

# DIGITALTRANSFORMATION IN THE MANUFACTURING INDUSTRY

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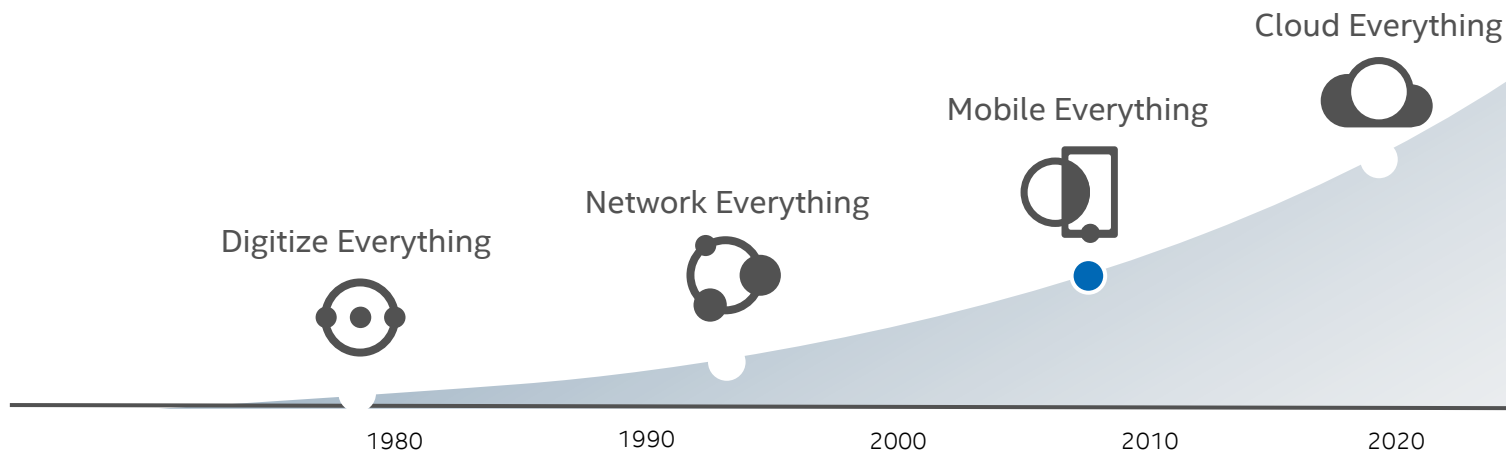
**intel**<sup>®</sup>

# Powering the Era of Distributed Intelligence

“More and more, every aspect of humanity is coming online and coming to the **digital foundation** that we uniquely build and deliver.

- Pat Gelsinger, Intel CEO

”



100B

Intelligent  
Connected  
Devices



Distributed  
Intelligence

Compute

$10^{18}$   
 $10^{15}$   
 $10^9$   
 $10^4$   
 $10^2$

# Manufacturing Industry Transformation Drivers

**Market Factors**



**The Human Element**



**Increased Security Risk**



**Disruptions**





# AI / Defect Detection

## Business problem:

With increased customization in production experienced today, existing QA is not sufficiently accurate, leading to high rework and scrap costs, downtime and customer complaints.

## Products and Partners:

- Relimetrics software
- Intel® Xeon® processors and components
- SAP MES system

## Solution blueprint

- Intel® Architecture and components,
- Relimetrics solution runs AI-based video analytics

## Business advantages

- Maximized operational efficiency
- Reduced rework, scrap, and labor costs and production downtime
- Customers are self-sufficient



# Manufacturing as a Service

## Gain Control of Your Supply Chain

With the recent pandemic, trade restriction and sourcing concerns, supply chains are top of mind. Many manufacturers are looking for ways to improve supply-chain management through better efficiency, agility and security that can:

- Accelerate and optimize the end-to-end procure-to-pay process
- Mitigate supply chain risks
- Improve decision making with up-to-date information

Run SAP HANA® offered as-a-service powered by HPE GreenLake to streamline and optimize supply-chain management processes within your enterprise.



# Manufacturing as a Service

## Power Your Plant's Operations

Boost agility and efficiency with SAP HANA offered as-a-service powered by HPE GreenLake

Siloed systems impede the communication and collaboration that are so important for effective plant operations. Remove these barriers, and bridge operational technologies (OT) in the factory with the IT systems in your enterprise for better data governance, improved access to data insights, and higher confidence in dealing with regulatory compliance.

Unify with a cross-enterprise , edge-to-cloud data- and app-management solution like SAP HANA® as a service powered by HPE GreenLake, and bring the cloud to the source of data and control.





# HPE Infrastructure for SAP HANA as a service with HPE Greenlake

## Database tier

To power the database tier **HPE Superdome Flex 280** and **HPE Superdome Flex** feature a unique modular architecture that equips environments of all sizes. The reliable **HPE ProLiant DL560** is also an option



## App tier

To power the SAP application tier and small databases in VMware® environments, and to equip service providers for SAP HANA offerings, customers can choose from **HPE ProLiant DL360 or DL380**, **HPE Superdome Flex 280**, and **HPE Synergy 480**



## Storage

To ensure your persistent data is always on and always available—use HPE Storage. **HPE Primera has a 100% availability guarantee**, and **HPE Nimble Storage has a measured 6'9s of uptime**





# Customer success story – Danfoss



“We need to drive granular as well as high-level insight into our customers’ needs. If it’s time to design a new circuit board, we need to know about it—and we need to know today, often before anyone else has even thought about it.”

—Sune Baastrup, SVP and CIO, Danfoss

## The Challenge:

To align its global operations and speed time-to-market with an infrastructure that meets the highest standards for transparency, scalability, security, and cost-efficiency.

## The Solution:

- For its ERP initiative, the company implemented SAP S/4HANA in a Greenfield environment.
- Danfoss runs the platform on four HPE ConvergedSystem 900 for SAP HANA appliances, with SAP applications running on HPE Synergy servers.
- Danfoss is wrapping its HANA architecture in a pay-per-use model using HPE GreenLake Flex Capacity, a service approach that tightly couples the company’s IT consumption with its IT spend.
- For its engineering platform, Danfoss selected HPE Integrity Superdome servers. The platform equips its engineering teams with in-memory computing to supercharge their modelling and simulation capabilities.



# Intel-based HPE product portfolio with SAP can help you get:



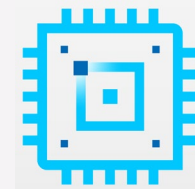
Better Total Cost  
of Ownership



More Value from  
the Cloud



Simplified Business  
Transformation



Trusted Reliability  
and Predictability  
of Performance





intel®

# SAP HANA

## Realize the Promise of in-memory computing with Intel Optane Persistent Memory and Intel Xeon Scalable processors

### The Intel® Advantage

- First to deliver near-DRAM performance with persistency – optimized using Intel's App Direct Mode
- Manage larger data sizes in memory effectively
- Provide instant data access at system re-starts
- Run existing applications unchanged in the cloud or on SAP HANA 2.3+

Persistent Memory  
non-volatile data

Higher Capacity  
than DRAM

Data Security  
Hardware enhanced  
security features



Performance  
Near real-time  
insights

Data Reliability  
faster re-starts

Transforming  
the data storage  
hierarchy

### Benefits

Process more data in real-time, at a lower TCO, with improved business continuity

**17x**

Improvement in data load at startup time<sup>3</sup>

**4.5TB**

Increased total memory capacity per CPU

<sup>3</sup> See Notes and Disclaimers for more information