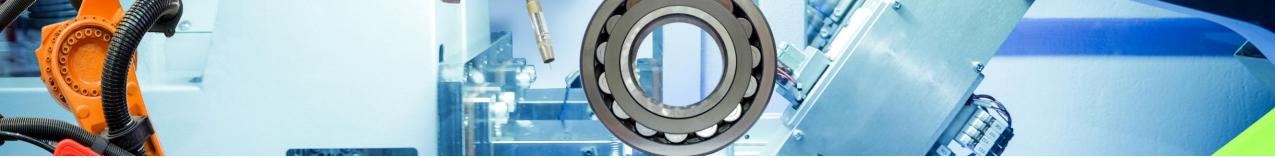


# Capitalizing On Industry 4.0

The Market Opportunities In Today's Manufacturing Sector

ABI research for visionaries

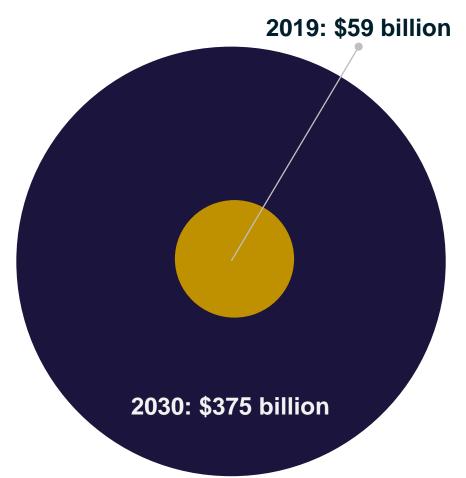


#### **Capitalizing On Industry 4.0**

The Industrial & Manufacturing sector is in the midst of a digital revolution. Companies are investing in technologies like the Industrial Internet of Things (IIoT), artificial intelligence, augmented reality, data management, generative design, location and asset management, machine vision, and other cuttingedge tools and platforms.

While this is a transformative shift for companies within the space, it also represents a huge opportunity for technology companies as well. That's because investments are set to skyrocket. In fact, ABI Research forecasts that the market will grow from US\$59 billion in 2019 to US\$375 billion in 2030 (excluding hardware revenues). Including hardware revenues, that figure jumps to US\$1.046 trillion – up from US\$310 billion in 2019.

This report breaks down the major revenue opportunities throughout the digital factory of the future over the next decade.



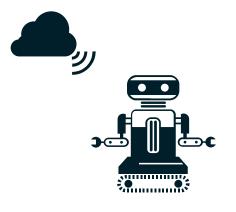


#### **The Road To Industry 4.0**









## **Industry 1.0** 1700s

Manual labor began being replaced by the steam engine.

## **Industry 2.0** 1800s

The electrification of factories substantially increased the productivity per square foot when production line logic superseded drive-shaft logic.

#### **Industry 3.0** 1990s

Programmable Logic Controllers (PLCs) began appearing on the factory floor, and were widely assimilated by auto manufacturers, as they significantly reduced the time and cost of control, sequencing, and safety interlock logic. This gave rise to the use of automation, robots and Human-Machine Interface (HMI) in industrial processes.

## Industry 4.0 Present

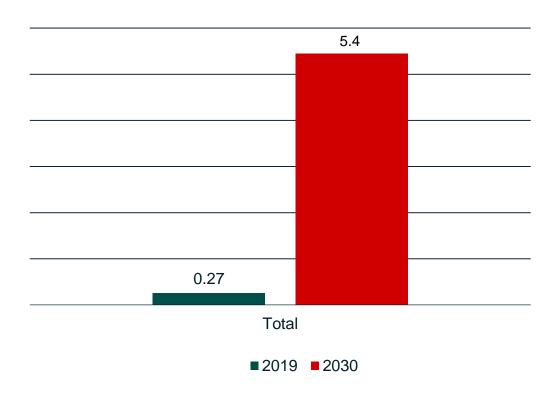
The Industrial Internet of Things (IIoT), big data, and cloud technology allow for more intelligent, digitized production.



#### **More Connections = More Revenue Opportunity**

Industry 4.0 is creating millions of new end points that will need to be interconnected. However, the existing infrastructure can't support it, creating an opportunity for connectivity experts and providers to step in.

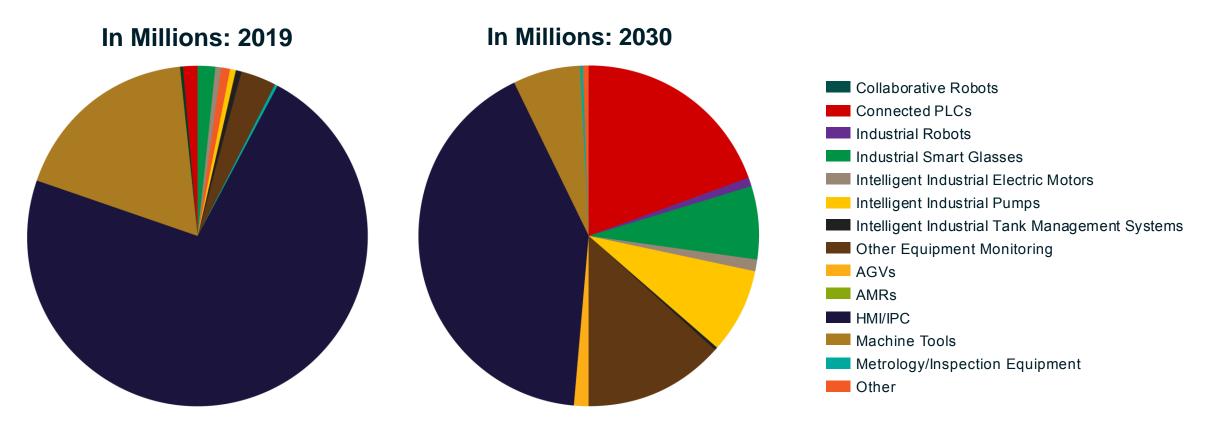
#### Connections In Billions





#### **Connections By Application**

(Without Asset Tracking)

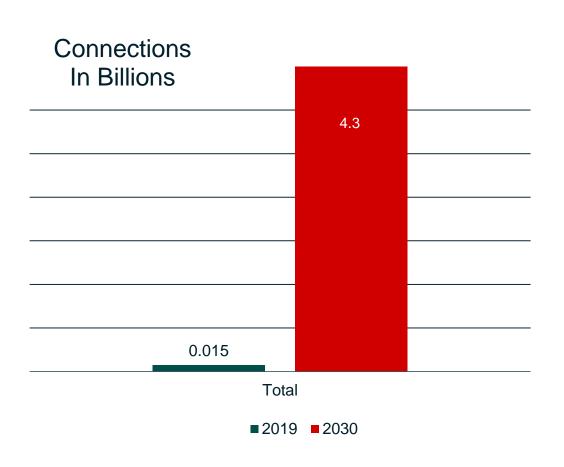


The application environment needs to evolve in order to accommodate the demands of Industry 4.0. That's why no-code and low-code companies are being acquired at a record pace.

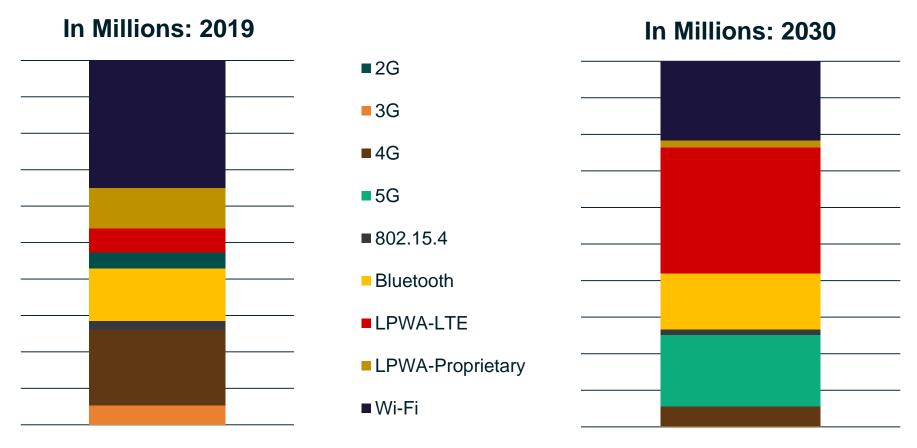


#### **The Acceleration of Asset Tracking**

Industry 4.0 is creating millions of new end points which will need to be interconnected. However, the existing infrastructure can't support it, creating an opportunity for connectivity experts and providers to step in.



#### **Connections By Technology**

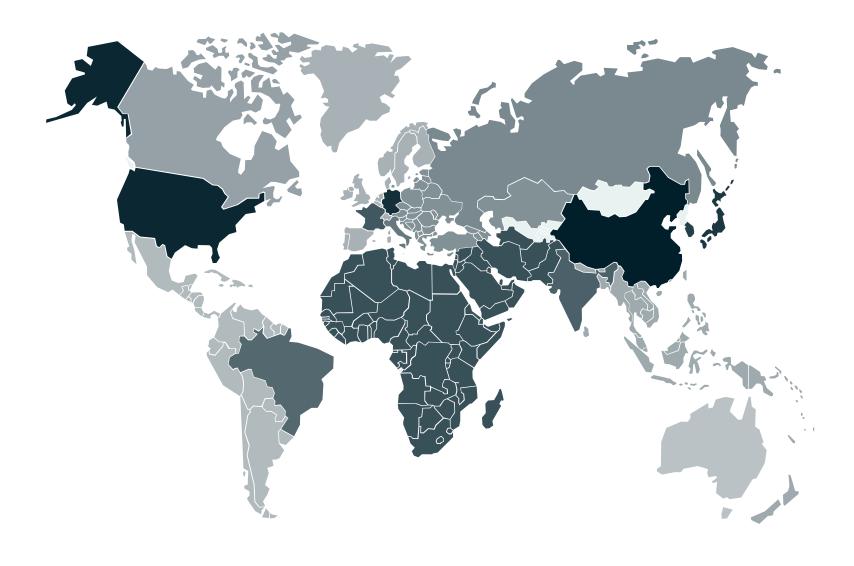


By 2024, most digital factory connections will be wireless. This is driven by the rise in newly connected endpoints, including sensors, mobile assets for asset tracking, condition-based monitoring and predictive maintenance applications, autonomous mobile robots (AMRs), etc.

## Revenues By Country (Hardware Not Included)

In \$Billions: 2030

China	88.7	
United States	81.9	
Japan	28.8	
Germany	28.8	
South Korea	22.0	
Middle East & Africa	19.5	
Brazil	15.6	
Rest of Asia Pacific	14.1	
France	10.9	
India	10.5	
United Kingdom	9.4	
Italy	8.8	
Rest of Eastern Europe	8.6	
Rest of Latin America	8.1	
Russia	7.4	
Rest of Western Europe	5.3	
Canada	5.2	
Australia	3.1	



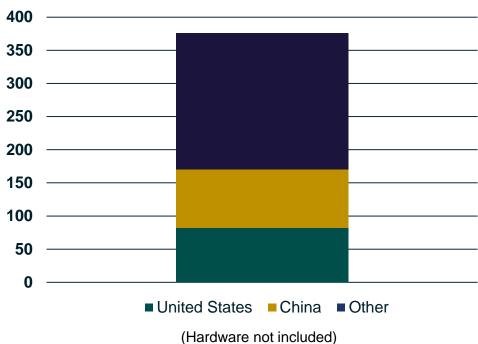


#### **Revenues By Country**

(Hardware Not Included)

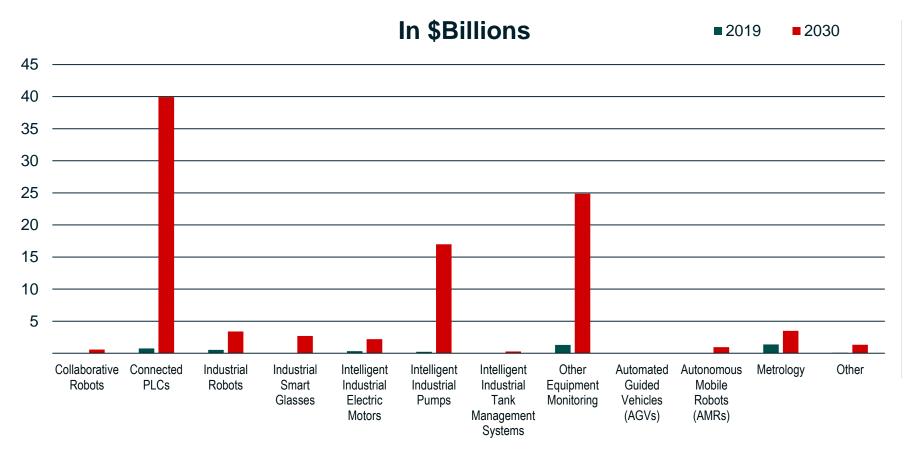
Though Industry 4.0 is a global phenomenon, roughly half of global revenue opportunities will be concentrated in China and the United States.

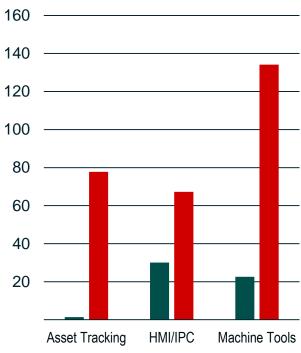






#### **Non-Hardware Revenues by Application**

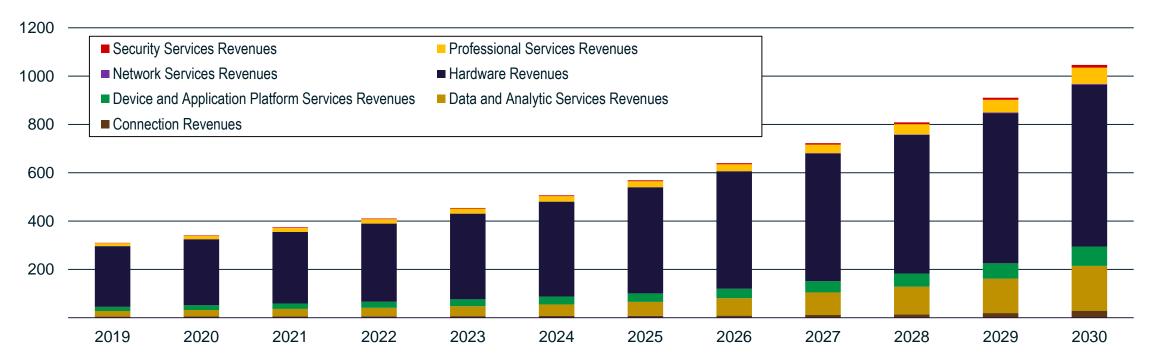






#### **Revenues By Type**

#### In \$Billions



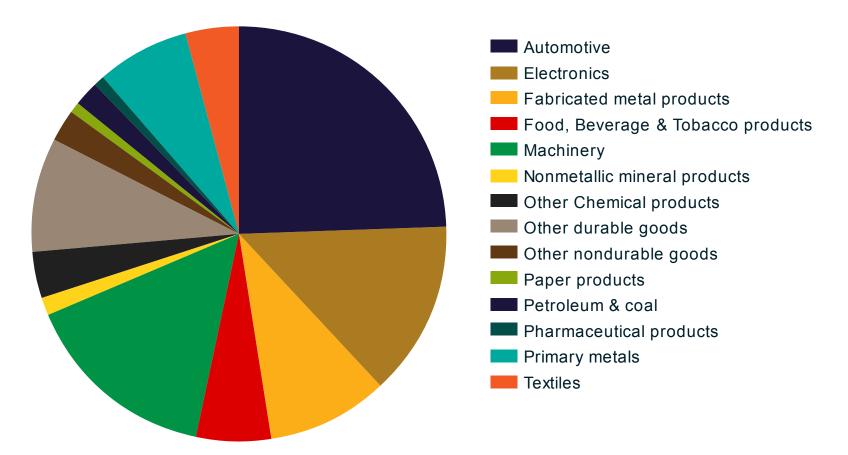
As the amount of custom code required to deploy new solutions on factory floors drops, data and analytic service revenue growth in smart manufacturing will accelerate to reach a global total of US\$185 billion in 2030.



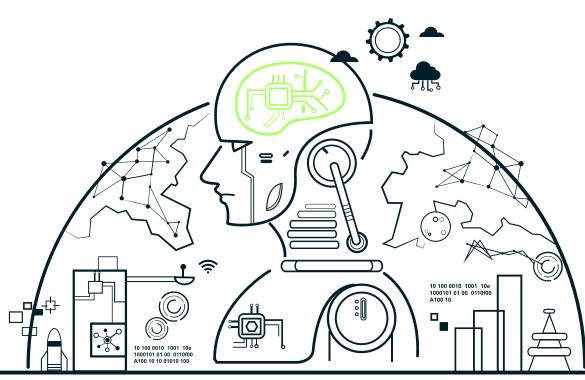
#### **Revenue Breakdown By Industry: 2030**

The leading industries overall include automotive, food, beverage, and tobacco products, and electronics.

The U.S. leads the way in most industries, while China leads in machinery, nonmetallic mineral products, primary metals, and textiles.







#### **Spotlight On: Artificial Intelligence**

Manufacturers are embracing new technologies, such as generative design, additive manufacturing, virtualization, visualization and simulation.

Most, if not all, of these technologies feature AI solutions.

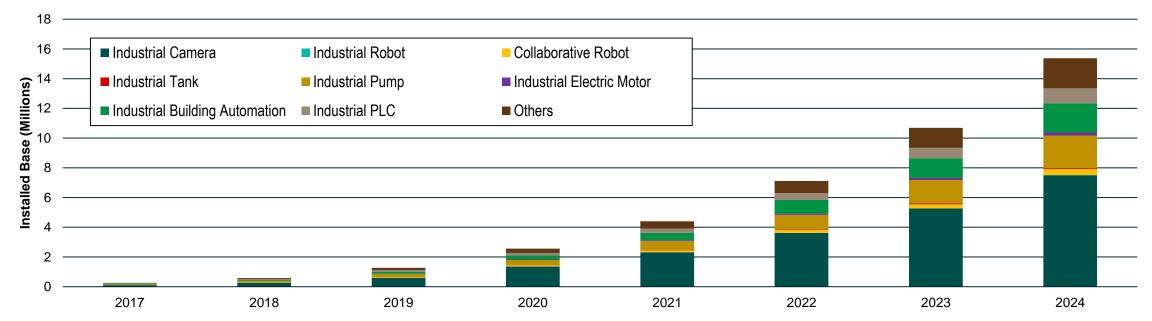
By leveraging support from various vendors, including industrial cloud vendors, pure-play AI vendors, third-party system integrators and connectivity providers, manufacturers will be able to focus on developing operational AI that provides valuable insights to product development, inventory development and daily production.

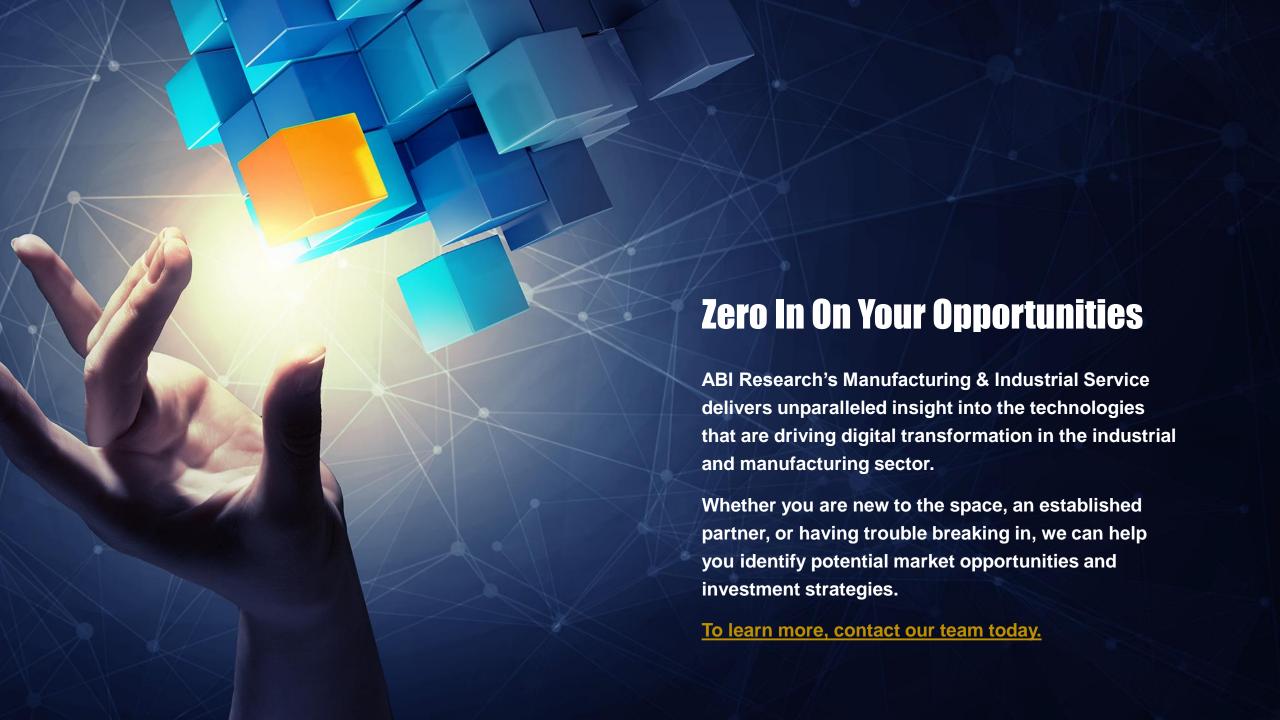


#### **Artificial Intelligence In Industrial Applications**

• Overall, ABI Research estimates the CAGR of total shipments to be 50.7% from 2019 to 2024, growing to over 15 million. The most popular use case is predictive maintenance, followed by equipment monitoring and defect inspection.

#### Installed Base of Al-Enabled Edge Systems in Industrial Manufacturing





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