

# Leading The Digital Revolution

A digital revolution is transforming today's factories. By merging cloud computing with real-time data and advanced analytics, manufacturing is making a historic leap forward through digitalization.



The **amount of data** that will exist by 2020 — nearly as many digital bits as there are stars in the universe.<sup>1</sup>



The **number of things** that will be interconnected through the Internet of Things by 2020.<sup>2</sup>



The **percentage of the world's economy** that experts predict will be digital — from big data to new technologies and systems — by 2020.<sup>3</sup>

Similar to past innovations of steam, electricity and computing, digitalization is a game-changer for manufacturing.





Industrial companies that believe the ability to analyze data will be decisive to their business model in five years.<sup>4</sup>

**Percentage of industrial companies** that will have implemented digitalization solutions in all important business divisions by 2019.<sup>5</sup>

#### Digitalization

creates substantial productivity increases for manufacturers across the entire value chain, from design and engineering to sales, production and service.



The **increase in efficiency** that industrial companies anticipate over the next five years due to digitalization.<sup>6</sup>



The **additional revenue** per year that industrial companies expect due to digitalization and interconnection of products and services.<sup>7</sup>

Like past industrial revolutions, factories of the future will look and work differently from today's manufacturing plants.



**Percentage of today's machines** that manufacturing executives say will need upgrading or replacement due to digitalization.<sup>8</sup>



Despite the inevitable evolution, less than half of manufacturing leaders consider themselves ready for digitalization.<sup>9</sup>

To make digitalization practical for manufacturers, Siemens developed the

#### Digital Enterprise Software Suite –

a comprehensive portfolio of software-based systems.

### 15 years

Siemens has been developing the Digital Enterprise Software Suite for 15 years to address digitalization for manufacturing.

## 17,500 engineers

Siemens has over **17,500 software engineers** dedicated to digitalization.

#### 280,000 devices

From skyscrapers and gas turbines to the traffic control centers of 255 cities, Siemens already has more than **280,000 devices linked to the Internet of Things** via secure connections.

### 30% reduction

Totally Integrated Automation Portal, part of the Digital Enterprise Software Suite, **reduces engineering costs** by up to 30%.









#### 50% reduction

Product Lifecycle Management software and automation, also part of the Digital Enterprise Software Suite, **reduce time to market** by up to 50%.

#### 0.0012% defect rate

At Siemens' Digital Factory in Amberg, Germany, digitalization has already led to the **lowest possible defect rate** — 0.0012% — and is still declining.

To find out what digitalization solutions from Siemens can do for your company, learn more about the Digital Enterprise Software Suite.

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#### References:

1 EMC, IDC, "The Digital Universe of Opportunities: Rich Data and the Increasing Value of the Internet of Things," April 2014 2 Gartner, "Gartner Says By 2020, a Quarter Billion Connected Vehicles Will Enable New In-Vehicle Services and Automated Driving Capabilities," January 26, 2015 3 Accenture, "Accenture Technology Vision 2016: Executive Summary," January 2016 4 PricewaterhouseCoopers, "Industry 4.0 – Opportunities and Challenges of the Industrial Internet," December 2014 5 Ibid. 6 Ibid. 7 Ibid. 8 McKinsey & Company, "Manufacturing's Next Act," June 2015 9 Ibid.





