



INTESA SANPAOLO  
INNOVATION CENTER

# INDUSTRY TRENDS REPORT **TECHNOLOGY, MEDIA & TELCO**

*ARTIFICIAL INTELLIGENCE  
ENABLED BUSINESS MODELS  
FOR SMES*

AI



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# EXECUTIVE SUMMARY

Artificial Intelligence (AI) has entered a new phase of maturity, transitioning from experimental deployments to a systemic, general-purpose technology embedded across industries and economic functions. This evolution reflects not only technological progress but also a structural shift in how value is created, captured, and distributed across the global economy. AI is no longer confined to isolated use cases or pilot projects; it is increasingly integrated into core organisational processes, shaping decision-making, operational efficiency, and strategic positioning for both large enterprises and small and medium-sized enterprises (SMEs) .

This transformation is underpinned by the recognition of AI as a general-purpose technology, similar to electricity or the internet, with broad applicability across sectors. Advances in generative AI and foundation models have significantly expanded the range of tasks machines can perform, from language and vision processing to reasoning and decision support. These capabilities are enabling organisations to move beyond traditional automation toward cognitive augmentation, where AI supports complex analytical tasks and enhances human decision-making. As a result, AI is increasingly embedded in everyday workflows, acting as a horizontal productivity layer across organisations.

At the same time, the AI ecosystem is evolving toward integrated platforms that combine multiple capabilities within unified environments. This shift is particularly impactful for SMEs, as it reduces the need for specialized infrastructure and technical expertise. Integrated solutions enable organisations to deploy AI across functions such as content generation, software development, data analysis, and workflow automation within a single interface. This “platformization” of AI is accelerating adoption by lowering barriers to entry and enabling more scalable and accessible deployment.

From an economic perspective, this transition is supported by strong investment dynamics. AI-related investments now account for a significant share of global venture capital, reflecting a broader reallocation of capital toward AI-enabled business models and infrastructure. In parallel, large-scale investments in data centers, compute capacity, and cloud infrastructure highlight the transition from a startup-driven innovation cycle to a capital-intensive industrial phase. In this context, access to compute, data, and integrated ecosystems is becoming a key determinant of competitive advantage.

However, the development of AI is characterized by structural imbalances at the global level. The United States currently leads the ecosystem, driven by its dominance in semiconductors, cloud infrastructure, and foundation models, supported by large-scale capital and integrated platforms. China, in contrast, is advancing through coordinated industrial strategies, combining strong state support with rapid deployment across strategic sectors. Its increasing use of open-source and open-weight models further accelerates diffusion and ecosystem development. Europe occupies a distinct position, combining strong research capabilities, industrial depth, and regulatory leadership, but facing constraints in large-scale compute infrastructure and investment capacity.

In response, Europe is strengthening its technological sovereignty through initiatives such as the EU Chips Act and, more recently, a broader Technology Sovereignty Package. These initiatives aim to expand capabilities beyond semiconductors to cloud infrastructure, AI development, and open-source ecosystems, while supporting SME adoption through improved access to secure and scalable digital technologies. This integrated approach reflects a strategic effort to reduce dependency on external providers and foster a more resilient and competitive AI ecosystem.

The rapid expansion of AI is fundamentally anchored in the evolution of a multi-layered technology stack, which structures how capabilities are developed, accessed, and deployed. This stack spans from compute infrastructure and semiconductors to cloud platforms, foundation models, data systems, and application layers. Its increasing modularity allows different actors to specialize across layers, accelerating innovation while reducing barriers to entry.

At the foundation, compute infrastructure has emerged as a critical bottleneck. High-performance chips and advanced semiconductor manufacturing technologies, dominated by players such as NVIDIA (United States) and ASML (Netherlands), are essential for training and deploying large-scale AI models. This concentration creates structural dependencies, making access to compute a strategic resource comparable to energy or raw materials in traditional industries.

Above this layer, cloud infrastructure has become the backbone of AI deployment, enabling scalable access to computing resources and models. Hyperscale providers such as Microsoft (United States) and Amazon (United States) offer integrated environments that allow organisations to develop and deploy AI applications without owning underlying infrastructure. At the same time, European cloud providers such as OVHcloud (France) and Scaleway (France) are positioning themselves around sovereign and accessible solutions, particularly for SMEs.

At the core of the stack, foundation models have emerged as the dominant paradigm, enabling general-purpose capabilities across industries. These models serve as reusable intelligence layers that can be adapted to multiple use cases, significantly reducing development time and cost. The ecosystem is becoming more diversified, with European players such as Mistral AI (France) and Aleph Alpha (Germany) developing differentiated approaches focused on efficiency, transparency, and regulatory compliance.

The evolution of the technology stack is also characterized by increasing accessibility. Platforms such as Hugging Face (United States/France) and Dataiku (France) are democratizing access to AI development tools, while MLOps (Machine Learning Operations) and LLMOps (Large Language Model Operations) frameworks enable organisations to manage the full lifecycle of AI systems, from development to deployment and monitoring. These tools are critical for scaling AI adoption, as they reduce complexity and ensure reliability in production environments.

At the same time, the emergence of multimodal and agentic AI systems is transforming how AI operates within organisations. These systems combine perception, reasoning, and action, enabling the execution of complex workflows and supporting more autonomous decision-making processes. This evolution marks a shift toward AI systems that are not only responsive but also capable of orchestrating tasks across multiple tools and environments.

Overall, the convergence of these technological developments is leading to a more modular, scalable, and accessible AI stack, enabling organisations of all sizes to leverage advanced capabilities and integrate AI into their operations.

Building on these technological foundations, AI is now diffusing across industries as a horizontal productivity layer, transforming both operational processes and knowledge work. However, adoption remains uneven, reflecting differences in digital maturity, data availability, and sector-specific use cases.

In manufacturing, AI is widely used for predictive maintenance, quality control, and process optimization, improving efficiency and reducing downtime. In service-oriented sectors, AI enhances customer interactions, automates workflows, and supports decision-making. In knowledge-intensive domains, generative AI tools are enabling content creation, data analysis, and strategic planning, fundamentally reshaping how work is performed.

This dual impact, on both operational and cognitive processes, highlights the versatility of AI as a general-purpose technology. AI is not only automating repetitive tasks but also augmenting human capabilities, enabling workers to focus on higher-value activities. As a result, organisations are redesigning processes around AI, rather than simply integrating it into existing systems.

At the same time, AI adoption is strongly correlated with data intensity and digital maturity. Sectors such as information and communication and professional services are leading the transformation, while more traditional industries are adopting AI more gradually. This uneven diffusion reflects both structural constraints and varying levels of readiness across sectors.

Nevertheless, the overall trajectory points toward a progressive expansion of AI use cases, driven by increasing accessibility, improved tools, and growing awareness of the value of AI. As organisations continue to integrate AI into their operations, the focus is shifting from experimentation to measurable impact, particularly in terms of productivity gains, cost reduction, and improved decision-making.

Ultimately, the impact of AI depends on how effectively organisations integrate these technologies into workflows, decision-making processes, and organisational structures. AI is increasingly recognized as a core driver of productivity, but its benefits remain unevenly distributed across company sizes and sectors.

Large enterprises tend to capture a disproportionate share of early gains due to greater access to resources, data, and technical expertise. In contrast, SMEs face challenges related to awareness, integration complexity, and change management. However, the increasing availability of accessible tools and platforms is gradually reducing these barriers, enabling SMEs to adopt AI more effectively.

Evidence from real-world deployments highlights the tangible impact of AI on productivity. AI-powered tools can significantly improve efficiency, reduce operational costs, and enhance decision-making across functions. This is particularly relevant for SMEs, where AI can act as a “force multiplier,” compensating for limited resources and enabling more efficient operations.

This trend is further reinforced by findings from the SRM survey, which provide a data-driven perspective on AI adoption across manufacturing and logistics. The survey indicates a strong acceleration in adoption, with a majority of companies either exploring or implementing AI solutions, and a significant share planning to increase or maintain investment levels. Importantly, organisations already report measurable benefits, including improvements in performance, cost reduction, and enhanced operational efficiency. These findings confirm the transition from experimentation to structured adoption, where AI is increasingly viewed as a concrete lever for competitiveness and resilience.

At the organisational level, the integration of AI requires new capabilities in terms of governance, skills, and process design. The transition toward AI-driven operations involves not only technological adoption but also cultural and organisational change. Companies must develop the ability to identify relevant use cases, integrate AI into workflows, and manage associated risks.

Looking ahead, the evolution of the AI economy will be shaped by the interplay between technological innovation, infrastructure development, and organisational transformation. Competitive advantage will increasingly depend on the ability to effectively integrate AI into value creation processes, rather than simply adopting the technology.

Taken together, the developments described in this report highlight the emergence of a new phase in the AI economy, where technological capabilities, economic dynamics, and organisational transformation converge. AI is no longer a standalone innovation but a foundational component of modern digital infrastructure, shaping how organisations operate and compete.

For both large enterprises and SMEs, the key challenge is not access to technology but the ability to deploy it effectively. As AI becomes more accessible and integrated into everyday tools and workflows, the focus is shifting toward execution, integration, and value creation. Organisations that succeed will be those that can align AI capabilities with their strategic objectives and embed them deeply into their operations.

In this context, AI represents both a transformative opportunity and a strategic imperative, redefining the foundations of productivity, competitiveness, and innovation across the global economy.



# INTRODUCTION



# PRINCIPAL ABBREVIATIONS

|                  |                                                                               |                   |                                                       |
|------------------|-------------------------------------------------------------------------------|-------------------|-------------------------------------------------------|
| <b>AI</b>        | <i>Artificial Intelligence</i>                                                | <b>CSRD</b>       | <i>Corporate Sustainability Reporting Directive</i>   |
| <b>AIoT</b>      | <i>Artificial Intelligence of Things</i>                                      | <b>GDPR</b>       | <i>General Data Protection Regulation</i>             |
| <b>LLM</b>       | <i>Large Language Model</i>                                                   | <b>EUDR</b>       | <i>European Union Deforestation Regulation</i>        |
| <b>STT</b>       | <i>Speech-to-Text</i>                                                         | <b>SOC 2</b>      | <i>Service Organisation Control Type 2</i>            |
| <b>TTS</b>       | <i>Text-to-Speech</i>                                                         | <b>ESG</b>        | <i>Environmental, Social, and Governance</i>          |
| <b>ML</b>        | <i>Machine Learning</i>                                                       | <b>LCA</b>        | <i>Life Cycle Assessment</i>                          |
| <b>CRM</b>       | <i>Customer Relationship Management</i>                                       | <b>CSR</b>        | <i>Corporate Social Responsibility</i>                |
| <b>ERP</b>       | <i>Enterprise Resource Planning</i>                                           | <b>GNSS</b>       | <i>Global Navigation Satellite System</i>             |
| <b>EAM</b>       | <i>Enterprise Asset Management</i>                                            | <b>ADS-B</b>      | <i>Automatic Dependent Surveillance–Broadcast</i>     |
| <b>CMMS</b>      | <i>Computerized Maintenance Management System</i>                             | <b>ESA</b>        | <i>European Space Agency</i>                          |
| <b>APS</b>       | <i>Advanced Planning and Scheduling</i>                                       | <b>HR</b>         | <i>Human Resources</i>                                |
| <b>RFQ / RFx</b> | <i>Request for Quotation / Request for (Information, Proposal, Quotation)</i> | <b>R&amp;D</b>    | <i>Research and Development</i>                       |
| <b>ICP</b>       | <i>Ideal Customer Profile</i>                                                 | <b>IP</b>         | <i>Intellectual Property</i>                          |
| <b>API</b>       | <i>Application Programming Interface</i>                                      | <b>OSNMA</b>      | <i>Open Service Navigation Message Authentication</i> |
| <b>KYC</b>       | <i>Know Your Customer</i>                                                     | <b>RISC V</b>     | <i>Reduced Instruction Set Computer – Five</i>        |
| <b>CX</b>        | <i>Customer Experience</i>                                                    | <b>SRAM</b>       | <i>Static Random Access Memory</i>                    |
| <b>CCaaS</b>     | <i>Contact Center as a Service</i>                                            | <b>GPU</b>        | <i>Graphics Processing Unit</i>                       |
| <b>SaaS</b>      | <i>Software as a Service</i>                                                  | <b>AWS</b>        | <i>Amazon Web Services</i>                            |
| <b>PaaS</b>      | <i>Platform as a Service</i>                                                  | <b>SME / SMEs</b> | <i>Small and Medium-sized Enterprise(s)</i>           |
| <b>IoT</b>       | <i>Internet of Things</i>                                                     | <b>SRM</b>        | <i>Supplier Relationship Management</i>               |
| <b>IDP</b>       | <i>Intelligent Document Processing</i>                                        | <b>AR</b>         | <i>Augmented Reality</i>                              |
| <b>FMIS</b>      | <i>Farm Management Information System</i>                                     | <b>VR</b>         | <i>Virtual Reality</i>                                |
| <b>GTFS-RT</b>   | <i>General Transit Feed Specification – Real Time</i>                         | <b>EEG</b>        | <i>Electroencephalogram</i>                           |

#### **ABOUT INTESA SANPAOLO INNOVATION CENTER:**

Intesa Sanpaolo Innovation Center is the company of Intesa Sanpaolo Group dedicated to innovation: it explores and learns new business and research models and acts as a stimulus and engine for the new economy in Italy. The company invests in applied research projects and high potential start-ups, to foster the competitiveness of the Group and its customers and accelerate the development of the circular economy in Italy.

Based in the Turin skyscraper designed by Renzo Piano, with its national and international network of hubs and laboratories, the Innovation Center is an enabler of relations with other stakeholders of the innovation ecosystem - such as tech companies, start-ups, incubators, research centres and universities - and a promoter of new forms of entrepreneurship in accessing venture capital. Intesa Sanpaolo Innovation Center focuses mainly on circular economy, development of the most promising start-ups, venture capital investments of the management company Neva SGR and applied research

For further detail on Intesa Sanpaolo Innovation Center products and services, please contact [businessdevelopment@intesasanpaoloinnovationcenter.com](mailto:businessdevelopment@intesasanpaoloinnovationcenter.com)

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