HPE and GE Digital: Teaming up to transform industry

Hewlett Packard Enterprise

GE Digital

Digital technology and Industrial Internet of Things (IIoT) bring big wins
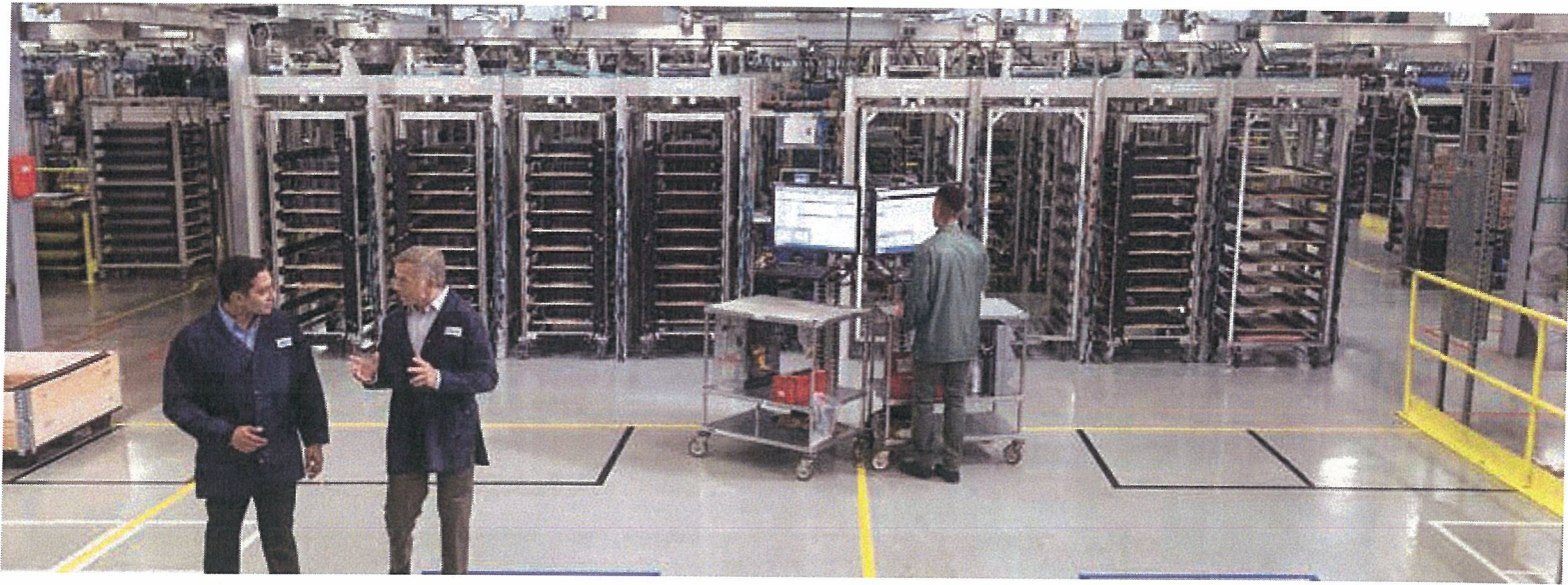
Revolutionizing industry by engineering together

- GE Digital manages more than $1 trillion in assets for the world's leading aviation, healthcare, transportation, power and water, and oil and gas companies.

- Together, HPE and GE Digital are transforming these industries by delivering cloud, core-to-edge computing, Industrial IoT sensor technology, and advanced analytics.

- The results include increased productivity, reduced cost, risk mitigation, and faster time to market.

- By integrating disparate systems and digitizing operations, HPE and GE Digital solutions for industry typically reduce:

  - Downtime by 10–15%

  - Labor costs by 14%

  - Inventory by 30%

  - Lead time by 60%

Incredible things can happen when pioneers partner and innovate. HPE and GE Digital are revolutionizing the way industrial companies operate and run their business, with solutions that tap into the wealth of invaluable data and intelligence that is transforming industry.

Across manufacturing, energy, rail, and aerospace industries, companies are boosting productivity, cutting costs, improving safety, and reducing risk with IIoT and analytics that are driving business outcomes and revolutionizing how humans and machines work together. The advent of digital technology, especially in industry, is driving huge changes. The ability to digitize everything provides information that can dramatically increase productivity across industries.

The power and the insights with the Industrial Internet come from the wealth of intelligence from edge assets and data across the enterprise. To help drive this industrial revolution, HPE and GE Digital are teaming up to bridge the worlds of information technology (IT—an HPE expertise) and operational technology (OT—a GE Digital expertise) to maximize insights for industry. GE Digital has developed a comprehensive and secure platform for the Industrial Internet of Things called Predix, to build, test, deploy, and operate industrial applications at scale. HPE enables Predix customers to meet their IT needs with networking and compute platforms to ingest and analyze data at the edge, on-premise, and in the cloud.

The path to digitizing industry is simple, but powerful. Manufacturers are putting more sensors on machines than ever before. When you pull data off those machines, you can drive productivity in every part of the industrial value chain.

The Internet of Things (IoT) is projected to include 26 billion devices at the "edge" of traditional networks by 2020. Those devices generate enormous volumes of data, which presents a unique business opportunity around the rapid extraction of insights.[1]

Imagine a world where nothing ever breaks

Industries such as aerospace are already deriving huge benefits from digital transformation. Sensor data from a typical passenger flight can exceed 1 TB. That's a huge volume, variance, and velocity of data to collect, cleanse, aggregate, and analyze. Real-time sensor technology can pinpoint critical issues, such as when a jet engine blade needs replacement. Once an issue is identified, a maintenance crew is immediately notified, and the issue can be resolved without incident.

HPE computing power, Industrial IoT solutions, and automation play a big role in aviation. In a lot of cases the sensors may already be present, but a person has to physically take the results, pull them off in real-time (not possible), and communicate a request for action. Through technology, we can now automate and speed up this process, while eliminating the need for human intervention.

Industrial IoT can have benefits across many industries. Can a machine get better fuel efficiency? Can the machine generate more electricity? Can we eliminate unscheduled downtime? These are the groundbreaking changes we will see.

Building a Predix-powered world

Predix, the world's first Industrial Internet platform, is reshaping the companies that shape our world by connecting data, intelligence, and people. Predix harnesses sophisticated analytical techniques including digital twin technology to optimize assets and operations and reveal new business opportunities. It's designed from the bottom up to tackle the unique challenges of industrial computing, supporting deployments from the edge to the cloud with built-in security and governance. All this is supported by a software ecosystem that makes building and using applications faster, shortening the time to value. To help our customers gain the most from their Predix environments, HPE has developed connectivity, compute, IT security and services offerings. By working together, GE Digital and HPE empower customers to aggregate and interpret their data, and create actionable insights.

14%
cut in labor costs[2]

60%
reduction in lead time[3]

For example, a trucking manufacturer that needs to produce a "smarter" digitized hauling truck can use a Predix service that includes 53 detailed inputs from sensors, while collecting and processing data and developing important operational correlations. A separate micro-service and analytic offered by Predix tells the manufacturer how and when to do maintenance to keep the hauling truck running properly. Industrial IoT allows businesses to do all this in real-time, by placing sensors on the truck, grabbing data, wirelessly transmitting it, and comparing it to environmental and historical data to make faster and better decisions.

An ideal partnership of industry leaders

In early 2015, GE decided to bring together all its digital capabilities and IT functions—which resided in several areas across the business units—and place them under one software division called GE Digital. In creating GE Digital, they became one of the world's top 20 software vendors, a $5 billion business.

HPE and GE have worked together for more than 20 years, serving many of the same leading industrial customers. Their partnership has grown in significance and importance with the emergence of GE Digital and Predix. Now, the combined core-to-edge technology of HPE Mobile First Networks, HPE Edgeline Converged Edge Systems, and the HPE Hybrid Cloud provide additional flexibility for GE Digital's Predix, enabling deployment across the full spectrum of asset, device, and data types.

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