

VISION

Our vision is for Greater Grand Rapids to become a major tech hub in the Midwest, growing the tech sector to 10% of regional employment. This vision calls for 20K new tech jobs over the next 10 years.

OUR GOAL

TEN YEAR GOAL 20,000

NEW JOBS IN TECH SECTOR

10%

OF REGIONAL EMPLOYMENT

OUR STRATEGY



Talent

- Develop New Talent →
- Reskilling Talent →
- Educating Talent →
- Attracting Talent →

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Ecosystem

- Launch Events →
- Support Entrepreneurs →
- Grow Incubators & Accelerators →
- Increase Density →
- Expand Broadband →



Growth

- Digital Transformation →
- Connecting Businesses & Tech →
- Attract & Grow Existing Tech →
- Market Tech Hub →

Overview

Shaping Our Future

Establishing Tech Hubs

Creating Our Strategy

Roadmap For Success

The Process

The following report is a roadmap for accelerating Greater Grand Rapid's position as a tech hub. It's the product of more than six months of intensive research and strategic planning on the part of The Right Place, business and community leaders, educators, entrepreneurs, and numerous other stakeholders across the region.

We've Segmented Our Strategy and Recommendations into Three Categories:



Talent



Ecosystem



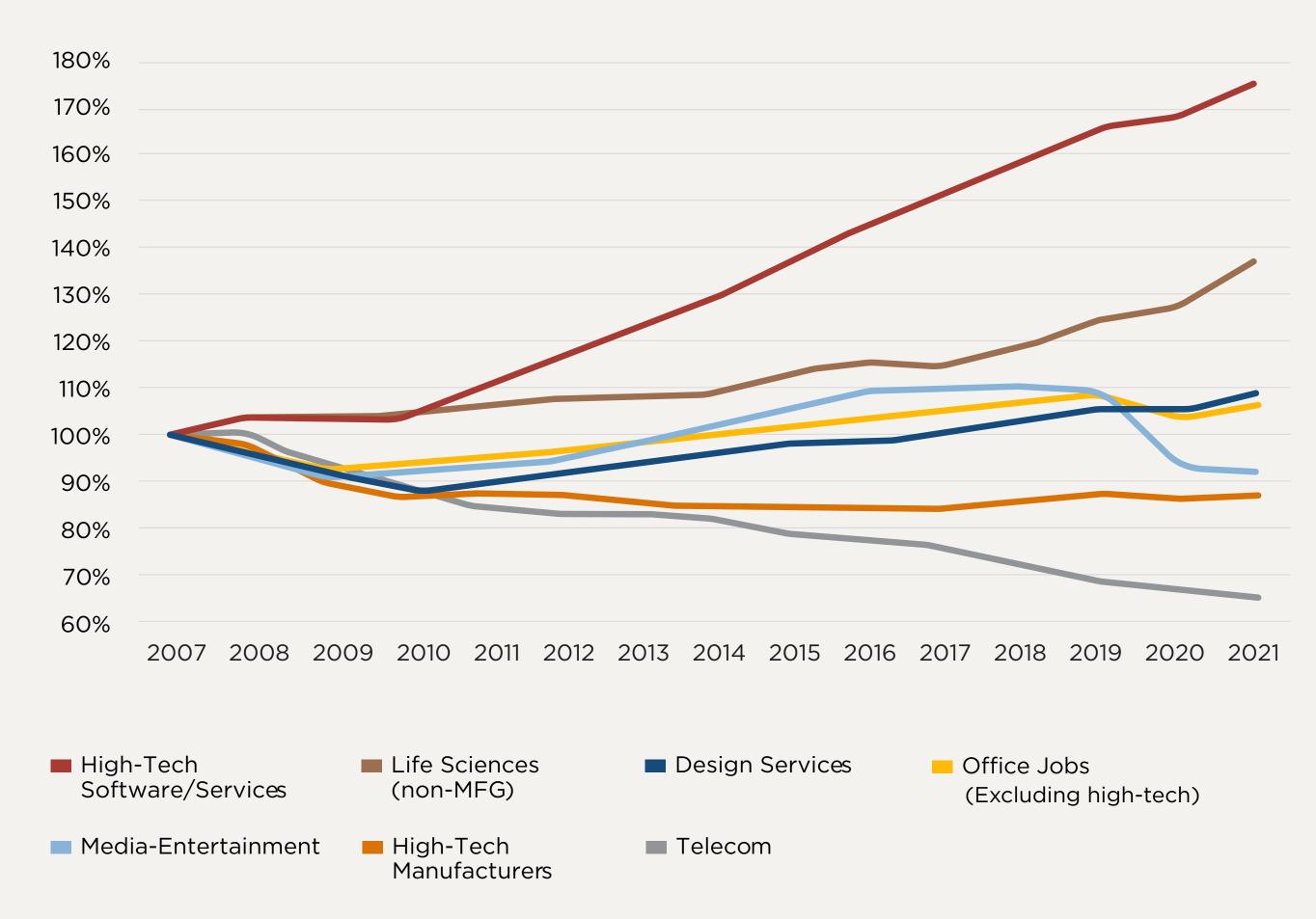
Growth

There's no denying technology is the future. Our businesses are driven by it. The future of Greater Grand Rapids depends on it.

The next decade will spur more technological progress than experienced over the past century.¹ Future jobs will mirror that trend, with the growth in tech-related fields projected to grow at twice the rate of other occupations nationally over the coming decade.² Currently, job postings for positions in emerging tech fields increased 209% between 2015 and 2021, while high-tech software and service firms grew at a rate far surpassing other sectors in the years following the Great Recession.³,4



Tech Industry Growth 2007 to 2021





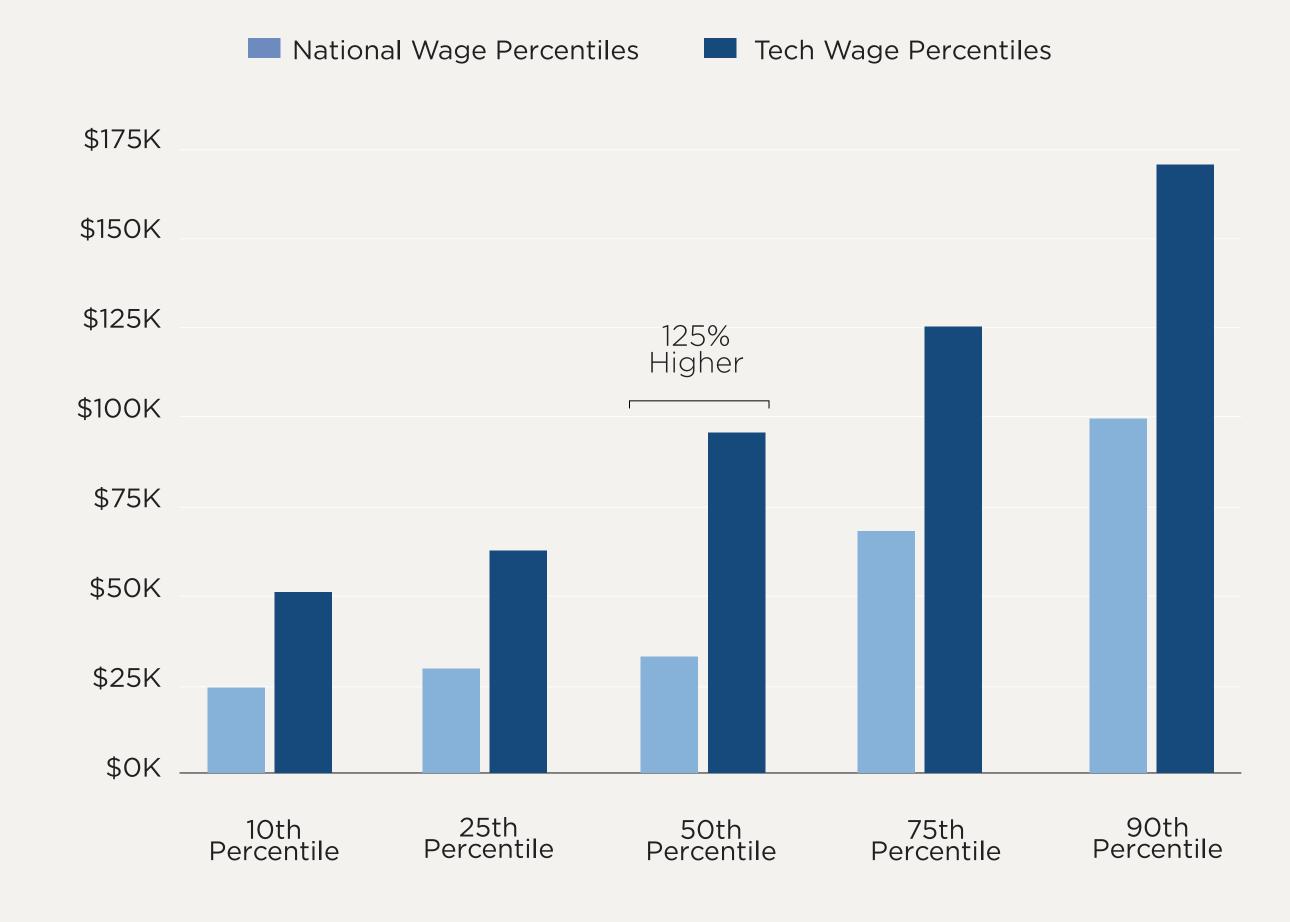
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Tech hubs, or communities where tech is a leading industry, have become the modern engines for economic growth, spurring advancement and prosperity for the surrounding region.

These thriving communities drive higher economic output, retain and attract greater numbers of highly educated individuals, and provide increased wages. The result is a robust region where people have many opportunities to pursue an improved quality of life.

Tech Wages Compared to National Averages





To ensure Greater Grand Rapids remains a vibrant community and center for economic growth,

we must execute this strategy for establishing a tech hub.

Developing a tech hub is an economic imperative that Greater Grand Rapids must pursue to ensure **we** can provide our businesses and people with the resources, tools, and environment to thrive in a future increasingly dominated by technology.

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TERMINOLOGY

The terms "we" and "our" are used frequently throughout this report and refer to our community interaction. The Right Place owns direct responsibility for portions of this plan, while execution of other recommendations will rely on the Greater Grand Rapids community, which was instrumental in developing this strategy. We encourage you to find your place and passion here and assist us on our region's journey.



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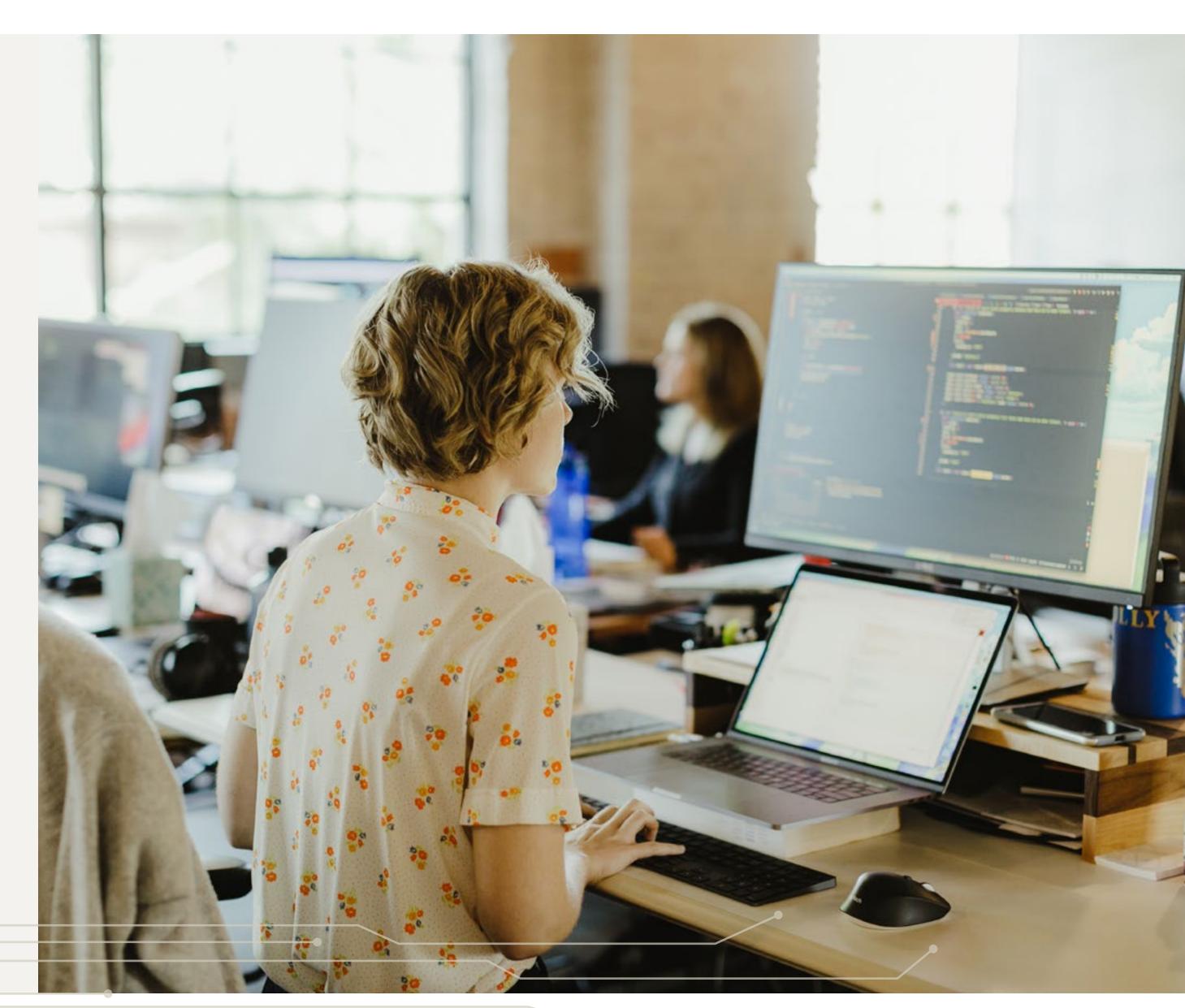
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The primary objective of our strategy is to add 20,000 new tech jobs in Greater Grand Rapids over the next decade to reach 10% of the regional workforce.

Approximately 33,500 people currently work in Greater Grand Rapids' tech sector, comprising **6.1% of our region's total labor force.** To compete with other major metropolitan areas for talent, businesses, and innovation, creating a tech hub is essential for Greater Grand Rapids.

¹ The "tech sector" comprises a combination of tech industries and tech-related occupations, as defined by CompTIA.



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Communities across the country are aggressively pursuing strategies to position themselves as centers for technological innovation, capitalizing on the economic opportunity the tech sector offers.

Once confined primarily to the coasts, we've witnessed the meteoric rise of emerging tech hubs including Austin, Denver, and Salt Lake City. These communities show higher and more consistent growth trajectories in tech jobs, with heavier concentrations of their workforces employed in tech compared to Greater Grand Rapids.

Tech Workforce Statistics:

Tech Employment& Growth

Percentage of Tech
Workforce 2020

Percentage of Tech
Workforce by Job Type

& Growth

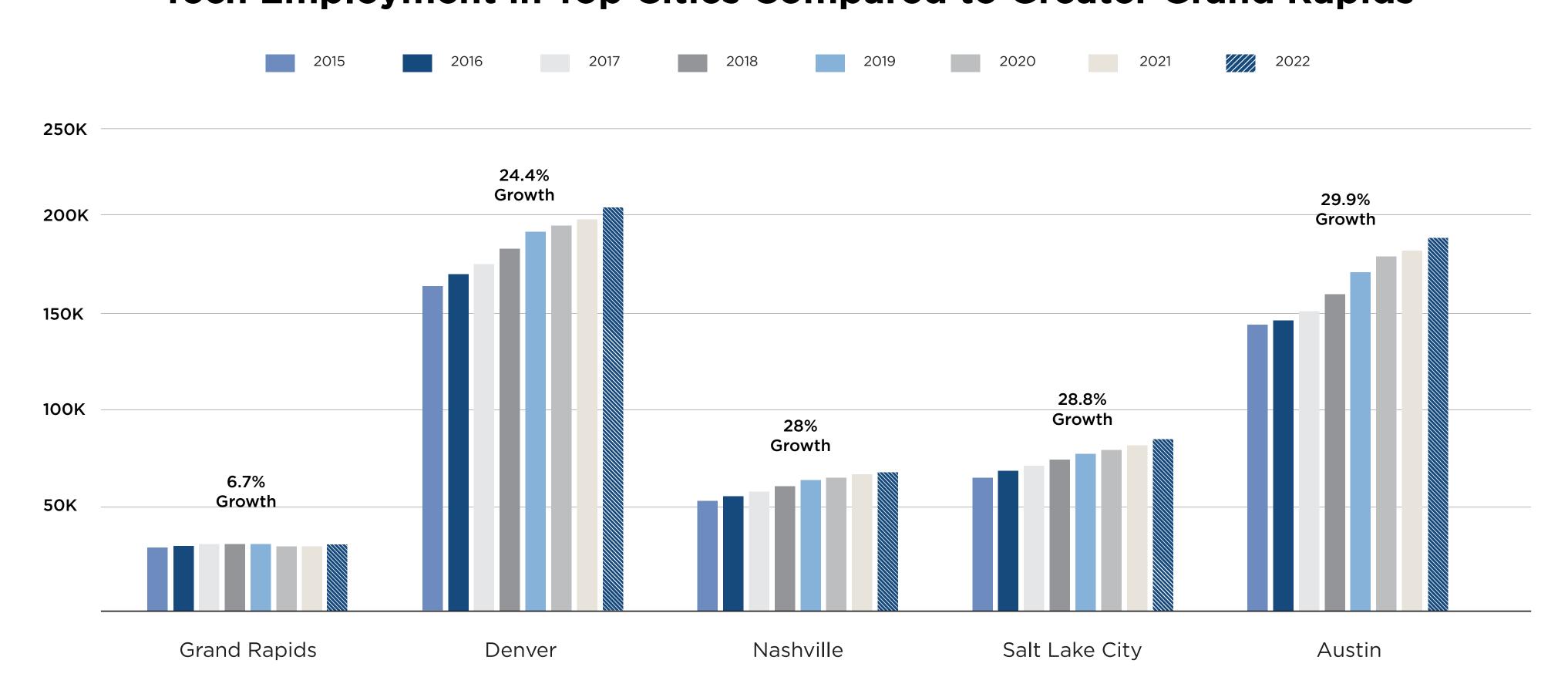
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Tech Employment in Top Cities Compared to Greater Grand Rapids



Note: 2022 numbers represent an estimate generated by CompTIA and EMSI Burning Glass.

Source: The "tech sector" comprises a combination of tech industries and tech-related occupations, as defined by CompTIA.

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Tech Employment & Growth

Percentage of Tech Workforce 2020 Percentage of Tech Workforce by Job Type

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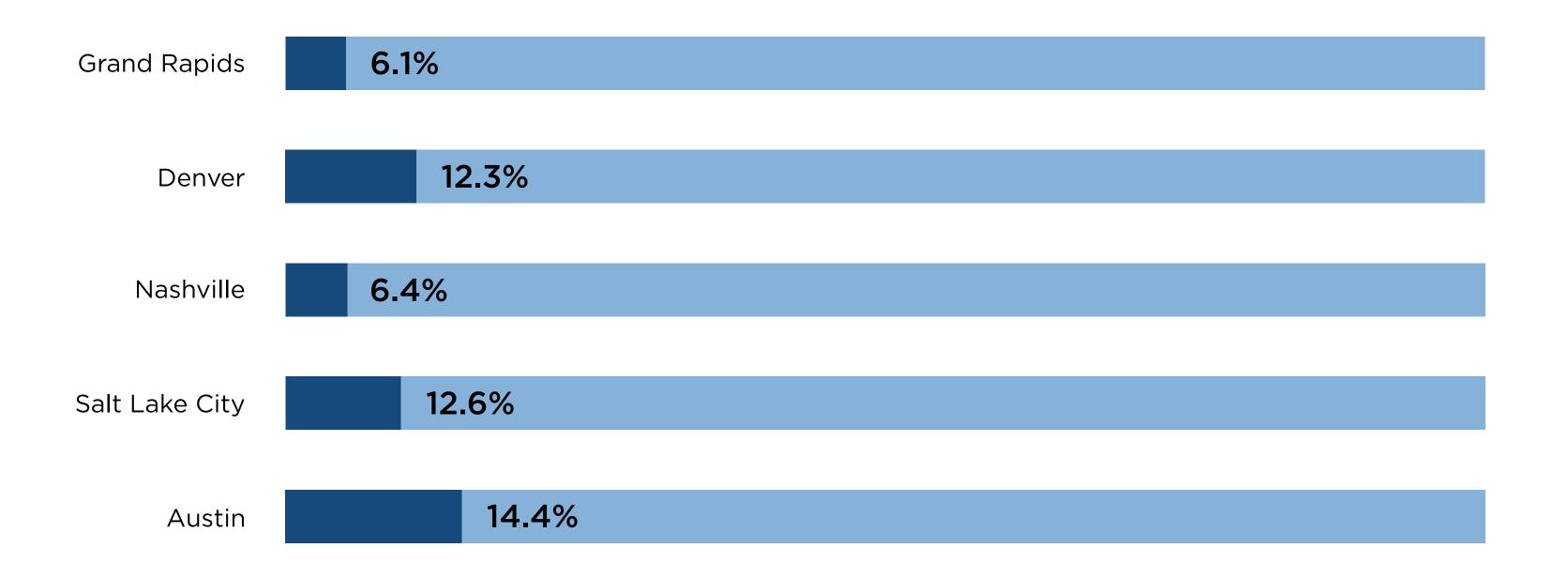
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Percentage of Tech Workforce 2020



Source: Data derived from U.S. Bureau of Labor Statists, EMSI-Burning Glass, and CompTIA

Tech Employment Percentage of Tech & Growth **Workforce 2020**

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Percentage of Tech Workforce by Job Type

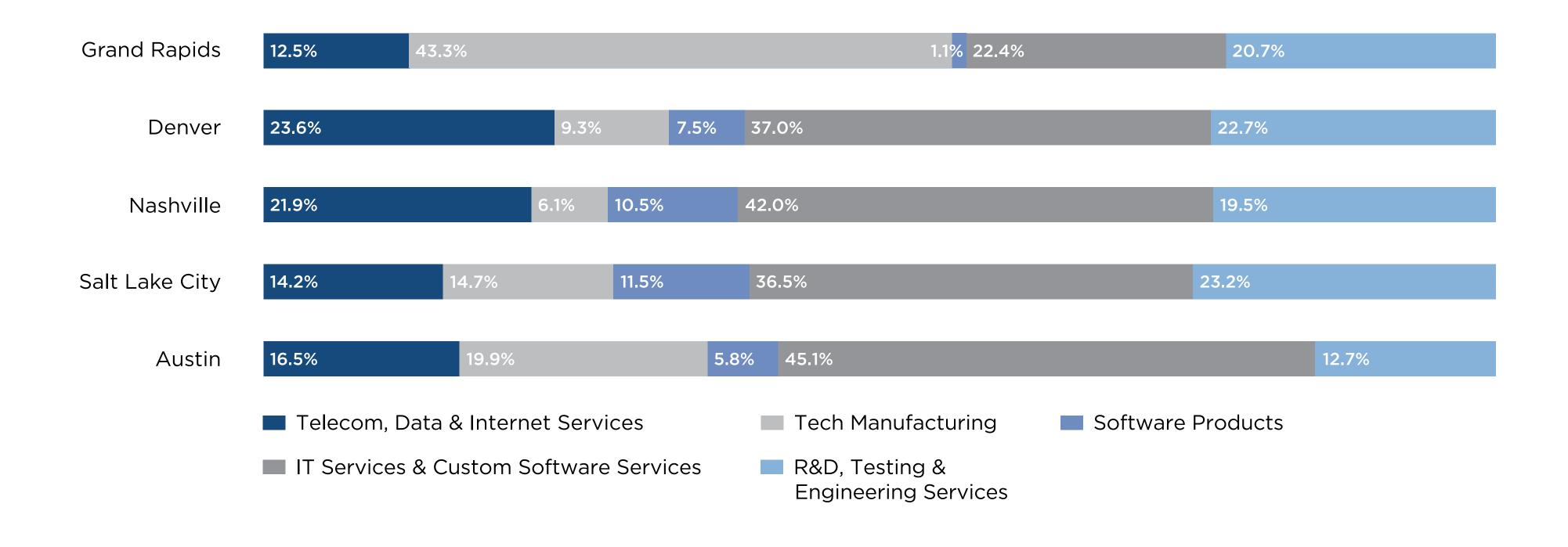
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Percentage of Tech Workforce by Job Type



Source: 2021 Data from CompTIA and EMSI Burning Glass

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Greater Grand Rapids is no stranger to transformation and innovation. We've grown our region into one of the most diverse and prolific centers of design, engineering, and manufacturing in the country.

In the 1990s, business leaders saw the need to further diversify the economy. We leaned on our region's strong public-private partnerships and created the Medical Mile, which has resulted in a health sciences sector that touches all corners of the region. Today, our community leaders have recognized the need for further economic transformation, setting our sights on the rapidly growing technology sector.



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This strategic plan is the product of a truly collaborative effort including more than 200 people from businesses large and small, educators at all levels of the continuum, and community leaders across the region. The recommendations in this report require ownership and dedication from every one of us. Our community must lean into the public-private partnership model that has served us so well in the past and fully invest in this strategy.





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Kickoff Meeting Attendants

Case Studies

businesses, community leaders, educators, and other stakeholders from across the region.

Together, we created subcommittees to focus on the three main pillars of this strategy: Talent,

Innovation Ecosystem, and Business Growth. These subcommittees met three times over the course of the process to shape the content of this report. Our efforts have already proven effective, with stakeholders and organizations implementing the recommendations produced as part of this process.

We formed a task force of more than 100

Below is a list of our accomplishments to date.



Survey Responses Subcommittee Meeting Participants

Expert One-on- One Interviews



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The following pages outline a series of goals and objectives designed to propel the Greater Grand Rapids economy to the next level. As you review this strategy, find your place to step in and support the next wave of West Michigan's economic growth.

With leadership from The Right Place and countless regional partners, we will begin in earnest to move the needle. We will be publishing an annual technology sector report, tracking our progress, highlighting successes, analyzing shortcomings, and adjusting our strategy to stay in step with the rapidly changing sector. Further, a "Phase 2" tech strategy assessment will be conducted by a nationally recognized research and strategy firm to help accelerate our strategy, pushing us further, faster.



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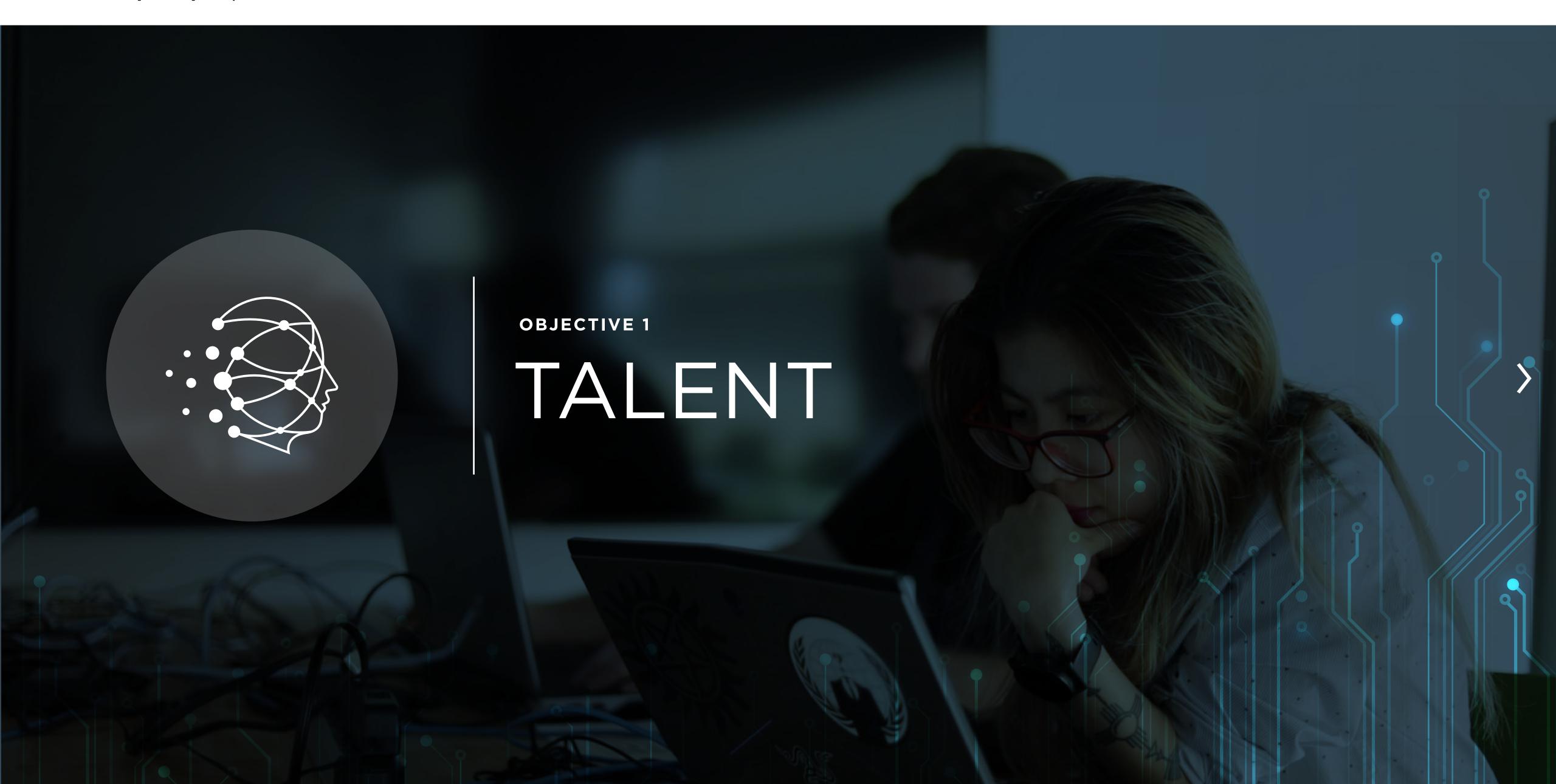
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Building Diversity

Developing Talent Reskilling Talent Educating Talent

Attracting Talent



OBJECTIVES:

Developing Talent

Ensuring all students have foundational tech skills and are exposed to technology and tech careers throughout their education.

Educating Talent

Providing our college students with high-tech degree programs and internships to increase the number of tech graduates in Greater Grand Rapids.

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Reskilling Talent

Providing our region's workforce with the training and reskilling opportunities to stay ahead of the curve.

Attracting Talent

Ensure organizations and companies across Greater Grand Rapids are making targeted efforts to attract these talented individuals to our region.





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Researchers estimate the global shortage of tech talent will reach 4.3 million people by 2030.

Sophisticated tech workers comprise some of the most sought-after talent in the world today. Demand for these workers has created a global shortage of tech talent and the demand is projected to grow exponentially as companies undergo rapid digital transformation in coming years.²

¹ Korn Ferry. "Future of Work: The Global Talent Crunch" ² KPMG. "Winning the War for Tech Talent"

Reskilling Talent Ed

Educating Talent

Attracting Talent

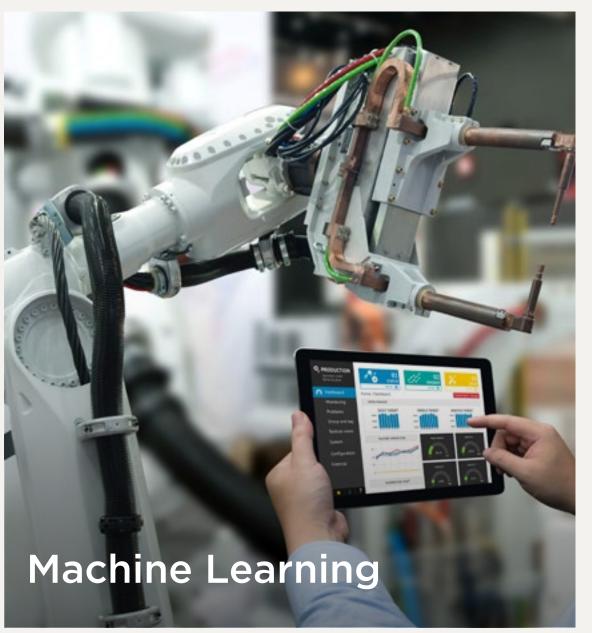
Demand for tech talent in Greater Grand Rapids is forecasted to grow across industry sectors.

Top Four Emerging Technologies in West Michigan:









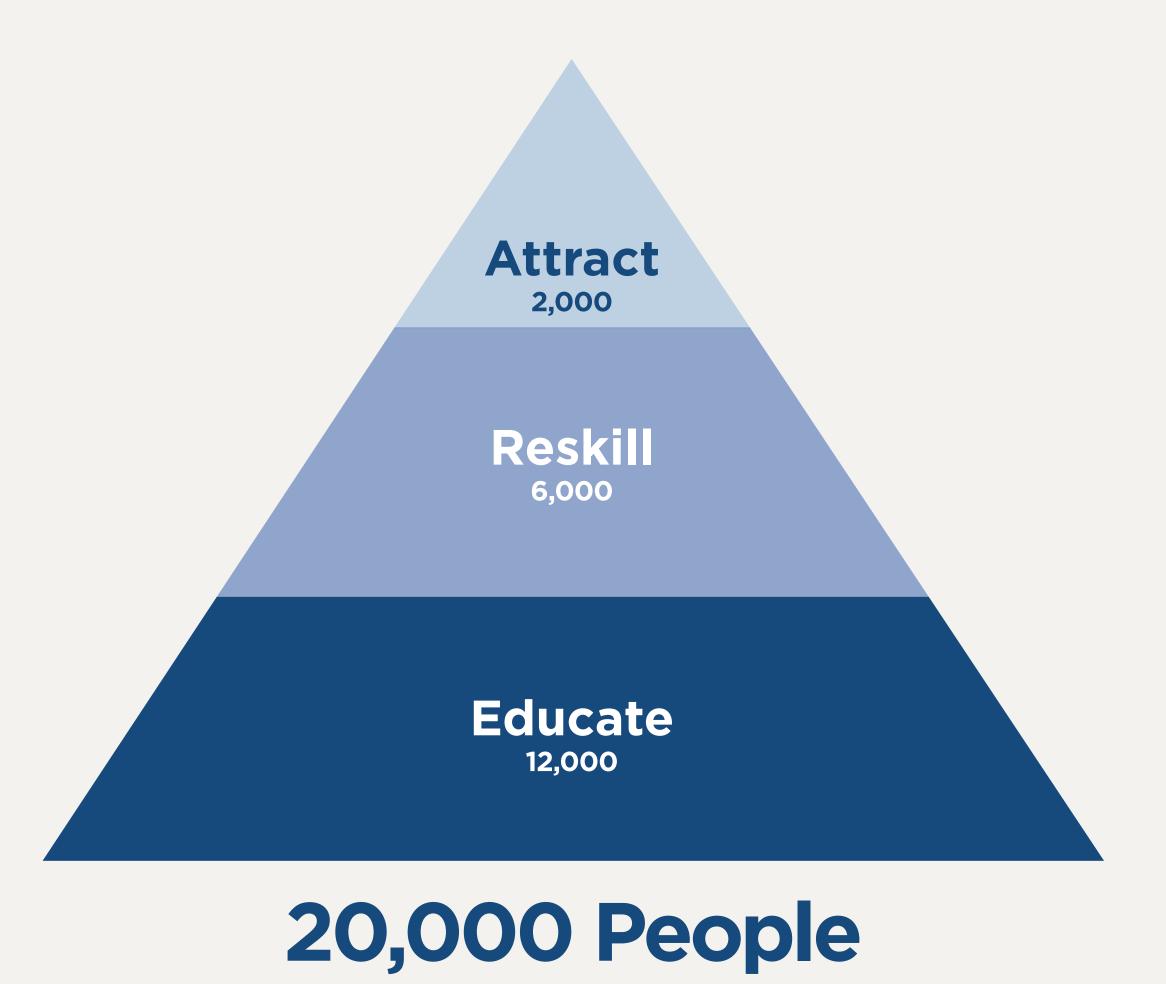


Greater Grand Rapids must educate, reskill and attract 20,000 tech workers in 10 years.

To meet the rising demand for tech talent and position Greater Grand Rapids as the leading tech hub in the Midwest, our region must increase the concentration of its tech workforce to 10% of the overall labor pool in the next decade.

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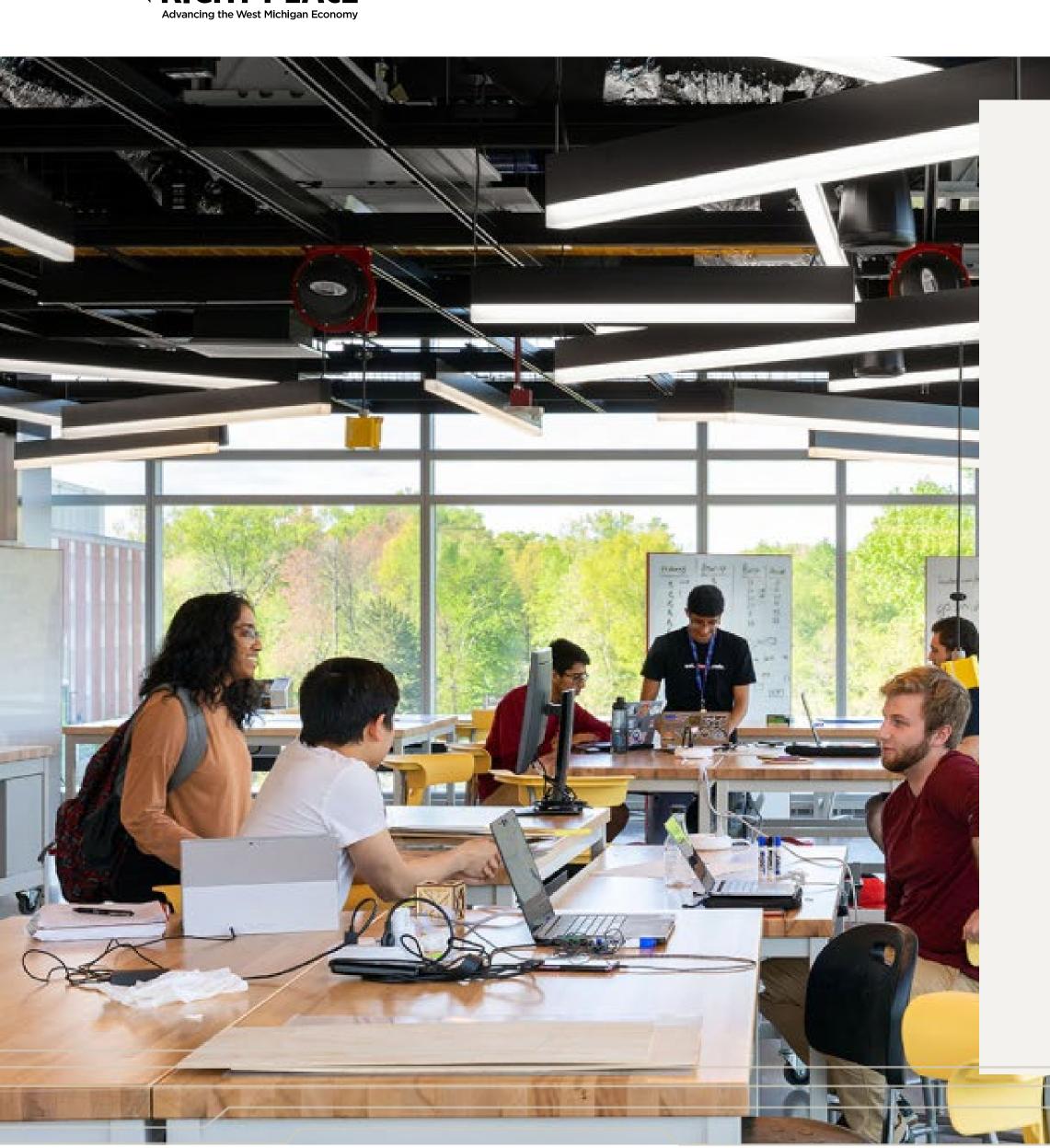
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To reach our goal of adding 20,000 tech jobs in Greater Grand Rapids, we must launch a multi-pronged strategy beginning by increasing exposure to tech skills and careers throughout the K-12 system.

Researchers predict the workforce of the future will interface with tech more than ever. The vast majority of emerging career fields—from data analytics to artificial intelligence—will require a level of technical sophistication. We must prepare the upcoming generations to excel in this new reality.

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The Future of Jobs

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Increasing Demand

- Data Analysts and Scientists
- Al and Machine Learning **Specialists**
- Big Data Specialists
- Digital Marketing and **Strategy Specialists**
- Process Automation **Specialists**
- Business Development **Professionals**
- Digital Transformation **Specialists**
- Information Security **Analysts**
- Software and Applications Developers

- Internet of Things Specialists
- Project Managers, Business Services, and Administration Managers
- Database and Network **Professionals**
- Robotic and Strategic Advisors
- FinTech Engineers Management and **Organization Analysts**
- Mechanics and Machinery Repairers
- Organizational Development **Specialists**
- Risk Management Specialists



Increasing Demand

























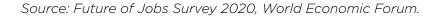














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The changing nature of work will drive substantial retraining and upskilling demand in Greater Grand Rapids.

50%

The estimated number of workers who will require retraining as companies adopt new technologies.¹

75%

Of 23,000 respondents to a SalesForce survey said they did not feel ready to operate in a "digital-first" world.²

1 World Economic Forum. "Future of Jobs 2020" 2 SalesForce. "Digital Skills Index Update." 2022





Our region must provide the training and resources necessary for people to change paths or upskill to pursue a meaningful and impactful career in tech.

Doing so will require a combination of employer-led training, certificates, and two-year and four-year degree programs alike. Work must also be done to retain our graduates by providing opportunities to engage in meaningful work with local employers.

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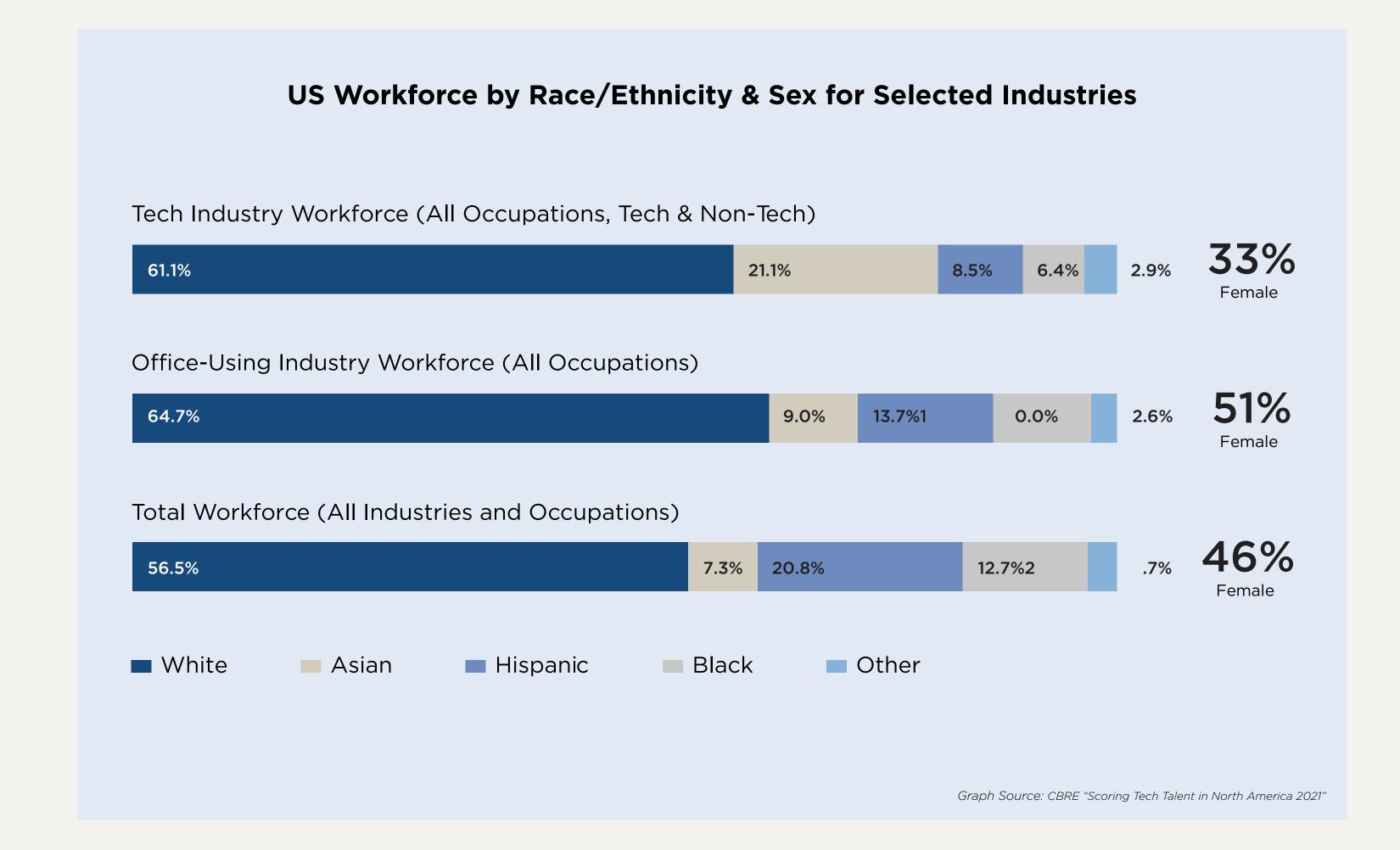
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Greater Grand Rapids can design our tech sector with intentionality by amplifying existing programs and developing new ones that engage our diverse students and incumbent workers.

Tech is notorious for its lack of diversity, with Black and Hispanic workers engaging with the tech sector at half the rate they participate in the broader economy. Further, women make up only 33% of the tech workforce, compared to 46% of the total workforce. At our nascent stage of tech development, Greater Grand Rapids has an opportunity to build a passion for tech among diverse populations.¹



1 EMSI Burning Glass and CompTIA 2021 data based on demographics of tech occupations

Building Diversity

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By using technology to inspire students from an early age, we can create the next generation of technologists right here in Greater Grand Rapids.

To boost our tech talent pipeline, we must lean on our business community to assist educators and other stakeholders in inspiring our students through curriculum, extracurricular activities, and career exploration opportunities.

Computational **Thinking**

East Kentwood Esports

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Computational Thinking for Education (CT4EDU) at MSU

The **CT4EDU** program develops teacher competencies and co-develops lesson plans with elementary school teachers and administrators (Grades 2 to 5) to equitably integrate computational thinking—the foundational skills for computer science—into curriculum. The program offers teachers professional learning, classroom activities, lesson screeners, toolkits, and posters to provide opportunities for young children to learn and explore computational thinking. Research shows that the CT4EDU program has helped boost students' metacognition, problem-solving, and learning management skills, while improving math learning outcomes.

The program is currently being deployed in Kentwood and Oakwood public schools.Watch **this video** to learn about this work.



Computational **Thinking**

East Kentwood Esports

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THE WHY



Esports

East Kentwood High School launched an Esports program in 2017 to join the then nascent sport. Since that time, the program has grown to 82 participants, spread across ten separate teams, and encompassing six gaming titles. East Kentwood's Esports team practices in a dedicated lab with eight HD TVs for competitive console gaming and 20 gaming PCs. The program was founded to provide students who were not traditional athletes or involved in band or theater the opportunity to participate in a team environment. East Kentwood administrators say the program also helps provide students access to collegiate-level scholarships to play Esports. Additionally, their students are leveraging the program to pursue careers in technology.







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Building Diversity

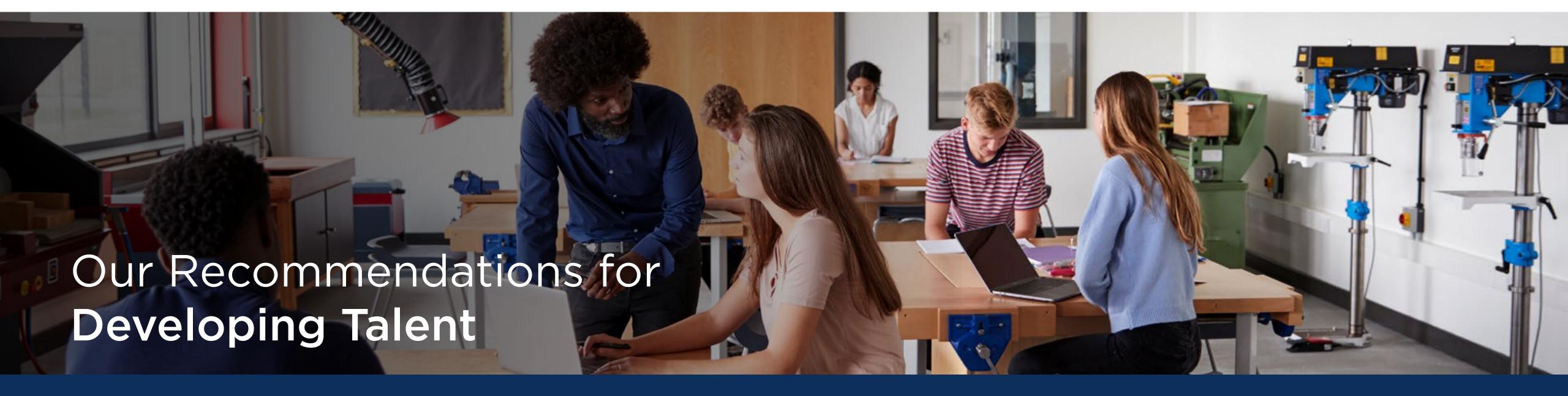
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TACTIC 01

Scaling tech programs
aimed at increasing academic
equity in education including
STEM Greenhouse, WMCAT,
Midwest Tech Project, and
similar organizations.

STEM GREENHOUSE CASE STUDY →

WMCAT CASE STUDY →

MIDWEST TECH PROJECT CASE STUDY →

TACTIC 02

Launching a tech-centric high school career center to bolster student interest, engagement, and knowledge of tech.

TACTIC 03

Increasing corporate participation and support of tech-related extracurricular programming in the K-12 system.

TACTIC 04

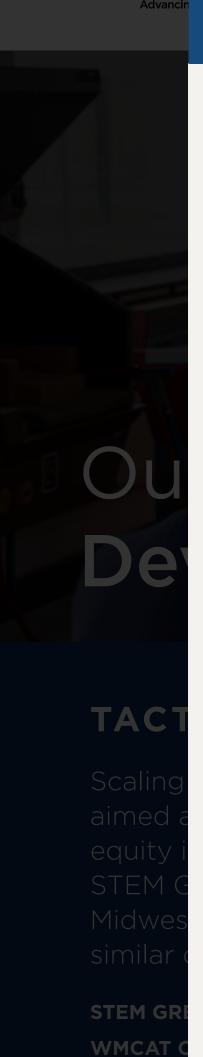
Creating age-relevant exploration opportunities in technology careers for elementary, middle, and high school levels so all students are exposed to real-world opportunities in tech.

TACTIC 05

Creating an Educational
Subcommittee of The Right
Place Tech Council to develop
a framework for educators
to integrate computational
thinking and other tech skills
into the K-12 curriculum.

Case Study





MIDWES

STEM Greenhouse

Case Study

STEM Greenhouse provides training in STEM-related skills for youth, as early as third grade through senior year of high school, in vulnerable communities through after-school programming, summer camps, and instruction during the school day with a commitment to diversity, equity, and inclusion at its core. The organization's STEM Scholars program focuses on engaging middle school students by promoting hands-on learning opportunities. Additionally, the **Sankofa STEM Academy** is a 5-week immersive summer program. The STEM Greenhouse also provides opportunities for young people to listen to speakers and engage with mentors who resemble them and have had similar experiences. While STEM Greenhouse focuses most on individual academic victories, the program delivers an impressive impact on the region's diverse tech talent pipeline, with participants 50% more likely to continue taking advanced math and science courses in high school.





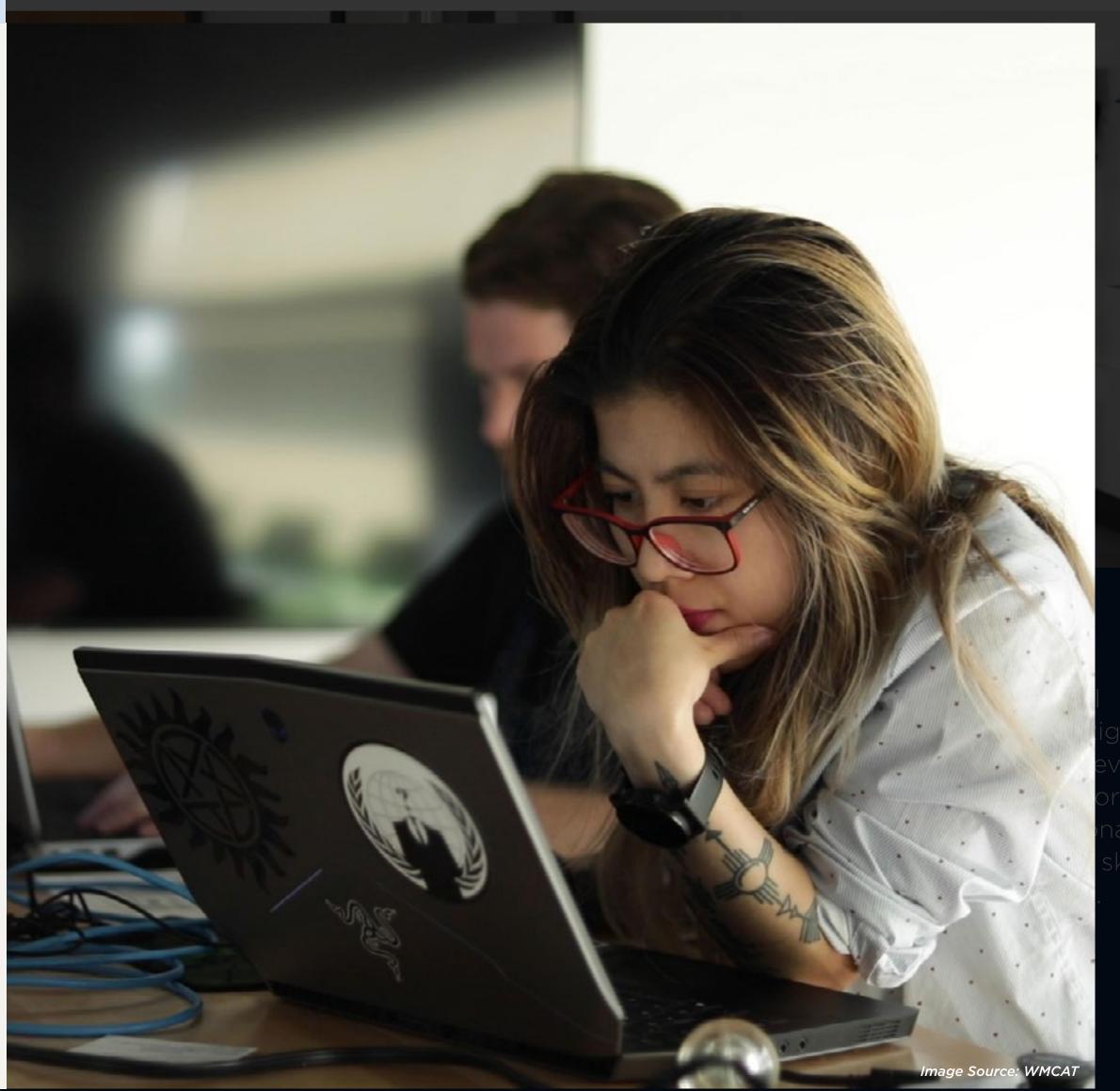
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The West Michigan Center for Arts and Technology Case Study

The West Michigan Center for Arts + Technology (WMCAT) provides equitable access to opportunity for young people and adults to make social and economic progress in their lives and the community. WMCAT advances this mission through career training for adults experiencing under- and unemployment, arts and technology engagement for middle and high school students, and social enterprise business models.

WMCAT's **Cybersecurity + GRC** (Governance, Risk, and Compliance) career training pathway aims to increase family economic security through thriving-wage careers, diversify the tech talent pipeline, and support inclusive growth in West Michigan. Part of WMCAT's Adult Career Training Program, the tuition-free pathway includes professionally led instruction, leadership and personal development curriculum, apprenticeships with local employers, and on-site resources to support students as they take national certification exams and enter their new career field.







STEM G **WMCAT** MIDWES

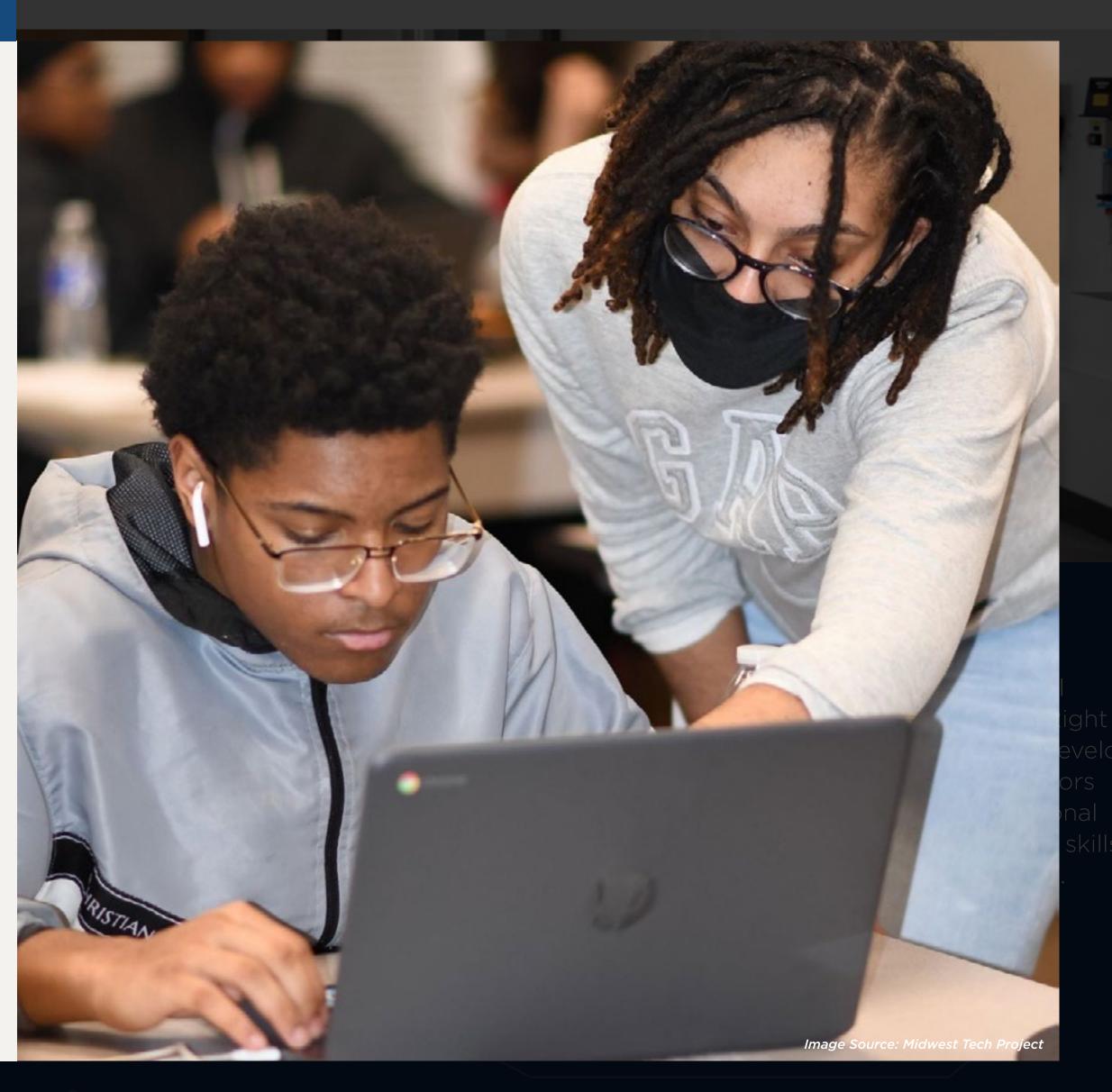




Midwest Tech Project Case Study

Based in Grand Rapids, the Midwest Tech Project

strives to promote diversity in tech by exposing people of color to opportunities within the tech sector, career pathways and business startup opportunities in tech. MTP connects with the areas most diverse neighborhoods through extensive programming, events, after school activities and mentorship. Further, the Midwest Tech Project assists Black and Brown entrepreneurs and startup organizations in developing business plans, marketing, financial, legal, and other resources crucial to start up success.



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The COVID-19 pandemic accelerated the dramatic and immediate shift to tech for businesses across sectors.

From advanced point-of-sale systems at restaurants and retailers to increased automation on the manufacturing shop floor and the shift to virtual work, workers and consumers alike are more exposed to technology than ever before. To some degree, every company is a tech company and requires employees with a level of technical sophistication.





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The tech sector and education partners can leverage existing models to expand the talent pipeline through retraining and upskilling.

Greater Grand Rapid's manufacturing sector has demonstrated the success of such models through close relationships between skilled trades programs and regional employers. Furthermore, our local universities and community colleges have shown their willingness to create programs to respond to industry demand.





Building Diversity

Developing Talent

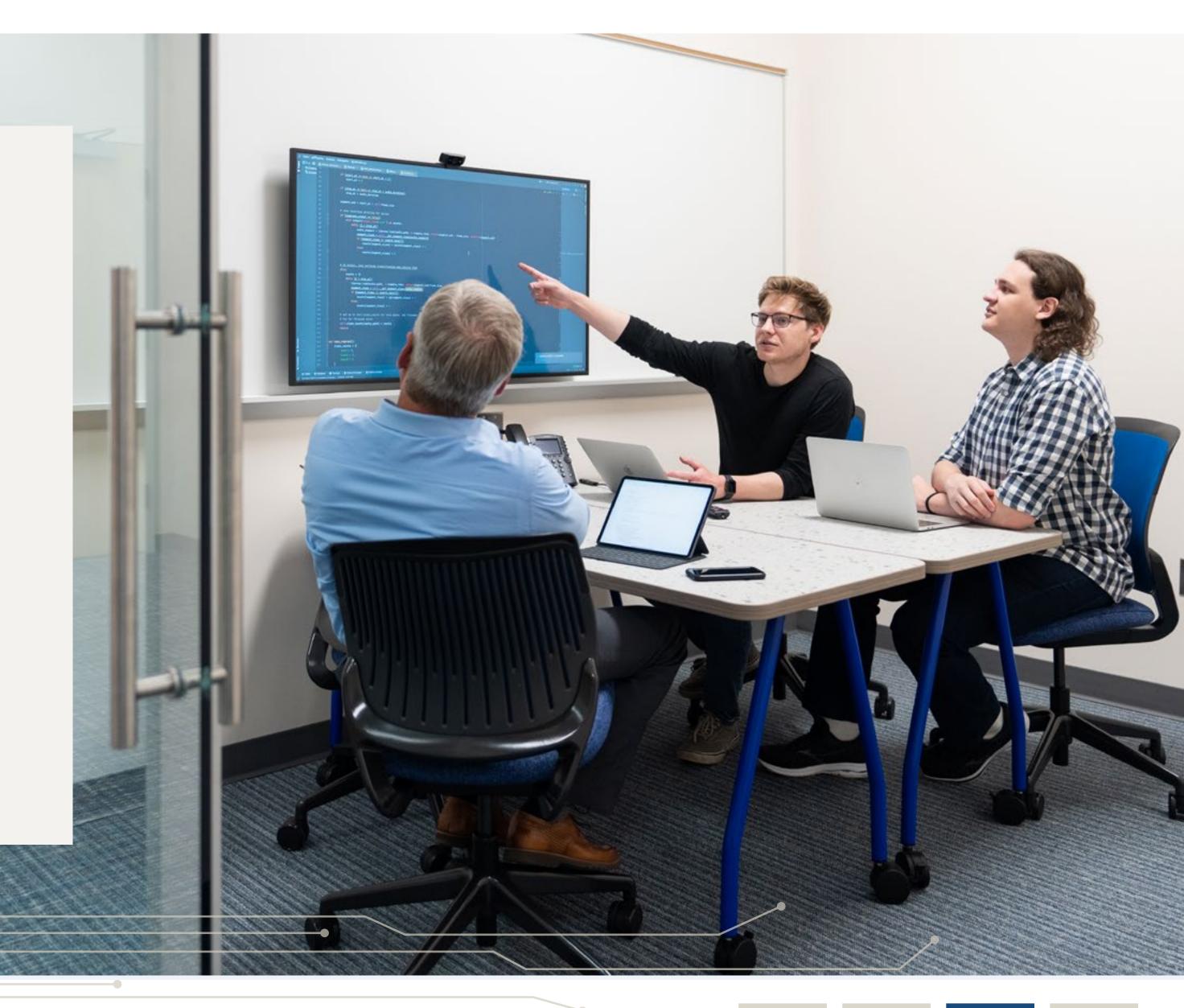
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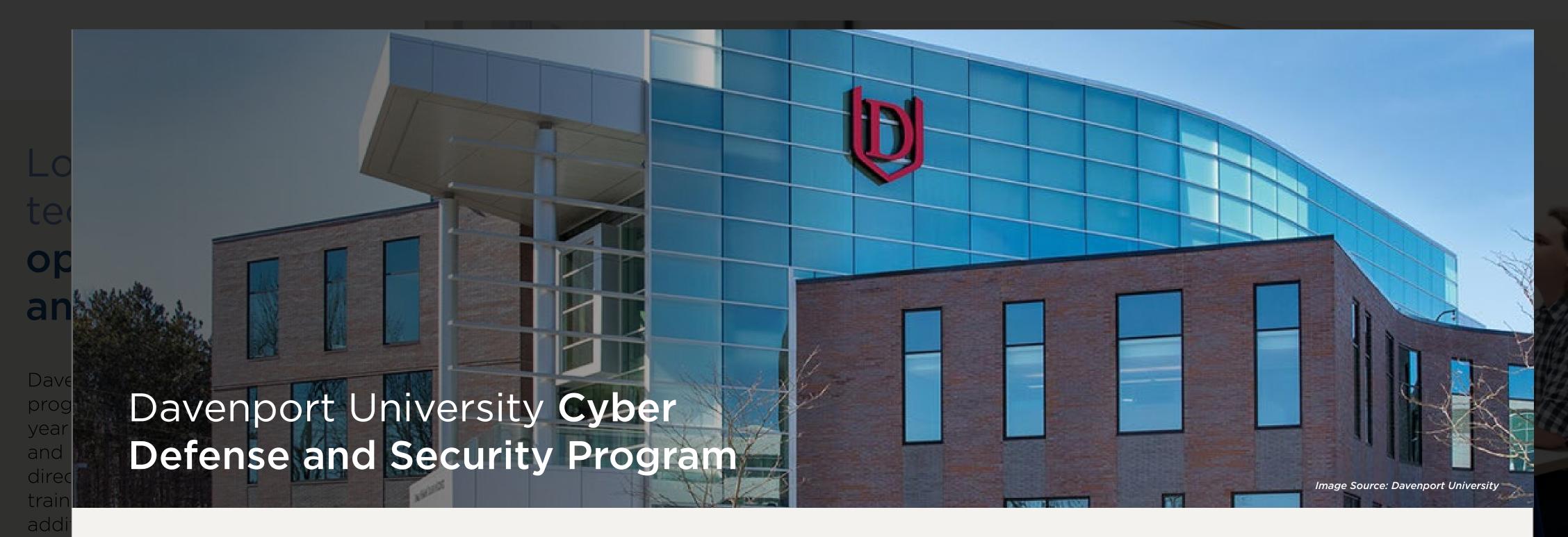
Local universities and major tech companies offer numerous opportunities for retraining and upskilling.

Davenport University offers an awarded-winning cybersecurity program and Grand Rapids Community College provides twoyear programs in computer programming, computer support, and network administration designed for students to graduate directly into the workforce. Stackable credentials and online training programs through major tech companies also provide additional options for retraining and upskilling.

Davenport Cyber Case Study



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Davenport University offers a stackable credential program in Cyber Defense and Security through its College of Technology. The stackable structure allows students to begin their careers in cybersecurity by completing a certificate program to secure entry-level positions. From there, students can go on to layer more advanced education, including a Cybersecurity Associate degree, Bachelor of Science in Cyber Defense, and a Master of Science in Information Assurance and Cybersecurity. **Davenport's College** of Information Technology currently enrolls approximately 850

students and features a 15-to-1 student-to-teacher ratio. The college is one of 16 schools across the country designated as a Center of Digital Forensics for Academic Excellence by the Department of Cyber Crime Center. The school is also recognized as an academic institution of excellence by the National Security Agency and Department of Homeland Security.

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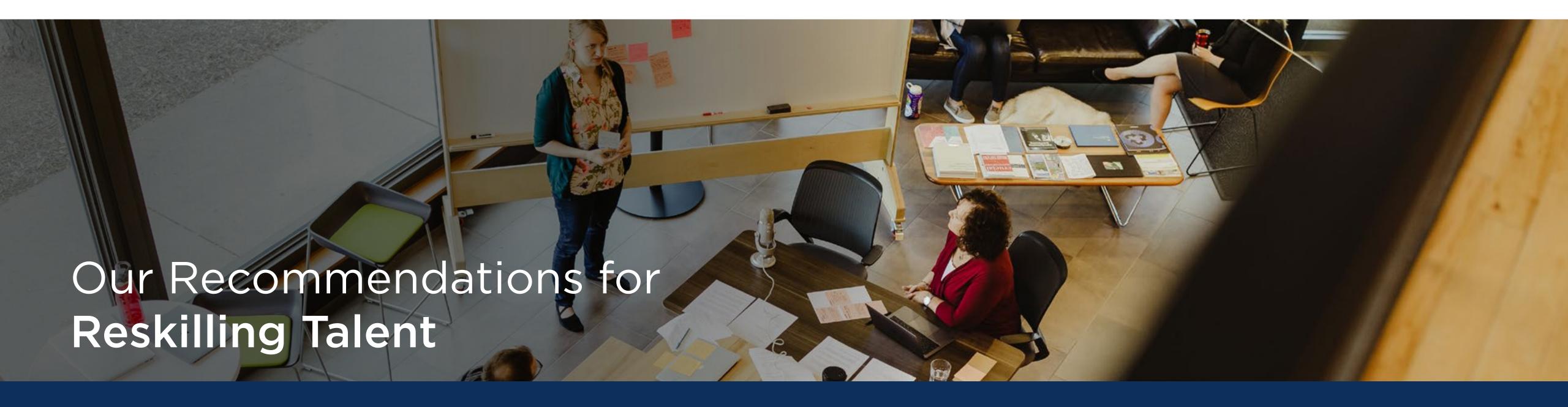
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TACTIC 01

Creating readily deployable models for retraining and upskilling workers closely linked to regional employers that can be housed within community colleges and other institutions.

TACTIC 02

Establishing partnerships with major tech enterprises such as Google, Microsoft, Salesforce, and LinkedIn to grow local completions of these industry-led tech certification programs.

TACTIC 03

Benchmarking and scaling existing employer training and co-op models to include more companies and talent.

TACTIC 04

Building upon the computer training programs offered by the **Urban League** and **Hispanic Center,** intentionally growing the diversity of the tech talent pipeline.



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Our institutions currently graduate approximately 480 tech graduates annually. Reaching our goal of educating 12,000 more people will require a 3x increase in college graduates.

Greater Grand Rapids' colleges and universities produce tech talent spanning computer science, cybersecurity, engineering, and other tech-related fields. By providing ample opportunities for students to engage with companies in cutting-edge tech fields throughout their education journey, we can create an environment where college students are more likely to choose Greater Grand Rapids and more apt to stay once they graduate.

FSU Center for Virtual Learning



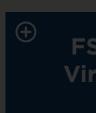
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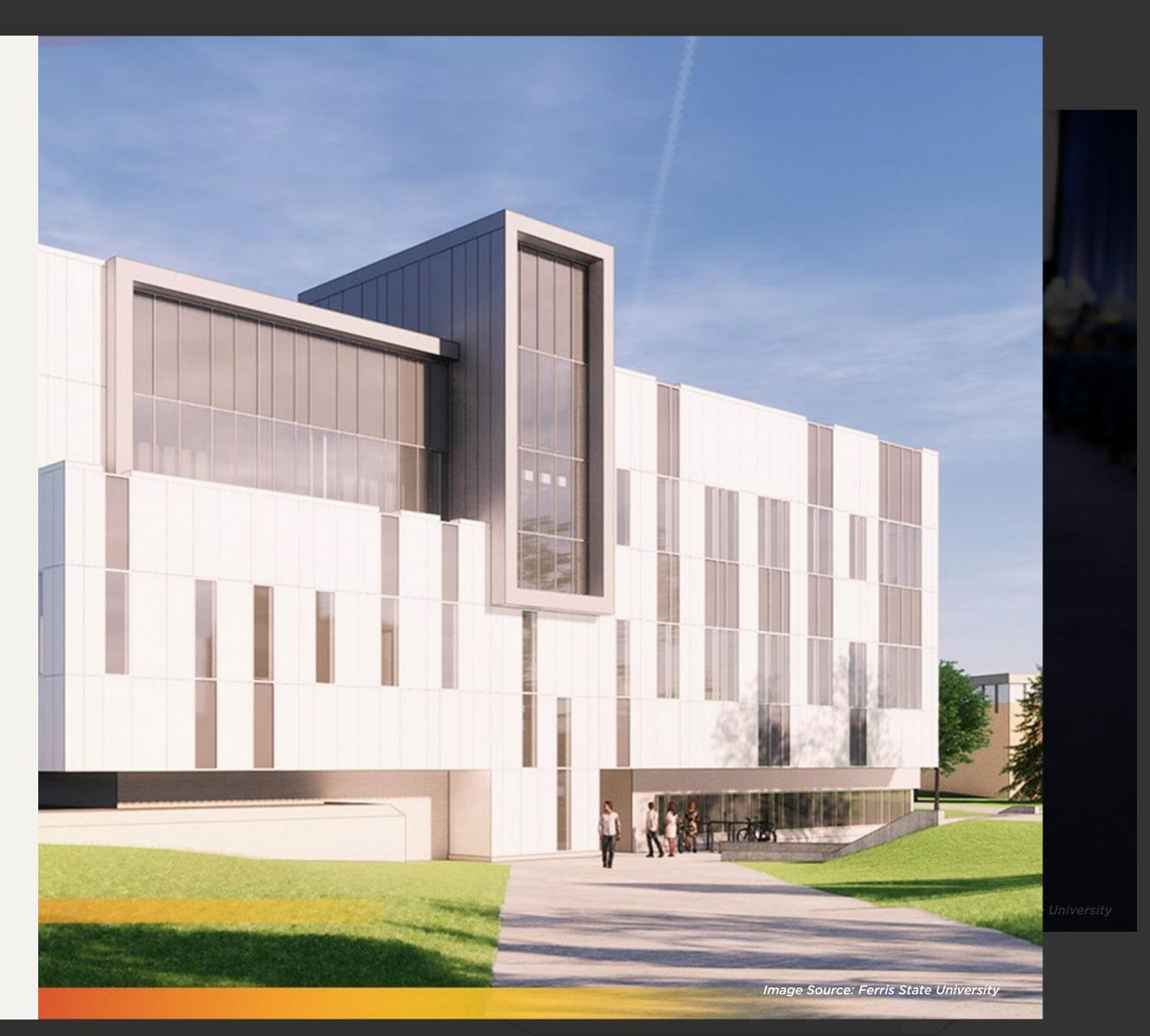
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Ferris State University **Center for Virtual Learning**

Ferris State University is nearing completion on a \$32 million **Center for Virtual Learning** (CVL) which will house a number of the university's most hightech programs including the School of Information Security and Intelligence, Artificial Intelligence and Project Management, Digital Media, and others. The 64,000-square-foot facility will include a Faraday room—the first of its kind in Michigan—which isolates all network communication for research and instruction in artificial technology. Courses in cybersecurity, internet of things, machine learning, natural language processing, and other cuttingedge technologies will be taught in the new facility. Additionally, CVL will be the anchor facility for Ferris State's Esports team, providing the first purpose-built Esports arena on a university campus in Michigan.



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TACTIC 01

Mimicking long-established industry partnerships for engineers and nurses by creating pathways and opportunities for computer science and other tech graduates to engage with regional companies through employer-sponsored research programs, internships, co-ops, and other programs.

TACTIC 02

Scaling the Applied Computing Institute at Grand Valley State University to aid in college graduate enrollment, retention, and enterprise engagement.

APPLIED COMPUTING INSTITUTE →

TACTIC 03

Developing a central landing page showing all tech-related programming and projects being conducted by West Michigan institutions.

TACTIC 04

Leveraging an Educational
Subcommittee of The Right Place
Tech Council to bridge gaps and
encourage collaborations between
universities, community colleges,
regional tech businesses and
other stakeholders.

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Grand Valley State University Applied Computing Institute

The <u>Applied Computing Institute</u> (ACI) at Grand Valley State University gives both undergraduate and graduate students the opportunity to work closely with major employers on real-world projects. Each undergraduate senior project is sponsored by a sponsoring company. For 15 weeks, seniors work closely with the company under faculty supervision to go through an entire product development process.

Graduate students involved with ACI work on higher-end and more complex projects. A sponsoring company will create a statement of work to solve a problem or develop a process. Graduate students are paid a stipend and work on the project as they complete their graduate degree.







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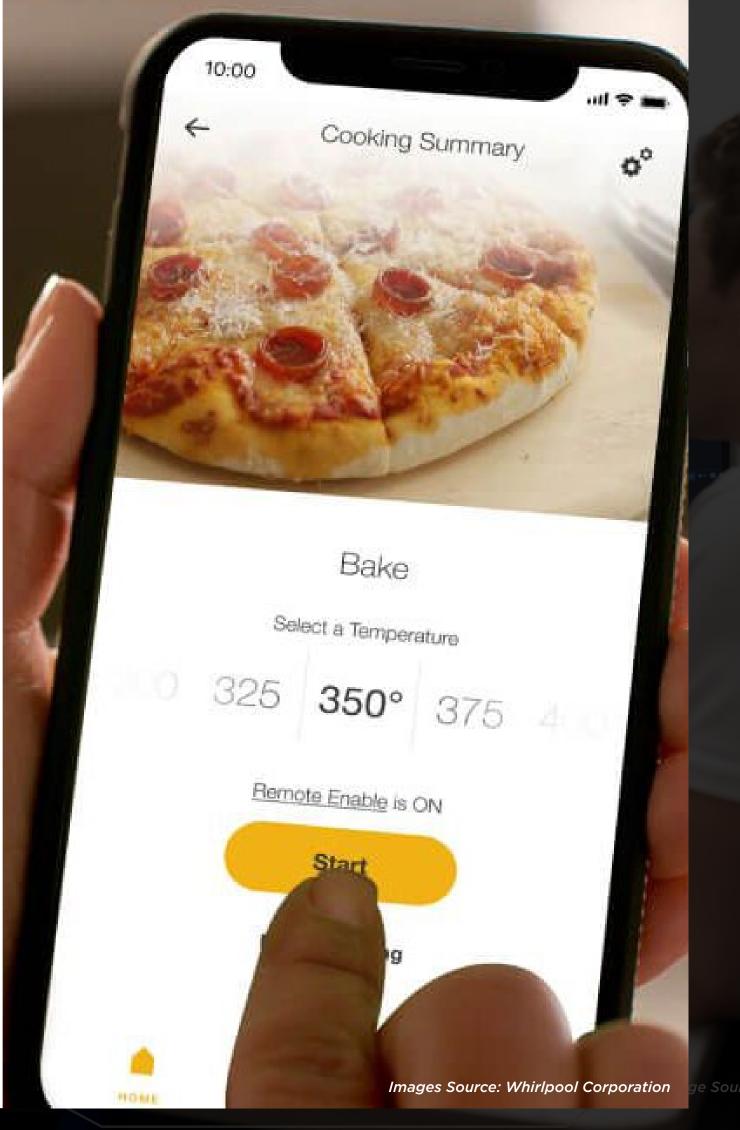
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Students Partnering with Whirlpool

In 2020, computer science students at ACI conducted a **joint project** with engineers at Whirlpool aimed at improving the company's smart appliance technologies. Whirlpool tasked the students with designing a mobile app allowing Whirlpool employees to contribute data to enhance the user experience of Whirlpool's Smart Countertop Oven. Specifically, the app was designed to allow Whirlpool employees the ability to contribute data by annotating photos of food. The data was then used to train and improve image recognition algorithms to automatically recognize food when placed on the countertop oven.







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Attracting Tech Talent

The tech labor market is mobile. In general, tech workers are attracted to areas that offer the most opportunities in their field, with the best pay relative to cost of living. These workers also generally place a high amount of value on placemaking and other community factors when choosing a place to live. Often, these criteria are not aligned with where an individual received their degree.

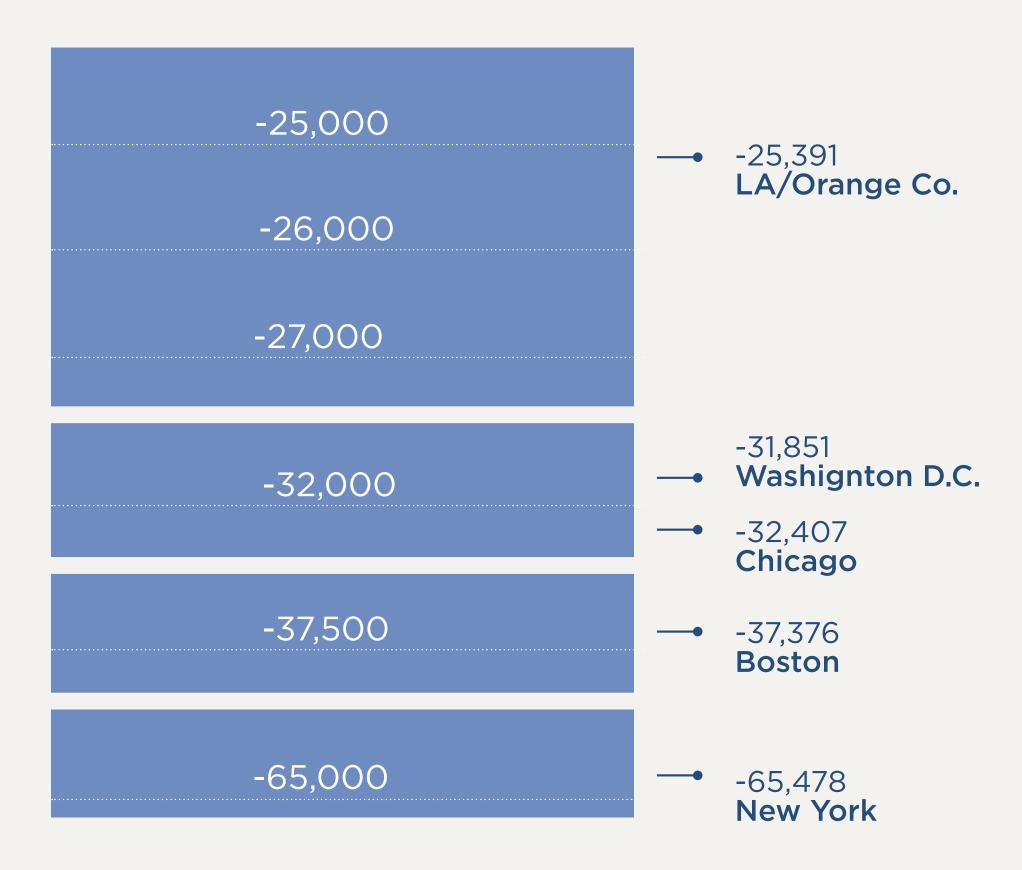
Many of the country's largest metropolitan areas have experienced a so-called "brain drain" in tech in recent years. For example, the New York metropolitan area lost 65,500 tech workers from 2016 to 2020, while Boston and Chicago lost 37,500 and 32,407, respectively, over the same period.

As tech workers continue to move across the country, we must ensure organizations and companies across Greater Grand Rapids are making targeted efforts to attract these talented individuals to our region. Organizations such as Hello West Michigan, a regional talent attraction and retention organization, are poised to scale such attraction efforts.



Brain Drain Market

Opportunity to Attract Talent from Outside Regions



CBRE Research, U.S Bureau of Labor Statistics, Statistics Canada, National Center for Education Statistics (Metro), Canadian Universities, 2021



Overview Building Diversity Developing Talent Reskilling Talent Educating Talent Attracting Tale



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Hello West Michigan The Boomerang Effect

Hello West Michigan's talent attraction efforts focus on education, attraction, and connections. They seek to bring together potential relocatees and hiring employers through a variety of methods. By educating potential relocatees through its website and social media, they help job seekers determine if the region is the right fit or connect them with resources post relocation. Hello West Michigan is proactive in attraction by running out-bound marketing campaigns promoting the region. These campaigns focus on targeting people living outside of Michigan who have a prior connection to the state. Millions of advertising impressions have been served since 2014 and the campaigns are structured in a way that allows the organization to track resulting hires.



Overview

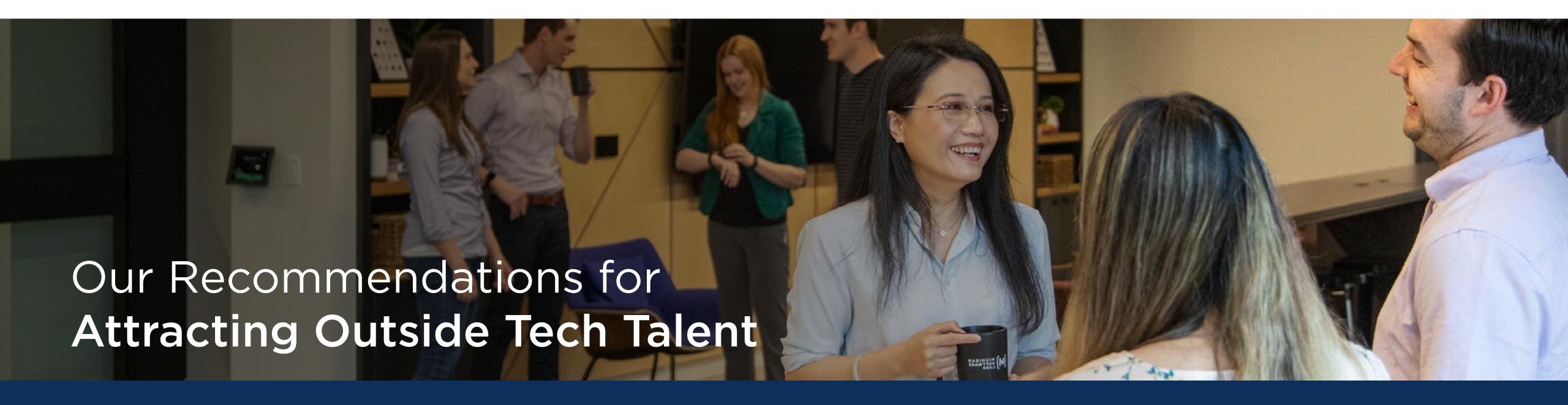
Building Diversity

Developing Talent

Reskilling Talent

Educating Talent

Attracting Talent



TACTIC 01

Leveraging Hello West Michigan and other talent organizations to target tech-related boomerangs and other individuals with ties to West Michigan.

TACTIC 02

Targeting tech workers across the country suffering from mass layoffs through a combination of strategic digital advertising and a rapid response team that would deploy information and resources in the effected communities.

TACTIC 03

Encouraging companies to actively recruit more workers from so-called "brain drain communities" to Greater Grand Rapids.

TACTIC 04

Expanding the reach of programs such as GVSU's Applied Computing Institute to actively recruit past graduates who have left Greater Grand Rapids.

TALENT

ECOSYSTEM

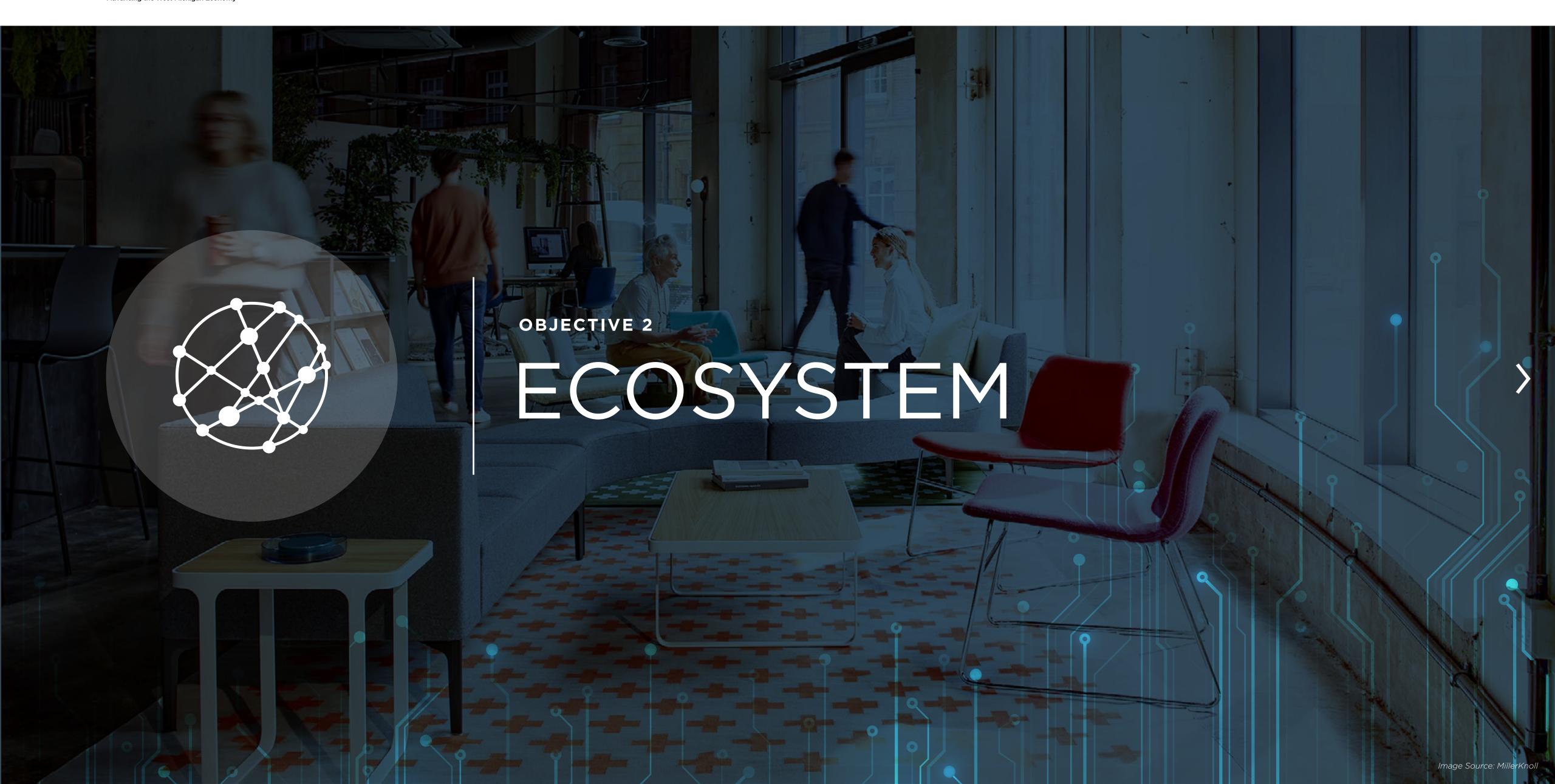
GROWTH

RESOURCES

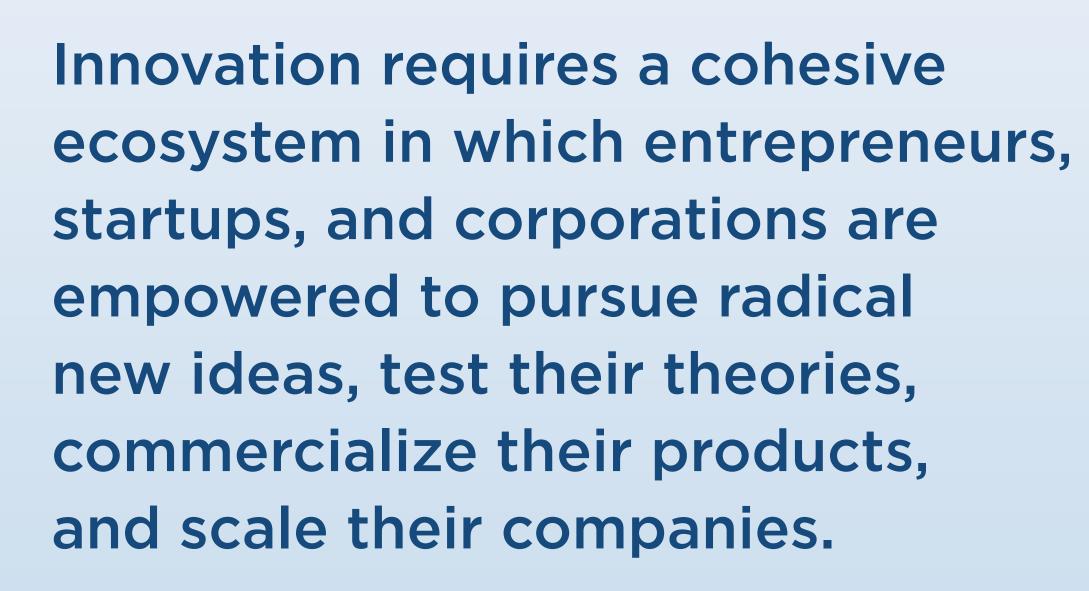
Launch Tech Events Support Entrepreneurs

Grow Incubators & Accelerators

Expand Broadband Increase Density



TALENT





OBJECTIVES:

Launch Tech Events

RIGHT PLACE

Using events to expose our businesses to emerging trends and signal to the region and beyond that we are committed to growing our tech cluster.

Grow Incubators& Accelerators

Transforming ideas into commercial, disruptive technologies by leveraging area incubators and accelerators.

Support Entrepreneurs

Providing the support needed to attract and retain entrepreneurial companies through mentorships, investment and funding opportunities.

Increase Density

Creating physical tech districts to accelerate opportunities for research, collaboration and to attract tech talent.

Expand Broadband

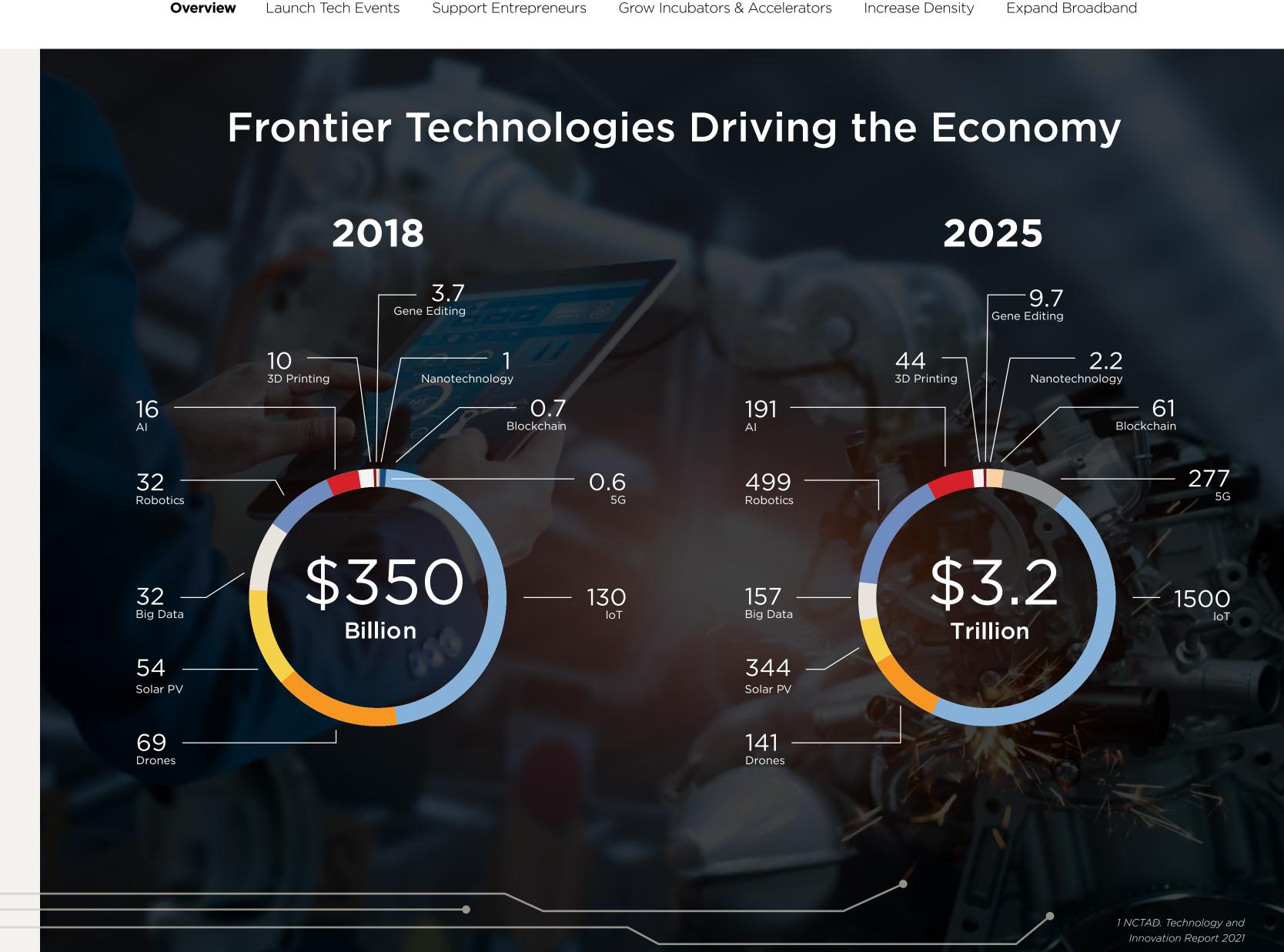
Leading the nation in broadband service, providing reliable, accessible and affordable internet access throughout the region.



From advancements in artificial intelligence, data analytics, and robotics to the emergence of vehicle electrification and blockchain, innovation is at the heart of technology.

A 2021 report published by the United Nations Conference on Trade and Development (UNCTAD) identified 11 frontier technologies researchers expect to drive the future economy. These technologies represented a global industry of \$350 billion in 2018 and could reach \$3.2 trillion in 2025.

THE WHY TALENT **ECOSYSTEM** GROWTH RESOURCES 📶



Expand Broadband

Frontier Technologies

Technol			Internet of Things (IoT)	Big Data	Blockchain	3D Printing	Robotics
Technor	logy	Artificial intelligence (AI)	internet of Things (101)	Big Data	BIOCKCIIdili		Robotics
Publication (1996-2018		403,596	66,467	73,957	4,821	17, 039	254,409
Patent (1996-2018	8)	116,600	22,180	6,850	2,975	13,215	59,535
Price		Insurance Fraud-Detection Tool: \$100,00-\$300,000, Chatbots: \$30,000- \$250,000	Electrocardiography Monitor: \$3,000-\$4,000 Building & Home Automation: from \$50,000	Building & Maintaining a 40-terabyte Data Warehouse: \$888,000 per year	Project Development: \$5,000-\$200,000	Entry Level 3D Printer: \$200, Top-notch industrial printer: \$100,000 average 3D Printer: \$700	Industrial Robots: \$25,000-\$400,000 Humanoids: \$500-\$2,500,000
Market Siz	:e	\$16 Billion (2017) \$191 Billion (2024)	\$130 Billion (2018) \$1.5 Trillion (2025)	\$32 Billion (2017) \$157 Billion (2026)	\$708 Million (2017) \$61 Billion (2024)	\$10 Billion (2018) \$44 Billion (2025)	\$32 Billion (2018) \$499 Billion (2025)
Major Providers		Alphabet, Amazon, Apple, IBM, Microsoft	Alphabet, Amazon, Cisco, IBM, Microsoft, Oracle, PTC, Salesforce, SAP, (IoT Platform)	Alphabet, Amazon, Dell, HP, IBM, Microsoft, Oracle, SAP, Splunk, Teradta (Storage Platforms Analytics)	Alibaba, Amazon, IBM, Microsoft, Oracle, SAP, (Blockchain-as-a-Service)	3D Systems, ExOne, HP, Stratasys	ABB, FANUC, KUKA, Mitsubishi, Electric, Yaskawa (Industrial Robotics) Hanson Robotics, Pal Robotics, Robotics, Softbank Robotics (Humanoids) Alphabet/Waymo, Aptiv, GM, Tesla (Autonomous Vehicles)
Major Users		Retail, Banking, Discrete Manufacturing	Consumer, Insurance, Healthcare Providers	Banking, Discrete Manufacturing, Professional Services	Finance, Manufacturing, Retail	Discrete Manufacturing, Healthcare, Education	Discrete Manufacturing, Process Manufacturing, Resource Industry



Launch Tech Events Support Entrepreneurs

Grow Incubators & Accelerators

Increase Density

Expand Broadband

Frontier Technologies

Technology	Drones	Gene Editing	5G	Nanotechnology	Solar Photovoltaic (Solar PV)
Publications (1996-2018)	10,979	12,947	6,828	152,359	10,768
Patent (1996-2018)	10,897	2,899	4,161	4,293	20,074
Price	Commercial Drones: \$50-\$300,000 (High-end: \$1,000-\$4,000), Military Drones: 14.5 Million (MQ-9 Reaper)	Standard in Vitro Fertilization: over \$20,000/try + \$10,000 or more for tests	\$0-20/Month more than 4G Network	Anti-Cancer Drug with Nanotechnology \$4,363/cycle	Residential PV System (6KW) \$16,200-\$21,420
Market Size	\$69 Billion (2017) \$141 Billion (2023)	\$3.7 Billion (2018) \$9.7 Billion (2025)	\$608 Million (2018) \$277 Billion (2025)	\$1 Billion (2018) \$2.2 Billion (2025)	\$54 Billion (2018) \$334 Billion (2026)
Major Providers	3D Robotics, DJI Innovations, Parrot, Yuneec Boening (commercial drones), Lockheed Martin, Northrop Grumman Corporation (military drones)	CRISPR Therapeutics, Editas Medicine, Horizon Discovery Group, Intella Therapeutics, Precision BioSciences, Sangamo Therapeutics	Ericksson, Huawei, Nokia, ZTE (Network Equipment) Huawei, Intel, Media Tek, Qualcomm, Samsung Electronics (Chip)	BASF, Apel Sciences, Agilent, Samsung Electronics, Intel	Jinko Solar, JA Solar, Trina Solar, Canadian Solar, Hanwha Q Cells
Major Users	Utilities, Construction, Discrete Manufacturing	Pharma-Biotech, Academic/ Research Centre, Agrigenomic/ Contract Research Organizations	Energy Utilities, Manufacturing, Public Safety	Medicine, Manufacturing, Energy	Residential, Commercial, Utilities

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Launch Tech Events

Support Entrepreneurs

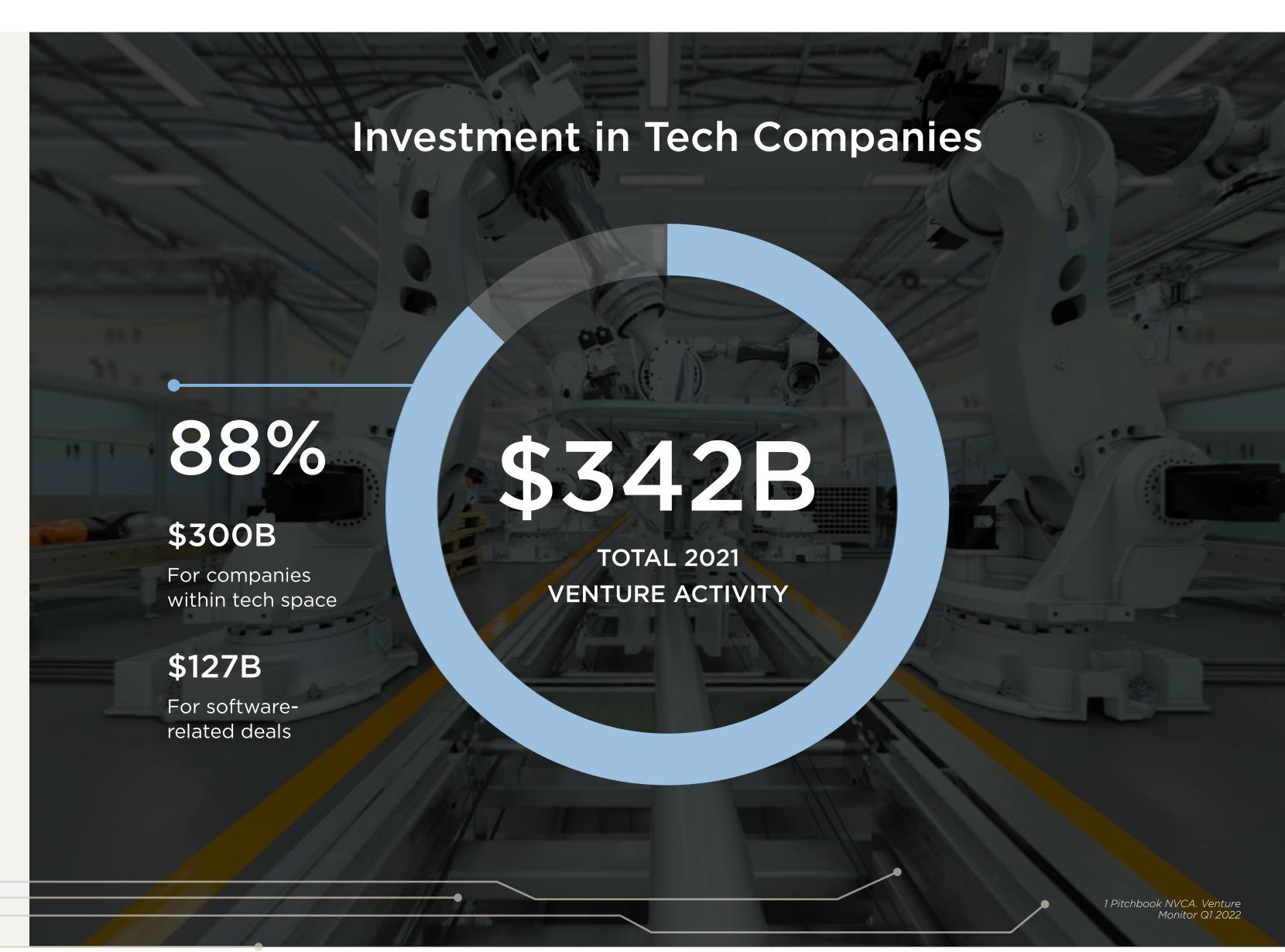
Grow Incubators & Accelerators

Increase Density

Expand Broadband

In terms of investment, the number of venture capital deals in the tech space has increased more than 7x in North America over the past decade.

Of the \$342 billion in total venture activity in 2021, 88% (\$300 billion) was earmarked to companies within the tech space, with \$127 billion (37%) dedicated to software-related deals alone. Venture capital activity in the software sector outstripped all other subsectors tracked by Pitchbook. As a region, we must ensure our entrepreneurs, companies, and universities have the resources and support to capitalize on that innovation.



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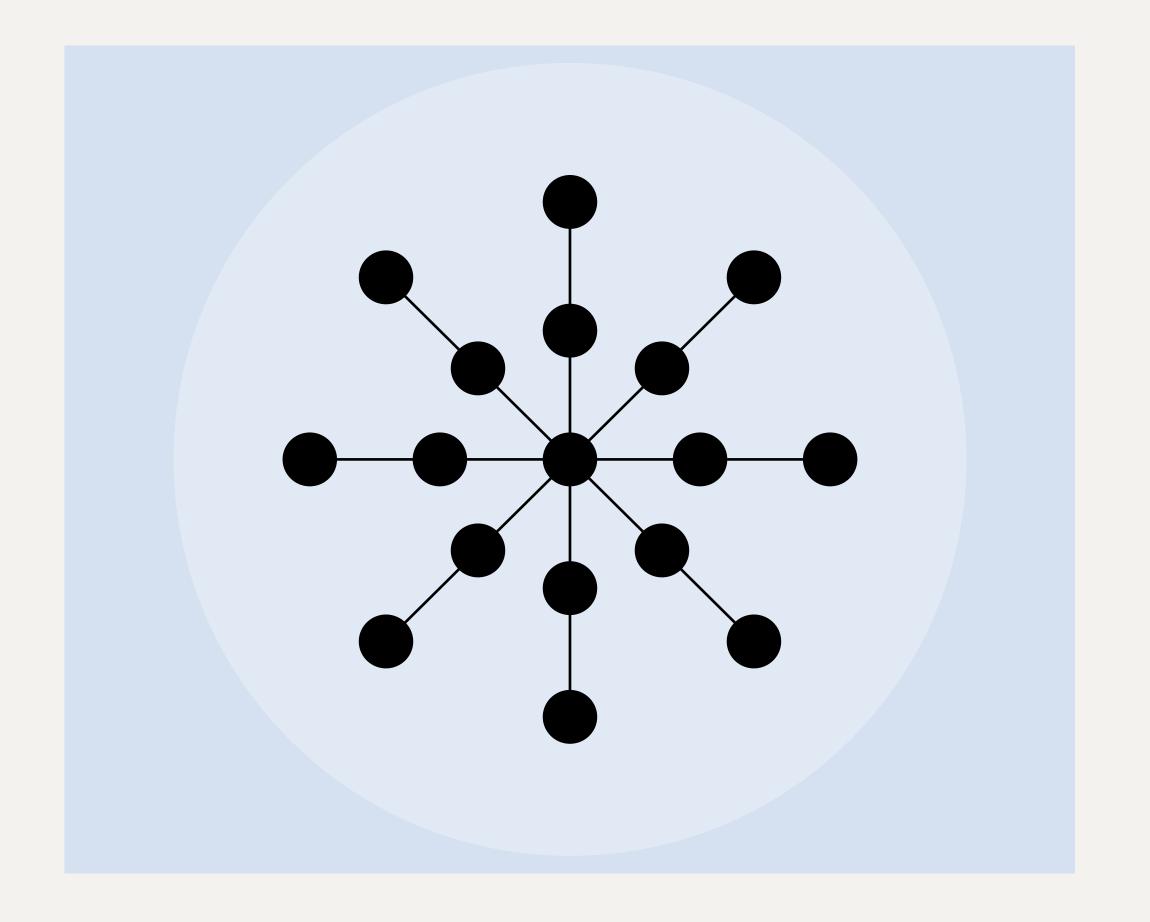
Grow Incubators & Accelerators

Increase Density

Expand Broadband

Successful tech clusters across North America share similar models for their innovation ecosystems, with numerous entry points and programs to support R&D and startups.

The entire ecosystem works toward the end goal of commercialization and scaling. This work is often aided by close partnerships with major area employers, who help identify the major problems that require new tech solutions.



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Increase Density

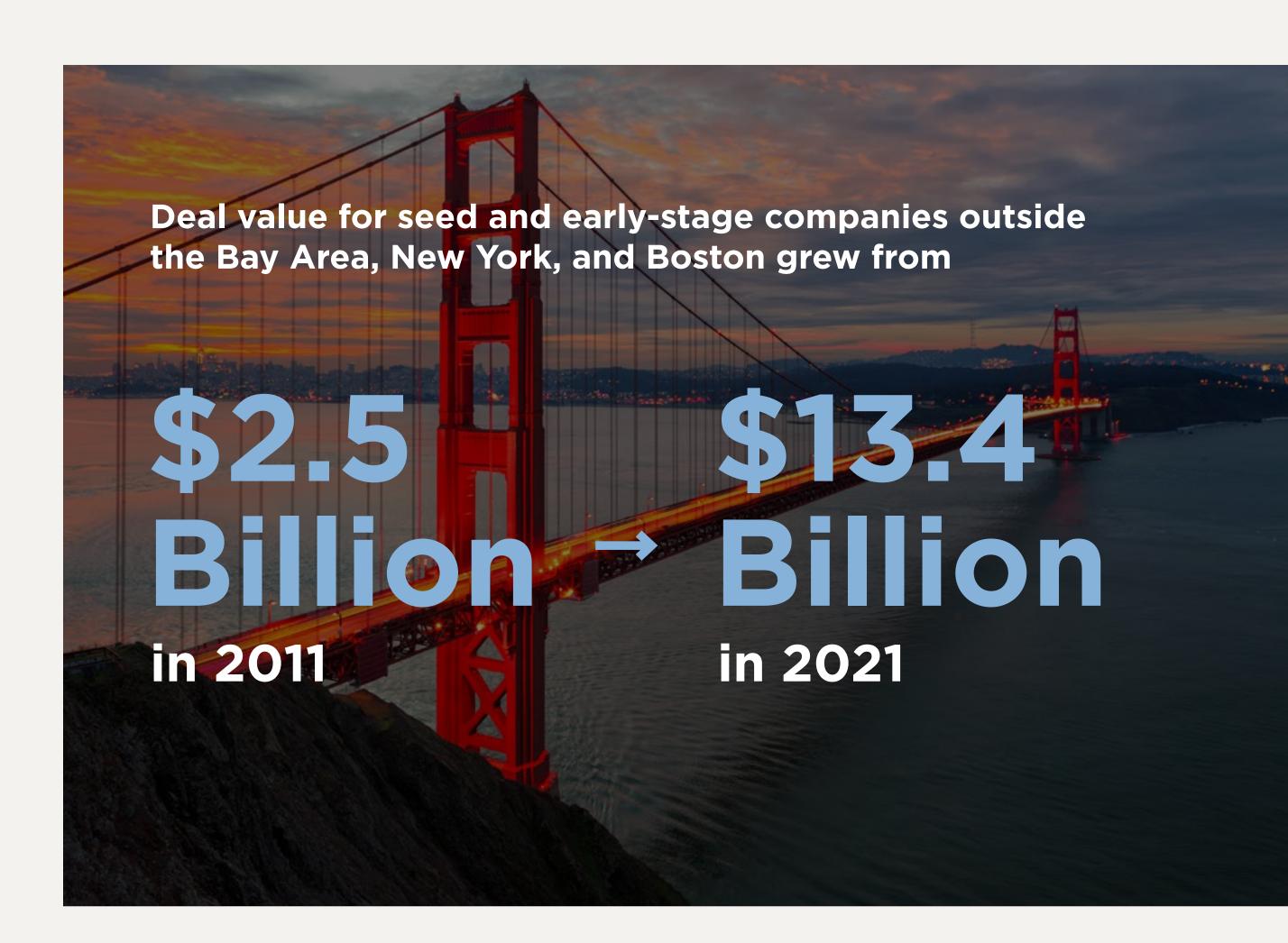
Expand Broadband

A key portion of this strategy is to seek more investment for entrepreneurs, startups, and other innovators in Greater Grand Rapids.

Deal value for seed and early-stage companies outside the Bay Area, New York, and Boston grew from \$2.5 billion in 2011 to \$13.4 billion in 2021. Meanwhile, the share of seed and early-stage venture dollars invested in Bay Area startups declined to less than 30% in 2021, compared to 40 percent in 2014. Venture capital is taking note of this trend, and new firms are opening offices in smaller communities now more than ever.

(†) Investment Outside of Bay Area, NY & Boston ① US VC Firms Founded
Outside the Bay Area,
NY & Boston

Deal Flow in KeyCities from2014-2021



1 PitchBook and Revolution Fund. Beyond Silicon Valley.

2 Ibid

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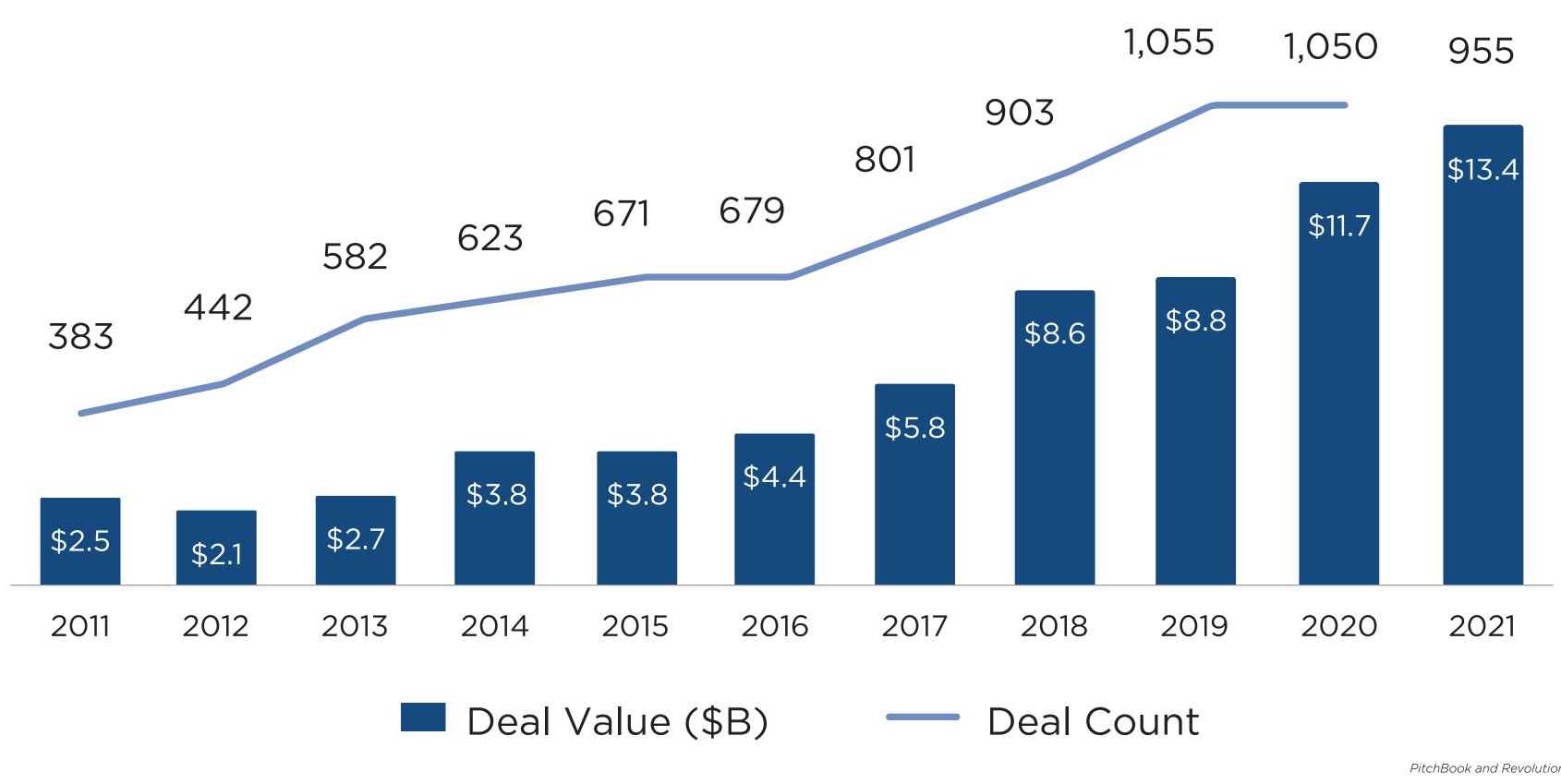
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Launch Tech Events Support Entrepreneurs Grow Incubators & Accelerators Increase Density Expand Broadbar

Bay Area Seed and Early-Stage VC Dollars Invested Outside of the Bay Area, New York, and Boston



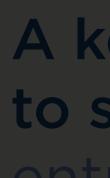
PitchBook and Revolution Fund. Beyond Silicon Valley.

Investment Outside of Bay Area, NY & Boston

US VC Firms Founded Outside the Bay Area, NY & Boston

Deal Flow in Key Cities from 2014-2021

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US VC Firms Founded Outside the Bay Area, **New York, and Boston**

With so much opportunity outside of the Bay Area, New York, and Boston, we must position our companies to capture these venture capital dollars as they migrate from the coasts to emerging tech markets.

New VC Firms Since 2011



PitchBook and Revolution Fund. Beyond Silicon Valley.

Investment Outside of Bay Area, NY & Boston

US VC Firms Founded Outside the Bay Area, NY & Boston

Deal Flow in Key Cities from 2014-2021

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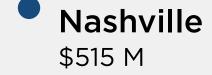




Though existing venture deal flow in Greater Grand Rapids has increased in recent years, venture capital investing pales in comparison to aspirational markets across the country.







Austin \$1,762 B

PitchBook and Revolution Fund. Beyond Silicon Valley.

Launch Tech Events

Support Entrepreneurs

Grow Incubators & Accelerators

Increase Density

Expand Broadband

To become an emerging tech market, Greater Grand Rapids must establish itself as a community where researchers, entrepreneurs, technologists, and others can make their ideas a reality.

Part of that strategy is expanding the capabilities of our business incubators and accelerator programs. Scaled appropriately, incubators have demonstrated their ability to make a significant economic impact through their support of entrepreneurs.





Overview Launch Tech Events Support Entrepreneurs Grow Incubators & Accelerators Increase Density Expand Broadba



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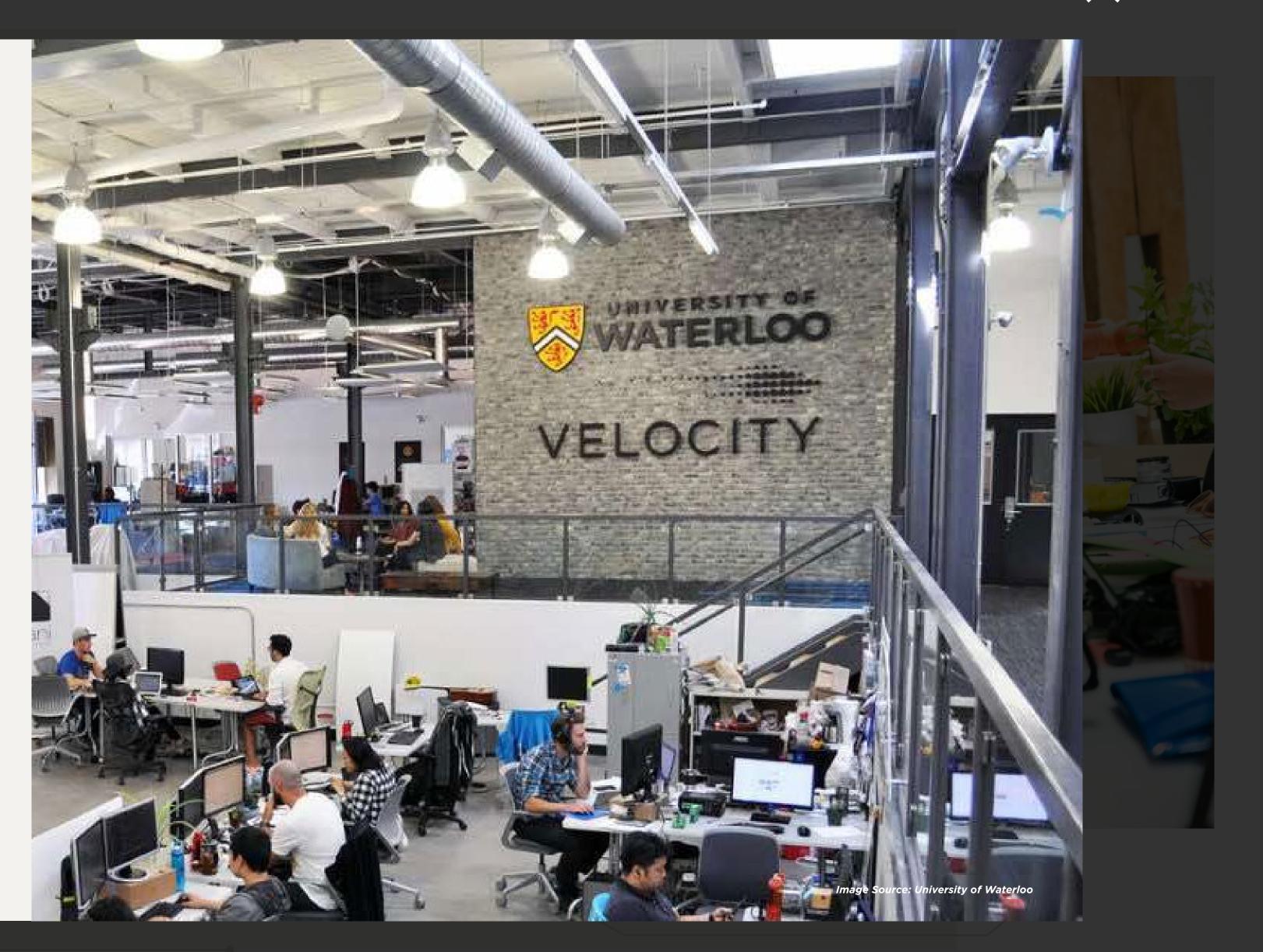
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The Economic Impact of Incubators

- **Velocity**, a business incubator supported by the University of Waterloo in Ontario, Canada, has helped raise \$3.6 billion in funding for more than 400 companies since it was founded in 2008. The organization reports that its alumni companies have created more than 5,000 jobs.
- New York University <u>Tandon Future Labs</u> has helped raise \$1.1 billion in capital for more than 250 startups since 2009.





Overview

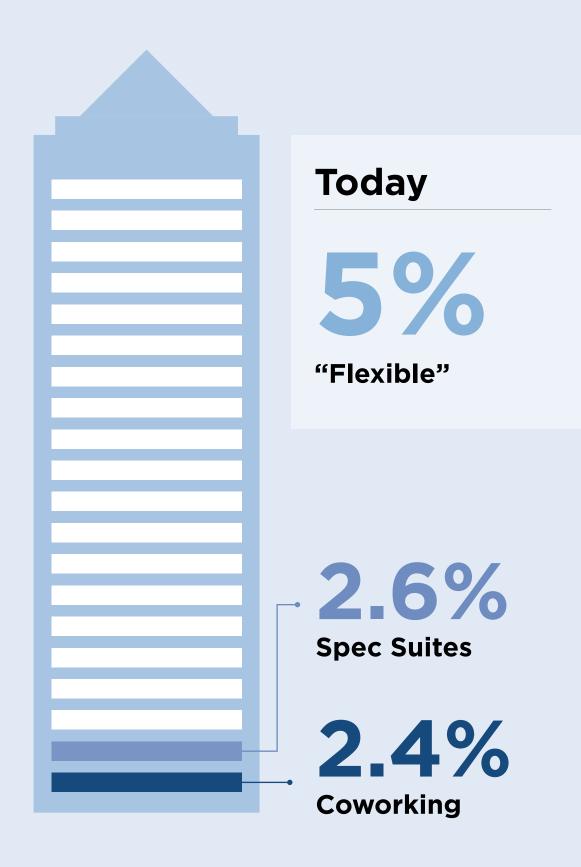
Launch Tech Events

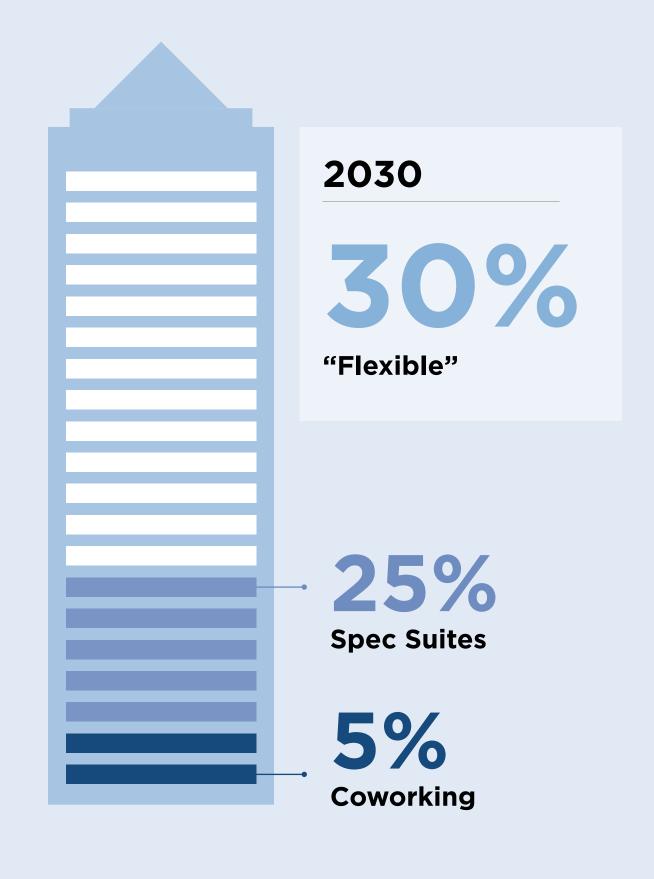
Support Entrepreneurs

Grow Incubators & Accelerators

Increase Density

Expand Broadband





Coworking:

Independent, third-party flexible office providers from traditional executive office suites to coworking and incubators.

Spec Suites:

Other flexible formats including communal workspaces and spec suites available on a term of less than 3 years.

Flexible offices, such as co-working spaces, offer startups an affordable opportunity to gain a foothold and build the physical density of tech in a community.

Prior to the COVID-19 pandemic, flexible office space grew at a 22% average annual rate. While both the global pandemic and decline of WeWork has caused disruption in the flexible work sector, experts believe the model will prove a long-term disruptor in the office market.



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Flexible Office Spaces by City

Grand Rapids Flexible Office Inventory = **79,488 sq feet.** Grand Rapids Flexible share of existing inventory (%) = 0.7%

Seattle **3.0**% 3,015,271

Portland 1.5%

> **Grand Rapids 0.7**% 79,488

Chicago **2.7**% 6,742,123

San Francisco **4.7**% 3,732,289

Denver **2.5**% 2,852,121

Phoenix **1.7**% 1,560,954

Austin **3.0**% 1,698,721

Coworking: Independer

Source: JLL. Flexible Space Sector Trends. May 2022.



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Increase Density

Expand Broadband

Widespread accessibility to high-speed broadband is also a key component to continuing building Greater Grand Rapid's tech ecosystem.

The global COVID-19 pandemic thrust the importance of broadband onto center stage with the proliferation of remote work and remote schooling. Reliable, accessible, and affordable connectivity is an essential service. Broadband increases the speed of commerce, supports remote workers, encourages online and remote learning opportunities, and has countless other benefits.



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Establishing reliable and accessible high-speed internet services signals to the rest of the world that Greater Grand Rapids is fully invested in becoming the Midwest's prominent tech hub.

We must continue efforts to spread broadband accessibility throughout our region by ensuring the service is affordable and available to everyone, whether in the urban core or suburban and rural areas.

Adult Access to
Broadband By Race

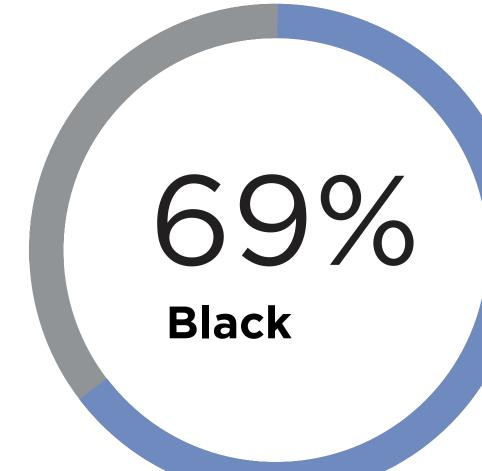
Student Access to Broadband

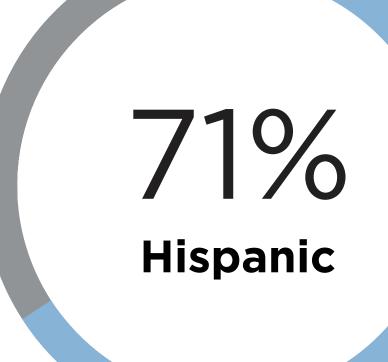


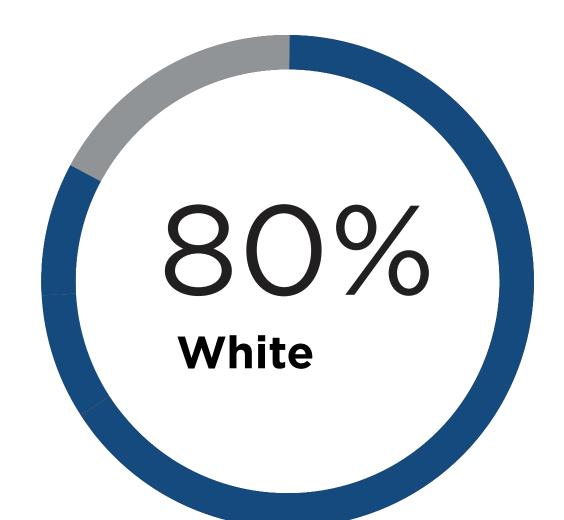
Overview Launch Tech Events Support Entrepreneurs Grow Incubators & Accelerators Increase Density Expand Broadba

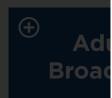


The Broadband Accessibility Divide: Percentage of **Adults Who Report Having Access To Home Broadband**









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These students are often forced to rely on alternatives such as smartphones for internet access; however, smaller screens and data caps have been shown to reduce student performance, ranging from homework completion and digital skills to the intent to attend college.

Students Living in Rural Areas with Access to High Speed Internet

Less Likely to Have High Speed Internet

As Likely Not to Have Any Access At All



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Expand Broadband

Increasing broadband accessibility will benefit everyone and boost the economy.

From an economic perspective, a ten percent increase in broadband penetration in 2014 would have resulted in 875,000 additional jobs and \$186 billion in economic output nationally by 2019, according to an analysis conducted by Deloitte. At a state level, connecting currently disconnected Michigan households to broadband would produce between \$1.8 billion and \$2.7 billion in additional annual economic activity.

Deloitte. Broadband For All: Charting a Path to Economic Growth. April 2021 State of Michigan. 2021 Update to the Michigan Broadband Roadmap. November 2021

An Increase of broadband in 2014 would have:

Increased Jobs by:

Increased Economic Output by:

875,000 + \$186 Billion By 2019

Connecting disconnected Michigan households to broadband would produce between:

\$1.8 Billion \(\top\)\$2.7 Billion

in additional annual economic activity



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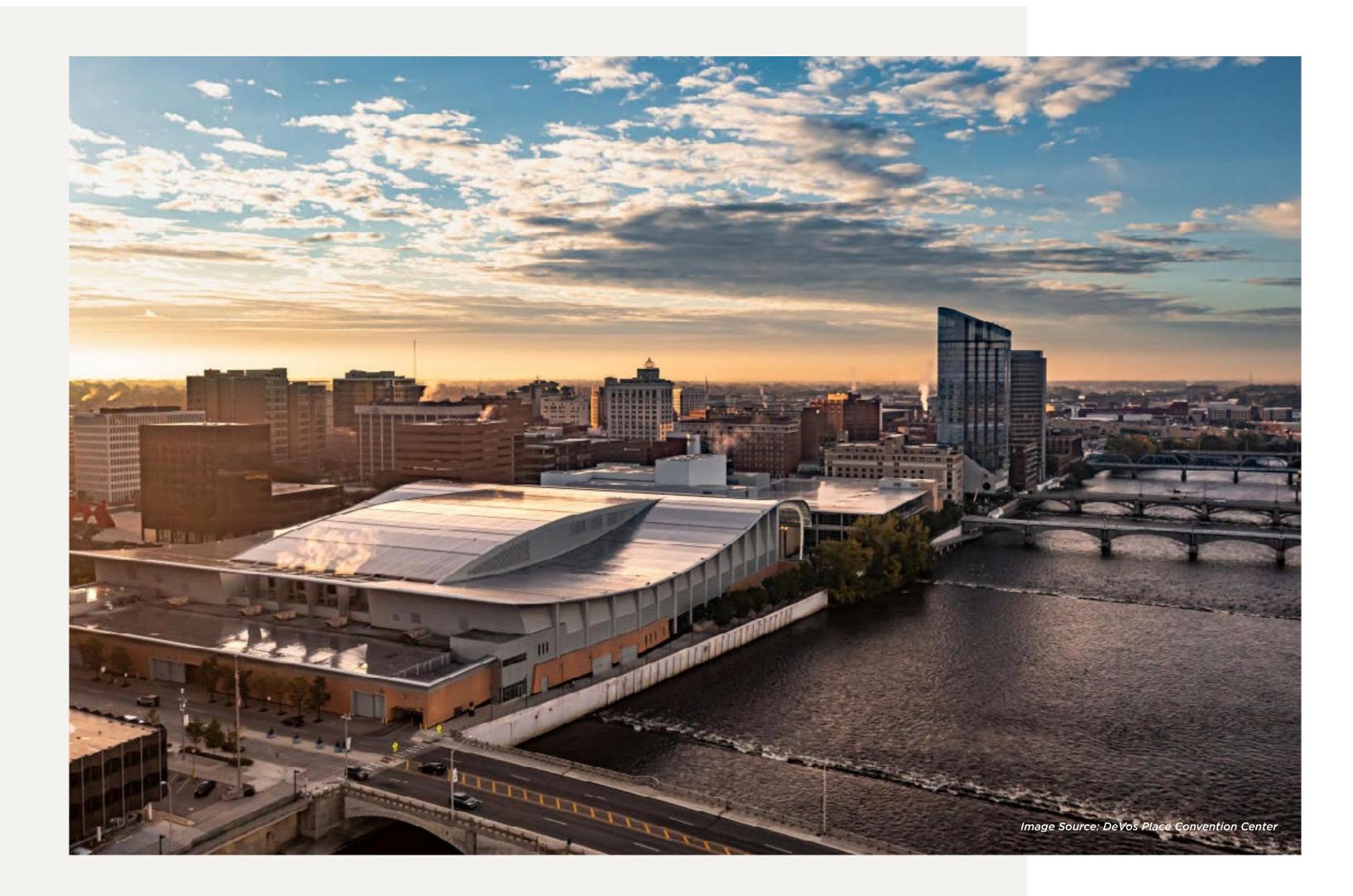
Increase Density

Expand Broadband

Launching a signature tech event—or series of events—while enhancing the region's existing events will demonstrate that

Greater Grand Rapids is committed to technology.

High-profile events can spur talent attraction efforts and entice both tech startups and seasoned tech enterprises to the area. These events have the power to unite the region around technology, prompting further engagement and buy-in from the community while offering new opportunities for established tech companies to network and experience share.





Launch Tech Events

THE WHY

Support Entrepreneurs

Grow Incubators & Accelerators

Increase Density

Expand Broadband



TACTIC 01

Developing a technologyfocused event around the theme of digital innovation, showcasing the technology and innovation ecosystem Greater Grand Rapids offers.

TACTIC 02

Establishing an Emerging Trends series in Greater Grand Rapids in which the community would invite technologists, futurists, and other thought leaders to speak on cuttingedge technologies, trends, and other topics.

TACTIC 03

Increasing opportunities, formal and informal, for meetups, networking, and experience sharing among Greater Grand Rapids' tech community.

TACTIC 04

Creating more opportunities to get students inside regional tech companies or tech departments, increasing exposure to real-world, real-time tech projects while showcasing careers in the field.

TACTIC 05

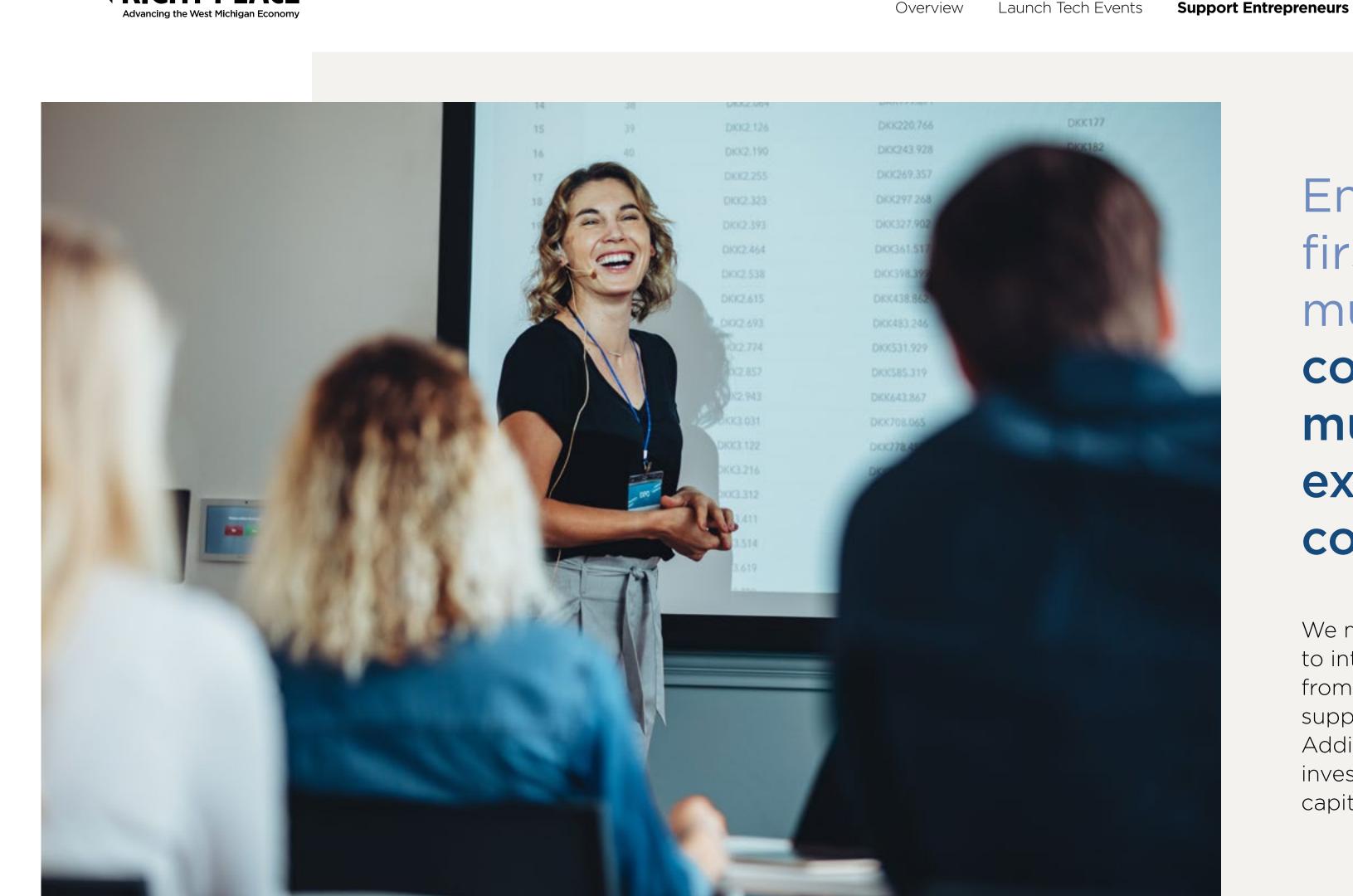
Launching a Technology Week, inviting tech companies to speak to schools about careers in tech modeled after CareerQuest and the Discover Manufacturing event where thousands of students engage with employers.



Grow Incubators & Accelerators

Increase Density

Expand Broadband



Entrepreneurs—particularly first-time entrepreneurs—must have access to a cohesive ecosystem with multiple on-ramps and exit points to scale and commercialize their ideas.

We must increase the opportunities for our entrepreneurs to interact with mentors, both within the tech space and from larger, established enterprises, that can provide further support and funding for developing breakthrough tech. Additionally, we must encourage access to funding and investment opportunities so our startups can access the capital they need to sustain and grow.



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Overview

Launch Tech Events

Support Entrepreneurs

Grow Incubators & Accelerators

Increase Density

Expand Broadband



TACTIC 01

Creating cohesive pathways for entrepreneurs and startups to navigate and access local resources and encouraging collaboration and collective impact.

TACTIC 02

Increasing funding and investment opportunities for entrepreneurs and startups by:

- a. Developing connections with investors for seed and venture capital funding in major metro areas, including Silicon Valley, Chicago, New York, and Detroit, to capitalize on the greater accessibility of capital post-pandemic.
- b. Partnering with regional and state venture capital leaders to attract more national venture capital.
- c. Encouraging local tech company investment in early state ventures.

TACTIC 03

Providing opportunities
to connect established
enterprise companies
in West Michigan
with local startups
to provide advice,
resources, and support.

TACTIC 04

Developing a Tech
Mentorship program in
partnership with The Right
Place Technology Council.

TALENT

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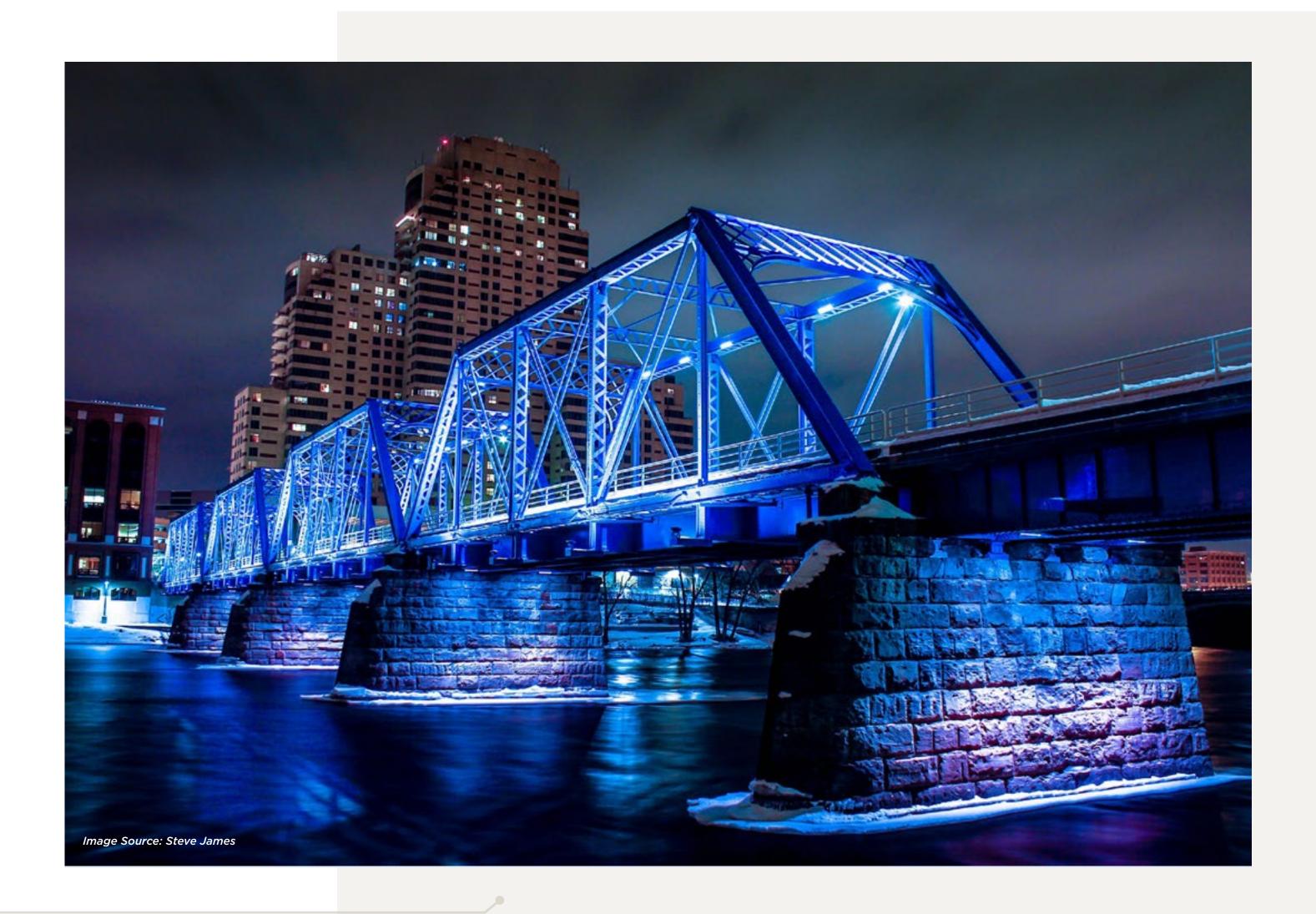
Launch Tech Events

Support Entrepreneurs

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Increase Density

Expand Broadband



We must continue building models that bridge the gap between startups and enterprises while supporting and scaling those models already successfully deployed in the region.

Despite existing at opposing ends of the business spectrum, enterprises and startups are uniquely positioned to benefit from one another. Startups need access to the funds and expertise an enterprise can provide. In contrast, enterprises lean on the agility and innovations of startups to keep pace with technology, jump the growth curve, and gain market share.

Overview

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Start Garden

Start Garden has provided a platform for startup and early-stage ventures to secure funding and support since 2012. The 5x5 Pitch Nights and other competitions have accelerated tech startups.

Seamless

Seamless offers a platform that pairs enterprise companies in non-competing industry verticals with tech-based startups while providing business support for those startups.

SEAMLESS CASE STUDY →

GVSU's Applied Computing Institute

Grand Valley State University's Applied Computing Institute (ACI) has a proven track record of software and app development to assist enterprise and early-stage tech companies.

Michigan State University

Michigan State University
(MSU) also joined Greater
Grand Rapid's innovation
ecosystem with its Spartan
Innovation Center, which targets
high-growth, high-tech companies
in life sciences, advanced
manufacturing, and mobility.

SPARTAN INNOVATION CASE STUDY \rightarrow

MSU's Conquer Accelerator

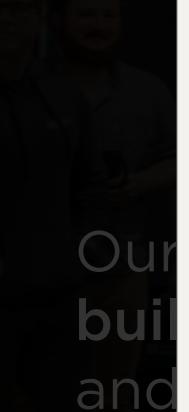
MSU hosts its Conquer Accelerator program, focusing on startup support and mentorship. Seamless

Case Study

Spartan Innovation Center

Overview Launch Tech Events Support Entrepreneurs **Grow Incubators & Accelerators** Increase Density Expand Broadbar



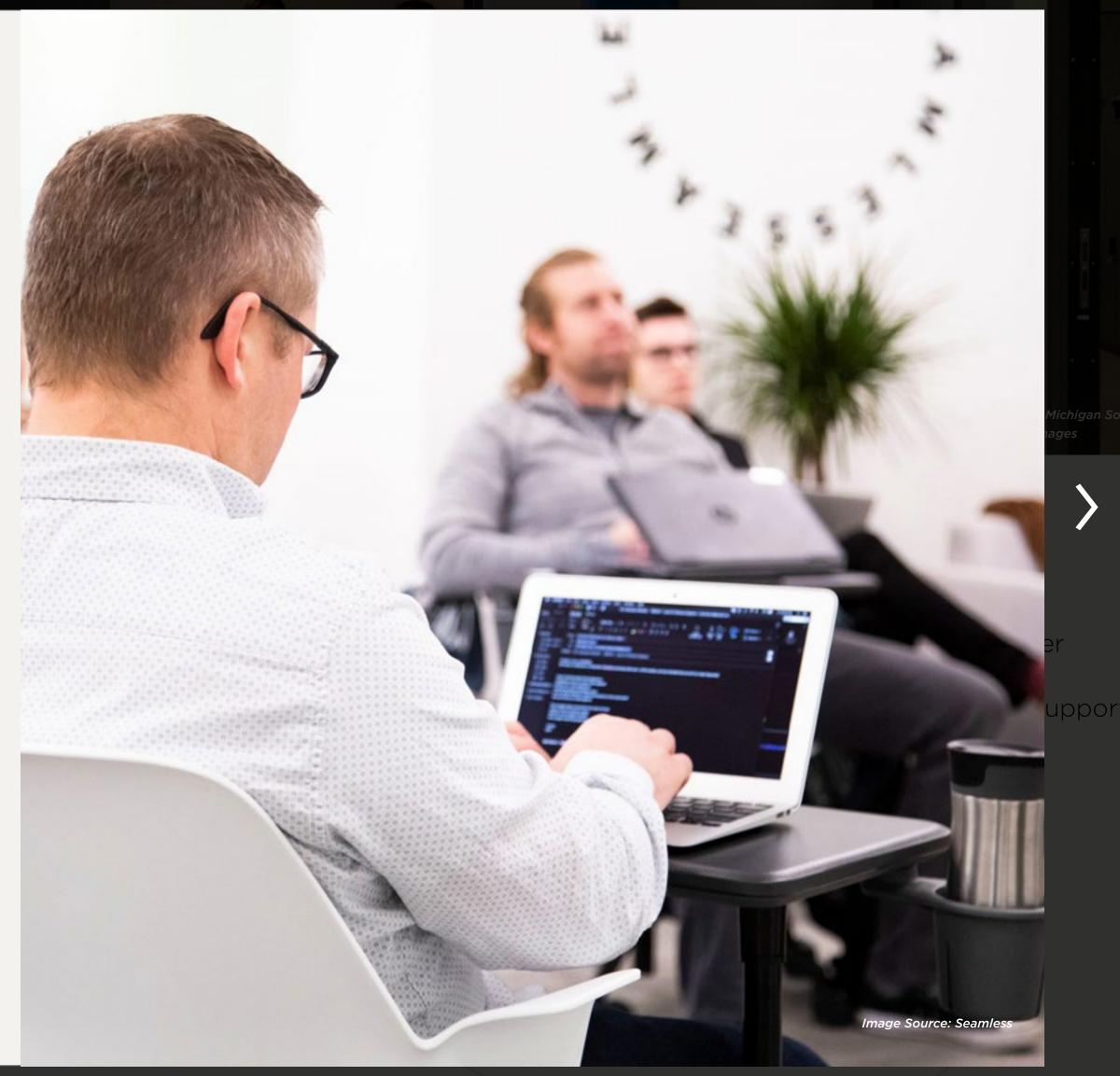


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The Seamless Platform

Seamless connects tech-based entrepreneurs and startups with enterprise companies in non-competing verticals to explore projects, technologies, and initiatives for collaboration and development. Through its model, Seamless provides a lightweight investment model for enterprises and removes many of the roadblocks preventing corporations from engaging with startups. The organization scouts and screens startups from across the globe and assists them in developing a proof of concept and operational framework necessary to begin the corporate engagement process. For startups, Seamless offers the connections, mentorship, and support to ensure their product and organization is in a position to productively engage with corporations, scale their companies, and ultimately work toward commercialization.



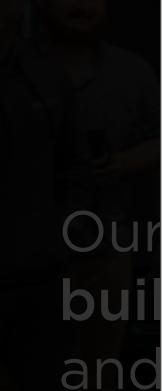




Seamless **Case Study**

Spartan **Innovation Center**

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Michigan State University **Spartan Innovations Center**

Spartan Innovations, a subsidiary of the MSU Foundation, supports over 100 startups in high-tech, high-growth industry verticals including life sciences, advanced manufacturing, and mobility across the Greater Grand Rapids area and throughout Michigan. The organization offers entrepreneur-in-residence programs, incubators, grant funding opportunities, mentorship, coaching, investment through Red Cedar Ventures and Michigan Rise early-stage startup funds, and other resources for startups from its Grand Rapids facility. To date, they have partnered with co-investors to invest over \$11 million in startups across West Michigan.



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TACTIC 01

Connecting corporations and enterprises with existing incubators and accelerators to encourage scaling, collaborating on industrysponsored projects, funding, and other support.

TACTIC 02

Expanding the Seamless corporate innovation model, finding more ways for more companies to participate.

TACTIC 03

Incentivizing more startups to take advantage of the existing incubators, accelerators, and other startup resources available in Greater Grand Rapids.

TACTIC 04

Creating a new model of incubation center, led by Grand Valley State University, focusing on high-tech, highgrowth companies.

TACTIC 05

Developing additional models for enterprise companies to invest in startups.





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Increase Density Expand Broadband

Physical clusters of tech companies and talent foster innovation, spur collaboration, and create an environment where tech thrives and is celebrated.

Austin has its "Silicon Hills" neighborhood, home to the highest density of tech companies in the city, including Apple, Amazon, Google, Intel, and many others.

Salt Lake City's startups cluster around the Riverwoods, Sugar House, and other districts.

Silicon Valley's Sand Hill Road has garnered international fame for its high density of venture capital firms focused on funding startup ventures.



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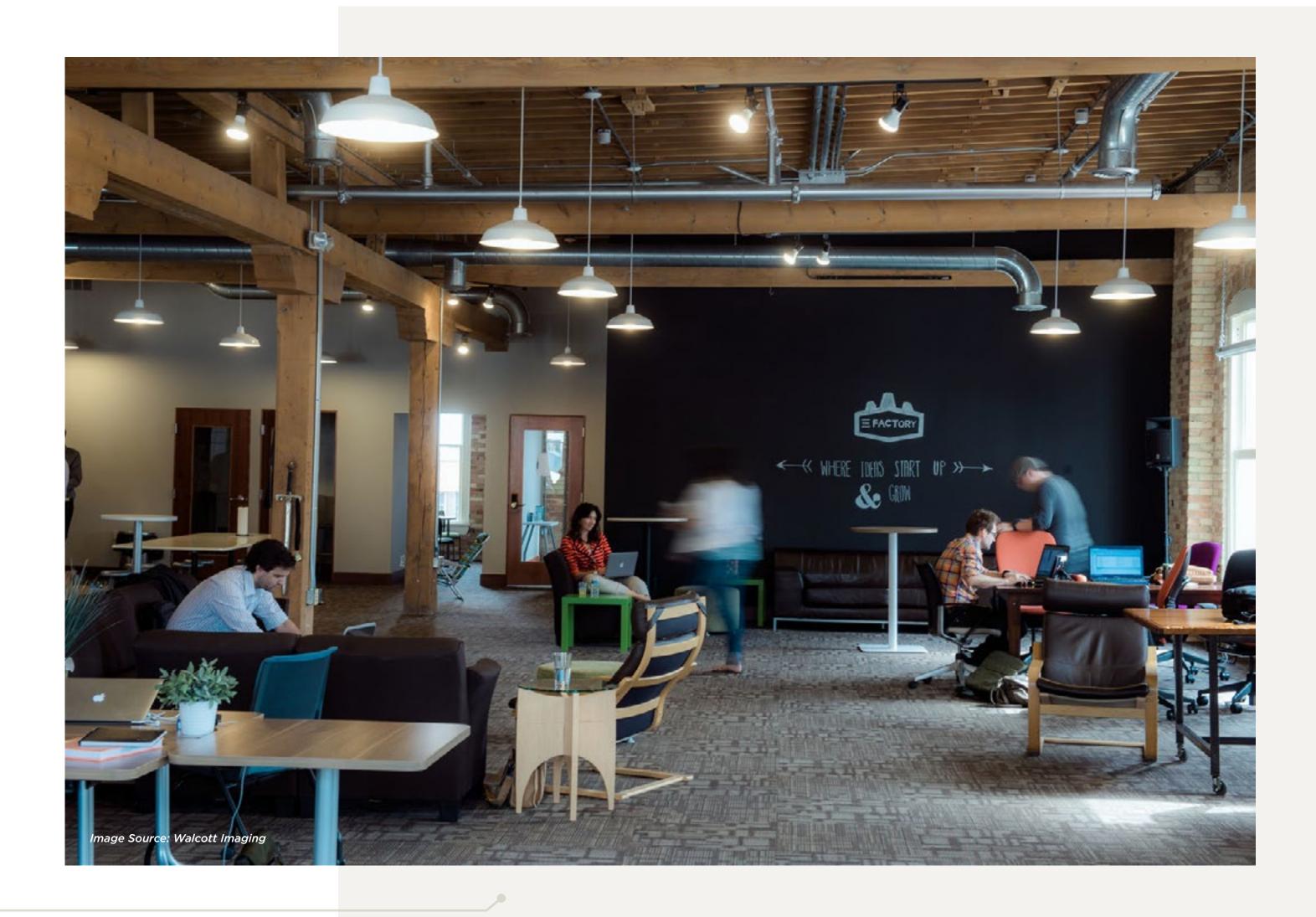
Launch Tech Events

Support Entrepreneurs

Grow Incubators & Accelerators

Increase Density

Expand Broadband



By encouraging this physical density in Greater Grand Rapids, we can help build gravity around the region's tech sector and increase the visibility of our existing tech companies.

This strategy involves scaling the amount of coworking and other flexible work options so startups, entrepreneurs, and even outside businesses can establish a presence in Greater Grand Rapids and scale from there.



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Launch Tech Events

Support Entrepreneurs

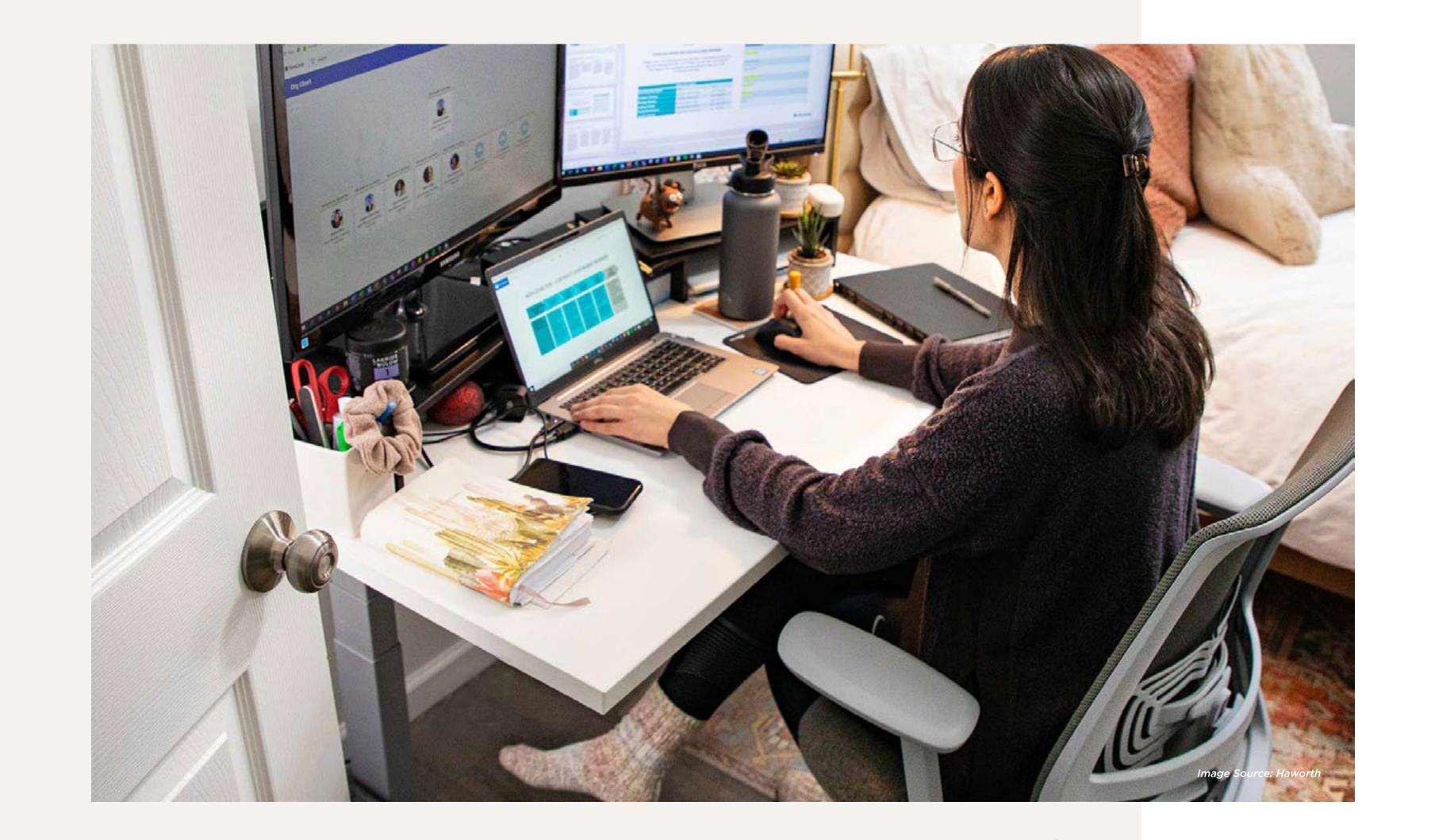
Grow Incubators & Accelerators

Increase Density

Expand Broadband

We must encourage digital connections among the Greater Grand Rapids tech sector.

The COVID-19 pandemic brought digital interactions and relationships into our professional and personal lives in a big way. As such, our strategy must include digital connectivity.



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Overview

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Expand Broadband



TACTIC 01

Establishing a taskforce to develop a framework for physical tech districts—considering urban, suburban, and rural opportunities—and implementing a strategy in the Greater Grand Rapids region.

TACTIC 02

Developing a framework to deploy additional coworking space to put Greater Grand Rapids on par with other major tech communities.

TACTIC 03

Creating and/or modifying incentives to support companies opening offices in the proposed tech districts.

TACTIC 04

Developing a vibrant online community focused on technology in Greater Grand Rapids.

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Increase Density

Expand Broadband



Expanding access to broadband services will require a three-part strategy focusing on access, affordability, and broadband adoption.

We must expand broadband availability to those areas of the region, both in suburban and rural communities, where it is currently lacking. At the same time, we must ensure broadband services are affordable to all people regardless of income level. Finally, we must encourage both our businesses and households to capitalize on the availability of this high-tech service and adopt broadband use.





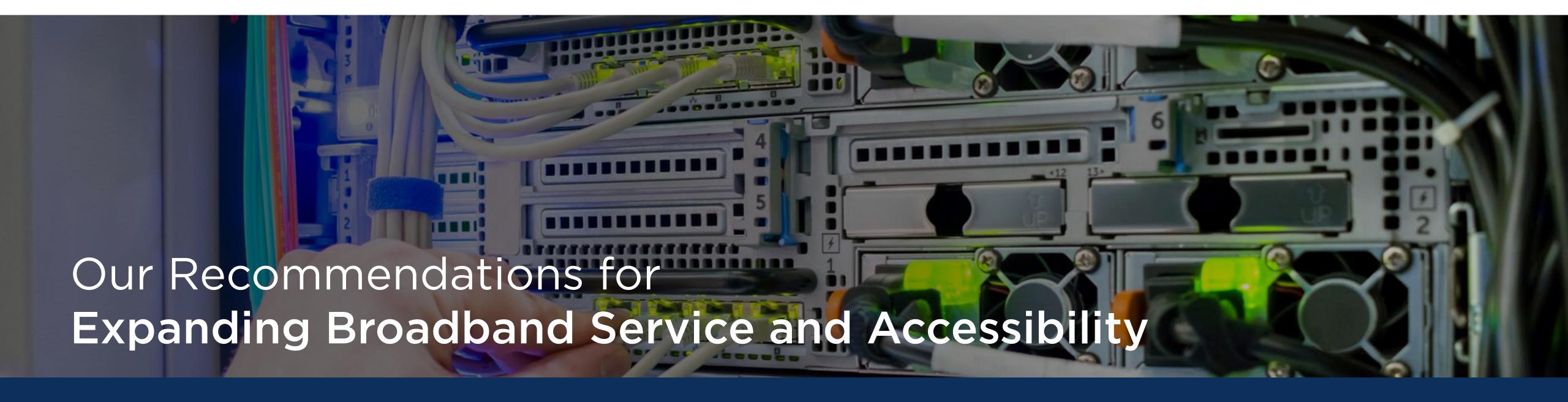
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Increase Density

Expand Broadband



TACTIC 01

Developing comprehensive countywide initiatives to increase overall broadband access.

TACTIC 02

Creating communication and educational plans targeting low-income households to promote broadband adoption rates.

TACTIC 03

Cultivating a public-private partnership between public institutions and private providers to launch and promote new affordability plans for targeted demographic markets.

TACTIC 04

Establishing a minimum standard of symmetric 100/100 Mbps service for broadband providers expanding network service using public broadband incentives.

TACTIC 05

Promoting the adoption of diversified broadband infrastructure that encourages multiple technology solutions based on geographic and demographic needs.



Digital Transformation

Connecting Businesses & Tech

Attract & Grow Existing Tech

Market Tech Hub





Digital Transformation

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Attract & Grow Existing Tech

Market Tech Hub

Our business community has the opportunity to lead future technological innovation in Greater Grand Rapids and cultivate a larger digital transformation throughout our entire community.

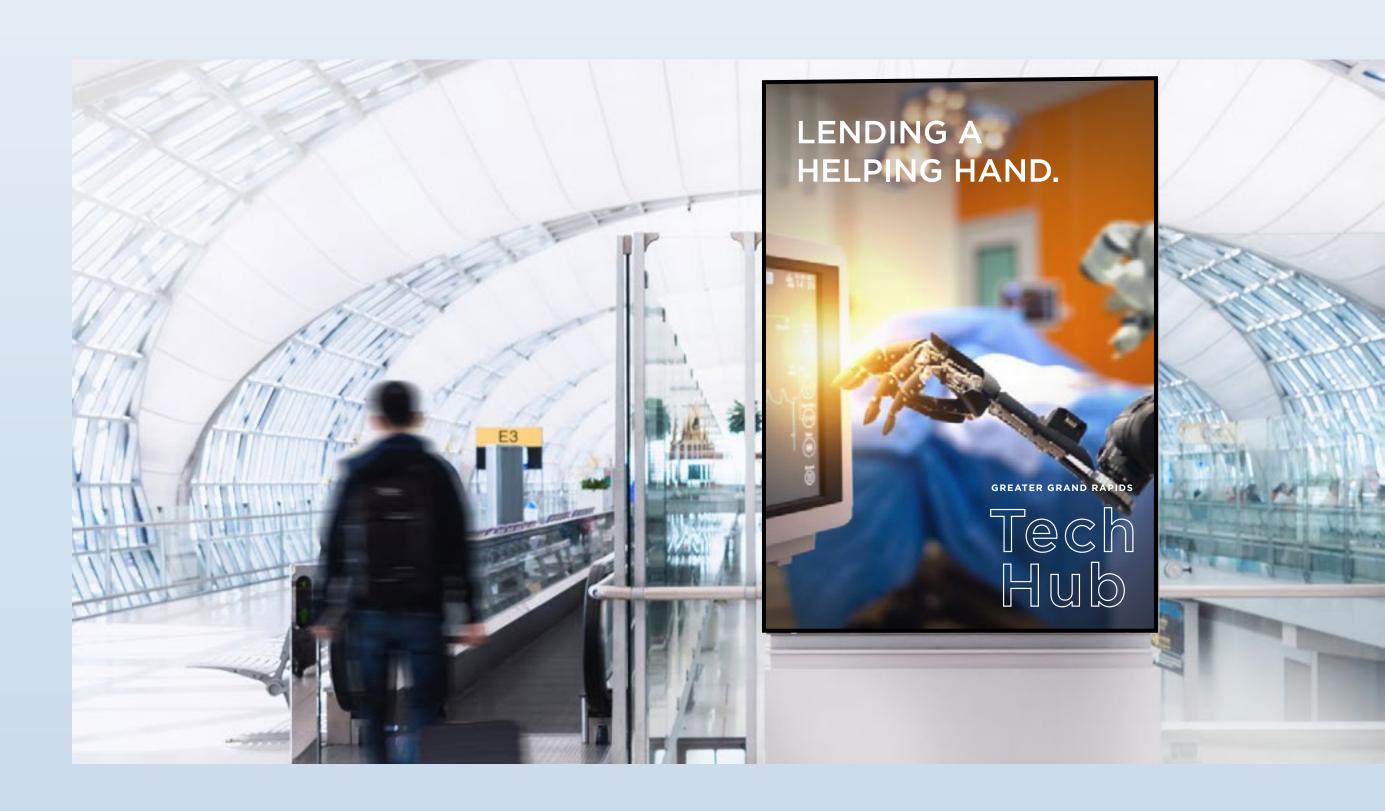
OBJECTIVES:

Digital Transformation

Assisting area companies to identify and adopt technologies that improve the competitiveness and resiliency of the business.

Connecting Businesses & Tech

Identifying major employers' regional tech service demands and connecting them to local service providers.



Attract & Grow Existing Tech

Supporting local companies and attracting new high-tech firms to inspire innovation, investment, and entrepreneurship.

Market Tech Hub

Promoting our growth as a tech hub with the rest of the world.

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Digital Transformation

Connecting Businesses & Tech

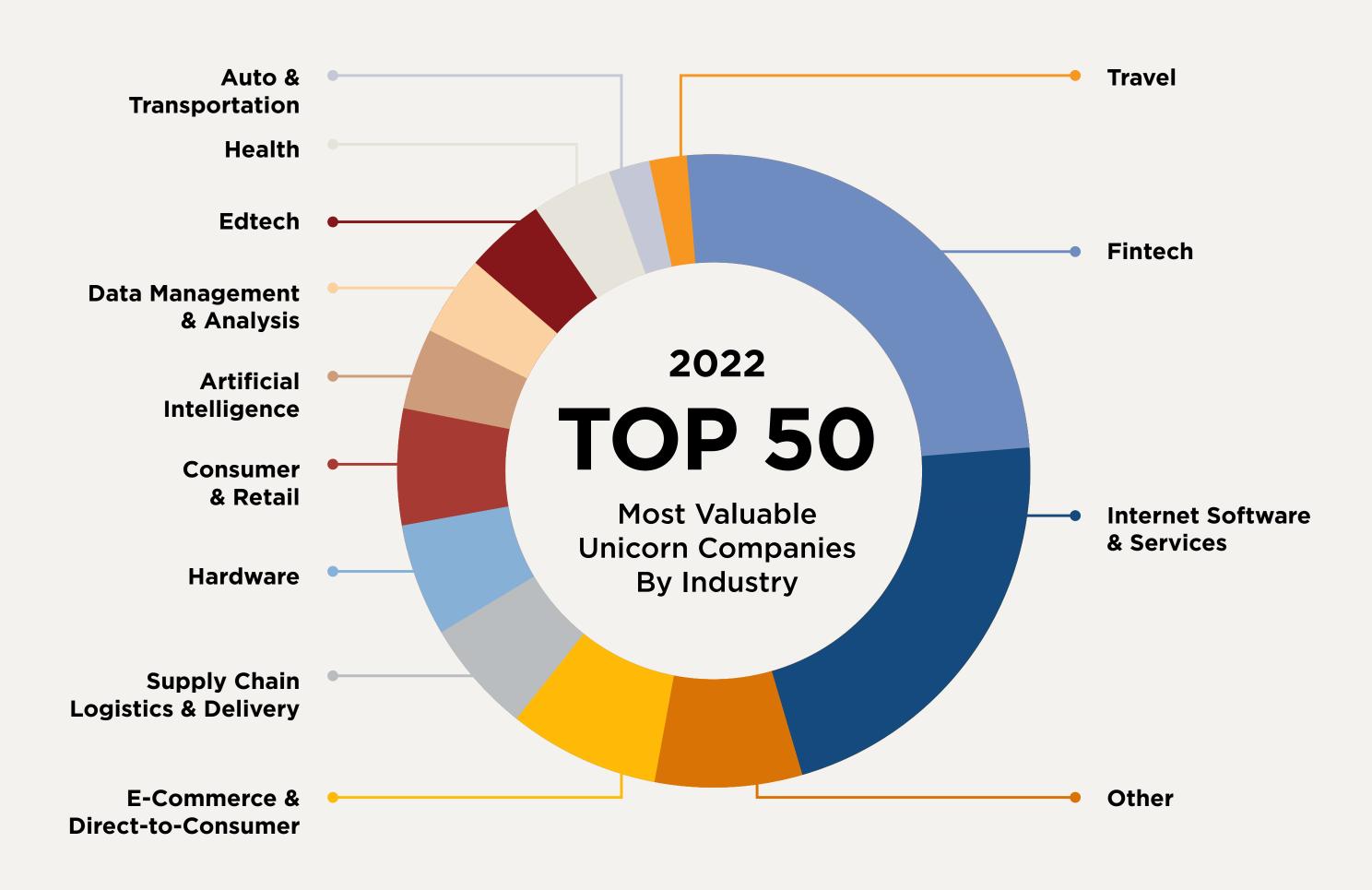
Attract & Grow Existing Tech

Market Tech Hub

The tech industry is the fastest-growing sector of today's economy. During the past decade, high-tech software and service companies grew at a rate far surpassing other industry sectors.

Most of the **1,000 companies deemed "unicorns"**—businesses valued at \$1 billion or more—are involved in the tech sector. Fintech, internet software and services, and e-commerce comprise half of the so-called "herd" as of February 2022.¹ Furthermore, tech firms consistently drive venture capital deal flow with fields including cybersecurity, healthtech, and fintech expected to lead deal activity for years ahead.²





1 CBInsights. "1000 Unicorn List" Click To View

2 KPMG Venture Pulse Q1 2022.

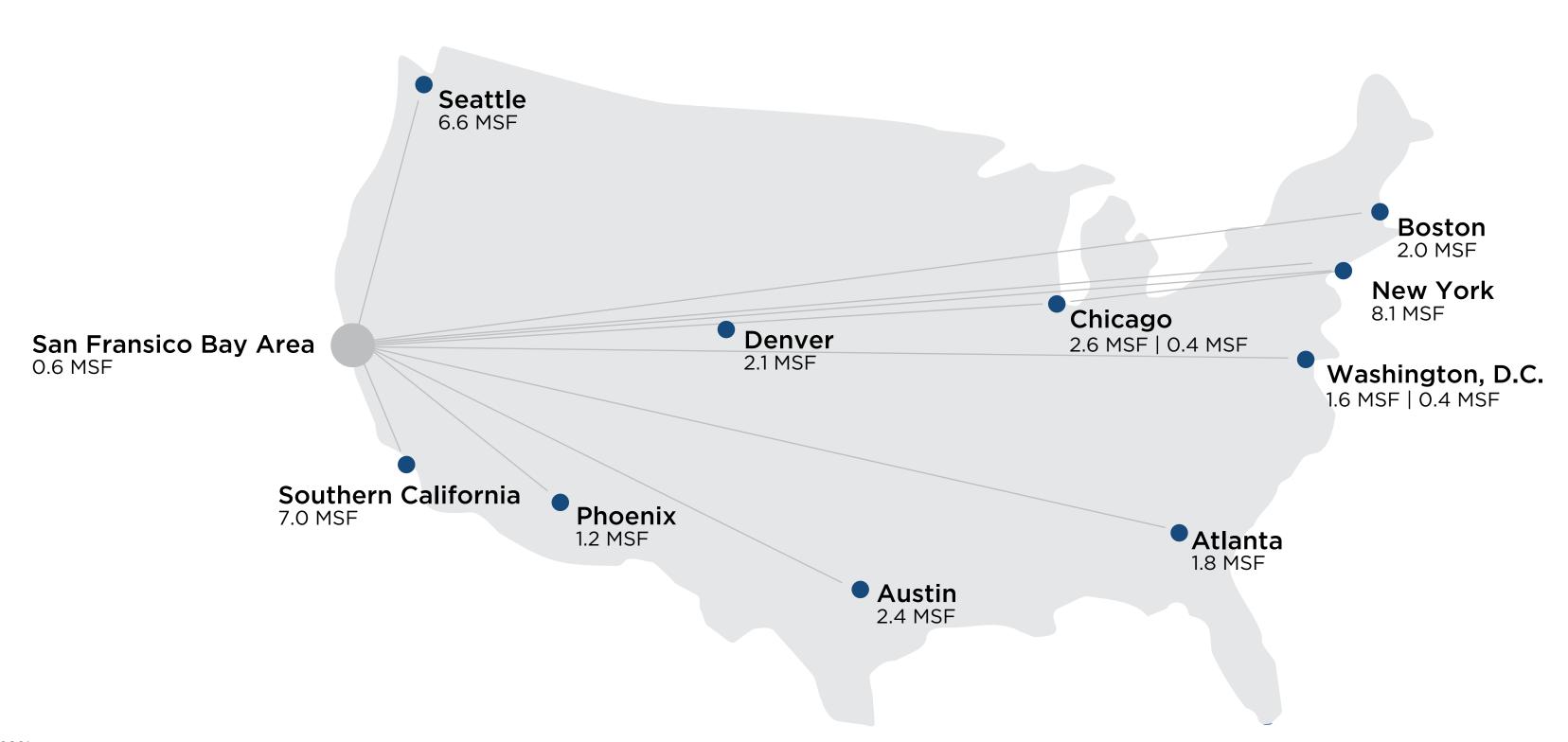
Overview Digital Transformation Connecting Businesses & Tech Attract & Grow Existing Tech

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Silicon Valley Expansion Across US

According to research by CBRE, these tech companies are increasingly expanding outside their traditional headquarters along the coasts and into new tech markets. Bay Area companies signed leases totaling more than 35 million square feet in 10 non-Bay Area markets between 2013 and 2021.



Source: CBRE Tech 30 2021

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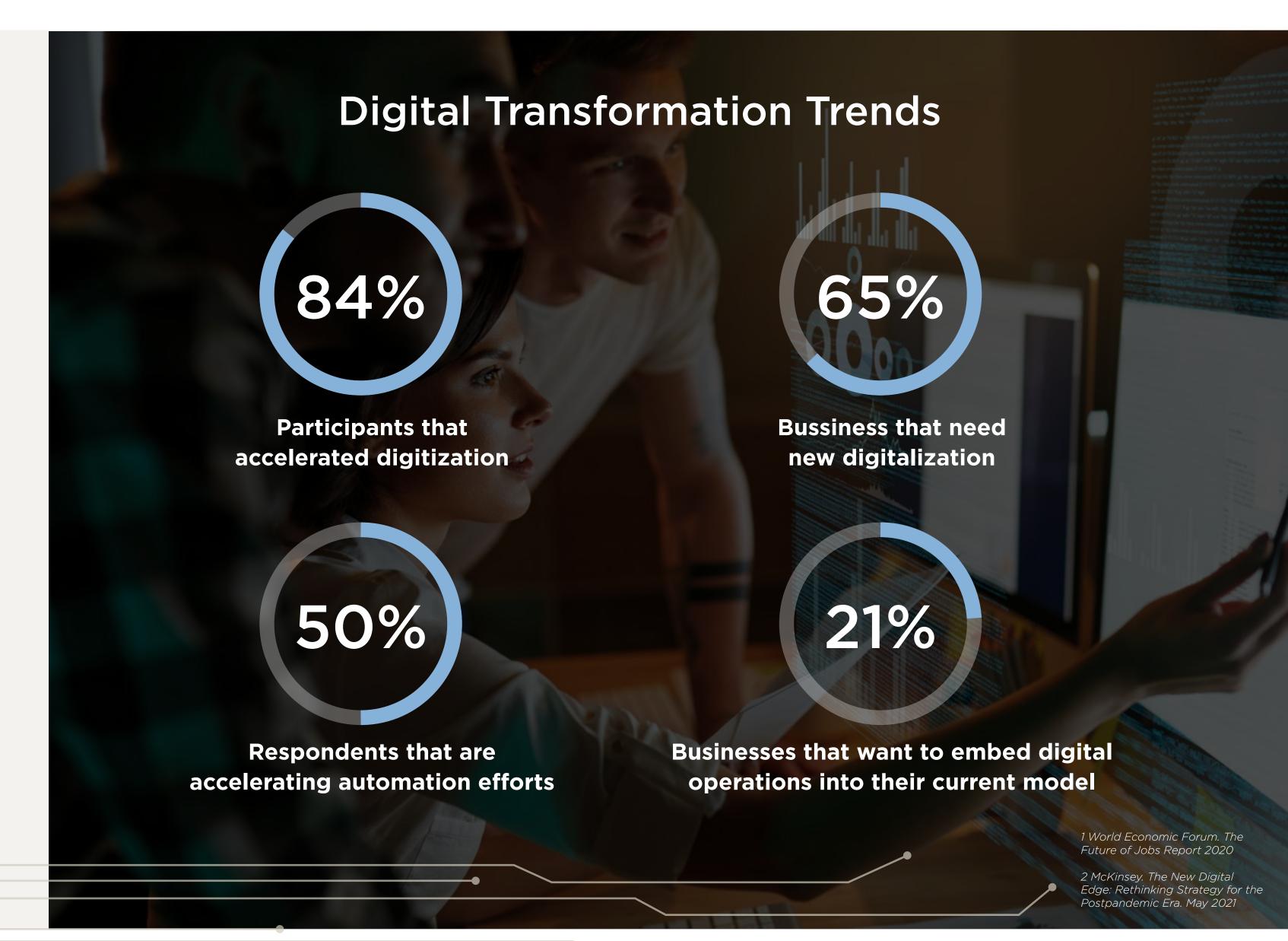
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According to a survey conducted by the World Economic Forum, the COVID-19 pandemic caused 84% of participants to accelerate digitization and 50% of respondents to accelerate automation efforts. A separate study conducted by McKinsey found that 65% of businesses it surveyed conveyed the need to build new digital businesses, and 21% expressed the need to embed digital operations into their current business model by 2023.



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Companies across all sectors in Greater Grand Rapids will need to integrate cutting-edge digital technologies into their operations. This is especially true for our manufacturing sector.

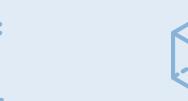
Advancements in industrial technology, from the industrial internet of things (IIoT) to additive manufacturing and artificial intelligence, will forever change how those products and devices are made. No matter the size of the operation, we must provide the resources and education for manufacturing companies to adopt digital transformations.

Technology Trends and Underlying Technology

INDUSTRY-AGNOSTIC TRENDS

Next-Level Process Automation and Virtualization

Robots/Cobots/RPA





3-D/4-D Printing



TC and lat Canna





Computer Vision

5G and IoT Connectivity

Future of Connectivity

INDUSTRY-SPECIFIC TRENDS

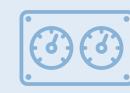
Bio Revolution

Industrial IoT



Biomachines/Biocomputing Augmentation

Future of Clean Technologies



Smart Distribution/ Metering



Battery/Battery Storage

> Source: McKinsey. The New Digital Edge: Rethinking Strategy for the Postpandemic Era. May 2021



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Surges in remote work, increases to cost of living, inflation, environmental concerns, natural disasters, and other factors have prompted tech workers and companies to relocate outside the traditional tech strongholds.

For most of recent history, tech firms were clustered in a handful of superstar metropolitan areas along the coasts, with only a handful of "rising star" regions including Salt Lake City, Denver, and Nashville gaining traction. Both research and anecdotal reports suggest the COVID-19 pandemic and other economic trends may have begun altering that trend and could prompt a diffusion of tech firms and talent across the country.

Metro Areas Share of U.S. Tech Job Postings

Source: Brookings Report: Superstars, Rising Stars, and the Rest: Pandemic Trends and Shifts in the Geography of Tech. March 2022.







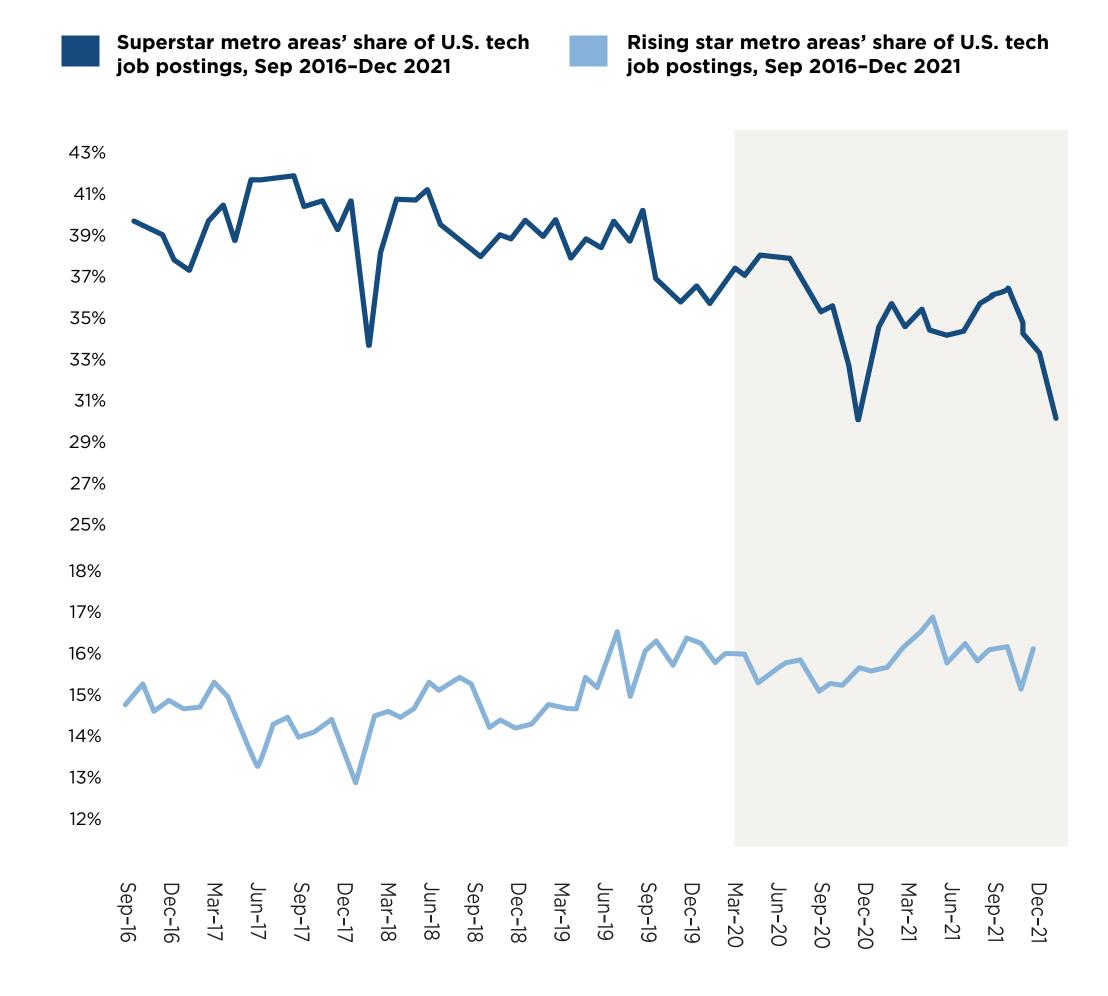
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Superstar Metro vs. Rising **Start Metro Areas' Share of U.S. Tech Job** Postings, 2016-2021

Researchers at the Brookings Institute found that high-tech job postings in "superstar" metros like Silicon Valley decreased in the post-pandemic years, while increasing in "rising star" and other metropolitan areas across the country.²



1 Brookings Metro analysis of Emsi Glass data. Updated January 2022. December 2021 data is preliminary



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Greater Grand Rapids can capitalize on the "rising star" movement by providing a thriving community for tech companies and workers.

A robust tech ecosystem, a deep bench of high-tech talent, and intentional placemaking initiatives will help ensure high-performing tech companies land and make a home in Greater Grand Rapids. Our tech strategy will be driven by supporting our existing tech businesses as they expand, recruiting new high-tech businesses to the area, and assisting all companies in adopting digital tools that will help them achieve sustained success.





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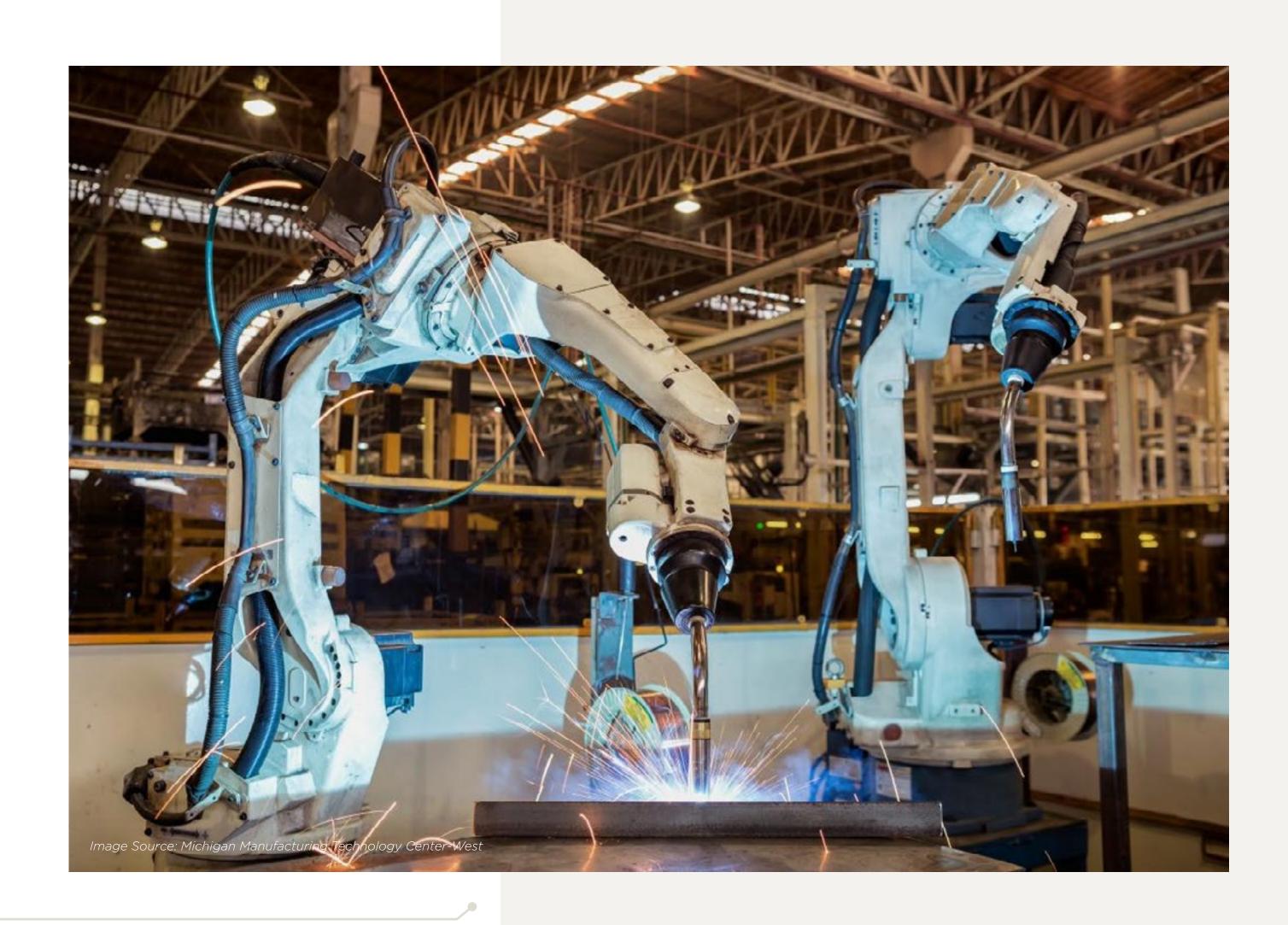
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Digital Transformation

Connecting Businesses & Tech

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Market Tech Hub



To remain competitive, businesses across Greater Grand Rapids will need to increasingly adopt digital technologies in their organizations.

In particular, we must ensure our small and middle-market manufacturers are prepared for the digital future. For this, we will rely on the expertise of the **Michigan Manufacturing Technology Center-West** and its initiatives in Industry 4.0, IIoT, and other emerging technologies.





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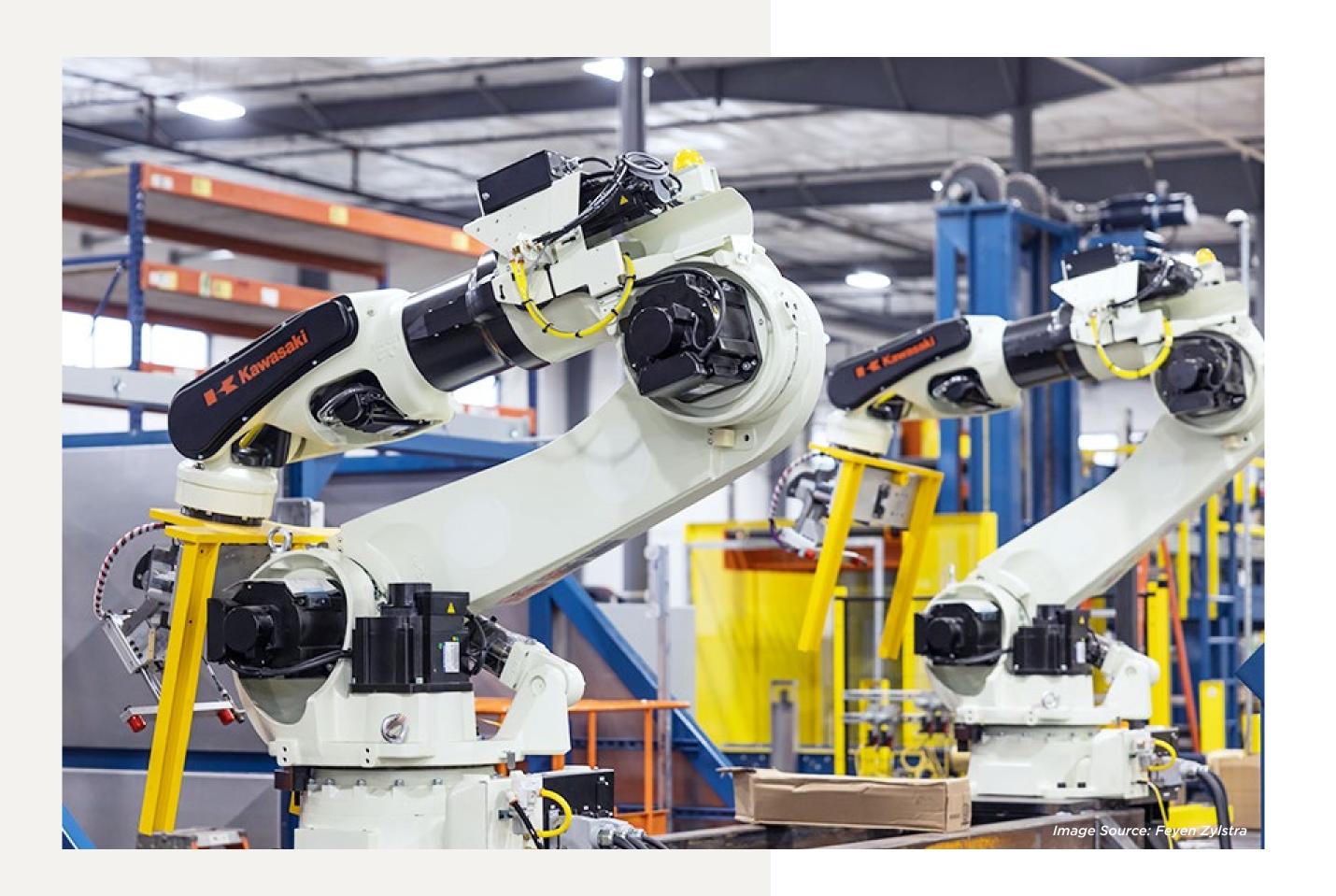
Attract & Grow Existing Tech

Market Tech Hub

We're creating opportunities for transformation with manufacturing leaders from Greater Grand Rapids.

To do this, we're relying on our manufacturing leaders to help chart the course and provide support for smaller organizations. **Feyen Zylstra** is currently in the process of developing a Smart Manufacturing Innovation Center aimed at small and mid-size manufacturing companies.

DigitalTransformationCase Study



Overview **Digital Transformation** Connecting Businesses & Tech Attract & Grow Existing Tech Market Tech H



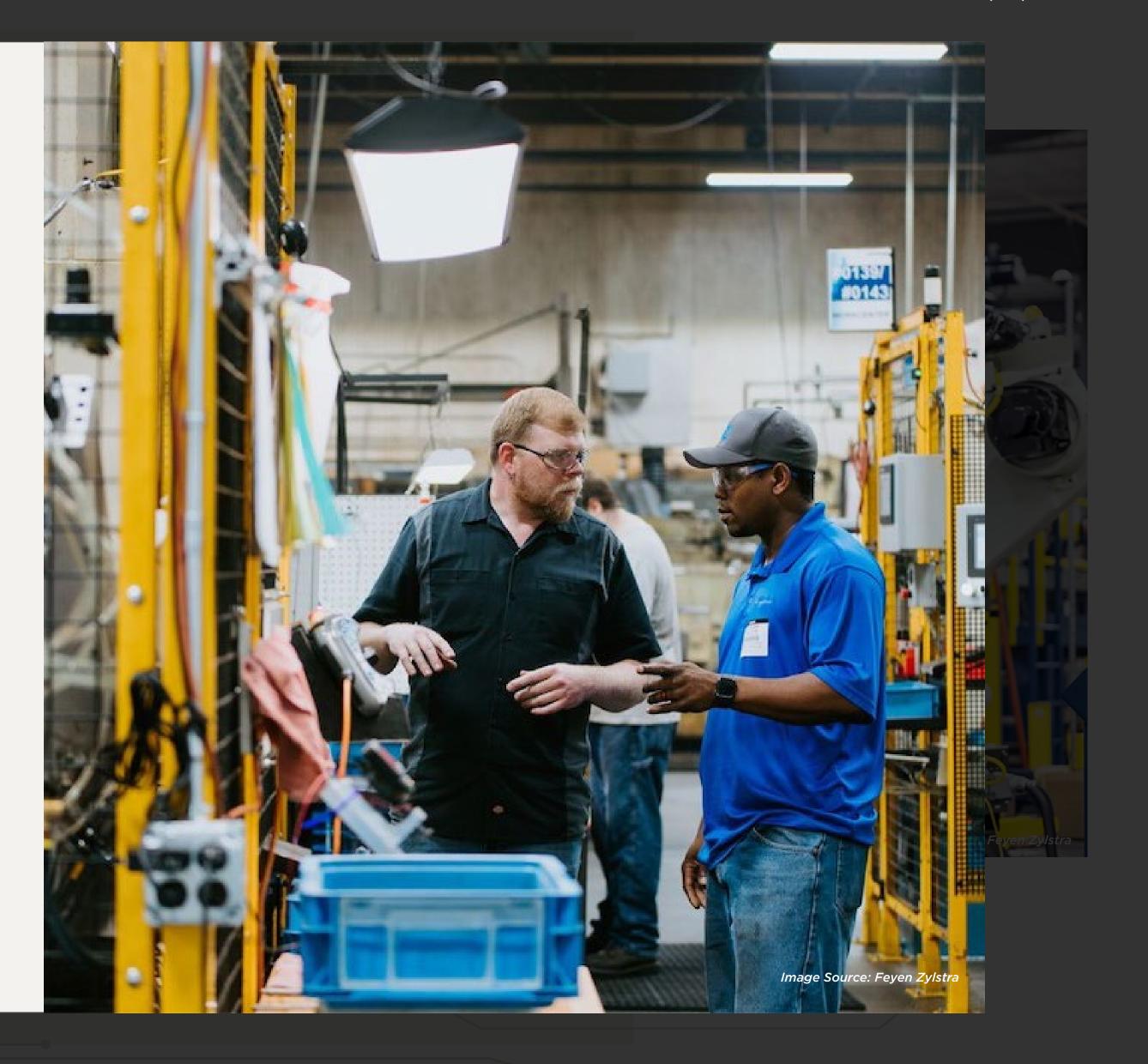


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Feyen Zylstra Manufacturing **Smart Manufacturing Innovation Center**

Feyen Zylstra (FZ) was one of eight recipients of a U.S. Department of Energy grant to create a Smart Manufacturing Innovation Center in Greater Grand Rapids. The industrial technology and electrical services provider will use the Innovation Center to provide smart manufacturing training and awareness to small- and medium-size manufacturers across industries. FZ conducts interactive trainings, workshops, and offers experimental labs and other opportunities to interact with Industry 4.0 and other advanced manufacturing technologies.



Digital Transformation

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TACTIC 01

Leveraging connections with local tech companies to advocate and support regional companies in their digital transformations.

TACTIC 02

Assisting local companies to adopt technology with increased programming through The Michigan
Manufacturing Technology
Center-West.

TACTIC 03

Finding new ways to support customized financing to expedite digital transformation.

TACTIC 04

Increasing engagement between companies and universities to provide research and development and training resources.

TACTIC 05

Exposing local companies to new technologies through visits to other tech markets.

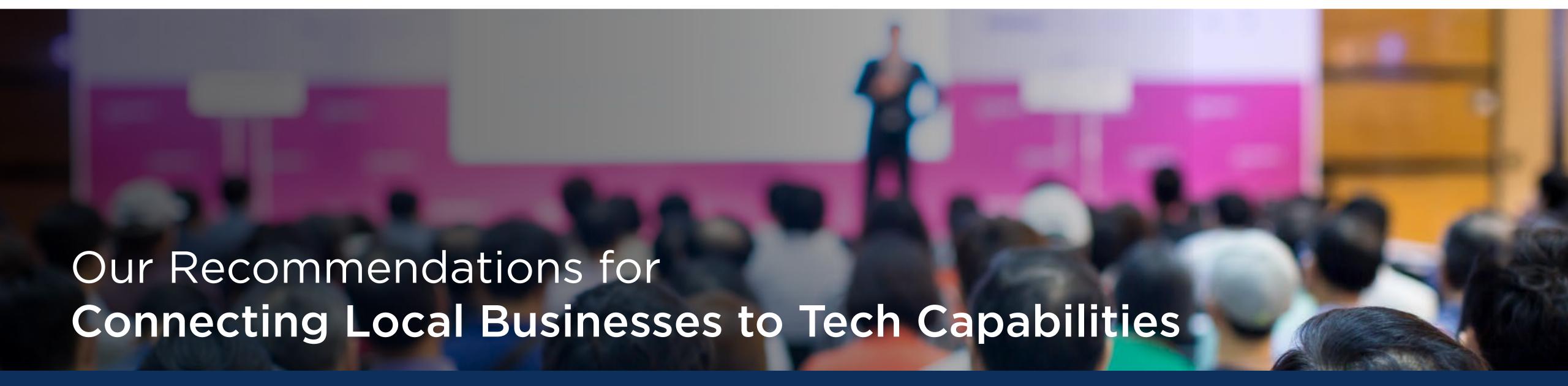


Digital Transformation

Connecting Businesses & Tech

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TACTIC 01

Mapping our local firm's existing spending on tech products and services outside the region.

TACTIC 02

Increasing the number of "touchpoints" between local tech companies and other Greater Grand Rapids businesses through formal events, social gatherings, panel discussions, and other methods.

TACTIC 03

Developing an accessible business directory for tech companies in Greater Grand Rapids and their services/solutions.



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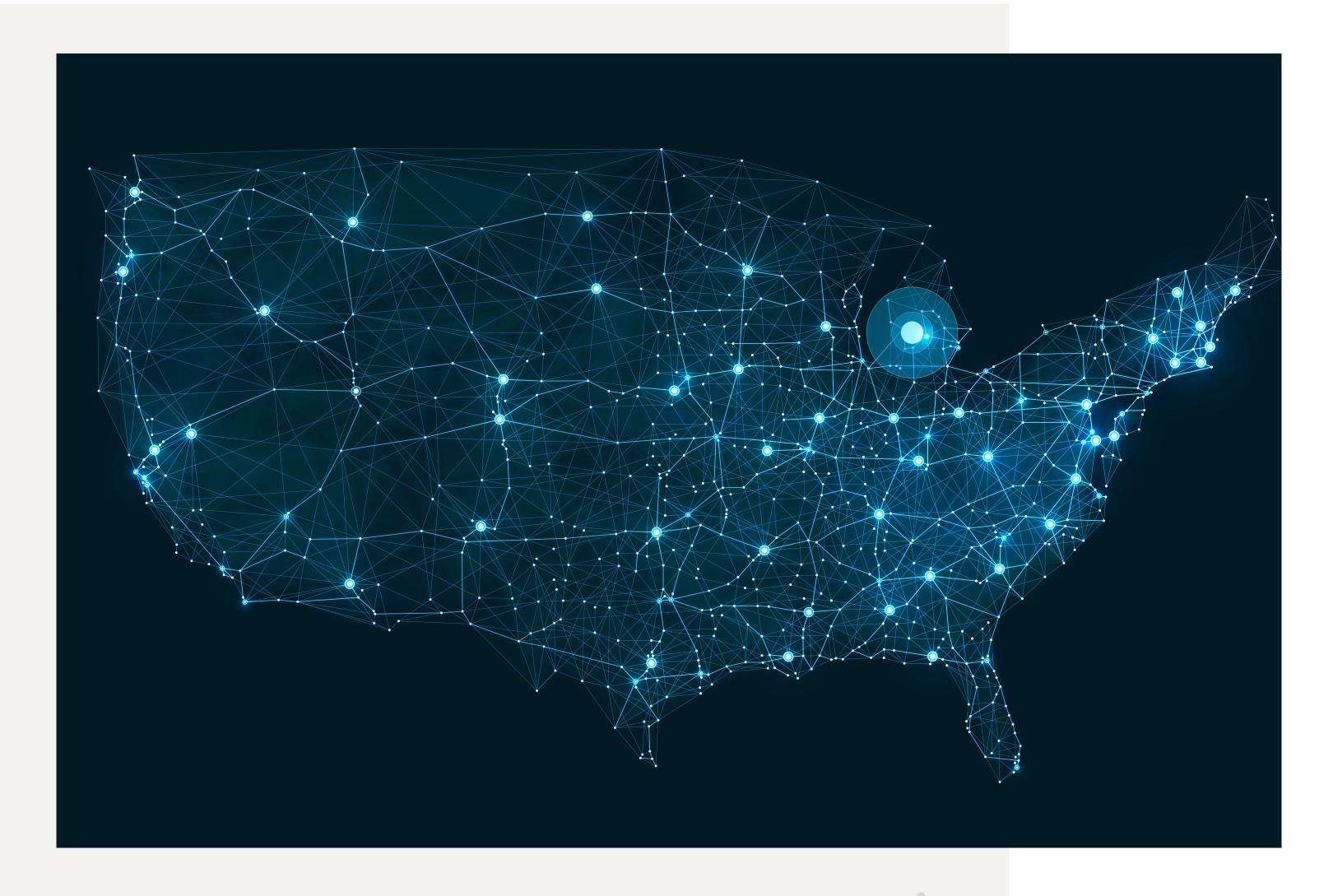
Connecting Businesses & Tech

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Greater Grand Rapids stands to capitalize on the dispersion of tech companies and talent across the country.

Tech companies spanning fintech, cybersecurity, biotech, agritech, and countless other subsectors can find the resources they need to grow in our region.





Digital Transformation

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Our Recommendations for Attracting and Growing Established Tech Companies

TACTIC 01

Leveraging the purchasing power of our region's enterprise companies to attract tech companies.

TACTIC 02

Contracting with domestic and international consultants to attract targeted tech company prospects to Greater Grand Rapids.

TACTIC 03

Advocating for incentive tools better aligned with the needs of high-tech, high-growth companies.

TACTIC 04

Highlighting the West
Michigan tech sector's
strength by attending
trade shows with groups
of area companies.



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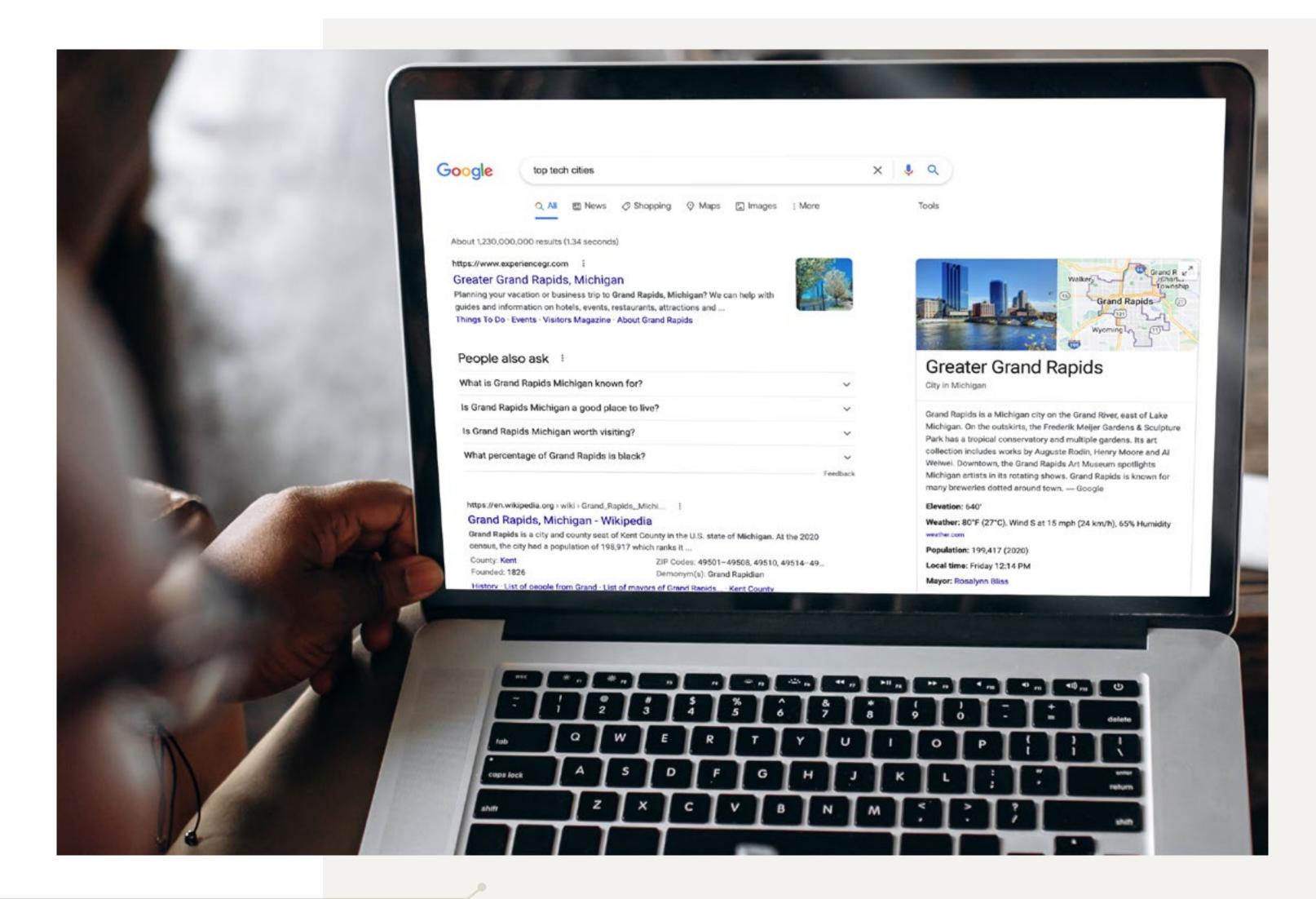
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Each recommendation in this roadmap can be significantly enhanced through a collective marketing strategy, from increasing the concentration of tech talent to promoting events and attracting capital.

We embark on this strategy with momentum—fast-growing tech companies making their mark, established companies leveraging greater and greater technology, and our education leaders committed to growing our tech talent pipeline. We must ensure these stories are told so the rest of the country and world can understand the tech hub we are building.

Digital Transformation

Connecting Businesses & Tech

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Our Recommendations for Marketing West Michigan as a Hub for Tech Innovation

TACTIC 01

Developing a multipronged marketing strategy promoting Greater Grand Rapids as a thriving tech hub.

TACTIC 02

Leveraging the collective capabilities of the Right Place Tech Council to jointly compete for work outside the region.

TACTIC 03

Utilizing consultants to promote Greater Grand Rapid's tech strengths in Silicon Valley and internationally.

TACTIC 04

Producing an annual State of the Tech Sector report for West Michigan.

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Brian Young	Rehamnn Technology Solutions



GREATER GRAND RAPIDS





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OUR TEN YEAR GOAL:

20,000

NEW JOBS IN TECH SECTOR

10%

OF REGIONAL EMPLOYMENT



