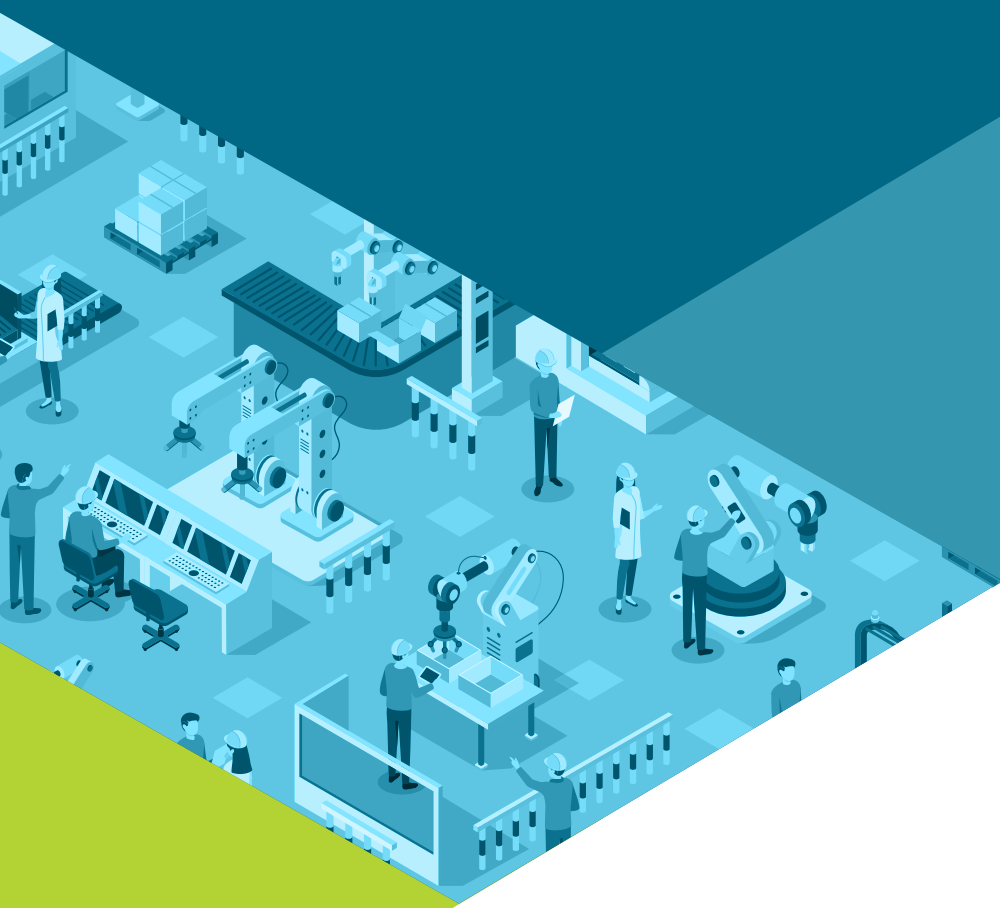
Urgent Priorities of Suburban Cook County Manufacturers

AMIDST A GLOBAL PANDEMIC



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Cook County COVID-19 RECOVERY Manufacturing Concierge

March, 2021

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Photo Caption Sources:

1 **An Economic Analysis of the Manufacturing Sector in Illinois.** Illinois Manufacturers' Association, April 16, 2019

2 **CMC Metals Supply Chain Report** - CMAP, January 2018

3 **Women in Manufacturing Study,** Deloitte, 2017

4 **Three Diversity Chiefs Share Insights,** NAM June 2020

5 **Salary.com,** January 2021

03052021

March, 2021

To the Residents of Cook County:

With the onset of the COVID-19 pandemic, Cook County partnered with the Illinois Manufacturing Excellence Center (IMEC) to ascertain the impact of this unprecedented situation on Cook County's manufacturing community. We surveyed and connected with over 1,000 manufacturers in suburban Cook County to understand their most pressing needs as a result of the changed landscape. Based upon these findings, Cook County re-affirms and deepens its commitment to help manufacturers rebound, reset, and position themselves for a successful future.

Cook County recognizes the important role that manufacturing plays in our regional economy. Cook County, with 192,500 people employed by over 5,000 firms, represents the nation's second largest concentration (by county) of manufacturers. These companies are, by and large, locally owned, small and an integral part of our communities. Consistent with national statistics, almost three quarters of these companies employ less than 20 people. Their passion, entrepreneurial spirit, and commitment to their workforce comes through loud and clear.

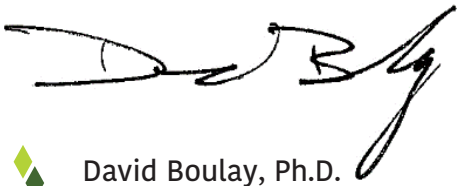
Manufacturing leaders responded to the pandemic with ingenuity and fortitude. They developed new workplace designs for health and safety, overcame supply chain disruptions, withstood loss of orders, and related cash flow pains. Even with the incredible levels of uncertainty, manufacturers navigated well to fulfill their essential duties. This pivotal moment highlights the incredible innovation, collaboration, and grit of our makers.

We want to extend our sincere gratitude to the over 1,000 manufacturers who took their time to give us guidance and insights. We are committed to supporting your success and will orient our efforts to that end. We all have much work to do, and we will do it better – together.

Thank you for your partnership.

Best,

Toni Preckwinkle
President, Cook County



David Boulay, Ph.D.
President, IMEC

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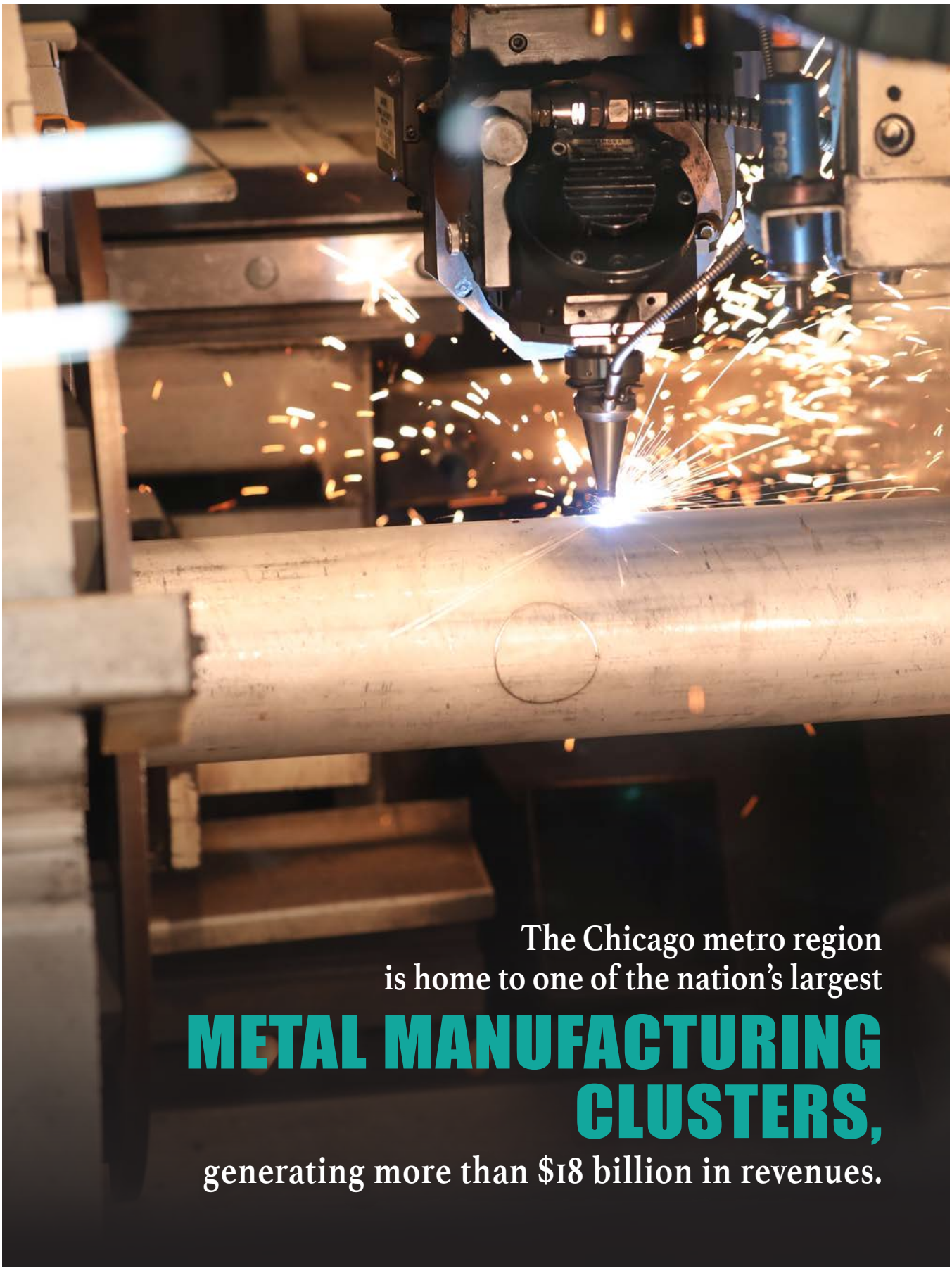
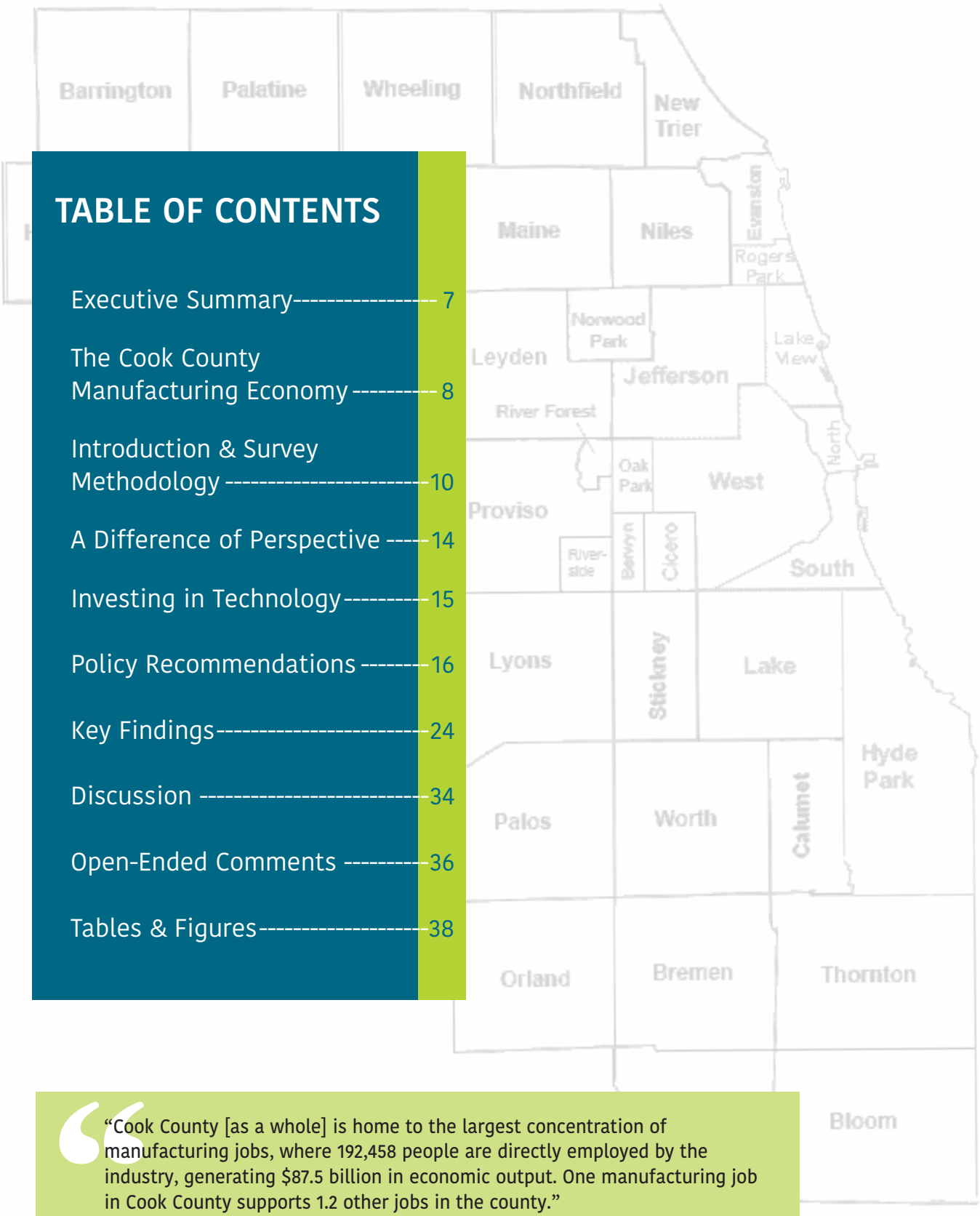


The Chicago metro region
is home to one of the nation's largest

METAL MANUFACTURING CLUSTERS,

generating more than $18 billion in revenues.



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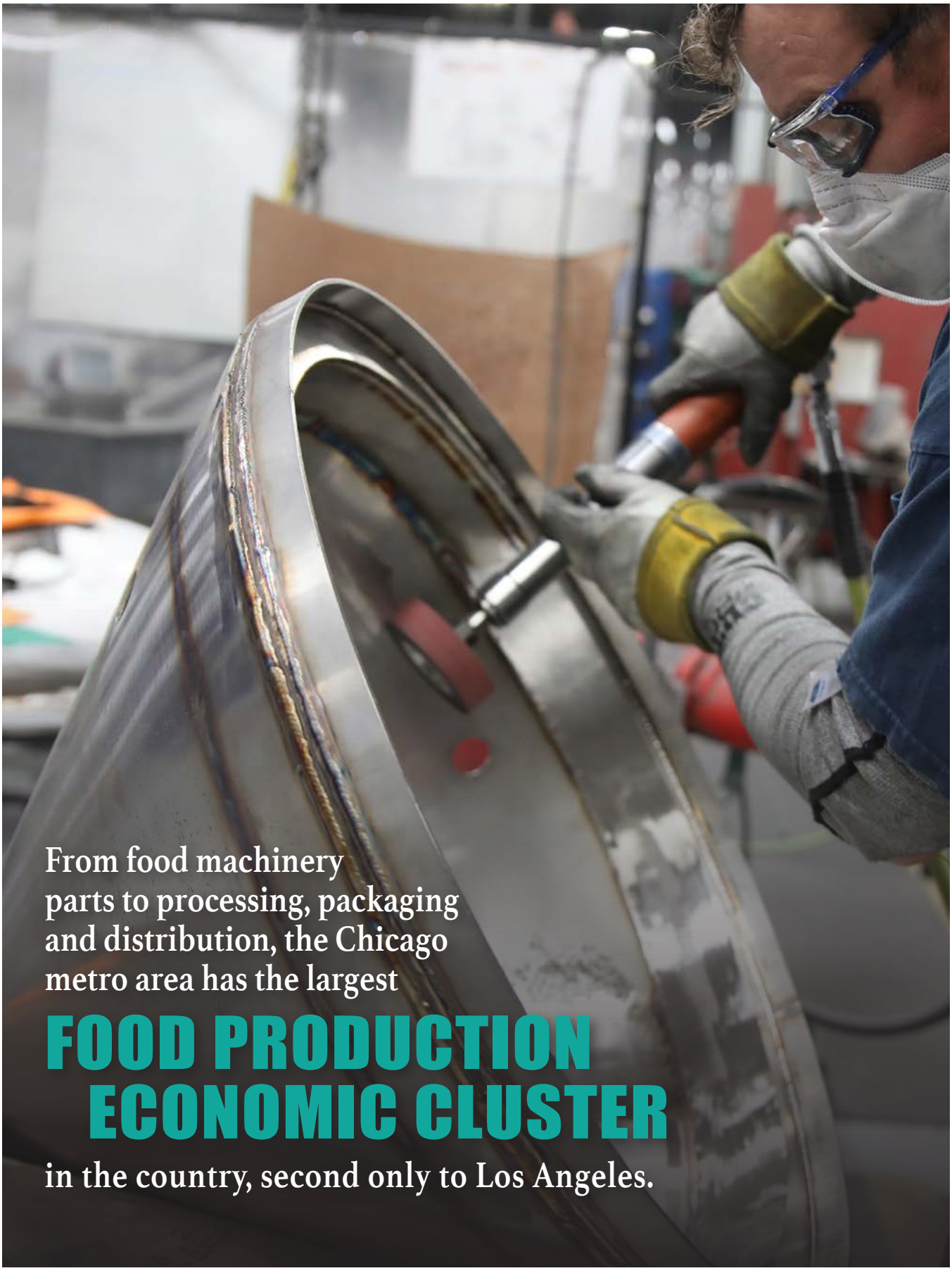
> "Cook County [as a whole] is home to the largest concentration of manufacturing jobs, where 192,458 people are directly employed by the industry, generating $87.5 billion in economic output. One manufacturing job in Cook County supports 1.2 other jobs in the county."
>
> *– IMA, Manufacturing Matters Illinois, July 2020*



From food machinery parts to processing, packaging and distribution, the Chicago metro area has the largest

FOOD PRODUCTION ECONOMIC CLUSTER

in the country, second only to Los Angeles.

EXECUTIVE SUMMARY

The Cook County Bureau of Economic Development and the Illinois Manufacturing Excellence Center (IMEC) collaborated to conduct a phone survey of the 5,000+ manufacturing firms located in suburban Cook County – to identify the relative urgency of key business drivers for manufacturers to recover and rebound from the COVID-19 pandemic. **More than 1,000 firms responded to the 10-question survey.**

The primary survey goals were to provide immediate support for requested urgent issues, and to identify policy actions to support a strong manufacturing rebound from the pandemic. To achieve these goals, the survey provided insight into how manufacturers have been affected, what areas they prioritize as well as the relative importance of key drivers of manufacturing success.

The survey results provide a deeper understanding of the varying needs of these manufacturers. With respect to the key drivers, we see a hierarchy of business needs based on size. Unsurprisingly, all manufacturers have similar needs in topics such as to create market growth opportunities, lead their organization toward high performance, drive productivity and efficiency in their processes, and improve safety, hygiene, and sanitation. There are pronounced differences when accounting for size of firms. The location in the county or type of manufacturing mattered little.

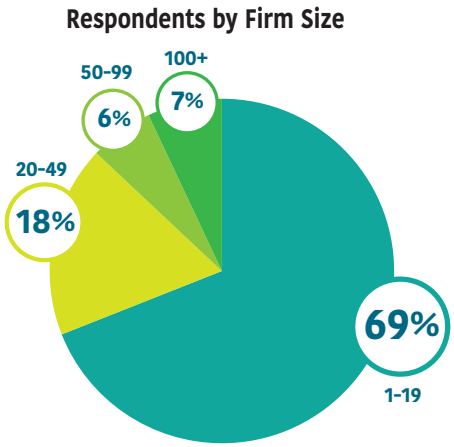
The smaller firms (1-19 employees) focused significantly on market growth and as manufacturer size increases, they require blended solutions. Solution sets that match needs with size provide comprehensive and deeper support can strengthen their competitive position and improve job quality.

This survey and report serve as a beginning to regularly gain insights into manufacturer needs and create policy solutions, to strengthen manufacturing in one of the largest manufacturing counties in the nation.

Smaller firms (under 20 employees) make up the bulk of the manufacturers and the clear priority for these sized firms is **'Create growth opportunities.'**

Manufacturers with less than 20 employees represent nearly 70% of the county's manufacturers. Policies which effectively support their market growth provide a foundation for their future growth.

Mid-sized firms (20-49 employees) and especially **Larger-sized firms** (50 to 99 and 100+ employees) have a relatively wide range of priorities, suggesting a number of constraints they see in growing their business to the next level.



The survey provides the following policy recommendations for guidance:

- **#1** Segment policy solutions to address differences by company size
- **#2** Promote access to global and local market access
- **#3** Facilitate global competitiveness through productivity and technology adoption
- **#4** Promote connections among firms and workforce solution providers
- **#5** Ease of doing business and addressing structural costs
- **#6** Establish an ongoing method to gain insights from county manufacturers

THE Cook County MANUFACTURING ECONOMY

Today, the U.S. is the **second-largest manufacturing nation**, behind China. Manufacturing represents **10-12% of Gross Domestic Product** and employment in the U.S., but it drives

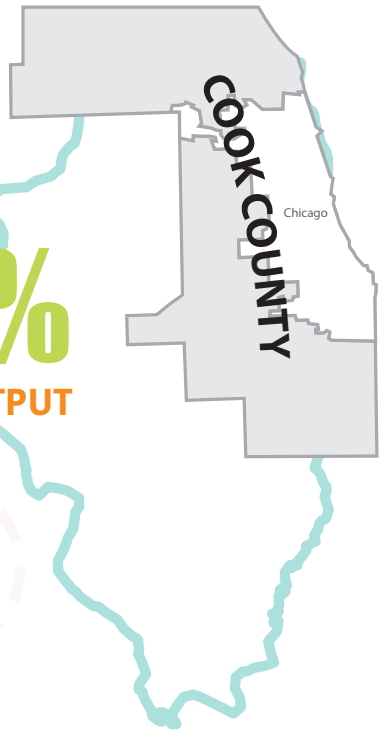
35% of productivity growth,
60% of exports, and
70% of R&D.

Making It In America: Revitalizing US Manufacturing
McKinsey & Company, November 2017

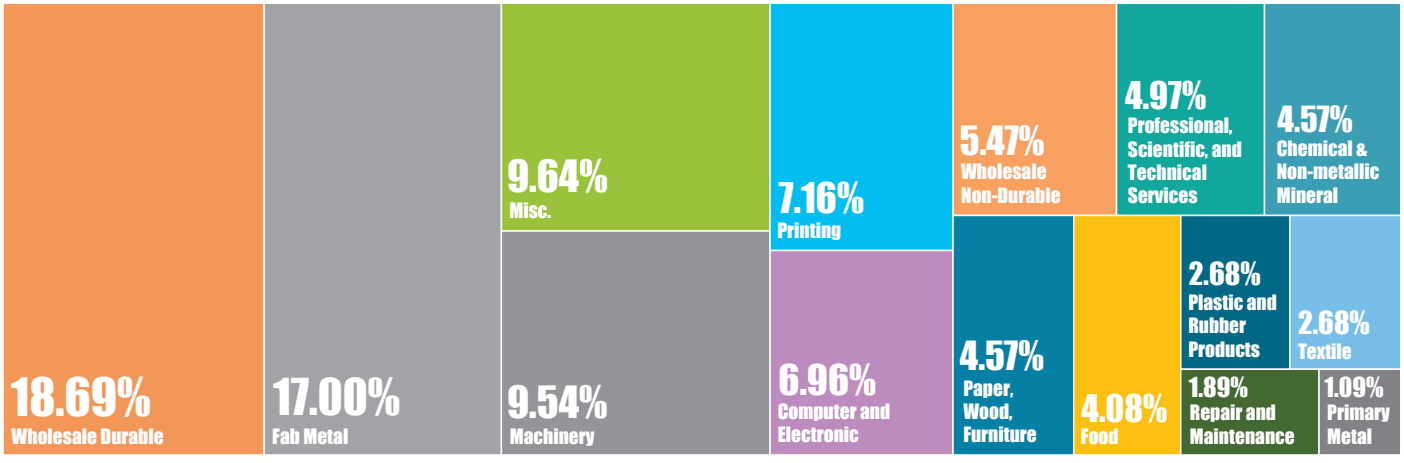
Manufacturing in Cook County

is an economic engine, driven not by a powerhouse of a few large multi-nationals, but a vast community of people who live and work in the Chicago region,

GENERATING MORE THAN 80% OF THE TOTAL MANUFACTURING OUTPUT OF THE ENTIRE STATE OF ILLINOIS.



INTERVIEW RESPONDENTS BY MANUFACTURING SECTOR



5,800+ MANUFACTURING FIRMS in Cook County

Manufacturers in suburban Cook County are, for the most part, small, locally owned firms operating in a wide variety of sectors ranging from food processing and packaging companies, metal fabrication for aerospace and defense industries, to firms making and supplying the components of industry, so vital to America's supply chain.

The Chicago region – and suburban Cook County – remains one of the largest metals manufacturing regions in the nation in terms of both employment and total output. The scale and concentration of this activity forms an entire supply chain within the region with firms specializing in numerous stages of the metals manufacturing process—from rolling and extrusion to fabrication and machinery manufacturing. Tube, sheet and bar steel is fabricated into components such as fasteners and containers, for a wide variety of products bound for the construction, automotive and machinery industries.

In the west suburban community of **ELK GROVE VILLAGE**, for example, more than **12,000 workers are employed in over 400 manufacturing firms,** in what is billed as the largest industrial park in the United States.

Manufacturing Employment

Total Manufacturing Jobs in the U.S.

12.7 MILLION

Total Manufacturing Jobs in Cook County **192,000+**

Manufacturing GDP in Illinois and Cook County

Total Illinois GDP ($billions, 2018)

$863,039.5

Total Manufacturing Output ($billions, 2018)

$108.43

(Percent share of total gross Illinois state product)

12.54%

Average Weekly Earnings in Manufacturing

US Overall	Illinois Overall	Cook County
$1,436	$1,302	$1,504

Cook County Manufacturing Output ($billions, 2019) $87.5

Share of total Illinois GDP **10.14%**

Share of total gross manufacturing output **80.7%**

According to the U.S. Census County Business Patterns, **67% of Cook County manufacturing firms have fewer than 20 employees** (U.S. Census Bureau) which aligns with the respondents to this survey. This survey closely mirrors the sector in terms of firm size.

FIRM SIZE BY EMPLOYMENT	Census	Survey Respondents
1-19 employees	67%	69%
20-49 employees	17%	18%
50-99 employees	8%	6%
100+ employees	8%	7%

Sources: Data from the U.S. BUREAU OF LABOR STATISTICS. Quarterly Census of Employment and Wages (QCEW). First Quarter 2020 • IMA 2020 Illinois Manufacturing Facts • CMAP Metals Supply Chain Report U.S. Census County Business Patterns: https://www.census.gov/programs-surveys/cbp.html

INTRODUCTION & SURVEY METHODOLOGY

The Annual Survey of Manufactures (ASM), a sample survey of approximately 50,000 establishments, is undertaken by the U.S. Census Bureau to provide sample estimates of statistics for all U.S. manufacturing establishments with one or more paid employee. The survey is conducted by mail, with limited phone calls conducted as follow for non-response. Compliance with the ASM is required by law.

In comparison, Cook County and IMEC undertook the project of contacting, by phone, the more than 5,800 manufacturing firms in suburban Cook County, to understand how firms were coping with, managing through, and preparing to exit the COVID-19 pandemic.

A phone survey of this size is significant, yet the urgency of the situation and importance of manufacturing in Cook County meant the stakes were high, requiring a commensurate approach.

There was no requirement to participate, yet more than 1,000 firms did so, with a desire to share their most urgent concerns, and an interest in seeking help to move beyond the pandemic.

A survey of this scope, undertaken on the county level, underscores the commitment by Cook County to the importance of a vibrant, healthy and growing manufacturing economy in the region. This report is a reflection of the county's desire to listen, understand and act, with policies and tools to help where the needs are most urgent.

The survey focused on asking firms to identify the priority of **TEN ISSUES:**

1. Lead the organization towards high performance
2. Develop long-term company direction
3. Manage organizational assets and data
4. Create growth opportunities
5. Protect and secure our digital information
6. Find, train & retain skilled workforce
7. Drive productivity and efficiency in our process
8. Address supply chain problems
9. Find the right technology
10. Improve safety, hygiene, and sanitation

The ten assessment categories in this survey are essential best practices for long term competitive success. These practices align with the US Commerce NIST **Baldridge Performance Excellence Framework, a world-renown standard for excellence**. The pursuit of concentration on, with improvement in, these categories is a validated, leading edge model for achieving and maintaining excellence in manufacturing.

These ten issues are rated on a four-point scale of urgency. For the purposes of calculating an average (mean) rating on these issues a numeric value from 3 to 0 was assigned:

- **URGENT** - Start Immediately (3)
- **IMPORTANT** - in the next year (1)
- **PRIORITY** - next 6 months (2)
- **NOT NOW** - future plans (0)

The survey was conducted via phone with attempts to all of the approximately **5,500+ manufacturing firms in suburban Cook County**, as identified through an industry database . This report analyzes results of a survey targeting a total of **5,541** valid manufacturing firms in suburban Cook County.

An overall response rate of 17.3%, on par with average telephone survey responses rates nationwide.

5,541
Valid Records
(269 records removed due to duplicates, invalid contact info, corporate office located elsewhere)

1,032
Total Responses

1,006
Final Respondent Count For Analysis
(26 removed as non-manufacturing)

RANKING BY SENSE OF URGENCY

The survey analysis focuses on those responses in the top-box of the survey: **'Urgent - Start Immediately'**. Average (mean) scores were also analyzed and were found directionally consistent with the pattern seen in the top-box response.

Ranking of 'URGENT' Issues by Company Size (as %)

Issues Ranked as 'URGENT' by Company Size	1-19 Employees	20-49 Employees	50-99 Employees	100+ Employees
1. **Create growth opportunities**	50	54	54	47
2. Improve safety, hygiene and sanitation	38	48	62	56
3. Drive productivity and efficiency in our processes	36	50	57	53
4. Lead the organization towards high performance	36	48	54	46
5. Find, train and retain a skilled workforce	27	43	61	54
6. Protect and secure our digital information	31	41	38	46
7. Address supply chain problems	26	36	36	39
8. Managing organization assets and data	28	35	34	32
9. Develop long-term company direction	24	34	23	33
10. Find the right technology	14	19	12	15

Responses ranked in **BLUE** indicate a response rate of **50% or more** in URGENT importance.

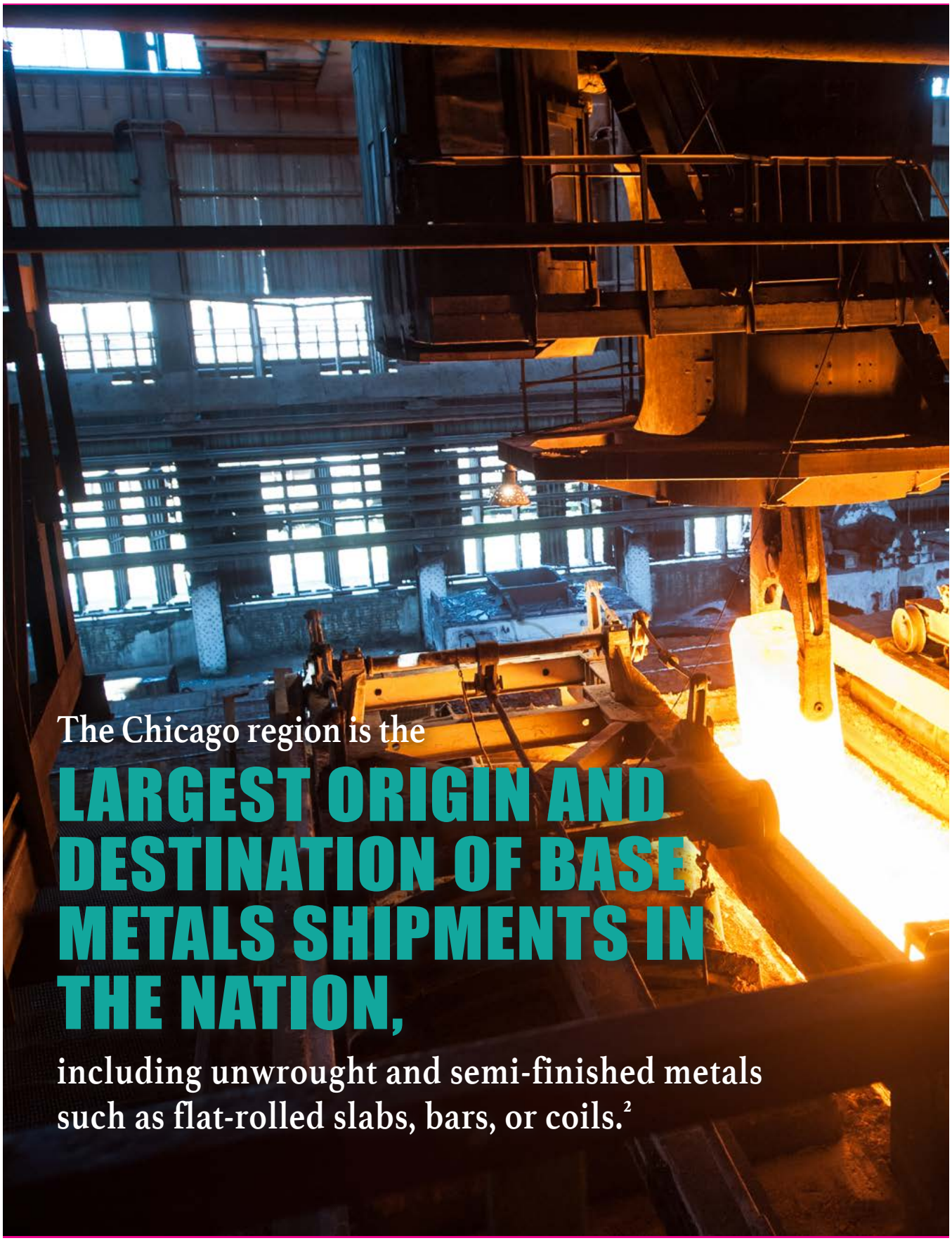
Responses marked in **GREEN** indicate a response rate of between **40-49%** in terms of an URGENT priority for the responding firm.

When respondents are examined in aggregate, the most important issues are:

1. 'Create growth opportunities' is rated as urgent by over half **(51%)** of the respondents
2. 'Improve safety, hygiene, and sanitation' rated urgent by **(42%)**
3. 'Drive productivity and efficiency in our processes' rated urgent by **(41%)** and
4. 'Lead the organization towards high performance' rated urgent by **(40%)**

While much news and discussion of the COVID-19 pandemic's effect on manufacturing has centered around the need to reconfigure supply chains, in particular for PPE and Medical products, the issue of **'Address Supply Chain Problems'** was not seen as particularly URGENT across all companies.

So, too, were the issues, **'Managing organization assets and data'** and **'Find the right technology'** when it came to the perceived ***lack of importance*** placed upon these topics by companies of all sizes. Small manufacturers (1-19 employees), the majority in Cook County and the US, stand to gain the most by adopting new technology – and to lose the most in terms of competitive advantage by not making the necessary investment.



The Chicago region is the

LARGEST ORIGIN AND DESTINATION OF BASE METALS SHIPMENTS IN THE NATION,

including unwrought and semi-finished metals such as flat-rolled slabs, bars, or coils.[2]

A DIFFERENCE OF PERSPECTIVE

A report available through the National Institute of Standards and Technology (NIST)*, ***"The Future of Manufacturing: 2020 and Beyond"*** highlights 5 key policymaker concerns regarding manufacturing strategy, management practices and investment priorities over the next 5 years and beyond:

1. **Going for Growth**
2. **Market and Operational Challenges: The Need for Speed**
3. **Technology Priorities: Investing for the Future**
4. **New Product Development: Faster Speed to Market**
5. **Talent Management: Attracting, Developing and Retaining Tomorrow's Leaders**

While the top priority of policymakers, **'Going for Growth'**, resonates with the majority of the survey respondents, across all company sizes, it is most urgent for those firms with fewer than **20** employees, **69%** of those surveyed.

Firms with 50+ employees, who make up 13% of survey respondents, do show an increased interest in concerns aligned with policymakers:

- **Investing in Technology and Cyber Security**
- **Building Supply Chain Resiliency**
- **Addressing Productivity: Declines, Improvement and Innovation**

INVESTING IN TECHNOLOGY

Industry 4.0 or Manufacturing 4.0 continues to be a trending 'hot button' topic among policymakers, yet little interest is shown on the part of smaller firms. **IN FACT, IN THIS SURVEY IT IS THE LEAST URGENT SUBJECT FOR SMALL FIRMS.**

Why might this be the case?

According to Tom Kelly, CEO and Executive Director of Automation Alley, an Industry 4.0 knowledge center for manufacturers, there exists a generational disconnect between the mindset of leadership at small manufacturing firms, many of which are family owned and operated, and younger generations who may be advocates of investment in new, digital technologies.

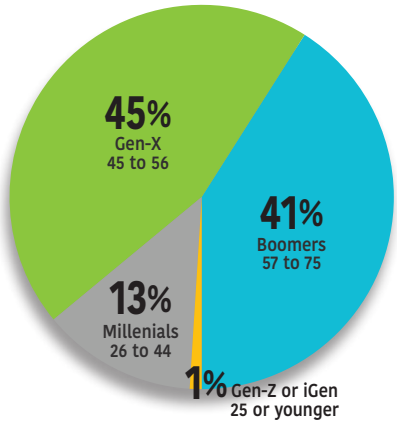
Family-owned small manufacturers are not small versions of large manufacturers.

"Owners of small companies tend to have a 'let's roll up our sleeves and get it done' type of personality," notes Kelly. "Deploying Industry 4.0 involves overlaying a digital mindset on a physical business, which is causing tremendous cultural distraction."

According to Kelly, "small manufacturers need to understand that it's not about applying technology to the process you know; it's about how technology is going to blow up the process you know."

Directly addressing the perceived **'GENERATIONAL DISCONNECT'** at small manufacturers may be a key to increasing understanding and adoption of Industry 4.0-enabling technologies that will help them achieve greater agility, productivity, reliability, speed and quality to remain competitive on a global stage.

PERCENTAGE OF SMALL BUSINESS OWNERS BY AGE GROUP



Even with the potential benefits, the perceived size, scope and cost of implementing Industry 4.0 technology can seem overwhelming – to the point of inaction. Not moving forward with technology, however, means more than just falling behind.

Many manufacturers understand the value of introducing Industry 4.0 into their workplace but are concerned with the potential costs and other unknowns. Policymakers must work to educate manufacturers on the true costs and benefits of adopting scalable technology, by encouraging firms to start small; to consider specific tools or individual pieces of equipment which can be integrated into a larger strategy.

Industry 4.0 technology isn't a one-time product, it's an investment that lasts over time – and manufacturers are in need of partners, both public and private, who are committed to building a lasting relationship.

* https://www.nist.gov/mep/current-state-manufacturing • Industry 4.0 for the Small Shop, ASSEMBLY Magazine, May 2020

POLICY RECOMMENDATIONS

With an understanding of the findings from the survey and the ongoing presence of COVID-19, **the following policy recommendations are offered for consideration:**

#1 Segment policy solutions to address differences by company size

It is common to refer to one group as small or mid-sized manufacturers. Yet, this limits the deeper understanding of their varying needs. Concerning the key drivers of manufacturing success, we see a hierarchy of business needs based on employee size. In this report, we refer to them as the MANUFACTURER'S HIERARCHY OF NEEDS (see page 24).

MANUFACTURERS WITH LESS THAN 20 EMPLOYEES REPRESENT NEARLY 70% OF THE COUNTY'S TOTAL MANUFACTURERS. It is imperative that policymakers craft solutions that take into account the unique aspects of these smaller companies. Policies that can effectively support their market growth through processes, skills, and access to potential customers, as well as access to funds, are critical for job growth.

As manufacturers grow, they face increased complexities and requirements for the business, which increase the need for skills, knowledge, and technology. Yet, these small to mid-sized manufacturers are unlikely to have these solutions or have limited resources to invest. As a consequence, these firms require broader and deeper support to strengthen their competitive position and improve job quality.**

Future policy decisions should implement solutions that meet the varying manufacturer needs by size. Development and implementation of policies that can help manufacturers of all sizes to navigate and adapt is the key to their long-term success and ultimately a robust manufacturing sector in Cook County.

Manufacturers that are more mid-sized require blended solutions. Models that provide comprehensive and deeper support to strengthen their competitive position and improve job quality.

Development and implementation of policies, which can help manufacturers of all sizes navigate and adapt, is key to their future, long-term success, yet with 75% of all manufacturers nationwide – and 66.7% of those in suburban Cook County having less than 20 employees – it is imperative that policymakers craft recommendations that take into account the unique aspects of these smaller companies including:

- often limited access to funds
- lack of process or knowledge of the skills required for growth generation
- lack of awareness of available technology, tools and resources and
- workforce recruiting, training and retention, among other topics.

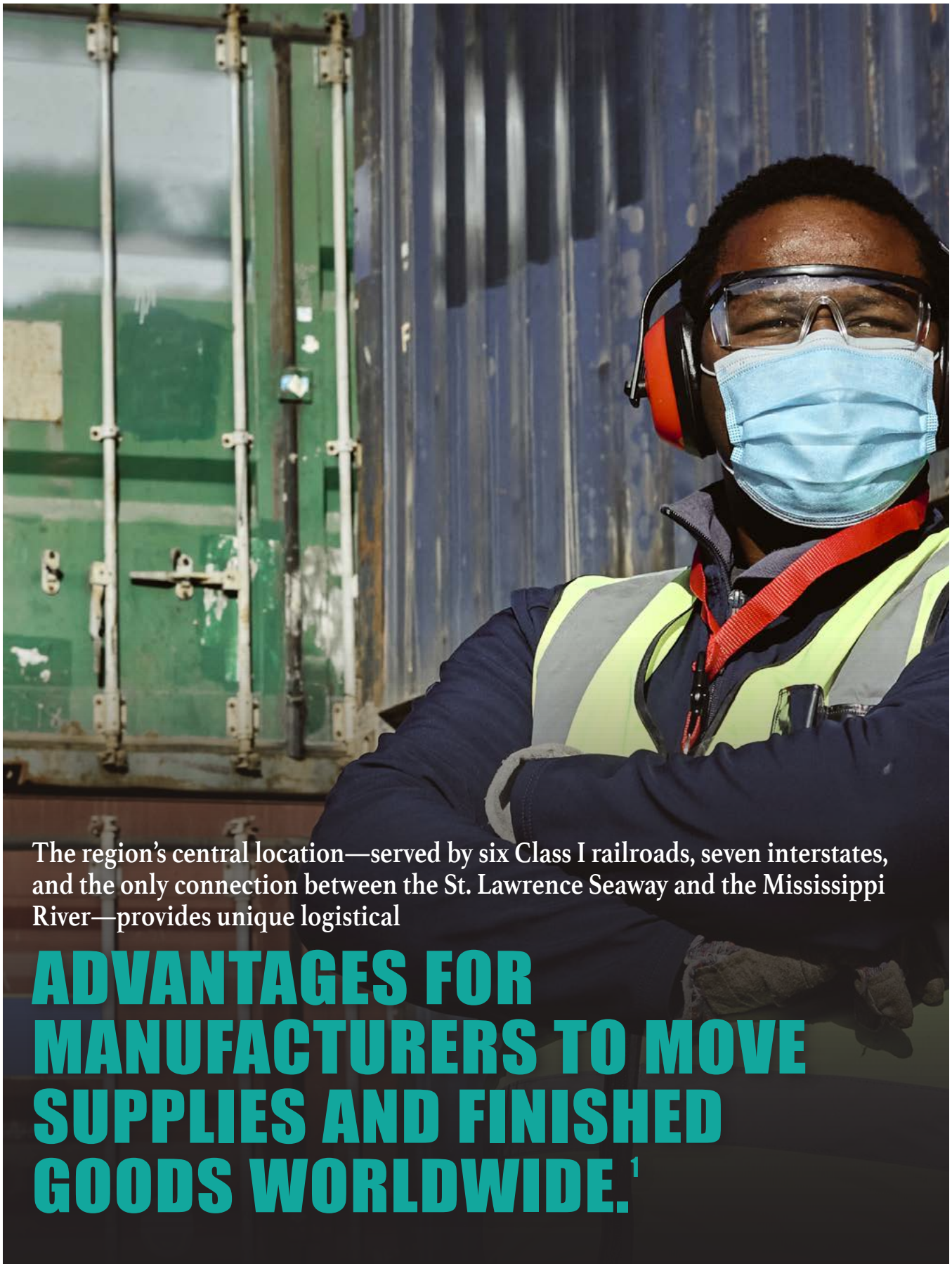
** https://www.brookings.edu/research/a-people-centered-approach-to-improving-job-quality-in-chicago/

#2 Promote access to local and global market access

Ensuring manufacturers are at the forefront, well connected, and well prepared for market growth opportunities is a foundation for long term success and job growth. There are numerous aspects to engaging in new market opportunities that can be coordinated.

Policymakers should work to help manufacturers:

- expand customer engagement skills
- invest in tools, resources and expertise needed to become digitally connected
- engage in networking opportunities furthering local supply chains and reshoring
- gain awareness of government procurement opportunities at federal, state and local levels
- obtain technical assistance for exports
- market their products as “Made in Cook County”



The region's central location—served by six Class I railroads, seven interstates, and the only connection between the St. Lawrence Seaway and the Mississippi River—provides unique logistical

ADVANTAGES FOR MANUFACTURERS TO MOVE SUPPLIES AND FINISHED GOODS WORLDWIDE.[1]

** https://www.brookings.edu/research/a-people-centered-approach-to-improving-job-quality-in-chicago/

#3 Facilitate global competitiveness through productivity and technology adoption

Productivity and technology did not rise up as urgent priorities for small and mid-sized manufacturers. While there may be several underlying factors, productivity is an essential ingredient for competitiveness, job quality and wages.

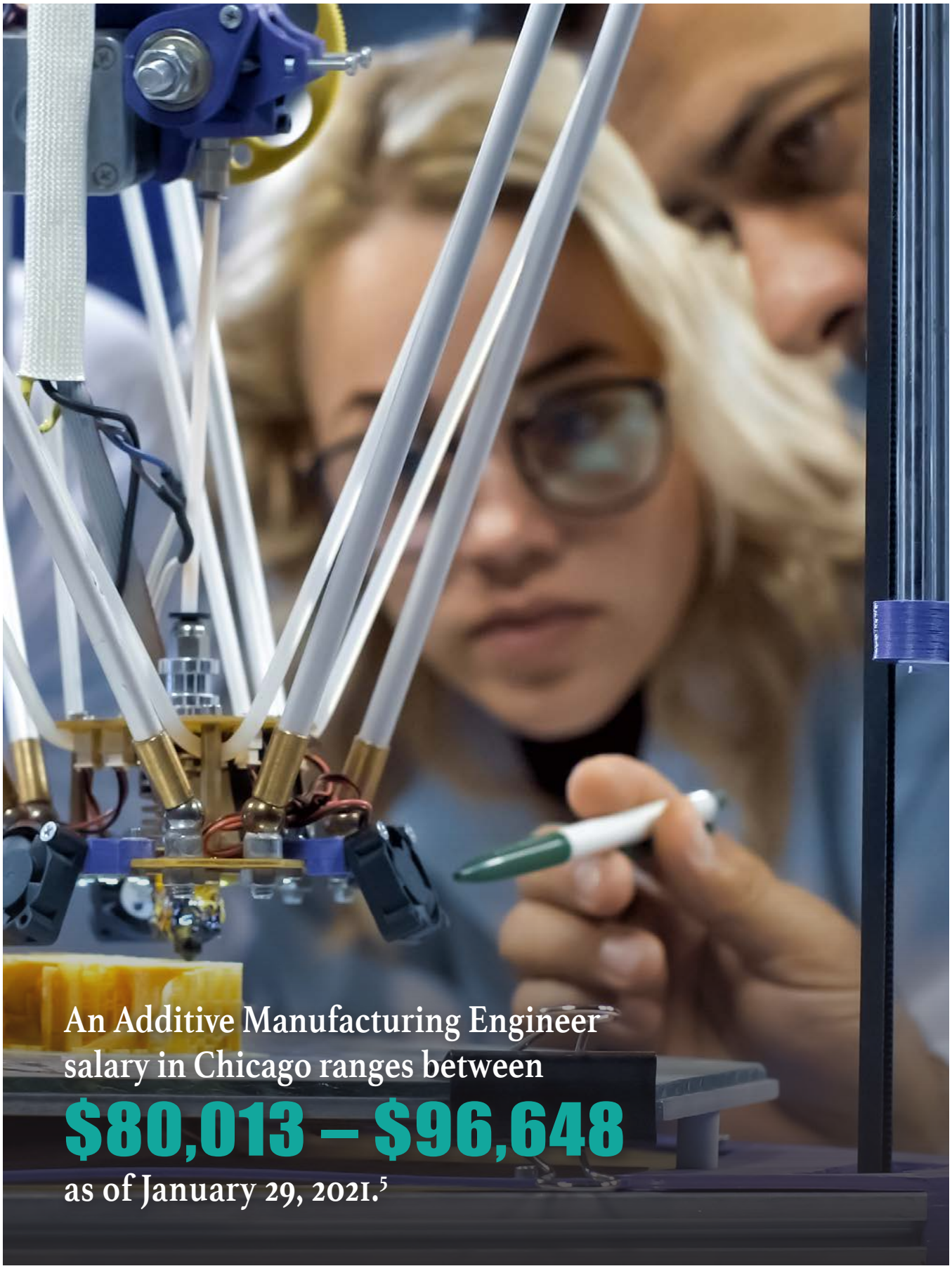
Active programs which work to advance the above priorities, such as IMEC's **Illinois Manufacturing Innovation Voucher**, which seeks to help manufacturers incorporate technology in their processes or products to sustain competitive advantages, have seen success – yet there exists a need for less complex solutions to address manufacturers' urgent challenges, especially among small manufacturers.

As cyber threats continue to grow, ensuring small manufacturers are well-positioned to defend and respond is essential for our nation's supply chain and industrial security. Cybersecurity incentives and technical support could be used to help manufacturers address this important, but often unseen need.

#4 Promote connections among firms and workforce solution providers

Workforce is vital for manufacturing success. There are wide ranging solutions for education and training for careers in manufacturing. These jobs are well paying and offer ample opportunity for career growth. Yet, the manufacturing skills gap has been a critical challenge in recent years.

While the pandemic softened the sector's urgency on workforce, it remains a critical topic and one that is likely to become even more so in the near future. There remains extensive opportunity to deepen the connections and aligning training resources and workforce development initiatives (re-skilling and upskilling) for business needs now and the future.


An Additive Manufacturing Engineer salary in Chicago ranges between
$80,013 – $96,648
as of January 29, 2021.[5]

#5 Further study and identify strengths/opportunities for the ease of doing business and addressing structural costs.

This survey did not ask questions about doing business in Cook County. However, these were common topics, specifically around taxes, in open ended questions and conversations. Given these topics were not part of this survey yet came up frequently enough, understanding the ease of doing business and costs of doing business deserves more policy research for action.

Manufacturers compete on a global stage with a wide array of cost challenges. To sustain and grow the relative position of Cook County manufacturing on the global stage, all costs must be thoroughly understood for the implications to compete and grow.

#6 Establish an ongoing method to gain insights from county manufacturers

The strong response from manufacturers highlights the need to have their voices heard. Ensuring an ongoing method of gaining leader insights will ensure policy decisions align with successful business and workforce outcomes.

GENDER DIVERSITY BENEFITS A MANUFACTURING ORGANIZATION

through improved ability to innovate, higher return on equity, and increased profitability.[3]

KEY FINDINGS

This analysis focuses on those responses in the top-box of the survey: 'Urgent - Start Immediately'. Average (mean) scores were also analyzed and were found directionally consistent with the pattern seen in the top-box response. The report findings are presented in 3 segments: Urgent Priorities Identified by Company Size, Geography and Business Sector.

URGENT PRIORITIES BY COMPANY SIZE

Among the smallest firms (1-19 employees) which makes up the bulk of the respondents (69%) priorities focus sharply on 'Create growth opportunities' with none of the other issues reaching 40% in importance.

There's a tendency for policymakers to focus in terms of small and mid-sized manufacturers. The federal definition of small and mid-sized is less than 500 employees. This survey highlights the limitations of such a broad grouping; very small firms have clear and different needs as compared to larger firms, and there appears to be a parallel to the concept of Hierarchy of Needs.

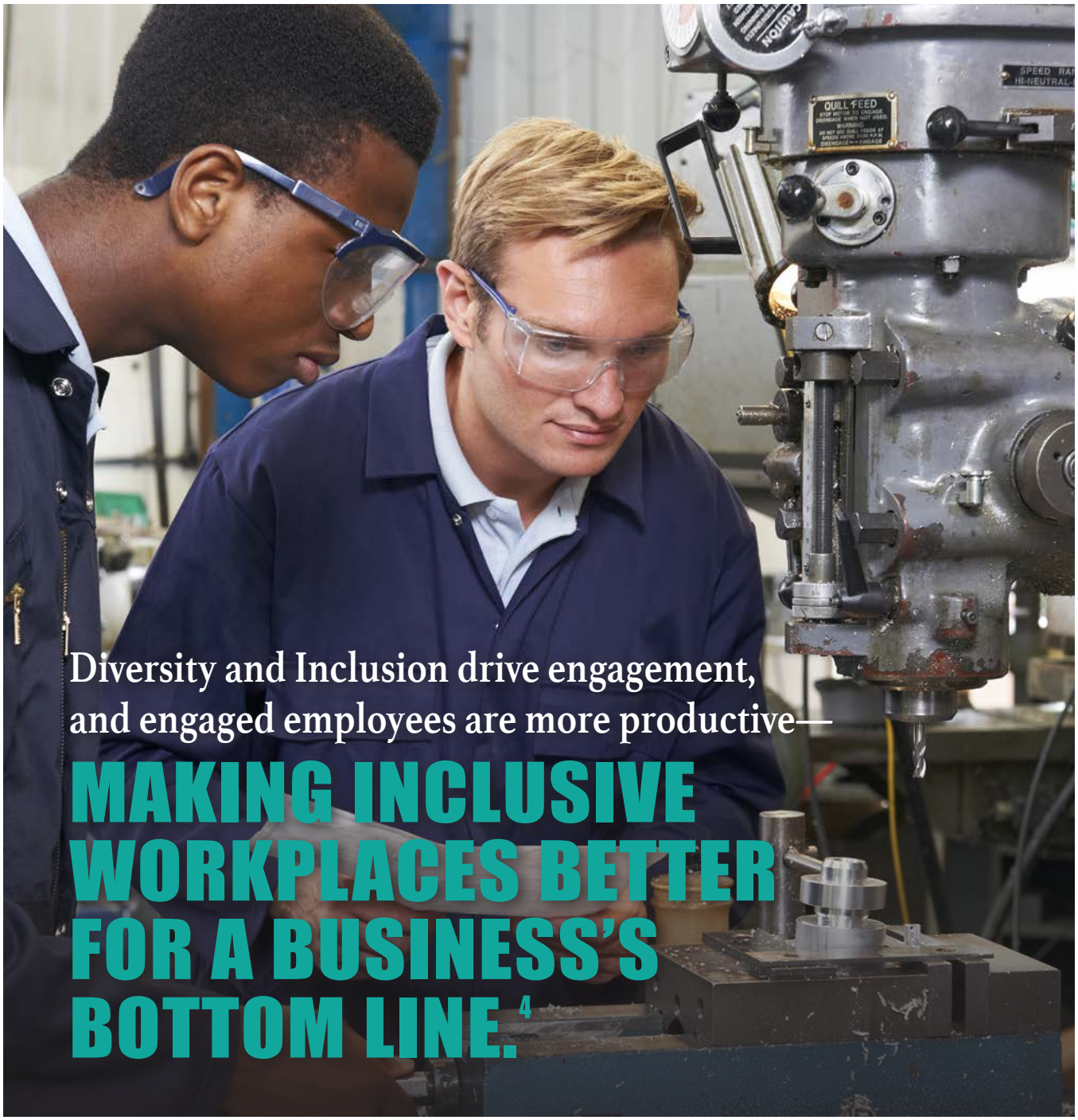
WHAT DO SMALL MANUFACTURERS, WITH 1-19 EMPLOYEES NEED?

The results of this survey have demonstrated a **Manufacturers' Hierarchy of Needs**. Chief among the findings is the correlation between Size of Firm and the URGENT NEEDS as identified by the responding manufacturers.

The most basic need for all respondents, but in particular those smaller firms, with 1-19 employees, is the need to "Create growth opportunities".

More simply said, "...if we don't have sales, nothing else matters..."

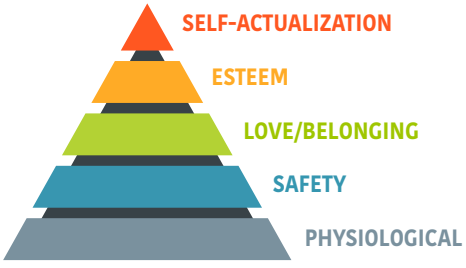
> Smaller firms, with the owner wearing many hats, must be focused on the basic needs of business, as highlighted by this survey.
> "As we're in a specialized industry, our biggest issue is the need for more business from our current clients"
>
> *– Small firm, 1-19 employees, Machinery Components Open-ended comment*



Diversity and Inclusion drive engagement, and engaged employees are more productive—

MAKING INCLUSIVE WORKPLACES BETTER FOR A BUSINESS'S BOTTOM LINE.[4]

NOTE: In 1943 Abraham Maslow wrote "A Theory of Human Motivation", one of the most influential works in the field of human psychology. Maslow argued that humans will seek to fulfill the most basic physiological needs before all others, shown in **Maslow's Hierarchy of Needs.**



WHAT DO MANUFACTURING FIRMS WITH 20–49 EMPLOYEES NEED?

Manufacturing firms of this size have grown beyond small or start-up size, and consequently their needs revolve around employment issues – specifically managing and encouraging productivity and performance while maintaining a safe workplace.

While 'Create growth opportunities' remains important for larger firms, other issues also emerge:

Firms with 20-49 Employees have additional key concerns:

- Drive productivity and efficiency in our processes
- Find, train and retain a skilled workforce
- Lead the organization towards high performance
- Improve safety, hygiene and sanitation

> "[We could use help getting] certifications that can assist [us] with getting approved to be an aerospace provider. Some of the [survey items] marked as urgent are actually things [we] are doing but are considered urgent because [we] feel that [we] need to continually keep them on radar and improve on, to move forward in business..."
>
> *– Smaller sized firm, 20-49 employees, Metal Fabricator*
> *Open-ended comment*

Once a powerhouse industry in Illinois, the Printing and Related Support industries continue to

EMPLOY MORE THAN 30,000 PEOPLE WITH A GDP OF $5.4 BILLION.[1]

WHAT DO LARGER SIZE MANUFACTURERS WITH 50-99 EMPLOYEES NEED?

As manufacturing companies grow in size, the number of health/safety regulations and reporting requirements rise. Smaller companies, under 10 employees are often exempt from the federal and state health and safety regulations of those with 50-99 employees.

Firms, particularly those with 50-99 employees, have a heightened interest in a range of issues including:

- Improve safety, hygiene and sanitation
- Find, train and retain a skilled workforce
- Drive productivity and efficiency in our processes
- Lead the organization towards high performance

> "Remote working has been a challenge for [us], as [we] are a family-owned small business that did not have the technology set up [in place] for [the pandemic]. Because of [our small] size and being under one roof [we] are used to managing by walking around and being very hands-on. These [factors] have made continuing business productively a challenge..."
>
> *— Medium sized firm, 50-99 employees, Industrial Contractor*
> *Open-ended comment*

For every job in the Illinois pharmaceutical and medical equipment manufacturing industry,

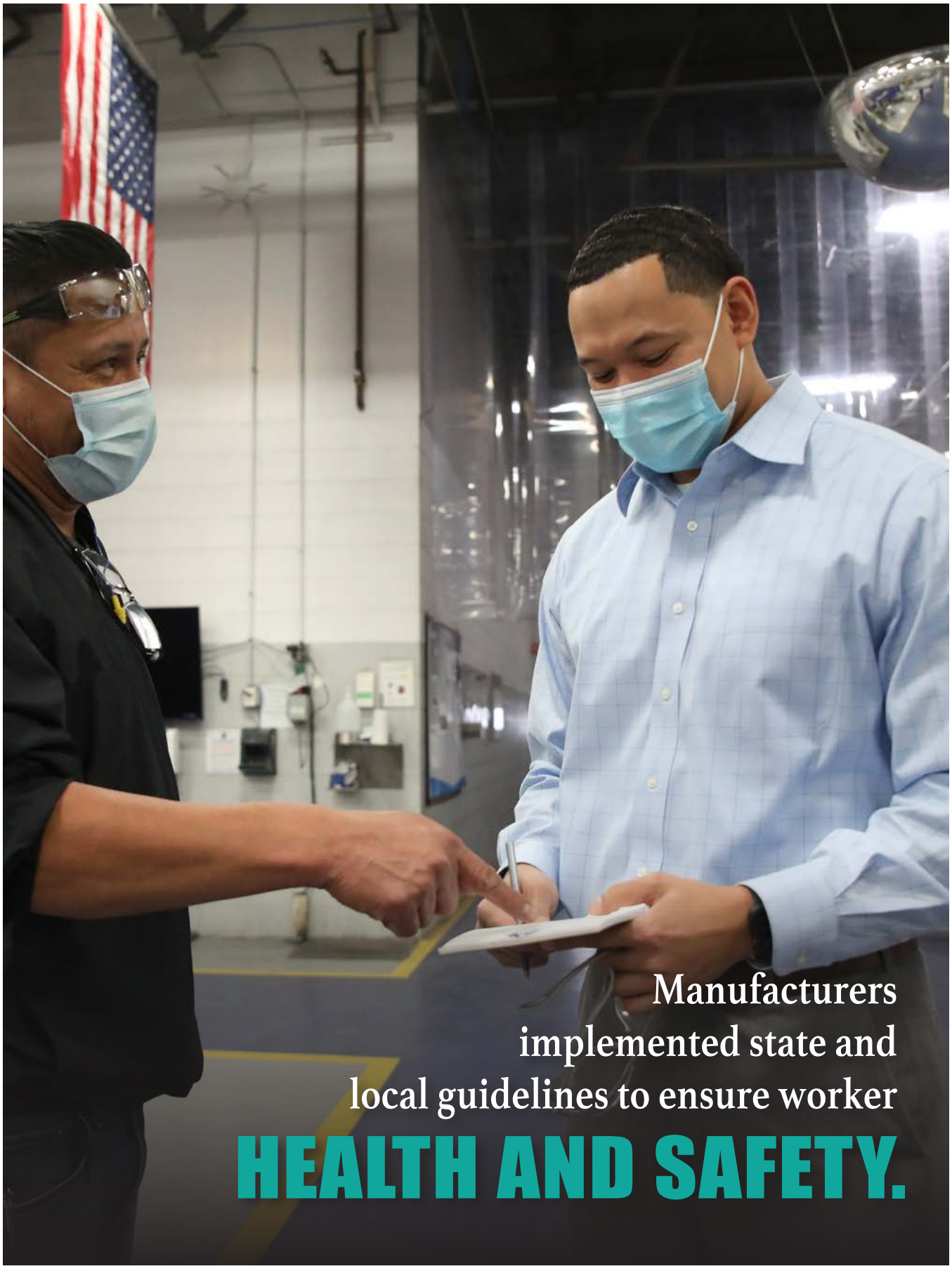
AN ADDITIONAL 3.8 OTHER JOBS ARE CREATED IN THE STATE ECONOMY.[1]

WHAT DO THE LARGEST SIZE MANUFACTURERS WITH 100+ EMPLOYEES NEED?

Manufacturing firms with 100 or more employees have dealt with any number of issues as they have continued to grow, chief among them the challenges of finding, training and retaining a skilled workforce. Yet when asked about their key concerns, the leadership of these firms move beyond the specific HR and Productivity issues into the realm of leadership, specifically working ON the business, not just IN the business. The ability to see beyond the day-to-day or even year-to-year issues, into the future, remains an important topic for these firms.

The urgent needs of the largest size manufacturers were closely aligned with manufacturers with 50-99 employees. Being at the top of the Manufacturer's Hierarchy of Needs, in terms of size, these firms are concentrating on the higher-level needs, **with improve safety, hygiene and sanitation being predominant due to COVID-19.**

> "Many of the important things have been hit on in this survey. Top ones: Workforce development, training, opportunity. [We're] reviewing processes now... [we feel] many companies are transitioning to those that have worked with computers very little and those that have grown up with them. We try to use [technology] to [it's] fullest, but we do not drop past practices. [When there is] resistance to change, you end up doing it both ways and not having a streamlined process. [We] need to work on having one general process that is the most efficient... and decide what does the actual value add [of] activities that need to be [addressed next]."
>
> *— Large sized firm, 100+ employees, Industrial Contractor*
> *Open-ended comment*


Manufacturers
implemented state and
local guidelines to ensure worker
HEALTH AND SAFETY.

URGENT PRIORITIES BY GEOGRAPHY AND BUSINESS SECTOR

GEOGRAPHY

In an attempt to understand if significant differences existed, we appended regional data to each record and divided suburban Cook County into five regions based on townships:

- **NORTH** = Northfield, New Trier, Main, Evanston and Niles
- **NORTHWEST** = Barrington, Palatine, Wheeling, Hanover, Schaumburg and Elk Grove
- **WEST** = Leyden, River Forest, Proviso, Lyons, Stickney, Norwood Park, Oak Park, Riverside, Calumet and Berwyn
- **SOUTHWEST** = Lemont, Palos, Worth and Orland
- **SOUTH** = Bremen, Thornton, Rich and Bloom

BUSINESS SECTOR

The survey respondents were spread out across 15 unique business sectors, representative of the diverse and interconnected supply chain, manufacturing and logistics hub that makes up the Chicago region. Respondents by business sector included:

BUSINESS SECTOR	RESPONDENT FIRMS
Wholesale Durable	188
Fab Metal	171
Miscellaneous	97
Machinery	96
Printing	72
Computer and Electronic	60
Wholesale Non-Durable	55
Professional, Scientific, and Technical Services	50
Chemical & Non-metallic Mineral	46
Paper, Wood, Furniture	46
Food	41
Plastic and Rubber Products	27
Textile	27
Repair and Maintenance	19
Primary Metal	11

Size is Key

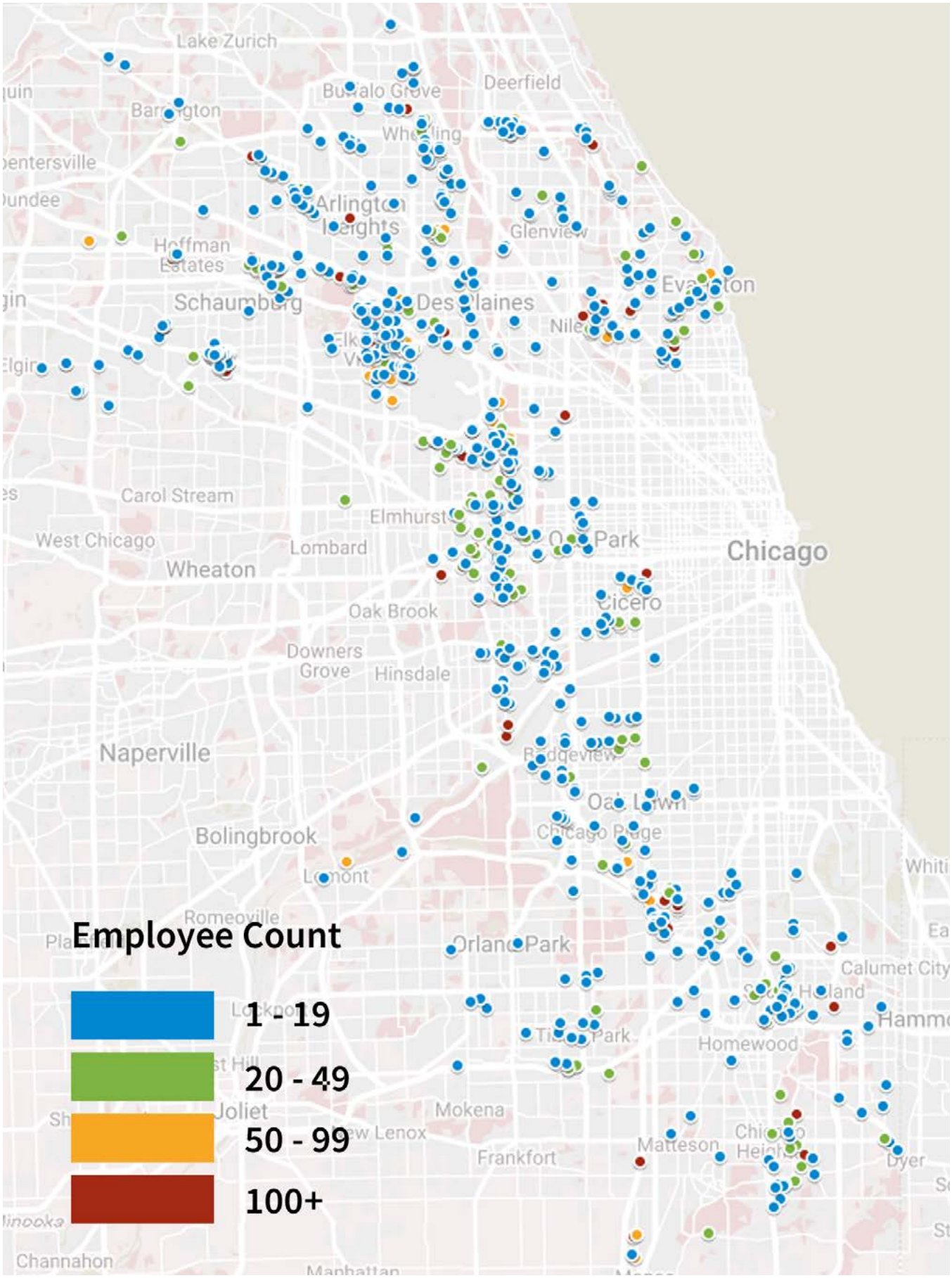
SIZE IS KEY

Given the overall size of the manufacturing community and the wide range of manufacturing sectors, it might have been expected that either the location or type of manufacturing would present significant differences in the most urgent needs.

This was not the case.

As indicated in the number one policy recommendation, knowing the size of the manufacturing firm is key to understanding how the needs differ across the ten key business drivers.

While there are clearly differences in the specific training needs of a welder and a food sanitation worker, the key business drivers used in this survey are common across all firms regardless of geography and sector. These drivers must be in place to ensure the welder and food sanitation worker has a job over the long term.


Employee Count
1 - 19
20 - 49
50 - 99
100+
Lake Zurich
Deerfield
Glenview
Schaumburg
Carol Stream
West Chicago
Wheaton
Lombard
Elmhurst
Oak Park
Chicago
Cicero
Oak Brook
Downers Grove
Hinsdale
Naperville
Bolingbrook
Romeoville
Orland Park
Homewood
Mokena
Frankfort
Matteson
Dyer
Channahon

DISCUSSION

The changes brought about by the pandemic were already in motion – from the adoption of technology and growing workforce and productivity challenges to issues of cyber security. Almost overnight, manufacturing firms were forced to adapt to a new reality of a displaced workforce with 100 remote 'locations' when previously there was only one.

While the timeline for the 'disruption stage' of the pandemic is not fully known, we know that a recovery will eventually come. Now is the time, however, to act; neither panicking nor remaining complacent. Policymakers and business leaders have a unique opportunity to work on planning – and implementing – courses of action for an eventual recovery.

Helping manufacturers recognize where we are in this process, understanding how every crisis follows an arc leading to recovery, should present an opportunity for Cook County to motivate firms to act NOW, not waiting until obvious signs of a recovery are in full view.

The 2008 recession taught us that the most successful, enduring companies were those that took measures in lockstep with each phase of the crisis. These companies forged a strategy and made decisive, bold and informed decisions and didn't miss a beat.

AN EXPONENTIAL RATE OF CHANGE

Just as the COVID-19 virus has grown at an exponential rate of change, so too have the effects on businesses of all sizes.

According to a McKinsey & Company report, 'The Great Acceleration' published in July 2020:

> "The fault lines between industries and business models that we understood intellectually before the COVID-19 crisis have now become giant fissures, separating the old reality from the new one. **Just as an earthquake produces a sudden release of pent-up force, the economic shock set off by the pandemic has accelerated and intensified trends that were already underway.** The result is a dramatic widening of the gap between those at the top and the bottom of the power curve of economic profit—the winners and losers in the global corporate performance race."

> "Along with the accelerated pace of change, however, comes a unique opportunity to unlock big strategic moves. Our research found that companies that pursued big strategic moves persistently, through every phase of the economic cycle, increased their odds of outperforming their peers. **Much of the organizational inertia that usually stands in the way of unlocking these big moves is now gone, as the crisis has rendered obsolete the budgets and personal targets that make such moves so hard to achieve."**

THE SHIFT AGE

The need for change and the removal of many traditional barriers to making change – presents a monumental SHIFT, for better or worse, in the future fortunes of manufacturing in suburban Cook County and across the globe.

In the book ***Brand Shift: The Future of Brands and Marketing***, by David Houle and Owen Shapiro, they describe 'The Shift Age' as an era of human history following the "Information Age", wherein we gained the ability to collect, analyze and control data – which has become a defining feature of successful companies.

In the Shift Age, information and data analytics have become super-abundant and are no longer the defining constraint that separates successful from unsuccessful organizations. In the Shift Age, the ability to exploit opportunities from the increasingly rapid – exponential – changes, particularly in technology, have become the defining characteristic of successful organizations.

Does this SHIFT AGE mean policymakers and manufacturers should suddenly adopt any and all forms of technology, as the way forward

YES AND NO.

YES – because the benefits derived from a host of technological advances can greatly increase productivity – from how firms find and market to customers to how they manage the shop floor.

NO – because whether the technology includes adoption of **Industry 4.0 or Cyber Security or Supply Chain Logistics** there is a current disconnect between the recommendations of policymakers and the urgent needs of those 'on the ground' as evidenced by the results of this survey.

The transformative power of technology is evident to many – but until other basic 'needs' are addressed there will be limited adoption and growth by those who may need technology most.

In addition to technology, the Shift Age is characterized by a world dominated by exponential growth. When compared to our traditional precepts of linear change, exponential change does not feel 'natural' to most people. Manufacturing leaders who can work outside their comfort zone, and recognize the opportunities, will benefit the most.

ANALYSIS OF QUALITATIVE DATA FROM SURVEY

The 10-question phone survey included an open-ended question, with answers entered by the interviewer:

What other issues are a priority for your organization?

Answers were classified into those containing "issues" (in response to the question prompt) and those containing "non-issues" (answers like "no issues," "do not contact," "none," etc.).

Of the 1,006 total responses, 437 (43.4%) identified some issues and 569 (56.6%) contained no substantive issues. Among small companies (1-19 employees), 40.5% reported some issue, while 49.8% of larger companies identified some issue. Percentages of each theme are provided based on the sample of respondents who identified an issue.

Open-Ended Comments Data Chart

	Taxes %	COVID %	Workers %	Finances %	Sales %
1-19 (280)	17.5	12.9	14.3	10.0	15.4
20+ (157)	20.4	19.1	27.4	7.0	8.3
All (437)	18.5	15.1	19.0	8.9	12.8

Blue notes a statistically significant difference.

Discussion themes were identified through a search for keywords + visual inspection. Larger companies are statistically more likely to report issues related to their workforce and less likely to report issues related to sales.

In many ways, the comments support the findings from the rating questions. Concerns about sales and workers feature prominently in the comments, with larger companies more focused on worker issues and smaller companies focused more on sales issues - as they do in the rating questions.

Other topics which emerged in the comments that were not directly included in the ratings are:

COVID - although this seems closely related to the safety issues included in the ratings

Finances
(e.g. issues related to profits/margins)

Property Taxes

These additional themes point to areas where future research could be beneficial, for example:

Is COVID a unique, transitory event impacting safety concerns, or do the comments indicate a continuing, and growing, focus on this area?

QUESTIONS FOR CONSIDERATION...

- How do finance comments (e.g. margins/profits) relate to the productivity concerns?
- Does this finance theme point to issues/language that could help focus manufacturers on addressing stagnant productivity trends?
- What can be done in terms of refinement of tax policy or communication about taxes that could help address manufacturers' concerns in this area?
- Do the relatively limited number of comments about local politics and foreign entities represent niche concerns, or could they be early indications of emerging issues for manufacturers?

LIST OF TABLES

- **Table 1** – Percent 'URGENT' by Company Size
- **Table 2** – Percent 'URGENT' by Region
- **Table 3** – Overall Percent 'URGENT' and Mean
- **Table 4** – Percent 'URGENT' by Company Type
- **Table 5** – Size of Firm (Number of Employees)
- **Table 5b** – Mean Importance by Company Size
- **Table 6a** – Region of Suburban Cook County
- **Table 6b** – Mean Importance by Region
- **Table 7a** – Company Type
- **Table 7b** – Mean Importance by Company Type

Table 1

Percent 'URGENT' by Company Size	1-19 Employees	20-49 Employees	50-99 Employees	100+ Employees
Lead the organization towards high performance	36	48	54	46
Develop long-term company direction	24	34	23	33
Managing organization assets and data	28	35	34	32
Create growth opportunities	50	54	54	47
Protect and secure our digital information	31	41	38	46
Find, train and retain a skilled workforce	27	43	61	54
Drive productivity and efficiency in our processes	36	50	57	53
Address supply chain problems	26	36	36	39
Find the right technology	14	19	12	15
Improve safety, hygiene and sanitation	38	48	62	56

Table 2

Percent 'URGENT' by Region	North	Northwest	South	Southwest	West
Lead the organization towards high performance	45	42	36	34	38
Develop long-term company direction	28	28	24	20	26
Managing organization assets and data	31	36	26	20	27
Create growth opportunities	59	53	44	46	48
Protect and secure our digital information	36	36	32	24	35
Find, train and retain a skilled workforce	26	34	40	36	34
Drive productivity and efficiency in our processes	45	41	40	46	38
Address supply chain problems	34	30	29	29	26
Find the right technology	17	14	16	11	16
Improve safety, hygiene and sanitation	42	44	44	40	40

Table 3

Overall: Percent 'URGENT' and Mean	% Urgent - Start Immediately	Mean Importance Score
Lead the organization towards high performance	40	1.8
Develop long-term company direction	26	1.5
Managing organization assets and data	30	1.5
Create growth opportunities	51	2.1
Protect and secure our digital information	34	1.5
Find, train and retain a skilled workforce	34	1.6
Drive productivity and efficiency in our processes	41	1.8
Address supply chain problems	29	1.3
Find the right technology	15	0.9
Improve safety, hygiene and sanitation	42	1.6

40–49% of responses

50% + of responses

Table 4

Percent 'URGENT' by Type	Wholesale Durable	Fab Metal	Misc	Machinery	Printing	Computer and Electronics	Wholesale Non-durable	Professional, Scientific and Tech. Services	Chemical and Non-metallic Mineral	Paper, Wood and Furniture	Food	Plastic and Rubber Products Mfg.	Textiles	Repair and Maintenance	Primary Metal
Lead the organization towards high performance	44	36	35	38	44	43	34	48	43	33	46	30	44	47	18
Develop long-term company direction	19	22	31	22	19	27	25	30	33	28	22	15	41	32	27
Managing organization assets and data	34	29	32	27	22	27	33	26	39	22	32	18	41	21	27
Create growth opportunities	49	41	56	56	50	57	51	52	43	48	56	70	63	53	36
Protect and secure our digital information	38	25	31	32	39	43	31	38	46	30	42	30	56	21	0
Find, train and retain a skilled workforce	29	41	31	46	19	22	24	32	37	39	49	44	33	42	36
Drive productivity and efficiency in our processes	41	41	34	45	39	45	36	34	46	37	54	30	48	53	45
Address supply chain problems	35	23	34	19	28	32	42	16	39	37	34	26	41	10	0
Find the right technology	15	13	13	11	21	13	16	18	24	15	10	11	15	16	9
Improve safety, hygiene and sanitation	41	41	39	43	35	53	47	40	44	46	46	30	37	53	30

NOTE OF CAUTION: The small respondent base reduces the statistical reliablility of the findings in this chart.

Table 5a

Size of Firm (# of Employees)	Percent
1-19	69%
20-49	18%
50-99	6%
100+	7%

Table 5b

Mean Importance by Company Size	1-19 Employees	20-49 Employees	50-99 Employees	100+ Employees
Lead the organization towards high performance	1.6	2.0	2.3	2.0
Develop long-term company direction	1.4	1.7	1.5	1.7
Managing organization assets and data	1.4	1.6	1.7	1.7
Create growth opportunities	2.0	2.2	2.2	2.1
Protect and secure our digital information	1.4	1.6	1.7	1.8
Find, train and retain a skilled workforce	1.3	1.9	2.3	2.2
Drive productivity and efficiency in our processes	1.6	2.0	2.4	2.1
Address supply chain problems	1.2	1.5	1.7	1.7
Find the right technology	0.8	1.1	1.2	1.1
Improve safety, hygiene and sanitation	1.5	1.8	2.2	2.1

Table 6a

Region of County	Percent
North	14%
Northwest	35%
South	15%
Southwest	9%
West	26%

Table 6b

Mean Importance by Region	North	Northwest	South	Southwest	West
Lead the organization towards high performance	1.9	1.8	1.7	1.7	1.7
Develop long-term company direction	1.6	1.5	1.4	1.4	1.4
Managing organization assets and data	1.5	1.6	1.5	1.3	1.4
Create growth opportunities	2.3	2.1	1.9	2.1	2.0
Protect and secure our digital information	1.5	1.5	1.4	1.3	1.5
Find, train and retain a skilled workforce	1.3	1.6	1.8	1.7	1.6
Drive productivity and efficiency in our processes	1.9	1.7	1.7	2.0	1.7
Address supply chain problems	1.4	1.3	1.3	1.3	1.2
Find the right technology	1.0	0.9	0.9	0.8	0.9
Improve safety, hygiene and sanitation	1.5	1.7	1.7	1.5	1.6

Table 7a

Company Type	Percent
Wholesale Durable	19%
Fab Metal	17%
Misc	10%
Machinery	10%
Printing	7%
Computer and Electronics	6%
Wholesale Non-durable	5%
Professional, Scientific and Tech. Services	5%
Chemical and Non-metallic Mineral	5%
Paper, Wood and Furniture	5%
Food	4%
Plastic and Rubber Products Mfg	3%
Textiles	3%
Repair and Maintenance	2%
Primary Metal	1%

Table 7b

Mean Importance by Type	Wholesale Durable	Fab Metal	Misc	Machinery	Printing	Computer and Electronics	Wholesale Non-durable	Professional, Scientific and Tech. Services	Chemical and Non-metallic Mineral	Paper, Wood and Furniture	Food	Plastic and Rubber Products Mfg	Textiles	Repair and Maintenance	Primary Metal
Lead the organization towards high performance	1.9	1.6	1.7	1.7	1.8	1.9	1.6	2.0	2.0	1.6	1.9	1.6	1.7	2.1	1.7
Develop long-term company direction	1.6	1.3	1.5	1.4	1.3	1.6	1.5	1.6	1.6	1.6	1.4	1.1	1.8	1.5	1.5
Managing organization assets and data	1.6	1.4	1.5	1.3	1.4	1.4	1.6	1.4	1.6	1.3	1.7	1.2	1.9	1.2	1.6
Create growth opportunities	2.1	1.8	2.1	2.2	2.1	2.2	2.2	2.2	2.0	2.1	2.2	2.5	2.3	2.1	1.9
Protect and secure our digital information	1.5	1.3	1.4	1.4	1.6	1.8	1.5	1.4	1.8	1.4	1.7	1.3	2.0	1.1	0.9
Find, train and retain a skilled workforce	1.4	1.8	1.4	1.9	1.0	1.4	1.2	1.5	1.6	1.8	2.1	1.9	1.6	1.8	1.6
Drive productivity and efficiency in our processes	1.8	1.8	1.5	1.9	1.7	1.9	1.5	1.7	2.1	1.7	2.2	1.6	2.1	2.1	1.9
Address supply chain problems	1.5	1.2	1.4	1.0	1.1	1.3	1.6	1.0	1.5	1.5	1.6	1.4	1.6	0.6	0.9
Find the right technology	0.9	0.9	0.9	0.8	1.0	1.0	0.8	1.0	1.3	0.7	0.9	0.8	0.9	0.8	0.5
Improve safety, hygiene and sanitation	1.6	1.6	1.4	1.7	1.3	1.9	1.6	1.6	1.6	1.8	1.7	1.3	1.5	1.9	2.5

NOTE OF CAUTION: The small respondent base reduces the statistical reliablility of the findings in this chart.

IMEC
Plan. Implement. Excel.

Cook County
COVID-19
RECOVERY
Manufacturing
Concierge