

Here to Grow!

Manufacturers in the Quad Cities have the potential for a strong future ahead. With the changes happening in the world today, a constant pursuit of growth and innovation will be one of our greatest strengths. But in order to harness it properly, growth needs to take place within a clear framework of opportunity.

The ambitions for our future, the territories we've prioritized, and the technologies that support them represent the future for manufacturing in the Quad Cities. They are the key to inspiring growth across the entire region. At the same time, we should see them as part of an organic process. The trends that affect manufacturing and our customers today are changing all the time, and we need to change with them – which could mean new territories and new technologies further down the line.

The challenge now is to translate this framework into reality. And it's a challenge for all of us.

The roadmaps we've developed are merely the starting point. We need to structure ourselves for working together and support each other as we build capabilities for future growth.

Thinking about remaining relevant and even flourishing in the future is essential for our success, as individual companies and as a community. We all have contributions that we can make. By getting involved with the Manufacturing Innovation Hub and the Quad Cities Chamber DIA Program and by working together we can ensure that the Quad Cities remains a strong, thriving community for manufacturing with a tradition for growth that continues for many years to come.



HERE TO **GROW!**

OPPORTUNITY TERRITORIES OPPORTUNITY-DRIVEN GROWTH

TERRITORIES	NEEDS	VALUE	CONDITIONS
<p>FAST AND FLEXIBLE</p>  <p>Shorter timelines, varied customers with unique requirements, and the need to be competitive through efficiency: manufacturing has changed considerably in the last 20 years. Manufacturers need to learn how to keep a fast and flexible shop floor and back office so they can create and deliver more quality products to more customers.</p>	<ul style="list-style-type: none"> Flexibility, leading to reduced down times and lead times Mobility of machines, creating an ability to reconfigure the layout of the shop floor to meet production needs Modularity, allowing for the ability to replace one piece of equipment rather than the whole line to create new products Responsiveness, ability to change with and in response to the market Reduced time to market, with shorter lead times 	<ul style="list-style-type: none"> Customization is on the rise (supported by flexibility) Ability to reduce / eliminate downtime for line changes Reduced lead times, allows customers to engage in JIT Increased responsiveness to customer and market needs 	<ul style="list-style-type: none"> Companies are starting to choose flexibility rather than efficiency as the most important factor Modularity for quick line changes is increasing Automation is happening on a smaller scale to allow for quick reconfiguration Speed enables companies to catch customer trends as they emerge Use of cloud computing based tools is growing, allowing suppliers to collaborate faster and more efficiently The option to customize products is becoming so widespread that customers expect it from a wider range of goods
<p>EMPOWERED + EQUIPPED</p>  <p>Manufacturing has evolved. It's not just a blue collar job any more. With an aging workforce retiring and the digital transformation changing the landscape, we're now seeing "light blue collar jobs" and a need for manufacturers to attract, train and retain a dedicated workforce that looks at employment as more than just a job.</p>	<ul style="list-style-type: none"> Need for new skills in labor force (IT and electronics specialists, maintenance for new machines, etc.) Skilled labor shortage (industry wide) Skills and knowledge are lost when individuals retire Technology changes at a rapid pace, requiring constant retraining Increasing need to cross train people so they can be adaptable, able to change 	<ul style="list-style-type: none"> New name for the collar – light blue collar Smaller to mid-sized will benefit from having deeper skill sets and more agility Develop and maintain skilled workforce, attracting new employees More productive, able to do more with less Apprentice programs to enable knowledge transfer 	<ul style="list-style-type: none"> Over 4M US workers are retiring each year Employee average tenure is 5-10 years Millennials are expected to account for 75% of the global workforce by 2025 Millennials have an expectation of work/life balance and will set boundaries accordingly Tacit knowledge is being lost as older managers leave the workforce
<p>VISIBLE + ACCESSIBLE</p>  <p>The world isn't as big as it used to be. We truly live in a global economy, requiring visibility and connection to current and potential customers. With digital platforms and social media, it's easier to make a name for yourself, engage and network with customers, and find the next lead. Manufacturers that embrace every aspect of marketing from traditional to digital will have more options today and into the future.</p>	<ul style="list-style-type: none"> A dynamic web presence, build to become more visible Customers want to feel engaged with the companies they are buying from Companies must be responsive to customers New markets continue to open up, companies need to be able to reach those emerging markets 	<ul style="list-style-type: none"> Creating demand, cultivating interest in products and services Build awareness around company and brand Differentiate the region – bring new talent and companies Create "buzz", identify and market your differentiator 	<ul style="list-style-type: none"> The way companies win business is changing as is the way they communicate with customers Rise in interactive content to keep customers engaged Mobile has overtaken desktop: more content on a small screen Marketing is moving towards being all about the customer – customer-centric, customer experience, jour and insights, all play a role in choosing a marketing strategy With 1.79B users worldwide, social networking allows users to express their opinions while reaching a broad, cross-sectioned audience Mobile devices have allowed anyone to access information and sources previously available only to an elite few.

TECHNOLOGIES

<p>DATA / INFORMATION CONTENT MANAGEMENT SYSTEMS</p>  <p>Data / Information Content Management Systems is the combination of tools required for gathering and utilizing both internal and external information within the manufacturing environment. It includes the collection and analytics of data, 3D design and simulation tools, managerial tools or software such as MRP, ERP, EDI, or MES as well as the technology to keep it working together.</p>	<p>ADDITIVE MANUFACTURING</p>  <p>Additive manufacturing involves all of aspects of 3D Printing. It may replace future processes or be used to complement or augment current ones.</p> <p>Tooling is the biggest opportunity, especially in the Quad Cities.</p> <p>The breakthrough opportunity is to rethink design all the way back to the product itself.</p>	<p>AUTOMATION / ROBOTICS</p>  <p>Automation / Robotics involve any jobs where machines replace manual methods. Automation and robotics will be instrumental in running an operation that augments or replaces existing labor in value and non-value added jobs with a high standard of quality. These technologies will run the gamut from fully automated and robotic systems to less expensive, collaborative solutions.</p>	<p>DIGITAL PLATFORMS</p>  <p>Digital Platforms entail all the means a manufacturer could use to communicate with the outside world. From simple websites to social media platforms like Facebook, LinkedIn, Twitter, Instagram, Periscope and manufacturing marketplaces. These interfaces allow manufacturers to create a digital footprint that connects B2B companies and drives customer engagement.</p>
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STRATEGIC FRAMEWORK

GROWTH AMBITIONS



OPPORTUNITY TERRITORIES



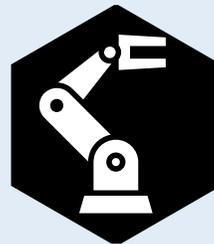
TECHNOLOGY ROADMAPS



**DATA /
INFORMATION
CONTENT
MANAGEMENT
SYSTEMS**



**ADDITIVE
MANUFACTURING**



**AUTOMATION /
ROBOTICS**



**DIGITAL
PLATFORMS**



ILLINOIS DEFENSE INDUSTRY
ADJUSTMENT PROGRAM

UNIVERSITY
OF ILLINOIS
URBANA-CHAMPAIGN
CHICAGO
SPRINGFIELD



Nathalie P. Voorhees Center
for Neighborhood and
Community Improvement

