



for tomorrow

Edition 3: Intelligent Industry: The Next Era of Transformation

**#GET THE FUTURE YOU WANT** 

The third edition of the Capgemini Research Institute's quarterly review, **"Conversations for Tomorrow,"** focuses on the convergence of digital and engineering worlds which will help companies build intelligent products, operations, and services, at scale.

# The journal explores the following themes

### Accelerating the next era of transformation

68% of organizations will accelerate their transformation investments in the next 12 months, with technology-led initiatives at the core.

 Capgemini Research Institute, "Fast-forward to the future defining and winning the post-COVID new normal," July 2020.



"The convergence of cloud technologies, big data, AI, IoT, and 5G is critical to the next phase of transformation."

**Börje Ekholm** President and CEO, Ericsson



"Intelligent Industry brings together engineering, IT, and digital and thereby allows a convergence of the physical and virtual worlds."

**Aiman Ezzat** Chief Executive Officer, Capgemini



"This [software-driven] revolution will be comparable to that of the smartphone. The use cases associated with a smartphone skyrocketed when it was connected to the cloud. In the same way, the connected car will lead to the invention of new services. It will create new business models and new revenue opportunities for auto manufacturers."

**Frédéric Vincent** Member, Renault Group Board of Management, CIO Renault Group

### Softwaredriven automotive transformation

Over the next ten years, the share of automotive OEMs' revenue that comes from software-based features and services is expected to nearly triple, from **8% to 22%.**<sup>2</sup>

**2.** Capgemini Research Institute, "Next Destination: Software: How automotive OEMs can harness the potential of software-driven transformation," July 2021.

### 5G and connectivity

Early adopters of 5G say they have already realized improved operational efficiencies.<sup>3</sup>

**3.** Capgemini Research Institute, "Accelerating the 5G Industrial Revolution: State of 5G and edge in industrial operations," June 2021.



"We are now focused on the real-time control aspects of 5G, particularly telepresence and interactive remote collaboration between workers and machines."

**Dr. Norihiro Suzuki** CTO and Head of the Research & Development Group Hitachi, Ltd.



"[Our] digitalization roadmap consists of five work streams. First, is digital twins which focuses on digital twin of product, production, and performance."

# **Digital twins**

Public authorities around the world, in Singapore, Shanghai, Stockholm, and Brooklyn in New York, for instance, are turning to digital twins to help them in optimizing urban planning, infrastructure management, traffic monitoring or even

## Harnessing data

Organizations that are proven data leaders realize a significant performance advantage; for instance, they see 22% higher profitability than the average. <sup>4</sup>

4. Capgemini Research Institute, "The data-powered enterprise: Why organizations must strengthen their data mastery," November 2020.



We partner with a number of groups such as Innovative Medicines Initiative (IMI) in Europe to ensure that we're sharing data in both directions. The major driver behind these data-sharing practices is to make informed, data-driven decisions. The more data we have, the better questions we can ask and thus more accurate responses.

#### Dr. Anastasia Christianson

Vice President, R&D Business Technology, Janssen, Pharmaceutical companies of Johnson and Johnson



"We have huge amounts of operational and production data. We established Omnia, Equinor's cloud-based data platform, to ensure this data is available on a single platform across our value chain, including development and production, transportation, marketing, and trading."

#### Torbjørn Folgerø

SVP, Enterprise Digital, Technology Digital & Innovation, Equinor



"The reliability, robustness, and possible economic value of AI is directly linked to the trust we have in these systems. A significant effort to address these challenges is required to ensure we fulfil the social and economic potential of AI."

**Professor Marta Kwiatkowska** Professor of Computing Systems, University of Oxford



"We're moving well past the days of computer-aided design (CAD) and product lifecycle management (PLM) data only being applicable to a design or management function. Now, we're seeing it deployed in other areas of the value chain, such as the application of PLM data to produce digital work instructions for a factory work cell..."

**Catherine Kniker** Chief Strategy Officer, PTC

## Strengthening sustainability

Only 36% of automotive original equipment manufacturers (OEMs) partner with suppliers and utilities in promoting a second life for EV batteries. <sup>5</sup>

5. Capgemini Research Institute, "The automotive industry in the era of sustainability," March 2020.



"[Our] organization is focused on building key strategic partnerships across the entire value chain, so that we have oversight of every step of the way."

Giles Moreau





"We are using technology and innovation in various areas. In North America, the Huggies brand introduced diapers made with plant-based ingredients. We are already using sensor analytics to track our energy and water consumption to monitor our footprint."

#### Kim Kirkconnell

Vice President, IT Global Digital Supply Chain, Kimberly-Clark



"This [smart manufacturing] space requires IT and OT skillsets to work together in a new way. At Kimberly-Clark, we have put together a cross-functional workstream that's made up of both IT and engineering personnel."

#### Amy Sausen

Global Director, Digital Technology, Kimberly-Clark

# Upskilling

Lack of talent at mid-to-junior levels is the leading challenge for Consumer Product and Retail organizations on road to data mastery.<sup>6</sup>

 Capgemini Research Institute, "The age of insight: How Consumer Products and Retail organizations can accelerate value capture from data," March 2020.



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