Charting the next chapter for TechPoint and Indiana's tech ecosystem.

TECHPOINT
Strategic Plan

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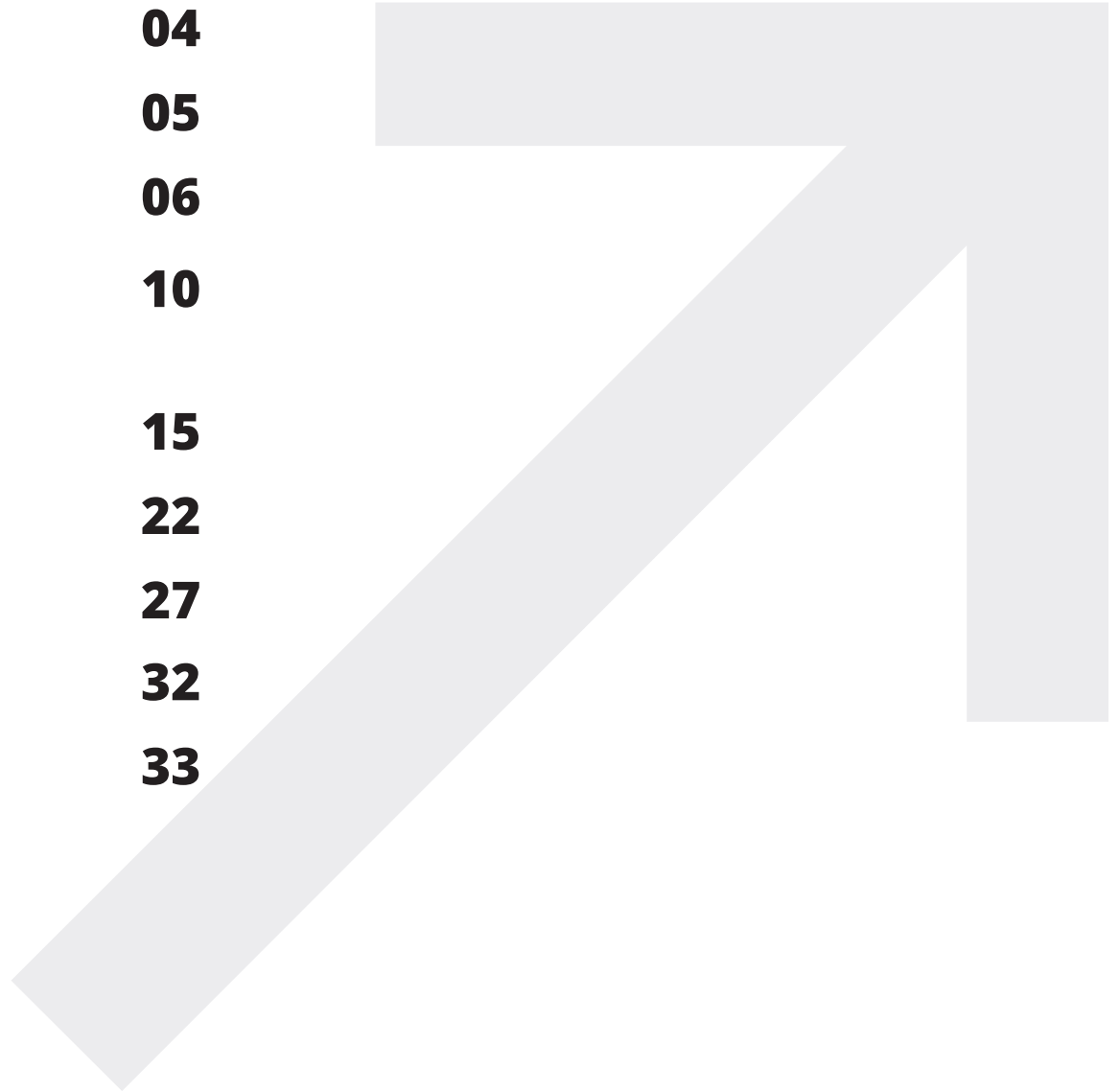
Welcome

The Indiana technology industry has grown to be one of the state's greatest job creators, adding 1 of every 10 new Hoosier jobs over the past decade, and contributing $51 billion annually to Indiana's GDP.

Since its inception in 2003, TechPoint has played a primary role in building, energizing, and giving voice to Indiana's tech community. It catalyzed venture capital formation and investment. It supported start-up and scale-up stage company growth. And it attracted and supplied in-demand talent.

Over the past decade the tech industry has also become a horizontal business enabler and disrupter. TechPoint grew and adapted to represent and support the expanded scope of the industry and tech employers. Now, more than 200 tech employers and educational providers around the state engage and invest in TechPoint programs and events every year. Those organizations range from startups and accelerators to global corporations, universities, and training providers. Moreover, Indiana's tech employers hail from software, hardware, IT services, and telecom, as well as manufacturing, financial services, agriculture, healthcare, and life sciences.

In the wake of pandemic-induced changes, rapid industry growth, accelerated rates of digital transformation, Diversity, Equity and Inclusion (DE&I) commitments, and the findings in Central Indiana Corporate Partnership's (CICP) Indiana GPS Project (April 2021), our TechPoint team and board recognized the need to reassess and refocus. In 2021, we partnered with consulting firm Fourth Economy to assist in an intensive strategic planning process consisting of dozens of stakeholder interviews; foundational research into TechPoint's history, programs, and team; and strategic planning sessions with the TechPoint leadership team and executive committee. The process surfaced several key insights and recommendations.

TechPoint, tech industry leadership, and state government leadership should select and commit to an impact goal compatible with the economy that we want to build.

> **Impact Goal: 230 by 2030.**
> **230,000 Hoosier tech workers by 2030.**
>
> That means adding more than 45,000 tech workers over the next decade, doubling the projected growth rate and significantly increasing diversity, ensuring a robust talent pool for employers, enriching career opportunities for citizens, and well over half a billion dollars more annually in state revenue to help fund services and quality of life amenities.

To ensure that this growth results in shared prosperity and a strong, sustainable economy, the plan for achieving this goal should prioritize and include metrics for diversity, startup creation and growth, and technology/sub-industry specialization.

Indiana and the tech industry are at an important inflection point. I want to thank all of the individuals who contributed their time and ideas to this process. The pages that follow highlight the research findings that resulted from this process, and the initiatives TechPoint plans to undertake to achieve the impact goal above. However, this goal is bigger than TechPoint. Reaching it will require "a village". TechPoint looks forward to working with partners to ensure that Indiana emerges with one of the next great tech economies, replete with economic prosperity for Hoosiers.

Mike Langellier
President & CEO

TechPoint History

In 2003, two IT industry organizations – the Indiana Software Association (ISA) and the Indiana Information Technology Association (INITA) – merged to form TechPoint. In 2006, TechPoint became part of the Central Indiana Corporate Partnership (CICP). Created in 1999, CICP brings together chief executives of Central Indiana's prominent corporations, foundations, and universities in a strategic and collaborative effort dedicated to the continued prosperity and growth of the region and state.

TechPoint is proud to produce the Mira Awards, an elite recognition program with a 22-year track record as the "Oscars of tech" in Indiana. The Mira Awards identify and spotlight exceptional individual and organizational achievements at the largest annual convening of Indiana's tech community.

TechPoint has played a pivotal role in tech venture capital formation and investment. From 2008 to 2014, it organized angel investors and millions of dollars of investment into startups through HALO Capital Group, and then later championed the passage of Governor Holcomb's $250 million Next Level Fund and the expansion of the venture capital investment (VCI) tax credit. Today, TechPoint attracts venture capital firms from across North America through its semiannual VC Speed Dating event, which has brought 86 firms from 23 states to Indiana and facilitated over 1,200 meetings with more than 150 Indiana companies since 2015.

In 2014, TechPoint released its Tech Workforce Report and began launching signature talent programs, most notably the Xtern internship program, but also the Grid, Sales Bootcamp, Red Carpet Experience, S.O.S. Challenge and others. More than 12,000 individuals have applied – most from Indiana but inclusive of all 50 states – and TechPoint has matched over 1,000 into jobs with Indiana tech employers. In 2019, TechPoint launched Jobs In Tech 101, including a web product and focused presentations to help students understand and pursue job opportunities.

TechPoint launched TechPoint Index in 2018 – a website resource with tech community news, profiles, community events, a job board, and a company directory. It now shares hundreds of stories and thousands of job postings to tens of thousands of subscribers and followers every year.

In 2019, TechPoint partnered with the Indiana Economic Development Corporation to help the state and the IEDC target and attract out-of-state tech employers looking to expand or relocate. Jobvite, Terminus and Celigo are just a few of the success stories to emerge since the advent of that partnership.

In July 2020, TechPoint set forth a DE&I action plan to boost the representation of Black and other underrepresented groups on TechPoint's board and in its programs, as well as to expand support for minority-led startups.

2003 - 2006	2008	2014	2018	2019	2020
ISA and INITA merge to form TechPoint, which joins CICP	TechPoint begins pivotal role in venture capital formation and investment	TechPoint launches Xtern and talent attraction initiative	TechPoint Index launched, serving thousands of subscribers and followers annually	TechPoint and IEDC work to attract out-of-state tech employers	TechPoint sets DE&I action plan to increase diversity and representation in tech

Strategic Planning Process

Overview

TechPoint embarked on a four-month strategic planning process to identify, clarify, and articulate the organization's value proposition, priority focus areas, and future opportunities. The planning process engaged a wide array of stakeholders, including its leadership team, member-organization executives, peers and partners in the field, and public sector officials. The process phases were:

- foundational research (including baseline data analysis)
- stakeholder engagement (including 31 interviews and focus group activities)
- impact focus and alignment (including qualitative research and trend forecasting)

The **foundational research phase** consisted of baseline data analyses of the tech workforce and startup/scale-up activity within Central Indiana and the state. The analyses were based, in part, on previously unpublished data from the Indiana Department of Workforce Development. The data within the analysis allow TechPoint to explore existing sector growth expectations and what actions TechPoint needs to take to increase its impact.

The **stakeholder engagement phase** consisted of focus group discussions, strategic planning sessions with the TechPoint leadership team, and robust 1-on-1 interviews with 31 stakeholders. Individuals representing universities, private companies, venture capital sources, and startup founders provided vital insights that allowed Fourth Economy to articulate TechPoint's current image and propose future goals.

The **impact and strategy alignment phase** reviewed previous planning and strategy materials to inform trend forecasting for cluster growth and workforce development initiatives. This phase identified strategies for future consideration that can be added to current TechPoint activities that deepen talent and workforce development and provide startup and scale-up support.

Foundational Research

TechPoint and their strategic planning partners at Fourth Economy wanted to take a data-driven approach to this planning effort. While it is widely acknowledged that the tech sector has a significant direct and indirect economic impact on the state's economy, it has been some years since TechPoint defined the size and shape of the sector.
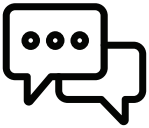
Stakeholder Engagement

TechPoint's expansive network contributed extensive feedback during the stakeholder engagement phase of the strategy development, including 31 interviews across technology-related industries. Several members of TechPoint's leadership, alongside partner organizations, participated in focus group and feedback discussions to guide the identification and definition of the tech workforce and startup/scale-up growth activity.

Tech ecosystems need resources like talent, innovation, companies, capital, community, promotion, research, and policy. Attracting, harnessing, and coordinating these resources is critical for success.

– TechPoint

The 31 interviewees included startup founders and funders, [TechPoint members and board members](#), and constituents such as large tech company executives, university representatives, venture capital firm leadership, and advocacy and support organizations. Interviewees were asked questions about two key insights required for the planning process: first, how stakeholders view Indiana's tech ecosystem, and second, what they consider TechPoint's role and reputation in the ecosystem. Discussions focused on analyses of the tech ecosystem, the local tech industry, and the broader economy to indicate trends, challenges, and opportunities that could impact TechPoint and its mission.

Major Themes of the Interviews

Articulated by Interviewees

- Significant talent/workforce needs
- Desire for more startups, scale-ups, venture capital
- Progress needed on DE&I
- Desire for more stakeholder engagement and convening
- Interest in more statewide impact

Observed by Fourth Economy

- Inconsistency in interviewees' ability to clearly, consistently describe TechPoint
- Not enough industry specialization outside of marketing technology to create a new cluster of company growth

What's the most important thing TechPoint does?

Talent

- Offering talent programs and resources for job placement and skill development
- Preparing people to join the tech workforce
- Keeping people in Indianapolis and stopping brain drain
- Coordinating the Xtern program

Business Attraction and Growth

- Serving as a connector: from businesses to tax credits and grants, networks for schools
- Networking and community building
- Providing a community for startups and a place to convene

Advocacy (Research + Promotion)

- Serving as ambassadors for tech in Indiana
- Running the Mira Awards program
- Collecting and disseminating data, research, and innovation information
- Offering Marcomm promotions and support of tech news and wins

Facilitated focus groups with the TechPoint leadership team occurred several times, to vet the interest and effectiveness of TechPoint's current model. Stakeholder engagement complemented the data analysis and provided TechPoint with more robust evidence to evaluate during the visioning and goal refinement process. As the organization enters a new chapter, these dynamic findings will also help TechPoint galvanize support and deepen its impact.

SWOT Analysis

Focus groups from TechPoint leadership also engaged in SWOT analysis, a tool used to evaluate strengths, weaknesses, opportunities, and threats. Reflecting on existing conditions and potential outcomes, both positive and negative, provides valuable perspective and supporting evidence that can facilitate decision-making.

Strengths

- Is a trusted leader in Central Indiana's tech community and the primary local organization focusing on tech workforce support
- Has non-partisan support from the tech community and local and state governments, and thus is able to drive change throughout the state and build credibility
- Stakeholders and the tech community respect and appreciate external communications and resources
- Events, community convenings, and programs create value and build pride

Weaknesses

- Universities want more connection points to talk about support, curriculum and career development, and opportunities
- Members want to better understand the resources available to them
- There is the perception that talent training programs need a refresh
- Breadth exists, but more depth is necessary in talent/workforce and scale-up support

Opportunities

- Participate more fully in DE&I initiatives
- Tap educational institutions more
- Grow resources and relationships in more regions around the state.
- Help with employer engagement, especially workforce development and retention

Threats

- Competition with the coasts, and other cities in the Midwest
- Lack of talent growth and retention
- In order for the culture of Indianapolis to be inclusive and attract diverse talent, the city needs more cultural amenities that appeal to different types of people
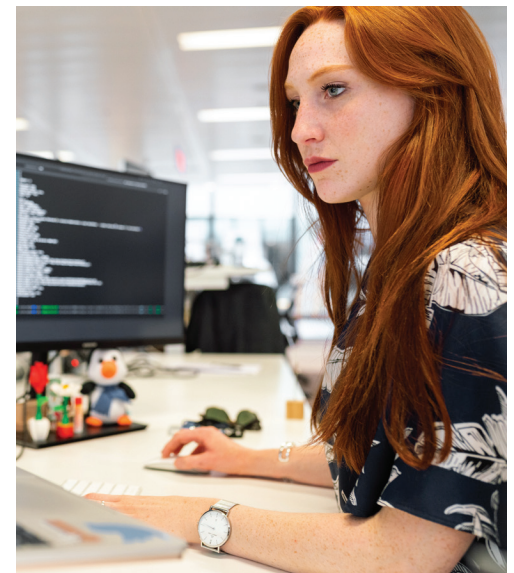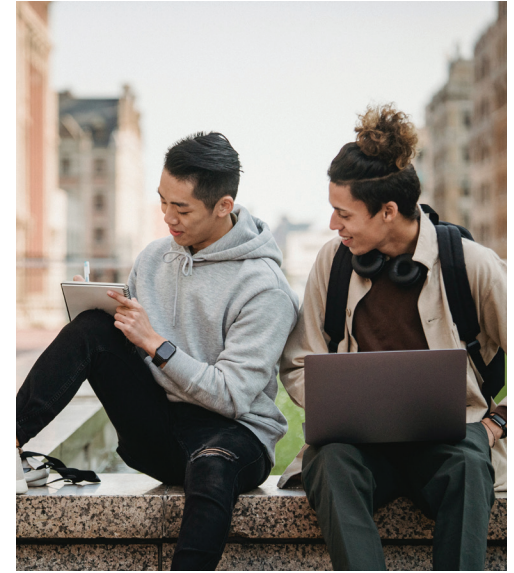
Talent and Workforce Development

The tech workforce analysis was performed to provide a baseline of industry-related employment in the state.

Recognizing that various tech organizations and government agencies differ in which North American Industry Classification System (NAICS) industries and Standard Occupational Classification (SOC) occupations to include in their tech industry definitions, TechPoint asked Fourth Economy to analyze the most reliable options, including the definitions used by the Bureau of Labor Statistics, the Bureau of Economic Analysis, CompTIA's Cyberstates Tool, and TechPoint in its 2014 and 2015 tech workforce reports. On the basis of this analysis, TechPoint chose to use CompTIA's Cyberstates "Tech Industry and Workforce Classification, 2021." The CompTIA tech workforce definition was chosen for several reasons, including recency of data, recognized expertise and legitimacy in the industry, and the national scale of the data (which allows for state-to-state and metro-to-metro comparisons).

CompTIA's Cyberstates defines the tech workforce using the concept of 'net tech employment,' which includes three components: all those employed by companies in the tech industry, those working in tech occupations for employers outside the tech industry, and self-employed workers. Based on this definition, Indiana's tech workforce consists of 184,300 employees.

Fourth Economy worked with the Indiana Department of Workforce Development to access the raw data used in the Tech Workforce Analysis. The analysis also utilized data from Emsi (a labor market data company), including historical data from 2010 to 2021 Q3 and projections to 2030.
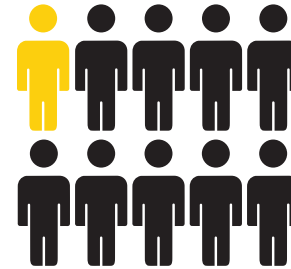
Indiana's Tech Workforce

↗ Indiana's tech workforce grew from 158,400 in 2010 to 184,300 in 2020, an addition of 25,900 workers at a growth rate of 16.3%. Using Emsi projections provided by the Indiana Department of Workforce Development, the tech workforce is projected to grow by 23,700 workers from 2020 to 2030, a 12.9% growth rate. At the end of the decade, the Indiana tech workforce is projected to employ 208,000 Hoosiers.

↗ Indiana tech employment is an essential driver in statewide job growth. Over the past decade, 1 in 10 jobs added to the Indiana workforce were tech workers. Additionally, Indiana's tech workforce grew 60% faster than the overall workforce – by 16.3% compared to the state's workforce growth rate of 10.1%.

↗ While tech employment is concentrated in Central Indiana, with 40% of all workers employed by companies in the region, the industry impacts all regions of the state, with 109,700 workers (60%) employed by firms outside of Central Indiana.

↗ Tech employment benefits the statewide economy. For every 10,000 new tech workers, there is an addition of $698 million in wages, adding $56.7 million in personal tax revenue to the state, with $22.5 million in income taxes and $34.2 million in sales taxes from discretionary spending. The Tech Industry contributes $51 billion to statewide GDP. That amount is four times the GDP of educational services, twice the GDP of utilities, and about the same contribution as the construction industry.

SOURCE: Emsi data as provided by the Indiana Department of Workforce Development. Tech Industry and Occupation definition and Net Tech Employment framework by CompTIA Cyberstates, 2021. Overall workforce data from BLS Quarterly Census of Employment and Wages

16.3%
growth rate of tech workforce in Indiana from 2010 to 2020

1 in 10
jobs added to the Indiana workforce over the past decade were in tech

60% faster
over the past decade, Indiana's tech workforce grew 60% faster than the overall workforce

Examining diversity within the tech workforce:

There is recognition nationally, and shared in Indiana, that there is a critical need for the tech industry to become more diverse and extend the sector's employment opportunities to more people. The Tech Workforce Analysis shows that there is room for improvement in Indiana.

Women Workers

48%
overall Indiana workforce

28%
Indiana's Tech Workforce

Black Workers

10%
overall Indiana workforce

7%
Indiana's Tech Workforce

Latinx/e Workers

6%
overall Indiana workforce

3%
Indiana's Tech Workforce

SOURCE: Fourth Economy analysis and modelling, 2021. Data from 2020.

Top 10 Growing Tech Occupations, 2020 to 2030

Employment growth in tech-skilled occupations in the tech industry is projected to be driven by computer and engineering occupations. Business-skilled occupations like sales, marketing, finance, and professional services could not be isolated from the same in other industries and, thus, are not included here.

	SOC	Description	2020 Jobs	2030 Jobs	# Jobs Added
1	15-1256	Software Developers and Software Quality Assurance Analysts and Testers	16,841	21,474	4,633
2	17-2112	Industrial Engineers	10,542	11,722	1,180
3	15-1232	Computer User Support Specialists	11,689	12,778	1,089
4	15-1211	Computer Systems Analysts	9,764	10,727	963
5	11-3021	Computer and Information Systems Managers	5,761	6,628	867
6	15-1299	Computer Occupations, All Other	3,897	4,476	579
7	17-2141	Mechanical Engineers	7,359	7,932	573
8	51-2028	Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	7,335	7,901	566
9	15-1212	Information Security Analysts	1,413	1,945	531
10	15-1244	Network and Computer Systems Administrators	6,575	6,909	333

SOURCE: Emsi data as provided by the Indiana Department of Workforce Development. Tech Industry and Occupation definition and Net Tech Employment framework by CompTIA Cyberstates, 2021.

Workforce Development Key Findings

Engagement Takeaways

- Employers need a better understanding of TechPoint offerings both in membership and workforce programs
- A recommendation to reevaluate programs and effectiveness. Stakeholders believe there is an opportunity for TechPoint to lead tech talent growth and development
- A need to build buy in around a clear, ambitious, goal that is impact driven

Analysis Takeaways

- Indiana's Tech Workforce has grown significantly in the past decade, and is positioned to grow 12% to 13% under a business-as-usual scenario
- 40% of the Tech Workforce is in Central Indiana (EGR 5)
- DEI - Women, Black/African American, Latinx/e lag in share of tech worker jobs

Startups and Scale-ups

Strong economies are made up of a mix of established or legacy firms and more recent entrants, often referred to as startups. While established firms can provide continuity and economic confidence, to maintain a competitive advantage they need a pipeline of new talent and product and service innovations. Startup companies can serve these roles, as they provide dynamic opportunities for new workers and work to solve challenges. A percentage of companies will survive and some will reach the scale-up stage, increasing their job and economic impacts.

The planning team conducted an original analysis of the current levels of startup and scale-up activity occurring in Indiana. Understanding new startup activity and scale-up growth provides insight into the future hiring trends and needs of the Indiana tech workforce. As of 2021 Q1, Indiana was home to 10,500 total tech establishments (QCEW, 2021 Q1) and 3,186 tech firms established since 2010. Tech companies established in 2010 or later make up 30% of the overall share of establishments. 29% of these newer firms are located in Central Indiana (Economic Growth Region 5), and 40% are multi-county establishments, meaning they have physical locations in Indiana but may be headquartered in another state.

Startup and Scale-up Activity

- There are 139 young tech firms with 20+ employees (started since 2010, still with an Indiana headquarters establishment).

- 95.6% of Indiana tech firms established in 2010 or later have 0-19 employees. 4.4% employ 20 or more workers.

- 50% of these firms are located in Central Indiana Economic Growth Region (EGR) 5, although many are located in EGR regions 2, 3, 4, and 8.

- The number of tech firms formed after 2010 Q1 with 20 or more employees is steadily increasing. Indiana has a solid base of tech firms that are primed to expand. The number of young firms with 20-49 employees and 50-249 employees peaked in 2021 Q1.

Of tech firms established 2010 or later, most have fewer than 20 employees

0-19	20-49	50-29	250+
3,213	88	49	2
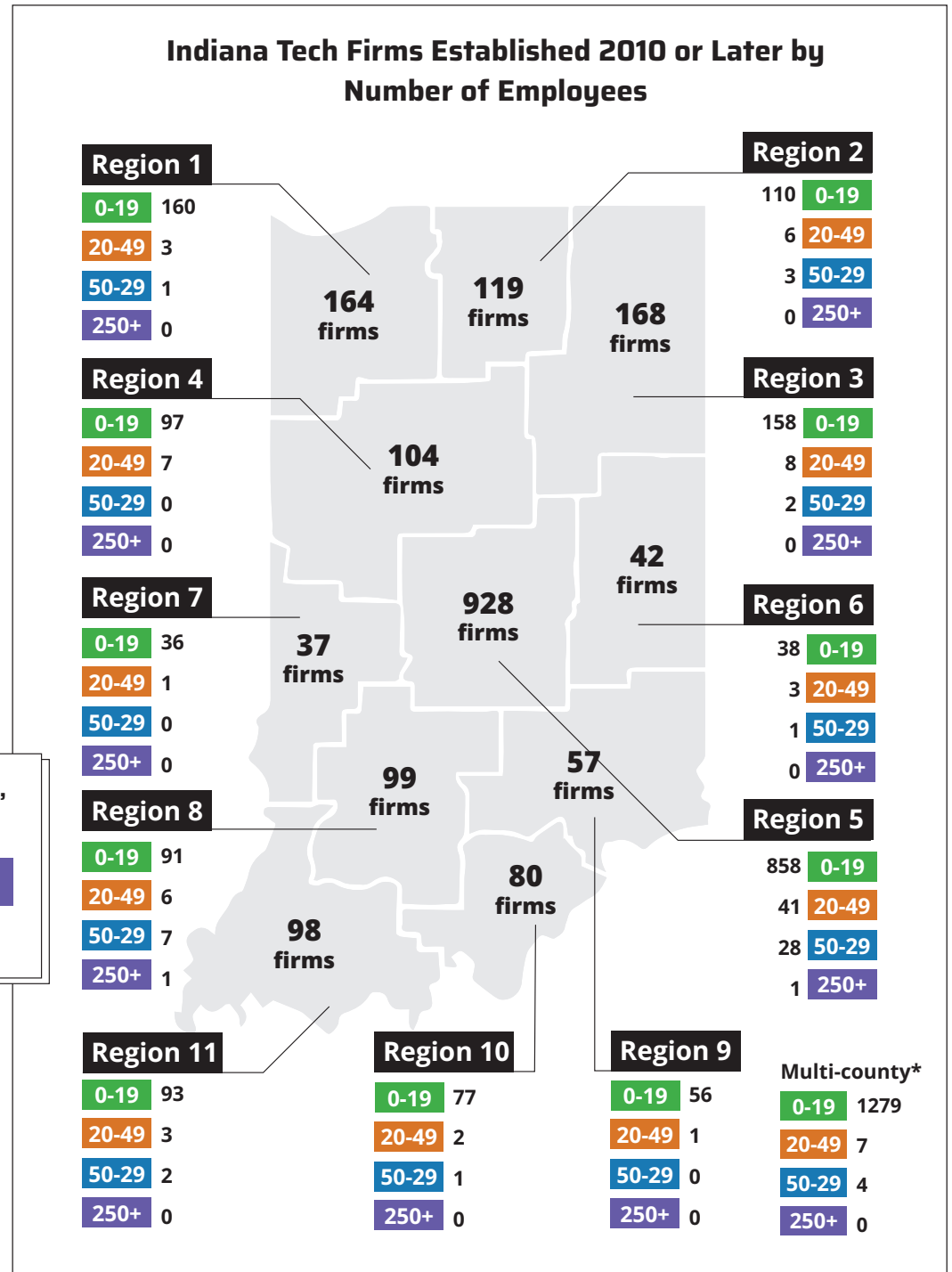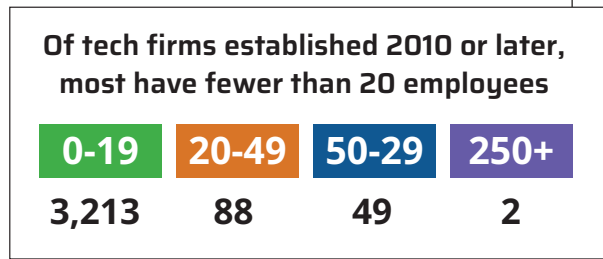
*Economic Growth Regions designated as "N/A" are multi-county establishments. These establishments have physical locations in Indiana but may be headquartered out-of-state.

Indiana Tech Firms Established 2010 or Later by Number of Employees

Region 1 — 164 firms
0-19	160
20-49	3
50-29	1
250+	0

Region 2 — 168 firms
0-19	110
20-49	6
50-29	3
250+	0

119 firms

Region 4 — 104 firms
0-19	97
20-49	7
50-29	0
250+	0

Region 3 — 42 firms
0-19	158
20-49	8
50-29	2
250+	0

Region 7 — 37 firms
0-19	36
20-49	1
50-29	0
250+	0

928 firms

Region 6 — 57 firms
0-19	38
20-49	3
50-29	1
250+	0

Region 8 — 98 firms
0-19	91
20-49	6
50-29	7
250+	1

99 firms

80 firms

Region 5
0-19	858
20-49	41
50-29	28
250+	1

Region 11
0-19	93
20-49	3
50-29	2
250+	0

Region 10
0-19	77
20-49	2
50-29	1
250+	0

Region 9
0-19	56
20-49	1
50-29	0
250+	0

Multi-county*
0-19	1279
20-49	7
50-29	4
250+	0

Future Focus: Building Relationships with Young Tech Firms

600+

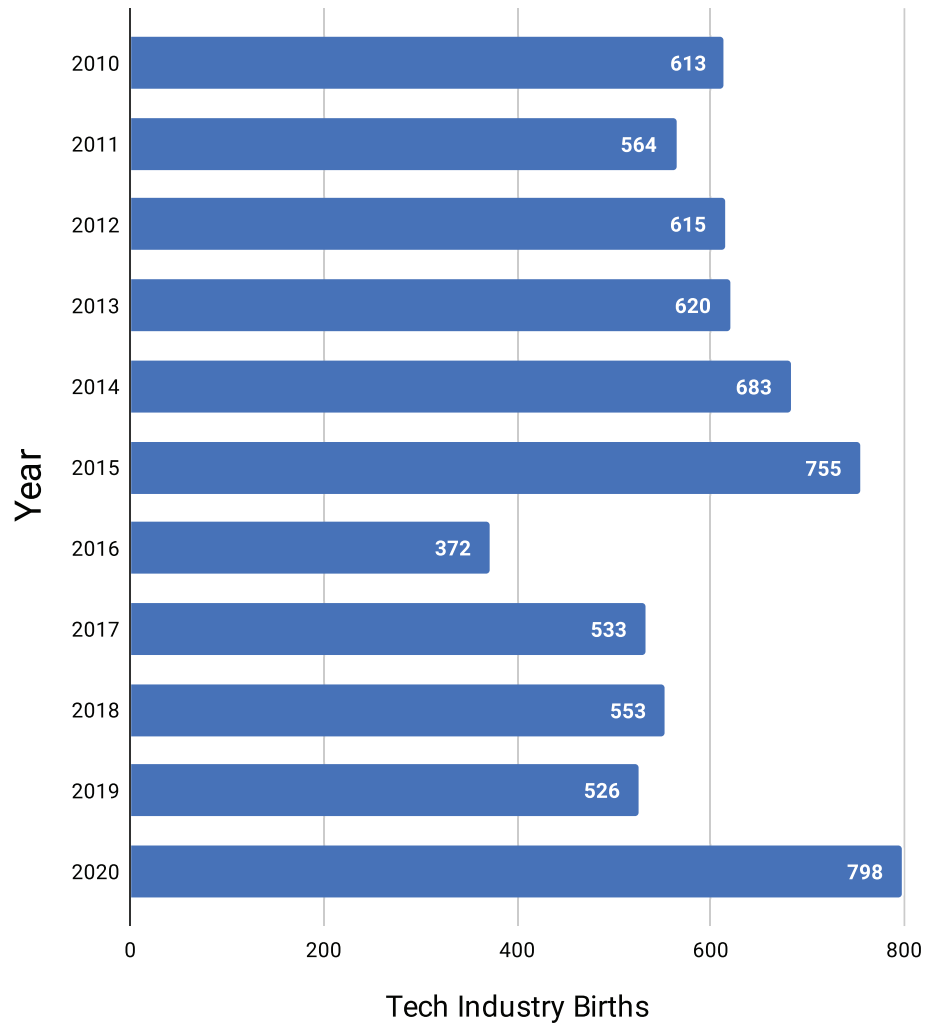In the past decade, Indiana averaged more than 600 tech firm births per year

372 to 798

annual range of tech firms established in Indiana between 2010-2020

1/2

Around half of the organizations in the TechPoint Tech Directory were founded in 2010 or later.

Tech Industry Births by Year

Year	Tech Industry Births
2010	613
2011	564
2012	615
2013	620
2014	683
2015	755
2016	372
2017	533
2018	553
2019	526
2020	798

SOURCE: Indiana Department of Workforce Development

Top 10 Growing Tech Industries, 2020 to 2030

Employment growth in Indiana tech occupations is projected to be driven by Professional, Scientific, and Technical Services, Computer and Electronic Product Manufacturing, and Telecommunication.

	NAICS	Description	2020 Jobs	2030 Jobs	# Jobs Added
1	541511	Custom Computer Programming Services	14,484	20,868	6,385
2	541512	Computer Systems Design Services	15,056	19,559	4,503
3	517312	Wireless Telecommunication Carriers (except Satellite)	3,524	5,087	1,563
4	541330	Engineering Services	14,232	15,346	1,114
5	541513	Computer Facilities Management Services	1,278	1,909	630
6	334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing	1,367	1,992	625
7	334417	Electronic Connector Manufacturing	1,702	2,316	614
8	541519	Other Computer Related Services	1,176	1,377	201
9	517911	Telecommunication Resellers	761	958	197
10	519130	Internet Publishing and Broadcasting and Web Search Portals	1,931	2,096	165

SOURCE: Emsi data as provided by the Indiana Department of Workforce Development. Tech Industry and Occupation definition and Net Tech Employment framework by CompTIA Cyberstates, 2021.

Top 10 Tech Industries by Number of Establishments

	NAICS	Description	Number of Establishments
1	541511	Custom computer programming services	2,511
2	541512	Computer systems design services	2,323
3	541330	Engineering services	1,490
4	511210	Software publishers	489
5	423430	Computer and software merchant wholesalers	438
6	518210	Data processing, hosting and related services	435
7	517311	Wired telecommunications carriers	263
8	541715	Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	257
9	541380	Testing laboratories	242
10	541714	Research and development in biotechnology (except nanobiotechnology)	235
10	519130	Internet publishing and web search portals	235

SOURCE: BLS Quarterly Workforce Indicators, 2021Q1

Startup/Scale-Up Key Findings

Engagement Takeaways

- A need to continue collaborating across Central Indiana Corporate Partnership to better understand how technology is shaping existing industries

- There is more support needed for startups, including financial investment and talent pipeline and retention

- Comparative analysis is needed to see if startup birth and growth numbers are consistent with other leading states.

- A root cause analysis is needed to understand what is impeding startup growth

- A need for stakeholders to buy-in around the clear, ambitious goal that is impact-driven

Analysis Takeaways

- As of 2021Q1, there were 3,186 Indiana tech firms established in 2010 or later still with an Indiana headquarters establishment

- Only 139 of these tech firms (4.4%) have 20+ employees

- In the past decade, very few Indiana tech firms established 2010 or later scaled up to expand beyond 20+ employees

"Indiana's tech industry needs to prioritize branching into disruptive trends."
- Stakeholder Interviewee

TECHPOINT

Specialization

Foundational research and stakeholder engagement revealed that there is a need for industry specialization if the state of Indiana is to better position itself for continued and expanded growth within the tech industry. Industry specialization requires planting a flag within a particular sector to develop a center of gravity and expertise. Industry specialization helps a region prepare for job transitions, transformation, and growth. Additionally, focusing resources on a niche or two will allow Indiana to differentiate itself as a tech hub while also leveraging existing regional industries or assets.

Fourth Economy Findings:

- Employees fear that automation will eliminate job opportunities before the workforce has a chance to upskill in a new industry or skillset
- Indiana needs to differentiate itself from other growing tech hubs (e.g. Atlanta, Nashville, Austin, Chicago, Salt Lake City, Louisville, Pittsburgh, Columbus)
- Chicago and Toronto are often referenced as competitors for talent and scale-up growth
- A lack of focused messaging and programmatic consistency prevents TechPoint and partners from developing a robust, sustained method of helping companies and communities attract and retain talent
- Indiana does not have a clearly recognized leadership role in any specific technology space, outside of marketing tech

↗ Focus

Identify technology specialization areas where there is an opportunity for TechPoint and partners to develop the appropriate knowledge base to support sector leadership and enable proactive steps to ensure positive impacts on the talent and start-up/scale-up areas.

↗ Action

Develop a working group of tech industry stakeholders (private, public, and academic) to identify tech specialization areas, growth opportunities, risk profiles, and existing knowledge strengths within Indiana.

↗ Outcome

Develop a strategy for how to approach technology specialization.

Example Spotlight

Technology Specialization as a talent and company growth driver: Pittsburgh and Robotics Specialization

- An initial federal, state, philanthropic investment of $10M begins the specialization process
- Ten years later, the public hype kicks into gear, but it is still another five before widespread global recognition
- Today the ecosystem is mature - the Pittsburgh Robotics Network - 81 companies and over 3,000 employees

"We are talking about a set of technologies that companies all over the world are going to be utilizing… The opportunity for Pittsburgh is to be one of those technical centers that push the technology forward and, as a technical center, acts as a magnet for business."

– Dave Pahnos,
Carnegie Magazine, 1995

Tech Sectors and Specialization Considerations

Ed Tech - Online Learning - software, hardware, credentialing

- The Ed Tech sector was already growing, remote experiences in 2020-2021 will propel focus
- The Ed Tech sector is anticipated to grow from $74B in 2019 to $318B by 2027 (a 19.9% CAGR over the period)
- EdTech companies raised $2.2B in equity in 2020 (a 30% increase from the prior year)
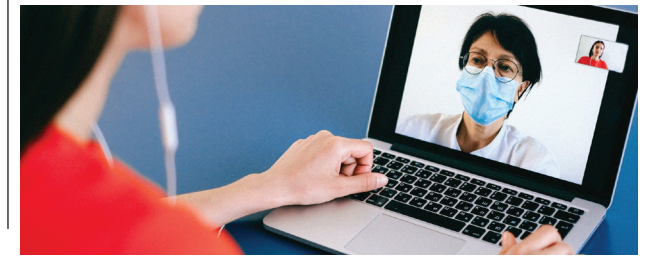
Telehealth/Digital Health Apps

- TeleHealth appointments up 38X from 2019, consumer acceptance improved, regulatory environment more supportive
- Expected to continue growth as a cost model (labor force response) and preference for some care typologies (e.g. mental health)


Cybersecurity

- Continued growth in the market is expected, with 10% CAGR over the next five years, $345B market
- IoT, ransomware, remote work threats, cloud storage all drive need for smarter tech
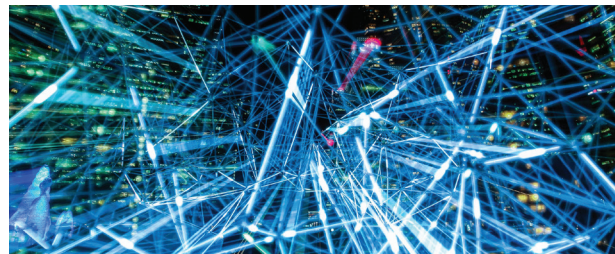
Artificial Intelligence

- The global AI market is projected to grow from $47.47 billion in 2021 to $360.36 billion in 2028, at a CAGR of 33.6% in the forecast period
- From healthcare to manufacturing: decision-making and forecasting are processes informed by AI
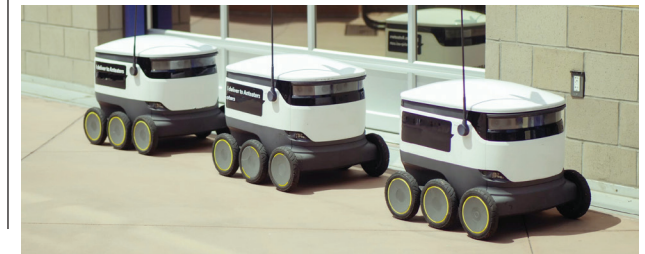
Automation and Robotics

- Worker shortages in low-skill, low pay occupations
- The need to increase productivity is driving investments globally

Contactless Experiences

- Contactless user experiences – especially in the payment sector – seeing exponential growth
- User experiences provide an opportunity for human-centered design

Digital Marketing

- Wide variation in what's counted, but consistent in growth at ~18% CAGR of a $500B plus market

Finance of Tech

- [Special Purpose Acquisition Company](#) (SPACs) as a capital acquisition model
- Venture capital continues to expand reach from coasts and Chicago

Autonomous Vehicles - Mobility Electrification (and Hydrogen at some level)

- Electrification is picking up speed as cost profile decreases and policy goals are pursued
- Fleets, personal vehicles from scooters to boats – lots of systems, customization potential, etc.

Smart Cities

- Continued focus on use of tech for better city systems, management, responsiveness
- Connected systems – smart traffic management
- Energy and waste management systems

Specialization Key Findings

Engagement Takeaways

- Identifying new industries helps the region prepare for job transitions, transformation, and growth
- Finding a niche or two to double down on allows Indiana to differentiate itself as a tech hub while also leaning into industries that are already successful

Analysis & Research Takeaways

- Leverage prior CICP research and identification of Advanced Industry Clusters
- Disruptive technologies are creating new markets and cross-cutting opportunities across emerging industry sectors
- Additional exploration is needed to refine the approach within Tech Sectors and Specialization Considerations

Impact Focus

Through the foundational research analysis and stakeholder engagement, three impact pillars emerged. The first two, talent/workforce development and startup/scale-up growth, are consistent with TechPoint's current mission to grow and strengthen Indiana's tech ecosystem.

The priority focus areas of talent/workforce development include **talent and workforce attraction, development, retention, and increasing the number of diverse tech workers within the industry.**

The priority focus areas for startup/scale-up growth include **increasing the number of tech startups, increasing the number of tech companies that scale up to major market-leading employers, and maximizing the propensity for them to retain an Indiana HQ or major hub.**
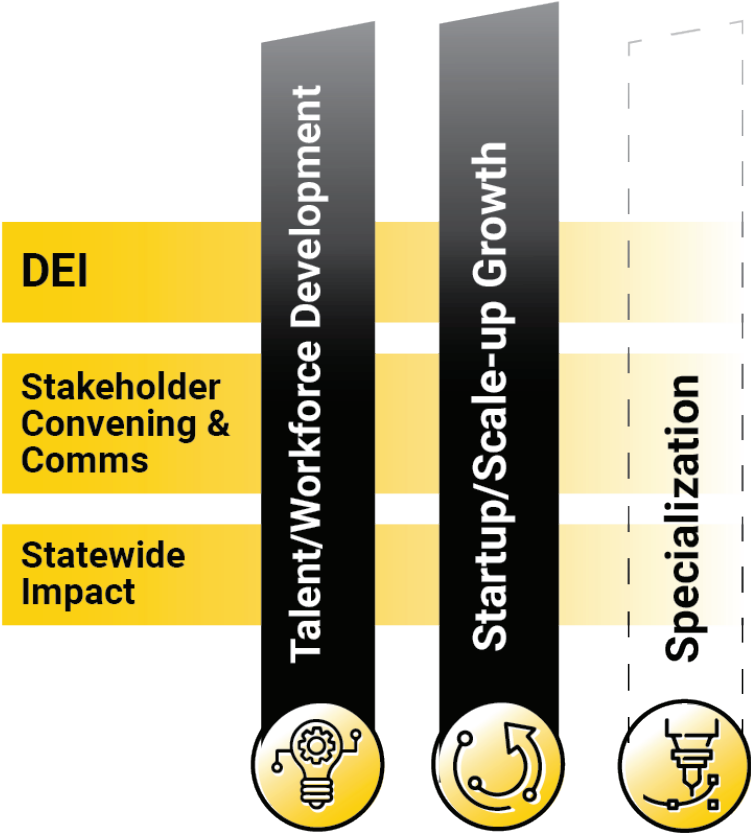
Additionally, tech specialization emerged as a new vertical, with a focus on **researching and identifying high-opportunity technologies or sub-industries in which Indiana should specialize, develop assets, and plant a flag.**

In its programmatic activities, TechPoint should place emphasis in the areas represented by the horizontal bars.

TechPoint should use a **diversity, equity, and inclusion lens** to address the lag in representation amongst tech workers and increase access to tech workforce resources and employment opportunities for minority-led startups and groups currently underrepresented in tech.

Stakeholder convening and communications will be needed to collectively incorporate stakeholders into the problem-solving process and maximize impact through public awareness and education.

Finally, with digital transformation happening in every industry, major universities around the state emphasizing startup generation, and 60% of Indiana's tech workforce residing outside of Central Indiana, TechPoint should be attuned to opportunities for **statewide impact.**

DEI

Stakeholder Convening & Comms

Statewide Impact

Talent/Workforce Development

Startup/Scale-up Growth

Specialization

"TechPoint helps Indy land companies and brings them into the tech ecosystem. TechPoint is phenomenal on our strengths in a way that engenders trust and confidence in people with preconceived notions about Indiana."

- Stakeholder Interviewee

Strategy Alignment

Equitably grow Indiana's tech workforce through the attraction, development, and retention of current and future Indiana residents

Existing Assets

- TechPoint Job Board and Tech Directory are online resources to support members in identifying tech job opportunities
- Talent Programs such as Xtern, The Grid, Sales Bootcamp, and S.O.S. Challenge help to grow the workforce, both in and outside university communities
- TechPoint membership allows entrepreneurs to form connections and develop a tech network, offers access to tech resources, and provides opportunities to start and grow a company
- TechPoint's new communications efforts amplify the success stories of tech workers and founders to increase the representation of diverse entrepreneurs, as well as actively engage with communities who are underrepresented and underserved within the tech ecosystem

TechPoint's robust talent programs – including Xtern, Sales Bootcamp, and Red Carpet Experience, as well as affiliate programs like the Orr Fellowship – have enabled Indiana and Indiana employers to attract and retain some of the most in-demand tech- and business-skilled college and mid-career talent. These programmatic interventions are important, stocking Indiana's economy with key future business leaders, product architects, and entrepreneurs. However, the magnitude of the need for tech workers – and the moral imperative to make tech jobs accessible to more than just top university graduates – requires TechPoint to do more.

To transform the state's legacy industries and make economic prosperity accessible to more Hoosiers, Indiana must dramatically expand its tech workforce. The opportunity is massive, with Microsoft forecasting that 149 million new technology jobs will be created globally by 2025.

Going forward, the traditional "brain gain" talent attraction strategies will not be enough. To overcome current and future workforce shortages and achieve diversity goals, more fundamental employer-led workforce system alignment is needed. The tech industry must play a more active leadership role in education and workforce development, speak with a unified voice about job needs and skill expectations, and make jobs accessible to a wider array of candidates.

Strategies to Consider

- Expand TechPoint's role from its current talent attraction and supply focus to an added focus on pathway alignment and workforce development for existing Hoosiers who are at risk of losing jobs due to advanced technology integration
- Increase communication and practice sharing with companies, universities, and partners around needs and opportunities for future skills development and job placement strategies
- Review and refine talent programs (Xtern, The Grid, Sales Bootcamp, S.O.S.) to ensure effectiveness and impact. Continual review of programmatic activities on an ongoing basis will allow for adjustments to be made to increase effectiveness as technology advances
- Conduct research about industry and technology trends and workforce needs, and incorporate the findings into a strategic plan to understand programmatic efficacy
- Develop strategic partnerships and alliances with organizations serving underrepresented populations throughout Indiana
- Provide a range of access points using a sliding scale or tiered costs to lower barriers to entry for underrepresented founders
- Hone diversity, equity, and inclusion partnerships and initiatives to increase tech workforce and entrepreneur participation

Increase the number of company starts and scalability of startups

Existing Assets

- VC Speed Dating connects venture capital investors with Indiana startups in search of investment

Strategies to Consider

- Understand the root causes of barriers to scale-up growth since Indiana has a strong base of companies primed for scale-up growth, but too few breakthrough to become large locally headquartered employers
- Redefine startup/scale-up support and resources provided by TechPoint
- Identify resource and access gaps in entrepreneur and seed-level startups

## Promote and grow Indiana as a tech hub

Existing Assets

- The Mira Awards and Tech 25 are two signature events that elevate Indianapolis's presence throughout the state and country as a tech hub
- Existing marketing and communications support for members effectively promotes the Indiana tech hub, though additional effort in this area, particularly broadcasting tech news and expanding representation in who is featured, would help tell the tech story more broadly within Indiana

Strategies to Consider

- Expand geographic reach throughout the state by aligning with partners and clusters of activity to develop potential satellite locations for talent programs
- Amplify talent and workforce opportunities and resources through TechPoint Index and marketing and communications initiatives
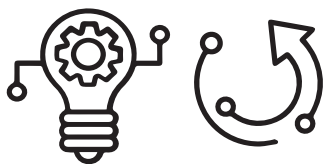
Attract high potential scale-ups and talent to Indiana

Existing Assets

- Company Hunting Initiative (CHI), a program in partnership with the Indiana Economic Development Corp, helps employers expand their operations to Indiana through lead generation and discovery conversations as well as Indy Tech Tours

- Partnership with TMap + Make My Move introduces experienced, out-of-state talent to the amenities and incentives available to them upon relocation to Indiana

Strategies to Consider

- Modify measurements and metrics for success and grant reporting, and utilize Salesforce to align customer relationship management activities to better understand reporting functions and success metrics

Research and identify high-opportunity technologies or sub-industries in which Indiana should specialize, develop assets, and plant a flag

Existing Assets

- TechPoint research and policy work supports new innovation and ideas through the TechPoint Index to support innovative policy and practice implementation

- Continued partnership and membership with anchor organizations like the Indiana Economic Development Corporation (IEDC) and the Central Indiana Corporate Partnership (CICP) to align TechPoint strategies with larger organizations and state goals

Strategies to Consider

- Execute a feasibility planning effort to define TechPoint's role

- Diversify funding opportunities and/or collaborate with partners to raise the capital and attract the talent needed to identify technologies, leverage existing capacity, and formulate strategy

- Reinvigorate board engagement (through executive committees) to support research

- Develop Executives in Residence/Subject Matter Experts in potential industry specialization areas

Conclusion

TechPoint is in a strong position to usher in Indiana's future tech ecosystem. It is uniquely connected to the powerful network of the tech industry and the public sector organizations that support it. It has a track record of excellence and steady leadership. Coming out of this planning process, TechPoint is ready to guide Indiana's tech industry to continued growth in the focused areas of talent/workforce growth, startup and scale-up company growth, and industry specialization. The next ten years, guided by these priorities, are sure to be impactful and productive as TechPoint embarks upon its initiatives and works with partners toward the "230 by 2030" impact goal.

"TechPoint brings together the tech sector industry leaders and rising entrepreneurs with policy makers and educators. The organization is well managed, inclusive, and effective in shaping policy and practices for the economic growth of the sector. The leadership of the organization is innovative, competitive, and strategic."

- Amy Conrad Warner,
Vice Chancellor for the IUPUI
Office of Community Engagement
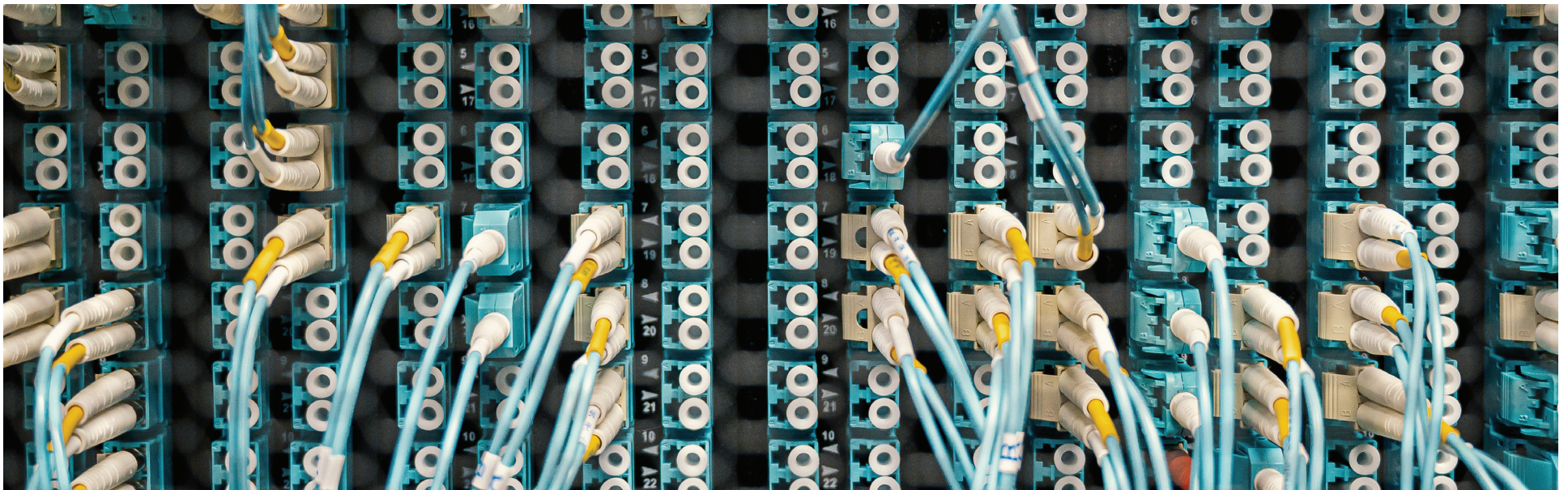
Appendix

Analysis

Analysis commissioned by CICP and conducted by TEConomy Partner, LLC in 2018 highlighted regional strengths related to tech industry potential:

- The volume of tech in the area has increased
- Medtech and life sciences opportunities are growing, in addition to logistics, IT, aerospace and agriculture technology
- Businesses continue to accrue benefits from the area's historical strength in industrial manufacturing and the technological evolution of legacy industries
- A couple of "unicorns" and neat growth stories anchor Indiana's tech history including ExactTarget, Lessonly, and Formstack
- Indiana is business-friendly, easy to access, and home to people who are collaborative and committed to Indiana's success
- The business community is supportive and entrepreneurs have access to an experienced tech leadership network
- Employers can attract talent with a low cost of living and good quality of life

While these factors will continue to spur tech industry growth, the Indiana GPS Project Report provides a more cautionary analysis and identifies the following pre-existing conditions:

- The state's tech industry has experienced multi-year productivity slippages in its advanced-industry sector, recurrent struggles with industry and labor market shifts, and a shortage of quality employment
- Indiana struggled to adapt to economic shifts, which have created multiple "reallocation" challenges for industries and workers
- The economy provides too few 'good jobs'
- Indiana ranks 39th in the nation for the share of its employees working at young firms
- Low per capita IT investment and insufficient digital investment are limiting advanced-industry sector competitiveness and the state's broader productivity
- Nearly one-third of Indiana jobs – the highest share in the country – are now highly susceptible to automation employing existing technologies.

The Indiana GPS Progress Report offered three strategies to build resilience into economic recovery:

- Accelerate digital adoption to drive economic dynamism and competitiveness
- Do more to support workers who aren't in good jobs, to promote inclusion and broadly shared prosperity
- Promote favorable job creation and worker transitions to allow for a beneficial "rewiring" of the economy

Talent/Workforce Development: Defining the Tech Workforce

What we've seen through analysis

In addition to the 2014 and 2015 tech workforce definition used by TechPoint, Fourth Economy performed a national scan of tech workforce definitions, examining the following sources:

- Bureau of Economic Analysis, Defining and Measuring the Digital Economy, 2018. (Page 21)
- Bureau of Labor Statistics (Hecker), High-technology employment: a NAICS-based update, 2005. (Page 4)
- CompTIA Definition of the Information Technology (IT) Industry, 2016. (Page 19)
- CompTIA Tech Industry and Workforce Classification, 2021. (Page 149)

Each source has tradeoffs:

	Positive	Negative
CompTIA, 2021 (chosen option)	+ Most recent of sources examined + National, great breakdowns and comparisons available + Nationally recognized industry source material	- Many occupations counted in this definition are only listed by this report
CompTIA, 2016	+ National source + High number of industries and occupations listed by 3+ sources	- No longer used by CompTIA
BLS, 2005	+ Includes tech industries based on their concentration of high tech occupations	- Oldest report examined - Some awkward "tech industries" because of the methodology used
BEA, 2018	+ Governmental source data packaged by BEA	- Only industry based. - Defines the "Digital Economy" =/= "Tech Workforce"
TechPoint, 2015	+ Previously used by TechPoint	- Counts many industries and occupations that other reports do not

Tech Industry Definition

Industry Classification By NAICS (North American Industry Classification System)

IT/Tech Services

423430, 541511, 541512, 541513, 541519, 611420

Telecommunications, Internet Services and Data Hosting

517311, 517312, 517410, 517911, 517919, 518210, 519130

Software

511210

Manufacturing: Computer, Peripheral and Communications Equipment

334111, 334112, 334118, 334210, 334220, 334290, 334310

Manufacturing: Semiconductors and Electronic Components

333242, 334412, 334413, 334416, 334417, 334418, 334419

Manufacturing: Measuring, Control Instruments, Optical Media, and Space Systems

334510, 334511, 334512, 334513, 334514, 334515, 334516, 334517, 334519, 334613, 334614, 336414, 336415, 336419

Technician, Engineering, Repair, Maintenance, R&D and Testing

811211, 811212, 811213, 811219, 541330, 541380, 541713, 541714, 541715

Tech Occupation Definition

Occupation Classification By SOC (Standard Occupational Classification)

Information Technology (IT) Occupations

11-3021, 15-1111, 15-1121, 15-1122, 15-1131, 15-1132, 15-1133, 15-1134, 15-1141, 15-1142, 15-1143, 15-1151, 15-1152, 15-1199, 15-2098

Other Technician, Engineering, Installer, Repair and Maintenance

11-9041, 17-2011, 17-2031, 17-2061, 17-2071, 17-2072, 17-2112, 17-2131, 17-2141, 17-2199, 17-3021, 17-3023, 17-3024, 17-3026, 17-3027,

17-3029, 27-4011, 27-4012, 27-4014, 43-9011, 49-2011, 49-2021, 49-2022, 49-2091, 49-2092, 49-2093, 49-2094, 49-2095, 49-2096, 49-2097,

49-2098, 51-2021, 51-2028, 51-4011, 51-4012

Startup/Scale-up Support: Methodology Notes

New firms

These are often referred to as "births" by the Bureau of Labor Statistics (BLS). BLS defines births as establishments that appear in the longitudinal database for the first time with positive employment in the third month of a quarter, or showed four consecutive quarters of zero employment in the third month followed by a quarter in which it shows positive employment in the third month. This was the methodology used in this request to determine the number of new firms, with new firms appearing in 2010 or later. Also, some establishments had UI predecessor accounts in which the industry NAICS was the same throughout the time series. If the change in the UI account occurred before 2010, that establishment was not included in these calculations.

Size class

Indiana DWD gathered quarterly data from 2010Q1 to 2021Q1 to help answer questions around start up and scale-up activity of tech firms in Indiana. The CompTIA tech industry definition was used to define tech industries. Size classification was based on four employment classes: 0-19, 20-49, 50-249, and 250+. Size class is assigned based on employment of the establishment in the 3rd month of the quarter.

Size class change

This determines if employers are growing into larger size classes. This dataset looks at the change of size class at 1, 3, and 5 years after the birth of the establishment.

Note that those with a "N/A" size class change represent establishments in which there is not enough information 1, 3, or 5 years after the birth of the establishment, or if additional employment information on that establishment after its birth is not available.

What firms are in the dataset?

This data only includes established firms with QCEW or UI records 2010Q1 or more recent. The dataset that looked at size class change looked at size class change at 1, 3, and 5 years after the birth of establishment.

Firms in the QCEW dataset

- 3,186 tech firms established in 2010Q1 or later that still exist in 2021Q1
- 139 of these tech firms have 20+ employees

Firms in the UI dataset

- 7,087 new tech firms established 2010Q1-2021Q1
- 5,405 N/A.
  - Those with a "N/A" size class change represent establishments in which there is not enough information 1, 3, or 5 years after the birth of the establishment, or if additional employment information on that establishment after its birth is not available.
- 1% of new tech firms established from 2010-2020 increased in size class within 5 years (3.7% if discount all N/A values)

Summary Data by Economic Growth Region

EGR	Primary Metro	Tech Workforce, 2020	Employment, Tech Occupations 2020	Employment, Tech Industries 2020	Tech Firms Established 2010 or later	Tech Firms with 20+ employees established 2010 or later	Tech Workforce, 2030 Projection	Projected Growth 2020 to 2030
1	Greater Chicago/Gary	10,215	7,896	4,375	164	4	10,755	540
2	South Bend	13,308	10,768	4,793	119	9	13,990	682
3	Fort Wayne	18,136	13,500	8,748	168	10	18,052	-85
4	Lafayette	10,490	8,627	3,516	104	7	11,688	1,198
5	Central Indiana	74,584	52,354	41,943	928	70	84,642	10,058
6	Muncie	4,434	3,428	1,898	42	4	5,305	871
7	Terre Haute	2,484	2,028	861	37	1	2,502	17
8	Bloomington	8,438	6,555	3,553	99	14	9,882	1,444
9	Columbus	9,191	7,987	2,271	57	1	10,232	1,041
10	Louisville	9,054	7,060	3,763	80	3	10,430	1,376
11	Evansville	6,816	5,002	3,423	98	5	8,075	1,259

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Strategic Plan by Fourth Economy

Fourth Economy is a national community and economic development consulting firm. Powered by a vision for an economy that serves the people, our approach is centered on principles of competitiveness, equity, and resilience. We partner with communities and organizations, public and private, who are ready for change to equip them with tools and innovative solutions to build better communities and stronger economies.

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