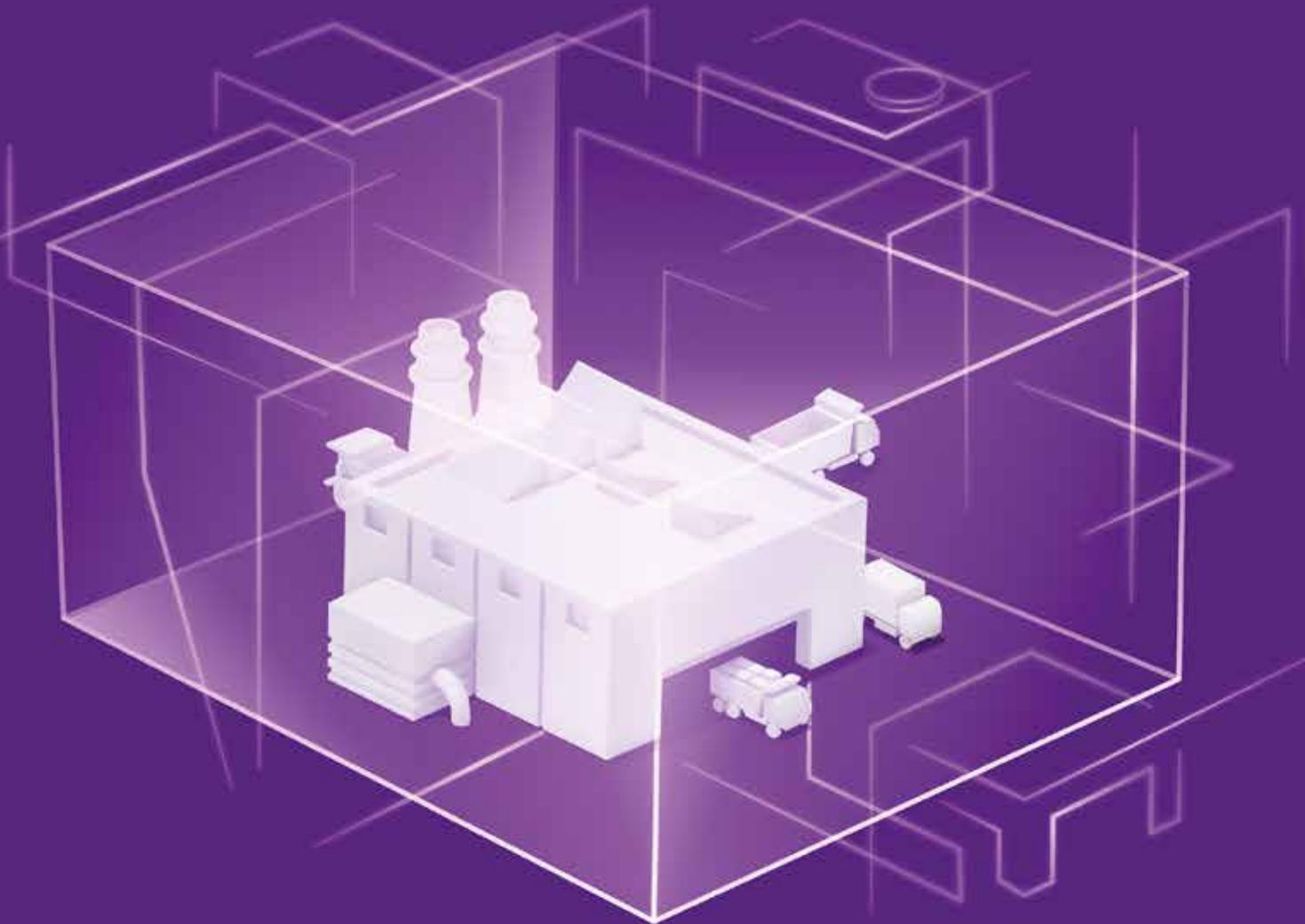




# RETHINK, REINVENT, REALIZE:

How to successfully implement digital reinvention



**With a broad industrial base and specialization in the export of high-quality products, Italy's manufacturing sector is not only a big driver of the Nation's economy<sup>1</sup>; it is on course to strengthen its front line position through digital reinvention.**

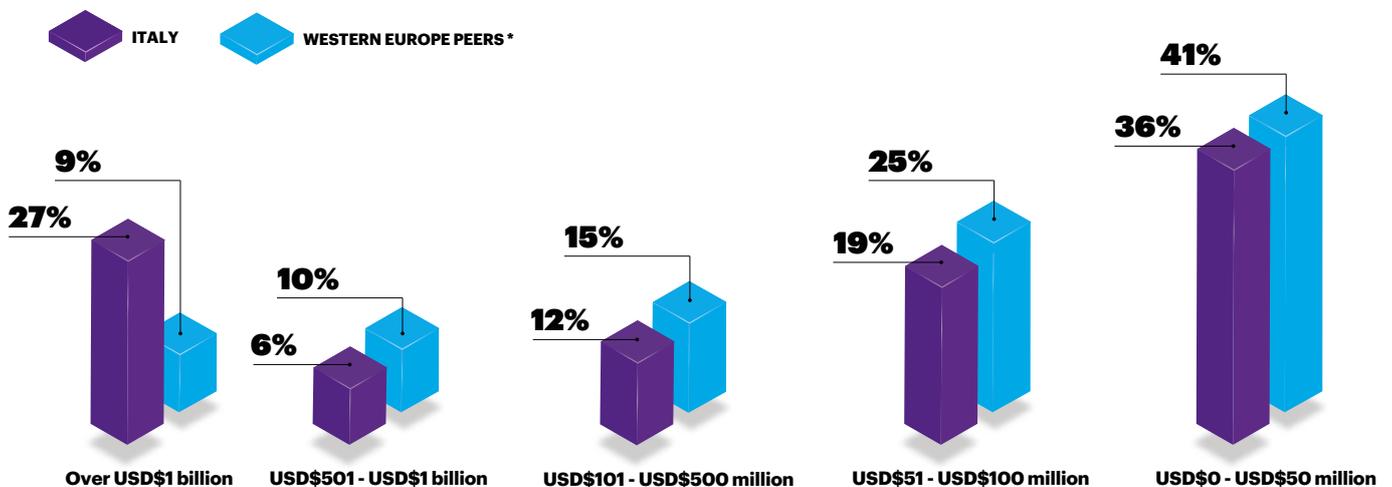
# ITALIAN COMPANIES ACCELERATED INVESTMENTS IN DIGITAL REINVENTION

An Accenture survey of 100 senior executives from Italy's leading businesses across 12 industries revealed that the country's manufacturers are spending heavily on digital reinvention. A robust 27 percent of the companies surveyed spent more than \$1 billion each on digital reinvention projects over the past three years (**Figure 1**).

This is significant when compared with Europe's other major economies: France, Germany, Spain and the UK. In our survey of 222 companies in those four countries, we found that only 9 percent invested \$1 billion or more in their digital reinvention initiatives over the same period.

**Figure 1:**  
**ITALIAN COMPANIES ARE BIG SPENDERS ON DIGITAL REINVENTION**

SPENDING ON DIGITAL REINVENTION OVER THE PAST THREE YEARS (2016-2018)



**Note:** \* France, Germany, Spain and the United Kingdom  
**Source:** Accenture Industry X.0 Italy Survey, 2019| Base: N=100; Accenture Industry X.0 Global Survey, 2019| Base: N=222

Italy's giant strides to build a digital future are not surprising, given the Industry 4.0 program which the Italian government launched in 2017 to provide investment support for capital goods, advanced technologies and innovation projects. Under the program, total government spending on incentives between 2017 and 2021 is expected to reach almost €10 billion (\$11.4 billion)<sup>2</sup>. The result of the incentives is already visible: in 2017 alone, the private sector increased its investments by €13.3 billion (\$15 billion)<sup>3</sup> and reached more than €90 billion overall (\$101.7 billion)<sup>4</sup>.

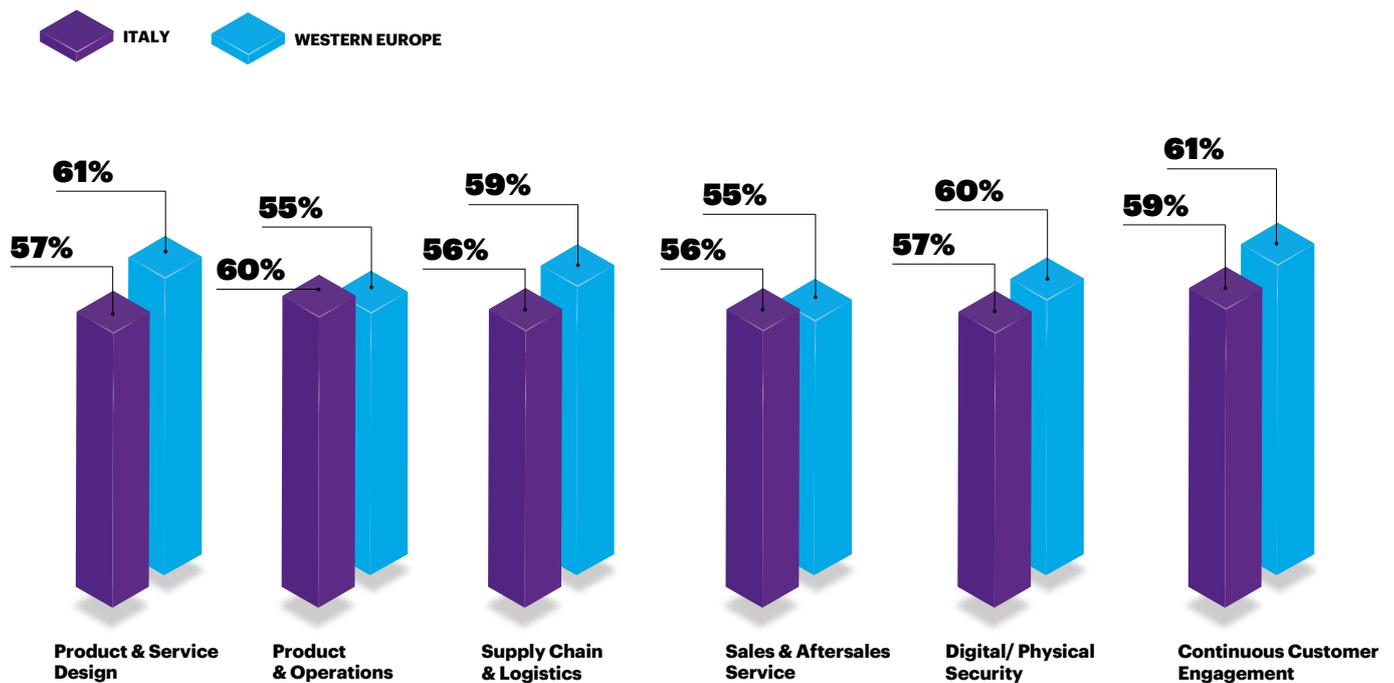
The government's plan was probably a key factor that led Italian companies to intensify their investments in recent years and pave the way for their Industry X.0 transformation. However, the incentives came rather late compared to other Western European peers. For instance, Germany launched its *Platform Industrie 4.0* plan in 2013, the year when the United Kingdom announced its *HVM Catapult* program; in 2015, France announced its *Alliance Industrie du Futur*<sup>5</sup>.

# BUT SPENDING MORE DOESN'T GUARANTEE SUCCESS

Having breakthrough innovative ideas is not enough when it comes to digital transformation. While Italy's increased spending on digital reinvention may seem encouraging at first sight, a deeper analysis of the data uncovers a slightly different story. In our research, we asked companies if digital proofs

of concept (PoCs) were scaled sufficiently widely for use across all enterprise processes. We found that despite significantly outpacing their Western European peers in terms of investment, Italian manufacturers were barely keeping pace when it came to scaling intensity (**Figure 2**).

**Figure 2**  
**SCALING INTENSITY IN ITALIAN COMPANIES STOPS HALF WAY**

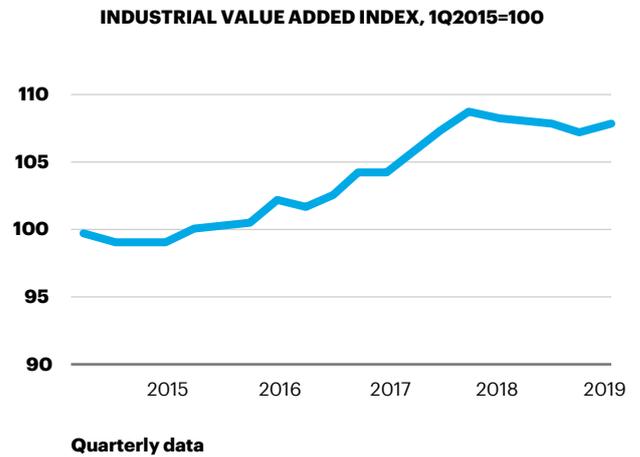
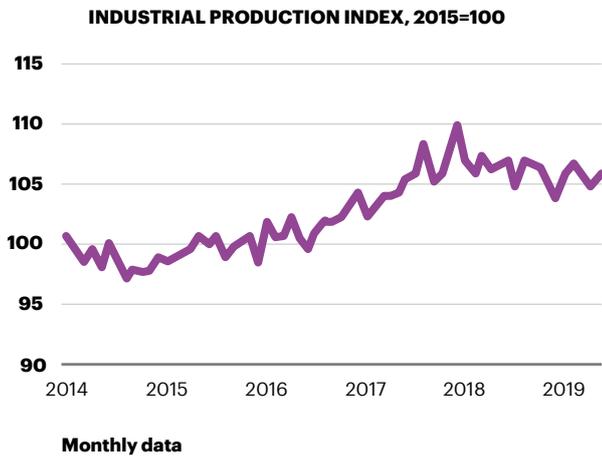


**Note:** Scaling intensity is the average number of scaled PoCs over the average number of PoCs initiated in each business function across industries  
**Source:** Accenture Industry X.0 Italy Survey, 2019| Base: N=100; Accenture Industry X.0 Global Survey, 2019| Base: N=222

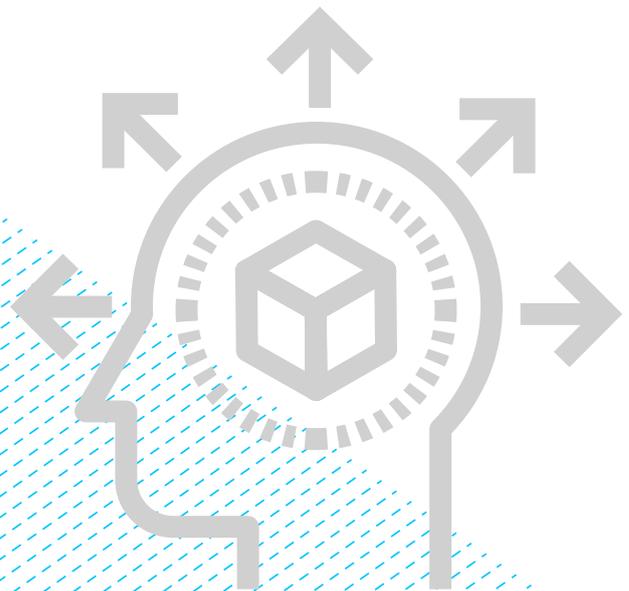
Moreover, at the macroeconomic level, Italian industry has recently tended to flatline: in 2018, the pace of Italy's recovery from the drawn-out financial crisis decelerated,

showing that stimulus from government incentives and investments, though necessary, is not sufficient to deliver sustainable growth (Figure 3).

**Figure 3**  
**ITALIAN INDUSTRY OUTPUT AND VALUE ADDED ARE NOW FLATLINING**



Source: Accenture analysis on ISTAT data



# WHY ARE ITALIAN COMPANIES STRUGGLING TO ACHIEVE MORE SIGNIFICANT SUCCESS?

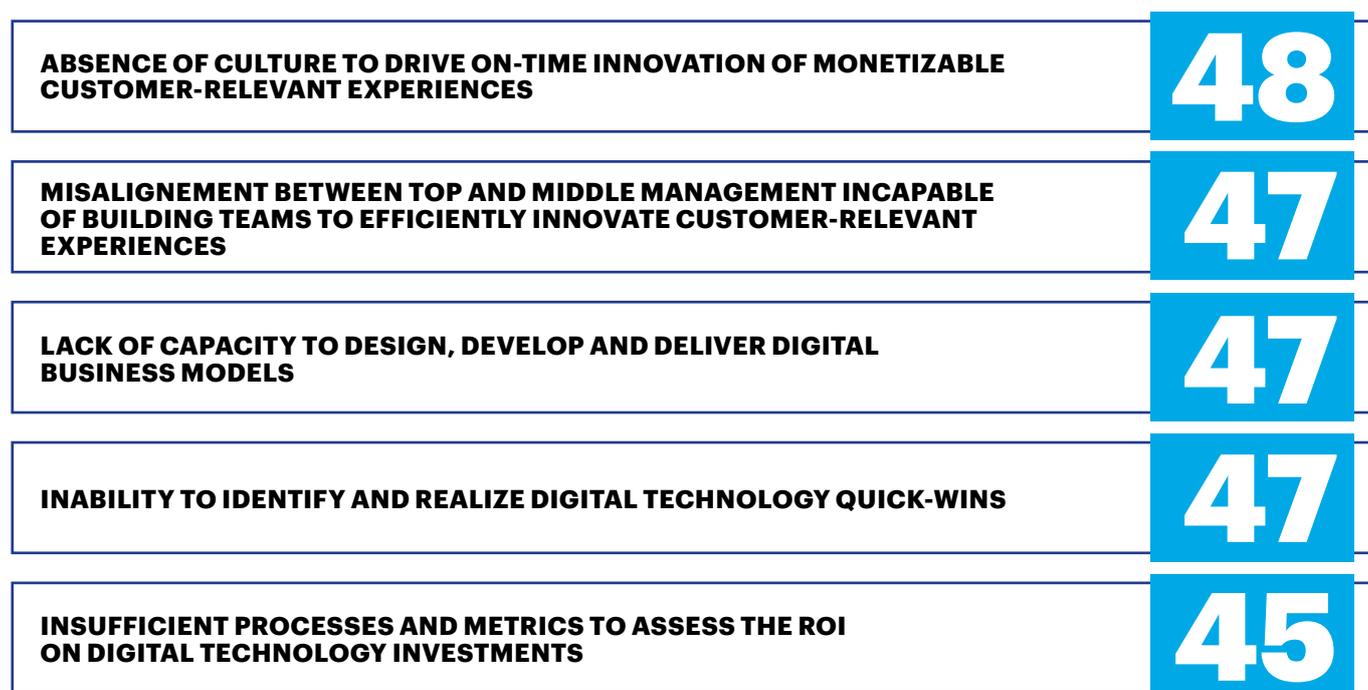
## Lacking the culture to drive change

When asked what holds them back from digital reinvention, Italian executives responded that the toughest criticalities are around the culture of innovation or, rather, its absence. Remarkably, top and middle management teams in Italian companies are not aligned on how to deliver customer value through digital technologies. Lack of alignment at senior levels prevents top-down infusion of a culture of innovation that

is a prerequisite for digital reinvention. Not only do Italian companies lack the culture to drive on-time monetizable innovations, they also seem short of ideas to design and deliver new business models (Figure 4). Italian companies may excel at designing and scaling successful prototypes, but to embrace digital transformation, they still need to cultivate a radically different mindset.

Figure 4

### MAIN CHALLENGES TO SCALING PROOFS OF CONCEPT



**Note:** Respondents were asked to rank the top challenges on a scale of 1 to 7, with 1 being most important. The number in the bars is the sum of the answers ranked within the top 3 across all business functions

**Source:** Accenture Industry X.0 Italy Survey, 2019| Base: N=100

# Missing the “big picture” innovation journey that delivers tangible business outcomes

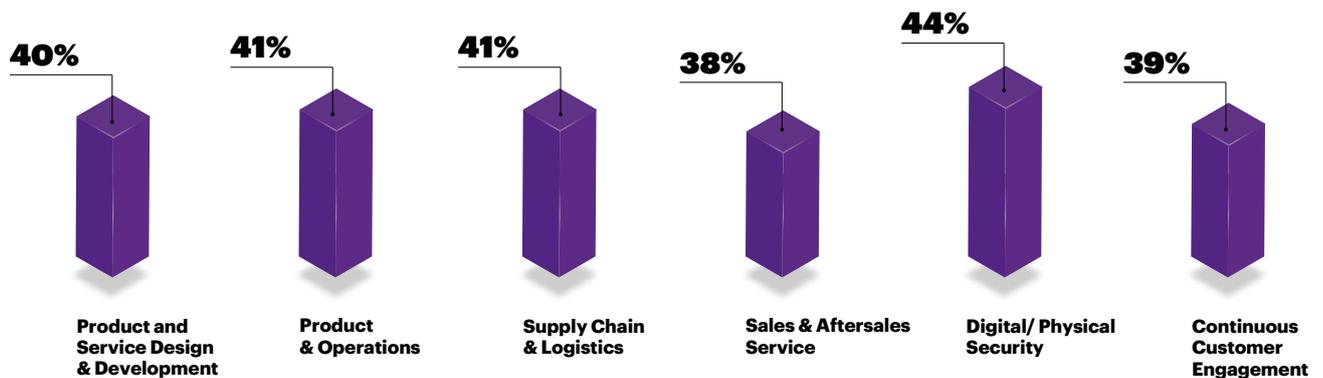
Absent the right culture, digital investments may prove pointless. A serious consequence of Italian manufacturers’ lack of an integrated approach toward their digital transformation is the risk that investments remain underutilized.

The majority of Italian executives’ initiatives to build and scale digital POCs across key functions fail to deliver the desired business outcomes (Figure 5). When it comes to Product and Service Design &

Development, our research shows that only 41 percent of manufacturers in Italy fully achieved their goal to reduce time-to-market, while a mere 31 percent successfully reached their goal to accelerate prototype iteration. In Production & Operations, only 38 percent managed to reduce their manufacturing cycle time while 37 percent achieved higher plant flexibility. We saw similar results across other business functions.

**Figure 5**

## ONLY 40% OF ITALIAN COMPANIES FULLY ACHIEVE THEIR BUSINESS OUTCOMES AFTER SCALING DIGITAL POCs



**Note:** Average (across each of the key business areas/functions) share of respondents fully achieving their business outcomes by building and/or scaling digital POCs

**Source:** Accenture Industry X.0 Italy Survey, 2019| Base: N=100

Our survey found that a surprisingly low 34 percent of Italian executives believe that development of an “as-a-service” operations and offering model is important as a means to overcome the organizational challenges that digital transformation entails. On the other hand, the majority do not perceive as important enablers of digital reinvention either the agile approach to integrating design and data-driven inputs from different functions or the creation of a Digital Services Platform to collect and analyze data in real-time. Therefore, large standalone investments and successfully scaled digital POCs deliver little value since they are not supported by updated business (product innovation) and operating (process innovation) models.

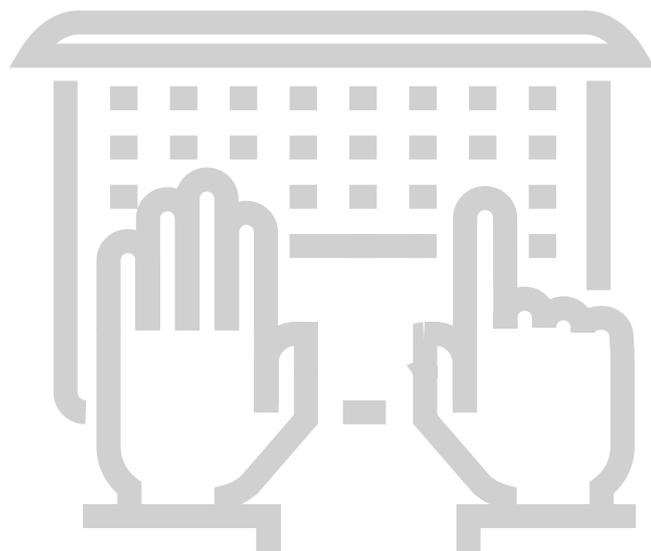
Despite the incentives available to them, Italian companies continue to invest without first designing a holistic, systemic approach. At the outset, they partially achieve their business objectives through investments in technologies. After equipped themselves with sometimes best-in-class technology, they then fail to fully leverage their business and operating models to maximize their new technology assets and the data it generates.

# WHAT CAN ITALIAN COMPANIES DO TO SUCCESSFULLY DEVELOP AND EXECUTE THEIR DIGITAL REINVENTION PROGRAMS?

**Follow a systematic approach towards a specific innovation journey**

It is abundantly clear that a policy of one-off investments on ad-hoc PoCs will not lead to successful digital reinvention. Italian companies

must adopt a better practice and follow a well-planned and systematic approach to developing and executing their transformation programs.



## **RETHINK**

**The first step is to redefine specific business objectives that are unique for each company. To do so, companies must fully understand the context in which they operate, i.e. they must capture new business opportunities, correctly interpret social and economic...**

... trends, screen market and industry dynamics, and identify main threats and disruptions for their business as usual. Italian business leaders should then use the knowledge gained to rethink their business goals, market positioning, and value proposition.

# MARELLI: OPTIMIZING TECHNOLOGY TO ACHIEVE SPECIFIC BUSINESS OUTCOMES

## BUSINESS CHALLENGE

Magneti Marelli<sup>6</sup>, now Marelli, planned a digital transformation journey to prepare operations for Industrial Internet of Things (IIoT) in order to gain competitive advantage, increase customer satisfaction and enhance brand reputation. They wanted to understand what they should do to adopt Industry X.0 capabilities in order to improve operational efficiency through innovation. Improving their manufacturing systems and monitoring asset efficiency was key. Clearly, Marelli needed to digitalize plant operations and processes to connect assets and unlock efficiencies.

## SOLUTION

Marelli identified four strategic areas where innovation would overhaul the manufacturing system:

- Production scheduling and execution using artificial intelligence and machine learning
- Quality management with digitalized processes and data
- Materials management to streamline production line feeding and material traceability
- Plant maintenance to improve asset utilization and workforce management

The company then identified where and how its existing manufacturing application landscape could be enriched before defining an integrated information technology and operational technology (IT/OT) application suite for manufacturing operations. The suite of applications would serve as a digital foundation for the future IIoT platform, leveraging capabilities from the Industry X.0 Innovation Center in Modena, Italy.

Marelli created a proof of concept to test improvement in efficiency monitoring. The solution focused on manufacturing assets in one plant that makes lighting components and in another that produces suspension systems. The proof of concept considered key production assets, such as the engines powering the welding robots and an injection molding machine. An IIoT laboratory platform collects and processes data from sensors and programmable logic controllers (PLC) on these assets. Predictive algorithms were then developed to identify the likelihood and potential timing of the asset's failure, as well as critical conditions affecting production. To further advance this work, an IIoT Edge platform (based on Microsoft Azure) is currently under development. The IIoT platform can source and

process data from many different types of machines on the shop floor. When the system detects an imminent failure or critical status, it alerts supervisors for fast reaction before the machine actually breaks down.

## OUTCOME

Marelli has begun its transformation journey to upgrade operations, improve product quality, reduce time-to-market and unlock value by leveraging the data they collect. Marelli is now able to:

- Avoid possible breakdowns by monitoring and controlling plant operations remotely and in real time
- Conduct remote analysis to further improve maintenance
- Improve quality by introducing advanced early-warning analytics
- Increase automation and reduce manual paperwork for production planning processes
- Optimize maintenance planning and costs by replacing machine components only when needed
- Prepare for the future by applying advanced analytics to production assets

Marelli continues to work in order to develop new use cases and implementation initiatives in each of the company's four strategic areas.





**REINVENT**  
**Technology played a massive role in this strategic shift. Although investing in digital technologies, connecting machines and people, scaling PoCs, and using data are necessary steps, they are not sufficient to complete a successful transformation.**

When considering Industry X.O investments, Italian companies must design a specific reinvention journey that will leverage technology and redesign business and operating models to deliver concrete business outcomes. This pivot to a complex transformation cannot be undertaken without first developing partnerships with critical ecosystem stakeholders such as customers, suppliers, academia, competitors and technology and consulting partners. Furthermore, management of an ecosystem centered on co-innovation requires sophisticated orchestration competences and the generation of value for business in a way that should be different from the recent past. As a result, a consulting partner today is also remodeling its organization to become an Ecosystem Value Architect in both stages—transformation program design and implementation—to guarantee that clients achieve their objectives when investing in Industry X.O.

# ACCENTURE AS AN ECOSYSTEM VALUE ARCHITECT

Accenture has evolved its operating model to put co-creation with clients at the core of its activity. To do so, the company put in place a set of capabilities that are accessed through various elements of innovation architecture<sup>1</sup> in Italy (Industry X.O Innovation Center in Modena, Accenture Customer Innovation Network (ACIN) in Milan, Automotive Industry Solution Center in Turin, Digital Acceleration Center, Digital Platform Center, Cloud Innovation Center in Rome, Applied Intelligence, Innovation-as-a-Service, etc.).

## ACCENTURE INDUSTRY X.O INNOVATION CENTER IN MODENA: USE INNOVATION TO GAIN A COMPETITIVE EDGE

The Industry X.O Innovation Center Modena was opened in 2018. Located within a real, working factory in Emilia Romagna, the heart of Italy's manufacturing region, it was conceived as a Digital Service Factory to provide manufacturers with a living, hands-on environment to transform operational efficiency, deliver new business outcomes, and develop creative business models enabled by connected digital technologies, industry innovation, and collaborative ecosystems. Core to the Center is a partnership with HPE COXA, a flexible, agile and innovative provider of engineering solutions, technology projects and products. The approach used in the Industry X.O Innovation Center Modena is based on:

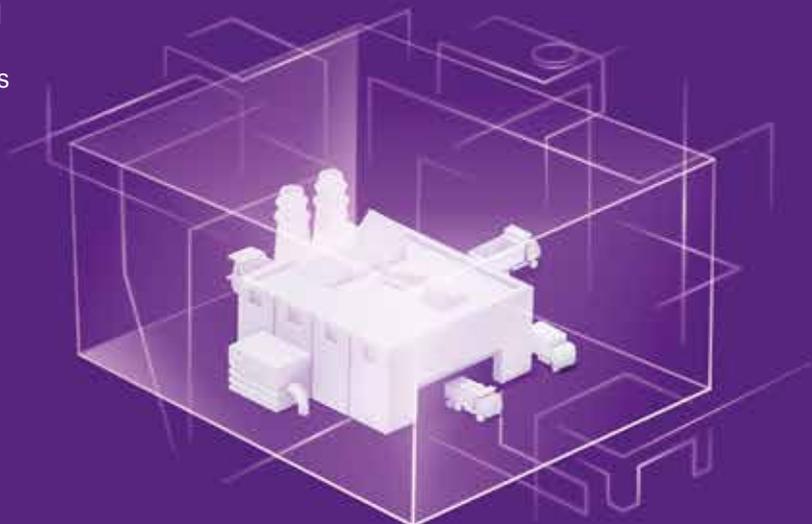
- **Business outcomes identification and support.** Innovation and digitization become strategic assets when they are applied to support a client company by delivering better process control, improved product quality, lower operating costs (maintenance, energy, materials, etc.), higher workforce engagement and by leveraging agile manufacturing, a contemporary strategy that uses data, information, and insights as tools to react to the different internal and external complexities.
- **Beyond traditional thinking.** The Center's personnel is equipped with unique capabilities. It works with visitors and partners to challenge traditional solutions and reimagine the future of manufacturing through real-life scenarios.

- **Innovation applied.** The Center constantly explores new digital solutions, during and after use case development. Cases include Industrial equipment integration through Smart Plug; Analytics to support real time shopfloor monitoring; Control tower to transform data into valuable insights; AI to support process optimization; Connected Workers; Safety powered by Artificial Intelligence, among others.

The journey to be undertaken by a company that aims to reinvent itself on an Industry X.O model is carefully designed, planned, and executed through tailored workshops, design thinking sessions, access to our innovation ecosystem. The Center can deliver results within weeks.

*"We showcase the excellence of the Made in Italy brand with our engineering solution technology products for automotive, motorsport, automation solutions, and others. We employ 300 people including 220 engineers. With increasing access to connected and intelligent products, we realize that customers expect businesses to deliver a tailored and personalized experience. And to that end, we have decided to collaborate with Accenture in order to take companies to the next phase of the digital era."*

**ANDREA BOZZOLI,**  
Chief Executive Officer, Hpe Coxa





**REALIZE**  
**A transformation journey is a continuous process that entails using digital technology to automate...**

... and streamline processes, and agile governance in order to rapidly produce efficiency gains in the initial phase. The returns generated must be reinvested and scaled to fund new topline growth and help ensure that sustainable business outcomes are achieved.

# BIESSE GROUP: WHEN A SYSTEMIC APPROACH IS PUT INTO ACTION TO PIVOT TO THE FUTURE

## BUSINESS CHALLENGE

Biesse Group<sup>7</sup> is a global leader in manufacturing technology for processing wood, glass, stone, plastic and metal. By implementing connected asset management across its industrial machinery, the company wanted to improve its operating model through operational efficiencies and reduced costs. However, Biesse Group's customers are interested in new digital capabilities, prompting the company to change its business model—opening up new revenue streams such as machine usage analysis and production process optimization, and developing a range of services to help improve the performance of its customers' machinery and overall productivity.

## SOLUTION

The Biesse Group started its transformation by designing an IIoT operating model, business case, solution and roadmap using the Accenture Connected Platforms as a Service (CPaaS) on a Microsoft Azure IoT platform.

The first set of services includes preventive maintenance alerts, machine management, manufacturing events analysis and remote diagnostics, and remote software distribution. Biesse's Service Department receives notifications about machine performance, enabling them to proactively contact customers to preempt or handle machine outages. Sensors and devices on the machines produce in-depth key performance indicators and usage analytics. This information is displayed on easy-to-view dashboards using Microsoft Power BI data visualization on mobile devices. The performance reports are periodically shared with customers, and the machine's technical documentation can be accessed on an app.

A new business model has been applied: Biesse's customers use a pay-per-use model and customize the services they receive from machine alerts. They also benefit from advanced services such as in-depth machine analytics that improve overall equipment effectiveness and productivity.

This Biesse use case demonstrates the success of a systematic and carefully designed approach towards digital reinvention in a traditional business.

## OUTCOME

The Biesse Group deployed a pilot solution and mobile app to clients after only five months, followed by a full rollout. The platform is available on more than 15 Biesse machine models across different areas. The IIoT platform has been released to their wood, glass and stone subsidiaries, dealers and end customers in 25 countries.

Biesse can use performance and usage insights from the field to improve product development and add features that would benefit their customers. These insights also enable the company to develop closer customer relationships: Biesse can recommend how to get the most out from their machines and position itself as an ecosystem partner that works closely with customers to improve production.

With its new IIoT platform, the Biesse Group delivers value-added services—and secures new revenue streams. Response times for machine outages are now 50 percent faster, and customers can get diagnostic information 60 percent quicker. In addition, "first-time fix" metrics—where the technician is able to fix the issue when first intervening—jumped to nearly 90 percent.



- <sup>1</sup> “Combinare Per Conquistare - La Rinascita Digitale Dell’industria Italiana”, Accenture (Page 3). Accessed on May 23 and downloadable at: [https://www.accenture.com/\\_acnmedia/PDF-71/Accenture-Industry-XO-ITA-whitepaper.PDF](https://www.accenture.com/_acnmedia/PDF-71/Accenture-Industry-XO-ITA-whitepaper.PDF)
- <sup>2</sup> “Dove va l’industria italiana – Rapporto 2019”, Centro Studi Confindustria (Page 102). Accessed on 12 June 2019 and downloadable at [https://www.confindustria.it/wcm/connect/90dd9b59-be26-4ffe-a0d4-e3119d8625fa/Rapporto+industria+\\_140519\\_Confindustria\\_.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-90dd9b59-be26-4ffe-a0d4-e3119d8625fa-mGSjNOG#page=102](https://www.confindustria.it/wcm/connect/90dd9b59-be26-4ffe-a0d4-e3119d8625fa/Rapporto+industria+_140519_Confindustria_.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-90dd9b59-be26-4ffe-a0d4-e3119d8625fa-mGSjNOG#page=102)
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- <sup>4</sup> “Italy’s National Plan Impresa 4.0. Results from 2017 – Actions for 2018”, MEF Page 7). Accessed on 12 June 2019 and downloadable at [https://www.mise.gov.it/images/stories/documenti/impresa\\_40\\_risultati\\_2017\\_azioni%202018\\_rev\\_eng.pdf#page=7](https://www.mise.gov.it/images/stories/documenti/impresa_40_risultati_2017_azioni%202018_rev_eng.pdf#page=7)
- <sup>5</sup> “Dove va l’industria italiana – Rapporto 2019”, Centro Studi Confindustria (Page 99). Accessed on 12 June 2019 and downloadable at [https://www.confindustria.it/wcm/connect/90dd9b59-be26-4ffe-a0d4-e3119d8625fa/Rapporto+industria+\\_140519\\_Confindustria\\_.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-90dd9b59-be26-4ffe-a0d4-e3119d8625fa-mGSjNOG#page=99](https://www.confindustria.it/wcm/connect/90dd9b59-be26-4ffe-a0d4-e3119d8625fa/Rapporto+industria+_140519_Confindustria_.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-90dd9b59-be26-4ffe-a0d4-e3119d8625fa-mGSjNOG#page=99)
- <sup>6</sup> “Moving to the New with smart manufacturing”, Accenture. Accessed on 12 June 2019 and available at: <https://www.accenture.com/us-en/case-studies/industry-x-0/magneti-marelli>
- <sup>7</sup> “Biesse Group IIOT builds new revenue streams”, Accenture. Accessed on 12 June 2019 and available at <https://www.accenture.com/us-en/success-biesse-group-iiot-builds-new-revenue-streams>

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Accenture is a leading global professional services company, providing a broad range of services and solutions in strategy, consulting, digital, technology and operations. Combining unmatched experience and specialized skills across more than 40 industries and all business functions — underpinned by the world's largest delivery network — Accenture works at the intersection of business and technology to help clients improve their performance and create sustainable value for their stakeholders. With 492,000 people serving clients in more than 120 countries, Accenture drives innovation to improve the way the world works and lives. Visit us at [www.accenture.com](http://www.accenture.com).

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## AUTHORS

### **RAGHAV NARSALAY**

Managing Director,  
Accenture Research

### **ARIANNA GAGLIARDI**

Manager  
Accenture Research

### **NATALIYA SYSENKO**

Manager  
Accenture Research

## RESEARCH TEAM

Preeti Bajla, Aarohi Sen, David Light,  
Surbhi B. Mehta