107 Years of Service

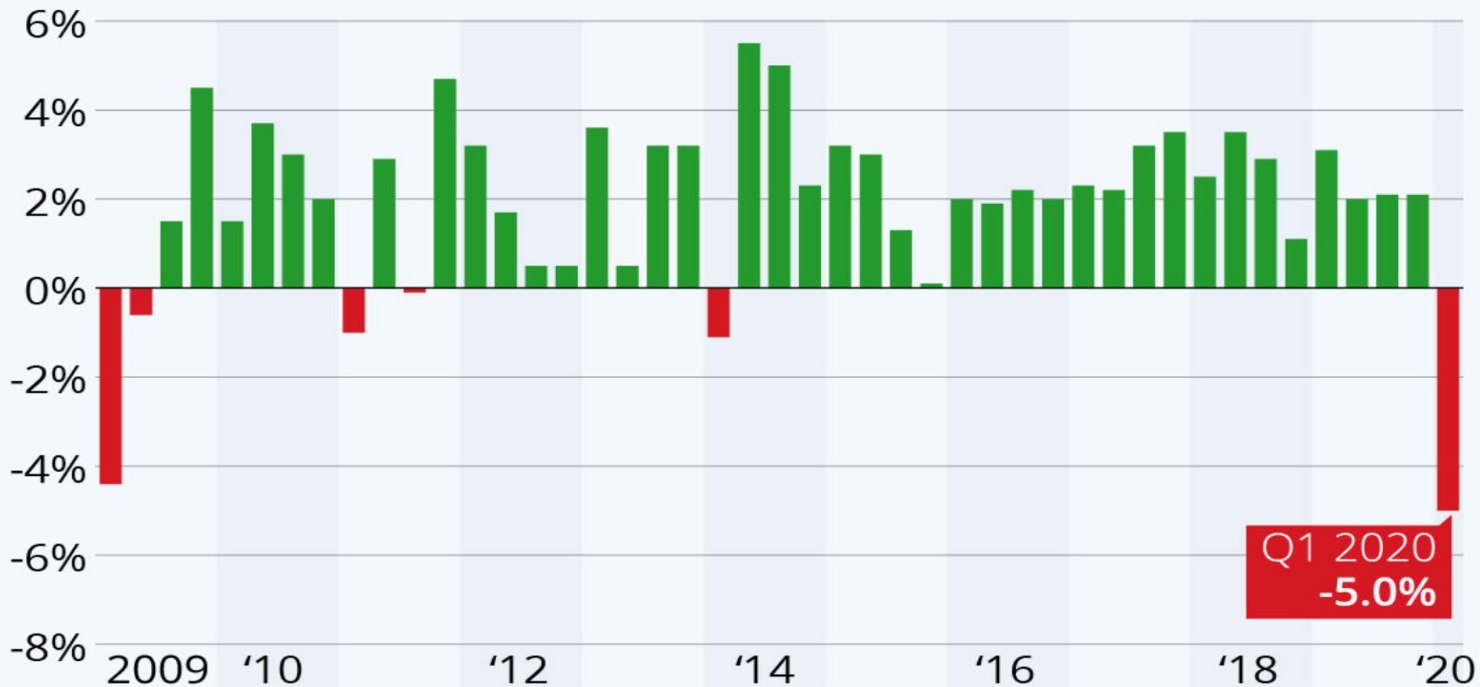
www.macny.org

MANUFACTURERS ALLIANCE of New York

The longest economic expansion in U.S. history followed by largest unemployment since the Great Depression

U.S. Economy Sees Sharp Downturn Amid COVID-19 Crisis

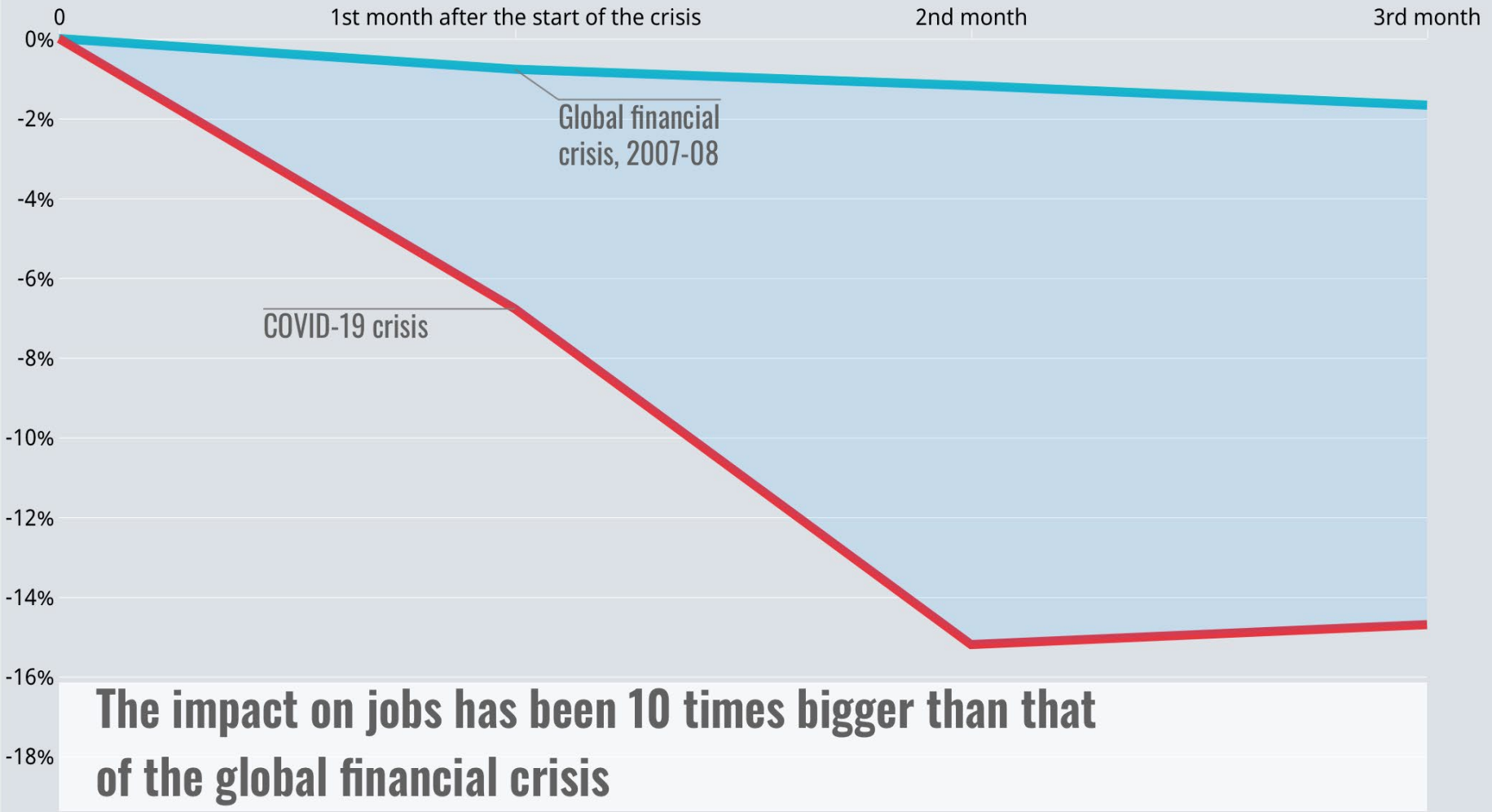
Quarterly real GDP growth in the United States*



* percent change from preceding quarter; seasonally adjusted at annual rates

Source: U.S. Bureau of Economic Analysis

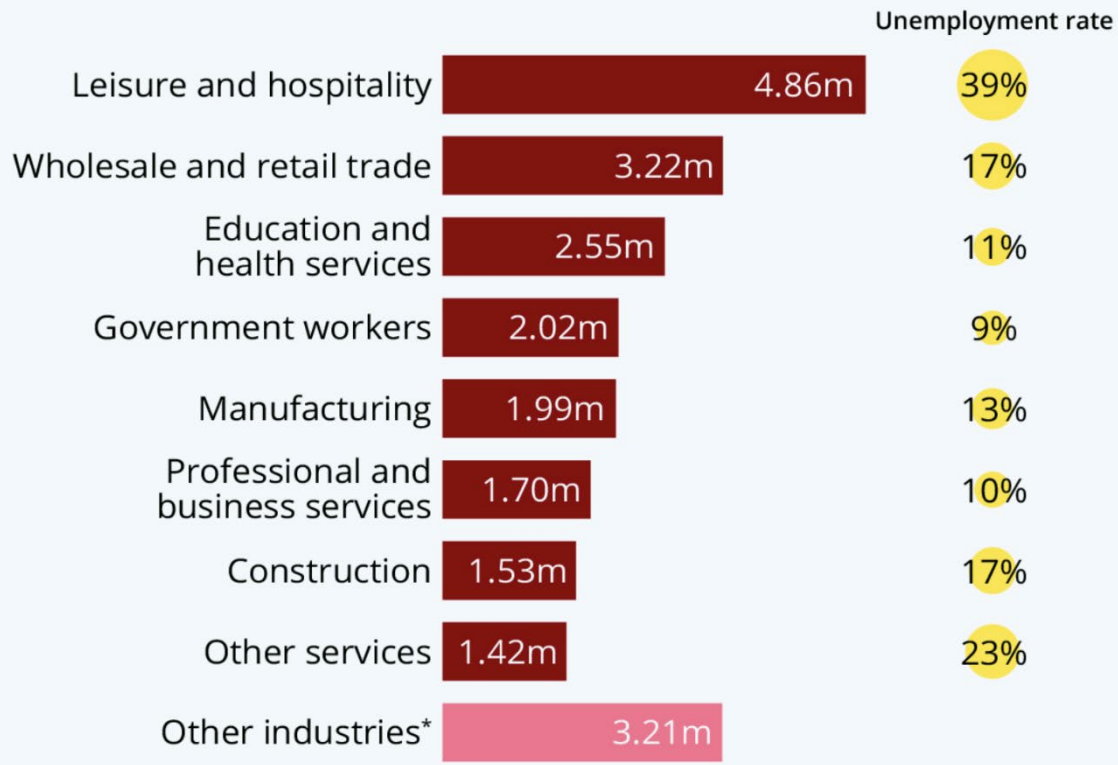
Collapse in the number of hours people work



Source: OECD (2020), OECD Employment Outlook 2020: Worker Security and the COVID-19 Crisis, OECD Publishing, Paris.
Note: Average of selected countries: Australia, Canada, Japan, Korea, Sweden, US.

The Industries Worst Affected by the COVID-19 Job Crisis

Number of unemployed persons aged 16 and over in the U.S. in April 2020, by industry



* incl. persons with no previous work experience and persons whose last job was in the U.S. Armed Forces

Source: Bureau of Labor Statistics

NAM MANUFACTURERS' OUTLOOK SURVEY
THIRD QUARTER 2020
SEPTEMBER 10, 2020

<table>
<tr>
<td>Percentage of Respondents Positive About Their Own Company's Outlook
66.0%
(May: 33.9% — Lowest since Q1:2009)

Small Manufacturers: 62.0% (May: 42.4%)
Medium-Sized Manufacturers: 65.5% (May: 27.4%)
Large Manufacturers: 70.3% (May: 22.5%)</td>
<td>Overall Facts About the Survey
Number of Responses: 472
In the Field: Aug. 14–28, 2020

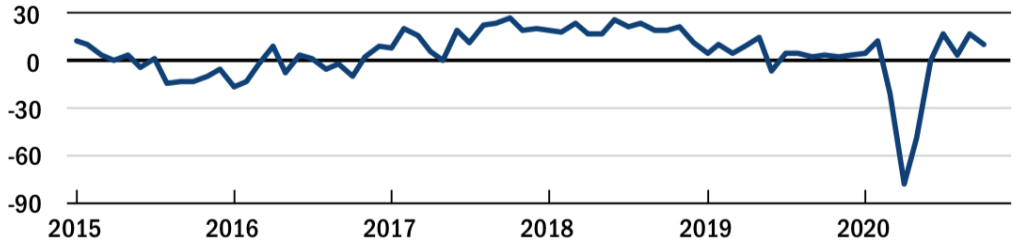
Small Manufacturers: 107 responses
Medium-Sized Manufacturers: 235 responses
Large Manufacturers: 130 responses

NAM Manufacturing Outlook Index[1]
44.5
(May: 23.3 — Lowest since Q1:2009)</td>
</tr>
<tr>
<td>Expected Growth Rate for SALES
Over the Next 12 Months
↑ 1.9%
(May: ↓ 4.3% — Lowest since Q1:2009)</td>
<td>Expected Growth Rate for PRODUCTION
Over the Next 12 Months
↑ 2.2%
(May: ↓ 3.8% — Lowest since question was added in Q2:2015)</td>
</tr>
<tr>
<td>Expected Growth Rate for FULL-TIME EMPLOYMENT
Over the Next 12 Months
↑ 0.7%
(May: ↓ 2.2% — Lowest since Q1:2009)</td>
<td>Expected Growth Rate for EMPLOYEE WAGES
Over the Next 12 Months
↑ 1.4%
(May: ↑ 0.5% — Lowest since Q2:2009)</td>
</tr>
<tr>
<td>Expected Growth Rate for CAPITAL INVESTMENTS
Over the Next 12 Months
↑ 0.7%
(May: ↓ 2.5% — Lowest since Q1:2009)</td>
<td>Expected Growth Rate for EXPORTS
Over the Next 12 Months
↑ 0.4%
(May: ↓ 1.4% — Lowest since question was added in Q2:2011)</td>
</tr>
<tr>
<td>Expected Growth Rate for PRICES OF COMPANY'S PRODUCTS Over the Next 12 Months
↑ 1.3%
(May: ↓ 0.1% — Lowest since Q1:2009)</td>
<td>Expected Growth Rate for RAW MATERIAL PRICES AND OTHER INPUT COSTS Over the Next 12 Months
↑ 2.2%
(May: ↑ 0.9% — Lowest since question was added in Q2:2018)</td>
</tr>
<tr>
<td>Expected Growth Rate for INVENTORIES
Over the Next 12 Months
↓ 0.4%
(May: ↓ 2.8% — Lowest since Q2:2009)</td>
<td>Expected Growth Rate for HEALTH INSURANCE COSTS
Over the Next 12 Months
↑ 5.8%
(May: ↑ 5.7% — Lowest since question was added in Q3:2014)</td>
</tr>
</table>

Current Indicators

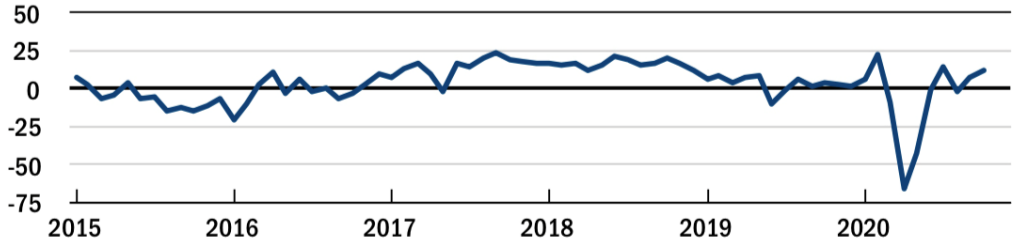
Change from Preceding Month

General Business Conditions



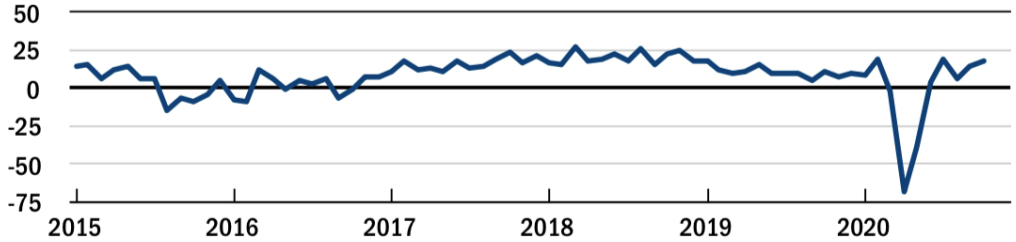
	Percent Reporting		
	Higher	Lower	Index
Sep	39.8	22.8	17.0
Oct	35.8	25.3	10.5
Change			-6.5

New Orders



	Percent Reporting		
	Higher	Lower	Index
Sep	34.9	27.7	7.1
Oct	38.3	26.0	12.3
Change			5.2

Shipments



	Percent Reporting		
	Higher	Lower	Index
Sep	34.0	19.9	14.1
Oct	36.5	18.7	17.8
Change			3.7

New York State Labor Market Overview – September 2020

The number of private sector jobs in New York State increased by 1.0% over the month in September 2020

Private sector jobs (seasonally adjusted) January 1990-September 2020

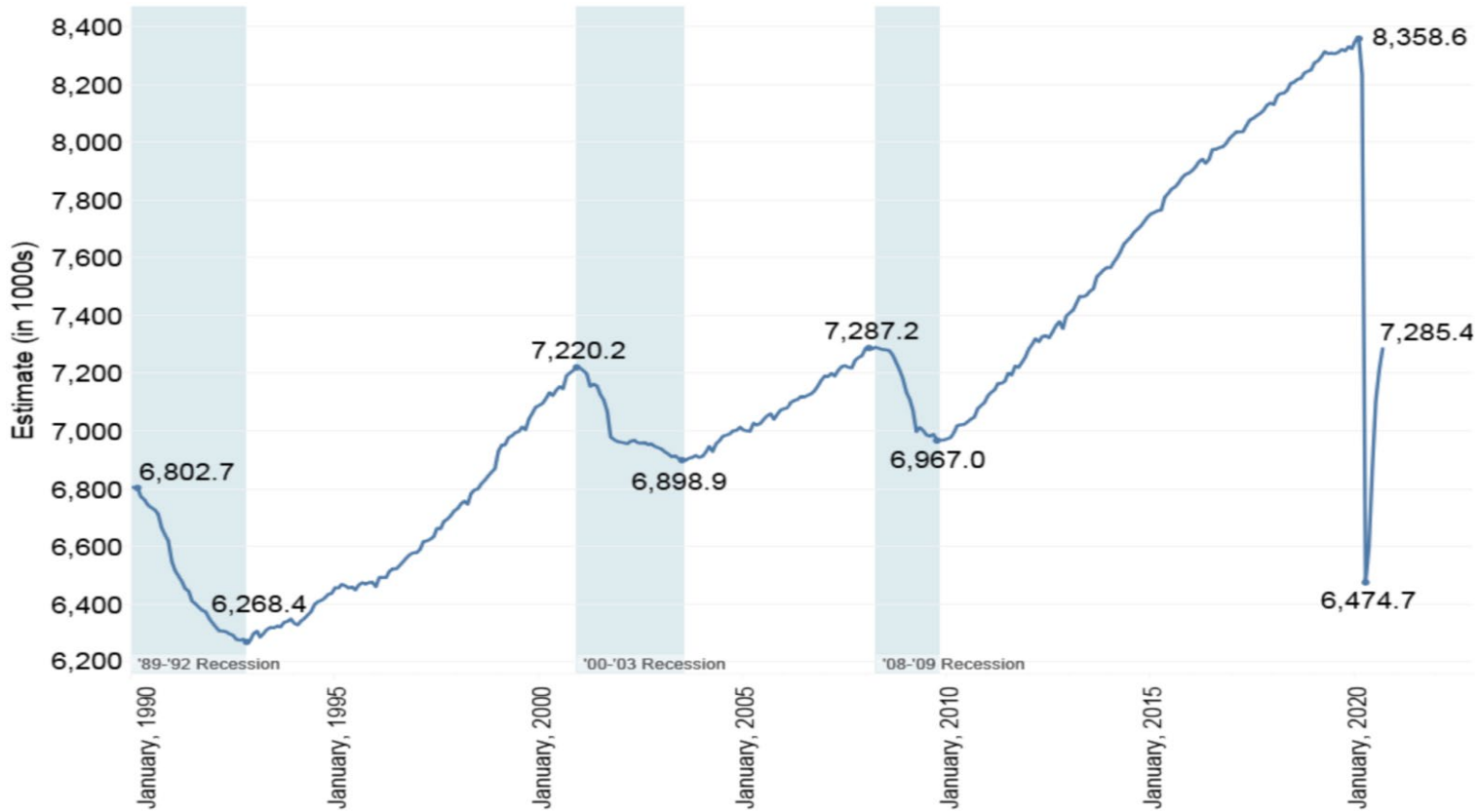


Table 2. Number of Nonfarm Jobs By Industry
New York State
(In Thousands, Not Seasonally Adjusted)

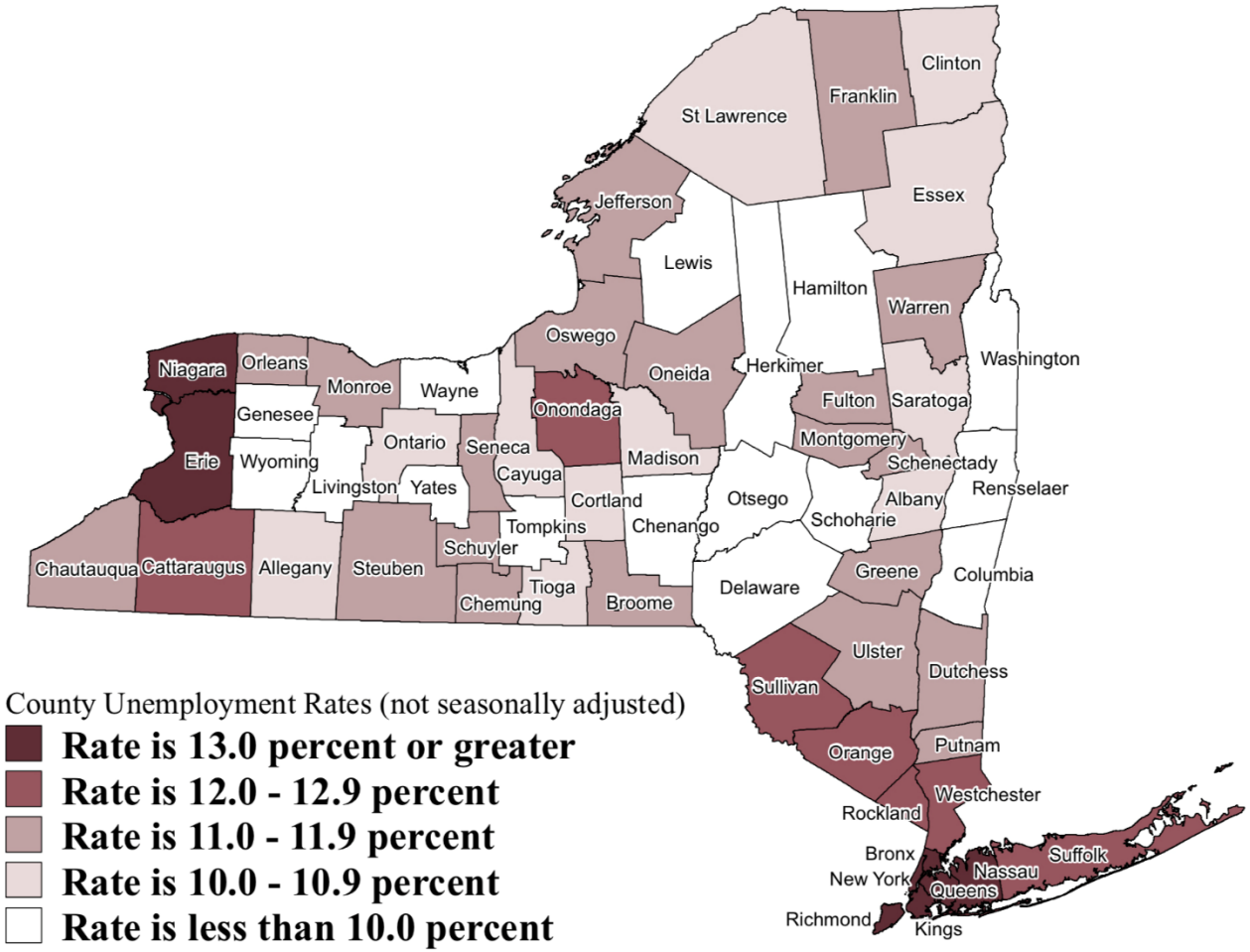
Industry	Septembe 2020	September 2019 (R)	Change to September 2020 from: September 2019 Net	%
Total Nonfarm	8,704.4	9,777.6	-1,073.2	-11.0%
Total Private	7,298.5	8,304.2	-1,005.7	-12.1%
Goods Producing	781.4	862.9	-81.5	-9.4%
Natural Resources & Mining	4.6	5.6	-1.0	-17.9%
Construction	380.5	418.7	-38.2	-9.1%
Manufacturing	396.3	438.6	-42.3	-9.6%
Durable Goods	231.6	253.5	-21.9	-8.6%
Non-Durable Goods	164.7	185.1	-20.4	-11.0%
Service-Providing	7,923.0	8,914.7	-991.7	-11.1%
Trade, Transportation, and Utilities	1,364.7	1,542.2	-177.5	-11.5%
Wholesale Trade	291.1	326.1	-35.0	-10.7%
Retail Trade	811.4	903.3	-91.9	-10.2%
Transportation, Warehousing, and Utilitie	262.2	312.8	-50.6	-16.2%
Information	266.5	279.5	-13.0	-4.7%
Financial Activities	691.7	727.1	-35.4	-4.9%
Professional and Business Services	1,229.9	1,378.3	-148.4	-10.8%
Education and Health Services	1,985.6	2,125.7	-140.1	-6.6%
Leisure and Hospitality	618.8	975.9	-357.1	-36.6%
Other Services	359.9	412.6	-52.7	-12.8%
Government	1,405.9	1,473.4	-67.5	-4.6%

Note: Data are subject to revision. R=Revised. Net and % changes based on rounded data.
Source: New York State Department of Labor, Division of Research and Statistics, 518-457-3800.

Table 1. Number of Nonfarm Jobs by Place of Work
New York State and Areas
(In Thousands, Not Seasonally Adjusted)

Area	Septembe 2020	September 2019 (R)	Change to September 2020 from: September 2019 Net	%
New York State	8,704.4	9,777.6	-1,073.2	-11.0%
Metropolitan Areas				
Albany-Schenectady-Troy Metro Area	431.4	471.4	-40.0	-8.5%
Binghamton Metro Area	96.7	103.1	-6.4	-6.2%
Buffalo-Niagara Falls Metro Area	517.8	566.6	-48.8	-8.6%
Dutchess-Putnam Metropolitan Division	134.6	147.5	-12.9	-8.7%
Elmira Metro Area	35.5	37.1	-1.6	-4.3%
Glens Falls Metro Area	50.2	55.6	-5.4	-9.7%
Ithaca Metro Area	61.1	63.4	-2.3	-3.6%
Kingston Metro Area	59.6	62.7	-3.1	-4.9%
Nassau-Suffolk Metropolitan Division	1,229.6	1,344.6	-115.0	-8.6%
New York City	4,032.0	4,652.3	-620.3	-13.3%
Orange-Rockland-Westchester	649.4	726.3	-76.9	-10.6%
Rochester Metro Area	483.9	539.5	-55.6	-10.3%
Syracuse Metro Area	289.3	322.2	-32.9	-10.2%
Utica-Rome Metro Area	117.4	127.2	-9.8	-7.7%
Watertown-Fort Drum Metro Area	37.9	41.6	-3.7	-8.9%

Unemployment Rates by County, New York State, June 2020



County Unemployment Rates (not seasonally adjusted)

- **Rate is 13.0 percent or greater**
- **Rate is 12.0 - 12.9 percent**
- **Rate is 11.0 - 11.9 percent**
- **Rate is 10.0 - 10.9 percent**
- **Rate is less than 10.0 percent**

Local Area Unemployment Rates* (%)
August 2019 and August 2020
(not seasonally adjusted)

	August 2020*	August 2019
Metro Areas	12.9	4.1
Albany-Schenectady-Troy	8.8	3.8
Binghamton	9.4	4.6
Buffalo-Niagara Falls	10.8	4.5
Dutchess-Putnam	9.4	3.8
Elmira	9.6	4.3
Glens Falls	8.2	3.6
Ithaca	7.2	4.0
Kingston	9.3	4.0
Nassau-Suffolk	10.5	3.9
New York City	16.3	4.2
Orange-Rockland-Westchester	10.8	4.1
Rochester	9.9	4.3
Syracuse	9.8	4.2
Utica-Rome	9.3	4.3
Watertown-Fort Drum	9.2	5.1
Non-metro counties	8.8	4.2

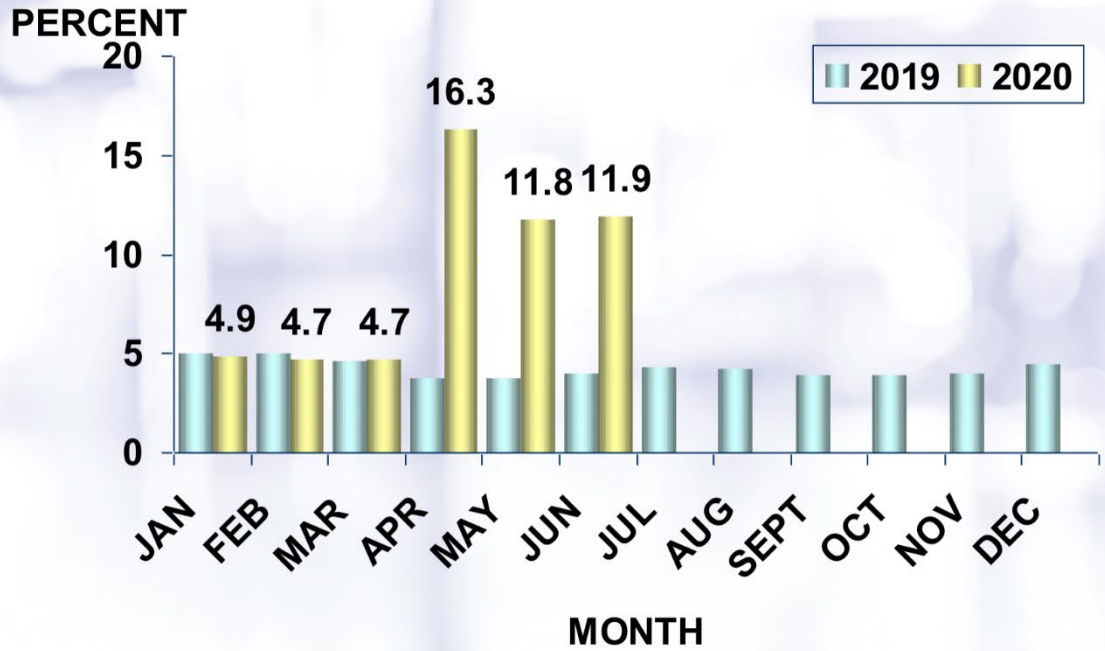
*Data are preliminary and subject to change.

*The Syracuse MSA includes Onondaga, Madison & Oswego counties.

Syracuse Metropolitan Statistical Area (MSA)

Syracuse MSA *

Unemployment Rates, 2019 - 2020



WE ARE YOUR DOL

* The Syracuse MSA includes Onondaga, Madison & Oswego counties.

Change in Total Nonfarm and Private Sector Jobs
August – September 2020

	Change in Total Nonfarm Jobs: (private sector + government)		Change in Private Sector Jobs:	
	Net	**%**	**Net**	**%**
United States	+661,000	+0.5	+877,000	+0.7
New York State	+109,300	+1.3	+75,300	+1.0

Unemployment Rates (%)*

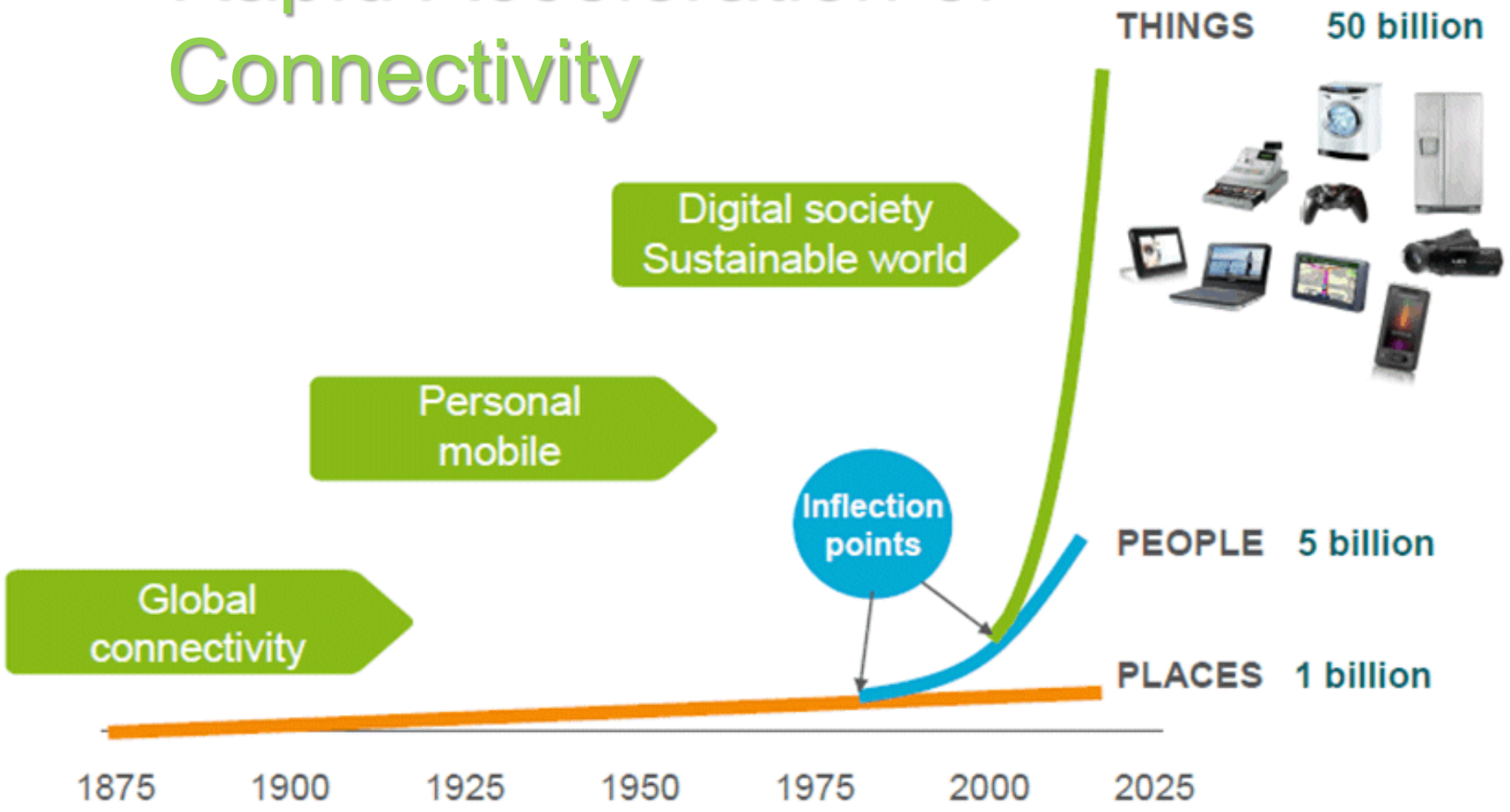
	September 2020*	August 2020	September 2019
United States	**7.9**	8.4	3.5
New York State	**9.7**	12.5	3.9
New York City	**14.1**	16.0	3.7
NYS, outside NYC	**6.5**	10.0**	4.1

*Data are preliminary and subject to change.
**Revised data.

The Future Exists Now -

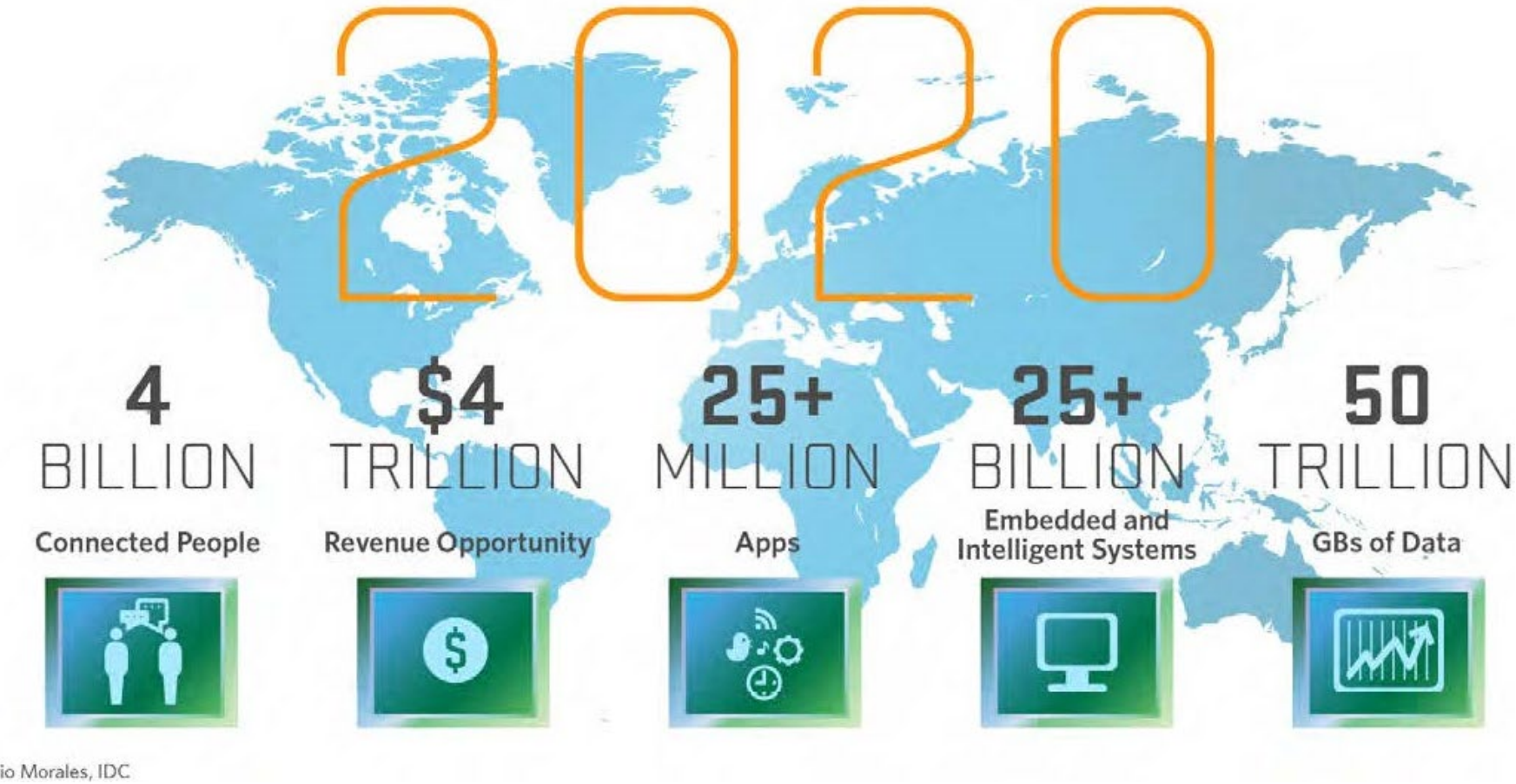
It’s Just Not Widely Distributed

Rapid Acceleration of Connectivity



Source: Ericsson AB, "Infrastructure Innovation - Can the Challenge be met?," Sept 2010

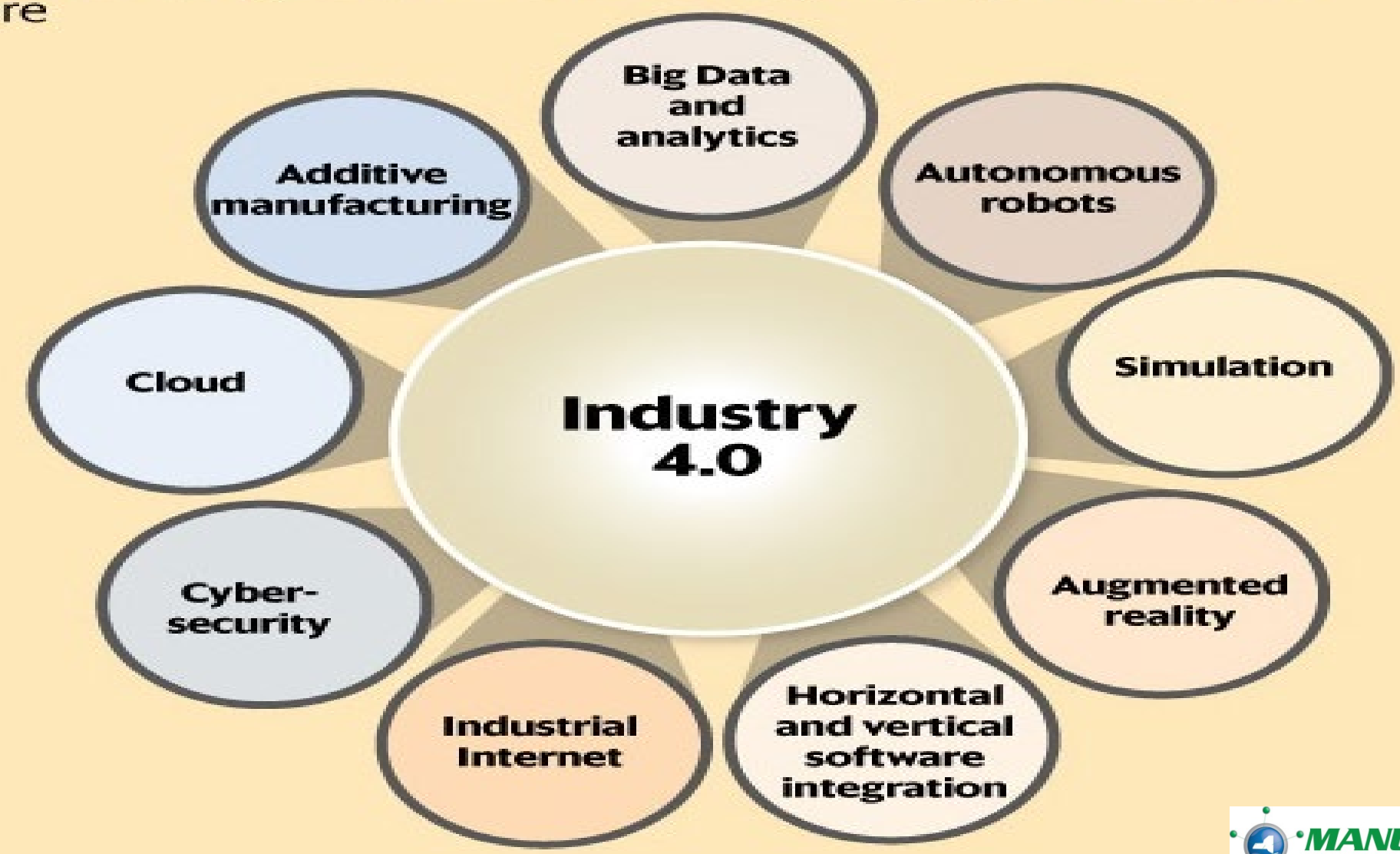
Internet of Things (IoT)



Source: Mario Morales, IDC

New-age production

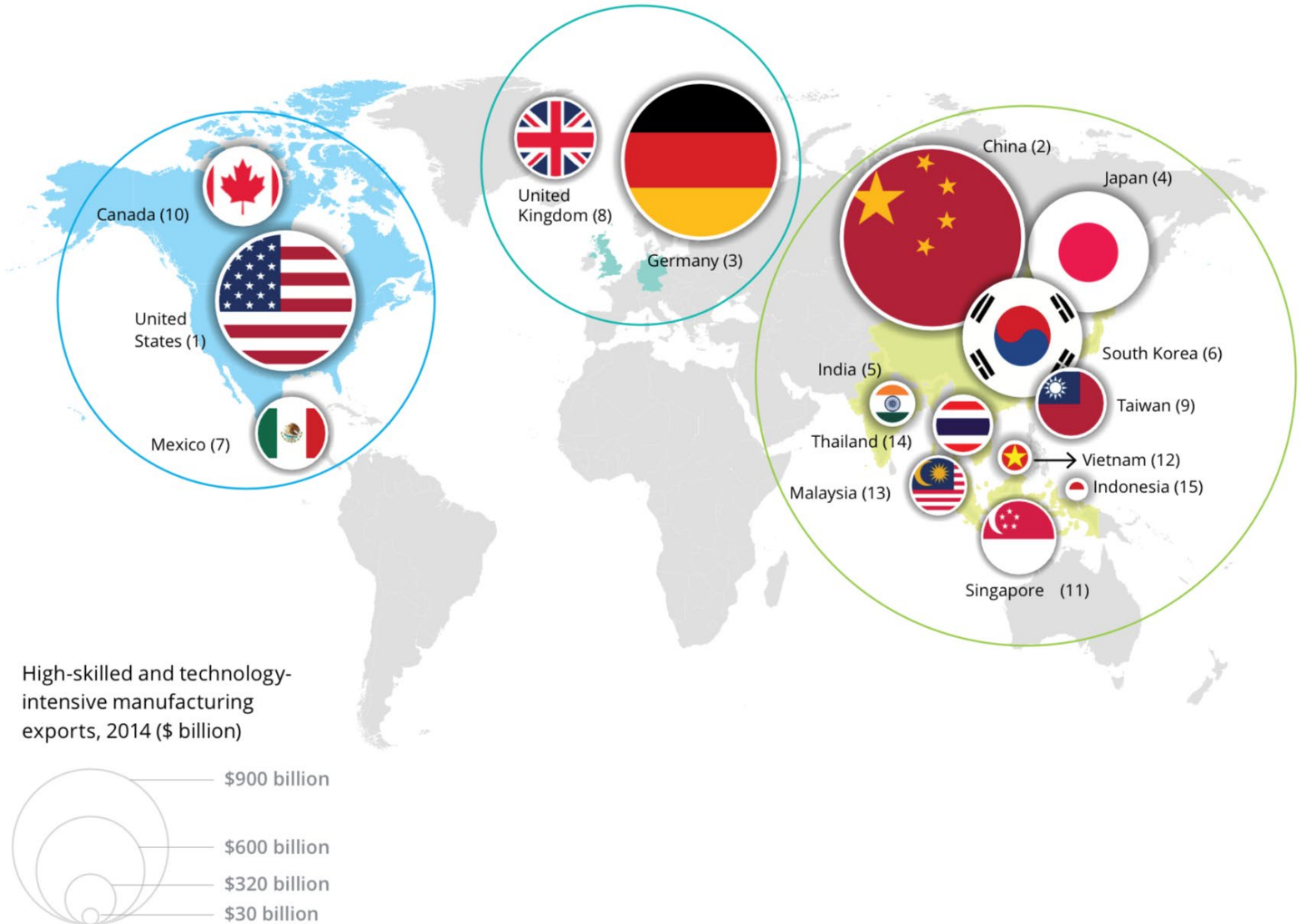
The nine technologies that will collectively drive production in the future



Top Ten Trends in Manufacturing

- Workforce is Tech Savy and Diverse
- Manufacturing as Service
- IoT Explosion and 5G Assimilation
- Cyber Security
- Industry-University Collaboration
- Supply Chain Leveraging and Blockchain
- AR and VR Growth
- Data Analytics, AI and Machine Learning
- Shifting Focus from B2B to B2B2C
- Reshoring and Increase in Made in USA

Figure 5. A look at the global manufacturing competitiveness landscape: Top 15 nations projected to be the most competitive in manufacturing by 2020



Note: Figures in parentheses represent the projected 2020 GMCI rank by CEOs

Source: Deloitte Touche Tohmatsu Limited and US Council on Competitiveness, *2016 Global Manufacturing Competitiveness Index*

Today!

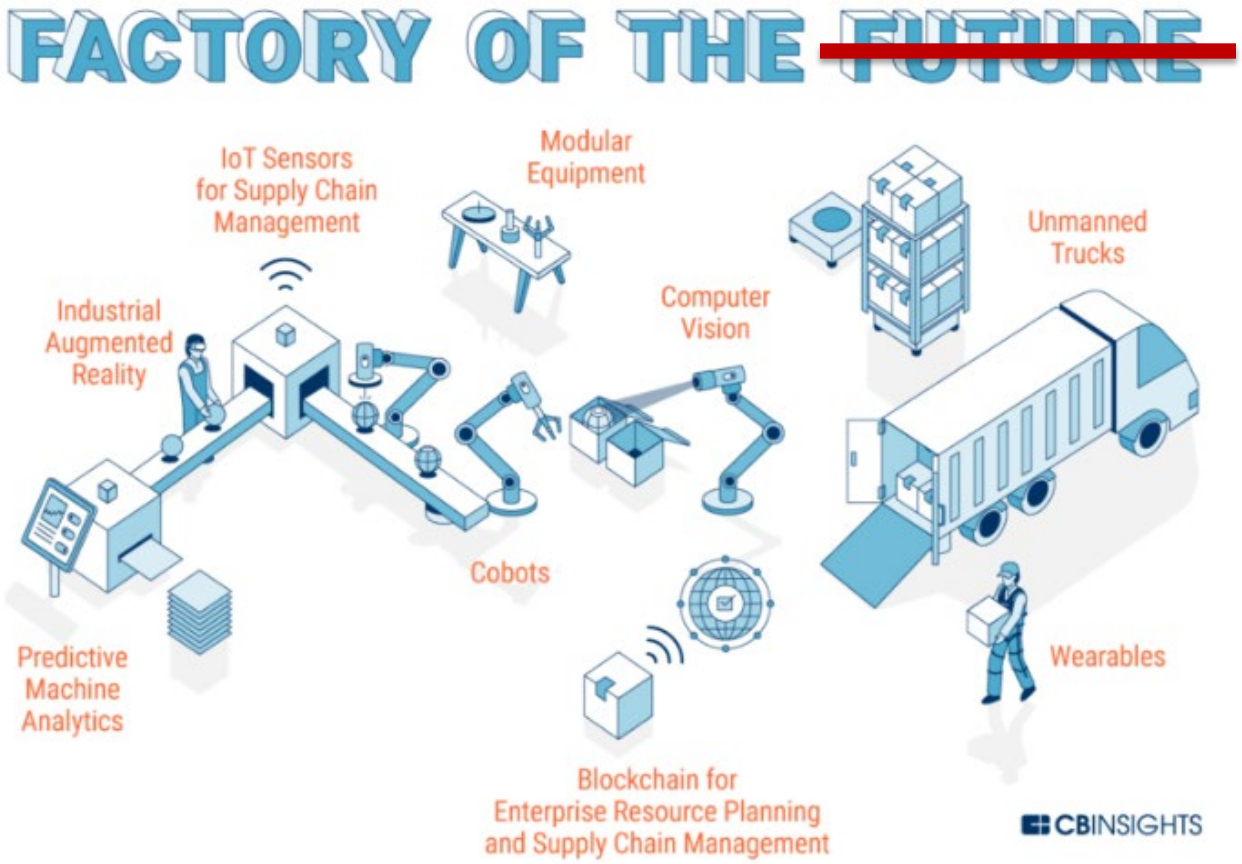
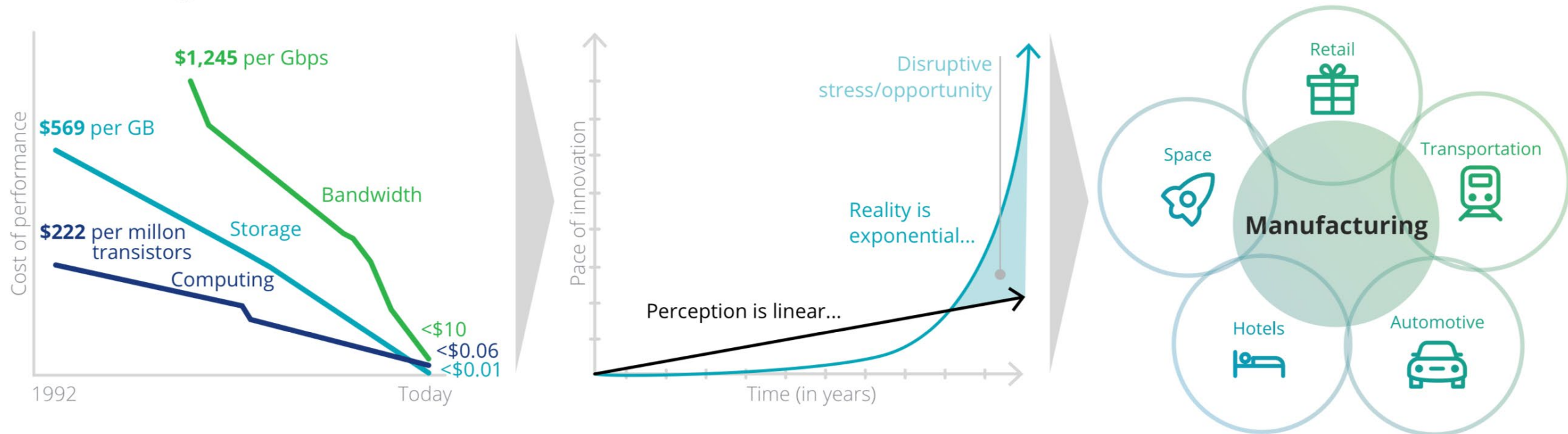

FACTORY OF THE FUTURE
IoT Sensors for Supply Chain Management
Modular Equipment
Unmanned Trucks
Industrial Augmented Reality
Computer Vision
Cobots
Predictive Machine Analytics
Blockchain for Enterprise Resource Planning and Supply Chain Management
Wearables
CBINSIGHTS

Figure 2. The pace of change is exponential, and manufacturers are not immune



Sources: Deloitte Insights, *The rise of the digital supply network: Industry 4.0 enables the digital transformation of supply chains*; Based on The Law of Accelerating Returns by Ray Kurzweil, *The Age of Spiritual Machines*

A persistent talent shortage is a major hurdle to the sustainability and growth of manufacturing companies. What are the reasons behind the shortage in manufacturing?

Increasing Baby Boomer retirements: 2.7 million Baby Boomers in the US manufacturing industry are expected to retire during 2015-2025.[8]

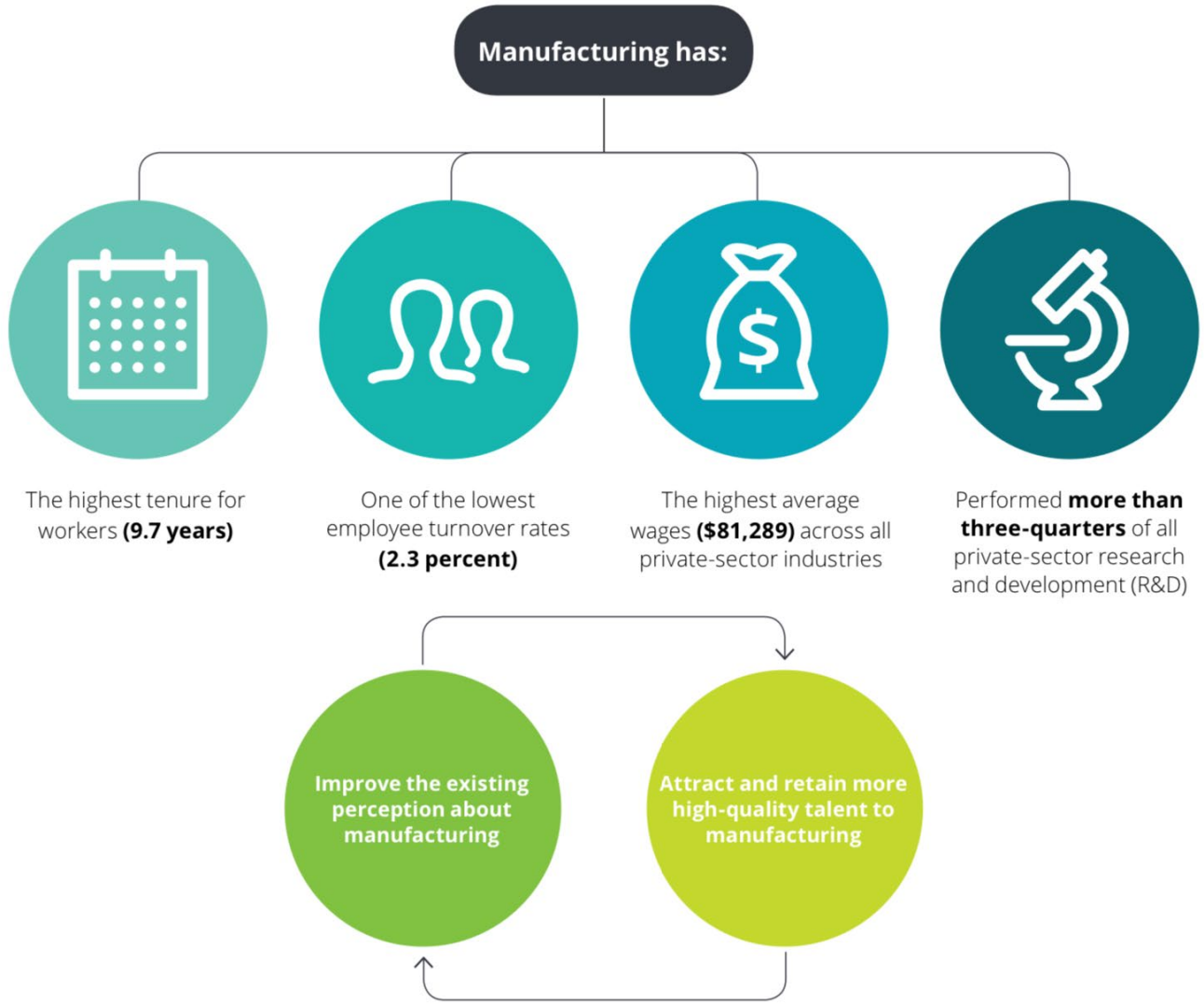
Shortage of qualified labor: People in skilled trades, technicians, and engineers are the most difficult to recruit in the United States.[9]

Changing skill sets needed for advanced manufacturing: Companies are increasingly looking at workers with STEM skills—software engineers, process engineers, automated systems engineers, and supply chain engineers are a few key manufacturing job roles with a future.[10]

Perceived attractiveness of manufacturing among public: While the US public believe manufacturing is vital to the economy and the standard of living, many Americans are reluctant to choose careers in manufacturing.[11]

Many opportunities exist to attract and retain the best and brightest in manufacturing, especially with the dawn of Industry 4.0. Interviewed executives say that highlighting the future skill set that manufacturing will require, training and/or mentoring through new forms of apprenticeship and training models, and tapping into a more tech-savvy workforce and culture will help the industry become a destination of choice for top talent.

Figure 12. Addressing the manufacturing skills gap: Sharing the good news to attract and retain top talent



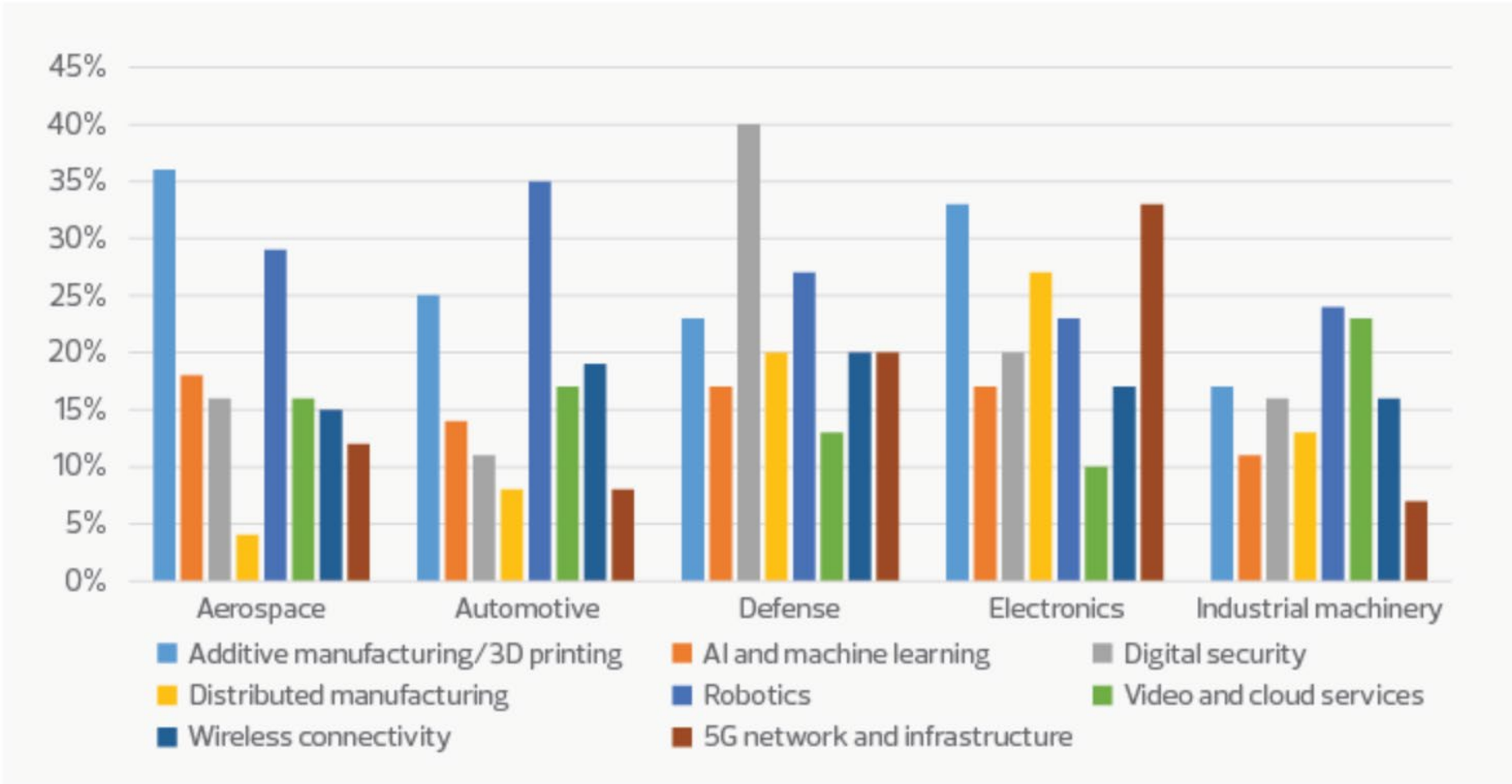
The virtuous cycle of improving the existing image and recruiting the best talent can help reshape the US manufacturing industry and better enable it to compete in these fast-paced, innovative, and transformative times.

Source: Deloitte and the Manufacturing Insitute, *A look ahead: How modern manufacturers can create positive perceptions with the US public*

Industry Leaders Are Investing In

- Customer Connectivity
- Supply Chain Reinvention
- Talent and Culture
- Digital Assimilation
- Big Data and Analytics
- Enterprise Protection

Investments that companies plan to make post-pandemic



Source: SME; RSM US LLP

107 Years of Service

WHAT IS MACNY DOING FOR YOU ?

- Events and Learning Networks
- Workforce Initiatives
- Member Services
- Advocacy & Issues Coalitions

www.macny.org

Every Job is Changing!

Our Pathways approach…

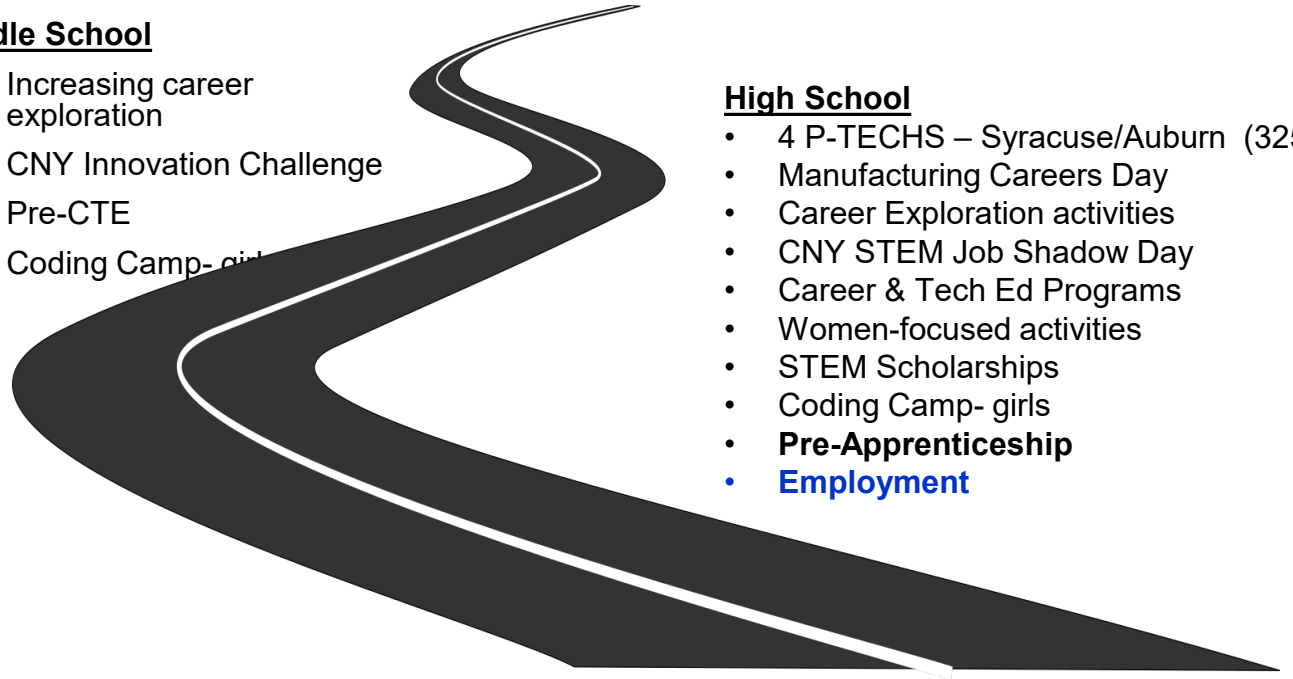
Middle School

» Increasing career exploration

» CNY Innovation Challenge

» Pre-CTE

» Coding Camp- girl



High School

- 4 P-TECHS – Syracuse/Auburn (325)
- Manufacturing Careers Day
- Career Exploration activities
- CNY STEM Job Shadow Day
- Career & Tech Ed Programs
- Women-focused activities
- STEM Scholarships
- Coding Camp- girls
- **Pre-Apprenticeship**
- **Employment**

Supports

- Annual Awards Program- June 12
- MACNY Newsletter/Website
- CNY STEM Hub/CNY Tech Sector
- Mentoring/Career Coaching at all levels

Post-secondary/Career

- STEM Scholars Connection
- Internships
- **Employment- JOB SIGNING DAY**
- Apprenticeships

107 Years of Service

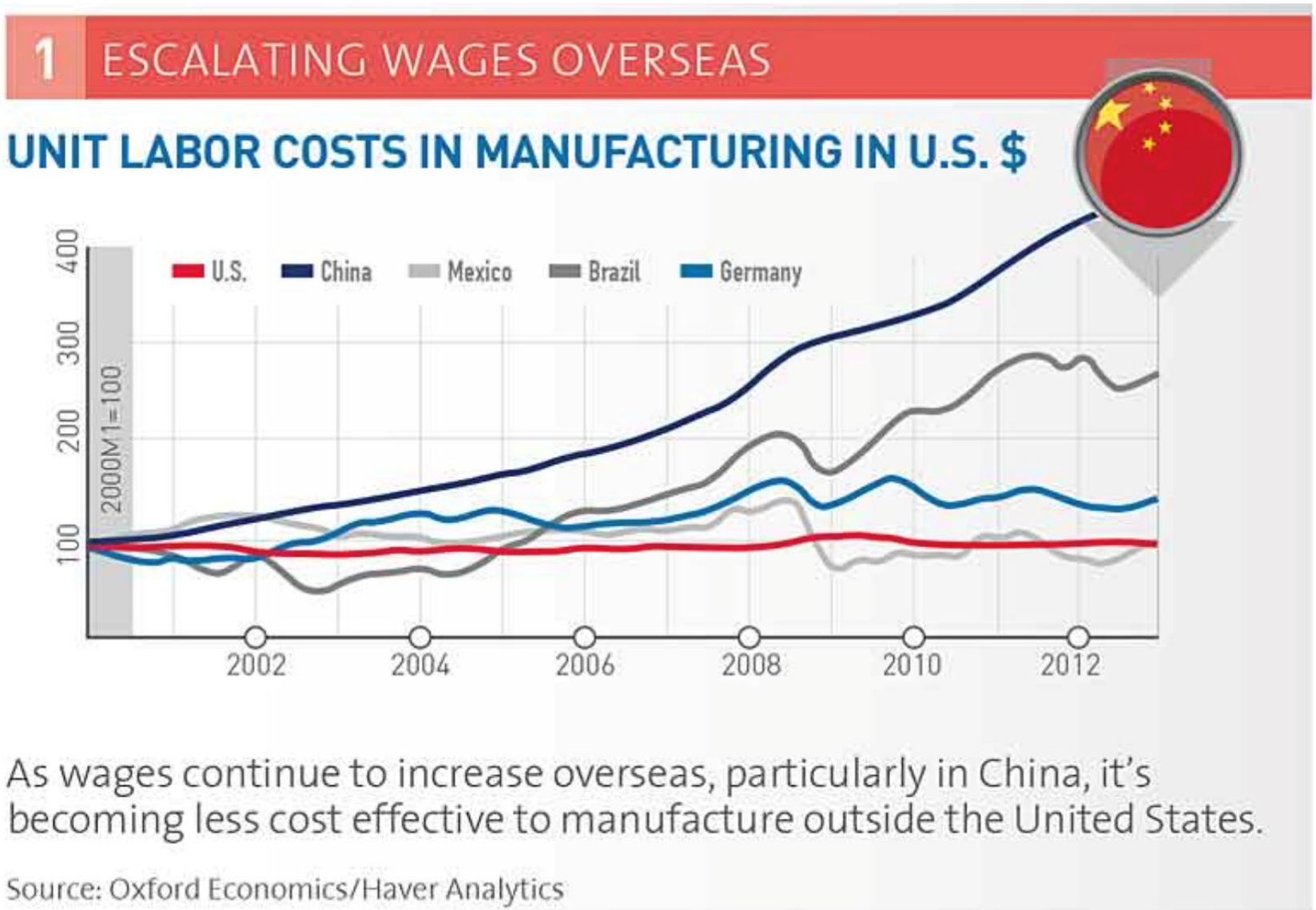
NEW INITIATIVES

- Individual Learning & Memberships
- Leader Learning & Services
- Digital Content Creation & Delivery
- Workforce Solutions & Partnerships
- Apprenticeships & Pre-Apprenticeships
- Statewide Advocacy & Service Networks


Reshoring Initiative
Bringing Manufacturing Back Home

The Case for Reshoring

It’s time to bring more quality manufacturing jobs back to the U.S.



The Case for Reshoring

It’s time to bring more quality manufacturing jobs back to the U.S.

107 Years of Service

THANK YOU

www.macny.org

107 Years of Service

www.macny.org

MANUFACTURERS ALLIANCE of New York