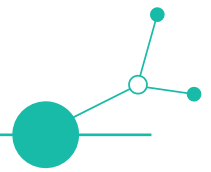




D4.2.1 Regional Action Plan



Italy

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A. REGIONAL CONTEXT AND ECOSYSTEM OVERVIEW

A.1 Main industrial sectors

Lombardy represents the economic engine of Italy and one of the most competitive industrial regions in Europe. The region is characterised by a dynamic, export-oriented and innovation-driven entrepreneurial fabric, with a strong manufacturing vocation that significantly contributes to national and European industrial competitiveness. With approximately 84,900 manufacturing enterprises, more than 903,000 employees, Lombardy accounts for around 26–27% of Italy's total manufacturing turnover and value added, 24% of employment and 27% of national manufacturing exports. This confirms Lombardy as the leading manufacturing region in Italy.

Lombardy's manufacturing system is highly diversified and multisectoral, encompassing both process industries and discrete manufacturing. Key sectors in terms of value added and industrial relevance include:

- Machinery and machine tools manufacturing (around 47% of Italian machine tool producers and 38.5% of robotics companies are located in Lombardy);
- Metallurgy and metal products (approximately 25% of Italian producers are based in the region);
- Chemical industry;
- Rubber and plastics (with strong specialisation in composites and polymers for automotive, aerospace and marine sectors);
- Textile industry;
- Pharmaceutical industry;
- Food and beverage production.

Digitalisation is a central transformation driver across Lombardy's industrial system. Companies have actively leveraged national incentive schemes (Transition 4.0 and 5.0) to invest in advanced digital technologies, automation systems and process integration tools. The region shows a relatively advanced level of adoption of Industry 4.0 technologies, particularly in:

- Automation and robotics,
- Mechatronics and control systems,
- Sensorisation of machines and production processes,
- Data collection and industrial cybersecurity,
- Hybrid production systems and advanced manufacturing technologies.

However, challenges remain in terms of full data integration and AI adoption. According to Eurostat data (2024), 8.2% of companies with more than 10 employees in Italy use at least one AI technology, compared to an EU average of 13.5%. This suggests that, despite strong technological capabilities, AI diffusion across SMEs remains moderate and uneven. A key regional need concerns improving companies' data readiness and capability to manage, analyse and valorise data in order to enable AI-based solutions, digital twins and advanced monitoring systems. Digital maturity is therefore heterogeneous: large enterprises are generally more advanced, while SMEs require structured support in digital integration and data governance.



Sustainability and environmental transition are increasingly embedded in the regional industrial strategy. Companies are investing in:

- Energy efficiency measures,
- Renewable energy integration,
- Process optimisation to reduce material consumption and waste,
- Circular economy practices (eco-design, recycling, remanufacturing).

The strong presence of enabling sectors such as machinery, advanced materials, and chemical industries supports the development of green technologies and circular industrial solutions. However, the green transition is still uneven across sectors and company sizes. SMEs in particular face barriers related to investment costs, regulatory complexity and limited technical expertise. There is growing demand for tools to monitor environmental performance, improve ESG reporting and integrate sustainability criteria into production and product design.

Lombardy's Smart Specialisation Strategy (S3 2021–2027) is strongly aligned with advanced manufacturing, digital transformation and sustainable industrial innovation. Key priorities include:

- Integration and development of Artificial Intelligence for manufacturing;
- Sensorisation of machines and processes, big data management and cybersecurity;
- Hybrid production systems, collaborative robotics, mechatronics and automation;
- Advanced monitoring technologies from design to production, including environmental monitoring;
- Circular economy solutions (eco-design, recycling, remanufacturing, disassembly, reverse logistics);
- Validation of advanced and smart materials;
- Flexible, resilient and proactive supply chain management systems;
- Human-centric factory solutions and inclusive technologies;
- Virtual and augmented reality technologies for training and mentoring;
- Digital platforms for advanced manufacturing;
- Innovative methods for industrial design and co-design with end users.

These priorities demonstrate strong coherence with the objectives of B2GreenHub, particularly in areas such as digital maturity, AI integration, circular economy, testing infrastructures and university–industry collaboration.

A.2 Key regional actors

The Lombardy region hosts a dense and highly diversified industrial ecosystem, where multiple actors play a strategic role in enabling green and digital transformation in line with the GREENE 4.0 framework.



Manufacturing SMEs and mid-caps represent the core target group of the ecosystem. Given the structure of Lombardy's economy, characterised by a strong presence of small and medium-sized enterprises, these actors are central to any regional transformation strategy. However, the ecosystem must differentiate its approach: particular focus should be placed on innovative SMEs and mid-caps that demonstrate both the willingness and the capacity to invest in digitalisation and sustainability. These companies can act as early adopters, pilot users and multipliers within their supply chains. At the same time, a significant share of traditional SMEs still shows limited digital maturity and green awareness. For this segment, priority actions should focus on awareness-raising, readiness assessment and gradual capacity building before full-scale deployment initiatives.

Technology providers constitute another key pillar of the GREENE 4.0 ecosystem in Lombardy. The region hosts a strong base of machinery producers, automation companies, robotics firms, AI developers and advanced materials suppliers. These actors provide enabling technologies that can be vertically integrated into manufacturing processes. Their role is not only to supply solutions but also to collaborate in co-development, testing and validation activities, particularly in structured environments such as joint laboratories and pilot facilities.

Universities and R&D organisations are essential actors both in terms of research excellence and industrial application. Lombardy benefits from a strong academic and research infrastructure capable of supporting advanced manufacturing, AI integration, sustainable production systems and circular economy models. Their contribution spans from fundamental research and technological foresight to applied research, technology transfer and workforce upskilling. Strengthening structured collaboration between academia and industry remains a key strategic priority to bridge long-term research objectives with short- and medium-term industrial needs.

Business support organisations and innovation intermediaries play a crucial facilitation role. In Lombardy, Competence Centres, Digital Innovation Hubs (DIHs), clusters, business associations (including Confindustria and sectoral federations) and regional innovation agencies act as connectors between companies, research institutions and public authorities. These actors are particularly relevant in reducing ecosystem fragmentation, supporting SME access to funding and testing infrastructures, and promoting participation in national and EU-funded programmes. They are instrumental in identifying common technological objectives at supply chain level (e.g., shared data platforms, collaborative innovation projects) and in supporting cross-border networking initiatives.

Public authorities, including the regional government and related agencies, provide the strategic and regulatory framework. Through the RIS3 strategy, funding instruments and innovation policies, they define priority areas and ensure alignment with European digital and green agendas. Their role is also critical in enabling long-term ecosystem coordination and ensuring continuity beyond project-based initiatives.

A.3 Existing platforms and support structures

Lombardy benefits from a well-structured and articulated innovation support ecosystem, composed of regional platforms, European networks, cluster initiatives and specialised testing and training infrastructures. The challenge is not the absence of tools, but rather ensuring integration, accessibility and coordinated deployment.



At regional level, one of the main reference tools is the [Open Innovation Platform](#) of Regione Lombardia, which functions as a digital space for knowledge exchange, policy consultation and stakeholder engagement. The platform facilitates dialogue among companies, research organisations and public authorities, and supports thematic communities aligned with the regional Smart Specialisation Strategy (RIS3).

In addition, Lombardy actively participates in several European-level networks with strong regional presence and impact, including:

- [Enterprise Europe Network](#) (EEN), supporting SMEs in internationalisation, innovation partnerships and access to EU funding;
- [S3 Platform](#) (S3P), promoting interregional collaboration aligned with Smart Specialisation priorities;
- [Vanguard Initiative](#), where the regional cluster AFIL (Associazione Fabbrica Intelligente Lombardia) coordinates the Efficient and Sustainable Manufacturing (ESM) Pilot, fostering interregional industrial pilot projects and value-chain development.

These platforms provide strategic positioning, matchmaking opportunities and access to European cooperation frameworks, particularly for advanced manufacturing and industrial innovation.

Furthermore, Lombardy hosts a range of competence centres, Digital Innovation Hubs (DIHs), university laboratories and applied research infrastructures that offer testing, validation and demonstration services. These environments are crucial for piloting advanced manufacturing technologies, automation systems, AI solutions and circular economy processes. However, access and visibility are sometimes fragmented, especially for smaller SMEs. A best practice is the [JOiINT LAB](#), established in 2020 in partnership with Istituto Italiano di Tecnologia (IIT). It is focused on advanced robotics technologies and aims at strengthening the technology transfer mission, bridging research activities and industrial needs, training high-level professional figures with advanced technical-scientific skills and enhancing the technological excellence of the area. JOiINT LAB is unique in terms of size and strategic importance, making it the ideal base for IIT's projection towards supporting the Lombard and national industry. Another example is the SmartLab, located at the POINT, the Technology Center of Bergamo. It is a demonstrative laboratory where different machines from Intellimech associated companies are interconnected following the Industry 4.0 paradigm. SmartLab is divided into two main areas: a software room, where researchers can develop software or use it for simulation and testing; a showroom, where some of the demonstrators developed in the last years are available, including diagnostic, monitoring and predictive systems, smart applications and communication systems

The region also benefits from a strong university system, technical institutes and lifelong learning initiatives. Competence centres and DIHs also provide targeted Industry 4.0 training modules. Nevertheless, training supply can be dispersed and not always fully aligned with immediate industrial deployment needs, particularly regarding AI integration, data governance and sustainability monitoring.

While Lombardy already has multiple platforms and support structures, the main limitation identified is fragmentation, limited interoperability and the difficulty for SMEs to navigate the ecosystem efficiently. In this context, B2GreenHub can provide significant added value. The strongest integration potential exists with:

- The Open Innovation Platform of Regione Lombardia (for policy alignment and stakeholder engagement);
- AFIL and Vanguard Initiative pilots (for cross-border value-chain experimentation);
- Enterprise Europe Network (for international matchmaking and EU project participation);



- Competence Centers and DIHs (for testing, readiness assessment and training deployment).

These tools already operate within innovation ecosystems but could benefit from a more deployment-oriented digital bridge connecting technology portfolios, testing facilities, training modules and funding guidance in a single operational pathway. B2GreenHub can act as an implementation bridge by:

- Facilitating the search for project partners across regions and value chains;
- Enabling structured access to green and digital technology portfolios;
- Connecting companies to testing and piloting environments;
- Providing access to training and learning materials aligned with transformation needs;
- Centralising information on funding opportunities and policy frameworks.

Unlike broader networking platforms, B2GreenHub can reduce complexity by offering a more user-friendly and operational interface focused on deployment rather than only networking or policy discussion. In particular, the platform can address current gaps in the accessibility and ease of navigation, as well as in creating a clear connection between technology identification, piloting and funding access.



B.KEY REGIONAL NEEDS AND BARRIERS

Based on survey evidence and regional seminar outcomes, the following needs and barriers have been identified.

B.1 Priority needs

Select and describe the most relevant needs:

- ✓ Access to finance
- ✓ Digital maturity and data readiness
- ☐ Green business model transformation
- ☐ Skills gaps
- ☐ Partner search difficulties
- ✓ Access to testing/piloting
- ☐ Regulatory complexity
- ☐ Ecosystem fragmentation

The regional ecosystem demonstrates a strong demand for structured support in accelerating green and digital transformation, particularly among SMEs and mid-sized manufacturing companies.

A primary need concerns **access to finance and funding opportunities**, especially to support digitalisation, AI adoption, eco-design, circular economy practices and green transition projects. Stakeholders emphasised the necessity of clearer guidance on available financial incentives, improved support for participation in EU-funded projects, and assistance in navigating complex funding mechanisms. Access to financial instruments is perceived not only as a resource issue, but as a strategic enabler to reduce risk and stimulate innovation investments.

A second critical need relates to **digital maturity and data readiness**. Companies require support to digitalise operational data, improve data flow across production processes and strengthen their capability to manage and valorise data for AI-driven solutions. There is a strong demand for tools to assess SME digital and green readiness, along with advisory services to help companies better understand their own knowledge base and capacity gaps. This includes the need for workforce upskilling (both employees and management), structured training programmes and guidance on integrating new digital tools into daily operations.

Another significant need concerns access to **testing and piloting environments**, including pilot users and early adopters. SMEs and start-ups require structured opportunities to test solutions in real industrial contexts before full-scale implementation. The region also highlights the importance of more structured collaboration spaces with universities, research centres and public authorities, enabling technology transfer, access to real industrial challenges and shared experimentation frameworks.

Cross-cutting needs include:

- Better information on available green and digital technologies;



- Access to experts and advisory services;
- Stronger matchmaking and value-chain networking (including cross-border cooperation);
- Tools to monitor progress on green and digital transformation;
- Evidence of successful business cases and demonstrators;
- Support in aligning innovation actions with RIS3 and regional strategies.

In relation to the B2GreenHub platform, stakeholders expressed strong interest in:

- Access to a portfolio of green and digital technologies;
- Access to testing and piloting facilities;
- Matchmaking with partners and value-chain actors;
- Access to experts and advisory services;
- Tools for assessing digital and green readiness.

Online training and funding information services are perceived as relevant but secondary compared to practical deployment-oriented tools.

B.2 Main barriers

- ✓ High investment costs
- ✓ Lack of knowledge about available solutions
- ☐ Long partner search processes
- ☐ Limited cross-border contacts
- ✓ Low digital readiness
- ☐ Administrative/legal differences
- ☐ Language/cultural barriers

Despite strong willingness to engage in transformation processes, several structural and operational barriers continue to limit the speed and scale of adoption.

The most significant barrier identified is **high investment costs and lack of funding**, particularly for SMEs. Financial constraints, combined with uncertainty regarding return on investment, reduce companies' capacity to undertake ambitious digital and green transformation projects.

A second major barrier concerns **low digital readiness** and limited experience with digital platforms and data management systems. Many organisations still operate with fragmented data structures and insufficient integration across processes. This hinders the adoption of advanced technologies such as AI, digital twins and sustainability monitoring systems.

Closely linked to this is the **skills gap and workforce transformation** challenge. Companies report shortages of qualified personnel capable of managing digital tools, sustainability strategies and new business models. At the same time, managerial focus often remains oriented



toward short-term operational priorities, limiting strategic investment in long-term innovation capacity building.

Additional moderate barriers include:

- Insufficient knowledge of available technological solutions;
- Fragmented regional innovation support systems;
- Lack of clear prioritisation of interventions;
- Difficulties in elaborating new competitive and sustainable business models.

Minor barriers include:

- Limited access to advanced technologies and piloting facilities;
- Time-consuming partner search processes;
- Administrative and regulatory differences across borders;
- Language and cultural barriers in transnational cooperation.

Overall, the evidence suggests that while motivation and interest are high, companies require structured, coordinated and deployment-oriented support to overcome financial, digital and organisational barriers. This confirms the relevance of the B2GreenHub platform as a practical enabler designed to reduce complexity, improve readiness and facilitate sustainable innovation pathways.



C.PRIORITY INTERVENTION AREAS

The strategic priorities aligned with the Transnational Strategy emerged at regional level are:

- ✓ Strategic Objective 1 – Knowledge & Competence Uplift
- Strategic Objective 2 – Transnational Ecosystem Connectivity
- Strategic Objective 3 – Platform Synergies & Reach
- ✓ Strategic Objective 4 – Education–Industry–Research Linkages

Strategic Objective 1 – Knowledge & Competence Uplift

This priority is particularly relevant for Lombardy given the region's strong manufacturing base and high level of technological specialisation. While many companies have invested in digital technologies through national incentive schemes, important gaps remain in digital maturity, data management capabilities and green transformation skills, especially among SMEs. The adoption of advanced solutions such as Artificial Intelligence and data-driven production systems is still uneven, and managerial competences for steering long-term transformation are not yet fully consolidated. Strengthening knowledge and competences is therefore essential to ensure that Lombardy's industrial system can maintain its competitiveness in an increasingly digital and sustainability-oriented market. This objective addresses primarily manufacturing SMEs and mid-caps, company managers and technical staff, as well as universities and training providers responsible for upskilling and curriculum development.

The expected change is an overall improvement in digital and green readiness across the regional ecosystem, with companies becoming more capable of managing data, adopting innovative technologies and integrating sustainability into business models. In the medium term, this should lead to stronger productivity, higher participation in innovation projects and greater resilience of the regional manufacturing system.

Strategic Objective 4 – Strengthening Education–Industry–Research Linkages

Lombardy benefits from a robust university and research system alongside a highly developed industrial base. However, collaboration between academia and industry is often fragmented or limited to short-term projects, while SMEs in particular face difficulties accessing research expertise, testing infrastructures and applied innovation environments. Bridging this gap is crucial to accelerate technology transfer and ensure that research outcomes effectively translate into industrial deployment.

This objective targets universities and research organisations, manufacturing SMEs and mid-caps, technology providers, clusters and innovation intermediaries, as well as public authorities responsible for innovation policy. By reinforcing structured and long-term cooperation models, the region aims to improve trust, coordination and alignment between research agendas and industrial needs.

The expected change is a more integrated and collaborative ecosystem, where joint laboratories, co-designed training paths and shared testing environments become standard practice rather than exceptions. Over time, this should enhance the capacity of the regional system to generate, test



and scale green and digital solutions, strengthening Lombardy's position within European innovation networks and supporting sustainable industrial transformation.



D.REGIONAL MEASURES

During the Regional Action Plan Focus Group, 5 measures were suggested in alignment with the pre-defined and selected Strategic Objectives. These are described in the following sections.

1. Title of the Measure

Co-design of training-paths with industry

2. Strategic Objective and Priority Area

Strategic Objective (SO): 1 – Knowledge & Competence Uplift

Priority Area:

- ☒ Training / Skills
- ☐ Technology adoption
- ☐ Testing & piloting
- ☐ Matchmaking & networking
- ☐ Policy support / governance

3. Problem or Need Addressed

This measure is aimed to decrease the mismatch between academic curricula and operational labour market needs that nowadays strongly limits the development of hybrid competences (technical, economic, environmental). The objective is to better prepare graduates for green and digital transformation without compromising academic identity, so that companies will be ready to the twin transition with people with dedicated competences inside the organization.

4. Target Groups

- ☒ Manufacturing SMEs
- ☐ Technology providers
- ☒ Research / education organisations
- ☐ Public authorities
- ☐ Intermediaries / clusters
- ☐ Other (specify):

The main target are Universities and Higher Education Institutions in cooperation with industries, to define the training paths. This allow to universities to be really effective for the growth of the ecosystem and to more attractive having a direct connection with the job market requested by



the companies. On the other hand, companies can integrate in their organization people with new competences able to bring technological innovation and value to their businesses. It also means decrease the training time and have resources that are operative sooner.

5. Description of the Measure

The measure aims to establish structured co-design mechanisms between universities and industries to align curricula with ecosystem needs while preserving the academic mission of higher education. Practical activities may include:

- Regular company visits and industry immersion experiences
- Development of tailored modules co-created with industrial partners
- Integration of research–industry–study hybrid formats
- Mandatory international mobility periods to strengthen exposure and adaptability

6. Connection to the Transnational Ecosystem

This type of measure actively contributes to create and strengthen regional innovation ecosystems and could also leverage on transnational cooperation for the sharing of best practice and the deepening of competences that are missing in their own region. B2GreenHub platform could act as matchmaking platform to find some company or tech provider active on a specific topic to collect insights and feedbacks also beyond the already existing network. The expert forum, for example, could be a good tool to be used for this measure, as well as the training modules containing good materials to start.

7. Roles and Responsibilities

Lead organisation(s): Universities and Higher Education organization. They should maintain academic standards and long-term research vision while integrating ecosystem-relevant competences.

Supporting actors (regional / transnational): SMEs that contribute by sharing real challenges, case studies, skills gaps and best practices.

8. Expected Outputs and Results

In terms of activities, the measure mainly consists in an effort for the coordination with companies and the stakeholder engagement (no major infrastructure investment required). The activation of new courses that involve companies is the main expected output.

9. Indicative Timeline

☐ Short-term (within 12 months)

☒ Medium-term (12–36 months)



☐ Long-term (beyond 36 months)

10. Resource Level (Indicative)

☒ Low

☐ Medium

☐ High

11. Monitoring Indicators (KPIs)

- Number and quality of newly activated or revised courses
- Number of companies involved in curriculum co-design
- Frequency of curriculum updates
- Student participation in industry-based learning paths

1. Title of the Measure

Strengthening the Quality and Impact of Internships

2. Strategic Objective and Priority Area

Strategic Objective (SO): 1 – Knowledge & Competence Uplift

Priority Area:

☒ Training / Skills

☐ Technology adoption

☐ Testing & piloting

☐ Matchmaking & networking

☐ Policy support / governance

3. Problem or Need Addressed

Internships not always generate real added value for students or companies due to the presence of a gap between academic learning and practical workplace competences, also in terms of soft skills such as the teamwork, the inter-department communication and the project management. Furthermore, there is a generational gap and the lack of structured dialogue between students and companies. For all these reasons, students experience a limited exposure to innovation and green/digital transformation challenges during internships.

4. Target Groups



- ☒ Manufacturing SMEs
- ☐ Technology providers
- ☒ Research / education organisations
- ☐ Public authorities
- ☐ Intermediaries / clusters
- ☐ Other (specify):

The main target are universities students in cooperation with industries, acting as host organizations. University career and internship offices are the responsible to engage companies and align the internship to the training courses.

5. Description of the Measure

The measure aims at redesigning and strengthening internship frameworks to ensure they are structured, skills-oriented and innovation-driven. The challenge is to transform internships from passive “administrative placements” into meaningful learning and co-innovation experiences. Key elements may include:

- Clearly defined learning objectives and role descriptions
- Identification of a dedicated company mentor (with decision-making or operational relevance)
- Structured internship plans aligned with university learning outcomes
- Focus on real tasks linked to green/digital transformation challenges
- Encouraging companies to use internships as channels to test new ideas or technologies brought by students

6. Connection to the Transnational Ecosystem

Students could leverage on B2GreenHub ecosystem and matchmaking platform to identify and contact innovation-oriented companies, both at regional and transnational level to propose to the university a company aligned with their interests.

7. Roles and Responsibilities

Lead organisation(s): universities should define learning objectives, ensure the academic coherence and monitor the quality. In particular, university internship and career offices.

Supporting actors (regional / transnational): industrial associations and companies able to provide meaningful tasks, assign qualified mentors and ensure student integration into the teams.

8. Expected Outputs and Results



In terms of activities, the measure mainly consists in an effort for the coordination with companies. For the industrial partners, they will act as mentoring, dedicating time and effort to include the students in their activities, potentially receiving small incentives for innovation-oriented internships. The activation of high-value and high-innovation internships is the main expected output.

9. Indicative Timeline

- ☐ Short-term (within 12 months)
- ☒ Medium-term (12–36 months)
- ☐ Long-term (beyond 36 months)

10. Resource Level (Indicative)

- ☒ Low
- ☐ Medium
- ☐ High

11. Monitoring Indicators (KPIs)

- Pre- and post-internship surveys to companies and students (quality and skills development assessment)
- Percentage of internships with defined learning plans
- Student satisfaction and perceived competence improvement
- Number of internships linked to green/digital innovation projects

1. Title of the Measure

Joint Laboratories and Shared Testing Facilities (Replication of the JointLab Model)

2. Strategic Objective and Priority Area

Strategic Objective (SO): 4 - Education–Industry–Research Linkages

Priority Area:

- ☐ Training / Skills
- ☐ Technology adoption
- ☒ Testing & piloting
- ☐ Matchmaking & networking



☐ Policy support / governance

3. Problem or Need Addressed

Starting from the limited capacity of SMEs and start-ups to manage, analyse and valorise data, as well as the lack of dedicated resources and infrastructures for experimentation and the misalignment between companies' short-term operational needs and universities' long-term research focus, companies experience a difficulty in building long-term innovation in their own organizations.

4. Target Groups

- ✓ Manufacturing SMEs
- ✓ Technology providers
- ✓ Research / education organisations
- ☐ Public authorities
- ☐ Intermediaries / clusters
- ☐ Other (specify):

The main target group of this measure are SMEs and start-ups, that want to introduce innovation in their organisation but have low resources to allocate and search for test before invest technologies. On the other hand, technology providers could leverage on this shared facilities to showcase their technologies and promote technology transfer towards real industrial players.

5. Description of the Measure

The main objective of the proposed measure is to establish and replicate joint laboratories and shared testing environments inspired by the JointLab model (focused on robotics). These structures function as permanent collaboration spaces where universities, research institutions and companies co-develop, test and validate green and digital solutions. The objective is to move from project-based cooperation to long-term structured partnerships, particularly in areas such as data management, AI, sustainability analytics, and advanced manufacturing technologies. The model can be replicated across different thematic domains relevant to regional ecosystems.

6. Connection to the Transnational Ecosystem

Testing facilities could be easily mapped in the B2GreenHub ecosystem to increase their visibility and favour the matchmaking with companies having the need to solve a specific digital/green challenge. This type of facilities is perfectly aligned with GREENE4.0 because they support the twin transition of the ecosystem, also leveraging on the creation of new transnational collaborations.



7. Roles and Responsibilities

Lead organisation(s): this is a shared responsibility for universities and research centres that provide scientific expertise, infrastructure, and long-term research vision and industrial companies (especially SMEs and start-ups) that bring practical challenges, use cases and co-investment.

Supporting actors (regional / transnational): clusters, industrial associations and policy makers that can financially support the creation of these shared laboratories and testing facilities.

8. Expected Outputs and Results

The measure requires an infrastructure and specific equipment to test innovative technologies, that implies also potential co-financing mechanisms (public–private mix).

9. Indicative Timeline

- ☐ Short-term (within 12 months)
- ☐ Medium-term (12–36 months)
- ☒ Long-term (beyond 36 months)

10. Resource Level (Indicative)

- ☐ Low
- ☐ Medium
- ☒ High

11. Monitoring Indicators (KPIs)

- Number of joint laboratories established or replicated
- Number and percentage of participating SMEs/start-ups (by sector)
- Number of collaborative R&D or testing projects initiated
- Duration of university–industry cooperation agreements
- Number of technologies tested/validated within the labs

1. Title of the Measure

Valorisation and Central Coordination of Available Opportunities

2. Strategic Objective and Priority Area

Strategic Objective (SO): 4 - Education–Industry–Research Linkages



Priority Area:

- ☐ Training / Skills
- ☐ Technology adoption
- ☐ Testing & piloting
- ☐ Matchmaking & networking
- ☒ Policy support / governance

3. Problem or Need Addressed

One of the main challenge is the fragmentation of initiatives, services and support instruments and the lack of clear reference points for companies. This could lead to the duplication of efforts and low visibility of existing opportunities because it is difficult to navigate the ecosystem (who does what, where, and how).

4. Target Groups

- ☒ Manufacturing SMEs
- ☒ Technology providers
- ☒ Research / education organisations
- ☒ Public authorities
- ☒ Intermediaries / clusters
- ☐ Other (specify):

The main target group are SMEs and start-ups that need to have a clearer visibility on the ongoing opportunities. However, all the other stakeholders are involved: universities and research centres that can support companies in R&D activities, and clusters, public authorities and innovation support organisations that monitor and communicate the funding opportunities.

5. Description of the Measure

The measure aims at establish or designate a coordinating entity (or structured coordination mechanism) to centralise and valorise existing opportunities within the regional ecosystem. The objective is not to create new services, but to make existing ones more visible, accessible and interconnected. This may include:

- Mapping and structuring available initiatives (training, labs, funding, internships, research partnerships)
- Creating a single access point or reference contact for stakeholders
- Ensuring regular communication and alignment among ecosystem actors
- Facilitating cross-sector dialogue between universities, industry and public authorities



6. Connection to the Transnational Ecosystem

The expert forum and the section of the B2GreenHub platform dedicated to funding opportunities could be used for the identification of available European and transnational opportunities.

7. Roles and Responsibilities

Lead organisation(s): the coordination body (e.g., regional innovation agency, university consortium, or designated ecosystem hub)

Supporting actors (regional / transnational): public authorities, cluster and industrial associations

8. Expected Outputs and Results

For this measure, the effort is mainly focus on coordination, communication and digital integration, with limited need for new infrastructure. The expected output is a centralized body or platform connecting the opportunities, integrated with already existing tool (including B2GreenHub) to avoid duplication.

9. Indicative Timeline

- ☐ Short-term (within 12 months)
- ☒ Medium-term (12–36 months)
- ☐ Long-term (beyond 36 months)

10. Resource Level (Indicative)

- ☒ Low
- ☐ Medium
- ☐ High

11. Monitoring Indicators (KPIs)

- Number of mapped and integrated initiatives
- Number of stakeholders using the centralised access point
- Reduction in duplicated initiatives
- Stakeholder satisfaction (via periodic surveys)
- Increase in cross-institutional collaborations triggered through the coordination mechanism



1. Title of the Measure

Clear and Shared Guidelines on Emerging Technologies

2. Strategic Objective and Priority Area

Strategic Objective (SO): 4 - Education–Industry–Research Linkages

Priority Area:

- ☐ Training / Skills
- ☐ Technology adoption
- ☐ Testing & piloting
- ☐ Matchmaking & networking
- ☒ Policy support / governance

3. Problem or Need Addressed

The regional ecosystem highlighted the difficulty in understanding and interpreting rapidly evolving technological landscapes (e.g., AI, data governance, sustainability reporting, digital twins, advanced manufacturing). This is due to the lack of shared terminology and reference frameworks across academia, industry and policy and to the cross-cutting and transversal impacts of new technologies (legal, ethical, environmental, organisational), difficult to be considered by SMEs and start-ups. This generates fragmented or inconsistent adoption strategies.

4. Target Groups

- ☒ Manufacturing SMEs
- ☒ Technology providers
- ☒ Research / education organisations
- ☐ Public authorities
- ☒ Intermediaries / clusters
- ☐ Other (specify):

The main target are SMEs, that should be supported by universities, technology providers, clusters and innovation intermediaries.

5. Description of the Measure

The measure aims at developing clear, practical and shared guidelines to support stakeholders in understanding, evaluating and adopting emerging green and digital technologies. These guidelines should:



- Provide simplified explanatory frameworks (what the technology is, maturity level, risks, opportunities)
- Clarify transversal implications (regulatory, ethical, environmental, data-related)
- Offer use-case examples relevant to SMEs and regional ecosystems
- Be co-developed by academia, industry and policy actors to ensure shared ownership and credibility

The guidelines should be periodically updated to reflect technological evolution.

6. Connection to the Transnational Ecosystem

The B2GreenHub ecosystem is essential for this measure, both for knowledge dissemination and for the connection with experts and facilitators that could provide valuable insight into the latest developments of the technologies.

7. Roles and Responsibilities

Lead organisation(s): Universities and research centres for the scientific validation and technological foresight, in collaboration with industry representatives to define practical applicability and public authorities for regulatory alignment.

Supporting actors (regional / transnational): Clusters and industrial associations could support the activity in terms of coordination and collection of contributes.

8. Expected Outputs and Results

The activities will mainly focus on expert coordination, with no infrastructure requirements. As expected output, a series of guidelines will be produced and made available for industrial companies to increase the awareness about the latest advancements and requirements on technologies adoption.

9. Indicative Timeline

- ☐ Short-term (within 12 months)
- ☒ Medium-term (12–36 months)
- ☐ Long-term (beyond 36 months)

10. Resource Level (Indicative)

- ☒ Low
- ☐ Medium
- ☐ High



11. Monitoring Indicators (KPIs)

- Number of guidelines developed and updated
- Number of stakeholders accessing or using the guidelines
- Feedback and satisfaction surveys
- Evidence of guidelines being referenced in training modules, labs or innovation projects



E. TRANSNATIONAL COOPERATION MEASURES

E.1 Regional actors ready for cross-border cooperation

Within the framework of GREENE 4.0, Lombardy has already engaged a diversified group of regional stakeholders including manufacturing SMEs, technology providers, R&D organisations and innovation intermediaries. Several of these actors have demonstrated both strategic interest and operational readiness to engage in cross-border cooperation initiatives, positioning themselves as potential early adopters and best-practice examples at European level.

Among manufacturing companies, particular interest has been shown by innovation-oriented SMEs and mid-caps operating in advanced manufacturing, automation, sustainable production and digital solutions. These companies are actively investing in green and digital transition and are seeking opportunities to access complementary technologies, specialised expertise and new European markets. Their participation in the regional workshops confirms their willingness to scale beyond local ecosystems.

Technology providers — especially those active in machinery production, robotics, AI-based solutions and advanced materials — are also well positioned for cross-border cooperation. Their motivation lies in accessing new industrial use cases, expanding their customer base and integrating their solutions into transnational value chains.

R&D organisations and universities involved in GREENE 4.0 have expressed strong interest in strengthening European collaboration in order to increase visibility, participate in joint projects and align research activities with industrial deployment opportunities. Cross-border cooperation is perceived as a means to accelerate technology transfer and reinforce applied research impact.

Innovation intermediaries, including clusters, Digital Innovation Hubs and Competence Centers, can play a facilitation role in matchmaking and coordination. Their structured networks and experience in EU-funded projects make them natural connectors between regional ecosystems.

The main motivations for cooperation include access to specialised knowledge and complementary technologies, stronger visibility at European level, learning from best practices in other regions and access to new markets and customers. However, several potential barriers remain. Companies — particularly SMEs — often face limited internal resources and time constraints to engage in international initiatives. In some cases, benefits of cross-border collaboration are not immediately clear, and perceived risks may slow down engagement. Additional obstacles include difficulty in identifying the right partners and limited funding dedicated specifically to cross-border activities. In this context, B2GreenHub can play a key enabling role by reducing partner search costs, clarifying cooperation opportunities and providing structured pathways towards transnational project development.

E.2 Forms of cooperation

- ✓ Joint participation in EU/national projects



- ☐ Cross-border piloting
- ✓ Shared testing facilities
- ☐ Consortium building
- ✓ Skills exchange
- ☐ Cross-border value chain development

Building on the regional strengths identified and the interest expressed by stakeholders during the GREENE 4.0 activities, cross-border cooperation is expected to take place through several complementary forms.

A primary and strategic modality is joint participation in European and national funding programmes, including Interreg, Horizon Europe and other innovation-oriented calls. Collaborative project development allows regional SMEs, technology providers, R&D organisations and intermediaries to pool complementary competences, share risks and access larger-scale funding opportunities. For many stakeholders, transnational projects represent not only a financial opportunity but also a structured pathway to long-term strategic positioning at European level.

Another key form of cooperation concerns joint R&D and innovation projects, particularly in areas aligned with Lombardy's RIS3 priorities such as advanced manufacturing, AI integration, sustainable production systems and circular economy solutions. These collaborations can support co-development of technologies, validation in real industrial environments and scaling of innovative solutions across regions.

Shared use of testing and piloting facilities is also considered highly relevant. Given the high investment costs associated with advanced manufacturing equipment and digital infrastructures, cross-border access to specialised laboratories, demonstration environments and pilot lines can significantly reduce barriers for SMEs. This approach enables companies to test solutions in complementary technological ecosystems and benefit from expertise that may not be available locally.

Skills exchange and mobility schemes represent an additional strategic dimension. Staff and student mobility between universities, research organisations and companies can foster knowledge transfer, strengthen mutual understanding of industrial and academic needs and accelerate the uptake of innovative practices. Such exchanges also contribute to building trust-based, long-term partnerships beyond individual project cycles.

Overall, cooperation within GREENE 4.0 is expected to move beyond occasional networking activities and towards more structured, project-driven and operational collaborations, capable of generating tangible industrial impact across participating regions.

E.3 Use of B2GreenHub tools for internationalisation

Given its industrial scale, technological specialisation and alignment with RIS3 priorities, Lombardy represents a highly relevant ecosystem for the deployment and international use of the B2GreenHub platform. The region combines strong industrial demand for digital and green innovation with advanced technological supply capabilities, a structured research and university



system, and a strategic policy framework focused on AI integration, advanced manufacturing and circular economy.

Within this context, B2GreenHub can significantly reduce friction in cross-border cooperation by providing a structured, user-friendly and deployment-oriented environment that connects industrial needs with concrete solutions and partners. The platform is particularly relevant for technologies that are strategic for Lombardy's transformation trajectory, including data analytics and Artificial Intelligence, automation and robotics, digitalisation and connectivity, energy-efficient technologies, renewable energy systems, waste reduction and recycling technologies, green and sustainable materials, additive manufacturing and carbon capture solutions. These technology domains are closely aligned with the needs expressed by associated companies and with regional transition priorities.

Regional stakeholders can use the platform to identify research and academic partners, find specialised technology providers, connect with industrial users for piloting activities, and build consortia for European or national funding programmes. The matchmaking function is particularly important for SMEs and intermediaries seeking structured cooperation beyond informal networks. In addition, the platform supports associated members in advancing their digital and green initiatives by providing access to relevant expertise, funding information and cross-border networking opportunities.

The main expected benefits include the creation of new business opportunities and cross-regional value chains, faster access to relevant technological solutions and partners, and improved alignment with European policy priorities and funding instruments. The platform also enhances visibility for regional organisations and clusters, strengthening their positioning within European innovation ecosystems. By facilitating easier access to cross-border cooperation and providing continuous updates of available data, B2GreenHub can also support more evidence-based decision-making and generate analytical insights through data aggregation and reporting functions.

B2GreenHub does not replace existing regional platforms or support structures. Rather, it complements them by acting as an operational bridge between policy frameworks, innovation actors and industrial deployment. In a regional context where gaps persist in AI diffusion, SME digital readiness and structured collaboration mechanisms, the platform can accelerate the practical implementation of green and digital solutions and strengthen the international dimension of Lombardy's industrial ecosystem.



F. INTEGRATION OF B2GREENHUB INTO REGIONAL WORKFLOWS

The integration of B2GreenHub into Lombardy's regional innovation ecosystem requires a structured onboarding strategy, targeted promotion activities and alignment with existing support structures in order to ensure long-term sustainability and effective uptake.

The **onboarding** approach will differentiate between companies that have already joined the platform and new potential users. For SMEs that have already completed onboarding, the focus will shift from simple registration to effective utilisation. Dedicated follow-up support will help them fully exploit the platform's functionalities, including technology scouting, matchmaking, funding guidance and access to testing facilities. The objective is to move from passive membership to active engagement, supporting companies in translating platform interactions into concrete projects and collaborations. For new SMEs, onboarding activities will emphasise practical value and tangible results. Best practice cases and testimonials from early adopters involved in GREENE 4.0 will be used to demonstrate the real benefits of platform participation, particularly in terms of partner search, access to funding opportunities and support for digital and green transition initiatives. This peer-driven approach is expected to increase trust and reduce perceived risks.

Promotion of B2GreenHub will rely on a combination of digital communication and in-person engagement. Social media channels and the consortium's website will provide continuous visibility, highlighting opportunities, success stories and upcoming calls. Dedicated events such as the "Pomeriggi Intellimech" — regular thematic meetings organised by the consortium — will serve as key dissemination moments, offering live demonstrations of platform functionalities and direct interaction with potential users. Furthermore, companies and stakeholders who have already benefited from the platform's services will be encouraged to act as multipliers, sharing their experience within their networks. This cascading dissemination approach aims to strengthen credibility and broaden outreach across the regional ecosystem.

To ensure effective **integration**, dedicated meetings will be organised with clusters, business associations, Digital Innovation Hubs, Competence Centers and other intermediary organisations. The objective is to explore synergies between B2GreenHub tools and existing regional services, avoiding duplication while enhancing complementarity. Particular attention will be given to align the platform with cluster initiatives, advisory services and EU project support activities. By embedding B2GreenHub functionalities within existing workflows — such as technology assessment, funding scouting or international matchmaking — the platform can become a natural extension of regional support mechanisms rather than a standalone tool.

Based on regional needs analysis and stakeholder feedback, the **most demanded services** are expected to include funding guidance, structured matchmaking, access to testing environments under a "test before invest" logic, and awareness-raising on digital and green technologies. SMEs particularly value clear information on funding opportunities, support in building project consortia, and faster identification of reliable technology providers. At the same time, increasing awareness of available solutions and helping companies better understand their digital and green maturity remain essential components.



G. IMPLEMENTATION AND GOVERNANCE

G.1 Implementation phases

The integration and operational deployment of B2GreenHub within the Lombardy ecosystem will follow a phased approach to ensure gradual consolidation, stakeholder engagement and long-term sustainability.

- **Phase 1 – Alignment & Preparation**

The first phase should focus on strategic alignment and preparatory activities. This includes continuing to map regional stakeholders and defining cooperation mechanisms with clusters, Digital Innovation Hubs, Competence Centers and business associations. Capacity-building sessions and internal coordination meetings could be organised to ensure that regional intermediaries are fully aware of the platform's functionalities and can integrate them into their advisory workflows. The objective of this phase is to enlarge the shared understanding and establish operational readiness before large-scale promotion.

- **Phase 2 – Service Uptake & Experimentation**

The second phase should focus on active engagement and practical use of the platform. SMEs and other stakeholders should be encouraged to experiment with key services such as matchmaking, funding guidance, access to testing facilities and training resources. Pilot use cases will be promoted, particularly in areas aligned with regional industrial priorities, including AI integration, advanced manufacturing and circular economy solutions. This experimentation phase aims to generate tangible examples of cross-border cooperation, joint project participation and technology validation.

- **Phase 3 – Scaling & Capitalisation**

The final phase should concentrate on scaling successful experiences and consolidating the platform's role within regional innovation workflows. Best practices emerging from pilot collaborations should be disseminated through regional events and communication channels. Greater emphasis will be placed on building structured cross-border value chains and increasing participation in European funding programmes. At this stage, the objective is to move from experimentation to systemic integration, embedding B2GreenHub as a stable support tool within Lombardy's innovation ecosystem. Monitoring and performance indicators help assess impact in terms of cooperation projects, technology uptake and SME engagement.

G.2 Governance structure

Effective governance is essential to ensure coordination, transparency and long-term sustainability of B2GreenHub integration at regional level.

A **regional coordination mechanism** should be established. This mechanism should involve regular consultation with clusters, business associations, Digital Innovation Hubs, Competence



Centers and relevant public authorities. The objective is to ensure alignment with regional policies, avoid duplication of services and foster complementarity with existing support instruments. Periodic coordination meetings will allow monitoring of progress, identification of emerging needs and adjustment of priorities. Intermediary organisations such as clusters and DIHs should act as multipliers, supporting SME onboarding and integrating platform services into their advisory and networking activities. Universities and R&D organisations should contribute to the development of innovation projects and knowledge transfer activities.

Project partners will play complementary roles within the governance structure. The regional partner will act as the primary facilitator and promoter of the platform, coordinating stakeholder engagement and ensuring integration into local innovation workflows.

Decision-making should follow a collaborative and multi-level approach. Strategic decisions related to platform development and transnational cooperation will be aligned at consortium level, while operational decisions regarding regional deployment will be managed locally, in coordination with key stakeholders. This structure ensures both coherence with the overall GREENE 4.0 strategy and flexibility to adapt to specific regional needs. The ultimate objective is to create a governance model that is transparent, participatory and capable of sustaining the platform beyond the project lifecycle.



H.MONITORING AND KPI FRAMEWORK

The monitoring framework for the integration of B2GreenHub in Lombardy is aligned with the objectives and impact logic defined in the Transnational Strategy. The selected Key Performance Indicators (KPIs) aim to measure not only quantitative uptake of the platform, but also its contribution to strengthening cross-border cooperation, accelerating technology adoption and enhancing digital and green competences within the regional ecosystem.

A first core indicator concerns the **number of SMEs onboarded to B2GreenHub**. This KPI reflects the platform's penetration within the regional industrial fabric and its capacity to engage companies, particularly manufacturing SMEs and mid-caps. Beyond simple registration, monitoring will also consider the level of active engagement to ensure meaningful participation.

The **number of matchmaking connections** initiated represents a second key metric. This indicator captures the platform's effectiveness in facilitating contacts between SMEs, technology providers, research organisations and intermediaries, both at regional and cross-border level. It reflects the reduction of friction in partner search and ecosystem navigation.

A particularly strategic KPI is the **number of cross-border cooperation links** established. This includes joint participation in European or national funding programmes, collaborative R&D initiatives, shared testing activities and structured transnational partnerships. This indicator directly measures alignment with the transnational cooperation goals of GREENE 4.0.

Technology deployment and industrial impact are monitored through the **number of technologies adopted and the number of pilot or test engagements activated**. These indicators assess the platform's contribution to moving from networking to concrete experimentation and implementation, particularly under a "test before invest" approach.

Finally, the **number of training completions** measures progress under the Knowledge & Competence Uplift objective. This KPI tracks participation in capacity-building initiatives and reflects improvements in digital and green readiness across the regional ecosystem.

Overall, the monitoring framework is designed to capture three dimensions of impact: ecosystem engagement (onboarding and matchmaking), cross-border integration (cooperation links), and industrial transformation (technology adoption, testing and training). Regular data collection and periodic review will allow adaptive management, ensuring that B2GreenHub remains aligned with regional needs and strategic priorities.



I. SUSTAINABILITY AND CAPITALISATION

Ensuring the long-term sustainability of B2GreenHub within Lombardy requires structural integration into regional strategies, stable governance arrangements and a clear pathway beyond the project lifetime.

A first key element concerns **alignment with the regional Smart Specialisation Strategy (RIS3)**. B2GreenHub is fully coherent with Lombardy's priorities in advanced manufacturing, Artificial Intelligence integration, circular economy, sustainable materials and resilient supply chains. By positioning the platform as an operational support tool for RIS3 implementation — particularly in facilitating technology uptake, cross-border cooperation and SME capacity building — its role can extend beyond the duration of the GREENE 4.0 project. Embedding B2GreenHub within regional policy instruments and cluster strategies will reinforce institutional anchoring and strategic continuity.

The long-term governance model will rely on a **coordinated regional mechanism** involving clusters, business associations, Digital Innovation Hubs, Competence Centers and research organisations. Rather than creating a parallel structure, the platform will be integrated into existing innovation workflows, with intermediary actors acting as multipliers and facilitators. This distributed governance approach ensures ownership at regional level while maintaining alignment with the transnational network.

Continuation beyond the project lifetime will depend on **demonstrating tangible added value** for SMEs and ecosystem actors. Continuous engagement with early adopters will generate visible success cases, reinforcing credibility and encouraging wider participation. Periodic monitoring of platform usage, impact indicators and user feedback will allow adaptive improvements, ensuring responsiveness to evolving industrial needs.

Capitalisation will also involve **expanding the platform's reach** towards additional industrial sectors, value chains and potentially new regions interested in structured green and digital cooperation. The modular structure of B2GreenHub facilitates replication in other territories with similar industrial profiles, particularly manufacturing-driven regions facing digital maturity and sustainability transition challenges.

Finally, promoting a culture of data sharing, regular updating of company profiles and technology portfolios, and **systematic dissemination of results** will strengthen the platform's relevance over time. By embedding B2GreenHub within existing innovation dynamics and ensuring practical, measurable benefits, the platform can evolve from a project-based initiative into a stable and recognised component of Lombardy's regional innovation ecosystem, supporting long-term green and digital transformation.