TREND RADAR
ENG OUTLOOK 2025

The Eng Group's perspective
on key business & tech trends.

Summary

We are at the beginning of a new era in which technology will seamlessly integrate into concrete solutions.

Maximo Ibarra
CEO Engineering Group
ENGINEERING
in Maximo Ibarra

01 Intro

2025 looks set to be a year in which, according to various market indicators, organizations and businesses will focus on consolidation and the creation of solid foundations for increasingly sustainable growth.

We are at the beginning of a **new era** in which technology, much like electricity a century ago, will seamlessly integrate into concrete solutions.

All companies will pursue three fundamental imperatives:

- continuously **improving** their ways of operating;
- **growing** economically and in terms of essential performance;
- **enabling** new ways of working and producing, with a focus on sustainability and medium-to-long-term impact.

"**Impact**" is a word that has been widely used in recent months. **For us at Eng, it represents the measure by which we gauge our relevance**: participating in the most important conversations, contributing to solving major global challenges, and acting on the frontlines where details and vision make the difference.

In recent months, we have witnessed a historic shift: **digital technology has moved from being a simple process optimizer to a creativity enabler**. Advanced technologies can be used to reduce costs, generate new revenue streams, create new jobs that promote inclusion, strengthen operational resilience, and build new business models. Technologies such as Cloud enable, cybersecurity protects, and Artificial Intelligence and Digital Twin push the boundaries of innovation, not only improving efficiency but **shaping creative visions and ideas**, thus **opening new possibilities in imagining and realizing our future**, as well as **experiencing our present**.

This change is taking place in an era where humanity faces unprecedented challenges that concern us all closely: pollution, resource management, overpopulation, digital citizenship, and access to healthcare.

We aim to tackle these challenges by leveraging our decades of experience and our willingness to explore the opportunities offered by new technologies, making the best insights tangible to grow and **create a better future**. At Eng, we have long invested in research and already boast an extensive portfolio of proprietary digital platforms; we will continue to expand and strengthen these assets to enable our clients to drive innovation, offering them greater control over technology and the entire production and management chain.

Moreover, we collaborate with hyperscaler partners to migrate services to next-generation systems.

The dialogue around technology has long since shifted: we no longer simply ask, "What have you done?" but now look ahead and ask, "What can we do together?"

For this reason, more than ever, the issue of responsibility toward stakeholders and partners is crucial to building solid mutual trust, mitigating potential risks, and promoting fair and sustainable development.

Innovation happens when technology shapes visions. Humankind has always dreamed of flying, but it remained a dream for millennia until technology made it a reality, forever changing the way we think and act.

Today, we find ourselves at exactly this moment: **vision and technology are coming together**, and it is essential to make these projects tangible to **generate a positive impact and real progress**.

02 People

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WHAT STRATEGIES WILL BE CRITICAL TO ATTRACT TOP TECH TALENT IN 2025?

Strategies to attract top tech talents in 2025 will have to be threefold: **empower our internal tech experts** to act as role models and become our best ambassadors in the wider tech community, sharing their experiences, capabilities and use cases with their network and peers; **offer the opportunity to contribute to the design of innovative solutions** in a fast-paced and constantly evolving company. A dynamic environment like ours provides space for innovators to leave their mark and shape the future of technology.
Lastly, but not least, **provide clear career paths, combined with continuous learning opportunities** - on the job and through training. This will be ensured through our internal Learning Academy, which every year delivers accelerated development programs to nurture and grow top talents and equips individuals with the skills and expertise needed to thrive in an ever-evolving tech landscape.

HOW CAN COMPANIES ENSURE DIVERSITY, EQUITY AND INCLUSION IN THEIR HIRING PROCESS?

Ensuring diversity, equity and inclusion in the hiring process requires to act at multiple levels across all stages of the candidate experience. Our managers and employees have been going through a mandatory training path to learn how they can contribute to creating an inclusive working environment.

We use gender-neutral language for job postings and apply standardized interview processes to mitigate biases, ensuring members of the interview panels represent different genders. Our Academy programs offer specialized technical training which prepare participants for their entry roles in the company. These programs are designed to include individuals with diverse backgrounds, such as women from both STEM and non-STEM fields, and people with disabilities.

HOW WILL HYBRID WORK MODELS INFLUENCE HIRING STRATEGIES?

Eng has been a strong promoter of hybrid working well before the Covid19 pandemic. Our people work to achieve objectives and are evaluated based on their achievements and behaviors. This approach is key to foster a culture of accountability and empowerment. Talents of all generations, especially GenZ, expect a hybrid working model and consider it the only relevant option today and in the future.

Our hybrid working approach goes beyond the contractual provisions and allows managers to increase the number of remote working days according to specific business needs. We realize that, as with any change, increased flexible and remote working have been bringing new complexities to the role of people managers. We have responded with dedicated training modules and guidelines to effectively lead geographically dispersed teams.

03 Legal

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WHAT EMERGING LEGAL CHALLENGES WILL DIGITAL TRANSFORMATION POSE IN 2025?

The main legal challenge in digital transformation will be posed above all by **Artificial Intelligence** that will revolve around two main aspects: **regulatory compliance** and **intellectual property protection**. AI-powered products must adhere to an ever-changing legislative environment that includes not only the AI Act, but also privacy and information securities regulations and directives. Companies will need to ensure AI systems are safe, explainable, transparent and do not violate data subjects rights. Moreover, AI raises complex issues regarding the ownership of creations and inventions made by AI systems.

Questions regarding IP rights ownership for AI-generated inventions and the use of existing algorithms will require clear legal contractual frameworks to protect innovations. Therefore, legal frameworks will need to adapt quickly to ensure both **innovation** and **protection**.

In addition to AI, this year we will continue addressing challenges that began in the previous one, such as **NIS2** and **DORA** compliance. This is essential not only to ensure the company adheres to such legislation but also to strengthen protection against one of the most critical issues

in digital transformation: **cyber threats**; as more systems become interconnected, cybercrime and data breaches will remain a major concern.

HOW CAN BUSINESSES STAY COMPLIANT WITH EVOLVING GLOBAL DATA REGULATIONS?

Given the continually evolving regulations applicable to entities operating in new technologies, the challenge for business to remain aligned with that regulatory environment is ever increasing and constantly evolving.
The approach that the business must take cross-functionally in order not to be adversely affected by the accelerating regulatory evolution, while at the same time continuing to be at the forefront and competitive, begins with the **culture of awareness**; timely knowledge and awareness of regulatory evolutions and innovations affecting our business allows us to make the best decisions in the shortest possible time.

Also crucial is the continuous **open discussion** and willingness for **constructive dialogue** among the different functions potentially involved, including business, legal, compliance and information security, which allows bringing different categories of interests, mindset and decision drivers to the table. This circumstance enables informed decisions that duly take into account all useful factors to be considered.

HOW CAN A PROACTIVE LEGAL DEPARTMENT SUPPORT AND PROTECT BUSINESS AS IT MOVES FORWARD IN NEW AND OFTEN UNCHARTERED TERRITORIES?

The industry in which we operate, precisely because it is strongly advanced, is at the same time highly challenging with an extremely complex regulatory framework that is still being defined.

A proactive legal department must **promote** on a recurring basis project to **study the impact** of new regulations, either approved or still in process, on the business in which it operates and ensure **proper and timely implementation**; such analyses cannot disregard a constant interaction with business and developers, which is essential to understanding the extent to which new regulations affect our markets.
The department is therefore expected to be able to **understand**, **monitor** and **translate** the potential of these innovations into concrete solutions, harmonizing the evolving practice with the existing regulatory environment and anticipating/managing potential risks to best protect its organization, especially at a time of great transformation such as the one we are experiencing today.
It is therefore critical to try to create a **safe environment** and a **culture of awareness**.

04 Government

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Key Trends

17

Bn $

THE PROJECTED GOVERNMENT SOFTWARE AND APPLICATIONS MARKET WORLDWIDE BY 2025.

80

Bn $

GLOBAL GOVERNMENT CLOUD MARKET SIZE BY 2030.

273.5

Bn $

WORLDWIDE CYBERSECURITY REVENUE BY 2028.

Source: the data shown represents our processing of information from multiple sources

KEYWORDS **+ AI + Cloud First + Citizen Experience + Digital Citizenship + Data Governance**

WHAT WILL BE THE MAIN TECHNOLOGICAL DEVELOPMENTS IN 2025 INFLUENCING THE DIGITALIZATION OF PUBLIC SERVICES, AND HOW WILL THEY IMPROVE CITIZEN ACCESS?

It will be essential to continue investing in **cloud integration** and **cybersecurity**. AI, in turn, will play a pivotal role in making public services increasingly personalized, universally accessible anytime and anywhere, fast, and secure.

These advancements will positively impact the reduction of operational costs, enhance **user experience** by making it more intuitive, and optimize administrative processes. In other words, they will foster digital inclusion and improve citizen satisfaction by, for instance, reducing waiting times and simplifying interactions with public administration.

While there are still delays in these critical areas, there is a clear awareness that change is underway, and we have all the tools needed to drive this transformation rather than merely adapt to it.

HOW WILL GOVERNMENTS USE AI, BIG DATA, AND PREDICTIVE ANALYTICS TO OPTIMIZE LAND MANAGEMENT AND PROTECTION, LONG-TERM PLANNING, AND NATIONAL SECURITY?

Let's start with a premise: monitoring alone is not enough. For governments, it is essential to prevent potential issues and anticipate phenomena, such as climate events, to implement timely and targeted policies.

Today, this is already achievable through **Digital Twin** technology, leveraging advanced Artificial Intelligence models and data analytics.

Extracting value from big data collected from diverse sources - sensors, satellites, and IoT devices - allows real-time assessment of territorial conditions, resource usage, waste prevention, and intervention planning.

The further development and large-scale adoption of innovative technologies will enhance the protection of critical infrastructures and at-risk areas, identify potential physical and cyber threats, and, more broadly, ensure public safety.

This requires adopting a new, proactive, and data-driven approach for more resilient and responsible governance.

WHAT IS ENG'S ROLE, AND HOW DOES IT SUPPORT PLAYERS IN TACKLING UPCOMING CHALLENGES?

We go beyond innovation, digitalization, and process and service simplification by offering concrete solutions that promote social cohesion, contribute to economic and cultural development, and improve resource management. For over 30 years, we have supported Italian public entities in this journey, and our distinctive feature lies in our ability to create modular solutions co-designed with stakeholders.

By combining existing data and systems with innovative technologies and platforms, we consistently place people at the center of innovation. We approach the future with creativity, seizing opportunities offered by technological evolution to address emerging challenges.

Facts & Figures

Government / At a Glance

30+

YEARS OF EXPERIENCE

150+

CLIENTS IN CENTRAL AND LOCAL GOVERNMENT

700

SPECIALISTS

05 Healthcare

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Key Trends

256.7

Bn $

FORECAST GLOBAL DIGITAL HEALTH REVENUE BY 2027.

18.34

Mln

THE NUMBER OF USERS IN THE DIGITAL HEALTH MARKET IN ITALY FORECASTED FOR 2029.

280

Bn $

THE ESTIMATED GLOBAL TELEMEDICINE MARKET VALUE BY 2025.

Source: Statista

KEYWORDS **+ Telemedicine + Digital Pathology + Healthcare Analytics + AI + PNRR**

WHAT IS THE CURRENT STATE OF TELEMEDICINE IN ITALY, AND WHAT SHOULD WE EXPECT BY 2025?

2025 will be a turning point with the large-scale rollout of services. The **National Telemedicine Platform (NTP)**, developed for Agenas within the framework of the NRRP and managed together with Almaviva, will ensure the governance of remote care processes through interoperability with solutions designed for service delivery. In this context, 2025 will see the startup of **Regional Telemedicine Infrastructures (RTI)**, which will drive the adoption of essential remote services: telemonitoring, televisits, teleconsultations, and teleassistance.

In this critical phase, we will play a significant and highly responsible role, being the primary contractors - together with Intellera and Arthur D. Little - for the implementation of the RTI. Our platform, **ellipse RemoteCare**, will be adopted in eight regions, where it will contribute to reshaping community healthcare, thereby reducing the burden on hospital networks.
To conclude, if 2025 marks a turning point for Telemedicine, we will continue to be key players in this field, expanding our presence from the national level of the healthcare system, with the NTP, to the regional/local level with the RTI.

WHAT INNOVATIVE SOLUTIONS WILL EMERGE TO ADDRESS THE GROWING DEMAND FOR HEALTHCARE SERVICES?

Beyond telemedicine, data analysis, including advanced forms enabled by AI, will undoubtedly emerge as a key player. These capabilities elevate application solutions for the digitalization of healthcare system processes—clinical, administrative, and managerial—that we are extensively implementing, supported by the NRRP.
Elevating means embedding automation, transformation, and predictive/simulation functions typical of AI into these solutions, leveraging its benefits across all supported processes: **scheduling systems** (e.g., Digital Twin for reducing waiting times), **diagnostics** (e.g., digital pathology), **care** and **assistance** (e.g., bots for telemedicine users), and **administrative** and **managerial processes** (e.g., Embedded Analytics for optimizing the procurement of drugs and medical devices).

At Eng, we are at the forefront of a massive three-year investment plan aimed at equipping our **ellipse** solutions with these distinctive and innovative features.

WHAT ROLE DOES ENG PLAY IN THIS RAPIDLY EVOLVING CONTEXT?

We are a Technology Group that has been supporting the national healthcare system for over 20 years with a strategy

focused on all processes and their end-to-end digitalization. This enables us to be a partner - not just a supplier - to approximately 200 clients, thanks to our **multidisciplinary teams** and our **unmatched leadership in offered solutions and project capabilities**.

These traits of our DNA have been further refined and strengthened, with contemporary relevance for the era of digital health: adopting agile approaches for the fast yet expert implementation of the digital solutions most central to NRRP initiatives (e.g., Electronic Medical Records); designing and delivering entirely "new" and contemporary solutions, starting from the basic functional components of our ellipse platform, to support processes in today's community healthcare (e.g., COT); and implementing data analysis solutions to ensure full process control and continuous improvement in every area of care and assistance.

Facts & Figures

Healthcare / At a Glance

60%
OF HOSPITALS USE OUR SOLUTIONS

1,2M
ADMISSIONS MANAGED

80M
HEALTHCARE APPOINTMENTS MANAGED (YEARLY AVERAGE)

57M
LABORATORY TESTS

06 Augmented City

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Key Trends

165.8

Bn $

ESTIMATED GROWTH OF THE GLOBAL SMART CITIES MARKET BY 2028.

4.257

Mln

SMART CITY CONNECTIONS WORLDWIDE.

115.33

Bn $

SMART CITY MARKET REVENUE WORLDWIDE BY 2030.

Source: Statista

KEYWORDS **+ AI + Digital Twin + NRRP + Public-Private Partnership + Smart Lands**

HOW WILL THE CONCEPT OF A CITY EVOLVE IN 2025?

2025 will be a pivotal year. The National Recovery and Resilience Plan and targeted investments over the past four years have laid the groundwork for a paradigm shift in city management and development. Urban centers are increasingly interconnected ecosystems, and the emergence of **smart lands** highlights the importance of transcending administrative boundaries and fostering networks to expand resources. This approach aims to enhance citizens' quality of life through services that meet their expectations while preventing depopulation in certain areas and the resulting economic slowdown.

Now, there is a need to ensure continuity in these initiatives and scale up best practices, addressing the still-existing digital divide. For 2025, I envision further progress towards cities that are not only technologically advanced but also more open to cooperation and sharing, essential for tackling the challenges ahead.

WHICH TECHNOLOGIES WILL HAVE THE GREATEST IMPACT ON REGIONAL DEVELOPMENT?

New technologies, such as **Artificial Intelligence** and **Digital Twins**, have the potential to elevate local authorities to a new level of efficiency, streamlining complex administrative processes.
Data analysis becomes crucial for understanding and mapping territories, offering increasingly personalized services, and enabling timely interventions through predictive logic.

Achieving this requires a strategic vision and specialized expertise. While municipalities have shown commitment to embarking on significant digitization processes, gaps remain in critical areas such as **cloud migration**, citizen experience, data platform adoption, and **cybersecurity**.

Strategic collaboration with the private sector is essential to provide continuously updated know-how and ready-made solutions that do not need to be developed from scratch.

HOW WILL ENG GROUP SUPPORT MUNICIPALITIES, AND WHICH STRATEGIES WILL BE KEY TO FACING THE CHALLENGES OF THE NEW YEAR?

We support local administrations with tailored, innovative, and sustainable solutions, recognizing that technology is

not the ultimate goal of an organization's efforts but rather a tool to improve its services. Public management should focus on other priorities, such as defining objectives, governance, and performance monitoring.

In this context, **public-private partnerships** act as accelerators, enabling authorities to concentrate on the strategic aspects of digital transformation while leaving private partners responsible for implementing interventions and managing services.

We can be considered pioneers of this approach, which is already being successfully applied in many areas across the country. We will continue this path, leveraging technology as a driver of real progress.

Facts & Figures

Augmented City / At a Glance

1200+

CITIES FOR WHICH, IN OUR HISTORY, WE'VE DEVELOPED PROJECTS & SERVICES

45%

OF THE TOP 100 ITALIAN MUNICIPALITIES USE OUR SOLUTIONS

750

PROFESSIONALS FROM MUNICIPIA, AN ENG GROUP COMPANY FOR THE DIGITAL TRANSFORMATION OF CITIES

500+

CITIES ARE OUR CLIENTS

07 Financial Services

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Key Trends

97

Bn $

ESTIMATED VALUE OF THE FINANCIAL SECTOR'S AI SPENDING WORLDWIDE BY 2027.

63.9

%

INCREASE IN THE TRANSACTION VALUE OF NEOBANKS WORLDWIDE BY 2028.

848

%

INCREASE IN THE NUMBER OF OPEN INSURANCE USERS GLOBALLY BY 2032.

Source: Statista

Financial Services

KEYWORDS **+ Digital Currency + Embedded Finance + Hyper-customization + Cost-cutting**

WHAT STRATEGIC AND MARKET POSITIONING CHOICES WILL BANKS AND INSURANCE COMPANIES FACE IN 2025?

The year 2025 opens with **extraordinary consolidation operations** by both large market players and smaller financial institutions. Ongoing mergers are also outlining the development of hubs aimed at acquiring expertise and resources in specific areas e.g. credit. In parallel, there is also a trend among European and international institutions to strengthen their positioning in **wealth management** through the acquisition of asset management entities.

This means that the focus of investment over the next 18-36 months may be entirely on redesigning the large industrial agglomerations of Italy's largest banks and insurance companies.
The **evolution of the infrastructure** and/or the **renewal of the information system** of the aggregating institutions will counterbalance the great synergies expected in the institutions destined to be integrated.

In these cases, a blockage in the demand for evolved products and services in the world of channels, credit and payments is certainly to be expected.
However, the banking system is in any case affected by large waves of adjustments to new regulations that generate substantial investments in due course and that must be carried out in any case even in the presence of extraordinary operations. Institutions focused on the organic development of their business will be those that will pursue innovation the most, generating a subsequent run-up by those today focused only on large files.

WHAT INNOVATIVE SOLUTIONS WILL BE IMPLEMENTED TO TRANSFORM THE CUSTOMER RELATIONSHIP BY LEVERAGING NEW TECHNOLOGIES?

Artificial intelligence will surely be one of the biggest areas of thought application and investment of economic resources. Although in the words of leading CEOs tangible benefits are not expected before 24-36 months, the attention and budgets that this topic is gradually focusing on are beginning to be visible. While still in 2024 actual spending on artificial intelligence systems and models was confined to experiments not necessarily linked to subsequent industrialization, we expect things to begin to change.

At present, the major applications appear to be in **knowledge management, process redesign and customer support services**. The main trends will be in the **management of core systems** of large institutions with the gradual **evolution of outsourcing offerings** for the small and medium-sized financial institutions segment. Transformations of credit and finance platforms are two short-to medium-term priorities. There is also great attention on channel management platforms (especially in the corporate world).

HOW CAN ENG SUPPORT PLAYERS IN AN INDUSTRY THAT IS CONSTANTLY CHANGING IN TERMS OF REGULATION, TECHNOLOGY, STAKEHOLDERS, AND THE BUSINESS ITSELF?

At Eng we steadily work on the expertise and professional excellence of our people, developing ever more in-depth and up-to-date know-how.

We pay great attention to the **specialized and continuous training** of our teams, so that they are always abreast of regulatory, technological and market developments.

We manage our internal processes effectively and in a structured manner, with a focus on **optimization** and **efficiency**, putting the intelligence, passion and talent of each professional at the complete service of the client.

The problem is not simply studying the evolution of the market or merely following its current trends; the real challenge lies in the ability to organize, coordinate and enhance **excellent, multidisciplinary skills**, putting them at the service of each client's specific goals and priorities with a **personalized, proactive and results-oriented approach**.

Facts & Figures

Financial Services / At a Glance

4000+
PROFESSIONALS

45%
ADVISORY SERVICES OUT OF TOTAL ACTIVITIES PROVIDED

4
PROPRIETARY PLATFORMS

30%
OF REVENUES ABROAD

08 Enterprise

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The global market trends for the next few years show promising growth and significant changes in various sectors (Industry, Energy & Utlities, Retail & Fashion, Tranportation, Media & Communication, ...) and **the main macro-trends** that are driving this transformation include: **increased adoption of new technologies** (86.2%), **wider access to digital** (86.1%), and **significant implementation of ESG standards** (80.6%).

The latest figure clearly indicates that **growth cannot disregard impact**: consider that global electricity consumption in 2050 will range between 52,000 and 71,000 terawatt-hours (depending on the energy transition scenario). At the same time, the global renewable energy market will continue to grow, as will the electric vehicle market, which is expected to reach an estimated size of approximately $1.08 trillion by 2028.

Another key aspect of the emerging landscape concerns **Artificial Intelligence**, which is becoming increasingly

strategic for businesses and capable of generating solutions that go beyond mere cost optimization. AI-based solutions can support companies in reengineering production processes to make them more efficient and sustainable.

However, to successfully implement Artificial Intelligence, a practical and operational approach is essential: **identifying the most promising use cases and analyzing how insights derived from data can contribute to creating new business models**.

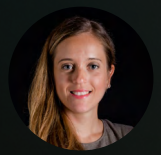
In **Manufacturing**, for example, the adoption of AI could increase labor productivity growth by 1.5 percentage points over 10 years. However, without a digital backbone an Integrated Digital Enterprise where, for instance, the PLM communicates with the MES and the ERP achieving real change cannot be expected.

In the **Media & Communication** sector, as well as in **Retail & Fashion**, the implementation of solutions like **chatbots and virtual assistants** can support customer management throughout all stages of the customer journey.
Similarly, 65% of leaders in the **Transportation** sector consider chatbots, virtual assistants, and customer service to be the most valuable AI applications, alongside **logistics management**.

The ability to identify new indicators quickly and easily, thanks to data collected from customer interactions, enables fast decision-making and supports the proper positioning of new products and services in response to sudden shifts in consumer preferences or general market conditions.

A key factor in the adoption of AI is undoubtedly t**he choice of a technology partner who must have an in-depth understanding of the field** and the ability to select the most suitable solutions for integrating AI into existing processes. At the same time, the partner should assist organizations in **developing a culture of security** at every organizational level.

09 ESG



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WHAT SUSTAINABILITY TRENDS WILL SHAPE THE TECH INDUSTRY IN 2025?

By 2025, sustainability will significantly shape the tech industry. Key trends include the adoption of **circular economy models**, with electronic equipment designed for longevity and recycling, while **energy-efficient hardware** and **renewable-powered data centers** will become a must.
AI and machine learning will optimize resource usage and drive decarbonization efforts. **Sustainable software development** will focus on energy-efficient code, while blockchain will ensure supply chain transparency and ethical sourcing. **ESG-focused investment** will boost green tech startups, while **regulatory pressures**, such as carbon taxes and emissions trading, will push companies to meet stricter environmental standards.

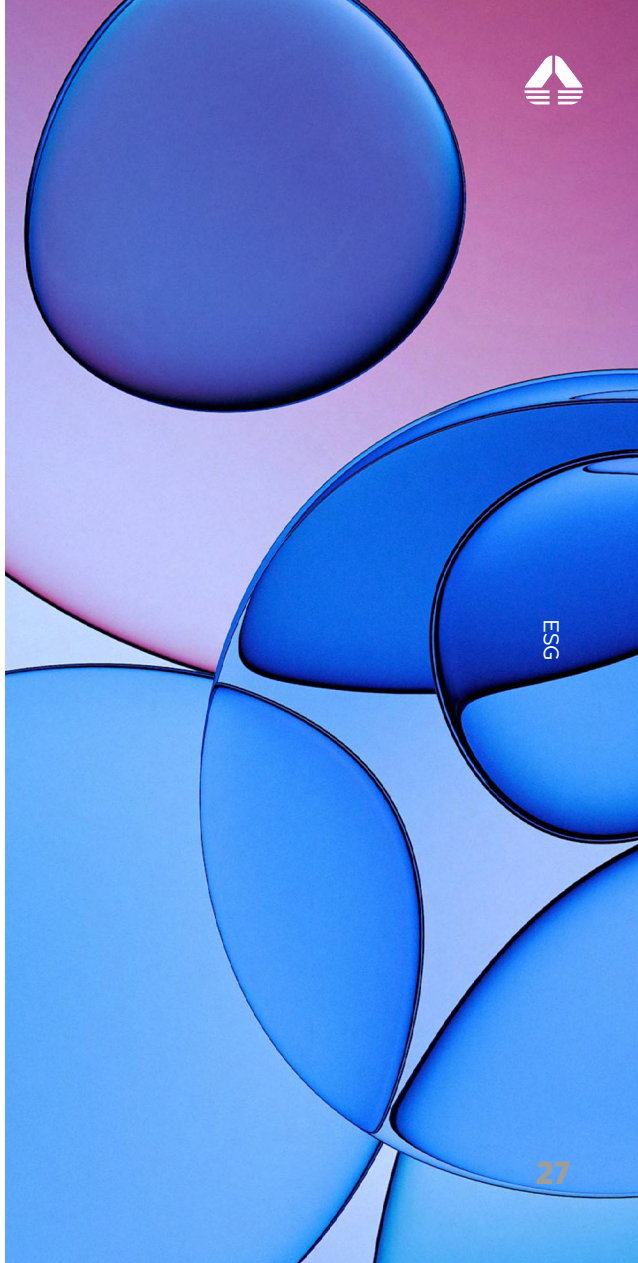
WHAT CHALLENGES DO TECH COMPANIES SUCH AS ENG FACE IN MEETING ESG GOALS?

Tech companies face several challenges in meeting ESG goals. Environmentally, they struggle with high **energy consumption linked to data centers**, and managing **e-waste** generated by hardware lifecycles.
Social challenges include ensuring **fair labor practices** across global supply chains, addressing data privacy concerns, and improving diversity and inclusion within the workforce. Governance challenges include maintaining **transparency in ESG reporting**, adapting to **evolving regulations**, and promoting **ethical decision-making in the use of AI and data**. Balancing business growth with sustainable practices and ethical considerations often requires significant investment and operational changes, making it a long-term commitment for tech companies.

HOW CAN ESG PRINCIPLES BE INTEGRATED INTO DIGITAL BUSINESS DEVELOPMENT?

Companies can **design energy-efficient products** and **leverage digital tools** like blockchain for transparent supply chains and to ensure sustainable sourcing of raw materials.

To address social factors, tech companies can adopt **ethical AI practices** and **safeguard data privacy**. Additionally, digital platforms can be used to **track** and report **real-time ESG performance**, improving accountability.



10 Energy & Utilities

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Key Trends

364

Mln

PRIMARY ENERGY CONSUMPTION IS FORECAST TO REACH 364 MILLION BARRELS OF OIL EQUIVALENT PER DAY BY 2045.

71k

Twh

GLOBAL ELECTRICITY CONSUMPTION WILL RANGE BETWEEN 52,000 AND 71,000 TWH IN 2050, DEPENDING ON THE ENERGY TRANSITION SCENARIO.

2000

Mld $

GLOBAL RENEWABLE ENERGY MARKET IS EXPECTED TO CONTINUE ITS UPWARD GROWTH OVER THE NEXT YEARS AND IT WILL REACH OVER 2 TRILLION U.S. DOLLARS BY 2030.

Source: Statista

KEYWORDS **+ GenAI + Digital Twin + IT/OT + Composable Platform + Renewable Energy Communities**

WHAT ARE THE MAIN TRANSFORMATIONS AND INNOVATIONS EXPECTED IN THE ENERGY & UTILITIES SECTOR AND THE WATER SECTOR IN 2025?

It is undeniable that we are facing a phase of profound transition and transformation affecting society and production chains from every perspective. By 2025, a significant acceleration of this process is expected, with the **widespread adoption of sustainable models**, strategic investments in **renewable energy**, the development of **new digital technologies**, and an increasing focus on the **circular economy** and the **hydrogen economy** as fundamental pillars to address climate challenges and ensure resilient growth.

The entire E&U sector is thus undergoing **a transformation that also includes an expansion of the service portfolio**: extra-commodities, Value-Added Services (VAS), Smart Cities, etc.Within this context, the **water sector** is gaining renewed prominence, driven primarily by climate change. **Climate change is significantly impacting the hydrological cycle, and Italy is among the countries most exposed to drought-related risks. Protecting water resources and improving their efficiency has become an absolute priority**.

At Eng, we firmly believe in the strategic importance of a precious resource like water for the country and the need for its technological evolution. We are working with our key partners to ensure digital innovation in the water sector through integrated platforms. **Digital Transformation is also essential for implementing the 5R model: Collection, Restoration, Reuse, Recovery, Reduction**.
In the E&U sector, technologies such as BIM, PLM, and Digital Twin are becoming increasingly common for supporting asset design and implementation, complementing well-established asset management practices. **An asset management approach focused on value enhancement** is necessary, starting with investment management using **asset investment planning tools** throughout the entire lifecycle. Additionally, digital tools supporting the ideation and design phases—such as those managing and valuing IP Rights—should not be overlooked. This also entails **strengthening control and automation across the production chain** through investments in Operational Technology (OT) and security.
The evolution of OT and the IT/OT convergence is a key factor for competitiveness and for grounding ESG strategies. The challenge lies in managing a **continuous transformation** driven by the energy transition and enabled by Digital. This is essential in an increasingly decentralized system but one that must keep people at the center.

HOW CAN AI CONTRIBUTE TO CREATING VALUE AND INNOVATION IN THE ENERGY & UTILITIES AND WATER SECTORS? WHAT NEW FRONTIERS CAN IT ENABLE?

The search for new solutions to address complex challenges such as climate change and the sustainable management of resources must incorporate AI in the E&U and Water sectors. Artificial Intelligence, encompassing the broad range of technologies classified under the AI category, amplifies the **knowledge and action potential of organizations and individuals alike**. It transforms and enhances decision-making processes on the one hand while providing new and powerful tools for innovation and creativity in R&D and the design of equipment, plants, and networks on the other.

AI technology, particularly GenAI, can **drive operational efficiency to help E&U operators maintain competitiveness**. This is critical in a context shaped by the dual challenges of managing the energy transition amid persistent geopolitical instability and addressing an aging workforce. With the development of GenAI, we will witness significant advancements in fraud detection models, increasingly personalized campaigns, error and service disruption prevention, resulting in lower service costs for users, and improved demand and supply forecasting.
In this evolving landscape, Artificial Iintelligence represents a crucial tool for driving innovation and sustainability while ensuring resilience and adaptability in the face of dynamic global challenges.

WHAT ROLE DOES ENG PLAY IN THE ONGOING

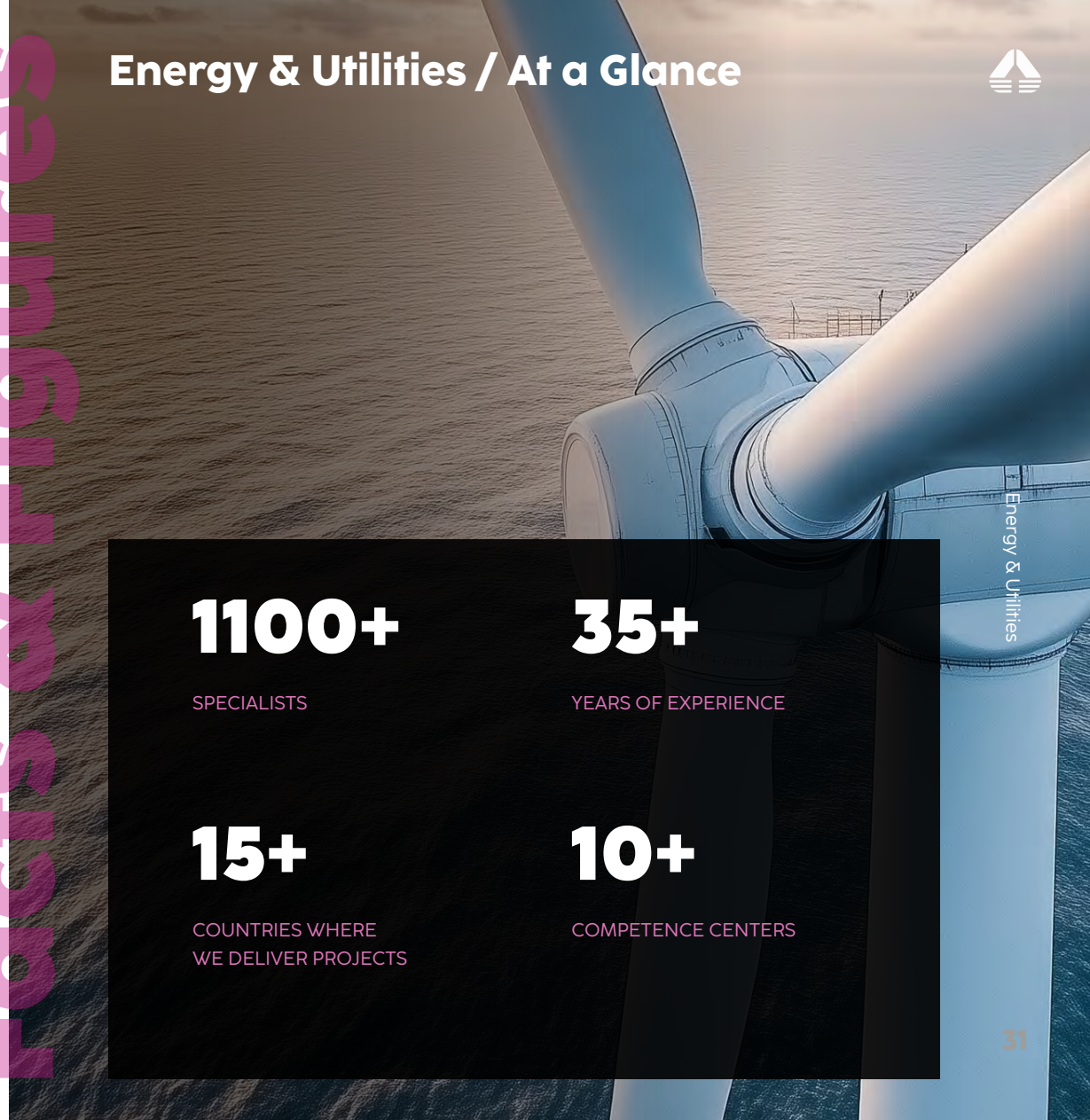
TRANSITION AND TRANSFORMATION PROCESSES?

Eng serves as a digital transformation partner, uniquely capable of combining cutting-edge technologies and platforms with deep, specialized knowledge of the E&U and Water sectors.
Engineering is active on multiple fronts: from driving digital transformation through tools and services for its clients and partners to engaging in research and development as a key partner in European-level research programs. Collaborating with our partners and a network of "Innovators," we bridge the gap between research and businesses. Concrete examples include our contribution to developing a platform for the local flexibility market (currently being piloted with major Utilities players) and the evolution of the market-leading Meter to Cash platform into the Neta Open Suite. This suite already offers a dedicated solution for the Renewable Energy Communities market and introduces the new MDM module.

Designing the transformative journey is just the first step. This must be followed by the practical implementation of solutions, increasingly shaped by a composable approach. Such an approach is especially effective in unlocking creative potential and leveraging ecosystems, while also ensuring efficiency in energy impact management, which must be monitored using appropriate analytical tools and methodologies.

Facts & Figures

Energy & Utilities / At a Glance



1100+
SPECIALISTS

35+
YEARS OF EXPERIENCE

15+
COUNTRIES WHERE
WE DELIVER PROJECTS

10+
COMPETENCE CENTERS

11 Industry

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Key Trends

1.43

%

ANNUAL GROWTH RATE OF MANUFACTURING OUTPUT IS EXPECTED TO BE 1.43% (CAGR 2024-2029).

10

Anni

THE ADOPTION OF AI COULD INCREASE US LABOUR PRODUCTIVITY GROWTH BY 1.5 PERCENTAGE POINTS OVER 10 YEARS.

24.31

%

THE AI INDUSTRIAL ROBOTICS MARKET IS EXPECTED TO GROW AT A 24.31% CAGR, REACHING $5.61 BILLION BY 2030.

Source: Statista

KEYWORDS **+ AI + Cybersecurity + Industrial Internet of Things (IIoT) + Digital Twin**

WHAT WILL BE THE MOST IMPORTANT MACRO-TREND FOR THE INDUSTRY IN 2025?

Let's start from a general fact: in 2025 AI will be everywhere, applied to everything, both from the technological point of view (in a cooperative manner with other technologies), and from a functional point of view for different business processes (**AI everywhere**).

Goldman Sachs predicts $1 trillion in investments in generative AI in the coming years, and analysts agree that Artificial Intelligence will be like WiFi: ambient, invisible, but omnipresent. Even in the industrial sector, there will soon be no area where it is not applied.
For example, while until recently we talked about Robotic Process Automation (RPA), technological evolution is now moving towards **Intelligent Process Automation (IPA)**, a technology that combines business process automation with Artificial Intelligence (AI) and Machine Learning (ML) tools to optimize, accelerate, and improve workflows, with undeniable benefits in terms of increased operational efficiency and cost reduction.
Previously, we had decision engines in applications that emulated humans, where decisions were ultimately made by a statistical model. Now, it is no longer the statistical model making decisions, but an AI agent.
Other examples include demand forecasting, where AI algorithms analyze historical data, market conditions, seasonality, and customer behaviors to predict sales, offering advantages in reducing costs related to overstocking or stock-outs.

Another important aspect is the application of AI to the **Supply Chain**, particularly regarding **Decision Science**, a decision-support system that is even more urgent in such a complex historical moment marked by wars, instability, and tariff impositions. These macroeconomic dynamics affect everything from industrial components to the automotive sector, and they are interrelated. It is therefore vital to quickly understand whether to source from one supplier or another, as the choice, under certain conditions, could slow down production. Not to mention the impact of Artificial Intelligence on security, which will undoubtedly be equally important in the near future.

EXCLUDING AI, WHICH TECHNOLOGICAL AREA WILL HAVE THE GREATEST IMPACT ON THE FUTURE OF ORGANIZATIONS?

Without a doubt, **cybersecurity**, but not only (or solely) in terms of technology. First and foremost, it is crucial to recognize that even factories are highly interconnected environments and, as such, exposed to attack risks. Automated warehouses, robotic factories...
But are those systems protected? There is awareness of the possibility of being attacked, but how ready is the organization to manage this risk? How much effort has been made to raise awareness and provide training?
In summary: is the organization prepared to manage not only security but also a **culture of security**?

It is vital to define a cybersecurity strategy by first identifying and balancing where and how to focus interventions, using a priority- and risk-mitigation-based approach.
The growing interconnection between **OT (Operational Technology)** and **IT (Information Technology)** systems in the industrial sector enables more effective risk management, as virtual replicas of critical systems allow for the isolation and protection of sensitive components.

In this context, **we at Eng** are equipped to support companies in strengthening their resilience and preventing attacks that could compromise both IT systems and physical security. We have the expertise and technologies to ensure a secure and controlled digital transformation.

FLEXIBLE MANUFACTURING HAS BEEN DISCUSSED FOR A WHILE. WHAT IS IT, AND HOW WILL IT EVOLVE IN 2025?

Flexible Manufacturing can serve as an effective response to the challenges ahead, especially considering the complexity

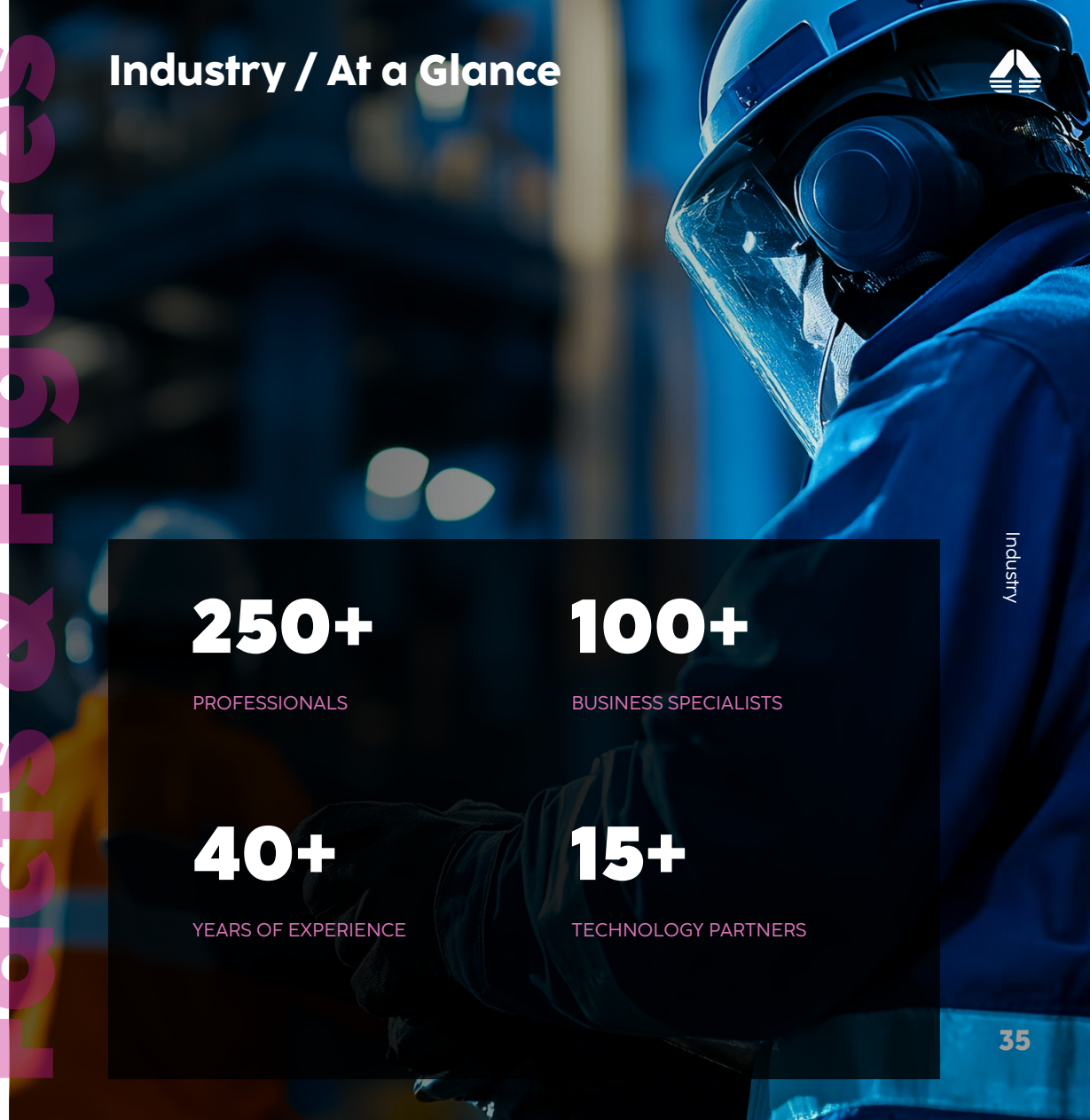
of the current period. It enables readiness for unforeseen events or sudden changes in demand, offering a more agile production model. This model utilizes advanced technologies designed for streamlined manufacturing, aiming to manage a wide variety of products in small quantities.

The market demands dynamic production systems:
this means equipping oneself with predictive capabilities, ensuring proper data governance, promoting widespread adoption of advanced automation, and integrating supply chains with a network of flexible suppliers.
A production model where the key components include:
AI-Driven Automation, Modular Systems, Digital Twins, IoT (Internet of Things).
Additionally, there is the opportunity to move production closer to product distribution sites through smaller plants, providing clear benefits in terms of both environmental and economic sustainability.

For us at Eng, Flexible Manufacturing is not the starting point—it is the culmination of a Change Management journey. This journey must engage the entire organization, transforming not only production processes but also the company culture.
It is a model capable of supporting innovation and collaboration while ensuring the ability to respond swiftly to the ever-changing demands of the market.

Facts & Figures

Industry / At a Glance



250+
PROFESSIONALS

100+
BUSINESS SPECIALISTS

40+
YEARS OF EXPERIENCE

15+
TECHNOLOGY PARTNERS

12

Media & Communication

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Key Trends

1.58

Tn $

REVENUE OF THE COMMUNICATION SERVICES MARKET IS PROJECTED TO REACH $1.58 TRILLION IN 2028.

15

Bn $

MARKETING AUTOMATION MARKET IS PROJECTED TO GROW TO $15 BN BY 2029.

729.56

Bn $

MOBILE DATA REVENUES ARE ESTIMATED TO INCREASE TO REACH $729,56 BN BY 2027.

Source: Statista

KEYWORDS **+ GenAI + Cloud + Cybersecurity + Digital Ecosystem + User Experience**

WHAT ARE THE MAIN TRENDS IN THE MEDIA & COMMUNICATION SECTOR?

In the Telco & Media sector, market trends are distinctly shaped by convergent operators, infrastructure operators, and the media segment, each characterized by specific technological and strategic dynamics.
Convergent Telco operators, active in both mobile and fixed telephony, are undergoing an intense consolidation process. Initiatives like the potential merger between Fastweb and Vodafone Italia highlight the need to enhance competitiveness, achieve economies of scale, and solidify their position in the Enterprise market.

This segment is becoming increasingly strategic, driven by rising demand for advanced solutions such as SD-WAN networks, private 5G, and cybersecurity services. Digital transformation serves as a critical lever: operators are diversifying their offerings through value-added services like **Cloud Computing, IoT**, and digital media to increase the average revenue per user (ARPU). Data management and monetization are becoming pivotal thanks to **data analytics** and **AI**, used to automate network operations, improve service personalization, and reduce customer churn by anticipating their needs. **Sustainability** is also a crucial topic, with investments in **green infrastructure** aimed at minimizing environmental impact and addressing increasing regulatory and societal expectations.
For **infrastructure operators**, such as Fibercop, Open Fiber, and INWIT, the focus is twofold: on one hand, enhancing infrastructure to meet growing connectivity demands, and on the other, developing new revenue streams by leveraging their assets through digital services and IoT. These players could play a strategic role in **advancing digital ecosystems**, supporting the development of **5G, smart cities**, and other innovative applications.
In the **Media** segment, significant transformation is underway, driven by the **convergence of telecommunications and content**. Digital distribution and on-demand consumption models are redefining market rules, with streaming platforms striving to build user loyalty and develop new monetization strategies. **AI is playing an increasingly critical role, not only in content creation and distribution but also in optimizing advertising strategies and personalizing user experiences**. Furthermore, new horizons in interactive entertainment, such as the metaverse, are being explored, promising additional business opportunities.

CAN GEN AI HELP ADDRESS THE CHALLENGE OF REGAINING COMPETITIVENESS? IN WHICH AREAS AND PROCESSES CAN IT BECOME A STRATEGIC ALLY?

GenAI has the potential to be a key strategic ally in addressing the challenge of regaining competitiveness in the Telco & Media sector, thanks to its ability to transform processes, optimize operations, and create value through innovation. One of the main areas where GenAI can make a difference is in **the personalization of services and the improvement of customer experience**. By analyzing large volumes of data, AI can deeply understand user behaviors and preferences, enabling the creation of targeted and personalized offers. This results in increased customer loyalty and satisfaction, while the integration of advanced chatbots and virtual assistants enhances interaction in contact centers, reducing waiting times and costs.

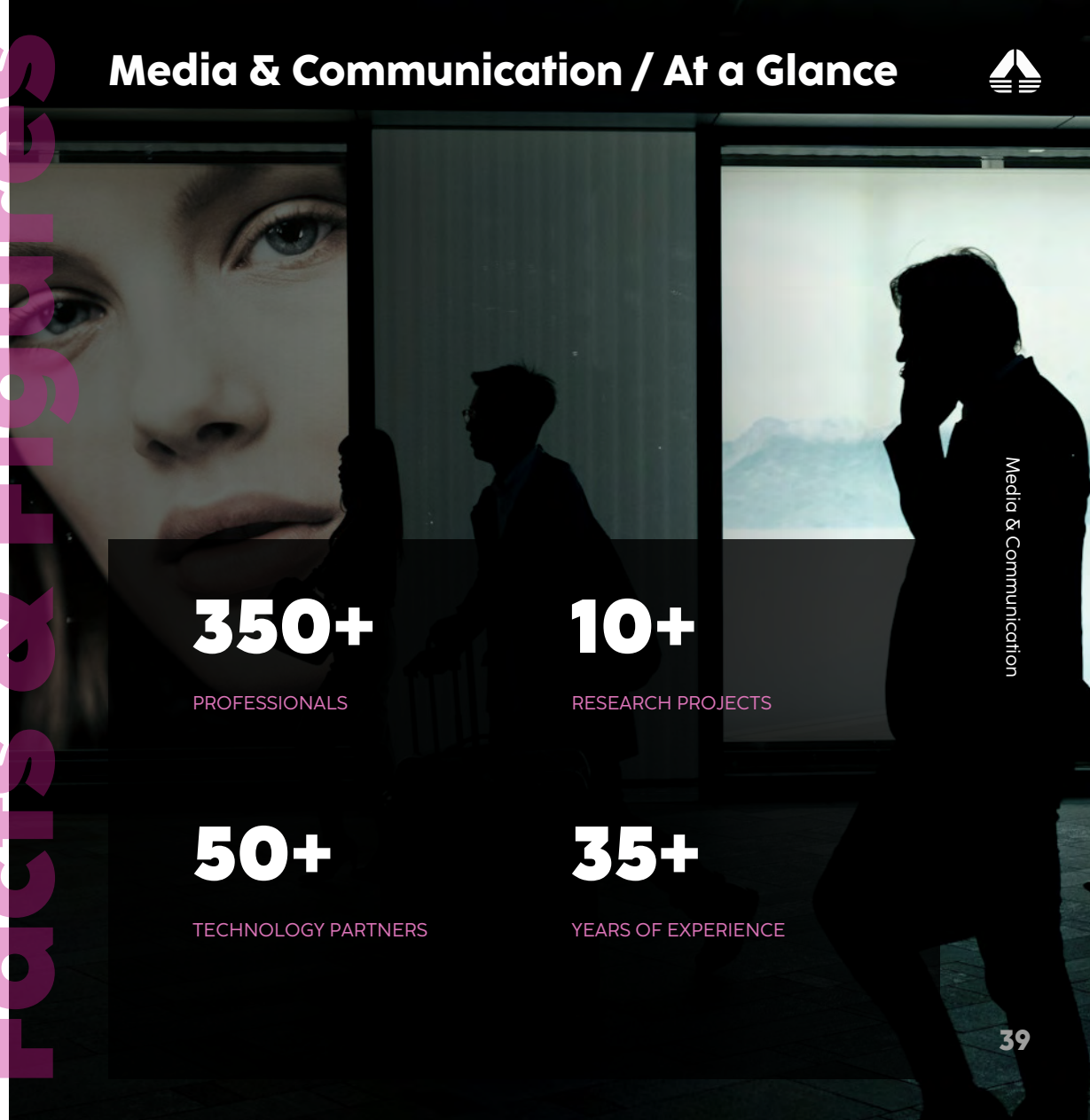
From an operational perspective, GenAI allows for the optimization of network management through predictive maintenance and process automation. In the media segment, GenAI can revolutionize content creation and distribution. With its ability to automatically generate text, video, and customized graphics, AI can more precisely cater to the preferences of specific audience segments, improving engagement and increasing monetization opportunities. Additionally, it can optimize recommendation and content indexing processes, supporting streaming platforms in retaining users.
On the sustainability front, GenAI can play an important role in optimizing the energy consumption of Telco infrastructures, suggesting more efficient network configurations and reducing operational waste. In a context where sustainability is increasingly central, this technology helps companies achieve their environmental goals, aligning with growing regulatory and societal expectations. Finally, GenAI can play a crucial role **in training and skills management, creating personalized learning paths** for staff.

HOW WILL ENG SUPPORT AND ASSIST INDUSTRY PLAYERS IN IMPROVING THE DIGITAL USER EXPERIENCE AND ACCELERATING TIME-TO-MARKET FOR NEW SERVICES?

Eng stands out for its ability to combine a deep understanding of B2C and B2B2X business models with advanced expertise in digital technologies, developing innovative solutions in close collaboration with its clients to generate value. Our approach focuses on five main areas. We support companies in the sector by: **digitalizing application infrastructures**, modernizing legacy applications through cloud-native solutions that simplify management and enhance operational efficiency; **improving customer onboarding and lifecycle**, optimizing the customer experience with digital solutions that streamline acquisition and enhance retention, leveraging automation and AI to personalize the customer journey and reduce operational costs; **enabling new revenue streams**, introducing new digital services and innovative business models such as cloud, IoT, and cybersecurity, thereby expanding companies' income sources and meeting emerging market needs; **reducing the Total Cost of Ownership (TCO) of infrastructures**, optimizing technological resources and adopting cloud and automation to cut management and maintenance costs; **lowering operational costs**, enhancing efficiency by optimizing business processes and adopting advanced technologies like AI, creating a virtuous cycle that reduces costs and improves service quality.

Facts & Figures

Media & Communication / At a Glance



350+
PROFESSIONALS

10+
RESEARCH PROJECTS

50+
TECHNOLOGY PARTNERS

35+
YEARS OF EXPERIENCE

13 Retail & Fashion

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Key Trends

40k

Mld $

THE ESTIMATED GLOBAL RETAIL MARKET VALUE IN 2030.

70+

%

INVESTMENTS IN AUTOMATION & REAL-TIME INVENTORY.

75+

%

EMERGING DRONES, CHATBOTS, AI, VR, & SMART DEVICES.

Source: Statista

KEYWORDS **+ Remote Selling + Fast Pay + Retail Planning + Digital Store + E-Commerce**

WHAT WILL BE THE MAIN IT INVESTMENTS IN THE RETAIL SECTOR IN 2025?

In 2025, IT investments in the retail sector will reach €1.24 billion, confirming a steady growth trend.
Key areas include **cloud computing**, which enhances scalability and infrastructure resilience; **IoT**, which optimizes warehouse management and customer interaction; **cybersecurity**, crucial for protecting sensitive data; **big data**, enabling advanced analysis of purchasing behaviors; and **Artificial Intelligence**, which supports customer experience personalization and operational efficiency.

The primary objectives are improving customer experience, increasing sustainability, optimizing logistics, and adopting innovative solutions for managing both physical and virtual retail locations.

HOW ARE DIGITAL TECHNOLOGIES TRANSFORMING THE SHOPPING EXPERIENCE IN RETAIL?

Digital technologies are making the **shopping experience** faster, smoother, and more automated.

Computer vision algorithms and IoT sensors enable the operation of dark stores, staffless points of sale where the entire shopping process is managed by advanced technologies: access is granted via QR codes, sensors track items taken from shelves, and payment is processed automatically.

Solutions like Conad's Passpay represent a significant evolution: customers scan products and complete payment in dedicated lanes without using traditional checkout counters, reducing queues and improving store efficiency.

This approach also allows retailers to reallocate staff to higher-value tasks, such as **customer support**, and leverage data analytics to **enhance their product and service offerings**.

WHAT NEW OPPORTUNITIES DOES ARTIFICIAL INTELLIGENCE OFFER THE RETAIL SECTOR?

Artificial Intelligence creates numerous opportunities for retail, improving productivity and efficiency in various areas.

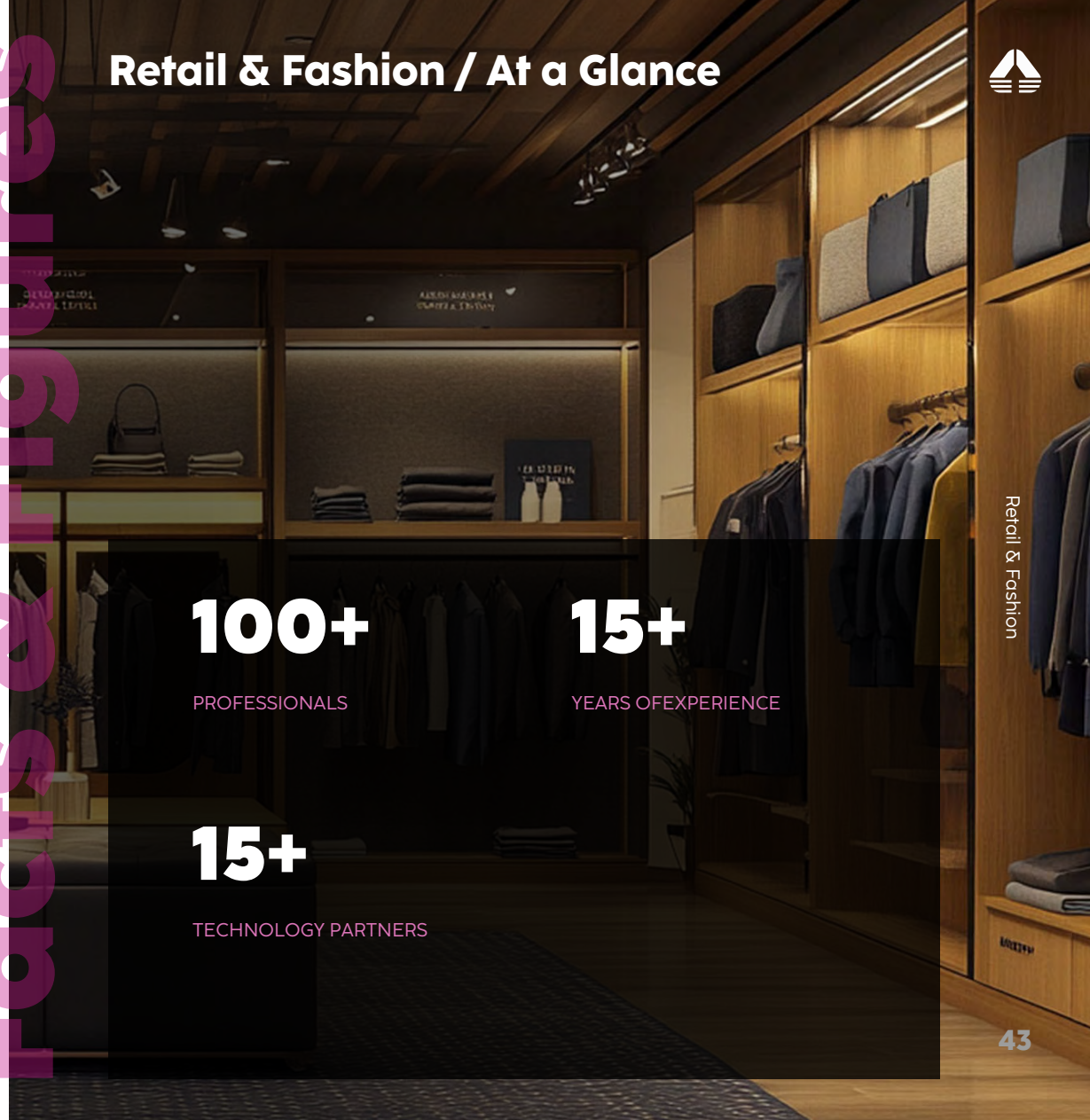
In supply chain management, predictive AI tools enable precise demand analysis, reducing stock-out risks and optimizing distribution times. For personalization, Artificial Intelligence analyzes behavioral data to provide highly targeted product recommendations and create tailored shopping experiences.

Additionally, AI automates repetitive tasks such as returns management, report generation, and shelf restocking, freeing resources for strategic activities.

In the near future, technologies such as **3D modeling** and **Augmented Reality** will allow customers to **personalize products and view changes in real time**, bridging the gap between online and in-store shopping.

Facts & Figures

Retail & Fashion / At a Glance



100+
PROFESSIONALS

15+
YEARS OFEXPERIENCE

15+
TECHNOLOGY PARTNERS

14 Transportation

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Key Trends

377

Bn $

THE PROJECTED GLOBAL SMART TRANSPORTATION MARKET SIZE BY 2030.

5.2

Bn

THE NUMBER OF PUBLIC TRANSPORT PASSENGERS IS PROJECTED TO REACH 5.2 BILLION USERS BY 2029.

1.08

Tn $

THE SIZE OF THE GLOBAL ELECTRIC VEHICLE MARKET IS EXPECTED TO GROW AROUND $1.08 TRILLION BY 2028.

Source: Statista

KEYWORDS **+ AI + Cybersecurity + Cloud + Mobility-as-a-Service (MaaS) + Intelligent Traffic Management System (ITS)**

TRANSPORTATION IN ITALY IS EVOLVING, REFLECTING GLOBAL CHALLENGES AND BECOMING INCREASINGLY INTEGRATED. WHAT ARE THE MAIN TRENDS FOR 2025 FROM THE PERSPECTIVE OF THE TWIN TRANSITION?

Transportation in Italy in 2025 will be characterized by greater sustainability, digitalization, and multimodal interconnection. The goal is to reduce environmental impact, improve the efficiency of mobility systems, and offer a more integrated and personalized travel experience. The Internet of Things will remain a top priority in 2025, including mobile devices that serve as primary sources for collecting data.

These devices are becoming increasingly intelligent, providing refined and pre-processed data rather than raw inputs. Additionally, the Cloud, in the form of Edge Computing, is becoming the main hub where information is stored, processed, and made available for business processes. High-Performance Computing (HPC) unlocks virtually unlimited potential for these infrastructures, as do Big Data Analytics systems and Artificial Intelligence platforms. These platforms build predictive and prescriptive models to guide operations development, enhance efficiency, and increase sustainability.

At Eng, our Data Platform collects real-time field data from users and infrastructure data to manage transportation safety. A crucial evolution is in **Green Logistics**, a strategic approach to minimizing the environmental impact of logistics activities, reducing the ecological footprint of transport processes, and integrating economic and environmental sustainability.

ARTIFICIAL INTELLIGENCE WILL HAVE AN INCREASING IMPACT ON TRANSPORTATION IN THE COMING YEARS. HOW CAN AI REPRESENT AN ADVANTAGE IN THE MOBILITY SECTOR?

AI, with its ability to process large amounts of data in real time and learn from it, offers numerous advantages in mobility. Firstly, AI can optimize routes for both public and private transportation, reducing travel times and traffic congestion. Moreover, it can help predict accidents, monitor vehicle conditions, and assist drivers. The business trend aims to **improve road safety** through AI-driven technological support (e.g., predictive analyses and the introduction of autonomous driving systems).

Another critical aspect involves consumption efficiency. AI can **optimize vehicle energy use** and manage fleets more intelligently. From a travel experience perspective, AI enables personalized services tailored to individual needs, such as recommendations for the most suitable transportation options, real-time traffic updates, and service bookings.

WHAT ROLE DOES ENG PLAY IN THE CHALLENGE OF DEVELOPING EFFICIENT, SAFE, AND SUSTAINABLE MOBILITY?

Eng is not merely a provider of technological solutions. Its **deep knowledge of the transportation sector**, built through years of experience and successful projects,

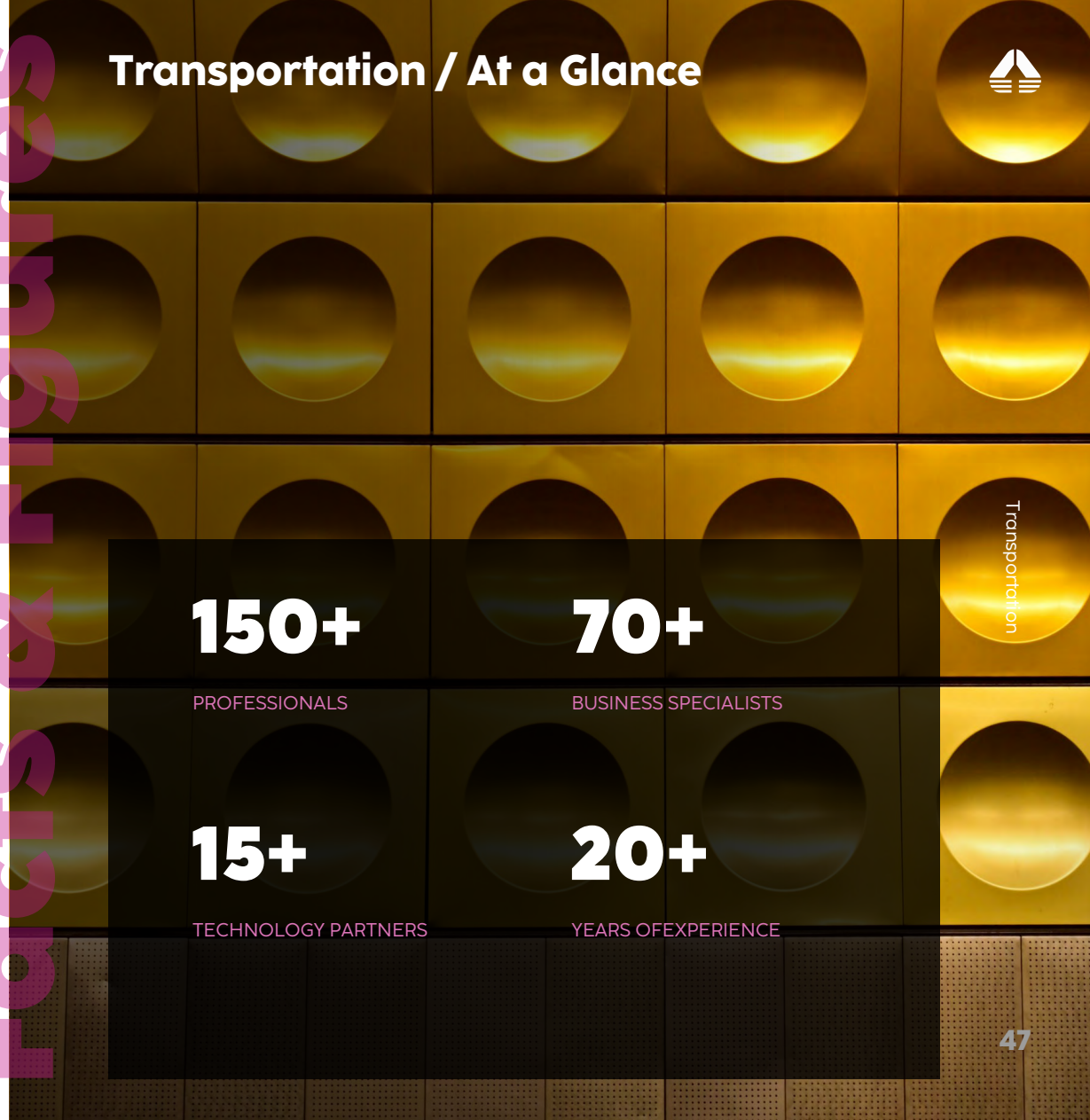
allows it to thoroughly understand clients' needs and deliver tailor-made solutions. These solutions address the specific requirements of each customer, ensuring the reliability and security of sustainable mobility services that are data-driven and designed for people, goods, and infrastructure. Technologies such as AI & Advanced Analytics, Blockchain, Cloud, Cybersecurity, Digital Experience, Digital Twin, Intelligent Automation, and IoT enable the overall efficiency of transportation processes - whether they involve people or goods, long or medium distances, or high or low capacity.

Our **technologies** and **expertise** support all stakeholders in the complex ecosystem that enables movement. This includes monitoring infrastructure, maintaining vehicles and facilities, protecting critical assets, optimizing investments, and simplifying and securing the customer journey.

This is further enhanced by a robust ecosystem of partners, including innovative startups, technology companies, and institutions - all united by a shared commitment to fostering sustainable **mobility development**.

Facts & Figures

Transportation / At a Glance



150+
PROFESSIONALS

70+
BUSINESS SPECIALISTS

15+
TECHNOLOGY PARTNERS

20+
YEARS OFEXPERIENCE

15 Industries eXcellence

Ettore Soldi
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Key Trends

43

%

PERCENTAGE OF MANUFACTURING COMPANIES PLANNING TO INTEGRATE ROBOTS INTO THEIR FACILITIES BY 2026.

143

Mln

NUMBER OF EMPLOYEES IN THE MANUFACTURING MARKET PROJECTED FOR 2025.

44

%

MANUFACTURING MARKET PRODUCTIVITY INTENSITY PROJECTED FOR 2025.

Source: Statista

KEYWORDS **+ Digital Thread + Data Managment + Flexible Manufacturing + AI & Data + Digital Twin**

AI WILL BECOME EVEN MORE PERVASIVE IN 2025: WHAT ARE THE PREREQUISITES FOR ITS FULL DEVELOPMENT IN THE INDUSTRY?

Manufacturing Data Integration is undoubtedly the foundation and an essential condition for transforming **raw data** into knowledge, making information available across the entire value chain and tailored to individual user profiles, from field operators to top management.

Without Manufacturing Data Integration, in fact, it makes no sense to even discuss Artificial Intelligence.

Key elements include Manufacturing Data Management, PLM-MES-ERP integration, Digital Twin and simulation, predictive and generative intelligence, AI & Data. However, enabling technologies alone are not enough to achieve the connected enterprise; it is equally necessary to overcome cultural, organizational, and technological barriers that hinder its full development.

Breaking the Silos: dismantling departmental barriers to interconnect processes, people, and applications across the entire company and the extended supply chain.

From a strategic perspective, the focus is on integrating and synchronizing PLM, MES, and ERP systems, as well as sharing data across the various application areas that oversee design, production, and business operations planning.

To achieve this, investments must target challenges such as **process standardization, system interoperability, cybersecurity, and the digital skills of the workforce**.

HOW DOES THE "BALLROOM MANUFACTURING" MODEL CHANGE LAYOUT AND PRODUCTION FLEXIBILITY?

The **Ballroom Manufacturing model** revolutionizes traditional layouts through autonomous and reconfigurable work cells. Each cell functions as an independent unit, equipped with specialized machinery and personnel capable of producing similar yet distinct products.

This flexibility allows production to adapt quickly to changes in demand, reducing setup times and improving efficiency. Automated transport systems, such as AGVs, support material flow, while advanced software like MOM/MES optimizes real-time management.

The result? **Lower operating costs, higher quality, and a faster supply chain**.

WHAT ARE THE ADVANTAGES OF DISTRIBUTED PRODUCTION AND MICROFACTORIES IN THE "FLEXIBLE MANUFACTURING" MODEL?

Distributed production with **microfactories** located near consumer markets ensures greater operational efficiency. These facilities operate on a small scale, reducing transportation costs and speeding up delivery times particularly beneficial for industries like food and consumer goods.

Microfactories, integrated with digital technologies and automation, enhance supply chain management, enabling rapid responses to demand fluctuations.

This decentralized approach **reduces environmental impact and makes product customization easier**.

Facts & Figures

Industries eXcellence / At a Glance

700+
PROFESSIONALS

30+
INDUSTRIAL SECTORS

18+
HUB IN 4 CONTINENTS

1500+
PROJECTS DELIVERED

16 Our CIO view

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HOW CAN CIOS DRIVE/SUPPORT BUSINESS INNOVATION THROUGH TECHNOLOGY IN 2025?

Starting from a solid IT foundation for innovation. This involves prioritizing digitization initiatives that may have been postponed over the past years, such as **moving to the cloud** or **updating infrastructure**. These steps are essential prerequisites for leveraging newer technologies like Generative AI and low-code/no-code solutions. Without a modern and robust foundation, it won't be possible to fully benefit from the latest advanced technologies. This is exactly what we did in Eng over that past couple of years, progressively moving our internal applications from On-prem to Cloud infrastructure and from custom to market platform. In this way we ensure we are leveraging on a **modern and composable architecture**, still allowing custom developments to cope with specific company policy and process.

WHAT STRATEGIES WILL BE KEY FOR ALIGNING IT WITH EVOLVING BUSINESS NEEDS? CIO AS A TECH 'EVANGELIST' WITHIN ORG?

CIOs should engage in continuous dialogue with business partners. This involves educating them about new technologies, sharing examples and ideas. It is crucial for business leaders to understand and believe in the potential impact of new solutions. Indeed, the only way to achieve

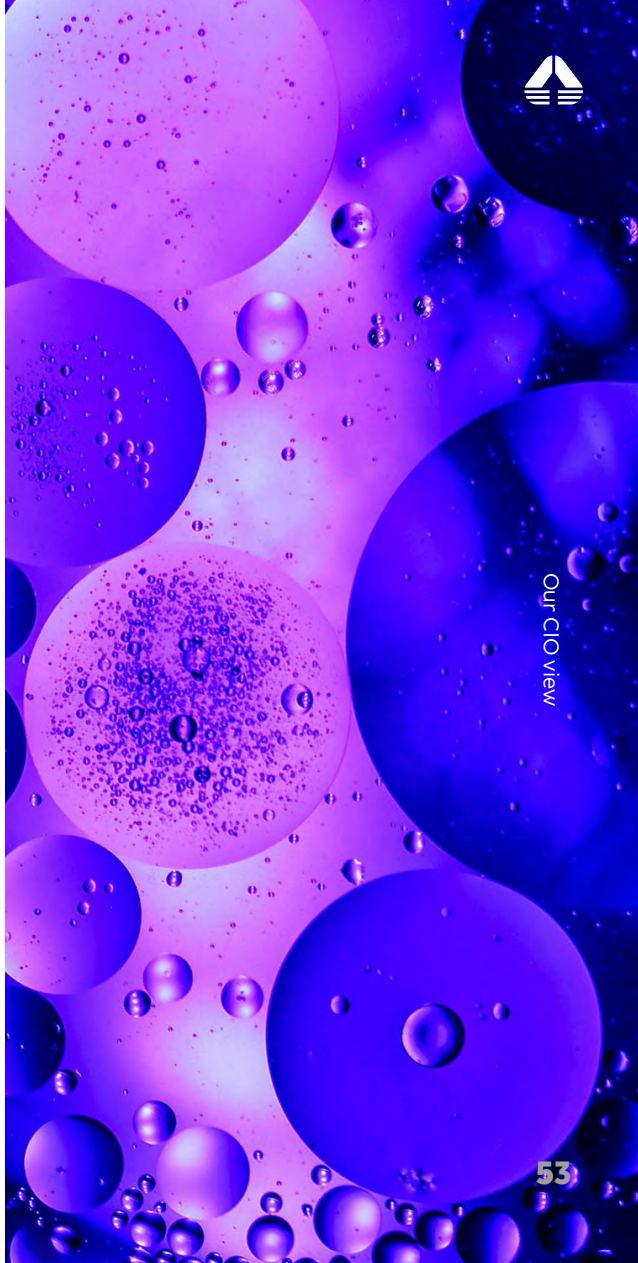
a positive ROI in a short timeframe from IT investments, including those in Generative AI or other new technologies, is to embed business benefits in terms of efficiencies or growth. The closer the alignment between CIOs and business partners, the more effective the innovation will be. One effective method is by **implementing POCs** to test the boundaries of new technologies and demonstrate their potential impact in a controlled environment. For example, creating small AI-agents for specific tasks can serve as a POC to showcase how AI can streamline operations and improve efficiency. These POCs can help build confidence among business partners and provide tangible evidence of the benefits of new technologies. In this context, reskilling teams and finding the right partners are also crucial steps in supporting the company's technological journey.
Evolving the internal IT team or finding the best partners to support this evolution is a significant challenge for CIOs today. CIOs need to leverage individuals with a strong vision and deep understanding of current technology capabilities to act as a tech 'evangelist' in the Company.

As Eng CIO, I am in a privileged position to leverage the expertise of our Eng Digital Business Units in various technologies to support my team and me in this educational journey. For example, with the help of our Salesforce team, in 2024 we used a fast-prototyping methodology to quickly set up a Salesforce CPQ+ environment based on high level company's requirements to show all the product features.

Once the business understood the potential of this tool, we smoothly kicked-off a project to fully reengineer our pricing and quoting processes leveraging on Salesforce technology. Another recent example was with Copilot GitHub that combines MS Copilot to coding practices improving performances.

HOW WILL CIOS BALANCE INNOVATION WITH OPERATIONAL EFFICIENCY?

Balancing innovation with operational efficiency is a critical challenge for CIOs, who need to adopt a strategic approach that ensures both **innovation** and **operational stability**.
On key element relies on creating balance within IT operations through right-sourcing, adaptive partnerships, and scalable contracts. This enables IT to respond **swiftly** and **effectively** to challenges, ensuring that both innovation and operational efficiency are prioritized.
By partnering with external experts and leveraging scalable contracts, CIOs can access the necessary resources and expertise to drive innovation without compromising on operational stability. At the same time, it is important to ensure cross-fertilization and sharing of activities, problems, and solutions among the two areas, so as to be able to quickly reengage people once the evolution is done.
This approach may slow down the evolution but remains **essential** to guarantee the company's stability and ensure the service is constantly up and running.



17 Data Privacy

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HOW CAN BUSINESSES BALANCE DATA-DRIVEN STRATEGIES WITH USER PRIVACY?

The data-driven strategy has, in recent years, represented a true signal of disruption across many sectors. Numerous companies have invested in data-driven technologies, aware that the vast amount of data at their disposal requires a new mindset and an innovative approach to remain competitive. The success of businesses now depends on their ability to leverage insights from the growing volume of available data to promptly understand market trends and business evolution. Implementing a data-driven strategy impacts not only strategic planning but also represents a paradigm shift.

The core issue is **incorporating a data-driven mindset into the corporate culture** - a transformation that must begin with how data is collected and selected, paying close attention to the legality of its processing through a transparent and informed process. This means ensuring data collection aligns with privacy requirements mandated by regulations. Thus, while it is essential for data to be available and accessible, it is equally critical that it be "trusted." The source of such data must be known and of high quality, and it must be clear how the data flows within the company and how it is processed to generate value.

Management must therefore pursue a **data-driven, privacy-oriented strategy** that enables the creation of a business model more focused on the customer. This approach allows companies to align their product and service offerings with customers' actual needs, reducing production and distribution times and costs while improving the customer experience.

WHAT ROLE WILL TRANSPARENCY PLAY IN MAINTAINING CUSTOMER TRUST IN 2025?

Technology is amazing, but often as users, we feel dependent on the constant "connection" that characterizes our lives. Finding our personal balance in our relationship with it is one of the main challenges of our generation.

Digital well-being is the long-term solution we should apply in our daily lives. Digital Detox seems to address the need to spend some time outside the "bubble" of the digital world, allowing us to look at it from the outside and avoid falling victim to brain rot. In this context, transparency in the digital realm plays a crucial role and can be the means to enable users to engage with technology in a conscious way that is beneficial to their lives, as active participants rather than passive ones.
Recently introduced and soon-to-be-implemented regulations have introduced several rules to ensure transparency and security in online services. Relationships between users and digital platforms, based on principles of transparency, are essential to achieving digital well-being. One of the most relevant aspects of the transparency principle in this context is the comprehensibility of how users interact with platforms that provide digital services, through clear communication methods tailored to the typical user of the service. Users, even those with limited expertise (such as minors, if the platform is also directed at them), must be able to access services and receive information that is clearly intelligible to them. In this sense, transparency is a key element to avoid undermining the trust that users place in the intangible world that digital represents.

HOW SHOULD COMPANIES PREPARE FOR STRICTER GLOBAL PRIVACY LAWS?

Data collection, privacy loss, and security risks are pressing issues worldwide, and the GDPR currently represents the most robust protection framework globally, setting the "gold standard" for other jurisdictions. The GDPR came into effect on May 25, 2018, and since then, the world has changed incredibly. New laws were essential to give European citizens full control over their personal data. The regulation applies to every EU member state as well as the European Economic Area, and any company or organization, even in the B2B market, operating globally and offering goods or services within the European Union must comply with it.
The global geographic presence of companies outside the EU demands a holistic approach in terms of compliance and data protection governance, considering the different regulations adopted worldwide and creating synergy in compliance efforts.

Countries like Brazil, Australia, Japan, South Korea, and Thailand have adopted legislation comparable to the GDPR. In 2023, eight U.S. states passed data privacy laws, with the laws in five of them coming into effect in 2024. In 2024, an even greater number of data privacy laws reached the desks of governors. Furthermore, the introduction of regulations like the AI Act and the push towards technological development are generating renewed attention on privacy matters. Therefore, the motivation behind countries adopting personal data protection laws must also be seen as a way to foster innovation for businesses, ensuring compliance with legal safeguards to protect data subjects and avoid penalties. Addressing privacy as a cross-cutting issue and an interplay with other regulations is a strategic key to making compliance a value rather than a cost.

18 Eng Digital

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In 2025, technologies like **Artificial Intelligence, intelligent automation, 5G, Extended Reality (XR), Industrial IoT (IIoT), edge computing**, and **blockchain** will reach full maturity, moving beyond experimental phases. The convergence of these solutions will give rise to sophisticated ecosystems capable of delivering substantial benefits across key sectors such as finance, healthcare, central and local public administration, utilities, energy, telecommunications, media, manufacturing, automotive, transportation, logistics, and agriculture. In this context, Engineering establishes itself with a comprehensive and constantly updated offering, the result of significant investments in research and innovation, as well as a continuous commitment to training and certifying expertise.

Eng Digital is a cross-functional organization that supports all markets through **six business lines** with specific expertise in different technology areas: cybersecurity (**Eng Security**), cloud & infrastructure (**Eng Cloud**), AI & data analytics (**Eng AI & Data**), augmented enterprise platforms (**Eng Platforms**), application maintenance & modernization (**Eng Modernize**), and digital experience (**EngX**).

Within the AI domain, **EngGPT** is a standout solution. This proprietary language model (LLM), developed using a "best-of-breed" approach and leveraging open-source libraries, provides scalable and customizable solutions seamlessly integrated with leading hyperscaler platforms.

To date, numerous use cases have been implemented in strategic areas such as code generation and optimization, virtual assistance, automated document management, semantic analysis of large datasets, and personalized marketing content creation.

Engineering is committed to further enhancing the EngGPT suite, integrating cutting-edge technologies to deliver a generative AI platform that is modular, versatile, and increasingly innovative.
Meanwhile, digital experiences will become an integral part of daily life, blending seamlessly with the physical world. Advanced technologies such as XR and IIoT, combined with 5G, will transform how people interact and work. Within this context, **EngX**, Engineering's new division, redefines the concept of the Digital Experience by redesigning customer journeys and brand activation strategies. EngX creates personalized, multisensory experiences that enrich every touchpoint with customers. **By integrating AI, immersive collaboration tools, and innovative interfaces, EngX revolutionizes digital interactions, enhancing overall user experiences and delivering added value for brands**.

Infrastructure evolution and cloud computing will remain pivotal in driving digital transformation, enabling the development of innovative solutions that combine scalability, flexibility, and reliability.

Composable architectures, microservices, and API-first models will accelerate the development and deployment of applications, enabling businesses to respond quickly to market changes. Hybrid and multi-cloud strategies will allow companies to optimize resources, improve operational efficiency, and reduce waste, contributing to sustainability goals.

Through partnerships with industry leaders such as AWS, Microsoft Azure, Google Cloud, Oracle, and RedHat, Engineering offers clients privileged access to state-of-the-art technology platforms. These collaborations ensure seamless interoperability with leading cloud services while providing expert guidance to migrate, integrate, and optimize cloud environments effectively.

Significant investments in training and certification have positioned Engineering as a trusted partner in enterprise platforms such as ServiceNow, Salesforce, SAP, Workday, Oracle, Microsoft Dynamics, and Infor.

By 2025, these platforms will continue to evolve, offering deeper integration with emerging technologies and becoming increasingly modular.
Thanks to its proven expertise and commitment to innovation, Engineering will remain a reliable partner for organizations aiming to maximize the strategic value of their platforms.

Edge computing and blockchain are driving profound transformations in key industries. Edge computing enables real-time monitoring and rapid responses, boosting operational efficiency, while blockchain ensures transparency and security in data exchanges. Together, these technologies optimize performance, build trust among stakeholders, and promote more sustainable operations.

Through Eng Modernize, its Application Modernization practice, Eng collaborates with universities, research centers, and industrial partners to develop innovative applications and ensure platform interoperability, supporting businesses in the adoption of distributed architectures. At the same time, the adoption of advanced technologies brings increasingly complex security challenges. The rise of cyber threats and the growing sophistication of attacks call for advanced protection strategies. **With its Eng Security division, Engineering tackles these challenges through innovative solutions, including advanced encryption systems, cyber intelligence, critical infrastructure protection, and disinformation countermeasures**.

Eng Security integrates cutting-edge technologies with ongoing research to prevent and mitigate risks, enhancing resilience and operational continuity. This approach ensures robust security and fosters trust, positioning Engineering as a strategic partner in digital transformation.

10 AI & Data

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Key Trends

2.5

Tn $

THE PROJECTED GLOBAL AI MARKET REVENUE BY 2032.

356

Bn $

GENERATIVE AI MARKET SIZE WORLDWIDE BY 2030.

132

%

THE INCREASE IN AI TOOL USERS GLOBALLY BY 2030.

Source: Statista

KEYWORDS **+ Private Generative AI + AI Act + Quantum Computing + Responsible AI**

WHAT ARE THE MAIN UPCOMING DEVELOPMENTS IN AI AND WHICH MARKET SECTORS WILL BENEFIT MOST FROM THEM?

AI is entering a new era, driven by innovative trends that are redefining its capabilities and impacts. Generative AI (GenAI) models, such as **Large and Small Language Models**, are becoming increasingly powerful and multimodal, able to integrate language, images, video, and complex data synergistically. **Advanced virtual assistants** are evolving toward more human and contextual interaction, while **AI-embedded systems** are increasingly being used for real-time monitoring and improvement of industrial and operational processes. In addition, the **integration of AI into everyday workflows** via collaborative platforms is growing, democratizing access to these technologies.

These developments offer tangible benefits in various areas. In **healthcare**, AI supports early and personalized diagnosis, improves clinical efficiency, and accelerates drug discovery through predictive simulation. In **government** services, virtual assistants simplify access to public services, automate complex processes and increase transparency. In **energy & utilities**, predictive AI models optimize the management of power grids, facilitating the transition to renewable sources. **Retail** also benefits from AI that delivers hyper-personalized customer experiences, while **manufacturing** is experiencing more efficient production through AI-driven simulations and predictive maintenance.

Eng is positioned as a leader in driving this transformation, offering customized solutions based on GenAI and integrated platforms that make the most of these new technology trends.

TO WHAT EXTENT CAN THE EVOLUTION OF QUANTUM COMPUTING INFLUENCE THE ADOPTION OF AI AND ADVANCED ANALYTICS TECHNOLOGIES IN THE COMING YEARS, AND HOW CAN COMPANIES BEGIN TO INTEGRATE IT INTO THEIR STRATEGIES?

Quantum Computing represents one of the most promising emerging technologies to revolutionize AI and Advanced Analytics. With its ability to **process huge amounts of data simultaneously**, this technology can **accelerate the training of AI models** and **solve complex problems**, such as logistical optimization, simulation of chemical reactions or financial risk management, that today require significant time and resources. The benefits will be particularly evident in **healthcare**, with advanced molecular simulations for drug discovery; **energy**, with network optimization; and **cybersecurity**, with models that can identify and prevent threats in real time.
However, to prepare to take advantage of quantum computing, companies must adopt a proactive strategy that includes **investment in research**, **in-house skills training**, and **partnerships with leading technology players**. Our company is a pioneer in this field, having been active for several years within some of the most important **national observatories** and with **innovation labs** aimed at implementing solutions to be applied in the field in partnership with large customers. We help organizations **gradually integrate these technologies**, providing **customized roadmaps** and **scalable solutions** to ensure sustainable competitive advantage and transformative impact in their future strategies.

IN 2025, WHAT CONSIDERATIONS SHOULD COMPANIES HAVE WHEN ADOPTING AI SOLUTIONS TO ENSURE RESPONSIBLE AND SAFE USE OF THIS TECHNOLOGY, AND HOW CAN ENG SUPPORT THEM IN THIS JOURNEY?

In 2025, the adoption of AI solutions will require a careful and responsible approach to address growing challenges

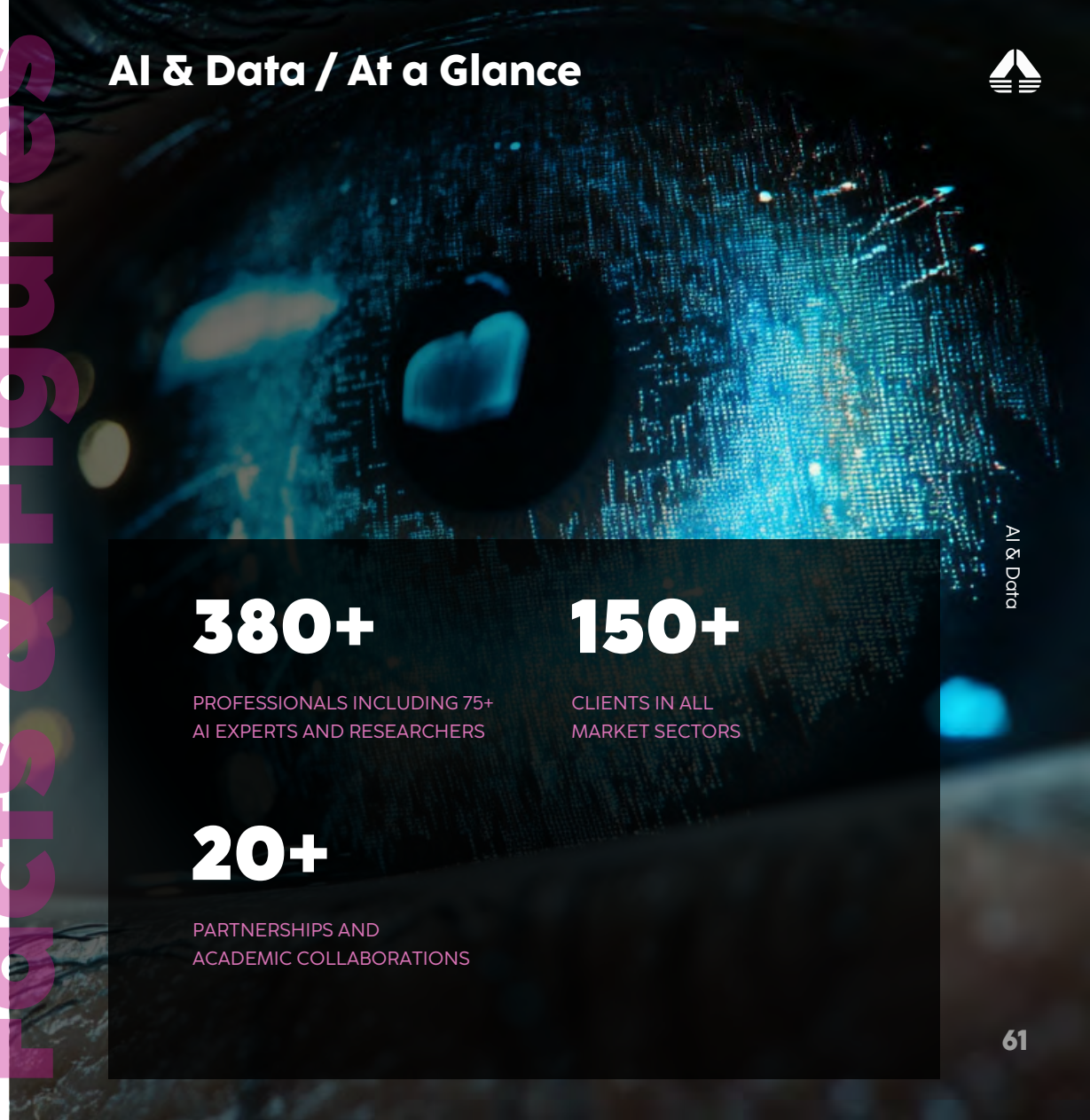
related to **transparency**, **ethics** and **security**. Compliance with regulations such as the **AI Act** will be essential to ensure that AI systems meet rigorous standards in terms of risk classification of use cases, transparency of the training process, and accountability of AI solution providers.

Dealing with bias in models, human oversight, and adopting transparent processes will be central to the company's priorities. In addition, it will be critical to invest in **training employees and managers**, ensuring that internal skills are adequate to use these technologies ethically and strategically. In parallel, **cybersecurity** will assume a crucial role: the integration of AI into complex business systems must be accompanied by advanced protection measures against emerging threats, such as the misuse of generative models for malicious purposes.

Our company supports clients on this journey through **Responsible AI solutions**, technology audits, governance frameworks, and cybersecurity strategies. We offer ethics monitoring tools (e.g., such as fairness and inherent bias in algorithms) and an **AI-onboarding strategy** aimed at a “smooth” transition to AI, ensuring a proactive and safe approach to the adoption of advanced technologies in line with business objectives and current regulations.

Facts & Figures

AI & Data / At a Glance



380+

PROFESSIONALS INCLUDING 75+ AI EXPERTS AND RESEARCHERS

150+

CLIENTS IN ALL MARKET SECTORS

20+

PARTNERSHIPS AND ACADEMIC COLLABORATIONS

20 Cloud

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Key Trends

262

Mld $

THE GLOBAL HYBRID CLOUD MARKET WILL REACH $262 BILLION BY 2027.

50.86

%

THE EDGE COMPUTING MARKET WILL GROW BY 50.86% IN THE NEXT 3 YEARS.

430

Mld $

THE GLOBAL AI SERVER MARKET WILL REACH $430 BILLION BY 2033.

Source: Statista

KEYWORDS **+ Cloud-Native Architecture + Green & Energy-Efficient Computing + Productive AI + Edge Computing + Hybrid Computing**

WHAT WILL BE THE MAIN STRATEGIC AND OPERATIONAL ADVANTAGES OF ADOPTING HYBRID COMPUTING, AND WHAT TRENDS CAN WE EXPECT IN 2025 IN THIS AREA?

The ability to integrate public cloud environments, private clouds, and on-premises infrastructures will allow for more flexible and efficient management of IT resources. This hybrid approach will enable businesses to dynamically move workloads between different platforms based on criteria such as cost, security, latency, and regulatory compliance.

From a strategic standpoint, **Hybrid Computing will enable companies to respond more agilely** to changing business needs, ensuring the ability to leverage public cloud capabilities when rapid scalability is required, while maintaining control over more sensitive data within private cloud or on-premises infrastructures. This model will be particularly useful in sectors with stringent compliance requirements, such as finance, healthcare, and public administrations, and it is expected to gain increasing relevance in 2025.
Operationally, AI will play a crucial role in maximizing the benefits of Hybrid Computing. **AI-supported Hybrid Cloud management platforms** will enable the automation of orchestration operations, intelligent workload balancing, and real-time resource optimization. **Predictive AI** systems will anticipate workload spikes, enabling automatic resource reallocation between public, private, and on-premises clouds to ensure maximum operational efficiency. This will help reduce the overall costs of managing IT infrastructures and improve system performance while maintaining consistently high service levels. AI will also be able to detect anomalies and impending failures, facilitating predictive maintenance and preventing service disruptions.

HOW WILL ENERGY-EFFICIENT COMPUTING INFLUENCE STRATEGIC DECISIONS IN THE IT SECTOR?

Energy-Efficient Computing will become a cornerstone of corporate strategies by 2025, driven by **increasing attention to environmental sustainability** and the need to **reduce operating costs associated with the energy consumption** of IT infrastructures. Companies will be required to implement innovative solutions to minimize the environmental impact of their operations, in light of growing sustainability regulations and ESG (Environmental, Social, and Governance) obligations.

At the operational level, Energy-Efficient Computing will materialize through the adoption of **low-power data centers**, the implementation of advanced cooling systems, such as liquid cooling, and the use of renewable energy sources. IT environments will be designed to reduce energy consumption not only in physical structures but also through software optimization and more efficient resource virtualization.

AI will be one of the key factors that will facilitate the implementation of these initiatives. **AI systems will enable real-time monitoring of energy consumption** and the identification of operational inefficiencies. With predictive AI algorithms, companies will be able to detect usage peaks and dynamically redistribute workloads more efficiently. AI-based management platforms will optimize resource usage by shutting down or reducing idle resources and automatically adjusting server capacity.

Moreover, companies will be able to leverage **AI-powered ESG reporting features** to monitor and improve transparency on environmental performance. These tools will generate detailed and automated reports on CO_2 emissions and energy efficiency, strengthening corporate reputation and ensuring compliance with international regulations. The adoption of energy-efficient technologies will have a significant impact, improving companies' competitive positioning and, by integrating sustainability into their strategies, allowing them to strengthen their image and access financing and incentives linked to ESG criteria.

WHAT OPERATIONAL IMPLICATIONS AND OPPORTUNITIES WILL EDGE COMPUTING OFFER IN 2025?

Edge Computing will revolutionize the operational landscape of **IT infrastructures**, enabling data processing directly at the source, rather than sending it to a central

cloud. This model will reduce latency, improve security, and ensure operational continuity even in the event of a cloud connectivity disruption.
Operationally, companies will need to **manage a large number of processing points distributed across remote sites**, facing the challenge of maintaining consistency and security in operations. AI will play also a crucial role in this context, allowing edge devices to analyze data in real-time, detect anomalies, and manage predictive maintenance to reduce downtime and extend equipment life.

AI will also facilitate **the orchestration of edge devices**, enabling centralized control of distributed operations. AI models will adapt resources to demand fluctuations, ensuring efficient allocation without human intervention. Additionally, distributed AI systems at the network edge (**Edge AI**) will improve operational security by preventing the transfer of sensitive data to the cloud, reducing the risk of exposure or data breaches.

The opportunities offered by Edge Computing will be particularly evident in industrial manufacturing and logistics, where real-time processing will allow for the detection of defects in manufacturing processes, inventory management, and real-time tracking of shipments. Companies adopting this technology will increase operational responsiveness, reduce latency, and ensure continuity even with limited connectivity.

Facts & Figures

Cloud / At a Glance

650+
CLOUD PROFESSIONALS

140+
CLIENTS

1000
INDIVIDUAL CERTIFICATIONS

3
GREEN & SECURED DATA CENTERS (1 TIER IV CERTIFIED)

21 Security

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Key Trends

6.4

Tn $

THE "CYBERCRIME COST" WILL INCREASE BY $6.4 TRILLION (+69.41%) BY 2029.

134

Bn $

THE GLOBAL AI-BASED CYBERSECURITY MARKET WILL REACH $134 BILLION BY 2030.

133

Bn $

THE "ZERO TRUST" SECURITY MARKET WILL REACH $133 BILLION BY 2032.

Source: Statista

KEYWORDS **+ AI-Powered Algorithms + AI-Embedded SOC + Stronger Regulations + Proactive Cybersecurity + More Sophisticated Threats**

AFTER THE ACCELERATION IN AI ADOPTION, HOW WILL CYBERSECURITY EVOLVE IN 2025 TO BECOME A KEY PRIORITY IN PROTECTING NEW TECHNOLOGIES AND DIGITAL EVOLUTION?

On one hand, AI represents a powerful tool in defending against cyber threats, but on the other, it can be exploited by cybercriminals to launch sophisticated and automated attacks. With the evolution of intelligent malware, advanced phishing, and the use of predictive analytics, **threats will become more complex and harder to detect**, compromising both sensitive data and digital infrastructures, as well as emerging platforms.

AI will play a crucial role in supporting human intervention in response to attacks, offering automated analysis to quickly detect and respond to threats. While human intervention will remain central, AI will be able to manage large volumes of data, detect anomalous patterns, and improve the efficiency of defensive operations.

In particular, AI will be essential in combating risks related to **deepfakes and disinformation**, helping organizations identify suspicious content through advanced detection algorithms and image and video analysis, preventing harm from the spread of false information. To address these threats, cybersecurity must adopt a **proactive approach**, viewing AI not only as a threat but also as an ally in system protection. AI-based solutions must be integrated from the early stages of technology design, following the principle of "security by design." Furthermore, cybersecurity management will become a shared responsibility within the organization, focusing on advanced technologies such as encryption, incident response automation, and predictive threat analysis.

WHICH TECHNOLOGIES WILL SUPPORT THE EVOLUTION OF CYBERSECURITY TO ENSURE PROACTIVE PROTECTION THAT GOES BEYOND SIMPLE COMPLIANCE?

Technologies such as **AI, Machine Learning**, and **Deep Learning** will be crucial in detecting threats in real time, improving analysis accuracy, and accelerating response times, especially in complex contexts like Advanced Anomaly Detection. Predictive models, which analyze historical and behavioral data, will allow for anticipating sophisticated attacks, significantly improving defense capabilities.

Another key tool will be the use of **Digital Twins** and behavioral analysis of business infrastructures, which will **simulate attacks** and test the resilience of defenses. This simulation will anticipate vulnerabilities that could be exploited, allowing for reinforcement of protection before actual attacks occur. Automating security processes will become crucial to reduce human intervention and improve incident management efficiency.
Tools like AI-powered Security Operations Centers (SOCs) will enable continuous network monitoring, identifying anomalies, and responding in real-time to attacks. Advanced encryption will protect sensitive data, even in complex environments like cloud and IoT networks.
In this context, cybersecurity must evolve beyond simple regulatory compliance, adopting integrated solutions that protect the entire digital ecosystem of businesses, from networks and devices to cloud platforms.

HOW SHOULD COMPANIES ADAPT THEIR DEFENSE MODELS IN 2025 TO ADDRESS EMERGING CYBERSECURITY CHALLENGES?

It remains essential to ensure continuous verification of all connections, both internal and external, to reduce lateral movements by attackers.
The focus will be on implementing and managing control according to the **Zero Trust model**, with particular attention to **hybrid and multi-cloud environments**, where the expansion of the attack surface requires advanced monitoring and strict access segmentation.

This approach addresses the increasing technological complexity and significantly enhances protection against threats. The focus will also be on **digital resilience**, developing solutions that ensure operational continuity even in the event of an attack.

In this context, **ongoing employee training will be crucial**: AI will support security professionals by automating repetitive tasks and improving response to threats.

Additionally, a **culture of security** must be integrated at all organizational levels, raising awareness among all members about threats such as phishing, social engineering, and other advanced attack techniques.

A collaborative approach between the public and private sectors will be essential to respond to threats in a more effective and coordinated manner.
Solutions such as **DevSecOps models**, which integrate security from the early stages of the software development cycle, will become essential to prevent vulnerabilities during design. Finally, companies will need to reduce the complexity of their security infrastructures, optimizing systems to improve efficiency, sustainability, and speed in adapting to new threats.

Facts & Figures

Security / At a Glance

300+
CYBERSECURITY SPECIALISTS

550+
INDIVIDUAL CERTIFICATIONS

450+
CLIENTS

20+
COUNTRIES WHERE
WE DELIVER PROJECTS

22 EngX

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Key Trends

6.2

Bn $

BY 2025, THE GLOBAL METAVERSE WORKPLACE MARKET IS PROJECTED TO REACH $6.2 BILLION USD.

14

Bn $

THE AR SOFTWARE SEGMENT IS EXPECTED TO ACHIEVE A MARKET VOLUME OF $14 BILLION USD BY 2025.

3.73

Bn

BY 2029, THE GLOBAL AR & VR MARKET IS ANTICIPATED TO REACH 3.73 BILLION USERS.

Source: Statista

KEYWORDS **+ Real-Time Conversational Exp + Digital Empathy + Next-Gen Visual Gears + XR & Multisensority for Inclusivity + Immersive Collaboration**

HOW WILL IMMERSIVE COLLABORATION TECHNOLOGIES REVOLUTIONIZE DIGITAL EXPERIENCES IN 2025?

Immersive technologies like **Extended Reality (XR)** and **Next-Gen Visual Gear** are advancing rapidly. Their large-scale adoption in 2025 will transform industries, especially in professional collaboration and services.

The **consumer experience** will undergo a major shift. For example, purchasing a car—traditionally a complex process due to numerous options—will be simplified. In 2025, immersive technologies and advanced conversational interactions will enable customers to design and visualize their car in a hyper-realistic virtual space, configuring every detail with the help of a digital consultant. Mixed reality will also revolutionize in-store experiences, allowing customers to explore physical vehicles while experimenting with endless configurations through headsets, in real time, alongside a consultant.

These technologies will not just enhance digital experiences but create entirely new ways of engaging, exploring, and deciding.

In **business collaboration**, immersive tools will redefine workflows. Imagine a geographically distributed team meeting in a shared virtual space: using XR, participants can interact as if physically present, working on detailed digital replicas of physical objects. This innovation will have a significant impact on areas like **design**, **training**, and **critical operations**, such as remote medical procedures or maintenance tasks, where experts guide less experienced technicians in real time within a digital replica of their environment. By 2025, immersive collaboration will break physical and logistical barriers, making experiences more intuitive, shared, and productive.

HOW WILL THE DIGITAL EXPERIENCE ADAPT TO EMERGING CHALLENGES IN 2025?

The biggest challenge of 2025 will be meeting the rising demand for **personalized and engaging digital experiences**. **AI** will play a pivotal role, becoming an invisible force driving the customer journey.
For instance, traditional chatbots - often limited and frustrating - will give way to **AI-powered conversational experiences**. Imagine a digital assistant capable of real-time data streaming and analysis, predicting customer needs, offering targeted solutions, and conversing naturally. These advanced systems, integrating **immersive technologies** with **Generative AI**, will adapt to a customer's emotional state and communication style. This shift will redefine interaction paradigms, offering deeply personalized and immersive experiences that strengthen the bond between humans and technology.

This transformation will extend beyond **customer care** into **services**, **sales**, and **entertainment**, creating experiences that address practical needs while considering emotional ones. This approach will foster more empathetic and engaging interactions, ensuring higher customer satisfaction and sustained engagement.

HOW WILL TECHNOLOGICAL INNOVATION CONTRIBUTE TO MORE INCLUSIVE DIGITAL EXPERIENCES?

Inclusivity will be a central theme in 2025, with technologies like **AI**, **XR**, and **wearable devices** playing key roles in making digital experiences accessible to everyone, regardless of physical, cognitive, or geographic barriers.

For instance, **XR for accessibility** allows people with motor disabilities to participate in immersive experiences using adaptive devices controlled by voice commands or brain signals. **Inclusive multisensory systems**, combining sound, visuals, and haptic feedback, will create experiences accessible to users with visual or hearing impairments.

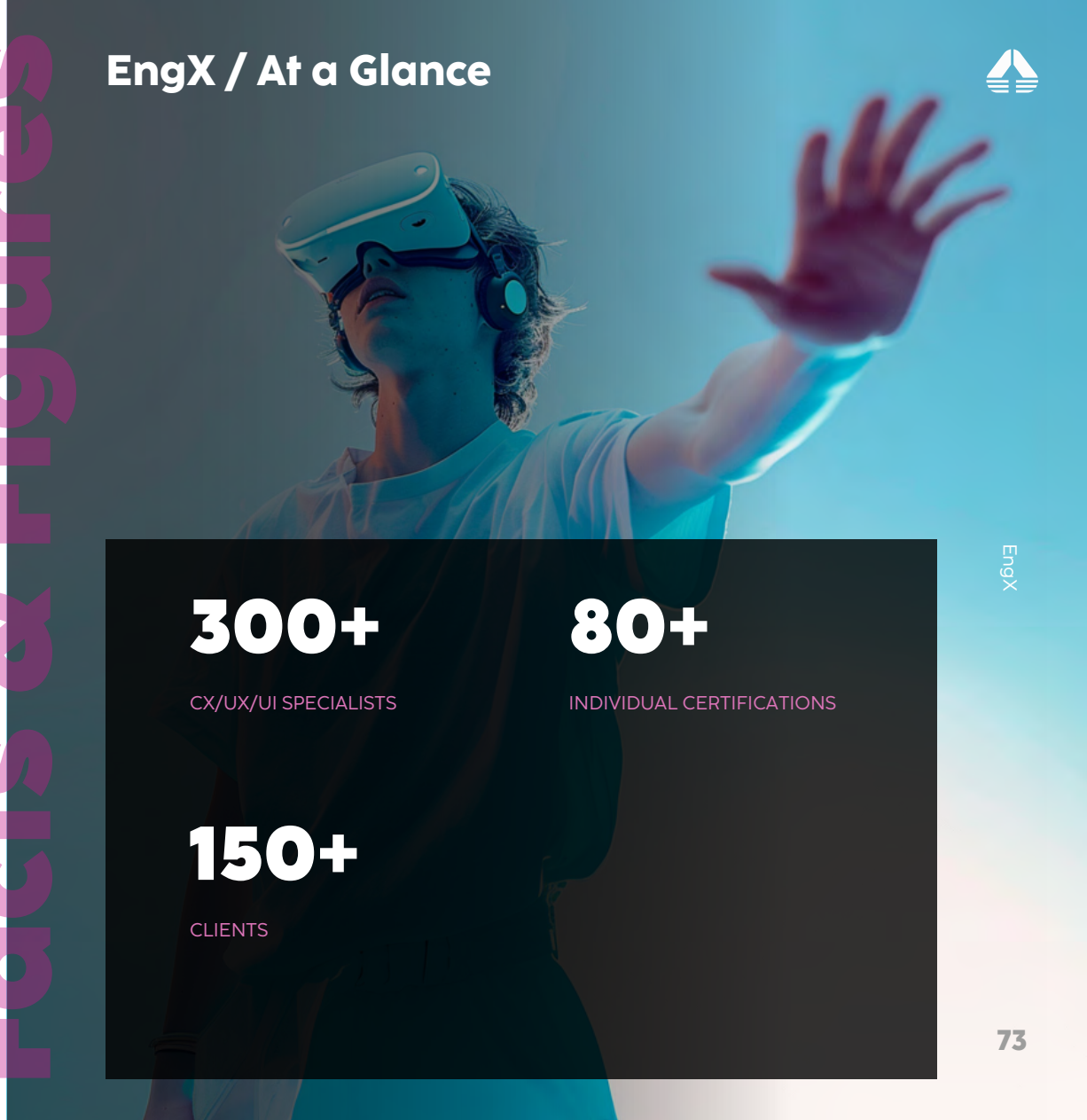
Additionally, **digital empathy** powered by AI will detect users' emotions and specific needs, adapting interactions in real time, including voice tone, to provide a more tailored experience. A practical example is an **XR-based educational system** designed for students with special needs. These platforms will offer customized learning paths and tools, enhancing engagement and comprehension through multisensory stimulation.

These innovations will not only improve accessibility but also help create more **human-centered, inclusive digital experiences**, bridging the digital divide.

Technology will become a universal connector, reshaping how we engage with it and making it more empathetic, responsive, and inclusive in an increasingly connected world.

Facts & Figures

EngX / At a Glance



300+

CX/UX/UI SPECIALISTS

80+

INDIVIDUAL CERTIFICATIONS

150+

CLIENTS

23 Platforms

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Key Trends

28.24

Bn $

THE GLOBAL AI SERVICE ROBOTICS MARKET WILL REACH $28.24 BILLION BY 2030.

77

Mln $

THE GLOBAL AI-DRIVEN ROBOTICS MARKET WILL BE VALUED AT $77 MILLION BY 2030.

9.76

Bn $

THE GLOBAL AI DEVELOPMENT TOOLS SOFTWARE MARKET WILL REACH $9.76 BILLION BY 2025.

Fonte: Statista

KEYWORDS **+ Augmented Enterprise Platforms + Automation Intelligence + Change Management + Technology-Human Synergy + AI Agent**

HOW WILL NEXT-GENERATION ENTERPRISE PLATFORMS INTEGRATED WITH AI EVOLVE BY 2025, AND WHAT WILL THEIR IMPACT BE ON INNOVATION AND OPERATIONAL EFFICIENCY FOR BUSINESSES?

If in 2024 enterprise platforms such as SAP, Salesforce, Microsoft Dynamics, ServiceNow, and Oracle Cloud underwent a profound transformation with the **introduction of AI Agents**, by 2025 these tools are consolidating and expanding their impact, redefining business service and operational models. AI Agents are no longer mere technological components but digital **partners embedded in workflows**, capable of optimizing operations, providing strategic decision-making support, and driving real-time innovation.

AI Agent-augmented platforms represent a strategic evolution: beyond optimizing business operations, they offer advanced decision-making support and foster innovation, redefining how organizations manage workflows.

By **assuming a proactive role**, AI Agents integrate into business processes to deliver continuous assistance, autonomously manage complex tasks, and personalize interactions based on context. Tools like ServiceNow's Virtual Agent not only streamline internal operational management but also anticipate potential issues, ensuring resilience and continuity.
This evolution leads to a **dual transformation**: reducing operational costs while increasing businesses' ability to innovate, adapt quickly to market changes, and create more effective experiences for both employees and customers.

HOW THE INTEGRATION OF INTELLIGENT AUTOMATION IN ERP, CRM, AND HCM PLATFORMS WILL EVOLVE COLLABORATION AND PRODUCTIVITY?

Intelligent automation powered by AI Agents is transforming business operations, **combining the power of Artificial Intelligence with automated processes** to enhance efficiency, personalization, and resilience.

The true potential of AI Agents lies in their ability to collaborate with people, driving innovation and amplifying human capabilities. **Human-machine collaboration** will become the cornerstone of daily operations: AI Agents will not replace workers but will free them from repetitive tasks, allowing them to focus on strategic decisions.

By learning from interactions, these agents **continually improve their adaptability to new contexts and changing needs**, becoming increasingly efficient and reliable tools.

Their scalability enables businesses to expand operational capacity, manage demand peaks with agility, and access new markets without compromising quality.
In the ERP context, AI Agents **automate and simplify complex processes** such as production planning, supply chain management, and financial control, offering predictive analytics for quick, informed decisions.
By integrating partner solutions like Oracle Cloud or SAP Business Technology Platform (BTP) with proprietary technologies, we can deliver an **advanced and customized ecosystem** that continuously monitors systems, identifies potential issues, and proposes preventive solutions to avoid operational disruptions.
In CRM systems, AI Agents enhance customer relationship management by personalizing interactions, anticipating needs, and strengthening loyalty. The **combination of our AI solutions** with tools like Microsoft Copilot and Salesforce's Agent Force exemplifies how integration can deliver strategic insights, improve team communication, and foster more effective collaboration.

WHAT ADOPTION AND CHANGE STRATEGIES WILL BE NECESSARY IN THE COMING YEAR?

AI Agents are becoming essential for enterprise platforms, but their success **requires targeted strategies**.

It is crucial to invest in strategic integration, ensuring these tools are implemented in processes where they can generate the greatest value, while avoiding unnecessary duplication or inefficiencies. At the same time, continuous monitoring and adaptation must be ensured. AI Agents require regular updates to stay aligned with technological and business evolutions, maintaining their effectiveness and relevance over time.

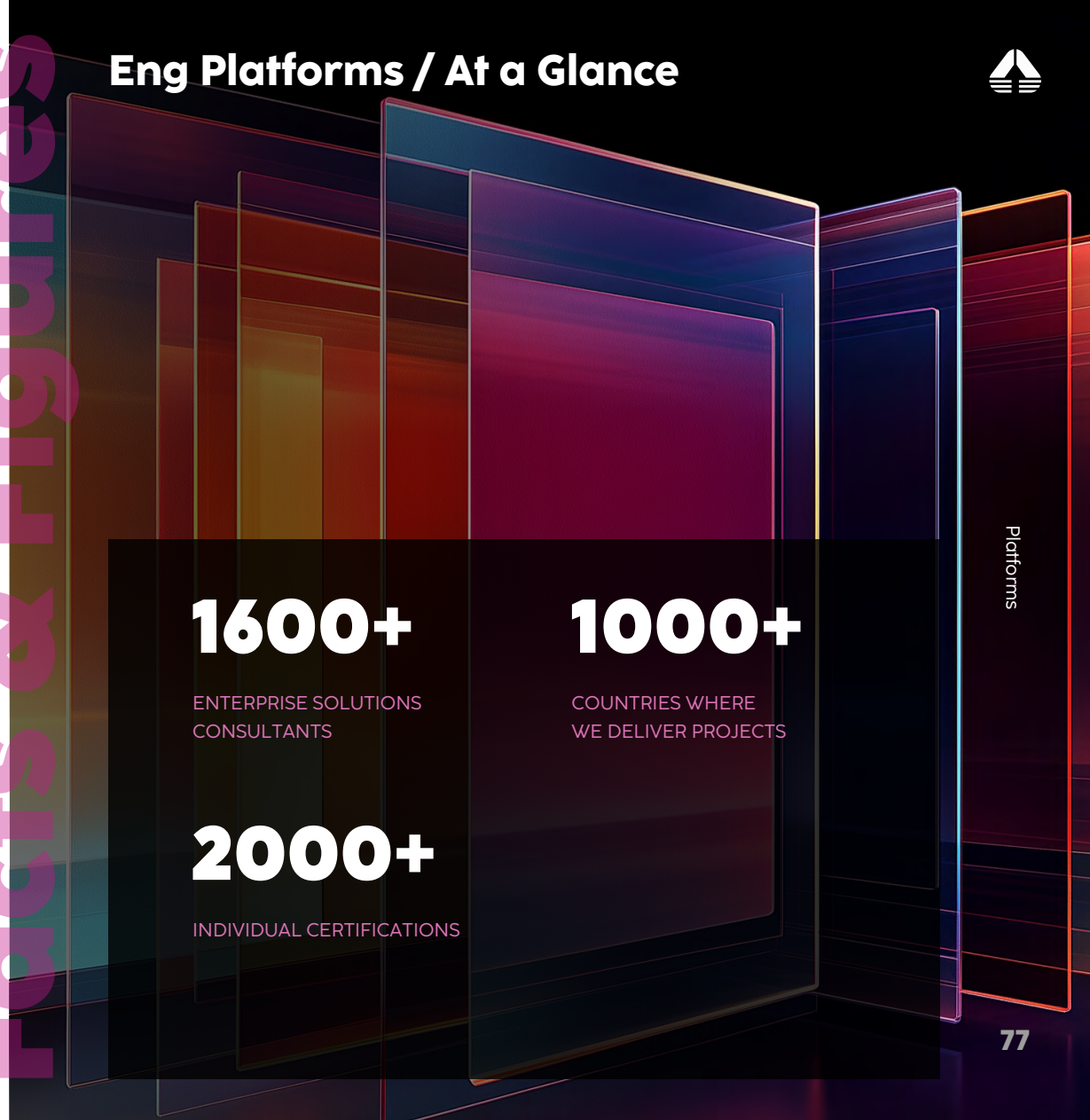
In parallel, employee training and **change management** will be central to enabling a smooth transition to the adoption of AI Agents. Technology, no matter how advanced, cannot reach its full potential without proper preparation of human capital. The success of AI Agents depends on users' ability to understand their functionality and fully leverage their potential, **integrating them seamlessly and productively into their daily activities**.

To address the digital skills gap, it will be necessary to create cross-functional teams capable of managing and optimizing these new technologies.

Small and medium-sized enterprises, in particular, will need to adopt a flexible and pragmatic approach to prepare for 2025. In a year where competitiveness will increasingly depend on the ability to innovate, investing in scalable AI solutions will allow SMEs to gradually adapt to market demands without compromising the stability of their operations.

Facts & Figures

Eng Platforms / At a Glance



1600+

ENTERPRISE SOLUTIONS CONSULTANTS

1000+

COUNTRIES WHERE WE DELIVER PROJECTS

2000+

INDIVIDUAL CERTIFICATIONS

24 Modernize

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Key Trends

74.6

Bn $

EXPECTED APPLICATION MODERNIZATION MARKET SIZE BY 2031 WITH A CAGR OF 18.7% BETWEEN 2024 AND 2031.

721.9

Bn $

CLOUD SERVICES MARKET BY 2025.

75

%

SOFTWARE DEVELOPERS WHO WILL USE AI CODE ASSISTANTS BY 2028.

Source: the data shown represents our processing of information from multiple sources

KEYWORDS **+ Modernization + Cloud Native + Generative AI + Dev Evolution + Sustainability**

WHAT ARE THE MAIN ELEMENTS OF AN APPLICATION SYSTEMS MODERNIZATION JOURNEY IN 2025 AND HOW CAN ENG SUPPORT COMPANIES IN THIS EVOLUTION?

Application systems modernization by 2025 will be characterized by an increasing adoption of **cloud-native practices**, the **pervasive use of AI** throughout the software lifecycle, and the **integration of security and compliance** as central elements. Organizations that invest in skills, agile/DevOps methodologies, and adopt flexible and scalable technology platforms will benefit from greater resilience and competitiveness in the market.

In Eng, we have purpose-built offering lines to support companies in modernization and migration to cloud.
We have developed a **cloud migration framework** that considers all components of architectural complexity, security, operational readiness, etc. and allows our customers to accelerate by adopting different strategies depending on the application context.
Furthermore, we are beginning to focus on the issue of code footprint with the aim of optimizing the code to reduce energy consumption, computational resources used, and consequently, the overall environmental impact.

Finally, we have pervasively integrated **GenAI into delivery processes** and we are able to help companies introduce artificial intelligence models into all business processes, also through our proprietary LLM (EngGPT) capable of addressing needs across multiple domains.

THERE IS A LOT OF FOCUS ON INNOVATION AND DIGITAL TRANSFORMATION, BUT MANY CIOS FIND THEMSELVES MANAGING AND SPENDING SIGNIFICANT PORTIONS OF THEIR BUDGET ON MORE LEGACY TECHNOLOGIES. WHAT ARE THE CRUCIAL FACTORS IN ENSURING CONSISTENT OPERATIONS OVER TIME WHILE TECHNOLOGICALLY EVOLVING?

In the context of digital transformation, one of the main dilemmas CIOs face is how to ensure business continuity of legacy systems -often critical to the business- while introducing newer technologies and paradigms.

Key success factors are:

- **clarity** in strategy and approach to modernization; before embarking on any transformation project, it is essential to perform a thorough analysis of the current state, identify the main critical issues and define a roadmap of gradual interventions to reduce operational risks;
- a **proper level of detail** in the coexistence of legacy and modern systems; architectures and intermediate paths must be clearly designed, and depending on the application context, different techniques can be used during modernization phases to minimize risk for the business;
- guaranteed '**Operational Readiness**'; since the use of modern solutions requires skills that very often differ from those typically present in companies working with so-called legacy systems, it is crucial to ensure these skills across the entire delivery chain;
- **lean delivery model** ready to respond to change; implementing development and project management methodologies based on lean approaches ensures quality and speed in responding to needs, even in uncertain or rapidly evolving scenarios.

HOW WILL THE ROLE OF SOFTWARE DEVELOPER EVOLVE WITH THE GRADUAL TRANSFORMATION OF LEGACY SYSTEMS AND THE ADOPTION OF MODERN ARCHITECTURES, ALSO THANKS TO GENERATIVE AI?

The need to keep legacy solutions operational while adopting new cloud-native paradigms and innovative technologies will lead to a significant evolution in the role of software developers.
By 2025, this professional figure will no longer be limited to code writing on a massive scale but will have an increasingly **hybrid and strategic role** in designing and

orchestrating the **coexistence of legacy and modern systems**. Generative AI tools, in fact, will automate parts of code writing, relieving each software developer of the most repetitive tasks and allowing to focus on the most critical, high-value aspects: architectural design, incremental systems modernization, performance and cost optimization, problem solving, as well as ensuring security and service continuity.

With the use of cloud solutions and the growing awareness of environmental issues, development teams will be required to write more efficient code and design scalable services, also sustainable in terms of energy consumption.

Furthermore, new architectures adoption requires every software developer to acquire **domain, infrastructure, security, and continuous integration skills**, as their involvement will extend from requirement definition to release and monitoring.
Continuous training and **on-the-job training** will therefore become essential: traditional programming skills will merge with analytical abilities, advanced debugging, CI/CD pipeline management, and lean/agile methodologies.

The adoption of modern architectures, combined with the potential of Generative AI, will thus transform the role of software developer into a true **innovation orchestrator**, ready to meet the challenges of a constantly evolving market.

Facts & Figures

Modernize / At a Glance

10+

YEARS OF EXPERTISE IN CLOUD NATIVE PROJECTS

1500+

SOFTWARE DEVELOPERS

150+

CLIENTS IN ALL MARKET SECTORS

25 Impacting the Future Together

Since always, we at Eng have supported our clients to fully understand their needs, identify new opportunities together, and create value. Through digital innovation, we have evolved to optimize processes, imagine, and build a future where technology is not an end in itself but a means to **improve people's lives** and tackle the most urgent challenges.

With a global network of 14,000 professionals, we collaborate daily with thousands of clients, focusing on what truly matters: **making a meaningful impact on the most complex issues**, even away from the spotlight.

We are committed to the crucial processes that form the foundation of all organizations. Our passion for technology is accompanied by a deep sense of responsibility to contribute to economic, social, and sustainable progress.

Interviews with the leaders of our company have outlined a clear vision for the future: a 2025 in which healthcare, energy transition, climate change, digital citizenship, and responsible growth become shared priorities.

Advanced technologies, such as Artificial Intelligence and Digital Twins, will drive these transformations, improving the quality of life, optimizing infrastructure, and fostering a more balanced relationship between people and the environment. A future where Cloud and Security will be the essential foundations and guardrails for secure digital transformation.

Addressing all of this requires technical expertise, collaboration, creativity, and a shared vision. **Growth is not only an economic goal but also a cultural one, to promote an ethical and responsible digital culture. We believe innovation must be driven by listening and co-creation with clients, joining forces to turn ambitious visions into tangible realities.**

Change is inevitable and part of our history, as is our passion for technology serving humanity to constantly push boundaries forward. Every day, we strive to make a difference, supported by the trust of those who collaborate with us.

We thank our partners, clients, and teams for sharing this evolutionary journey with us. It is thanks to this synergy that we can go beyond the limits of the possible and contribute to building a better future for everyone. Every day.

We elevate technology

TOGETHER, WE ELEVATE TECHNOLOGY TO MAKE IT MORE MEANINGFUL FOR EVERYONE, EVERYDAY

Innovation happens when technology shapes visions.

TREND RADAR / ENG OUTLOOK 2025

OUR IMPACT

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