triangle Park (Raleigh-Durham, NC) and University City (Philadelphia, PA), as well as more recent successes such as the CORTEX District (St. Louis, MO) and Boston’s Innovation District.

Efforts should also be made to advance the development of facilities, support services, and appropriate incentives to encourage the transformation of other areas across the region into innovation zones or districts, consistent with local objectives. This includes but is not limited to the development of an innovation zone linking the Nickel Plate District and the I-69 corridor in Fishers, and the Town of Brownsburg and its efforts to concentrate technology development in an area branded as “The Innovation Zone.”

5. Expand the Indy Chamber’s exiting microlending program to make it available to entrepreneurs outside of Marion County.
6. Form a Capital Alliance comprised of key stakeholders from the private equity, technology, and startup communities to develop a collaborative strategy to expand the supply of angel, venture, and other forms of capital in the Indianapolis region.

Along with concerns related to talent attraction and the impact of quality of place, small business owners and technology workers participating in public input expressed similar levels of concern about the relative lack of venture capital available to firms in the region and the state. The data examined in the Competitive Assessment substantiates these claims. Of 34 communities studied by Jones Lang LaSalle in its “High-Technology Office Outlook,” only four communities witnessed venture capital investment lower than Indianapolis (\$6.5 million) in the second quarter of 2014. Data from the National Venture Capital Association further alludes to the dearth of investment in the state, signaling a shortage of venture capital investment. Although total investment in Indiana-based companies has risen over time in recent decades (from an average of \$12 million annually between 1985 and 1990 to \$64 million from 1995-2000 to \$84 million from 2005 to 2010), the state’s relative position has changed little. The state of Indiana ranked 23rd in total venture capital investments in 1990, 28th in 2000, and 25th in 2010. On a per capita basis, the state comes out even lower (35th in 2010).

Perhaps of greater concern than the overall low levels of venture capital investment is the comparatively small share that is sourced from local venture capital investors. Just 13.7 percent of venture investments in the state of Indiana in 2013 originated from investors located within the state. That is not to say that the state has not attempted to build support; life sciences and technology entrepreneurs are afforded some important funding opportunities, such as the Indiana Future Fund, the INext Fund, the Hoosier Healthcare Innovation Challenge, and the BioCrossroads New Venture Competition. But many regions have struggled with the fact that providers of private equity and venture capital will often require a firm receiving investment to relocate to their home territory so that they can be proximate to other resources including the hands-on management expertise and mentorship of serial entrepreneurs and venture capitalists. Simply put, many entrepreneurs will choose to relocate their business to “follow the money” to locations in California, New York, and Massachusetts, among others. This is true in the Indy region and many other parts of the country. Furthermore, many competing areas have a larger network of serial entrepreneurs and “help coordinate dealmakers” in the life sciences and technology arenas.

The Indy Chamber could support the establishment of a new Capital Alliance comprised of key stakeholders from the private equity, technology, and startup communities to develop a collaborative strategy to expand the supply of angel, venture, and other forms of capital in the Indy region. The Alliance would ideally work with Entrepreneur Services in the Indy Chamber to help complete development the entrepreneurial ecosystem network map (see recommendation #1 in this pillar), inclusive of a comprehensive investors of available funds and investors in the region and state. An effort should be made to identify those individuals that are “dealmakers” in the region and ensure that they are invited to serve on the Alliance, potentially engaging Dr. Ted Zoller at the Center for Entrepreneurial Studies at the University of North Carolina to apply his “dealmaker algorithm” to the Indy region’s social and business networks. In addition to driving efforts to build a more robust capital environment, the Alliance can also help advance other important, related initiatives. One possibility is the evaluation of the viability and interest among dealmakers in developing a technology accelerator; such a program was occasionally mentioned by stakeholders as a missing piece to the region’s entrepreneurial ecosystem, despite the presence of multiple niche sector-focused accelerators in the region.

While the Indy Chamber can help coordinate activities and provide administrative support to the Capital Alliance, the group’s success will likely be derived from the passion and entrepreneurial abilities of its members. Accordingly, the Alliance must be led “by entrepreneurs, for entrepreneurs.”

7. Implement the Metro Indianapolis Export Plan to support and grow existing exporters and encourage small- and medium-enterprise (SMEs) to enter the export market.

In 2013, the Indianapolis metro was selected as one of eight metro areas to participate in the Global Cities Initiative, a joint project of The Brookings Institution and JPMorgan Chase. The initiative is being led by the Indy Chamber in collaboration with Indiana University-Purdue University Indianapolis (IUPUI) and Butler University and supported by leaders across the metro. The four-year project will develop and implement regional strategies to boost global trade and investment, forge partnerships between U.S. and international metro areas, and advocate for local, state, and national policy changes that support export activity as defined in the Metro Indianapolis Export Plan. Quoting the Plan, “In 2012, exports made up 17 percent of the Indianapolis gross metropolitan product, higher than its neighboring metro areas. In 2013, that figure dropped to 13.4 percent. The metro’s exports are strong but concentrated in relatively few firms, and changes in exports by one company can dramatically impact the totals. In an effort to diversify the regional economy, a new focus on encouraging and educating small- and medium enterprises to enter the international market through exporting is a priority. Deepening the Indy metro’s experienced exporters beyond large firms to include small- and medium-enterprises will diversify the metro’s export landscape and capitalize on SMEs’ entrepreneurially-minded business opportunities... (and) according to in-person interviews conducted by the research team, two of the top three

needs identified by non-exporting companies are export training (20 percent) and mentor/networking opportunities (16 percent)."

The Export Plan outlines a number of initiatives, many of which are supported by or integrated into the various recommendations contained elsewhere within this CEDS. The Plan identifies four key objectives which align with the broad pillars of his strategy (Educated and Talented Workers, Innovative and Enterprising Businesses, Attractive and Connected Places, and a Vibrant and Vibrant Image):

- ✓ Increase the number of exporting companies by 20% by 2020
- ✓ Increase efficiencies in the metro's supply chain, focusing on logistics
- ✓ Reduce transportation costs for metro Indy firms
- ✓ Increase international awareness and build a global reputation

Tactics identified to support these objectives include but are not limited to the following:

- ✓ Facilitate collaboration between established exporters and economic development officials when planning trade missions and meetings;
- ✓ Develop mentoring and trade mission programs to leverage large exporter contacts and market knowledge to assist small exporters with introductions and new-market navigation;
- ✓ Encourage companies in the supply chains associated with industry leaders to cluster in the Indianapolis metro to take advantage of logistical assets;
- ✓ Develop a toolkit to help SMEs assess their export readiness, develop export strategies, and pull customized market data through an online dashboard to present international market trends;
- ✓ Create a single source to make it easier for companies to interact with export information and assistance;
- ✓ Create a new-to-market export development program for SMEs (that includes a mentorship component);
- ✓ Create a matchmaking portal for shared logistics opportunities to lower export costs;
- ✓ Partner with U.S. Department of Commerce and the Central Indiana Small Business Development Center's export resources to assist companies and identify markets to conduct trade missions, and;
- ✓ Work with major Midwest manufacturers to identify their export transportation chain and offer custom Indy-based solutions to serve their needs better.

8. Coordinate a comprehensive, collaborative, and professionally-staffed regional business retention and expansion (BRE) outreach program.

Numerous studies have provided evidence that expansions of existing businesses have accounted for as much as 80 percent of a state or region's job creation. While much attention is given to ribbon cuttings associated with corporate relocations, the reality is that existing businesses already located within a region are the principal job creators, and accordingly, they deserve focused attention to ensure that the region is proactively mitigating any barriers to expansion and addressing concerns that could lead to layoffs or business closures.

With local economic development organizations (LEDOs) operating in every county, the Indianapolis region is, by and large, home to strong local and regional economic development capacity, with many LEDOs implemented proactive existing business outreach programs. However, the scale and scope of these programs varies greatly across county lines, leaving certain areas of the region with little to no formal approach to existing business outreach. The primary intentions of such outreach efforts include but are not limited to: understanding the challenges and opportunities facing existing businesses; alleviating burdens and barriers to competitiveness; identifying businesses poised for future expansion; identifying relocation prospects based on relationships with

existing businesses, and; aiding existing businesses with any necessary workforce development, economic incentives, regulatory affairs, and other needs.

The Indy Chamber should work with partners throughout the region, including LEDOs, IEDC officials, local governments, utilities, and other relevant organizations working to support existing businesses to formalize and coordinate a collaborative and cooperative approach to existing business retention and expansion (BRE) outreach that ensures that existing businesses in all portions of the region are served as equitably as possible. The existing "Code of Ethics" that loosely governs the relationships and operations between LEDOs and the Indy Chamber as it related to economic development activities could be transformed into a Memorandum of Understanding (MOU) that more carefully and clearly delineates the attributes of the coordinated, regional BRE program and established "rules of engagement." This could include but is not limited to the following principles and attributes:

- ✓ **Outreach methods:** The program should include segmented and targeted outreach using a variety of methods, including in-person site visits, phone calls, and online surveys. Goals should be established regionally and within each county regarding the number of businesses served by each outreach method in a given year. Some LEDOs are currently engaged in direct outreach via site visits and surveys while others focus their existing business programming on workforce-related issues by convening various workforce and education committees and councils of HR professionals. While there is value in these efforts, there are most appropriately coordinated and implemented on a regional scale (see recommendation #1 in the Educated and Talented pillar) given that employers leverage regional labor sheds and draw talent from institutions outside the borders of the county within which they reside. Accordingly, it may be appropriate for some LEDOs to refocus their existing business programming to be more oriented towards direct company outreach as opposed to council and committee coordination.
- ✓ **Information collected:** LEDOs should work with the Indy Chamber to develop common questionnaires that can be used to solicit company and sector-specific information in a standard format
- ✓ **Staffing the outreach:** Given that staff capacity already exists in LEDOs around the region and existing business service is a core component of many LEDO missions, it is appropriate for these organizations to provide the professional staff that is necessary to conduct outreach in their communities. The Indy Chamber's economic development staff can provide assistance to LEDOs and communities that lack sufficient capacity and resources to effectively implement certain forms of outreach.
- ✓ **Supporting the outreach with a Quick Response Team:** While professional economic development staff will manage the day-to-day interactions with companies in their territory, a Quick Response Team (QRT) of key staff members from relevant organizations should be developed to help ensure that any issues identified through direct company outreach are resolved quickly and effectively, demonstrating the clearly value of the program to the existing business community. The QRT would ideally be comprised of representatives from LEDOs, local government departments such as permitting and land use, utilities, state entities and departments, CICIP and associated sector-focused initiatives, and others.
- ✓ **Software and relationship management:** Effective BRE programs leverage specialized customer relationship management software that is designed specifically for economic development and BRE applications. The Indy Chamber should evaluate the viability of providing licenses to a shared software platform to all LEDOs in the region to enable their outreach efforts and facilitate sharing of information.

- ✓ **Training:** The Indy Chamber should also provide technical and practical training related to outreach methods and relationship management via the aforementioned software.
- ✓ **Intra-regional communication:** Effective BRE requires a collaborative approach whereby non-confidential company information is shared between organizations to ensure that the region's companies receive the care and attention that they deserve when it is requested and/or needed. This can be facilitated by the QRT outlined above, as well as regular meetings between the Indy Chamber and LEDO staff. Certain company information may be kept confidential by request or necessity, but regular dialogue and information-sharing is essential to ensure that company-specific information is aggregated into meaningful regional data that can help qualify and quantify certain trends in the regional economy, and inform ongoing updates to this CEDS, other regional strategies and plans, and annual legislative agenda. Information from existing business outreach can help inform entrepreneurial assistance such as the identification of gazelles (see recommendation #1 in this pillar), the identification of companies with strong export potential (see recommendation #7 in this pillar), and the identification of potential local alternatives to non-local suppliers of goods and services (see recommendation #2 in this pillar).
- ✓ **Reporting of results:** When information is aggregated to understand the state of the regional economy it must be conveyed to relevant partners and the public at large so that they can understand the scale and scope of economic development efforts in the region and their associated economic impacts. A key principle of effective, coordinated, and collaborative regional BRE is that no single entity seeks to "take credit" for the assistance provided or the impacts associated with a retention or expansion project.

8. Support policies and incentives that can improve the region's capital environment and nurture innovative activity.

As illustrated in the Competitive Assessment, the region and state are currently at a significant disadvantage relative to peer regions as it related to venture capital capacity. Many other studies, including a Battelle report for BioCrossroads entitled "Re-Examining the Need for Innovation Capital to Advance Life Science Development in Indiana" has highlighted the challenges in the state and suggested a variety of potential actions to support the enhancement of the capital environment. Across multiple bodies of research there appears to be some consensus regarding potential policy priorities and new incentives that should be evaluated at the state level to improve the capital environment and nurture innovative activity across the state and region. This includes but is not limited to:

- ✓ increasing the cap on venture capital tax credits;
- ✓ permitting the transferability of venture capital tax credits;
- ✓ improving (and making permanent) the state's research and development tax credit;
- ✓ enhancing flexibility for public investment in venture capital funds that invest in Indiana companies; and;
- ✓ enhancing funding to support or the creation of more university-sponsored grant programs and seed funding for applied research and commercialization.

The region's collaborative BRE program (see recommendation #1 in this pillar) and recommended Capital Alliance (see recommendation #5 in this pillar) should be viewed as resources alongside many other implementation partners such CICP and its associated sector-focused initiatives (i.e. TechPoint, BioCrossroads, etc.) when informing the development and refinement of annual legislative agenda.

3. Attractive & Connected Places

EXCERPTS FROM THE COMPETITIVE ASSESSMENT:

"No matter their geographic location, it is quite clear that Indianapolis residents take great pride in their community and readily tout the region's ability to provide them with a great quality of life."

"The region's central location was frequently identified by focus group participants as a key competitive advantage (and)... the region's roadway connectivity and capacity (was) the second most favorably rated element of the region's business climate...(and) the presence of FedEx Express' distribution facility affords businesses within the Indianapolis region with air cargo capacity that is bettered by (few). The Indianapolis region holds a significant competitive advantage for moving goods and raw materials around the nation and across the globe. However, it is the region's capacity to move people within the region via alternative modes of transportation that is comparatively underdeveloped."

"Survey respondents overwhelmingly identified public transportation as the biggest economic development challenge limiting the region's ability to grow quality jobs and elevate standards of living. Almost every focus group identified the lack of mass transportation options and the 'infrequent' and 'unreliable' (bus) service as a major competitive disadvantage. Stakeholders, however, did point out positives. Pacers Bike Share, a downtown bike share program that features 250 bikes and 25 stations, and BlueIndy, an all-electric car share program, were seen as positive improvements to the region's accessibility and mobility."

"Make no mistake – to obtain tomorrow's best and brightest, the Indianapolis region is in direct competition with metropolitan areas that are larger and able to offer significant entertainment and cultural amenities, as well as mass transit, to attract startup and tech talent."

REGIONAL OBJECTIVES:

- ✓ Improve the efficiency and effectiveness of existing public transportation networks and plan for future expansion.
- ✓ Invest in alternate transportation modes and personal mobility options for commuters, students, and visitors.
- ✓ Promote and leverage our advantages in air cargo capacity and road connectivity.
- ✓ Support necessary investments in roadway and intermodal infrastructure.
- ✓ Support the development of corridors of commerce, community, and culture.
- ✓ Redevelop brownfields and industrial sites, and prepare new shovel-ready sites.

TACTICAL RECOMMENDATIONS: ATTRACTIVE & CONNECTED PLACES

1. Encourage a proactive approach to future transportation planning by supporting investments that expand and align capacity and utilization of the region's public transportation and personal mobility infrastructure to create an integrated system of transportation modes that provide diverse mobility options for commuters.
2. Leverage recommendations within the Indy Connect Plan, the MPO's Long-Range Transportation Plan, the forthcoming IndyGo Forward Plan, and local comprehensive plans as regional roadmaps for accommodating the personal transportation needs of the region's residents, and as guidelines for priority projects when seeking federal funding or developing legislative agenda.
3. Help identify and advance new investments that support placemaking, expand public spaces, and complement the region's existing arts, culture, entertainment, and sports amenities. This should include a regional trail system, development plans for transit corridors, development around anchor institutions and the implementation of the Indy Fast Track Action Plan and its efforts to align transportation planning with redevelopment and revitalization objectives via various components of Plan 2020.
4. Continue to advocate for changes to state restrictions on home rule that hinder local governments' flexibility and control over their own structural and fiscal matters, and inhibit their ability to address the needs of their individual communities.
5. Leverage recommendations within the CONEXUS Strategic Plan for Indiana's Logistics Future and the Indiana Department of Transportation's Freight Mobility Plan as regional roadmaps for accommodating the freight transportation needs of the region's businesses, and as guidelines for priority projects when seeking federal funding or developing legislative agenda. Develop a plan to increase awareness among freight forwarders regarding opportunities in the Indy region in partnership with CONEXUS Indiana.
6. Promote employer participation in and support for the programs and incentives offered by Commuter Connect that encourage alternative commuting tactics, and encourage employers to adopt workplace policies that help reduce the number of commuters at peak hours.

TACTICAL RECOMMENDATIONS: ATTRACTIVE & CONNECTED PLACES

1. Encourage a proactive approach to future transportation planning by supporting investments that expand and align capacity and utilization of the region's public transportation and personal mobility infrastructure to create an integrated system of transportation modes that provide diverse mobility options for commuters.

As previously mentioned, the public input process revealed that residents dislike the relative lack of mass transit capacity and connectivity in the region, but appreciate recent investments in alternative forms of infrastructure that provide additional options for personal mobility. Input participants were principally referring to BlueIndy and Pacers Bike Share, but also recent investment in bicycle and pedestrian infrastructure. While some expressed a desire to see major investment in mass transit (particularly rail), others emphasized that they wanted to see communities across the region investing in walkability and bikability. And others, including the Steering Committee, have emphasized a need for a more coordinated approach to facilitating personal mobility; an approach that seeks to tie together the region's various options for commuters and seek to fill gaps whenever possible and practical. There are a number of planned and potential future investments that regional leadership can support or evaluate to advance the development of a more complete network of commuting options including but not limited to:

- ✓ Advocacy efforts associated with securing necessary funding to support the development of bus rapid transit (BRT) service along planned service lines in alignment with the Indy Connect Plan, potentially including but not limited to recently-enabled public referenda to fund mass transit;
- ✓ Continued investment in pedestrian and bicycle infrastructure, including bike lanes, sidewalks, and trails or paths that are viable commuting options and not simply a recreational asset;
- ✓ Rollout and feature expansion of the BlueIndy fleet network to major centers of commerce and activity;
- ✓ Advocate for the expansion of the Pacers Bike Share network to areas such as 16 Tech, IU Health Methodist Hospital, Eskenazi Hospital, and the Indianapolis Zoo among other location, and infill within the existing network to increase the number of access points;
- ✓ Support for continued growth in private services such as Uber that enable ride-sharing, and;
- ✓ Support for continued efforts to regularly evaluate and optimize the IndyGo route network following the release of the new IndyGo Forward Plan and associated changes to the system's route coverage and schedule.

The region should also invest in research and planning that seeks to better connect the various elements of the region's infrastructure for commuters; this is consistent with one of the primary objectives of Plan 2020. However, consideration should be given to a variety of opportunities to exhibit national leadership in the evaluation and advancement of alternate transportation modes, networks, and incentives in region's that currently lack significant mass transit infrastructure. Such opportunities include but are not limited to:

- ✓ Challenging entities such as IndyGo, CIRT, BlueIndy, Pacers Bike Share, Uber, and others to join an "open data" initiative that would allow members of the Indy region's IT community to analyze the infrastructure, ridership, and route networks of each mode in order to devise a more aligned system, potentially including a series of "hubs" whereby residents could access a variety of different modes from a single location.
- ✓ Developing a Center for Autonomous Vehicle Engineering and Systems (CAVES) that would pair researchers from the academic and private sector to evaluate and develop the latest technologies in autonomous vehicles with a specific focus on their potential applications in mass transit.

- ✓ Working with Energy Systems Network (ESN) to regularly evaluate “what’s next” in public transportation and mass transit investment around the world, and seek to ensure that the Indy region is on the leading edge in terms of evaluation and implementation of relevant and appropriate investments.
- ✓ Providing high school and/or college students with fully subsidized bus passes to increase ridership and allow students to access the variety of learning opportunities around the region that may not be readily accessible for all. Metro Nashville Public Schools recently launched a similar initiative.

2. Leverage recommendations within the Indy Connect Plan, the MPO’s Long-Range Transportation Plan, the forthcoming IndyGo Forward Plan, and local comprehensive plans (including Plan 2020) as regional roadmaps for accommodating the personal transportation needs of the region’s residents, and as guidelines for priority projects when seeking federal funding or developing legislative agenda.

Although the Indianapolis region holds a significant competitive advantage for moving goods around the nation and across the globe, the region’s capacity and options for moving people within the region via alternative modes of transportation that is comparatively underdeveloped. Focus group participants admitted that the upkeep of the local road and highway network is an issue, citing an abundance of potholes as a primary concern. With survey respondents evaluating roadway capacity and connectivity as a key competitive advantage, it is clear that maintenance of this capacity is where residents and businesses expect to see some focused investment.

In addition, almost every focus group identified the lack of mass transportation options and the “infrequent” and “unreliable” IndyGo bus service as a major competitive disadvantage. Different constituencies voiced their concern in different ways. For instance, higher education leaders expressed concern about their ability to attract students who desire an interconnected urban experience where a car is not a requirement to move about the region. Entrepreneurs, on the other hand, voiced difficulty competing against highly urbanized areas with extensive public transportation infrastructure for start-up workers, while young professionals asserted that the dearth of public transportation directly diminished their quality of life. Others lamented the recently-discontinued commuter bus service provided by the Central Indiana Regional Transportation Authority (CIRTA) between Carmel and Indianapolis; the line was unable to generate enough local revenue to overcome the loss of significant federal funding in the last year. And last but certainly not least, many survey respondents indicated that existing bus route network requires that they commit, in some cases, upwards of two hours to reach their jobs each day.

However, there are some significant recent developments that are adding to the region’s portfolio of personal mobility options, including BlueIndy electric car share and the Pacers Bike Share programs, and plans to develop bus rapid transit (BRT) lines that can provide much needed connectivity for commuters in certain areas have been met with enthusiasm and optimism. The forthcoming IndyGo Forward Plan is anticipated to address some of riders concerns about the frequency and reliability of service by optimizing bus schedules and routes.

While the various projects outlined in these plans - the Indy Connect Plan, the MPO’s Long-Range Transportation Plan, the forthcoming IndyGo Forward Plan, and local comprehensive plans, among others – are far too numerous to even summarize here, suffice it to say that the Indy Chamber and other partners have the necessary resources in these plans to identify priority transportation and mass transit projects when pursuing federal funding opportunities, developing project lists for statewide initiatives such as the Regional Cities Initiative, or preparing annual legislative agenda. It is important that the Indy Chamber and other partners who lobby on behalf of the region’s communities and their commuters be mindful of the needs, wants, and plans of various constituencies, particularly local governments, and relevant regional partners such as the MPO, CIRTA, and CICEO.

3. Help identify and advance new investments that support placemaking, expand public spaces, and complement the region's existing arts, culture, entertainment, and sports amenities. This should include a regional trail system, development plans for transit corridors and development around anchor institutions.

The public input sessions revealed that, to many residents, the Indianapolis region is a hidden gem – offering an affordable quality of life with many of the amenities that are generally reserved for metropolitan areas four to five times its size. The Indianapolis Symphony Orchestra, the Carmel Symphony Orchestra, the Children's Museum of Indianapolis, the Indianapolis Motor Speedway, Lucas Oil Stadium, a new expansion at the Indianapolis Zoo, the NCAA Hall of Champions, and the Indianapolis Museum of Art are among a small selection of the many arts, entertainment, and cultural assets housed in the Indianapolis region. This list is growing every year, and this growth in amenities has been praised by those who call the region "home." However, residents, particularly young professionals and college students, made it clear during public input that the region's "quality of place" is of vital importance to them and the likelihood that they will continue to reside in the region.

Regional leadership should be constantly evaluating ways to improve "quality of place" through small and large investments. Specifically, the idea of increased development around the region's anchor institutions - think hospitals universities - as a way to encourage more livable neighborhoods and investment in sustainable placemaking. These, and other investments, should coincide with a network of trails and additional mobility options that give residents and workers access to jobs, schools, hospitals, etc.

Comparatively smaller investments like pocket parks, dog parks, and events can be more valuable and attractive to some residents than large scale investments like new performing arts facilities, sports facilities, or cultural attractions. Furthermore, placemaking is not always about bricks and mortar. Community beautification efforts like litter removal, public art, and streetscaping can have profound differences on people's real and perceived quality of life and quality of place. But larger investments can be "game changers" and the region should continue to think "big and bold" when appropriate. Potential new investments that align with the wants of residents as expressed through public input, the promotion of target business sectors, and other objectives of this CEDS could include:

- ✓ New waterfront amenities along the Canal Walk, the White River, and other waterfronts around the region to encourage placemaking that is attractive to populations seeking diverse entertainment options and walkable environment. It will be critical that any such efforts are aligned with complementary Plan 2020 components (i.e. the Marion County Parks, Recreation and Open Space Plan and the Indianapolis Regional Center Plan) as well as other county and municipal recreation and open space plans.
- ✓ The development of a major new cultural and recreational attraction tied to the region's sports and technology community, considering an idea such as an "NCAA Sports Experience" – a facility that could complement the NCAA Hall of Champions and provide youth with the opportunity to try out a variety of different sports and athletic experiences, interact with new technologies related to sports, and evaluate their performance using modern analytics.
- ✓ The development of a new stadium for the Indy Eleven and the potential pursuit of a team transition to a Major League Soccer (MLS) franchise. While there is debate surrounding the public financing of stadiums around the country, Major League Soccer represents a tremendous opportunity for the region, one that is clearly is best and potentially only opportunity to expand the scope of professional sports in the region. The region is currently fortunate to be home to two (NFL and NBA) of the "big four" professional sports (NFL, NBA, MLB, and NHL). The rapid growth in popularity of professional soccer in the United States is no more evident than in Indianapolis where the Indy Eleven have gained a steady following in their short

existence. Recently announced plans for a new stadium with met with great enthusiasm by fans as a new stadium will greatly increase the team's likelihood of earning an MLS franchise. As of 2013, the average attendance at MLS games was more than 19,000, exceeding the average attendance for the NBA and NHL. The popularity of soccer in the United States shows no signs of slowing down among nearly every demographic group. A third major professional sports franchise would be a welcome addition to the region's sports portfolio.

Additionally, there should be significant support of the implementation of the Indy FastTrack Action Plan and its efforts to align transportation planning with redevelopment and revitalization objectives via various components of Plan 2020. Stakeholders have repeatedly emphasized they want to see the region invest in redevelopment and revitalization of brownfields and other underutilized or blighted parcels to encourage infill development throughout the region. The Indy Fast Track Action Plan is pursuing this very objective as it seeks to facilitate the redevelopment of "four underutilized regional land assets that were vacated as a result of the severe destabilization of the automotive industry." The initiative hopes to support reinvestment in Marion County and drive job creation in the core, particularly in manufacturing sectors, and then apply these lessons to other areas of the county in need.

Potential clearly exists to apply these "lessons learned" in other communities throughout the region. A natural first step for these communities would be to consider redevelopment and revitalization of brownfields in a similar manner to Indianapolis and Marion County, whereby redevelopment objectives are integrated into comprehensive community planning (such as Plan 2020) and aligned with other community objectives from transportation to economic development to placemaking.

4. Continue to advocate for changes to state restrictions on home rule that hinder local governments' flexibility and control over their own structural and fiscal matters, and inhibit their ability to address the needs of their individual communities.

As highlighted in the Competitive Assessment, the region is at a considerable disadvantage relative to competitors in other states where local communities have home rule, the ability to raise local option sales and income taxes, and in turn, greater flexibility to finance local needs from infrastructure systems to public schools to public transportation. This has, in part, contributed to a structural deficit in the City of Indianapolis and other jurisdictions. This lack of local control in revenue generation is clearly an inhibitor to the region's ability to provide the highest-quality infrastructure and services to its residents. A variety of measures have been discussed for years to potentially address the aforementioned structural deficit and redistribute tax revenues. While these methods – most notably a non-resident income tax – have their supporters, they also have their detractors. What seems less controversial is the notion that home rule would provide communities with greater flexibility in revenue generation to support investments that are desired and needed by their taxpayers. Although enabling legislation was recently passed to permit certain counties in the region to utilize existing local option income tax capacity for mass transit if publicly supported via a nonbinding local referendum, there still seems to be consensus – not unanimity – that home rule should remain a legislative priority for the region.

5. Leverage recommendations within the CONEXUS Strategic Plan for Indiana's Logistics Future and the Indiana Department of Transportation's Freight Mobility Plan as regional roadmaps for accommodating the freight transportation needs of the region's businesses, and as guidelines for priority projects when seeking federal funding or developing legislative agenda. Develop a plan to increase awareness among freight forwarders regarding opportunities in the Indy region in partnership with CONEXUS Indiana.

Without question the Indianapolis region holds a significant competitive advantage for moving goods and raw materials around the nation and across the globe. The region's central location was frequently identified by focus group participants as a key competitive advantage. The Indianapolis region is served by an extensive road network. Regional logistics companies can access four major interstates (I-65, I-69, I-70, and I-74); Indiana is home to the most expansive interstate system by a variety of measures. Nearly three quarters of business leaders responding to the online survey cited the region's roadway connectivity and capacity as an advantage or major advantage, the second most favorably rated element of the region's business climate. The presence of FedEx Express' distribution facility clearly affords businesses within the Indianapolis region with immense air cargo capacity that is matched or bettered by only a few regions in the country.

That being said, the region and state recognize that these are advantage that they cannot afford to lose. Maintenance and expansion of existing roadways were frequently mentioned by input participants who acknowledged that upgrading existing infrastructure was as important if not more important in some cases than developing new connectivity. In addition, various studies have highlighted that expanded intermodal capacity is critical to the region's sustained competitiveness for logistics and manufacturing operations. It has been noted that the region is partially reliant on intermodal facilities around Chicago, and absent significant additional capacity at existing yards, or the development of new facilities, the region and state may remain largely a "pass through" for intermodal activity. As intermodal volume continues to grow, railroads seek to improve their position to handle such cargo through improvements that reduce idle time and increase speed while in transport.

All of this is to say that the region must remain vigilant in its attempts to fill gaps in its transportation infrastructure supporting commerce; as the saying goes "the primary enemy of progress is the status quo." Fortunately, a variety of studies have identified the highest priority transportation infrastructure projects for the logistics and manufacturing industries, including but certainly not limited to the CONEXUS Strategic Plan for Indiana's Logistics Future and the Indiana Department of Transportation's Freight Mobility Plan. These plans and others emphasize key road projects such as the completion of I-69 between Indianapolis and Evansville, and US 31 conversion from Indianapolis to South Bend, as well as calling for the development of new intermodal facilities and the expansion of capacity at existing facilities.

These projects and others must remain at the forefront of the region's legislative priorities related to freight transportation. Coordination with partners such as CICIP, CONEXUS Indiana, and the Central Indiana Council of Elected Officials (CICEO) should be achieved by constant dialogue between parties to ensure that legislative agenda advanced by the Indy Chamber and other organizations is mindful of ever-changing local, regional, and state priorities, as well as sector-specific needs related to freight transportation.

Additionally, stakeholders from the logistics community indicated it was important for the region to develop a plan, inclusive of an intentional and proactive outreach effort, to increase awareness among freight forwarders – particularly those using Chicago facilities – about the available opportunities in the Indianapolis region. Such a plan would be most logically advanced by or in partnership with CONEXUS Indiana.

6. Promote employer participation in and support for the programs and incentives offered by Commuter Connect that encourage alternative commuting tactics, and encourage employers to adopt workplace policies that help reduce the number of commuters at peak hours.

The development and enhancement of transportation and transit infrastructure is not the only way to improve commutes and provides commuters with options. Programs that encourage different commuter behaviors and workplace policies that promote alternate work schedules can help reduce the number of commuters travelling on the region's roads at peak hours. Such programs could focus on live-work relationships, supporting one of the primary objectives of the Indianapolis Anchor Institutions Study to promote greater proximity of Marion County employees to Marion County anchor institutions.

Commuter Connect is a program operated by CIRT that promotes alternatives to driving alone, particularly carpooling. The group offers a carpool matching service and emergency ride home service while also working with employers to evaluate the "commuter-friendliness" of their workplace. They promote employer adoption of workplace incentives that provide stipends for bus passes and other forms of transportation which are tax deductible. Feedback from the Steering Committee has indicated that the region's business community should be more proactive in working with Commuter Connect to promote a variety of different workplace policies. Potential exists to better promote workplace incentives to commuters that encourage carpooling (reserved parking spaces, parking cash out programs, etc.), the use of public transportation (via aforementioned subsidized fares), and flexible work schedules ("flex" time, compressed work schedules, telework/telecommuting, etc.).

4. Vibrant & Inviting Image

EXCERPTS FROM THE COMPETITIVE ASSESSMENT:

"...in a world where the competition for talent is as fierce today as the competition for jobs, regions are increasingly mindful of the ways in which they are perceived – positively and negatively – by the outside world. Very simply, some residents and community leaders believe that a lack of common identity is a key impediment to the region's future economic growth and prosperity."

"Throughout public input, residents lamented the lack of strong identity for the Indy region. Entrepreneurs expressed a desire for a strong message that could resonate with those engaged in various aspects of startup culture, while young professionals wished for a strong brand so that their friends and family will stop asking them with a puzzled look: 'why do you live in Indianapolis?'"

"In the absence of widely recognized identity outside of motorsports, the nation has forged its own image of Indianapolis, one that is often heavily related to the state of Indiana's Hoosier identity. This image is both embraced and at the same time admonished by local residents."

"When asked what the region's brand should be, focus group participants offered mixed themes: 'Sports Capital of the World,' affordability, and an individual's ability to impact the community were frequently mentioned as potential identities. Of these, the region's existing brand identity related to professional, collegiate, and amateur sports is its strongest and most entrenched."

"Many stakeholders demonstrated strong pride in their community and the life it affords them. The trouble is, however, relaying this pride to outside audiences. A few different stakeholders representing large employers in the region mentioned the old adage that 'if you can get them here, they'll take the position.' And without question, many visitors are leaving the region with positive impressions that are changing potentially ambivalent or even negative perceptions that were previously held."

REGIONAL OBJECTIVES:

- ✓ Build an internationally recognized brand.
- ✓ Build local pride and emphasize inclusivity so that our residents can be our best ambassadors.
- ✓ Garner national positive media attention.
- ✓ Effectively market the regional to businesses, investors, residents, and visitors.

OVERVIEW: TACTICAL RECOMMENDATIONS

1. Develop a unifying and recognizable brand identity for the region.
2. Support programs that provide opportunities for community involvement, including Lilly Day of Service, Indy Do Day, Keep Indianapolis Beautiful, Great Indy Clean Up, United Way volunteer programs, Indy Hub's IndyVolved program, Leadership Indianapolis' Stanley K Lacey program, and many others.
3. Build a sustainable, coordinated public relations program targeting national publications, blogs, and social media, etc. to promote positive coverage of the Indianapolis region.
4. Create specific marketing programs geared toward attracting various audiences to the Indianapolis region, including:
 - ✓ Potential residents
 - ✓ Businesses seeking relocation and expansion options
 - ✓ Visitors

TACTICAL RECOMMENDATIONS: VIBRANT & INVITING IMAGE

1. Develop a unifying and recognizable brand identity for the region.

Many metropolitan areas throughout the nation have embraced a single, common identity that projects their community into the national and global consciousness. Whether it is Austin's "Keep Austin Weird" slogan that reflects its concentration of young, creative talent, or Nashville's "Music City" moniker reflecting its deep and ever-diversifying music heritage, regions large and small often leverage a distinct identity in order to attract visitors, businesses, and prospective residents. Throughout public input, residents lamented the lack of strong identity for the region. Many mentioned the Indianapolis 500 as the most recognizable attribute of the community, but acknowledged that this brand association did not reflect and communicate the Indianapolis region's quality of life and why it is such a great place to live. Entrepreneurs expressed a desire for a strong message that could resonate with those engaged in various aspects of startup culture, while young professionals wished for a strong brand so that their friends and family will stop asking them with a puzzled look: "why do you live in Indianapolis?"

Although community brands and perceptions are relatively trivial in the realm of community improvement and economic development, they often reflect deep associations with a place and can shape future perceptions. And in a world where the competition for talent is as fierce today as the competition for jobs, regions are increasingly mindful of the ways in which they are perceived – positively and negatively – by the outside world. Very simply, some residents and community leaders believe that a lack of common identity is a key impediment to the region's future economic growth and prosperity. The comments referenced above by young professionals and entrepreneurs illustrate the interconnectivity and interdependence of the pillars and objectives of this CEDS; it is impossible to decouple the issues of image and identity from the issues of talent attraction and retention, and economic development.

Identifying and projecting a distinct, positive image is a crucial part of the region's continued evolution as a globally competitive metropolitan area. One thing is for certain: a contrived brand is never a successful brand. Developing common themes will take time. Many stakeholders' pointed to the evolution of Nashville's brand when discussing how a region can overcome some negative connotations while still embracing its historical identity. Nashville's wholehearted embrace of country music helped forge a distinct identity, one that just recently began to trouble residents and community leaders who wanted to ensure that Nashville was known for more than just country music and the Grand Ole Opry. There was a fear that certain associations with country music – rural, conservative, and uneducated – whether perceived or actual, were inhibitors to the Nashville region's economic development and talent attraction efforts. These sentiments sound remarkably similar to those expressed regarding associations with the "Hoosier" brand. The rapidly-growing diversity of the Nashville region's music production was aggressively promoted, and residents and business leaders alike have embraced the "Music City" moniker that has come to reflect a region and a brand with more positive associations such as creativity, culture, and youthfulness. The Indianapolis region can emulate Nashville in promoting an evolution of its identities as a motorsports capital and/or an amateur sports capital into simply a "Sports City" much in the same way that Nashville successfully advanced its identity as the "Music City" and not simply a capital for country music. *However, the region will need to embark on a process of identifying, evaluating, and testing various brand associations and identities before embarking on any new large-scale marketing campaigns associated with a new brand identity related to sports or any other image that the region and its residents believe that they authentically represent.*

All of this is to say that the Indy region is in clear need for a comprehensive and collaborative regional marketing program that seeks to fulfill multiple objectives. There are many organizations actively engaged in marketing and promoting the region today to various audiences, from economic development organizations that market to companies and site selectors to convention and visitors bureaus that market to visitors. But what the region lacks is a

coordinated effort that seeks to develop and promote a shared brand identity and common messaging to various audiences when relevant, and differentiated tactics to other audiences when appropriate.

2. Support programs that provide opportunities for community involvement, including Lilly Day of Service, Indy Do Day, Keep Indianapolis Beautiful, Great Indy Clean Up, United Way volunteer programs, Indy Hub's IndyVolved program, Leadership Indianapolis' Stanley K Lacey program, and many others.

3. Build a sustainable, coordinated public relations programs, targeting national publications, blogs, social media, etc. to gain positive coverage of the Indianapolis region.
 - ✓ The formation of an informal *Regional Marketing Alliance* to provide a forum for professionals engaged in community and destination marketing to evaluate and establish the various elements of a regional program, and provide input on the ongoing refinement of the program and its various tactics.
 - ✓ The development of a compelling master narrative for the Indy region that resonates with residents, the business community, and stakeholders from around the entire region. This narrative and any associated brand identities should be tested extensively in both internal and external markets to evaluate its effectiveness in producing desired impressions. *This master narrative should be derived from a collaborative branding initiative led by the aforementioned Regional Marketing Alliance. It should be mindful of pre-existing local and regional branding and marketing efforts that seek to promote distinct identities of individual communities in the Indy region.*

Once these tasks have been completed, the Alliance could then begin working on the development of various tactics associated with the two markets (internal and external), identify the target audiences for specific campaigns and components of the program, and developing specific tactics to support these targeted campaigns. The potential tactics that follow are simply provided to illustrate possible components of a campaign and provide the Alliance with a starting point for its conversation and brainstorming regarding the appropriate tactics. Ultimately, the specific tactics pursued as a component of the regional marketing program should be mindful of the research and input that informed this CEDS but should be developed by the actual professionals in the region that implement these programs and pursue these objectives on a daily basis.

With regards to the two markets, the following can be used as ideas to support initial efforts:

- ✓ **Internal Campaign:** Before launching an external campaign, a multi-faceted internal campaign that seeks to unify the region behind common sources of pride and promote a positive self-image should be developed and launched in collaboration with organizations that are already engaged in similar initiatives. Potential components of the campaign could include the following:
 - A social media campaign that develops and promotes stories about why residents are attached to the region.
 - A series of weekly columns authored by residents, community leaders, and business leaders focusing on various segments of the region and its assets that may not be regularly spotlighted, with each series focusing on different aspects of the region (i.e. arts and culture assets in NUVO, restaurants and entertainment in IndyStar, or small business success stories in the Indianapolis Business Journal).

- A contest that solicits ideas from residents on various community improvement initiatives (i.e. public art projects, community events, new public spaces, etc.), allows residents to vote on their favorite ideas, and then challenges residents to crowdfund these ideas, potentially supported by a matching contribution from a corporate or non-profit sponsor.
- ✓ **External Campaign:** Once an internal campaign has been launched, the region can begin courting “ambassadors” that can help tell the region’s story and promote the narrative that was identified early in the process. Existing residents should be a region’s best advocates and assets in a regional marketing effort, and this is a primary reason why an internal campaign often precedes and external campaign. As previously mentioned, the various components of the external campaign should focus on a variety of different target audiences, supporting a variety of different regional objectives. This could include but is not limited to targeted campaigns such as:
 - The development and hosting of “homegrown” industry events such as conferences, trade shows, and other meetings can be effective way to increase the region’s exposure to specific audiences (executives and corporate decision makers, highly skilled workers, entrepreneurs and innovators, academic researchers, etc.) of interest to the region’s target sectors. The development of such “homegrown” events allows the region to define and influence the agenda for the event, the target audience, and the message related the region’s target sectors. TechPoint’s M-TECH: The Marketing Technology Experience conference is a great example of such an event that attracts target audiences to the Indy region and exposes them to the assets and opportunities that are available in the region with respect to a certain target sector (Information Technology, and more specifically, Marketing Technology). By creating an industry event that appeals to a niche audience and hosting this event on annual basis, the region can develop and reinforce its identity within this niche market (and others) over time. The Indy Chamber should work with relevant partners, including but certainly not limited to sector-focused entities (TechPoint, BioCrossroads, etc.), higher education institutions, and Visit Indy, to evaluate opportunities to develop similar “homegrown” events to M-TECH that align with target sectors and can help achieve regional economic development marketing objectives by bringing thousands of individuals with specialized interest and expertise in activities related to target sectors to the Indy region.

4. Create specific marketing programs geared toward attracting various audiences to the Indianapolis region, including potential residents, businesses seeking relocation and expansion options, and visitors.

- ✓ **Talent Attraction Campaign:** An effective talent attraction campaign is one that:
 - relies on existing and former residents to serve as ambassadors for the region;
 - leverages alumni groups in other regions to facilitate communication with those that have some pre-existing connection to the region;
 - integrates a compelling website that features what the region has to offer to a diverse group of individuals and connects prospective new residents to available job opportunities in the region;
 - utilizes social media to engage individuals around the globe, and;
 - aggressively promotes positive stories about the region, its assets, and its opportunities in major national and international media outlets.

- ✓ **Economic Development and Corporate Recruitment Campaign:** An effective economic development and corporate recruitment campaign is one that:
 - relies on input from the existing business community as well as other proprietary research to identify specific companies that could benefit from locating in the region;
 - focuses on the most effective marketing tactics in economic development, particularly earned media, and avoids the least effective tactics, particularly paid advertisements;
 - encourages face-to-face contact via inbound visits of site selectors and outbound visits to targeted corporate recruitment prospects;
 - targets key contacts in business sectors that the region wishes to develop, and;
 - provides necessary information to target audiences in a web-based format.

- ✓ **Travel and Tourism Campaign:** In alignment with the forthcoming Visit Indy Tourism Master Plan and other regional tourism objectives, continue to pursue bids for conferences, trade shows, sporting events, and other activities that have positive economic and community impact, and help create lasting, positive impressions of the Indy region for visitors.

Throughout focus group sessions, local stakeholders within the Indianapolis region identified sports as a catalyst for development and positive change throughout the region. The region has a rich history of hosting professional and amateur sporting events – 2015 marked the 22nd time that portions of the NCAA men’s basketball tournament were held in the City – along with professional motorsports events, most notably the Indianapolis 500. The Super Bowl and its immense, lasting impact on the community are oft-cited. These events are tremendous marketing opportunities for the region; every visitor is a potential new resident, employee, business owner, investor, or otherwise. The region repeatedly receives high marks from visitors to conventions and major sporting events, noting that the region is one of if not the most hospitable and well-prepared hosts for major events in the country.

Simply put, regional leadership should continue to prioritize the pursuit of bids for major sporting events and other events that attract tourists which are estimated to produce a positive return on investment in terms of economic and community impact. Such events do not simply help create and reinforce positive impressions of the region but so too can they help advance recognition in the region’s target sectors. With respect to sports, regional leadership will continue to need a holistic view of sporting events, acknowledging that youth sports have tremendous impacts on the region – a region that continues to develop its supportive assets in this area (see Grand Park in Westfield) – and other competitions such as competitive gaming and esports are growing immensely. Similarly, conferences, conventions, and other industry events related to the region’s target sectors and niche technologies represent opportunities to increase the region’s exposure to targeted audiences. Accordingly, coordination between Visit Indy, the Indy Chamber, and other economic development partners can help ensure that these audiences are reached and business development opportunities are pursued when relevant and appropriate.

4. IMPLEMENTATION PLAN

Implementation Capacity: Roles and Responsibilities

As regional economic development has evolved with more proactive strategic planning and greater organizational capacity across the United States, a few common attributes of successful implementation efforts have emerged. Chief among them is an acknowledgement that “collaboration” and “regionalism” are more than just words or platitudes. Successful regions and regional economic development organizations identify areas where collaboration can promote efficiency and effectiveness in service delivery, and create mechanisms to ensure that such collaboration is embodied by the individuals and organizations that are tasked with implementation of a regional strategy. They rely on both volunteers and professional staff, and understand that neither can effectively implement a strategy in isolation. And in building effective working partnerships across organizational boundaries and between professional staff and volunteers, clear roles and responsibilities are defined.

This section of the Implementation Plan presents a brief discussion of the roles and responsibilities of the two principal leadership structures that will help advance implementation of the Indianapolis Regional Comprehensive Economic Development Strategy (CEDS):

1. Volunteer Leadership: The CEDS Implementation Committee
2. Organizational Leadership: The Indy Chamber and Implementation Partners

The first section outlines the effective transition of the Steering Committee to an Implementation Committee and reviews its ideal role in supporting the efforts of the Indy Chamber and its various implementation partners. The second section reviews the responsibilities of the Indy Chamber with particular focus on the staff and financial resource requirements that are necessary to effectively implement the CEDS recommendations.

Volunteer Leadership: The Implementation Committee

As the strategic planning process comes to an end, the CEDS Steering Committee will formally transition to an Implementation Committee. This Implementation Committee will serve as the “keeper of the goals,” playing a critical role as a convener and coordinator of implementation efforts across numerous organizations over time. In an anonymous poll conducted during a May 2015 Steering Committee meeting, 97 percent of Steering Committee members in attendance endorsed the transition of the Steering Committee to an Implementation Committee.

IMPLEMENTATION ROLES AND RESPONSIBILITIES: The Implementation Committee should fulfill multiple roles in supporting the implementation of the Indianapolis Regional CEDS. First, the members of the Implementation Committee must be “champions” of the strategic planning process, its recommendations, and the implementation effort. They must work to inform and educate the region and its leadership, and build support for specific initiatives. They must constantly remind themselves and the region that the CEDS recommendations were derived from extensive research and public input, including the opinions of more than 2,100 residents, workers, business owners, and community leaders.

But most importantly, the Implementation Committee should serve as a catalyst. It should be the primary convener of implementation partners and will need to consistently remain focused on actions and results. The members of the Implementation Committee will need to engage a wide variety of organizations, institutions, and individuals that are necessary partners to carry out certain CEDS recommendations. While many regions have a tendency to continually discuss their challenges and opportunities, the Implementation Committee must recognize that, while continued dialogue is always valued, it cannot inhibit the process of *doing*. The Committee must remain focused on activating the various recommendations with the assistance of professional staff from various implementation partners, particularly the lead implementer, the Indy Chamber. In spirit and in action, the Implementation Committee should support the staff of the Indy Chamber and many other implementation partners that will take the lead on the implementation of specific initiatives. This includes a commitment of time and effort; a commitment to *make* time when necessary and to become a part of a team that works – hands-on – to enhance the region by way of CEDS implementation. Successful communities and economic regions rely on both volunteers and professional staff; neither can effectively implement a strategy in isolation.

The Implementation Committee should also assist the Indy Chamber in tracking progress, evaluating the success of implementation efforts, and regularly communicating these results to the public in collaboration with the Indy Chamber and other implementation partners. The Committee should evaluate past year successes on an annual basis, adjusting priorities and tactics as necessary. However, it must remember that the CEDS represents an agenda for both a region and an organization (the Indy Chamber), and that considerable time and effort has gone into its development.

Finally, the Committee should also assist the Indy Chamber with fundraising efforts and partner engagement. Much is made of “collaboration” – the Committee should clearly embody this attribute of CEDS implementation – but regional leadership occasionally forgets *why* collaboration and regionalism should be pursued in the context of economic development and community improvement: efficiency and effectiveness in service delivery. This Implementation Committee can help maintain this focus.

COMPOSITION AND MEMBERSHIP: The Implementation Committee should be composed of roughly 25-35 individuals that are interested and willing to make a multi-year commitment (minimum of two years) to advance the implementation of the strategic recommendations that were developed during the CEDS strategic planning process. It is important that a significant portion of the Implementation Committee’s representation be individuals that served on the Steering Committee and are therefore familiar with the strategic planning process, the input that informed the research findings, the strategic implications of these findings, and the strategic recommendations themselves. This continuity in leadership is critical to a quick and effective transition from strategic planning to implementation.

Moving forward, it is also important that the Implementation Committee include leadership from organizations and entities that will be critical implementation partners for one or more recommendations but were not officially represented by an individual on the Steering Committee. While not all potential implementation partners can and should be engaged on the Committee, those that will be called upon to lead implementation of one or more recommendations and/or devote significant financial or staff resources to the implementation of one or more recommendation should be represented. Finally, it will be important that the Committee include elected and appointed officials with local governments throughout the region

that are able to commit the time and serve as a liaison of sorts to their staffs and other elected leadership via the Central Indiana Council of Elected Officials (CICEO).

Every effort should be made to ensure that the Implementation Committee is geographically-representative, including business and community leadership from around the Indy region. However, it is also important that the Implementation Committee remain small enough to be productive, and is comprised only of those individuals willing and able to devote additional time and actively contribute to implementation. The Committee should not include individuals that are simply there to observe or passively participate. Some communities and regions choose to engage a broader group of partners and regional leadership through a series of regular “leadership briefings” or “community meetings” that provide updates on the status of implementation efforts.

LEADERSHIP: Implementation Committees are typically co-chaired by two individuals, however, some communities and regions have a single chairperson or tri-chairs. Initially, it is important that there is continuity in leadership between the Steering Committee and Implementation Committee. Accordingly, it is recommended that, if possible, the Steering Committee’s current tri-chairs commit to a one year term as tri-chairs of the Implementation Committee, with new leadership elected by the Implementation Committee in late 2016. Following the first year as an Implementation Committee the co-chairs would then rotate on an annual or biennial basis, nominated and elected by the Implementation Committee. All co-chairs should be required to serve on the Implementation Committee during the years immediately preceding and following their service as a chairperson. Although not a requirement, it could be valuable for the incoming chairperson of the Indy Chamber to serve as an Implementation Committee co-chair or tri-chair in the year preceding their service as Chamber chairperson, if possible. This would help ensure that future Chamber chairpersons are well informed of the various activities that are taking place in implementation of the regional CEDS.

SUBCOMMITTEES AND WORK GROUPS: Many communities and regions that establish Implementation Committees also choose to create subcommittees (also known as work groups or interest groups) that align with the high-level goal areas of their strategy; in the case of the Indianapolis Regional CEDS, the four pillars (Educated & Talented People, Innovative & Enterprising Business, Attractive & Connected Places, Vibrant & Inviting Image). *Market Street* does not believe that it is necessary for the Implementation Committee to create subcommittees for each of the four pillars as the CEDS specifically recommends the formation of a few new volunteer structures that would otherwise be duplicative in mission and function with such pillar-oriented subcommittees. This includes the committee or board that will oversee the collaborative, employer-driven workforce initiative coordinated by CICI (recommendation 1.1), the Capital Alliance (recommendation 2.5), and an informal Regional Marketing Alliance to help coordinate and coalesce various economic development, talent, tourism, and other place-marketing initiatives around unified messaging and branding for the region (recommendation 4.1). Consideration should be given to the establishment of a Regional Entrepreneurship Council that can support the development of the Indy Chamber’s Entrepreneur Services in alignment with CEDS recommendations and potentially serve as an umbrella to many other existing Chamber councils and committees related to Entrepreneur Services (see next subsection entitled “Relationship to Existing Chamber Committees”).

Market Street does believe that the Implementation Committee should form small, ad hoc committees when a deeper level of volunteer engagement is necessary to advance the implementation of specific

recommendations. While the Implementation Committee is responsible for coordinating implementation activities for all recommendations, some specific recommendations will require a great deal of initiative and hands-on work from the Implementation Committee's members to start and maintain implementation. For example, the Implementation Committee may determine that a small group of individuals and organizations needs to meet more frequently than the quarterly Implementation Committee meetings in order to help coordinate annual "Reach Out to Dropouts" walks (recommendation 1.5) or evaluate the viability of forming a public-private partnership to enhance and expand access to college and career counseling (recommendation 1.4), among other recommendations. In other communities and regions, such ad hoc committees or work groups are often comprised of between 5 and 10 individuals that are particularly passionate about a specific initiative and willing to devote additional time to make the initiative a reality. These groups report back to the full Implementation Committee on their progress and remain in operation for as long as necessary, with some meeting for just a few months if they can quickly accomplish their objectives.

RELATIONSHIP TO EXISTING CHAMBER COMMITTEES: The Indy Chamber currently has a relatively large set of pre-existing committees and councils, with a total of 16 actively meeting as of August 2015. Councils and committees can provide volunteers with opportunities to shape the strategic direction of an organization and region, and should provide valuable input and assistance to professional staff. While some are relatively self-sustaining and require little time from professional staff to manage or support, others require considerable time commitments from administrative, senior, and executive staff. And so, in establishing a new Implementation Committee and a few other volunteer-led committees (such as the aforementioned Capital Alliance, Regional Entrepreneurship Council, and Regional Marketing Alliance), consideration must be given to the manner in which these new structures will relate to and interact with existing Chamber committees.

Three potential steps can be taken to ensure that the Chamber's existing committee structure is aligned with CEDS objectives and any new volunteer structures (particularly the Implementation Committee) while also helping to ensure that the Chamber's committee structure does not expand in a manner that is unwieldy, inefficient, or difficult to manage:

1. **Develop a hierarchy:** Work with existing committee and council leadership to establish a reasonable hierarchy whereby certain existing committees and councils can become self-managing subcommittees. For example, the Chamber's existing Mentor Protégé Task Force and Small Business Task Force report to the Hispanic Business Council (HBC). Taking this a step further, the HBC and the recommended new Capital Alliance (recommendation 2.5) could report to a potential new Regional Entrepreneurship Council that would oversee any and all councils and work groups engaged in small business and entrepreneurship initiatives.
2. **Dissolve committees when appropriate:** Establish an annual review process whereby staff and volunteers evaluate interest and participation in, and effectiveness of, each council or committee. Those that have not been particularly effective or productive, or who do not have clear next steps/activities for the year ahead, should be considered for dissolution.
3. **Establish liaisons to the Implementation Committee:** While there will not be a place for a representative from each of the Chamber's existing 16 committees on the CEDS Implementation Committee, there is clearly value in having a liaison between existing committees and the Implementation Committee such that Chamber committees and their volunteers are well informed of

the strategic economic development initiatives that are being advanced by the Implementation Committee. Some existing chamber committees are working to support initiatives that may not be directly tied to CEDS objectives (i.e. Membership Marketing Council, Chamber Ambassadors, etc.). However, these councils can still benefit from alignment with the CEDS Implementation Committee; those supporting membership and events sales should be informed of implementation progress and the member value that CEDS initiatives create. Committee leadership could be “invited observers” to Implementation Committee meetings when appropriate, effectively serving as liaisons. In many cases, it could be appropriate for committee leadership (such as a chairperson of the Business Advocacy Council) to provide brief updates on their activities to the Implementation Committee.

TRANSITION: Beginning in Q3 2015, the Steering Committee should take the following steps to facilitate its formal transition to an Implementation Committee, with its first meeting ideally taking place no later than August:

- ✓ Seek commitments from Steering Committee members that are interested and willing to commit to a minimum of 18 months of service on the Implementation Committee (until the end of 2016).
- ✓ Identify key individuals (staff and volunteer leadership) at the organizations that are frequently identified as lead implementers or supporting partners for the strategy’s various recommendations that would be ideal additions to the Implementation Committee.
- ✓ Speak in person with the identified individuals, inform and educate them regarding the strategic planning process and its outcomes, and invite them to serve on the Implementation Committee.
- ✓ Develop a meeting schedule for the first 18 months (Q3 2015 – Q4 2016) of the Committee’s operations, understanding that much of the work in these first 18 months will be devoted to capacity-building and fundraising (see section entitled “Implementation Schedule” for a complete review of implementation priorities and timing).

MEETING SCHEDULE: The strength of the region’s first-year implementation effort will be a strong indicator of the region’s likely long-term success in activating the CEDS and preventing it from becoming the cliché “document on a shelf.” Simply put, getting started is often the hardest but most impactful task. Many communities and regions lose momentum following the strategic planning phase; any amount of delay could cause some individuals involved in the strategic planning process to lose interest, disengage, and view the process as “all talk and no action.”

During its first full year of operation the Implementation Committee should, at a minimum, meet quarterly and ideally continue its monthly meeting schedule for at least the first six months. Greater frequency can help activate high-priority initiatives from the CEDS, strengthen existing relationships and build rapport, and help Indy Chamber staff and that of other critical implementation partners to accomplish numerous “startup” tasks that need to be initiated before implementation can begin in full. This includes but is not limited to engaging a broader set of volunteers and implementation partners, and initiating fundraising for implementation via a capital campaign.

MEETING STRUCTURE, CONDUCT, AND FACILITATION: The Implementation Committee – and particularly its chairpersons – will need to determine the appropriate ways to structure, facilitate, and conduct meetings. Chairpersons should serve as meeting facilitators, ensuring that the committee remains on track and follows the agenda for that meeting. The chairpersons should work with the recommended Economic Development Coordinator to develop agenda in advance of each meeting.

A common format for meetings is to utilize the first half to allow Committee members to provide updates on implementation efforts in recent months. In the Indianapolis region, this could include representatives from the Indy Chamber, local economic development organizations (LEDOs), Central Indiana Corporate Partnership (CICP), various sector-focused organizations (BioCrossroads, TechPoint, etc.), and top appointed government officials, among many other individuals and entities that will be actively engaged in leading implementation efforts. The second half of meetings then becomes a work session to discuss the tasks and responsibilities of the Committee – both collectively and as individuals – in activating specific recommendations in the months ahead. Meetings therefore begin by taking a look back at the work that is in progress and/or has been accomplished in recent months, and conclude with a look forward at the work that needs to be accomplished in the coming months. These work sessions should identify the need to form any ad hoc subcommittees or work groups, while also developing clear “to-do lists” for individuals or subcommittees. There will be times when certain individuals are more heavily involved than others in implementation as necessitated by their subject matter expertise, interest level, or role within organizations that are working with the Implementation Committee to advance a specific recommendation.

Market Street recommends that the Implementation Committee utilize the “implementation matrices” included in this document, using the timelines within to identify the initiatives that it will focus on each year. Some communities and regions maintain and regularly update digital versions of these matrices to track and report progress.

Organizational Leadership: The Indy Chamber

The CEDS is a strategy for a region, not a strategy for a single organization. But any regional strategy needs an effective regional economic development structure – supported by volunteers *and* professional staff – to ensure that it is implemented and implemented well. It needs an activator: an organization that will set implementation in motion and ensure that adequate resources are devoted to implementation. And this organization needs to be structured in a manner that promotes efficient and effectual service delivery.

For many years this model in the Indianapolis region has included a variety of different organizations working to advance regional economic competitiveness. In 2012, many of these organizations came together under a single roof with a vision of a more unified and efficient model for service-delivery related to regional economic development. The Indy Chamber merged with Develop Indy, the Indy Partnership, and the Business Ownership Initiative (BOI) but in some ways these entities have continued to operate as separate units with different funding mechanisms. Furthermore, prior to the completion of this CEDS, they have not been united behind a common strategy for regional economic development.

This section of the Implementation Plan will briefly discuss the role of the Indy Chamber in advancing implementation, the completion of the merger through staff realignment, and the staff enhancements that are necessary to carry out the strategy’s recommendations. A discussion of the strategy’s financial requirements and the mechanisms by which the Indy Chamber can support the necessary fundraising will be presented in a subsequent section. With the Implementation Committee’s endorsement, recommended changes to Indy Chamber staff structure and capacity, as well as budgets and fundraising activity, will need to be reviewed and approved by the Indy Chamber Board of Directors.

IMPLEMENTATION ROLES AND RESPONSIBILITIES

As the convener of this CEDS process and the home of the aforementioned business units, the Indy Chamber will serve as the principal lead implementer of the CEDS and its various recommendations. However, the Indy Chamber will not lead implementation for every recommendation. In many cases its staff will serve a supportive role to other organizations and institutions that are necessarily or more appropriately the lead implementer for certain recommendations. In other cases its staff may serve a more catalytic role, working with other organizations to get certain ideas and initiatives off the ground before handing the work off to another organization or set of volunteers to carry implementation forward.

And while the CEDS will not comprise the Indy Chamber's entire body of work, nor does it fully reflect the entire scope of the Indy Chamber's operations, member benefit, or value added to the region, its businesses, and its workers, the CEDS can and should serve as a "playbook" for the Indy Chamber's regional economic development service delivery. In this regard, it serves as the organization's guiding economic development strategy, of which annual work plans can be derived consistent with the implementation timelines and matrices that are presented within this Implementation Plan.

This strategy will not only help advance and finalize the merger of the aforementioned business units, it will also aid the transition of the Indy Chamber from a highly transactional organization to one that is more strategic and service-oriented. If pursued and implemented, the strategy's recommendations should result in an organization that provides considerably greater value to customers within the region (i.e. local governments and their respective economic development organizations, the existing business community, small business owners, etc.) as well customers outside the region (prospective new businesses, site selectors and corporate decision-makers, skilled talent, etc.).

In doing so, the Indy Chamber – including its component business units – will maintain its role as the lead regional economic development marketing organization. In this role, it will generate new prospect activity and manage that activity with local and state partners. It will also seek to strengthen the alignment of its project staff (those managing new recruitment prospects and existing business expansions) with target sectors and those organizations that are advancing strategic initiatives related to these target sectors (i.e. BioCrossroads, TechPoint, Conexus Indiana, Energy Systems Network, AgriNovus).

It will assume a greater role in coordinating a regional business retention and expansion outreach program that will principally be led by local partners but enabled by the Indy Chamber's provision of shared software, supportive staff that is available to fill gaps in local service delivery and support LEDO staff, and the resources necessary to compile local information in a single regional business intelligence system that can be used in a variety of proactive and reactive ways.

The strategy also calls for a more substantive focus on talent and workforce development. This is an area of the CEDS where many partners will be engaged and will often take the lead in implementation efforts. Nonetheless, the Indy Chamber will need to be engaged in many of these efforts as talent and workforce development cannot be decoupled from business attraction and retention efforts in today's highly competitive climate for skilled workers. While partners will lead in some areas, the Indy Chamber should assume a leadership position in convening partners and implementing the recommended comprehensive talent attraction and retention marketing program. Along these lines, the organization can and should

continue to assume even greater leadership in shaping the image and identity of the Indy region by working proactively with a variety of partners already engaged in influencing perceptions of the region.

The Indy Chamber will also continue to serve as the home to a variety of small business support programs, with expansion to some of the Business Ownership Initiative's (BOI) historical functions (microlending and associated business advisory services). The Chamber will also need to demonstrate greater leadership in convening those that are interested in building a more robust support system for innovation-driven enterprises (IDE), consistent with the recommendations of the CEDS, such that the Indy Chamber's Entrepreneur Services division transitions from its historical focus on traditional small to medium enterprises (SMEs) to a division that has a more balanced focus on SMEs and IDEs.

Finally, it can and should continue to provide contract services to local government and/or local economic development organizations (LEDOs) that seek the Indy Chamber's assistance in providing services devoted specifically to their jurisdiction. This includes but is not limited to contractual arrangements such as the City of Indianapolis-Marion County's support for staff devoted to the City of Indianapolis-Marion County (by way of the historical Develop Indy business unit).

The completion of the merger should ultimately integrate these various business units into a single, more cohesive team operating as the Regional Economic Development department within the Indy Chamber. This process of completing the merger, building this department, and acquiring the necessary staff to wholly and effectively implement the strategy is discussed in the following section.

ORGANIZATIONAL STRUCTURE: COMPLETING THE MERGER

As previously mentioned, the Indy Chamber will serve as the principal lead implementer and, in partnership with the Implementation Committee, the convener of other implementation partners. In doing so, it should enhance the quality, efficacy, and efficiency of its service delivery to both internal (within the region) and external (outside the region) customers. To achieve these improvements, the Indy Chamber will need to significantly enhance staff capacity – necessitating a greater level of private funding to complement its public revenues – within a unified team operating as the Regional Economic Development department within the Indy Chamber. Much of the aforementioned transition has already taken place, legally and financially. However, some additional integration remains.

Indianapolis Economic Development, Inc., a 501(c)(6) which was previously doing business as Develop Indy, has ceased operation as a separate legal entity but continues to function as the Develop Indy business unit of the Indy Chamber, supported by a contract with the City of Indianapolis-Marion County.

The Indy Partnership, which has served as the regional economic development marketing organization for the nine-county Indy region, has historically been funded by agreements with local economic development organizations (LEDOs) which contribute 10 cents per capita in organizational dues as well as a comparatively limited amount of private investment (relative to regional EDOs in competing, similar-sized metros). It was clear during the stakeholder input phase that a number of obstacles inhibited the Partnership's effectiveness in recent years. There remains some brand confusion – internally and externally – in the wake of the merger. There is also confusion surrounding the Partnership and Chamber's collective funding structure following the merger, and to some degree, there is dissatisfaction with the Partnership's relative inability to raise additional private revenues sufficient to adequately fund an effective regional

economic development organization. Some of this dissatisfaction can be attributed to the aforementioned confusion; stakeholders – both business and community leaders – indicated that the lack of a comprehensive regional economic development strategy and associated plan to complete the merger inhibited the Partnership’s fundraising ability and organizational effectiveness. There is optimism that this process, inclusive of the CEDS and this complementary Implementation Plan, will provide the direction that investors and customers demand.

Simply put, there is a desire and need within the region to build a more cohesive and holistic regional economic development team that is principally supported by private investment, and to ensure that considerable public investment is better leveraged against this enhanced private sector contribution. The additional private sector contribution is not simply needed from a financial standpoint but also from the standpoint of organizational engagement. As outlined in the preceding section covering Volunteer Capacity, the region’s business community has demanded more of itself in terms of engagement – a commitment of time and not simply financial resources – in supporting the implementation of strategic initiatives and regional economic development programs.

The section that follows will briefly outline a method to integrate the aforementioned business units into a single Regional Economic Development department at the Indy Chamber, and detail the potential enhancements to staff capacity within this department that are necessary to wholly and effectively implement the CEDS recommendations.

STAFF CAPACITY: REGIONAL ECONOMIC DEVELOPMENT DEPARTMENT

At present, the Indy Chamber currently operated three distinct business units or division related to regional economic development: the Indy Partnership, Develop Indy, and Entrepreneur Services. A potential new Regional Economic Development department would realign these functions and incorporate additional capacity in three key areas:

1. **Regional Business Development**, inclusive of Indianapolis Economic Development (contract, fee-for-service)
2. **Talent Development**
3. **Entrepreneur Services**

These three divisions align in function with three of the four pillars that serve as the foundation of the region’s approach to regional economic development, and accordingly, the organizing principles and strategic framework of the CEDS. The fourth pillar – Image and Identity – is an area of the strategy that will be influenced by each of the aforementioned divisions of a Regional Economic Development department, as well as collaborative efforts led or supported by other implementation partners.

The remainder of this section outlines potential new staff positions that are necessary to effectively carry out the CEDS recommendations and build a foundation for long-term effectiveness in service delivery. These enhancements should also build the organizational capacity that is necessary to place the Indy Chamber on par with its principal competitors in a highly competitive world of regional economic development; a world where the competition is constantly investing more and more, and enhancing capacity even in troubled or stagnant economic times. They should also ensure that local partners – LEDOs and local governments – are receiving a far greater return on their investment.

Many of the proposed new staff positions are not entirely new positions but reflect a potential repositioning of the job function of existing staff. Some entirely new positions could be filled by existing staff members if their interest and capabilities align with the new position.

A visual summary of these potential changes is presented at the end of this section in the form of current and potential new organizational charts related to Regional Economic Development at the Indy Chamber.

OVERSIGHT

Chief Economic Development Officer (CEDO): The CEDO would provide strategic oversight and direction to the entire department, and would serve as the face of regional economic development on behalf of the Indy Chamber and its many local partners. Four Vice Presidents managing the divisions listed above would report to the CEDO. The ideal start date for this position would be no later than January 1, 2016.

REGIONAL BUSINESS DEVELOPMENT

Vice President, Regional Business Development (currently vacant): This position roughly aligns with the currently vacant Executive Director of the Indy Partnership. This individual will oversee an expanded regional business development function, inclusive of new business recruitment prospect activity and existing business expansion project activity, and the management of a team of sector-focused project managers. The ideal start date for this position is no later than January 1, 2016.

Project Manager(s), Target Sectors (4): Four project managers should support the bulk of the region's project activity (new corporate relocations and existing business expansions) with each assigned to a specific target sector or type of activity: Life Sciences, Manufacturing, Logistics, and Information/Technology. Any projects that fall outside these target sectors may be divided among project staff with assistance from the VP of Regional Business Development and others. By aligning project managers with target business sectors, the project side of regional economic development can become better aligned with the strategic side, particularly those initiatives advanced by sector-focused organizations such as BioCrossroads (Life Sciences), Conexus (Manufacturing and Logistics), and TechPoint (Information/Technology). Some existing staff can fulfil these roles but additional capacity will need to be hired. Ideal start dates for project managers (new hires) is no later than Q3 2016.

Business Retention and Expansion (BRE) Program Manager: With the development of a more coordinated regional business retention and expansion program, the Indy Chamber will need to build new capacity to oversee and coordinate the program with LEDO partners, ensuring that common outreach and survey methods are used, information is collected consistently, follow-up action is pursued quickly when necessary, and resulting data and takeaways are effectively utilized and communicated to inform service delivery, business recruitment, and other regional economic development functions. The ideal start date is no later than Q3 2016.

Director, International Business and Export Promotion: The principal task of the Director of International Business and Export Promotion will be to implement the Metro Indianapolis Export Plan, including the delivery of hands-on export assistance programs. Potential exists for additional capacity to be needed in the area of international business depending upon further work with the Brookings Institution related to foreign direct investment (FDI) and/or additional capacity within Entrepreneur Services (ES) to target export

assistance programs to SMEs and IDEs that are utilizing other programs and services operated by the ES division. The ideal start date is no later than Q3 2016.

Marketing and Communications Coordinator: A new Marketing and Communications Coordinator supporting the regional business development function would aid project managers and others with their economic development marketing needs, helping to produce print and web-based marketing materials, execute public relations and communications plans, plan events, coordinate inbound and outbound travel, and interface with other organizations and marketing/communications professionals in the region that will be engaged in the shaping the region's image and identity through proactive marketing campaigns. The ideal start date for this individual is no later than January 1, 2017.

Economic Development Coordinator: The Economic Development Coordinator would principally fulfil a volunteer coordination role. Their primary responsibility will be to support the Implementation Committee and other, complementary volunteer leadership structures that are created to support the implementation of the CEDS and specific recommendations. Their time will likely be split between administrative support functions and communications/relationship management. This individual should begin work immediately.

INDIANAPOLIS ECONOMIC DEVELOPMENT

The Indy Chamber can and should maintain its existing relationship with the City of Indianapolis-Marion County to provide city-specific services on a contract basis or through continued funding as a strategic public sector investor in a new regional economic development campaign (see Budgets and Fundraising section). Accordingly, the potential staff structured described herein maintains this relationship and staff provision, but acknowledges that the Indy Chamber will be developing a more robust regional economic development team – ideally supported by enhanced private investment – to complement and provide greater return on investment to public funding from the City of Indianapolis-Marion County. Although some other chambers of commerce and regional economic development organizations maintain similar contractual arrangements with local governments, many local governments have simply converted their contractual arrangements to strategic investments in capital campaigns supporting a broader, regional economic development strategy and program that leverages considerable private investment.

TALENT DEVELOPMENT

Vice President, Talent Development: With the quantitative research and qualitative input indicating that talent development is among the business community's top priorities related to economic development, and accordingly, with Talent Development as a key pillar in the regional CEDS, it is time for the Indy Chamber to begin building organizational capacity in this area. The VP of Talent Development would oversee a small but potentially growing Talent Development division within the Regional Economic Development department at the Indy Chamber. Initially, this individual will likely devote considerable time to ensuring the regional business community, inclusive of Chamber members and investors, is well networked and engaged with existing talent and workforce development initiatives across the region. They will also support the Central Indiana Corporate Partnership (CICP) in launching a substantive new employer-driven workforce initiative as identified in the CEDS. The ideal start date for this position is no later January 1, 2016.

Program Manager, Talent Attraction and Retention: The Program Manager, Talent Attraction and Retention would work with top Chamber leadership, including the VP of Talent Development, the COO, and

the CEDO to develop and implement a multi-faceted talent attraction and retention program including but not limited to the recommended talent marketing campaign. The ideal start date for this position is no later than Q3 2016.

ENTREPRENEUR SERVICES

Senior Director, Entrepreneur Services: With recommended expansion to BOI microlending and associated business coaching, and the transition of Entrepreneur Services to include a focus on innovation driven enterprise (IDE), the staff and day-to-day operations of Entrepreneur Services division will be expanding at a time when the demands are also rising on the current Vice President of Entrepreneur Services to provide greater strategic leadership and guidance to develop and launch this new capacity. Accordingly, there is value in adding new capacity to oversee and manage the day-to-day operations of the various components on Entrepreneur Services. *This position has recently been created and filled in 2015.*

Director, Innovation Driven Enterprise (IDE): The Director of Innovation Driven Enterprise will work with the Vice President of Entrepreneur Services and volunteer leadership to build the Indy Chamber's capacity to support IDEs and not simply SMEs through its Entrepreneurial Services division. This will include work to develop the recommended network map of the startup ecosystem, the recommended development of a virtual front door to the startup ecosystem, and support for startup operations associated with the recommended Capital Alliance. The position should serve as a go-to-resource for those entrepreneurs that are unfamiliar with available support services and resources for IDEs in the region and across the state, and will serve as a "connector" to such services and resources rather more than a provider of hands-on business assistance, coaching, mentorship, etc. However, this position could evolve into such a role over time should the IDE community demand it. The ideal start date for this position is no later than Q3 2016.

Grant Writer: As Entrepreneur Services expands the scale and scope of its operations, particularly its microlending program, it will need to seek considerable additional funding, potentially above and beyond that which could be raised through a regional capital campaign associated with the implementation of the CEDS and the associated development of necessary staff capacity at the Indy Chamber. Funding a grant writing position (potentially part-time) could provide a great return on investment, particularly as the region seeks funding for CEDS implementation from non-local sources (i.e. national charitable foundation with missions that support entrepreneurship in specific populations or areas). This position would also relieve the burden that is placed on the VP of Entrepreneur Services (and other staff) to pursue and maintain existing grant funding that is vital to Entrepreneur Services' sustained operations. The ideal start date for this position is January 1, 2016.

Business Coach (2-3): Business coaches supporting the BOI microlending program are currently at capacity and if Entrepreneur Services is to expand microlending as recommended, the division will unquestionably need additional coaches. Hiring should depend on available funding for microlending, and accordingly, needs/demand for coaching will vary. A minimum of two additional coaches seems reasonable at this time with one hire occurring immediately to alleviate current shortages in capacity and prepare for initial expansion. Further hiring of one or two additional coaches should be phased in as microlending expands. Additional, more specialized coaching capacity may also be needed to support hands-on assistance with export promotion and any further services developed and targeted towards gazelles.

OTHER STAFF CAPACITY CONSIDERATIONS

The Indy Chamber will need to assess staff capacity and potential make a few enhancements outside of a new Regional Economic Development department in order to fully support CEDS implementation. One such area that may need additional capacity in the near future is Government Relations and Policy Development. With emphasis placed on transportation and transit advocacy, and education and workforce policy, the need for additional resources devoted to **Government Relations and Policy Development** will persist and grow. Consideration should be given to hiring one or more additional **Project Manager(s)** to support existing senior staff and particularly their efforts related to transportation and transit.

Organizational Leadership: Implementation Partners

The preceding sections have discussed the roles and responsibilities of the Indy Chamber and the volunteer-led Implementation Committee in advancing implementation of the CEDS. While these two entities will devote much of the financial, staff, and volunteer resources necessary to the implementation of the CEDS, there are clearly numerous other partners that will lead and support the implementation specific recommendations.

For example, local economic development organizations (LEDOs) will lead implementation of a regional business retention and expansion outreach program with support from the Indy Chamber when necessary and appropriate. The Central Indiana Corporate Partnership (CICP) will lead the development of a comprehensive, employer-driven workforce initiative with support from the Indy Chamber. But there are many other examples, and countless other organizations that will be involved throughout the five-year implementation cycle.

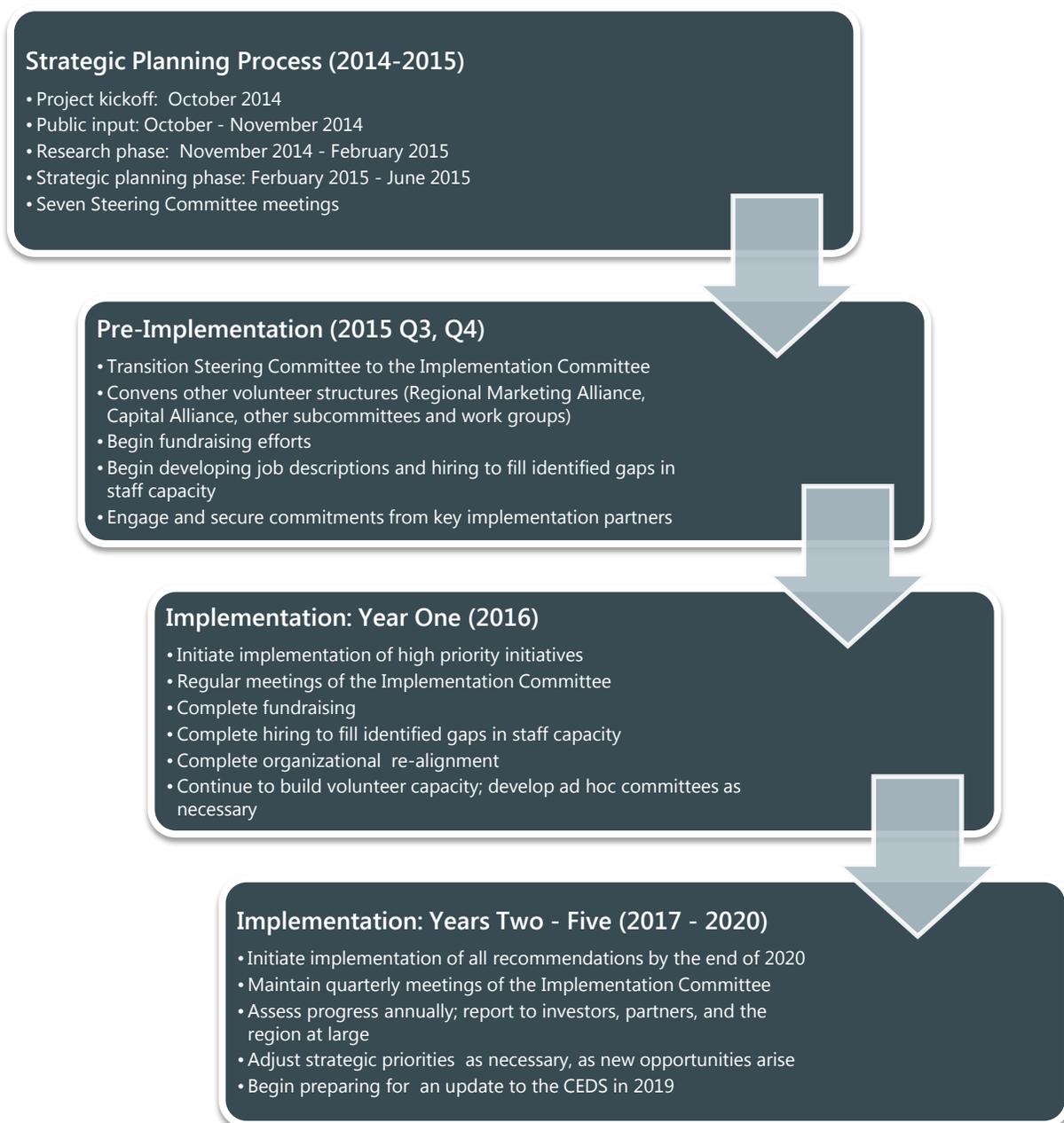
The table that follows is a non-comprehensive list of potential implementation partners, accompanied by abbreviations for each organization/entity. These abbreviations are used in the "implementation matrices" that follow to help identify lead implementers and supporting partners for each individual recommendation in the CEDS. This is by no means intended to be an exhaustive list; many other organizations can and should be involved in implementation, and the Implementation Committee should identify and engage any and all other relevant implementation partners as it pursues specific initiatives.

IMPLEMENTATION PARTNERS

Acronym	Organization	Acronym	Organization
ALUM	Alumni Associations	IDWD	Indiana Dept. of Workforce Development
AI	Angel Investors	IEDC	Indiana Economic Development
ANI	AgriNovus Indiana	IG	IndyGo
ARTS	Arts Council of Indianapolis	IHUB	IndyHub
BI	Blue Indy	IMC	City of Indianapolis-Marion County
BIO	BioCrossroads	IMP	Implementation Committee
BIZ	Existing Businesses	IPS	Indianapolis Public Schools
CA	Capital Alliance (recommended)	ITCC	Ivy Tech Community College
CC	CityCorps	IURTC	Indiana University Research & Tech. Corp.
CES	Cultural, Ent., and Sports Attractions	KAUF	Kauffman Foundation
CHAM	Local Chambers of Commerce	KIB	Keep Indianapolis Beautiful
CIB	Capital Improvement Board	LAW	Law Enforcement
CICEO	Central Indiana Council of Elected Officials	LEDO	Local Economic Development Organizations
CICF	Central Indiana Community Foundation	LF	Launch Fishers
CICP	Central Indiana Corporate Partnership	LI	Launch Indiana
CIRTA	Central Indiana Regional Trans. Authority	LGs	Local Governments
CISBDC	Central Indiana Small Business Dev. Center	LISC	Local Initiatives Support Corporation
CIWBC	Central Indiana Womens Business Center	LMI	Learn More Indiana
COM	U.S. Department of Commerce	MCPR	Marketing, Comm., & PR Professionals
CON	Conexus Indiana	MPO	Metropolitan Planning Organization
DI	Downtown Indy	OECOSL	Office of Early Child./Out of School Learning
DOT	U.S. Department of Transportation	OEI	Mayor's Office of Education Innovation
DT	Developer Town	ORR	Orr Entrepreneurial Fellowship
EDA	U.S. Economic Development	OSBE	Office of Small Business & Entrepreneurship
EI	Employ Indy	PBS	Pacers Bikeshare
ES	Entrepreneur Services (Indy Chamber)	PCRD	Purdue Center for Regional Development
ESN	Energy Systems Network	PK12	PreK-12 School Systems
EXIM	Export-Import Bank of the United States	PTAC	Indiana Procurement Tech. Assistance
FNDN	Charitable Foundations	R5WC	Region 5 Works Council
FTZ	Foreign Trade Zone #72 (INzone)	RC	Rideshare Companies (Uber, Lyft, etc.)
GOV	Governor's Office	RMA	Regional Marketing Alliance
GW	Goodwill Industries and the Excel Center	RO	Religious Organizations
HBC	Hispanic Business Council	RR	Railroads
HE	Higher Education Institutions	SBA	U.S. Small Business Administration
HI	Hospitality Industry Partners	SE	The Speak Easy
HR	Human Resources Professionals	SWIC	State Workforce Innovation Council
IAA	Indianapolis Airport Authority	TP	TechPoint
IBRI	Indiana Biosciences Research Institute	ULI	Urban Land Institute
IC	Indy Chamber	USAF	USA Funds
ICC	Indiana Career Council	USEAC	United States Export Assistance Center
ICHE	Indiana Commission for Higher Education	UTIL	Utilities
ICOC	Indiana Chamber of Commerce	VC	Venture Capital Firms
ICT	Indianapolis Cultural Trail	VERGE	The Verge
IDOE	Indiana Department of Education	VI	Visit Indy
IDOT	Indiana Department of Transportation	YPO	Young Professional Organizations

IMPLEMENTATION SCHEDULE

Successful regions never stop planning. But successful regions also do not allow the processes of conversing and strategic planning – as important as they are – to impede the process of *doing*. Any set of strategic recommendations needs a schedule for implementation. The Indianapolis Regional CEDS is an ambitious strategy for the region and its lead implementer, the Indy Chamber. The various recommendations contained within the CEDS cannot and should not be fully implemented in a five-year period, but all can and should be started. The graphic that follows provides a brief overview of the timing for key phases of the strategic planning process and subsequent implementation.



IMPLEMENTATION MATRICES

The implementation matrices that follow contain important guidelines for implementing individual recommendations within the CEDS. Complemented by the detailed actions and tactics outlined for each recommendation in the CEDS, these matrices can and should be utilized by the Implementation Committee to guide their efforts, manage outreach to appropriate implementation partners, help track progress, and identify “what’s next” on its implementation to-do list. The matrices, grouped by pillar, have been informed by Steering Committee small group discussions and surveys, and include the following pieces of information (in columns) for each recommendation:

Number:	The number assigned to each recommendation in the strategy.
Recommendation:	The recommendation as written in the strategy.
Potential Lead Implementer(s):	Abbreviations/acronyms of the entities that are likely the most logical organizations to lead implementation efforts for the referenced recommendation.
Potential Implementation Partners:	Abbreviations/acronyms of entities that could be engaged in a supportive role for the implementation of the referenced action. These are not exhaustive lists, but simply a starting point for the Implementation Committee’s outreach efforts associated with each recommendation. Steering Committee small group discussions have helped inform these lists of appropriate partners.
Implementation Timeframe:	A recommended start date and implementation timeline associated with each recommendation. Timeframes have been informed by prioritization exercises conducted by the Steering Committee members.
Potential Cost (Low):	A low end estimate of the potential cost associated with implementing the recommendation as written in the strategy. <i>Cost estimates do not include expenses associated with any new staff (salary or additional personnel costs) necessary to implement the recommendation. These costs will be reflected separately in the section covering Budgets and Fundraising.</i>
Potential Cost (High):	A high end estimate of the potential cost associated with implementing the recommendation as written in the strategy. <i>Cost estimates do not include expenses associated with any new staff (salary or additional personnel costs) necessary to implement the recommendation. These costs will be reflected separately in the section covering Budgets and Fundraising.</i>
Cost Notes:	Notes regarding what is broadly captured by the potential cost estimates.

IMPLEMENTATION MATRIX: EDUCATED & TALENTED WORKERS

#	Recommendation	Potential Lead Implementer(s)	Potential Implementation Partners	Implementation Start	Potential Cost (Low)	Potential Cost (High)	Cost Notes
1.1	Launch a collaborative and employer-driven workforce initiative that seeks to align and enhance numerous, often disconnected efforts to advance a continuum of educational and training opportunities supporting target sector development.	CICP	IC, BIZ, IMP, R5WC, ICC, SWIC, IDWD, ICHE, HE, ITCC, PK12, OEI, EI, BIO, TP, CON, ESN, ANI, HR	2016	TBD by CICP	TBD by CICP	Program budget to be determined by CICP. Primary cost to Indy Chamber will be staff time, potentially coming from new resources, that will be needed to effectively and proactively link regional economic development project activity with ongoing workforce initiative(s).
1.2	Advance long-term funding solutions for early childhood education programs statewide.	OECOSL, PK12, IPS	IC, FNDN, IDOE, GOV, CICEO	Ongoing	N/A	N/A	Cost associated with actual program expansion will vary tremendously depending on the scale of state and local financial support. Primary costs to the Indy Chamber are staff time covered by existing resources.
1.3	Evaluate the viability of one or more large scale investments that seek to increase youth interest in manufacturing, technology, and STEM-related careers by exposing them to emerging technologies and 21st century production processes and increasing the opportunity for new vocational certification programs and apprenticeships.	IC, IMP	FNDN, CICP, TP, PK12, HE, ITCC, EI, CES, R5WC	2018	Highly variable	Highly variable	Costs associated with certain developments are highly variable but would be incurred by entities that see certain investments as supportive of their missions and valuable to their operations. Primary costs to the Indy Chamber are staff time associated with volunteer coordination and staff engagement with relevant partners.
1.4	Evaluate the viability of developing a public-private partnership to support enhancements in college and career counseling capacity at regional high schools.	IMP, PK12, OEI	IC, FNDN, HE, ITCC, CICEO	2019	\$60,000 startup	\$120,000 startup	Cost estimate reflects a reasonable budget for an initial feasibility study which will ideally be funded by a collaborative group of nonprofits with missions that support public education, college matriculation, and career preparation.

IMPLEMENTATION MATRIX: EDUCATED & TALENTED WORKERS (CONT.)

#	Recommendation	Potential Lead Implementer(s)	Potential Implementation Partners	Implementation Start	Potential Cost (Low)	Potential Cost (High)	Cost Notes
1.5	Establish a series of "Reach Out to Dropouts" graduation walks in partnership with school districts to promote the re-enrollment of students that have dropped out of high school.	PK12, IPS, IMP	IC, BIZ, IDOE, LAW, RO, FNDN, LISC, LG, CICEO	2017	\$5,000 annually	\$10,000 annually	Cost will primarily be staff time associated with recruiting and training volunteers, and coordinating walks with local partners and school districts.
1.6	Enhance outreach and wraparound services and evaluate sustainable funding mechanisms for programs, such as the 21st Century Scholars program, in order to increase access to and completion rates at two- and four-year colleges and universities for those with financial need.	ICHE, GOV, IMP	IC, BIZ, FNDN, HE, ITCC	2016	N/A	N/A	Primary costs to the Indy Chamber are staff resources.
1.7	Develop and implement a multi-faceted talent attraction campaign as a component of a comprehensive new regional marketing program.	IC, RMA	BIZ, CICP, EI, HR, IHUB, YPO, HE, ALUM, IDWD, R5WC, ICC, VI	Development in 2016 Implementation and launch in 2017	\$150,000 startup \$100,000 annually	\$200,000 startup \$150,000 annually	Startup costs associated with development of a new campaign could include a variety of consulting fees associated with the development of cohesive plans for branding, web development, paid media, earned media, and public relations, as well as research related to image, identity, and perceptions of the region. Annual costs reflect a reasonable budget for ongoing expenditures related to talent attraction and retention that includes public relations, paid media, earned media, web maintenance and updates, print collateral, and travel.

IMPLEMENTATION MATRIX: INNOVATIVE & ENTERPRISING BUSINESSES

#	Recommendation	Potential Lead Implementer(s)	Potential Implementation Partners	Implementation Start	Potential Cost (Low)	Potential Cost (High)	Cost Notes
2.1	Enhance the Indy Chamber's Entrepreneur Services by implementing a variety of new initiatives that seek to establish a physical and virtual "front door" for entrepreneurial and small business support services in the region.	IC	LEDO, CHAM, CISBDC, PTAC, OSBE, CA, TP, DT, SE, HBC, CIWBC, VERGE, LF/LI, KAUF, USAF, SBA, VC, AI	2016 (many elements such as microloan expansion will necessarily be phased in over time)	Highly variable	Highly variable	Costs could vary tremendously and will depend heavily on available funds for microloan expansion and the organization's ability to secure grant funding. Additional costs for other recommended elements outside of microloan expansion (network mapping, virtual front door, Capital Alliance support, targeted assistance to gazelles, etc.) could reasonably range from \$100,000 - \$300,000 annually, depending upon startup costs associated with specific initiatives. If microlending is expanded regionally at the rate at which the existing BOI program issues loans, this figure could reasonably rise above \$500,000 in additional expenditure per year (not including salaries and not accounting for any additional interest income from loans).
2.2	Coordinate a comprehensive, collaborative, and professionally-staffed regional business retention and expansion (BRE) outreach program.	LEDO, IC	IEDC, UTIL, BIZ, LG, CHAM, CICEO	2016	\$60,000 annually	\$80,000 annually	Cost associated with coordinating and implementing a collaborative regional BRE program is primarily staff time. Annual cost estimates include expenditures associated with: software licenses that support existing business surveys, relationship management, and data collection and reporting (and the provision of licenses to LEDO partners); technology and market research that provides value to existing businesses; travel within the region for site visits; and other expenses associated with support for expansions and closure/layoff mitigation.

IMPLEMENTATION MATRIX: INNOVATIVE & ENTERPRISING BUSINESSES (CONT.)

#	Recommendation	Potential Lead Implementer(s)	Potential Implementation Partners	Implementation Start	Potential Cost (Low)	Potential Cost (High)	Cost Notes
2.3	Implement the Metro Indianapolis Export Plan which seeks to "develop a comprehensive export assistance ecosystem to support and grow existing exporters and encourage small- and medium-enterprise (SMEs) to enter the export market."	IC	IEDC, OSBE, CISBDC, GOV, SBA, EXIM, CICP, ANI, BIO, CON, ESN, TP, LEDO	2016	\$30,000 startup \$60,000 annually	\$40,000 startup \$100,000 annually	Startup costs will be needed to cover the expenses associated with developing the recommended SME toolkit, a clearinghouse of export information and available forms of assistance, a matchmaking portal to help reduce logistics costs for exporters, and other recommended resources. Annual costs reflect the expense associated with developing and hosting events for existing companies related to export opportunities, developing and travelling on international trade missions, and maintenance of resources such as the aforementioned toolkit, clearinghouse, and matchmaking portal.
2.4	Issue the "Billion Dollar Challenge" - an initiative to recapture \$1 billion of the roughly \$94 billion in business expenditure that leaves the Indy region each year by helping existing firms identify local alternatives to non-local suppliers of goods and services.	IC, IMP	CHAM, LEDO, CICP, CISBDC, OSBE, HBC, ANI, BIO, CON, ESN, TP, CICEO	2016	\$50,000 startup \$15,000 startup	\$100,000 startup \$25,000 annual	Primary costs will be staff time but will also include expenses associated with promoting the Challenge via a variety of media channels as well as any costs outside of staff time associated with developing a database of existing business products and services. Additional costs could be incurred if procurement assistance or other forms assistance are provided, potentially in support of the Anchor Institutions study.
2.5	Form a Capital Alliance comprised of key stakeholders from the private equity, technology, and startup communities to develop a collaborative strategy to expand the supply of angel, venture, and other forms of capital in the Indy region.	IC, IMP	VC, AI, CICP, ANI, BIO, ESN, TP, LEDO, CHAM, CISBDC, OSBE, DT, SE, HBC, CIWBC, VERGE, LF/LI	2016	\$5,000 startup Annual budget TBD by Capital Alliance	\$10,000 startup Annual budget TBD by Capital Alliance	Startup activities will primarily be supported by volunteer time among founding members. Some startup costs associated with building awareness will be incurred. Startup cost estimates reflect an initial grant from the Indy Chamber of roughly \$25,000 to support first year activities. The Alliance should be self-sustaining within two years.

IMPLEMENTATION MATRIX: INNOVATIVE & ENTERPRISING BUSINESSES (CONT.)

#	Recommendation	Potential Lead Implementer(s)	Potential Implementation Partners	Implementation Start	Potential Cost (Low)	Potential Cost (High)	Cost Notes
2.6	Advance development of the Indiana Biosciences Research Institute (IBRI).	IBRI, CICP, BIO	BIZ, GOV, HE, IURTC, FNDN, IMC, IC, IMP	Ongoing	Highly variable	Highly variable	Primary cost to the Indy Chamber will be staff time. CICP, BioCrossroads, the State, higher education institutions, and other organizations spearheading the development process will incur a variety of different costs depending upon their role. Total costs associated with the project as currently scoped are estimated at \$360 million.
2.7	Advance the development and preparation of 16 Tech and other regional innovation districts.	IMC, LG	IURTC, HE, IC, IMP, CICEO, CICP	Ongoing	Highly variable	Highly variable	Primary cost to the Indy Chamber will be staff time. Organizations spearheading the development process will incur a variety of different costs depending upon their role.
2.8	Support a variety of state policy priorities that can improve the region's capital environment and incentives for innovation.	IC, CA	ICOC, CHAM, IEDC, GOV, CICP, ANI, BIO, CON, ESN, TP, VC, AI	Ongoing	N/A	N/A	Primary cost to the Indy Chamber will be staff time. Primary cost to the Capital Alliance will be volunteer time.
2.9	Develop and implement a multi-faceted economic development marketing campaign as a component of a comprehensive new regional marketing program to support the recruitment of companies in target sectors.	IC	LEDO, CHAM, VI, LG, CICEO, UTIL, IEDC, GOV, ICOC, CICP, ANI, BIO, CON, ESN, TP, RMA	2017	\$100,000 annually	\$150,000 annually	Annual expenditures should vary based on the timing of certain inbound and events. Cost estimates include a budget for such events (inbound and outbound), public relations and pursuit of earned media, a limited amount of paid media/advertisement, and the development and maintenance of web and print resources.

IMPLEMENTATION MATRIX: ATTRACTIVE & CONNECTED PLACES

#	Recommendation	Potential Lead Implementer(s)	Potential Implementation Partners	Implementation Start	Potential Cost (Low)	Potential Cost (High)	Cost Notes
3.1	Leverage recommendations within the CONEXUS Strategic Plan for Indiana's Logistics Future and the Indiana Department of Transportation's Freight Mobility Plan as regional roadmaps for accommodating the freight transportation needs of the region's businesses...	IDOT, MPO, LG	CON, IC, ICOC, DOT, GOV, CICEO, IAA, RR, CICP, BIZ	Ongoing	N/A	N/A	Costs for individual transportation projects and the sources of funding for such projects will vary tremendously. Primary costs to the Indy Chamber are staff time.
3.2	Leverage recommendations within the Indy Connect Plan, the MPO's Long-Range Transportation Plan, the forthcoming IndyGo Forward Plan, and local comprehensive plans as regional roadmaps for accommodating the personal transportation needs of the region's residents...	IDOT, MPO, LG, IG, CIRTA, BI	CICEO, IC, ICOC, DOT, GOV, CICEO, CICP, BIZ, PBS, ESN, PK12	Ongoing	N/A	N/A	Costs for individual transportation projects and the sources of funding for such projects will vary tremendously. Primary costs to the Indy Chamber are staff time.
3.3	Encourage a proactive approach to future transportation planning by supporting investments that expand and align capacity and utilization of the region's public transportation and personal mobility infrastructure to create an integrated system of transportation modes that provide options for commuters.	TBD	IDOT, MPO, LG, CICEO, IG, CIRTA, BI, PBS, ICT, IMP, CICEO, IC, ICOC, DOT, GOV, CICP, BIZ, ESN, PK12	Ongoing	TBD	TBD	TBD
3.4	Promote employer participation in and support for the programs and incentives offered by Commuter Connect that encourage alternative commuting tactics, and encourage employers to adopt workplace policies that help reduce the number of commuters at peak hours.	CIRTA, IMP	BIZ, IC, CICP, CHAM, ICOC, IG, BI, PBS, CICEO	2018	\$20,000 startup \$10,000 annually	\$30,000 startup \$15,000 annually	Cost estimates capture a reasonable budget associated with enhanced marketing, promotion, and outreach efforts to build awareness and increase utilization of existing programs and incentives. Cost estimates also include a reasonable budget for the development of any new educational materials to help inform employers about potential new workplace policies and complementary incentives that they can offer their employees. Cost estimates do not incorporate any expenditures associated with the development of new alternative commute incentives or programs.

IMPLEMENTATION MATRIX: ATTRACTIVE & CONNECTED PLACES (CONT.)

#	Recommendation	Potential Lead Implementer(s)	Potential Implementation Partners	Implementation Start	Potential Cost (Low)	Potential Cost (High)	Cost Notes
3.5	Develop a plan to increase awareness among freight forwarders regarding opportunities in the Indy region in partnership with CONEXUS Indiana.	CON, IC	LEDO, IEDC, ICOC, BIZ, IAA, FTZ	2018	\$50,000 startup TBD annually	\$75,000 startup TBD annually	Cost estimates include a startup budget that covers potential studies and strategic planning necessary to develop the appropriate plan. Annual costs/budget should be established based on the recommendations contained in the recommended plan, and could potentially include a budget for marketing, advertisements, and outreach efforts (potentially including some travel) to increase awareness among freight forwarders.
3.6	Continue to advocate for changes to state restrictions on home rule that inhibit local governments' abilities to fund various forms of transportation infrastructure (and other investments) through local option referenda.	IC	ICOC, BIZ, LG, GOV, CICEO	Ongoing	N/A	N/A	Primary cost to the Indy Chamber will be staff time.
3.7	Support the implementation of the Indy Fast Track Action Plan and its efforts to align transportation planning with redevelopment and revitalization objectives via various components of Plan 2020, and encourage other local governments to promote similar alignment.	IMC, LG	IC, LISC, MPO	Ongoing	Highly variable	Highly variable	Cost will vary tremendously depending upon the scale, scope, and timing of redevelopment projects associated with identified Fast Track sites and others throughout the region. Primary cost to the Indy Chamber will be staff time.
3.8	Help identify and advance new investments that support placemaking, expand public spaces, and complement the region's existing arts, culture, entertainment, and sports amenities.	IMP, CES	ARTS, VI, ICT	Ongoing	Highly variable	Highly variable	Cost will vary tremendously depending upon the scale, scope, and timing of new investments pursued. Primary cost to the Indy Chamber will be staff time.

IMPLEMENTATION MATRIX: VIBRANT & INVITING IMAGE

#	Recommendation	Potential Lead Implementer(s)	Potential Implementation Partners	Implementation Start	Potential Cost (Low)	Potential Cost (High)	Cost Notes
4.1	Develop a comprehensive and collaborative marketing program that seeks to raise awareness and pride in what the region has to offer, unify the region behind common sources of pride, promote a positive self-image, increase the visibility of the region in national and international media, and build global recognition for the Indy region and its identity.	IC, RMA	LEDO, CHAM, VI, LG, CICEO, UTIL, IEDC, GOV, ICOC, CICP, ANI, BIO, CON, ESN, TP, BIZ, EI, HR, IHUB, YPO, HE, ALUM, IDWD, R5WC, ICC	2016	\$200,000 startup \$200,000 annually (costs already accounted for in 1.8 and 2.9)	\$250,000 startup \$300,000 annually (costs already accounted for in 1.8 and 2.9)	<u>Cost estimates are inclusive of cost estimates for recommendations 1.8 (talent marketing campaign) and 2.9 (economic development marketing campaign).</u>
4.2	In alignment with the forthcoming Visit Indy Tourism Master Plan and other regional tourism objectives, continue to pursue bids for conferences, trade shows, sporting events, and other activities that have positive economic and community impact, and help create lasting, positive impressions of the Indy region for visitors.	VI	IC, IMP	Ongoing	Highly variable	Highly variable	Cost to the Indy Chamber will primarily be staff time.
4.3	Work with relevant partners to develop "homegrown" industry events that align with the region's target business sectors, allowing the region to expose its assets and opportunities to global audiences, and strengthen its identity with respect to specific sectors and niche technologies.	IC, IMP	CICP, ANI, BIO, CON, ESN, TP, BIZ, HE, LEDO	2018	\$10,000 annually	\$20,000 annually	Any costs incurred by the Indy Chamber associated with the development of new homegrown events should be offset by revenues generated from such events, although such costs (and revenues) should be incurred (and earned) by an event organizer/manager. Annual cost estimate captures potential event sponsorship associated with one or two homegrown events relevant to target sectors.

BUDGET AND FUNDRAISING

The practice of economic development is highly labor-intensive work. Accordingly, much of the additional cost associated with implementing the CEDS is associated with new personnel that will be required to effectively carry out the strategy's recommendations. Once the necessary staff capacity was identified, the *Market Street* team developed preliminary estimates of potential costs associated with the implementation effort. An estimated cost range (a "low" estimate and a "high" estimate) associated with the implementation of each recommendation was developed when possible, with these costs outlined in the preceding implementation matrices. Similar cost ranges associated with potential new staff were also developed based on reasonable hiring ranges and incorporated all personnel-related costs.

In developing these preliminary estimates, it has been assumed that all pre-existing Indy Chamber operations (and associated expenditures) will be maintained *in terms of capacity*. That is to say, for example, that although the Indy Partnership is to be integrated into a new Regional Economic Development department at the Indy Chamber, its existing staff and expenditures associated with day-to-day operations will become part of this new department. Similarly, existing capacity and operations within the Entrepreneur Services division will be maintained. When pre-existing positions are eliminated within the new, proposed structure, it is assumed that these existing employees will remain with the organization and be repositioned into a similar role within the new structure. Accordingly, the cost estimates that follow related to personnel reflect *net* new positions, and net new costs associated with these positions. With these assumptions in place, a budget for the Indy Chamber's new Regional Economic Development department that reflects existing and necessary new capacity (staff and program expenditures) can be established.

Aforementioned cost ranges for staff and program costs are aggregated to arrive at five-year totals of required expenditures (again, a "low" and a "high estimate). This additional expenditure is added to pre-existing expenditure levels to arrive at a five-year fundraising goal for 2016 – 2020. A summary of these estimates follows.

PERSONNEL COSTS

As previously mentioned, significant additions to staff capacity at the Indy Chamber will be necessary to effectively carry out the CEDS recommendations and build a foundation for long-term effectiveness in service delivery. These enhancements should also build the organizational capacity that is necessary to place the Indy Chamber on par with its principal competitors in a highly competitive world of regional economic development; a world where the competition is constantly investing more and more, and enhancing capacity even in troubled or stagnant economic times. They should also ensure that local partners – LEDOs and local governments – are receiving a far greater return on their investment.

Based on reasonable hiring ranges for the positions outlined in the "Staff Capacity" section of this Implementation Plan, a reasonable annual budget for the recommended new hires ranges from \$1.05 – \$1.30 million, depending upon qualifications and the benefits and incentives provided. This level of expenditure will be necessary beginning in 2017 given that all recommended new positions have a recommended start date of no later than January 2017. Given that there are many high priority positions recommended to start in early- or mid-2016, roughly \$700,000 – \$875,000 in additional personnel

expenditure will be necessary to support these recommended hires in 2016. When accounting for a roughly five percent increase in annual personnel costs (cost of living increases, performance increases, benefits cost increases, etc.) this results in a five-year total of net new personnel cost equal to \$5.25 – \$6.50 million.

PROGRAM COSTS

Using the startup and annual cost estimates provided for individual recommendations in the implementation matrices, a range of total “program” (non-personnel) costs was estimated. Two important assumptions were made in developing these estimates. First, it was assumed that the non-personnel budget for Entrepreneur Services outlined in the “cost notes” section of the implementation matrix relevant to recommendation 2.1 (the enhancement of Entrepreneur Services) is phased in over the five-year period from a low of \$150,000 in 2016 to a high of \$500,000 in 2017. Second, the cost estimates do not include a budget for the recommended employer-driven workforce initiative (recommendation 1.1); this budget will be determined by CICIP (the lead implementer) in the near future. Once it is determined, the annual budget for this initiative could be integrated into the budget and fundraising needs identified herein should CICIP and the Indy Chamber determine that a joint or coordinated fundraising arrangement would be beneficial.

Based on the aforementioned assumptions, and the startup and annual cost estimates provided for individual recommendations in the implementation matrices, a reasonable budget for programmatic (non-personnel) expenditures associated with CEDS implementation ranges from a low of \$535,000 to a high of \$720,000 in 2016. Programmatic costs (inclusive of startup and recurring annual expenditures) increase over time in accordance with the implementation timeline outlined in the implementation matrices. By 2020, programmatic expenditures associated with the CEDS could rise from a low of \$880,000 to a high of \$1,090,000.

TOTAL BUDGET

When combined, the programmatic and personnel expenditure estimates provide a reasonable budget for new expenditures to be incurred by the Indy Chamber associated with CEDS implementation. The table that follows provides a summary of the net new cost ranges for personnel and programs, as well as annual and five-year totals.

	Personnel (Low)	Personnel (High)	Programs (Low)	Programs (High)	Total (Low)	Total (High)
2016	\$700,000	\$875,000	\$535,000	\$720,000	\$1,235,000	\$1,595,000
2017	\$1,050,000	\$1,300,000	\$630,000	\$835,000	\$1,680,000	\$2,135,000
2018	\$1,102,500	\$1,365,000	\$800,000	\$1,045,000	\$1,902,500	\$2,410,000
2019	\$1,157,625	\$1,433,250	\$830,000	\$1,040,000	\$1,987,625	\$2,473,250
2020	\$1,215,506	\$1,504,913	\$880,000	\$1,090,000	\$2,095,506	\$2,594,913
Five-Year Total	\$5,225,631	\$6,478,163	\$3,675,000	\$4,730,000	\$8,900,631	\$11,208,163

The five-year estimates (\$8.9 – \$11.2 million) presented in the preceding section provide a range of the additional monies that will need to be raised to support implementation of the CEDS, above and beyond those already devoted to Regional Economic Development at the Indy Chamber (and its current, associated business units: the Indy Partnership, Develop Indy, and Entrepreneur Services). Combining annual estimates of new expenditures with existing budgets for these three business units will provide an estimate of the

budget necessary to support a new, consolidated Regional Economic Development department at the Indy Chamber and its role in implementing the CEDS. Current budgeted expenditure for the three aforementioned business units in 2015 totals roughly \$3.1 million. When combined with estimates of new expenditures, we arrive at annual budgets for all Regional Economic Development department operations ranging from \$4.50 – \$4.85 million in 2016, rising to \$6.05 – \$6.55 million in 2020.

Fundraising

As previously mentioned, the total budget estimates provided in the preceding section assume that all pre-existing operations, including all contracted staff and operations devoted to the City of Indianapolis Economic Development (currently doing business as Develop Indy) are maintained. Accordingly, when developing estimates of required fundraising, it should be assumed that the revenues associated with these contracts are maintained. The same is true for all grant and contract revenues currently received by Entrepreneur Services and its various units (BOI, CISBDC, etc.), as well as LEDO dues paid to the Indy Partnership (10 cents per capita within each jurisdiction). At present, these contract and grant revenues comprise roughly two-thirds of all revenues (approximately \$2 million out of \$3 million total) supporting the three business units (Indy Partnership, Develop Indy, and Entrepreneur Services) that will collectively comprise a new, consolidated Regional Economic Development department at the Indy Chamber.

Without question, there is a significant need to raise additional private monies to support the implementation of this strategy and the enhancement of Regional Economic Development activities at the Indy Chamber. The organization and the region are fortunate to have such strong support from the public sector, and indeed, many other regions would be envious of this commitment from the public sector. But the current funding structure of activities that comprise the new Regional Economic Development department is unquestionably skewed towards public funding. Simply put, the Indy Chamber (as the lead implementer of the region's CEDS) and the business community it represents must considerably elevate the level of private funding for Regional Economic Development if they wish to build the necessary capacity to effectively implement the strategy, and to develop an organization that is sustainably funded in a manner that is in line with best practice, public-private, regional economic development partnerships.

As previously mentioned, current budgeted expenditure for the three business units that currently comprise Regional Economic Development operations at the Indy Chamber totals roughly \$3.1 million in 2015. When combined with estimates of new expenditures, we arrive at annual budgets for all Regional Economic Development department operations ranging from \$4.50 – \$4.85 million in 2016, rising to \$6.05 – \$6.55 million in 2020. In total, this equates to a five-year fundraising goal of roughly \$26.9 – \$29.2 million, or roughly \$5.38 – \$5.84 million annually. This would be an ambitious goal for a region the size of Metro Indianapolis if it did not include roughly \$2 million in contracted services each year. Assuming these contracted services and associated revenues are maintained and included in the capital campaign and fundraising effort associated with the CEDS, Market Street believes that that Indy region can certainly attain this level of private support for regional economic development (roughly \$3.4 – \$3.8 million annually or \$17.0 – \$19.0 million over five years).

That being said, fundraising efforts must begin immediately as there are considerable new expenditures that will need to be incurred in 2016. The Indy Chamber will need to secure some early commitments from investors willing to make a sizeable, upfront contribution that can help get new operations off the ground. It is also important to recall that the fundraising goal does not incorporate a budget for the recommended workforce initiative (recommendation 1.1) to be led by CICIP. As previously mentioned, any agreements with CICIP (or other implementation partners) to coordinate fundraising via a joint campaign would certainly be welcomed, and fundraising goals should be adjusted accordingly.

The Indy Chamber and the Implementation Committee should give consideration to branding the regional economic development campaign. Many regional chambers of commerce and economic development organizations have similar campaigns that are branded in a manner that reflect the element of public-private partnership, the timing of the campaign, and broad strategic objectives. Examples of such regional economic development campaigns led by chambers of commerce include *Partnership 2020* (Nashville Area Chamber of Commerce), *Opportunity Austin* (Greater Austin Chamber of Commerce), and *Tulsa's Future* (Tulsa Regional Chamber).

Ultimately, a successful fundraising campaign will build a Regional Economic Development department that is on par with or exceeds the capacity of the Indy region's peer chambers of commerce and economic development organizations. It will help transition the Indy Chamber and the region's economic development operations to a model that is not only more strategic and service-oriented, but also one that is less reliant on public funding and contract revenues, and more heavily supported by the private sector.

PERFORMANCE MEASUREMENT

Performance measurement is critical to any economic development or community improvement initiative. The process of establishing and tracking performance metrics will allow the Indy Chamber, the Implementation Committee, and the community at-large to assess progress towards implementing the Indianapolis Regional CEDS. Metrics can help determine if implementation is having the desired impact and producing the desired return on investment.

Market Street recommends that the Indy Chamber and the Implementation Committee track performance for three distinct sets of metrics:

1. **Regional Context:** These metrics represent regional outcomes that may be impacted by effective implementation of the strategy's recommendations but are heavily influenced by a variety of other factors unrelated to implementation and outside the control of implementing organizations. They measure the region's performance in key demographic, socioeconomic, economic, and quality of life attributes that the CEDS seeks to impact. Measuring performance in these indicators – employment, high school graduation rates, net migration, etc. – can help provide the appropriate "regional context" for more specific metrics that are directly tied to implementation of specific recommendations.
2. **Implementation Progress:** These metrics are more closely tied to individual recommendations within the CEDS and are thus more directly – and in many cases, exclusively – influenced by the implementation effort. They measure activities carried out by the implementing organizations.
3. **Public Reporting:** These metrics represent some of the most important regional outcomes and activities that the CEDS intends to influence; they are a subset of the Regional Context and Implementation Progress metrics described above. This smaller subset can be used in public reporting whereas the more comprehensive list of Regional Context and Implementation Progress metrics can be utilized internally by the Indy Chamber and the Implementation Committee to ensure that they are well informed through a wider variety of measures of the community's overall performance (the "regional context" metrics) and their collective performance in advancing implementation (the "implementation progress" metrics).

The following pages outline suggested metrics in the first two aforementioned categories. A limited subset of these metrics have been selected by *Market Street Services* with input from Indy Chamber staff to serve as potential "public reporting" metrics. These recommended "public reporting" metrics are included on the final page of this Implementation Plan, and should be reviewed by the Implementation Plan for their suitability.

REGIONAL CONTEXT

Potential “regional context” metrics (organized by pillar) to monitor annually include but are not limited to:

Overall Strategy (all pillars)

- ✓ Total employment
- ✓ Gross metropolitan product per employee
- ✓ Average annual wage
- ✓ Per capita income
- ✓ Poverty rate
- ✓ Annual net migration
- ✓ Percentage of all adults (age 25+) with an associate’s degree or higher
- ✓ Percentage of all adults (age 25+) with a bachelor’s degree or higher

First Pillar: Educated & Talented Workers

- ✓ Employment by business sector (for target sectors)
- ✓ Average annual wage by sector (for target sectors)
- ✓ Self-employment/sole proprietorship rates
- ✓ Percentage of employment in small businesses (firms with 0-19 employees)
- ✓ Academic research and development expenditures
- ✓ Exports per employee
- ✓ Percentage of business expenditures that leave the region each year
- ✓ Venture capital investment received
- ✓ Percentage of venture capital sourced from in-state funds

Second Pillar: Innovative & Enterprising Businesses

- ✓ Enrollment in pre-K programs
- ✓ State and local funding for pre-K
- ✓ Enrollment in STEM career clusters (by district and regionwide)
- ✓ Ratio of students to college and career counselors (by district and regionwide)
- ✓ High school graduation rates (by district)
- ✓ College matriculation rates (by district when available)
- ✓ Ivy Tech enrollment by program
- ✓ Ivy Tech degree completions
- ✓ Total higher education enrollment
- ✓ Percentage of annual in-migrants with a bachelor’s degree or higher
- ✓ Percentage of adults age 25-44 with a bachelor’s degree or higher

Third Pillar: Attractive & Connected Places

- ✓ IndyGo ridership (number of trips, number of riders, etc.)
- ✓ IndyGo operating expense per unlinked passenger trip
- ✓ BlueIndy usage (number of users, number of stations, number of vehicles in fleet, etc.)
- ✓ Pacers BikeShare usage (number of users, number of stations, number of bicycles in fleet, etc.)
- ✓ Number of businesses utilizing Commuter Connect programs
- ✓ Number of businesses with workplace policies and/or incentives supporting alternative commute modes
- ✓ Number of direct connections from Indianapolis International Airport
- ✓ Air cargo handled (lbs.) at Indianapolis International Airport

Fourth Pillar: Vibrant & Inviting Image

- ✓ Number of positive stories about the region in national media outlets
- ✓ Travel and tourism metrics (economic and fiscal impact of travel and tourism, average visitor spending, RevPAR, hotel occupancy rates, etc.)
- ✓ Survey data on resident and non-resident opinions of the Indy region

IMPLEMENTATION PROGRESS

Potential “implementation progress” metrics (organized by pillar) to monitor annually include but are not limited to:

First Pillar: Educated & Talented Workers

- ✓ Number of students reenrolled through “Reach Out to Dropouts” walks
- ✓ Number of participants in Xtern, the Orr Fellowship, and other programs
- ✓ Number of participants in potential new programs (i.e. IndyCorps/CityCorps, College Crews, etc.)

Second Pillar: Innovative & Enterprising Businesses

- ✓ Economic development project activity metrics (jobs created/retained, investment, average wage, etc.)
- ✓ BRE program activity (by county and regionwide): number of in-person visits, telephone interviews, surveys completed, existing business satisfaction, etc.
- ✓ Development of a “digital front door” and completion of a startup ecosystem “network map”
- ✓ Number of businesses receiving BOI microloans
- ✓ Amount of BOI microlending
- ✓ Number of businesses receiving export promotion assistance
- ✓ Number of businesses accepting the Billion Dollar Challenge
- ✓ Estimated business expenditure retained via the Billion Dollar Challenge (and associated economic and fiscal impact figures in terms of jobs, earnings and tax revenues)
- ✓ Formation and number of participants in the Capital Alliance
- ✓ Number of tenants (research teams and/or total staff) at IBRI
- ✓ Number of tenants (businesses or other organizations) and total employment at 16 Tech and other regional innovation districts

Third Pillar: Attractive & Connected Places

- ✓ Success towards transportation and infrastructure policy priorities on Indy Chamber legislative agenda
- ✓ Development of plan to improve awareness of freight forwarding opportunities
- ✓ Redevelopment of Indy Fast Track sites
- ✓ Development of new amenities and measures of patronage

Fourth Pillar: Vibrant & Inviting Image

- ✓ Formation and participation in the informal Regional Marketing Alliance
- ✓ Social media metrics/impressions associated with internal and external talent marketing campaigns
- ✓ Number of face-to-face impressions via inbound and outbound economic development marketing trips
- ✓ Web traffic statistics for key regional and destination marketing websites
- ✓ Sporting events hosted (professional, amateur, youth)
- ✓ Target sector-related events hosted (attendance, number of events, etc.)
- ✓ Target sector-related “homegrown” events (attendance, number of events, etc.)

PUBLIC REPORTING

The following subset of the aforementioned “Regional Context” metrics should be considered by the Implementation Committee for public reporting purposes. The list that follows reflects the bear minimum that the Implementation Committee should consider in for its public reporting activities. In addition to the subset below, the Implementation Committee should track progress towards all “Implementation Progress” metrics over time and report implementation successes to the public as they occur or when otherwise appropriate.

Market Street Services has developed a corresponding set of measureable goals for each metric based on our analysis of recent trends and potential future performance. These goals can be used to communicate desired impacts of effective implementation when communicating with investors, partners, and the public at-large.

- ✓ **Income growth:** Support annual per capita income (PCI) growth of 3.25 percent or greater, exceeding the historical regional and national averages of 2.1 percent and 3.0 percent between 2000 and 2013, respectively.
- ✓ **Job creation:** Support the creation of at least 60,000 net new jobs in the Indianapolis region between January 2016 and January 2021.
- ✓ **Talent attraction and retention:** Aid net migration to the Indianapolis region to an annual average of 10,000 net new residents (in-migration minus out-migration), up from an annual average of roughly 6,000 net new residents between 2000 and 2011.
- ✓ **Educational attainment:** Improve adult educational attainment in the region, reflected by an increase in the percentage of adults (age 25 and over) with at least a bachelor’s degree from 30.8 percent in 2013 to 35.0 percent in 2020, and the percentage of adults with at least an associate’s degree from 38.5 percent in 2013 to 45.0 percent in 2020.
- ✓ **Young professional attraction and retention:** Elevate the percentage of in-migrants with a bachelor’s degree or higher from 33.2 percent in 2013 to at least 45 percent in 2020.
- ✓ **Student achievement and college and career readiness:** Elevate graduation rates in underperforming school districts at an annual rate that exceeds the statewide and national rates of improvement, with a corresponding goal that all regional school districts will possess graduation rates at or above the statewide average by 2020.
- ✓ **Venture capital environment:** Improve the share of venture capital invested that is sourced from in-state venture capital funds from 13.7% in 2013 to at least 25% in 2020.

APPENDIX A: PRE-EXISTING RESEARCH RELEVANT TO SECTOR COMPETITIVENESS

The following studies and reports were reviewed by the *Market Street Services* team in the process of evaluating sector competitiveness.

- ✓ *Technology Workforce Report: Employment Trends and the Demand for Computer-Related Talent in Central Indiana*, TechPoint (2014).
- ✓ *Technology Workforce Report: Defining the Demand – the Tech Skills Central Indiana Companies Need to Grow*, TechPoint (2014).
- ✓ *Re-Examining the Need for Innovation Capital to Advance Life Science Development in Indiana*, Battelle Technology Partnership Practice prepared for BioCrossroads (2014).
- ✓ *Innovative Agbioscience in Indiana: A Baseline Assessment*, Battelle Technology Partnership Practice prepared for AgriNovus Indiana of Central Indiana Corporate Partnership (2014).
- ✓ *Manufacturing and Logistics Report*, Ball State University Center for Business and Economic Research (2014).
- ✓ *Delivering Indiana’s Logistics Future*, Conexus Indiana (2014).
- ✓ *Hire Up Indy! Supporting our Wealth Driving Sectors: The Supply of Technical Talent in Central Indiana*, EmployIndy (2014).
- ✓ *Indy FastTrack*, City of Indianapolis (2014).
- ✓ *Manufacturing and Labor Market Frictions*, Ball State University Center for Business and Economic Research prepared for Conexus Indiana (2014).
- ✓ *Blue Ribbon Panel on Transportation Infrastructure: Final Report to Governor Pence* (2014).
- ✓ *A Strategic Plan for Indiana’s Automotive Industry*, Indiana Automotive Council/Conexus Indiana (2013).
- ✓ *Indiana Manufacturing Survey*, Katz, Sapper and Miller & Indiana University (2013).
- ✓ *Indiana’s Competitive Advantage: The Opportunity to Win the Global Competition for College Educated Talent*, Battelle Technology Partnership Practice prepared for the Central Indiana Corporate Partnership (2012).
- ✓ *Race to the Future: The Statewide Impact of Motorsports in Indiana*, Purdue Center for Regional Development (2012).
- ✓ *Food and Agricultural Innovation: 21st Century Opportunities for Indiana*, BioCrossroads (2012).
- ✓ *Indiana’s Life Science Industry: 2002-2010*, BioCrossroads (2011).
- ✓ *Building National Security: The Economic Impact of Indiana’s Defense Industry*, Indiana Business Research Center (2011).
- ✓ *Indiana’s Forgotten Middle Skills Jobs*, Skills2Compete-Indiana (2010).
- ✓ *Phase I: A Plan for Indiana’s Logistics Future*, Conexus Indiana (2010).
- ✓ *Indiana Multimodal Freight and Mobility Plan*, Cambridge Systematics prepared for the Indiana Department of Transportation (2009).

APPENDIX B: TARGET SECTOR DATA TABLES

The following tables provide a broad review of key trends in employment and earnings for the Indianapolis region as compared to the United States. These tables provide information on a variety of business sectors that are related to the region's existing sector strengths and niche technologies. It is important to note that these lists of subsectors and corresponding NAICS codes are not intended to be rigid definitions of clustered economic activities in the region. As mentioned previously in the report, the North American Industrial Classification System lags the innovation that occurs within our economy, and accordingly, there are inherent challenges associated with their use in attempting to define specific employment levels in rapidly-changing business sectors.

RELATED BUSINESS SECTOR TRENDS: LIFE SCIENCES, 2004-2014

NAICS	Description	Location Quotient (2014)	Net Change in Jobs (2014)	% Change in Jobs (04-14)	Net Change in Jobs (14-24)	% Change in Jobs (14-24)	U.S % Change in Jobs (04-14)	Average Earnings	% of U.S.
Existing Sector Strengths									
3251	Basic Chemical Manufacturing	0.9	865	333	62.6%	50	5.7%	-7.1%	\$92,174 77.5%
3253	Pesticide/Fertilizer/Chemical Mfg.*	7.1	1,800	-281	-13.5%	-371	-20.6%	-10.9%	\$140,064 137.6%
3254	Pharmaceutical/Medicine Mfg.	7.1	13,498	-427	-3.1%	-568	-4.2%	-2.5%	\$190,089 129.0%
New Technology Focus									
1110	Crop Production	0.6	3,521	706	25.1%	170	4.8%	-6.1%	\$33,975 111.1%
1120	Animal Production	0.3	920	-420	-31.4%	-211	-22.9%	-10.9%	\$44,125 137.2%
3391	Medical Equipment/Supplies Mfg.	1.0	2,233	-1,865	-45.5%	-72	-3.2%	3.3%	\$64,157 70.8%
3345	Electromedical/Ctrl. Instr. Mfg.**	0.9	2,255	-574	-20.3%	-223	-9.9%	-11.2%	\$96,131 88.1%
4234	Prof./Comm. Equip./Supplies Whls.	1.3	5,818	-672	-10.4%	528	9.1%	-1.4%	\$88,219 84.1%
4242	Drugs/Druggists' Sundries Whls.	0.9	1,184	272	29.8%	192	16.2%	-12.3%	\$92,823 77.7%
5417	Scientific R&D Services	0.5	2,424	422	21.1%	378	15.6%	15.9%	\$121,253 95.0%
Total		1.3	34,519	-1,642	-4.1%	1,431	3.7%	0.1%	\$118,388 139.6%
Total, All Sectors			1036218	78,254	8.2%	137,899	13.3%	4.5%	\$54,511 93.9%

Source: EMSI

*Includes Other Agricultural Chemical Manufacturing; **Includes Navigational and Measuring Instrument Manufacturing

RELATED BUSINESS SECTOR TRENDS: MANUFACTURING, 2004-2014

NAICS	Description	Location Quotient (2014)	Net Change in Jobs (2014)	% Change in Jobs (04-14)	Net Change in Jobs (14-24)	% Change in Jobs (14-24)	U.S % Change in Jobs (04-14)	Average Earnings	% of U.S.
Existing Sector Strengths									
332	Fabricated Metal Product Mfg.	1.2	12,013	-80	-0.7%	655	5.5%	-3.6%	\$67,453 107.5%
327	Nonmetallic Mineral Product Mfg.	1.5	3,986	13	0.3%	506	12.7%	-23.2%	\$65,752 103.3%
331	Primary Metal Manufacturing	1.2	3,159	-436	-12.1%	38	1.2%	-15.0%	\$78,247 100.4%
333	Machinery Manufacturing	0.9	7,472	-1,931	-20.5%	-395	-5.3%	-2.3%	\$65,162 82.4%
336	Transportation Equip. Mfg.	1.3	14,408	-8,546	-37.2%	-837	-5.8%	-12.7%	\$97,196 112.6%
New Technology Focus									
334	Computer/Electronic Product Mfg.	0.5	3,675	-1,736	-32.1%	21	0.6%	-20.2%	\$85,081 70.6%
335	Elec. Equip./Appliance/Comp. Mfg.	0.4	1,017	185	22.3%	-149	-14.6%	-15.4%	\$69,889 82.4%
Other Manufacturing Activities									
324	Petroleum/Coal Products Mfg.	0.4	291	-89	-23.5%	-46	-15.9%	0.6%	\$131,746 79.1%
325	Chemical Manufacturing	3.1	17,101	-568	-3.2%	-965	-5.6%	-9.3%	\$173,726 148.3%
326	Plastics/Rubber Products Mfg.	0.7	3,336	-2,286	-40.7%	-126	-3.8%	-17.6%	\$62,038 102.9%
339	Miscellaneous Manufacturing	0.9	3,989	-1,796	-31.0%	-429	-10.8%	-11.6%	\$64,834 82.3%
Total		1.2	70,447	-17,269	-19.7%	-1,727	-2.5%	-11.7%	\$100,295 117.4%
Total, All Sectors			1,036,218	78,254	8.2%	137,899	13.3%	4.5%	\$54,511 93.9%

Source: EMSI

RELATED BUSINESS SECTOR TRENDS: LOGISTICS, 2004-2014

NAICS	Description	Location Quotient (2014)	Net Change in Jobs (2014)	% Change in Jobs (04-14)	Net Change in Jobs (14-24)	% Change in Jobs (14-24)	U.S % Change in Jobs (04-14)	Average Earnings	% of U.S.	
Existing Sector Strengths										
4231	Motor Vehicle/Parts/Supplies Whls. Professional/Comm.	1.9	4,478	405	9.9%	342	7.6%	-2.1%	\$61,871	107.3%
4234	Equipment/Supplies Whls.	1.3	5,818	-672	-10.4%	528	9.1%	-1.4%	\$88,219	84.1%
4235	Metal/Mineral Wholesalers*	1.6	1,404	141	11.2%	345	24.6%	4.0%	\$61,439	84.0%
4236	Household Appliances/Electrical/Electronic Goods Whls.	1.3	2,886	-1,019	-26.1%	-1,018	-35.3%	-5.1%	\$73,397	80.1%
4237	Hardware/Plumbing/Heating Equipment/Supplies Whls.	1.5	2,448	18	0.8%	532	21.7%	-1.1%	\$73,404	103.4%
4238	Mach./Equipment/Supplies Whls.	1.3	6,111	-1,406	-18.7%	206	3.4%	3.4%	\$76,623	103.0%
4246	Chemical/Allied Products Whls.	1.0	921	-116	-11.2%	-23	-2.5%	-2.2%	\$75,378	85.8%
4249	Misc. Nondurable Goods Whls.	1.0	2,448	762	45.2%	20	0.8%	-10.5%	\$58,799	105.6%
4541	Electronic Shopping Houses*	3.2	7,647	5,739	300.7%	1,564	20.4%	41.9%	\$43,227	71.0%
4811	Scheduled Air Transportation	2.1	5,910	3,358	131.6%	456	7.7%	-11.3%	\$59,702	65.1%
4841	General Freight Trucking	2.0	15,857	3,673	30.1%	3,316	20.9%	-1.6%	\$55,225	104.2%
4842	Specialized Freight Trucking	1.1	3,389	459	15.7%	1,056	31.2%	7.2%	\$50,856	91.2%
4881	Support Activities for Air Trans.	1.6	1,968	1,044	112.9%	750	38.1%	22.8%	\$62,865	114.4%
4931	Warehousing and Storage	2.7	13,869	3,888	38.9%	2,996	21.6%	32.7%	\$45,306	88.1%
New Technology Focus										
4251	Whls. Electr. Markets/Brokers**	0.6	3,557	923	35.0%	1,473	41.4%	30.6%	\$74,741	72.9%
4885	Freight Trans. Arrangement	0.9	1,284	75	6.2%	-20	-1.5%	13.8%	\$60,581	90.4%
5416	Mgmt./Sci./Tech. Consulting Svcs.	0.8	8,321	3,894	87.9%	3,740	44.9%	56.5%	\$74,192	85.6%
Other Logistics Activity										
4239	Misc. Durable Goods Whls.	0.7	1,632	-544	-25.0%	88	5.4%	15.1%	\$49,610	89.1%
4242	Drugs/Druggists' Sundries Whls.	0.9	1,184	272	29.8%	192	16.2%	-12.3%	\$92,823	77.7%
4244	Grocery/Related Product Whls.	0.9	4,641	642	16.0%	530	11.4%	7.4%	\$51,597	86.9%
4812	Nonscheduled Air Transportation	0.3	85	-2,386	-96.6%	-42	-50.0%	-8.3%	\$82,483	84.4%
4821	Rail Transportation	0.8	1,398	-33	-2.3%	-30	-2.1%	7.4%	\$81,991	98.7%
4882	Support Activities for Rail Trans.	0.3	57	-1	-1.5%	-18	-31.3%	42.6%	\$52,438	89.1%
4884	Support Activities for Road Trans.	0.8	586	42	7.6%	50	8.6%	17.3%	\$37,717	95.7%
Total		1.4	97,901	19,157	24.3%	17,031	17.4%	12.0%	\$60,994	82.5%
Total, All Sectors			1,036,218	78,254	8.2%	137,899	13.3%	4.5%	\$54,511	93.9%

Source: EMSI

*Includes Mail Order Houses

RELATED BUSINESS SECTOR TRENDS: INFORMATION TECHNOLOGY, 2004-2014

NAICS	Description	Location Quotient (2014)	Net		% Change		U.S %		Average	
			Jobs (2014)	Change in Jobs (04-14)	Change in Jobs (04-14)	Change in Jobs (14-24)	Change in Jobs (14-24)	Change in Jobs (04-14)	Earnings	% of U.S.
Existing Sector Strengths										
5415	Comp. Sys. Design/Related Svcs.	1.1	13,995	6,501	86.7%	7,455	53.3%	44.4%	\$108,956	99.3%
5171	Wired Telecom. Carriers	1.0	4,039	-1,809	-30.9%	-385	-9.5%	-16.8%	\$92,597	93.7%
5172	Wireless Telecom. Carriers*	1.0	1,019	329	47.8%	867	85.1%	-17.1%	\$89,265	99.9%
New Technology Focus										
5182	Data Proc./Hosting/Related Svcs.	0.8	1,514	549	57.0%	157	10.4%	1.0%	\$85,728	80.6%
5191	Other Information Services	0.2	306	200	188.5%	87	28.6%	131.3%	\$68,443	38.0%
5417	Scientific R&D Services	0.5	2,424	422	21.1%	378	15.6%	15.9%	\$121,253	95.0%
5418	Adver./Pub. Relations/Related Svcs.	0.6	2,208	-426	-16.2%	-301	-13.6%	-3.7%	\$62,981	77.2%
5419	Other Prof./Sci./Technical Svcs.	0.8	3,973	487	14.0%	896	22.6%	24.5%	\$41,663	84.8%
Total		0.9	29,783	6,452	27.7%	9,242	31.0%	5.7%	\$74,555	80.9%
Total, All Sectors			1,036,218	78,254	8.2%	137,899	13.3%	4.5%	\$54,511	93.9%

Source: EMSI

*Excludes Satellite Communication

RELATED BUSINESS SECTOR TRENDS: SPORTS, 2004-2014

NAICS	Description	Location Quotient (2014)	Net		% Change		U.S %		Average	
			Jobs (2014)	Change in Jobs (04-14)	Change in Jobs (04-14)	Change in Jobs (14-24)	Change in Jobs (14-24)	Change in Jobs (04-14)	Earnings	% of U.S.
Existing Sector Strengths										
7112	Spectator Sports	2.5	3,226	-1,011	-23.9%	182	5.6%	16.9%	\$134,588	120.2%
7113	Promoters of Sports*	0.7	589	29	5.2%	48	8.2%	47.0%	\$39,577	98.3%
New Technology Focus										
6211	Offices of Physicians	1.1	18,542	3,790	25.7%	5,780	31.2%	19.8%	\$117,234	118.9%
6213	Offices of Othr. Health Practitioners	1.1	6,627	2,893	77.5%	3,374	50.9%	37.4%	\$49,057	104.1%
6221	General Medical/Surgical Hospitals	1.2	36,933	6,875	22.9%	7,643	20.7%	10.7%	\$62,859	91.0%
6223	Specialty Hospitals^	1.9	2,690	989	58.2%	1,393	51.8%	41.2%	\$64,483	95.3%
Other Sports Activities										
7114	Agents and Mgmt. for Athletes**	0.4	83	11	14.6%	-35	-42.6%	19.4%	\$83,253	97.3%
7139	Other Amusement/Rec. Industries	0.8	6,724	88	1.3%	419	6.2%	12.5%	\$18,943	84.8%
7111	Traveler Accommodation	0.7	8,474	625	8.0%	621	7.3%	6.3%	\$26,815	58.1%
7223	Special Food Services	1.1	5,645	2,314	69.5%	1,546	27.4%	15.3%	\$21,317	87.7%
7224	Drinking Places (Alcoholic Bev.)	1.2	3,165	208	7.0%	343	10.8%	-1.6%	\$18,162	99.7%
7225	Restaurants/Other Eating Places	1.1	72,111	12,308	20.6%	4,594	6.4%	21.2%	\$17,025	90.0%
6116	Other Schools and Instruction	0.9	2,974	986	49.6%	620	20.8%	45.4%	\$16,180	72.9%
Total		1.1	159,310	29,482	22.7%	25,907	16.3%	18.7%	\$44,186	104.2%
Total, All Sectors			1,036,218	78,254	8.2%	137,899	13.3%	4.5%	\$54,511	93.9%

Source: EMSI

*Includes Arts and Similar Events

**Includes Artist, Entertainers, and Other Public Figures

^ Excludes Psychiatric and Substance Abuse Hospitals

APPENDIX C: BEST PRACTICES

12 FOR LIFE, SOUTHWIRE AND CARROLL COUNTY SCHOOLS (CARROLTON, GA)

12 For Life is a public-private partnership formed by Southwire and Carroll County Schools to address the community's dropout rate. Students, selected for the program, are identified by graduation coaches, counselors, or program administrators in Carroll County Schools as requiring additional support to complete high school. Upon selection, students are provided with a holistic effort to help them with support and guide them through graduation. Such support includes a one-on-one mentorship program that assists students with school and homework, advocates on their behalf, and guides them through issues like problem resolution, budgeting, social skills, and goal setting. Students also acquire soft skills in areas of team leadership, personal responsibility, and professional communication. Along with learning valuable life skills, students are given the opportunity to acquire in-demand job skills such in areas related to shipping; quality assurance; data entry; record keeping; and a variety of different technical skills that comes from hands-on experience working in a production facility.

In order to ensure the program's success, Southwire, a manufacturer of power transmission and distribution cables, constructed an independent operating facility to host 12 For Life students. The facility is operated by students who work in one of four shifts throughout the day, completing manufacturing-centric tasks to produce final products. These tasks include packaging products, assembling cable spools, and support functions (quality assurance and data entry) and, ultimately, lead to a final product that is shipped to Southwire customers. Through their labors, students earn a pay-check that is above minimum wage as well as an opportunity for increased performance-based pay.

Since 2007, 301 students who may not have otherwise obtained a high school diploma graduated from high school. Nearly 40 percent of the students go on to pursue their college education while others become full time Southwire employees.

ADVENTURES IN TECHNOLOGY, CATALYST CONNECTION & PITTSBURGH TECHNOLOGY COUNCIL (PITTSBURGH, PA)

Adventures in Technology is a program that brings together high school students in southwestern Pennsylvania students to solve real-world problems faced by regional manufacturers. Students are enrolled in an eight-week, hands-on project that involves designing, building, or re-engineering an existing product, process, or system. Throughout the eight week program, students meet company management and employees, tour the company facility, and receive an overview of the company's product, service area, and economic impact on the larger business economy. Past Adventures in Technology projects include:

Alternative Packaging Methods – Respironics, Inc., a medical respiratory product manufacturer, consulted with Franklin Regional High School (Westmoreland, PA) students to analyze packaging process for one of the company's products that were being damaged during shipping resulting in a return-to-manufacturer cost. Students designed and built a packaging prototype as well as an implementation cost savings estimate (\$11,000 annually).

Automobile Hard Drive – Seagate Technologies, a leading provider of computer storage products, partnered with Forbes Road Career and Technology Center (Allegheny, PA) students to design an automobile hard drive. As a final product, the students developed and installed a prototype hard drive with MP3 player capabilities into an automobile.

Mask Flow Chart – Students of Laurel Highlands (Fayette, PA) were utilized by Berkley Surgical, a medical manufacturer, to design a lean manufacturing process flow chart that would track a particular medical product throughout the manufacturing process. Students designed a process flow chart that included the delivery time of raw materials,

materials on-site, process materials, quality checks, staging area, packaging area and shipping. Berkley Surgical plans to implement the students' findings as a training tool for new employees.

Since the program's inception in 2002, more than 1,000 students from 50 high schools and technical schools have worked with over 50 companies. Along with immersing students in the day-to-day problems of businesses, manufacturers were given the opportunity to promote career opportunities in the local manufacturing community.

Adventures in Technology is funded by the Grable Foundation and the Society of Manufacturing Engineers in collaboration with the Pittsburgh Technology Council and Catalyst Connection, an economic development organization dedicated to advancing small and mid-size manufacturers in southwestern Pennsylvania.

FINANCIAL AID SATURDAYS, AUSTIN CHAMBER OF COMMERCE (AUSTIN, TEXAS)

While the Austin metro area has one of the most educated workforces in the nation, the Greater Austin Chamber recognized that much of the highly-educated population was the result of in-migration for high-technology sector jobs and University of Texas - Austin enrollment. With the support of three local school districts, six higher education institutions, and 12 community organizations and companies, the Greater Austin Chamber worked in the first phase of its "20,010 by 2010" program to boost local higher education enrollment by 30 percent over 48 months. The goal is to grow total regional enrollment in institutions of higher education to 20,010 by 2010.

A component of this effort was a program called Financial Aid Saturdays. In order to help meet increased higher education enrollment goals, the Chamber provided support to Austin, Round Rock, and Manor Independent School Districts (ISDs) to increase FAFSA (Free Application for Federal Student Aid) submission by 15 percent for students graduating in 2007. The Chamber organized and trained volunteers to make calls, answer questions, and walk students and their families through the process of applying for financial aid. In the first phase of the program, the Chamber's more than 200 volunteers assisted over 500 families in filing FAFSA applications.

REACH OUT TO DROPOUTS, HOUSTON INDEPENDENT SCHOOL DISTRICT (HOUSTON, TEXAS)

The Houston Independent School District first implemented a program in 2004 that sought to re-engage students who had recently dropped out of high school. This program – Reach Out to Dropouts – has been tremendously successful in its short history and has been adopted by other surrounding communities in Texas as well as other school districts nationwide. The program is supported by volunteers from throughout the community (concerned citizens, teachers, administrators, business leaders, and the United Way) who walk door-to-door in teams to visit the families of students that have not re-enrolled in school within the first few weeks of a new school year or failed to graduate the previous year for a variety of reasons.

During the 2008 walk in Houston, nearly 1,200 volunteers made contact with more than 680 students or parents, and 60 students began the re-enrollment process on the day of the walk. Many more re-enrolled in the following days with subsequent follow-ups by volunteers. The Fort Bend Independent School District replicated Houston's program in 2009. With only one participating high school, 68 volunteers visited 106 homes, contacted 72 students or parents, and re-enrolled 20 students. The Lamar Consolidated Independent School District, also in Fort Bend County, visited 65 homes, spoke with 37 families, and re-enrolled 26 students.

The initiative has since been expanded to 13 school districts in the Houston metropolitan area, with many other Texas communities joining in recent years, including but not limited to Dallas, Fort Worth, El Paso, and San Antonio. Similar efforts have been coordinated in Des Moines, Iowa and other parts of the country.