



**The path to industry 4.0:
Leveraging 5G and smart technologies**
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Event Summary Report

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Executive Summary

The path to industry 4.0: Leveraging 5G and smart technologies, organised by The Economist Events and sponsored by IBM, was chaired by Vijay Vaitheeswaran, US business editor, *The Economist*. It convened an intimate group of global leaders from manufacturing, asset-intensive industries and operational and digital technology companies.

The discussion explored a range of questions: how is digital success being redefined in organisations? What is the end goal of digital transformation—and does it ever end? Is technology the biggest driver of competitive advantage? What promising technologies for day-to-day deployment are on the horizon? Are developments such as 5G, AI and cloud computing being embraced across business functions? How big a roadblock are technical debt and legacy systems? What does it look like through a technological lens as businesses shift from continuity planning to recovery and acceleration? To what extent is sustainability a positive by-product of digital mastery?

It was against this backdrop that Manish Chawla, global managing director, energy, resources and manufacturing Industries, IBM, kicked off the discussion with his opening remarks.

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The covid-19 backdrop:

As Winston Churchill is purported to have said, “Never waste a good crisis”. That describes exactly the attitude and actions of business leaders in the face of the ongoing health, geopolitical, climate and economic disruptions. According to an IBM c-suite survey, 60% of executives are using this time to accelerate their company’s digital transformation. Technology is without doubt business leaders’ biggest preoccupation. Moreover, two-thirds of those surveyed said the pandemic had reduced internal resistance to digital initiatives. In times like this, after all, weak companies fail, strong companies survive and the very best thrive.

Technology in the bigger picture:

The vision of industry 4.0 boils down to how we leverage smart technologies in smarter ways to reorganise business processes. Technology can simultaneously enable competitor outperformance while underpinning resilience, especially in times of crisis. Companies therefore make two types of investments: into foundational technologies and differentiating technologies. Rollout timelines can mean that one category may merge into the other. The long-term goal is for companies to move away from random acts of digital experimentation and to scale towards their “North Star”. Companies take a “big bet” with the aim of improving customer experience, and this may support sustainability, innovation or efficiency.

A bird’s-eye view:

The ability to leverage real-time insights for predictive decision-making is hugely beneficial to the bottom line. The cloud and AI approach underpins this—especially in asset-intensive industries. It enables players to collect, store and then apply intelligence and analytics for its operational use at the enterprise level. This data can then be leveraged to support strategic decisions and break down silos.

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The workforce of the future:

The biggest hurdle by far in implementing digital transformation agendas is ensuring internal stakeholder buy-in. When companies evaluate the success of their digital initiatives, employee (and customer) understanding of the value-addition is as important as productivity boosts and competitiveness. There is a real business imperative to reassure people that they're not being replaced by digitisation. This holds especially true in a paradigm where workforces of the future will be comprised of humans augmented with intelligent machines. In the 1980s the automotive industry discovered the hard way that robots can't do everything. In 2021 we need to find what workers and technology are respectively best at, and ways for them to work together. There are lessons to be learned from the graveyard of failed top-down digital experiments and a revolving door of expertise.

Putting the customer in the middle:

Fast prototyping and the ability to fail quickly and adapt based on user feedback are radical in the world of enterprise. Having your ears to the ground via design thinking, and working backwards from user experience and needs, dramatically increases adoption. Workers (as users) are arguably at the heart of the transition to using new technologies. Customers, in theory at least, should be the biggest winners when companies compete to foster innovation that caters to their unmet needs. Thinking about intelligent workflows in a human-centric way applies here, too. After all, technology is never introduced into a void—you must think about the wider implications for pre-existing processes.

The sustainability imperative:

Today companies view sustainability as a key investment area that creates new markets and business opportunities for manufacturers to differentiate themselves. Examples include electric vehicles, energy transition to renewables, green design and the circular economy. Businesses are also increasingly in the spotlight and accountable for these ESG credentials. Regulators are fuelling this green transition by providing incentives for companies to innovate and upgrade older, polluting technologies.

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The hold-up of legacy systems:

There is enormous value in companies embracing an open hybrid cloud and AI platform to build modern manufacturing solutions. The days of proprietary protocols are coming to an end—and the future is a flexible, scalable and open architecture. We need to think about how factories fit into a digital value chain. Technological development will continue to accelerate exponentially, and this further heightens the imperative. The pandemic has made it painfully clear that few companies had comprehensively enacted their digital transformation agendas beyond rhetoric. Covid-19 is making them prioritise these investments, including into cyber-security.

The discussion was resoundingly optimistic. It is clear that in today's paradigm, digital mastery and visionary leadership go hand in hand. Leaders have a digital toolbox—AI, 5G, cloud computing and edge computing—and which tools they leverage, how and for what purpose, will make the difference between survival or success. For those ahead of the technological curve, there are enormous rewards to be reaped. Despite the prevailing uncertainty, the vision for industry 4.0 extends way beyond simply future-proofing operations.

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