ASSOLOMBARDA

RISING INDUSTRY

THE NEW GEOGRAPHIES OF GROWTH

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From Rethinking to Rising Industry

The strategic project

Digital technologies are generating an unprecedented volume of **data and knowledge**, opening up new opportunities for value creation. In this scenario, the competitiveness and resilience of businesses increasingly depend on their ability to leverage and share data, which no longer merely serves to support operational activities but is tending to become a genuine corporate asset. Leveraging data makes it possible to better understand complex phenomena, identify opportunities for improvement, anticipate critical issues and define business strategies based on objective evidence.

At the same time, **Artificial Intelligence** (AI) has now established itself as one of the main levers for the competitiveness of the production system. However, the value of AI does not stem solely from algorithms, but from the ability of companies to pool data, skills, technologies and concrete use cases. It is from this conviction, from rethinking the way of doing business thanks to the enormous potential of data, that **forgIA** was born: the initiative **promoted by Assolombarda** to guide the production system towards a new phase of industrial innovation founded on data and Artificial Intelligence.

The vision behind the initiative is to make our territory, starting from the Assolombarda quadrilateral, a point of reference for data-driven industrial innovation, fostering collaboration among companies, research centres, technology partners and developers of AI solutions. To achieve this goal, forgIA has launched a coordinated set of initiatives and programmes that simultaneously address the technological, organisational, cultural and industrial aspects needed to accelerate the adoption of Artificial Intelligence.

In particular, four complementary programmes were initially developed:

- **forgIA Industrial Data Ecosystem (IDE)**, to foster the secure sharing of data, models and AI solutions and value creation along production supply chains through common standards;
- **forgIA Accelerate**, to support the concrete adoption of Artificial Intelligence solutions in companies;
- **forgIA Academy**, to disseminate data skills and culture through training and networking;
- **forgIA Leadership Initiative**, to leverage data and AI through peer learning paths and mentoring programmes led by leading companies and best performers.

forgIA IDE is the foundational core of the entire strategy. It is the architecture that enables the secure sharing of data and creates the conditions for the development of high-impact Artificial Intelligence applications, leveraging in particular the vast wealth of data available to companies.

Furthermore, recognising Physical AI as one of the main growth drivers for manufacturing over the next decade, the strategic scope of forgIA is being broadened with the **Physical AI Ecosystem** programme, which aims to create the leading Italian hub for the convergence of Artificial Intelligence and manufacturing, with a strong international vocation, strengthening the position of Milan, Lombardy and Italy as a leading European location for the next generation of intelligent systems.

The development of the ecosystem and use cases

Assolombarda has played a key role in raising awareness among member companies of the importance of leveraging data and adopting advanced Artificial Intelligence solutions. Moreover, direct dialogue with companies has made it possible to bring to light, examine in depth and address the cultural and operational barriers that may limit the potential and applicability of a data-sharing ecosystem.

Over the past year, forgIA has taken significant steps in defining the technological, operational and collaborative foundations of the Industrial Data Ecosystem. The work carried out so far has involved companies, scientific partners and industrial stakeholders in a design and co-design process aimed at understanding the needs, opportunities and concrete ways of applying Artificial Intelligence in the business context and, in particular, in manufacturing.

Over **twenty early adopter companies** took part in the in-depth analysis and experimentation activities, contributing to the identification of **more than sixty use cases** in which the forgIA ecosystem can make a difference for the adoption of Artificial Intelligence. Some of these use cases have already reached a concrete implementation stage, while numerous further projects are currently being defined and will feed a significant pipeline in the coming months.

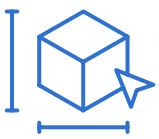
One of the clearest lessons to emerge concerns the value of an approach driven by industrial needs.

Companies are in fact showing strong interest in solutions capable of addressing concrete operational problems, such as supply chain visibility, energy efficiency, performance monitoring, the capture of know-how or access to advanced skills, rather than in initiatives focused exclusively on technological experimentation.

forgIA Use Cases

In parallel with the design and launch of the forgIA IDE collaboration environment, significant work was carried out to engage with and actively listen to a group of companies, in order to bring out and develop industrial use cases based on data sharing and Artificial Intelligence, to feed an initial Proof of Concept (PoC) of the ecosystem.

The use cases collected fall within several thematic clusters, from logistics to compliance, from market intelligence to knowledge management, through to sales and personnel management. Although individual meetings were held with each company, a significant convergence of needs emerged and, consequently, of possible use cases, some of which were particularly recurrent. A summary is provided below:



A) Logistics / Supply Chain / Capacity Management

A.1 “Warehouse integration”

Optimise the availability of components and warehouse space through the secure sharing of data on stock, availability and requirements among partner companies.

A.2 “Marketplace for raw materials, components and equipment”

Facilitate the rapid sourcing of raw materials, components and equipment through a shared environment that allows companies to exchange availability, terms and delivery times.

A.3 “Structured access to product datasheets”

Make technical product information accessible and queryable through a shared data model and standard interfaces, reducing manual activities and dependence on static documents.

A.4 “Post-order management / expediting”

Improve supply chain management through the real-time sharing of order status and delivery times, enabled by AI agents, reducing inefficiencies in procurement processes.

A.5 “Healthcare schedule optimisation”

Optimise the management of healthcare schedules through the sharing and analysis of booking data, reducing cancellations and inefficiencies in the delivery of services.

A.6 “AI for operational planning, stock and requirements”

Facilitate access to already validated Artificial Intelligence solutions, providing SMEs with ready-to-use AI services and capabilities to support their main business processes.



B) HR / Welfare / Skills

B.1 “Shared welfare / Home-to-work mobility”

Foster access to shared welfare services by aggregating demand among SMEs, making initiatives for the benefit of workers more sustainable and attractive.

B.2 “Internal knowledge transfer”

Preserve and leverage the company’s wealth of skills through digital tools for collecting, sharing and transferring knowledge, reducing the risks associated with turnover and retirements.

B.3 “Mapping skills demand/supply”

Improve the alignment between skills demand and supply through the sharing of companies’ professional needs, supporting collaboration with the education and training system.

B.4 “People analytics for recruiting, retention and people development”

Make recruiting, development and retention processes more effective through the analysis of HR data and the use of Artificial Intelligence to support decisions on the management of company skills and talent.



C) Sustainability / Compliance / Supply Chain Risk

C.1 “Supply chain sustainability”

Improve the monitoring of supply chain sustainability through the structured collection and sharing of environmental data, supporting continuous impact assessment and greater transparency towards stakeholders.

C.2 “Energy efficiency impact certification”

Measure and monitor the benefits of energy efficiency measures through the structured sharing of consumption data, supporting the reporting, certification and verification of the impacts achieved.

C.3 “Structured Safety Data Sheets”

Digitalise and simplify the management of Safety Data Sheets through the structured sharing of data along the supply chain, reducing manual activities, risks of error and compliance-related issues.

C.4 “Digital Product Passport”

Enable the structured sharing of the information required for the Digital Product Passport, fostering traceability and data management throughout the entire product life cycle.

C.5 “Shared cyber supply chain framework”

Improve the assessment and monitoring of cyber risk along the supply chain through the sharing of common metrics, evidence and practices, reducing fragmentation and burdens for customers and suppliers.



D) Sales / Quotation / Tenders

D.1 “Large international contracts”

Facilitate joint participation in complex tenders through collaboration between companies and the structured sharing of information, simplifying the identification of partners and the analysis of tender technical specifications.

D.2 “Patent verification”

Support the leveraging of intellectual property through the automated analysis of existing patents, facilitating the verification of the originality of innovations and reducing the risk of patent infringement.

D.3 “AI-assisted quoting with external data”

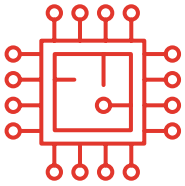
Make quotation processes more efficient through the automated analysis of tender specifications and technical documentation, reducing time, manual activities and errors in preparing quotations.

D.4 “AI quotation in contract and hospitality”

Accelerate and optimise the quotation of complex projects through the use of Artificial Intelligence, supporting the generation of offers consistent with requirements, constraints and company catalogues.

D.5 “Industrial matching between the needs and capabilities of member companies”

Facilitate the identification of partners and skills in the territory through the structured sharing of company capabilities, fostering the matching of industrial needs with opportunities for collaboration between companies.



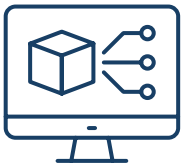
E) Finance / Market Intelligence

E.1 “Budget forecasting for industrial sectors”

Improve the understanding of market dynamics through the aggregated and secure analysis of demand and order data, supporting strategic planning based on shared evidence.

E.2 “Data platform for certified external sources”

Simplify access to and use of external data through the standardisation and sharing of certified sources, reducing integration costs, inefficiencies and duplication among companies.



F) Knowledge Management / Operations / Back-office

F.1 “Back-office document automation”

Automate the extraction and verification of data contained in heterogeneous documents using Artificial Intelligence, reducing manual activities and handling times for administrative and technical processes.

F.2 “Computer Vision for quality and traceability”

Improve quality control through the sharing of computer vision solutions for identifying non-conformities, fostering defect traceability and the continuous improvement of production processes.

F.3 “Shared regulatory database”

Support the management and interpretation of regulatory requirements through the sharing of knowledge and use cases and the use of AI tools for document analysis, fostering rapid and informed decision-making.

F.4 “Technical knowledge management for maintenance and customer support”

Leverage and make accessible the company’s technical knowledge through AI-based assistants, supporting maintenance, troubleshooting and rapid access to information on plants, machinery and processes.

F.5 “Leveraging process data and product telemetry”

Leverage the data generated by plants, machinery and processes through their secure and controlled sharing, enabling advanced services for maintenance, technical support, performance optimisation and product innovation.

F.6 “Document quality control along the supply chain”

Improve the quality and efficiency of document exchanges along the supply chain through automated compliance verification capabilities, reducing errors, rework and approval times between customers and suppliers.

In addition to these, there are further projects already identified within the forgIA Accelerate pipeline, including those with UCIMU companies.

Publicly released use cases

Among the most advanced use cases is the project proposed and developed with **Hydroservice**, an SME operating in the design and construction of hydraulic systems and customised engineering solutions. The project focuses on the selective sharing of information on warehouse availability. The solution enables companies to identify available materials and storage capacity more quickly, improving the responsiveness of supply chains and reducing operational inefficiencies.

With **Maire**, a large international group that develops and builds plants and innovative solutions for energy, chemicals and the energy transition, a solution dedicated to monitoring orders along the supply chain is currently being developed.

The objective is to make up-to-date information on the progress of supplies available, improving production planning and overcoming processes that are still heavily dependent on fragmented communications and non-integrated documentation.

The project developed with **Epta**, a multinational group specialising in the design and production of systems and technologies for commercial refrigeration, focuses on measuring the impact of energy efficiency measures in the commercial refrigeration sector.
Through the use of data, companies can objectively quantify the benefits achieved from energy efficiency initiatives, supporting ESG reporting activities and demonstrating the value of the investments made.

Finally, with **Bracco**, an international group active in the healthcare sector and a leader in diagnostic imaging, building on the experience gained by the company in developing the Ippocrate platform, in-depth work is under way on federated learning, an approach that allows multiple organisations to train Artificial Intelligence models on distributed data without directly sharing the underlying information. This is a particularly strategic element for contexts characterised by stringent requirements in terms of confidentiality, intellectual property protection and regulatory compliance.

forgIA Accelerate

As part of the forgIA Accelerate programme, a pathway was launched with UCIMU (Unione Costruttori Italiani Macchine Utensili, the Italian machine tool manufacturers' association), which led to the definition of further use cases of interest. It started with an introductory conference involving 50 participants, followed by more hands-on work through two Design Thinking workshops featuring a pilot group of 8 companies.



These workshops made it possible to identify and analyse two use cases considered of greatest interest for concrete implementation:

- “LLM for advanced technical translation”: automate the translation of technical content for foreign markets through the development and use of shared AI models and glossaries, reducing time and costs and ensuring superior quality.

- “Supply chain learning path for AI”: disseminate Artificial Intelligence skills along the supply chain through shared training paths, fostering the adoption of common tools, languages and best practices.

These use cases are currently being examined in depth by the forgIA Team, with a view to the development planned from the fourth quarter of 2026.

forgIA Academy

The forgIA Academy programme is aimed at a diverse business audience and seeks to develop greater awareness of the use of data and the potential of artificial intelligence tools in business, through outreach and in-depth events on the applications of artificial intelligence in various industrial sectors, as well as visits and thematic meetings at highly innovative organisations in the field of artificial intelligence.

Since December 2025, more than 15 dedicated events have been held; these include, in particular, “ForgIAre il futuro delle imprese” (“Forging the future of business”, 11 February), with over 200 participants, in collaboration with Comitato Leonardo, and “Rethinking Manufacturing” (25 June), an international event with over 230 participants, in collaboration with Politecnico di Milano. These were complemented by local events (in the provinces of the Assolombarda quadrilateral), supply chain events and events focused on the various industry groups, such as the “Next Engineering” series of meetings, dedicated to companies in the Engineering Services section.

From 5 to 11 July, the “Silicon Valley Innovation Tour” took place: the first forgIA Academy event abroad.

The mission, organised in collaboration with Ecole and AUSED, took over 20 managers from large and dynamic companies to explore the impact of artificial intelligence in some of the places where this technology is evolving most rapidly. Participants visited some of the world’s leading innovation hubs, such as UC Berkeley, met key players in the artificial intelligence sector, such as NVIDIA and Oracle, and engaged with cutting-edge companies in physical AI applications, such as Zoox and Multiply Labs.

In 7 months, over 700 people have been involved, working on skills, adoption and data culture. Thanks to companies’ commitment to sharing AI best practices and applications, the **“AI Use Case Library - (by) forgIA”** has also been created and made available on the Bussola 4.0 platform, bringing together real use cases organised by business function.

Finally, work is under way with local universities to launch, in the coming months, the **“University Contest – forgIA”**, in which teams of students will compete by proposing AI-based solutions to challenges set on the basis of companies’ experiences.

The front-end and operating model of forgIA IDE

A particularly significant step concerns the work aimed at building and releasing the first navigable version of the front-end of the forgIA Industrial Data Ecosystem. This is the visible component of the ecosystem, through which companies will progressively be able to access data, services, digital assets and Artificial Intelligence capabilities. The availability of this first platform is the step that makes it possible to evolve from the experimentation phase towards an industrialisation approach, progressively making the results of the work carried out in recent months available to companies and laying the groundwork for extending the ecosystem on a wider scale.

Alongside technological development, Assolombarda is working on **defining the operating model of the ecosystem.** The main roles have been identified, the relationships between participants have been designed and work has begun on drawing up the rules that will govern access to, and the sharing and enhancement of, the various assets on the platform, rules that establish the ecosystem's framework of trust. In addition, careful consideration has been given to the **operational barriers** that could limit the potential and applicability of a data-sharing ecosystem, focusing on data security and sovereignty and on the protection of intellectual property.

The platform will not merely collect technical content, but will offer companies a comprehensive point of reference, providing answers, strategic guidance and useful input for launching and developing new initiatives within the ecosystem.

The operating partner for the development of forgIA IDE is **Cefriel**, drawing on its many years of experience in digital ecosystems and its leading role in the creation of E015, the digital ecosystem of Expo Milano 2015, which became a benchmark model for the integration of services between public and private entities; a proven track record that makes it the natural partner for giving technical and methodological substance to the project.

An ecosystem founded on partnerships

Building an infrastructure of this kind requires multidisciplinary skills and a strong capacity for collaboration. From the outset, forgIA has attracted the interest and support of various parts of the Confindustria System; collaboration agreements are already in place with territorial and sector associations that share the goal of fostering the spread of artificial intelligence in companies.

The creation of the forgIA ecosystem has also required the activation of a broad **network of scientific and technology partners**, including Politecnico di Milano, MADE, AIRIC, AI4I (Italian Institute of Artificial Intelligence for Industry) and Cineca-IT4LIA, which support the initiative by providing specialist expertise, infrastructure and technology transfer capabilities to the business world. These collaborations are complemented by recently launched **major international partnerships**, including **the one with Core42**, which will help to further strengthen the technological sustainability, innovation capacity and growth prospects of the ecosystem.



Next steps

Today forgIA is entering a new phase of its development journey. Having built the foundations of the ecosystem, defined the first use cases, consolidated technology partnerships and set up an initial operating platform, the goal is to accelerate towards progressive **industrialisation.** The pilot phase of the project was in fact an important test bed for **validating companies' interest in the initiative**, recording a particularly high level of engagement. This feedback confirms the relevance of the project and makes it even more strategic to proceed towards its progressive industrialisation, in order to provide the ecosystem with a structured and scalable model, capable of welcoming a growing number of companies and amplifying its impact over time. In the coming months, the focus will be on completing the operating and governance model, expanding the portfolio of available assets and capabilities, consolidating the use cases launched and involving new industrial clusters and new companies interested in joining the ecosystem.

The evaluation and activation of **further projects** already identified within the forgIA Accelerate pipeline (including those with UCIMU, ASSOMAC and the group of Micro-Mechatronics companies of Assolombarda) also continue, together with discussions with the companies already involved in the in-depth analyses. Finally, on the **Physical AI** front, the development of the forgIA Physical AI Ecosystem will be pursued with the aim of fostering the integration of hardware and software skills and connecting Lombard companies to the main international Physical AI ecosystems, enhancing their industrial know-how globally. Within this development framework, particular importance is attached to the regional programme of Innovation and Development Zones (ZIS), within which Assolombarda and the forgIA partners have launched the **ZIS Artificial Intelligence** project, a point of reference for the dissemination and adoption of AI in the Lombard manufacturing system.

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