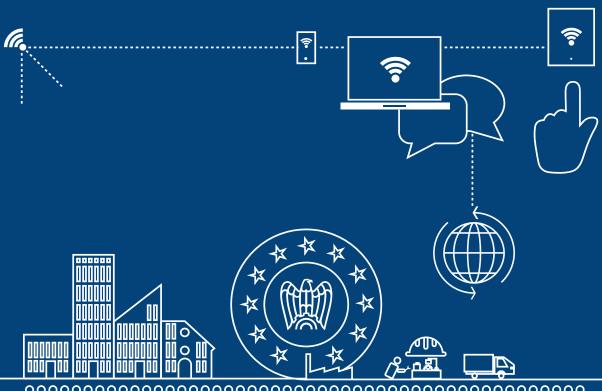
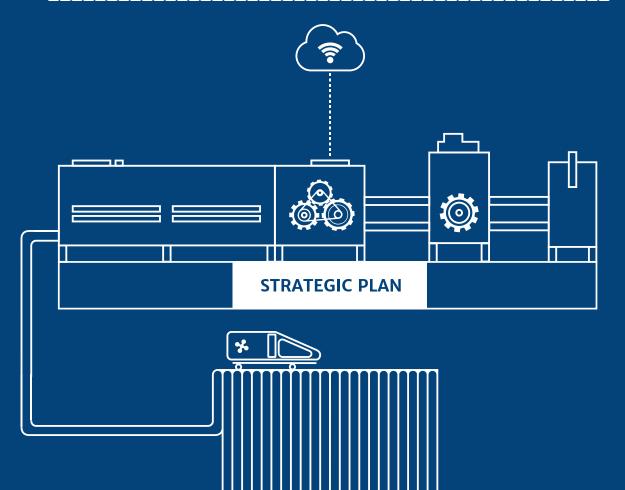
#### **CONFINDUSTRIA LOMBARDIA**

present

# #Lombardia2030







# #Lombardia 2030 / Strategic Plan

Vision and guidelines for manufacturing in Lombardia







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**Attachments:** The business environment of Lombardia region: compared with the European regions NUTS1 and NUTS2 (extended version)

"A country is competitive at a time when businesses operating on its territory are able to compete successfully in the global economy while ensuring the average citizen's living standards are high and rising"

(Michael Porter)

Two years ago I took over the presidency of Confindustria Lombardia at a very particular moment in which the world of Lombardia business and the whole of our network clearly expressed a need for change. We have identified this need as a real challenge, a project that would provide both short-term changes and the identification of long-term strategies.

At its base there is a macro objective: to establish a **strategy for the whole territory** – no longer understood as the sum of the provinces and neither as only a metropolitan city, but **as a macro-region embedded in a European context** – **to develop manufacturing for the future, able to draw large and small businesses, and deal in a competitive way the transition towards "Industry 4.0".** From this was born the need to formulate a **Strategic Plan that puts in place a system and evaluates all the wealth of ideas and content that the Confindustria network, in its complexity, expresses in our territory** and, while respecting the individual territorial specificities, integrates and channels the excellence and the peculiarities of all the shareholders towards four major elements that were reduced into four special projects: Promotion of a new Business Culture, Development and Reinforcement of Lombardia Clusters, Human Capital and Training, and Internationalization and European Networks.

The Strategic Plan #Lombardia2030 represents the compass of our activity in the years to come but, above all, we hope that it serves to guide the choices of our stakeholders: the Lombardia of the future will be born from correct choices, through a judicious and strategic use of resources, and growth roots in territories that are increasingly more competitive when inserted in a global scenario. The Confindustria Lombardia network, with this document, desires to make its contribution with the knowledge that, in the new global economic scenario, alone does not go far. It is for this reason that all the players in the field, public and private, administrators and stakeholders, should have vision and programs that not only go beyond the present, but know how to "sing from the same hymn sheet".

I would like to **thank**, for the work they have done, Prof. Fernando Alberti and Prof. Emanuele Pizzurno at the Institute for Entrepreneurship and Competitiveness, LIUC-Università Cattaneo, who have assisted on this pathway; Prof. Marco Fortis, Vice President of the Edison Foundation, who has developed for us a focus on the economic performance of Lombardia found within the document, and the invaluable contribution of the Centro Studi of Confindustria Lombardia in the person of Prof. Luca Paolazzi.

Alberto Ribolla

## **Abstract**

Lombardia is going through a historic moment of great importance and of great change. Indeed, if on the one hand it remains the national leader in the development and drawing of the economy, on the other hand, the reference horizon has moved progressively farther and farther away. Competitors, clients, and suppliers are actors in a global context which has become increasingly complex. Resources, approaches and strategies used to date, and that have proved to be successful, may not be as decisive in the new competitive context. What is needed are new tools, new skills and alliances that allow Lombardia to be competitive and attractive in a global context, bearing in mind that social well-being is closely linked to economic well-being.

According to the Social Progress Index (an index for measuring the well-being of states, alternative or complementary to the GDP), the progress of a nation is based on the ability to meet the basic needs of its citizens, provide the foundation for being able to build long-term well-being (access to formal education, information, health and safety, equal opportunities, etc.) and to give the *opportunity* for them to be realized. The success of businesses, that helps this well-being, is an essential prerogative that should be present, however facilitated.

The support of the development of industrial competitiveness is not distinguishable from the development and competitiveness of the territories and of the society in which they operate and, therefore, of the sustainable development.

This sustainability is, indeed, based on principles of ethics and equity, and therefore on having among its targets a balanced and efficient allocation of resources among its various dimensions: economic, social, environmental, territorial and generational. On the other hand, the pursuit of this objective, that Porter and Kramer (2011) have called *Creating Shared Value*, has the aim of recognizing the mutual reinforcement between the business and the territory/community to which it belongs.

**Competitiveness (for all) is the keyword**, that drives the detailed definition of the strategies and – cascade – the operational actions and applications of these strategic directions.

They have to put in place all the private and public forces that allow to bridge the gap with the most advanced areas in Europe and worldwide, and to achieve a high level of prosperity of the region that, would result in high quality jobs and high employability for its inhabitants with the consequence of an increase in the standard of living and welfare.

The Strategic Plan is, therefore, the fundamental document to define and guide this development, a document of vision and leadership.

To reach such ambitious objectives, it starts from the beginning. On the one hand, with a picture of the region, the characteristics of its manufacturing structure, understanding from where our well-being comes and where it is conceivable that arises in the future; from the centrality of the manufacturing sector, from which it strongly depends the development of services, to present – beyond all perceptions and prejudices – the state of art of the competitiveness of the territory. On the other hand, by comparing with other European and non–European areas, in particular with those most developed that constitute a benchmark. In this study of quantitative and macro–economic data there is also a qualitative analysis, realized by a comparison with all interested parties in order to capture the elements of detail and to understand in depth the phenomena affecting the world of business.

In parallel, it explores the emerging trends that nowadays are tangentially affecting the network of businesses but that will profoundly affect competition in the near future, such as "Industry 4.0" and, in the same way, a renewed financial structure.

The combination of these areas of study stems not only from the strengths and weaknesses of the region, and the resources available, but also the gap to be filled and opportunities to be exploited.

Based on the above analysis, four vertical lines of strategy were identified that will have the task of guiding the strengthening and enhancement of regional competitiveness: **the promotion of a pro-industry culture**, **the development and reinforcement of Lombardia clusters**, **human capital and professional training**, **and internationalization and European networks**.

Within each of these strategic lines, the contribution of key stakeholders will be crucial, allowing the prompt identification of the lines of action, programs, and projects that will help to translate into concrete action the strategic policies.

The Strategic Plan is then divided as follows; the first chapter introduces the competitive model of reference that starts from the concepts of territorial competitiveness, elaborated by the working group of Prof. Porter at the Harvard Business School, to define the development model for Lombardia region. The second chapter presents the macro-economic framework of Lombardia business environment — developed by the Edison Foundation — to provide a comparison with the territorial benchmark, as well as a simulation — thanks to the help of the Centro Studi of Confindustria — of the regional macroeconomic scenarios. The third chapter outlines the strategy for the development model of Lombardia that has at the center its manufacturing system. After a detailed description of the main strategic lines, for each of which there are outlined reasons and objectives, it traces some examples of lines of action and programs. In conclusion, there is a focus on the role of Confindustria Lombardia and the method that will be followed in order to implement the plan.

From vision to concrete, from the most developed theoretical models to the life of businesses. The ambition that guided the definition and writing of this document was the desire to contribute and confirm, in a stable manner, or improve the positioning of Lombardia region in places of vital importance within the global landscape. To achieve this objective, reference models, in terms of territorial development, were used in order to make sure that they would not stop the plan of the vision, but would be able to translate into concrete lines of action, viable and of strong impact on the competitiveness of businesses and, as a consequence, the entire Lombardia.

The Action Plan, that will follow in a separate and detailed document, will have even more proactive lines of strategy. Separate but synergetic, with continuity and coherence between strategy and action that will characterize Confindustria Lombardia in the years ahead, it will be written in consultation with stakeholders, and will define objectives that are targeted and reachable through constant monitoring of the results.

# Methodological note

The Strategic Plan is the result of a complex process guided by Confindustria Lombardia, alongside the *Institute for Entrepreneurship and Competitiveness*, LIUC Università Cattaneo which provided support and methodological guidance.

The development of the Strategic Plan saw three crucial steps:

- 1. Development of the strategic vision of Confindustria Lombardia;
- 2. Involvement of territorial Associations, and the Committees of young entrepreneurs and small businesses ;
- 3. Final work-out sessions.

The initial founding moment was the development of the strategic vision and direction for the future of Confindustria Lombardia that were announced and disseminated at numerous events, public and technical, and that were the basis of the strategy of the mandate 2013/2017.

The second founding moment involved all the different persons of Confindustria Lombardia who, inserting themselves proactively in the process, helped to shape and articulate the strategic priorities and lines of action for the development of Lombardia in 2030. The gathering of the contributions was conducted by the *Institute for Entrepreneurship and Competitiveness* through semi–structured interviews guided by a specific investigation protocol.

At this stage the interviewed participants were:

- 10 Territorial Associations Presidents and Directors
- Regional Committee of Young Entrepreneurs President
- Regional Committee of Small Businesses President

Primary data, collected in the field, was strengthened through the acquisition of secondary data such as:

- Scientific literature
- Grey" literature and reporting, from the following sources:
  - Confindustria
  - Confindustria Lombardia, Veneto and Emilia Romagna
  - Territorial associations of Lombardia
  - Unioncamere network

Finally, in the third phase, it was decided to validate the lines of strategy of the plan – in particular, to decline into programs and actions up to the end of their implementation – through a shared and participative process (inspired to the GE work–out approach) of gathering strategic themes.

The result of this collective and shared effort is reported in the following pages.



Employment growth, the increase in the level of orders supported mainly by external demand, the growth in consumer confidence and car registrations, the first positive data on the housing market and an overall increase in GDP. There are many signs proving that Italy is exiting from the crisis and that give confidence to the country¬, and this recovery appears to be guided by both external factors (among them the decline in oil prices and the monetary policy of the ECB – "Quantitative Easing") and by endogenous factors at a country level.

What is certain is that it can see the light at the end of the tunnel and that the local and global economic scenario looks far better with respect to some time ago. Certainly, the recovery is slow and uncertain, a rocky road.

The crisis has left a deep imprint on the country, bringing out strongly the structural and network weaknesses that over the years of economic expansion had taken a back seat. The stifling bureaucracy, poor infrastructure and the lack of an economic policy – to name a few – are critical factors that have manifested with virulence.

"Now, some signs of this confidence begin to manifest in the business system, complicit in several factors.

If these and early factors, as timid, signs, of an improving economy help us to look to the future with greater positivity, certainly we should not delude ourselves that the path of growth has already, definitively, been embarked on"

(Confindustria Lecco and Sondrio)

The effect has been that, in some areas of the country, entire supply chains have disappeared. However, if the macro-economic level has showed great delays and deficiencies, **the micro-economic level, i.e. that of the businesses, has been able to react**, sometimes in no particular order, sometimes with synergetic initiatives. This is what scholars call resilience, the ability to resist in a difficult context, which manifests itself clearly in the fabric of Italian business.

In this scenario, Lombardia has been able to express itself as the best part of the country, while maintaining an important competitiveness. Of course, in Lombardia many businesses have ceased trading, but those that remain – and they are many – are those that have been able to better equip themselves for global competition.

On the one hand, what companies are asking the Confindustria network is to be able to help them identify those strategies, those drivers of competitiveness that will allow businesses to become stronger, to capitalize on the recovery, releasing their untapped potential and supporting them in this strengthening.

On the other, businesses demand to push public institutions to do what in their office to trigger a virtuous circle that from the businesses involves the whole society. The past has taught that if this process is successful in Lombardia, the whole country will benefit from it and will be able to regain positions of leadership to which it is entitled.

It is in this context, still difficult and uncertain, that the Strategic Plan of Confindustria Lombardia is engaged.

#### 1.2. The global competitive arena

In recent years, one of the most challenging elements for businesses has surely been evolution, rapid and marked, that developed in a competitive context. This became liquid, progressively removing stability, competitors multiplied, the defensive barriers reduced.

On the one hand, indeed, the European Union has gradually opened its markets, trade and investments. These regulatory initiatives made more competitive many sectors, systematically demolishing fixed positions and thus generating new competitive pressure. At the same time, the single currency has revealed all elements of value in its offer to businesses (product innovation, reliability, service level, etc.) eliminating the chance of devaluations.

On the other, different areas of the world, Asia-Pacific at the forefront, are facing with determination on the global economic scene a progressively cutting of space and resources to areas (USA and EU) traditionally stronger, thanks to more widely widespread free trade agreements.

Just considering the impact that the Transatlantic Trade and Investment Partnership – now under negotiation between the European Union and the United States – will have, and that could later be extended to the member countries of the North American Free Trade Agreement (NAFTA) and the European Free Trade Association (EFTA).

Adding the impact of new technologies, (ref. par. 3.3), it is clear that doing business has become much more complicated in many sectors.

Threats, but also many opportunities.

While an increasingly broad context leaves room for the entry of new and aggressive competitors in the same way, for businesses, there opens up many new markets and opportunities.

According to the United Nations Agency for Trade and Development (UNCTAD, 2014), **world trade tripled in value between 2000 and 2013**, and the recent crisis was not a slowdown of a much broader phenomenon.

Of course, as said previously, rates of participation in the generation of output and world trade are much higher for new actors (South–east Asia, South America and Africa) and are invariably increasing. On the one hand, from the output generation side, this growth is concentrated in certain activities and stages of the supply chain (raw materials, low added value works) where it is easier to enter if a company does not show a strong and long tradition of industrial activity and of research and development. On the other hand, income growth that these increases generate, create new lifestyles and increasingly demanding markets.

Therefore, there are new challenges for our businesses: (I) stages of the supply chain to be abandoned because of these are no longer competitive, (II) stages to enhance and develop because of these may create

added value, (III) globally available new suppliers and expertise, (iv) new markets to capture, and (IV) new products to be developed for customers (who, sometimes, have very different tastes and preferences).

This new global approach requires new skills, attitudes and an evolution that for many businesses is now the "everyday". But for others, accustomed to a completely different context, it is a gap too difficult to fill. This strategic plan is targeted at all businesses, with the intent to accompany them on the pathway towards new challenges.

#### 1.3. The main technological dynamics

The competitive context has not only seen the emergence of new actors on the scene, but also of new tools and technologies. And the impact has been equally significant.

In fact, if competition has become global the new communications technology and logistics have helped make the phenomenon more evident.

Thanks to technology, the availability of information products and services for purchase with absolute simplicity, on a global scale, has made the world very much smaller, so that it may not distinguish what was the precursor phenomenon and what will be the successor.

Logistics has, therefore, a crucial role in the ability of a country Mila to be competitive, but at the same time, an efficient logistic

"Our manufacturing must evolve towards a new productive model for the 21st century to keep up with competition globally.

At an international level, five large «mega trends» are consolidating; these will define the transformation of the manufacturing sector:

- 1. Industry 4.0 >> or Smart Factory,
- 2. Nanotechnology and Nanomanufacturing,
- 3. Integration of services/manufacturing,
- 4. Additive Manufacturing,
- 5. Techno-manufacturing clusters."

(Assolombarda Confindustria Milano Monza and Brianza)

system flatten the cost differential between a product that is easily available locally and from one that is sourced from a great distance. Thus highlighting another key element of competitiveness: **labor costs**. If transporting goods from one continent to another has become quick and sustainable, the criteria for the location of the production site is necessarily linked to the cost of production and, therefore, to the cost of labor. As far as concerns Italy, labor cost is known to be one of the most acclaimed weaknesses of the market.

Other **new technologies** are entering the scene and some of these appear to have the potential to have the same impact. Among these could be included:

• 3D printers and, more generally, the world of makers and DIY ("do it yourself"), a widespread phenomenon known for some time but powered by new technologies that, as it was with the spread of ICT, has resulted in a more simple phenomena and traditional needs. This is certainly an area of great interest because it is very close to manufacturing and its products, and its potential is such that there is even talk of a new industrial revolution;

- In the near future (though in part it is already happening) every maker may design its own product whatever it is in digital format, send the design to a laboratory that has the tools to realize it (*makerspaces*), or produce it personally from individual elements. These products will be designed, thanks also to stimuli and cues, which are constantly shared in an *on-line community* and sold via the web (the economics of bits and that of and atoms that are, in this approach, difficult to separate);
- Automation technologies and a different use of the web are making, and will make, production environments increasingly "smart". These will be able to adapt, without human intervention, to different conditions and leading to production processes that are more efficient, better performing, safe, and environmentally friendly.
   A "factory of the future" in which ICT technologies (including virtual reality and augmented reality) are increasingly becoming integrated into machine tools, equipments and production environments;
- Apps and mobile development. All the developments in communication technologies are producing new categories of services or mode of utilization of services and existing products is resulting in changes that are, indirectly, investing in the world of industry. Even if this is, apparently, virtual and distant from industry and closer to the world of services, it is a technological trend to be considered as an integral part of production processes; trying only to think about the direct relationship with the final consumer or to new forms of distribution.

#### 1.4. Social development and competitive development

The support for the competitive development of businesses is not distinguishable from the development and competitiveness of the territories and associations in which businesses operate and, therefore, of sustainable development. Indeed, on the one hand, sustainability that is based on principles of ethics and fairness and, therefore, on having among its objectives a balanced and efficient allocation of resources between its various dimensions: economic, social, environmental, territorial and generational. On the other hand, the pursuit of this objective, that Porter and Kramer (2011) have called *Creating Shared Value*, has the goal of recognizing the mutual reinforcement between the business and the territory/community to which it belongs.

However, the understanding of the **potential of the shared value** is just beginning, it is not a question of philanthropy or individual isolated initiatives, but the tendency to structurally evaluate the decisions and opportunities through the lens of shared value. According to Porter and Kramer, there are three main ways in which businesses can create opportunities of shared value: (I) **re-defining products and markets**, (II) **redefining productivity in the value chain, and** (III) **enabling the development of local clusters.** So doing, it will spread a shared business culture, that is already part of the DNA of many companies in Lombardia. However it should be known and recognized, becoming a common practice. And businesses will be the first to reap great benefits. It is from these advantages that the territories will benefit, through the well-being and the widespread wealth of businesses in their more restricted social role.

It should be noted that **in the current globalization scenario**, **the territory is assuming an increasingly important role**. To set up a **sustainable competitive development strategy**, a territorial network should be able to provide and protect, in a structural way, some unique competitive advantages: from maintaining the integrity of the natural environment to the preservation of local identities, from the presence of an adequate knowledge management network to a network of responsible businesses according to the model of creating shared value that synergistically leads to prosperity and a higher quality of life.

#### 1.5. Competitiveness: a reference model

The competitive model of reference is that outlined by Michael Porter<sup>1</sup>, an approach that aims to achieve a high standard of **prosperity**:

it is this that leads to the set ting of a standard of life that grows and is sustainable.

However, prosperity may only be achieved through competitiveness.

And the competitiveness of a territory depends on the ability of its businesses to innovate and improve continuously.

"Defending the manufacturing meant defending the economic well-being of nations. The equation is simple. Major manufacturing businesses are equivalent to greater technological innovation, seen as a new product introduction or use of new technologies that, in the long run, are the real engine of growth in productivity "

(Unindustria Como)

The businesses of a territory may, therefore, gain a competitive advantage against the best competitors in the world. To accomplish this goal, companies should find in their territory of origin :

- pressures and challenges (strong national knowledge, competent suppliers and demanding local customers). In fact, only in this way they will strengthen, becoming ready to compete;
- a favorable context for development. The pervasive and persistent anti-industrial culture that is present throughout Italy today acts as a brake to the full improvement and growth of competitiveness of businesses..

In a few words: it has to achieve a high and growing level of productivity (of labor, capital, and natural resources) that should be of interest to the same extent as the private, public administration and the intermediate bodies of the country.

Focusing on productivity the "pie expands", businesses play a central role in territorial development, both local and international ones, and the role of governments is to create the enabling conditions for the growth of productivity.

How then to meet the challenge of competitiveness and productivity? It is not simple: the determinants of competitiveness are at three levels. One should, therefore, act on several levels, based on the first level, that of the *equipment*, that is, on the characteristics and resources of the territory and of these to engage the second level: fiscal policies, social (education, health, justice, etc.), and macroeconomics so that these create the most appropriate starting conditions to unleash the potential of competitiveness.

However, productivity then grows in businesses where it continuously develops **innovation** in the broad sense (not where there is a low cost of labor or raw materials!) and to learn every day to "always do more and better with less."

In advanced economies – and therefore in territories such as Lombardia – this means pushing the preparatory levers of innovation: creation and evaluation of human capital, attraction of innovative businesses and individuals, internationalization and development of clusters.

<sup>&</sup>lt;sup>1</sup> Michael Eugene Porter is an American economist and academic, a professor at Harvard Business School where he directs the *Institute for Strategy and Competitiveness*.

Working on these areas, the quality of the business *environment*, and the sophistication of business activities, the results become evident.

While it is, therefore, essential to act by supporting the best conditions for the input factors (resources, capital and labor but also qualified education and infrastructure), it should not, however, forget the importance of strengthening demand conditions: indeed, a large and sophisticated clientele stimulates product innovation, as well as the presence of supplier industries (upstream) allowing better co-ordination of production and facilitating the flow of information and innovation. Ultimately, the more there is a positive rivalry between the businesses, the more greater the benefits and innovation for the territory in which they operate.

As one shall see in later chapters, Lombardia already has many strengths in these areas of action, which is no coincidence place it at the top in Europe, but not enough. The vision that Confindustria Lombardia has for 2030 leads to the will to improve and to grow in each area, in a dynamic way, because other territories are evolving and growing.

Prosperity is not inherited, except in a small part, it is built.

#### 1.6. The center stage of medium tech

Another point of great strength for the Lombardia system is **the central role occupied by** *medium tech*. This term indicates a part of the manufacturing sector (e.g.: mechanical, chemical, plastic, electrical, marine, the automotive supply chain, medical and diagnostics) which typically involves the adoption of sophisticated technology. It also combines the strength of the industrial and artisan roots of the know-how "how to do it, and do it well" part of business culture of companies in Lombardia. The medium tech shows also with a **clear attitude towards incremental and combinatory innovation.** 

"Medium tech is incremental and combinatory innovation. Training and employment. Unlike high-tech, it favors "social cohesion" and promotes a cooperative attitude between businesses and firm local roots"

(Assolombarda Confindustria Milano Monza and Brianza)

If the "high tech" model is based on "extraordinary merit", on the talents of a select group of young start–uppers, the "medium tech" model is based instead on the choral contribution by people of "ordinary merit" who are often senior and of great practical experience, resilience and wisdom who can resist in mature sectors through their own inventiveness.

*Medium tech*, therefore, has very precise characteristics:

- the innovation is based on the "ability to best combine the factors of production" and to a progression of improvements, "in a long journey of trial and error", an ability that supports the development and competitiveness of those sectors considered mature and, therefore, less relevant. This innovative ability needs no extraordinary talents and mostly young, but should instead make use of "ordinary talents" and feed "the cumulative knowledge gained over time, or experience";
- the preparation and ability to be present in international markets, and thus to strengthen through leverage of exports the growth of GDP. International activities are not only of sales or exploitation of cost advantages offered by some countries, but also and above all of proximity and presence in the most relevant markets, taking however firmly in Italy the head and the heart of strategies, research, of "high end" productions and with higher added value.

These characteristics are crucial in the *medium tech* sectors, where radical innovation is not so predominant, but where **the competition is based on the ability to develop or adopt innovation incrementally** with a marked *market pull* / adaptive (attention and adaptation to market/customer of reference) orientation. This constant innovation is typically generated in all the layers and functions of the organization: managers, technicians, workers and it is this gradual improvement of processes and products that produces value, generates *ability* that is difficult to imitate, and roots in the territory.

Another success factor of Italian *medium tech* is due precisely to the **link between the territories and businesses.** The restricted geographic areas where there are the most diverse sectors, but connected to each other (as in the cluster model), represent a potential competitive advantage: the competitiveness of a territory depends on its ability to best use and combine the human capital, financial resources and any available natural ones. The importance of the business – territory bond is declined in different ways.

Medium tech businesses, in fact: (I) play a role of social inclusion, (II) employ good human capital, (III) with long term orientation, (IV) promote constantly the update of skills, (V) promote merit, (VI) are positively rooted in the territory and (VII) create a *supply chain* of quality, thus improving the spread of social capital: "A constellation of values that contribute, in the long run, to make it a more solid, more stable and even richer a society." There are six levers on which to insist (Rocca, 2014): "Innovation and productivity, human capital and ordinary merit, social cohesion and intergenerational mobility". These are characteristics of *medium tech* in which good enterprise culture is combined with social sustainability.

It is this unique combination, characterized by incremental and combinatory innovations, that characterizes Lombardia's *medium tech*.

#### 1.7. A new use of finance

Businesses can not develop without adequate financial resources. To grasp the recovery, at a global level, it is therefore necessary to reopen dried up sources and develop new channels.

Just as it is clearly stated in the **position paper of Confindustria, "An agenda for the credit for the growth of the country"**, from which they are coherently recovering the proposals and intervention trajectories, it requires (I) influence to alleviate the financial strain of businesses reactivating the credit circuit. It is also essential to (II) promote the resources of businesses to alternative debt instruments in the banking sector and (III) support the strengthening of capital.

The dynamics described above, in a fast changing scenario, should be accompanied by a modernization of relations between banks and businesses implemented at regional, national and international level; essential in order to revitalize the credit market in the short term and restart the economy.

With the construction of a new bank-business relationship model there will have to be an agreement on both sides. Businesses will have to grow, increase their degree of transparency, and strengthen their financial structure through increased capitalization and a greater use of alternative to banks debt sources. All this will transform the bank-business relationship, contributing, through the highest ratings, the flow again of credit. Banks should be fully aware of the negative consequences that would result for the entire Italian economy from the continued strong credit squeeze.

In recent years, credit has become more and more selective. At the beginning of the crisis this was due to difficulties in bank funding while more recently the phenomenon has been linked to the deteriorating quality of credit portfolios. In the near future, it will be necessary to have a strong commitment from the banks to deepen their knowledge of businesses and take into account the real development prospects of individual businesses, regardless of the sector and the average indicators and the level of innovation that characterizes it.

Banks should enhance the use of qualitative information and increase their weight in the evaluation of the merit of credit for an individual business. Banks and businesses should jointly define, through agreements to be concluded between the representative associations, including at the territorial and sector level, the characteristics of evaluation models based on their own specific qualitative variables (e.g.: quality of management, characteristics of the industrial plan, the presence of certifications and patents) aimed at understanding the real future potential of individual businesses.

The objective is to arrive at a more transparent bank-business relationship, efficient and balanced in those that do not have their own credit to those healthy businesses that are able to face the markets and grow, driving also the recovery of the country.

Initially, it is essential to **revitalize the credit market** – this remains central to businesses, especially small and medium – and ensures that businesses pass the necessary liquidity to finance capital and investments. In this regard, an important contribution should come from instruments of guarantee that will be further strengthened and refinanced with resources from the structural funds and the chamber network.

Considering the crucial importance that internationalization plays in the development of SMEs, it is essential to develop modern and efficient financial-insurance instruments for businesses exporting and making investments abroad. At the international level, it should ensure the full homogenization of banking regulation. In addition, to meet the difficulties of the banking market, recently adopted determinants should be the measure of the ECB.

Finally, there needs to be **new financing for businesses**. This is essential now that the loans are falling, but will be crucial also after the exit from the crisis, when bank credit will have structurally a minor role in financing the economy. Businesses will have to provide the resources needed for development through alternative channels to those of the bank. More resources will have to come from their own capital. It is, therefore, essential to support the capitalization of businesses, pushing them to open up to outside investors, either through fiscal levers or the re-launching of private equity and venture capital.

#### Strengthen the instruments of guarantee.

Italy counts on a complete and articulated guarantee system, based on two components: one public, in particular represented by the Fondo di Garanzia for SMEs and one private, consisting of a network of trust. During the crisis, the network has proved strategic for access to credit for SMEs.

The Fondo and the trust have been at the forefront, alongside businesses recording strong rates of growth in activity and insolvencies. Now, there is the need to initiate a broader debate at national level to rethink and strengthen the guarantee network. This also means redesigning the network of trust and reform of the Fondo di Garanzia for SMEs.

#### Promote the spread of alternative credit instruments.

Bank credit is no longer sufficient to meet the financial needs of businesses in relation to the recovery of productive investment. However, without such investment, the Italian economy would not return to growth on solid foundations. Therefore, it is essential to develop alternative financial channels to banks.

#### Promote the strengthening of the capital of businesses.

One should retake pathway used to strengthen capital in the decade before the crisis and that has been interrupted in recent years. It should be said that the low average capitalization of Italian businesses is a consequence also of the lack of competitiveness of the country: in particular, much higher global tax rates and energy cost than other European countries, such as Germany. Without such deficits businesses could have more resources to strengthen capitalization.

It is essential to support the capitalization of businesses. Also, in terms of equity, the role of institutional investors is important.

It should be noted that in the capital markets, there is an observed a dynamism that bodes well. In particular, important signals are emerging from the new AIM-MAC stock list and from the interest around the Elite project of Italian Stock Exchange. Both are strategic to improve the access of SMES to capital markets.

#### Private funding in support of the real economy.

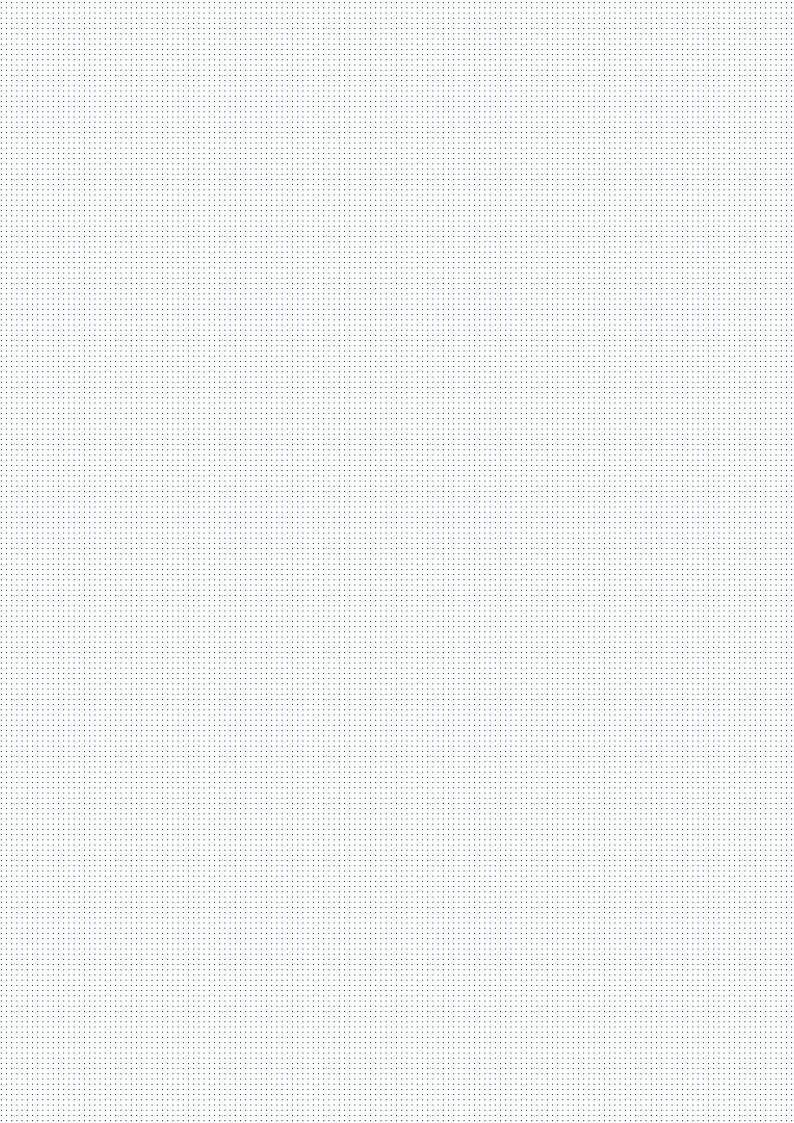
It is important to facilitate insurance companies and pension funds in the realization of long-term investments that may contribute to the support of the real economy, with positive effects on the Italian productive network and the capitalization of businesses, with particular attention to SMEs.

This need was emphasized also by the European Commission, in a recent Communication on medium and long term finance (that follows the Green Paper of last year), that aims to mobilize private sources of long term financing for the real economy.

The competitiveness of a territory depends on the ability of its businesses to innovate and improve continuously.

To accomplish this, within its territory of origin it must either find pressures and challenges, because only thus will it reinforce and be ready for competition, or have a context that is conducive to development: the pervasive and persistent anti-industrial culture still represents in Italy today a brake to the full expression of competitiveness of businesses.

In one phrase, it has to achieve a high and growing level of productivity (of labor, capital and natural resources) that should be of interest to the same extent in private, public administration and the intermediate bodies of the country.





Lombardia is the most competitive region of the country.

And not only that: Lombardia is also among the most competitive regions in Europe.

This result is all the more significant when considering the many obstacles and the unfavorable environment in which they Italian businesses generally operate, including those of Lombardia, even if the structural context of Lombardia is securely among the best in the country.

A context that, as is noted, is characterized by excessive bureaucracy, high taxes, high energy costs, legal uncertainty, and the infrastructure deficit: important constraints inherent in the national system that have long weighed on businesses and discouraged foreign investment; to which has been added, in recent years, the collapse of domestic demand generated by excessive austerity policy that has dealt a further blow to the purchasing power of Italian families (already weakened by a twenty-year process of de-leveraging public finances, based on continuous increases in taxation of households and businesses, that at least has allowed Italy to present from 1992 to 2014 in advanced primary states for 22 years out of 23) and had a negative impact on the same dynamics of industrial production and investment, leaving industry with a huge bill to pay in terms of loss of productive capacity.

What, however, it is much less known – and that with this brief analysis is intended to bring to light – are the many strengths of Italy, in particular Lombardia region, that too often are not adequately exploited, even ignored, in a country that tends to constantly self-depreciate. On the contrary, it appears inclined to overestimate its classification in international competitiveness rankings, such as those of the International Institute for Management Development in Lausanne, or the World Economic Forum, that outline more and more an Italy in decline, placing the country also in areas that are extremely competitive such as Lombardia region at the bottom of those rankings.

#### 2.2. A comparison with other European regions

The survey that follows is centered on the development of a focus on the business environment of Lombardia region in order to bring out, thus making them known, its many strengths. The analysis first describes, in a very concise way, the positioning of Lombardia in the national framework and the importance of individual provinces in a regional economy. It then proceeds with an accurate comparison between the Lombardia business environment and that of the equivalent European regions of NUTS22 grade and, also, of some leading European regions of NUTS11 grade, based on some economic indicators used traditionally.

Lombardia is the leading Italian region both from the demographic point of view, and economically. Its population of 9.9 million inhabitants in 2011, accounted for 16.4% of the Italian total and its GDP, more than EUR 337 billion for the same year, represents more than 20% of national GDP.

Lombardia is the main industrial region of the country: in 2013 its industrial added value was equal to 26.7% of the national total; while in terms of employment Lombardia accounts for 23.8% of people employed of the entire domestic industry. Lombardia also plays a leading role in agriculture, presenting the second agriculture added value, or 10.4% of Italy. However, the weight of the individual provinces in economic and productivity sector in Lombardia is very different, with a predominant role of the province of Milan, followed at a distance, by the provinces of Brescia and Bergamo.

These three provinces are the most important from the industrial point of view, while in the agricultural sector leadership is that of the two southeastern provinces of Lombardia (Mantova and Cremona), together with the province of Brescia. In particular, the province of Milan generates 31.3% of industrial added value of Lombardia, Brescia 14% and Bergamo 13.1%. As for value-added agriculture, the province of Brescia precedes all others with 26%, followed by Mantova (20.2%) and Cremona (14.6%).

With 9.9 million inhabitants, Lombardia, in comparison with the equivalent European regions of NUTS2 rank is, from a demographic point of view, the second largest European region after the IIe de France, which has 11.9 million. With a population of more than 6 million inhabitants, there are three Spanish regions (Andalusia, Catalonia and Madrid) and another region of France (Rhône–Alpes). The main German region from a demographic point of view is Dusseldorf (in tenth place, with just over 5.1 million inhabitants), while in England it is Outer London (fifteenth, with 4.9 million inhabitants).

The nomenclature has various levels subdividing the territory of the European Union in:

- NUTSo level of territories: these are the 28 nation states.
- NUTS1 level of territories: they are the macro-regions, such as the German Lander or if dell'talia the division for over-regional areas, such as North-West, North-East, Centre, South, Islands.
- NUTS2 level of territories: in the case of Italy it is the strict sense of the Regions; NUTS 2 territories are the autonomous communities in Spain, the regions and the French overseas departments, the Belgian and Dutch provinces, the Austrian Lander, the German Regierungsbezirke, etc.
- NUTS3 level of territories: in the case of Italy it is the provinces; are territories NUTS2 German Kreise, the French Departments, the Spanish provinces, Nomoi in Greece, Maakunnat in Finland, the Län in Sweden, etc.

<sup>&</sup>lt;sup>2</sup> The Nomenclature of Territorial Units for Statistics (NUTS) identifies the division of EU territory for statisticians.

From the point of view of economic size, Lombardia is the second NUTS2 European Region for GDP generation, positioning itself again after the Ile de France, but ahead of regions such as Inner London, Upper Bavaria, Düsseldorf, or the region of Stuttgart (figure 1).

When considering the GDP per capita, Lombardia is placed 45th, behind NUTS2 regions with a much smaller number of inhabitants (with the exception of the Île de France), while in terms of GDP per capita of acquisition power it is placed 32nd.

#### FIGURE 1.

#### Ranking based on GDP of the first 20 European NUTS2 regions: year 2011

Unit of measure in the chart: billions of Euros



Lombardia is located at the top of the classification for generation of added value, that is the total of the main economic sectors. In particular, considering the European NUTS2 regions, Lombardia is in second place in terms of total added value generation.

As for the 6 main areas in which economic activities are divided, Lombardia appears:

- first for industrial added value;
- second for added value in construction, commercial services, Public Administration;
- third for added value in finance services;
- fourth for added value in agriculture.

Also, in comparison with the European regions of higher grade NUTS1, Lombardia is always among the top twenty macro-regions in terms of generation of added value. In particular, excluding the North-West of Italy (of which it forms part with overwhelming weight), Regione Lombardia appears:

- eighth for total added value;
- fifth for industrial added value;
- sixth for added value in financial services;
- seventh for added value in construction;
- eighth for added value in commercial services;
- eighteenth for added value in agriculture;
- nineteenth for added value in Public Administration.

It is interesting to note, also, how Lombardia would be placed in a leading position even in the sectorial classifications for countries. In particular, Lombardia, if it were a separate nation, would be in UE28:

- tenth for generation of total added value;
- eighth for industrial added value and in financial services
- tenth for added value in commercial services;
- eleventh for added value in construction;
- sixteenth for added value in agriculture;
- twelfth for added value in Public Administration.

It is also interesting to make a comparison between the economy of Lombardia and that of 11 other leading European regions in the NUTS1 ranking. The European regions selected correspond to the principal regions of the major European countries in terms of total added value generation:

the French Île de France and Bassin Parisien; the German Bayern, Niedersachsen (Lower Saxony) and Baden-Württemberg; the Spanish Este and Sur; the English London and South-East; the Dutch West-Nederland; and the Belgian Vlaams Gewest (Flemish).

In these regions the industrial sector plays an important role, except for the Ile de France and London where there are clearly preponderant trade and financial services.

In terms of added value generated, Lombardia, among the 12 regions considered, is the fourth in importance in the industrial sector, with a weight of 25.1% of total economic activity, preceded by the three German regions (Baden-Württemberg 34.7%; Bayern 29.4%; Niedersachsen 26.9%), important centers of production of luxury cars (that house respectively Mercedes, BMW and Audi, Volkswagen). In terms of employment, Lombardia is second in the industrial sector (25.3%), only just behind Baden-Württemberg (26%).

Among these regions Lombardia is placed sixth in terms of GDP per capita.

Similarly, the analysis for total added value places Lombardia in fifth place (behind the same regions that are ahead of it for GDP per capita, with the exclusion of the West-Nederland).

Considering the added values for the sectors, Lombardia is always placed at the top of the ranking, except for the agricultural sector and public administration. In particular, Lombardia is placed:

- third for industrial added value;
- fourth for added value in construction and in financial services;
- fifth for added value in commercial services;
- seventh for added value in agriculture;
- tenth for added value in Public Administration.

Also, the analysis of the added value for the sectors per capita places Lombardia at the top of the ranking, this time with the exception of the sectors of construction and industry, and again that of public administration. In particular, Lombardia is placed:

- third for pro capita industrial added value (figure 2);
- fourth for pro capita added value in financial services;
- sixth for pro capita added value in agriculture and in commercial services;
- seventh for pro capita added value in construction;
- tenth for pro capita added value in Public Administration.

The third position occupied by Lombardia in the ranking for industrial added value, both overall and per capita, is a major achievement when considering that the two macro-regions before the Lombardia are Baden-Wurttemberg and Bavaria, that are distinguished worldwide for absolute excellence in industrial added value, that is explained by the presence in these areas of the previously mentioned centers of production of German luxury cars and related components.

However, wanting to do an exercise that "purifies" the industrial added value of the predominant incidence of the production of luxury cars and to review more homogeneous areas from a demographic point of view, when compared with the industrial added value per inhabitant of the first industrial macro-region in Europe, the Rhine Westphalia, that has about 17 million inhabitants, with the sum of Lombardia, Veneto and Emilia Romagna, that together have a population comparable to that of the great German area, it may see similar averages of total industrial added value and per capita.

This signifies that without Mercedes, Audi, BMW, Porsche and Bosch (mainly located in Baden-Württemberg and Bavaria), the industry of the North-Italy (that has its hub in Lombardia) has values equivalent to those of German industry (figure 3).

# Average population (000) Industrial Value Added\* per inhabitant

DE1 – Baden – Württemberg	 10.769
DE2 – Bayem	 12.563       9.557
ITC4 - Lombardia (NUTS2)	 9.955 7.613
DE9 – Niedersachsen	 7.918       6.809
BE2 – Vlaams Gewest	 6.320       5.795
NL3 – West–Nederland	 7.855       4.278
ES5 - Este (ES)	 13.397       4.086
FR2 - Bassin Parisien	 4.024
Fr1 – Íle de France	 11.889       3.545
UKJ – South East (UK)	 2.981
ES6 - Sur (ES)	9.894 2.028
UKI - London	 8.133     1.845

<sup>\*</sup> building industry excluded

Without the "car industry", manufacturing in leading Italian regions is comparable to the German one.

### **RENANIA - WESTFALIA**

201



Population

17,8 milions



Industrial added value

132 billion Euros



Industrial added value per inhabitant

7.393 euro

## LOMBARDIA VENETO EMILIA ROMAGNA

2011



Population

19,3 milions

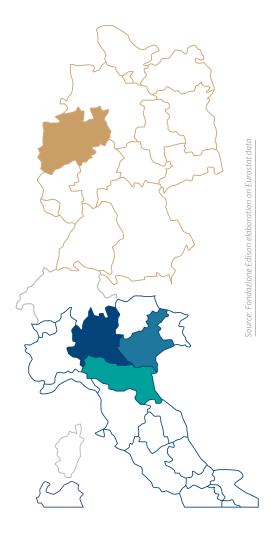


Industrial added value

143 billion Euros

Industrial added value per inhabitant

7.409 euro



#### 2.3. The manufacturing sector: profile and performance

#### Manufacturing employment

Lombardia, in comparison with the equivalent European NUTS2 regions ranking, is the region with the highest manufacturing employment (figure 4), positioned in front of the German Stuttgart (Baden-Wurttemberg), Upper Bavaria and Düsseldorf (in the Rhineland-Westphalia), reflecting the fact that large groups apart (that Germany, unlike Italy, has historically been able to preserve and enlarge), Lombardia is not so much different from the major regions of Baden-Württemberg and Rhineland-Westphalia. Considering the 23 main sectors where manufacturing activities, in terms of NACE rev.2 were divided, Lombardia has always been located among the top

"... One of the ways forward is drawn by the growth of those sectors where we are excellent, which is the industry 'medium high tech', high-quality manufacturing (...) One area that is growing thanks to incremental feeding day by day with the experience of all workers, and that is the best and vital part of our economy"

(Confindustria Alto Milanese)

10 European NUTS2 regions in terms of employment, with the exception of the motor vehicle sector. In particular, Lombardia has been on the podium 16 times and finished:

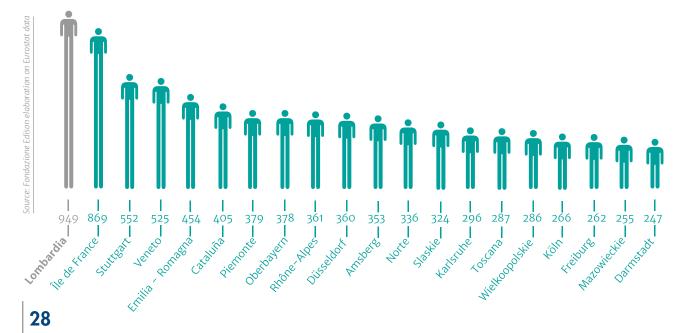
- first in 7 sectors (textile; wood and wood products (excluding furniture); paper and paper products; printing and e reproduction of recorded material; rubber-plastic products; metal products; electrical appliances);
- second in 6 sectors (apparel; chemicals; pharmaceuticals; machinery and equipment; other manufacturing; installation and repair of machinery and equipment);
- third in 3 sectors (metallurgy; computers, electronic and optical products; furniture).

The other positions have been:

- fourth in 3 sectors (food; coke and refined petroleum products; products of other non-metallic minerals);
- sixth in 1 sector (beverages);
- eighth in 2 sectors (leather and footwear; various means of transport other than automobiles;
- seventeenth in 1 sector (automobiles, trailers and semi-trailers).

#### FIGURE 4.

Ranking based on MANUFACTURING EMPLOYMENT of the first 20 European NUTS2 regions: year 2012 Unit of measure on the chart: thousands of employees



#### **Export manufacturing**

The relative export analysis of artifacts was made by comparing the export of Lombardia directly with that of the 28 countries in the EU. Not only because the Eurostat statistics do not provide data on regional exports, but also because Lombardia's export is of such dimensions as to make it comparable with that of entire nations.

It proceeded by calculating the export of artifacts of the individual EU countries by summing the codes 5, 6, 7 and 8 of the Standard International Trade Classification (SITC) whose aggregate corresponds in international definitions to "manufactured artifacts". For Lombardia, the corresponding figure was obtained from the ISTAT database, adding Lombardia's exports for the same four codes of the SITC classification.

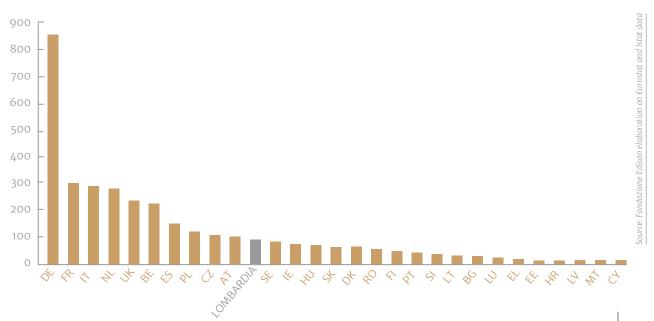
Figure 5 shows how the export of manufactured artifacts of Lombardia is approximately one third of that of Italy and other major European countries (excluding Germany) and similar or slightly lower than that of countries such as Poland, the Czech Republic, and Austria. In a hypothetical ranking of the main European exporting countries, Lombardia, if it were a separate nation, it would be placed therefore in eleventh position.

This brief analysis set itself the goal of highlighting the strengths of Lombardia's economy, that appears to cut across all sectors, but emerges with greater force in the industrial sector.

And, therefore, to give Lombardia, and Italy in general, a "different story" inside and especially outside of the country, highlighting the extraordinary numbers at its disposal and that this work has tried to carry out.

FIGURE 5.

Manufacturing Export from Lombardia (NUTS2) in comparison with EU28 (NUTS0) countries: year 2014
Unit of measure in the chart: billions of Euros



#### 2.4. The macro-economic impact

By Confindustria "Centro Studi"

The lines of strategy to be taken to raise the level of competitiveness and stimulate the development of manufacturing and related services – in order to narrow the existing gaps compared with other more industrialized regions of Europe – may be measured by quantifying the macro–economic impact resulting from their implementation. From a methodological point of view it should be noted that this measurement is only possible if there is a robust database and statistical data is available that allow reliable input for the application of macro–economic models.

From the employment point of view, the objective to be pursued is to increase the number of people employed in 17 sectors where the Lombardia does not occupy first place in the international rankings, in order to climb at least one position in the classification. To compensate the gaps compared with the regions that are placed higher up in the ranking that relates to each of the 17 sectors would require a total increase of around 110 thousand employees in the entire manufacturing sector (equal to 11.2% of employment in the sector).

Impact assessments may be made using the manufacturing data as a whole. The **Centro Studi Confindustria (CSC)** has estimated (figure 6) that the objective employment could be achieved if, with equality in all the other factors, **Lombardia's regional exports increased by 3% annually until 2030. This would result in an increase of manufacturing added value by 1.6% per year, resulting in a GDP growth of around 0.7% a year extra.** 

To be the same as all the others, according to this scenario, the share of manufacturing value added would stand at 23.8%, an increase of 3.3 points compared to that of 2011 (latest year available) and returning to a similar value to that of 1999. This would allow the Lombardia economy to obtain another objective, namely to increase the importance of manufacturing in the economic structure and (currently fourth) to gain a position in the classification of the most industrialized regions of Europe.

Assuming that export increases, instead of 10%, the effects would be the following:

- Manufacturing added value would increase by 5.4%
- Employment in manufacturing by 1.9%
- The GDP by 1.8%.

#### Effects resulting from an increase in the rate of female employment

Lombardia is one of the Italian regions with the highest total employment rate: 64.9%, well above the national average (55.7%) and only just behind Trentino Alto Adige (68.3%), Emilia Romagna (66.3%) and Valle d'Aosta (66.2%).

Compared with the Ile de France region of France that, due to its characteristics, is the European benchmark, the difference in terms of total employment is not particularly significant: this, in fact, is equal to 66.2%, 1.3 percentage points more than Lombardia.

The difference is entirely attributable to the lower share of female employment: in Lombardia this is 57.5% against 63.4% of the French region; the opposite occurs, instead, with reference to the male rate that is higher in Lombardia by 2.8 points (72.1% vs. 69.3%).

The CSC has calculated what would be the increase the GDP of the region if the female employment rate ascended to the level of that of 'lle de France, that is, if it increased by 5.9 points. With equality in productivity and all the other conditions, this increase would generate – due to the consequent increase in income of employees and consumers – a GDP increase of 4.1%, or about 14 billion euro (equal to 1400 euro per citizen).

## Effects of an increase in the quality of human capital

The level of human capital, measured by the number of years of formal education is low by international standards, in terms of quantity and quality (PISA test, PIAAC) and constitutes a competitive handicap for the industrial system, thus explaining part of the slow growth of Italy.

Education has positive effects on productivity growth and, therefore, the expansion of wealth, because it increases the human capital together with skills, knowledge and personal attitudes that make work more productive with the same technology used and facilitate and accelerate the adoption of new and existing technologies. In addition, through various channels, it stimulates technological progress, improving the ability to generate product and process innovations.

The comparative analysis at the international level shows that, in this respect, Italy's gap with the principal economies is still very wide. Lombardia is no exception in comparison with Europe: the average years of formal education – a proxy for the amount of human capital – remains below the values that characterize other European countries with comparable levels of industrialization. The difference with respect to Norway, Germany and Denmark, on average, exceeds three years of education (ISTAT data updated to 2015 for Lombardia region and OECD updated to 2010 for the other countries).

An increase in the level of education would have a positive impact on levels of GDP in the medium term and the economy's growth potential in the long term. To assess the extent of this impact, the CSC has estimated an increase of three years in the average level of education in Lombardia. This would allow the region to be among European countries with the highest levels of education. Assuming an elasticity of labor productivity to the change of the years of education equal to 4% (Ciccone et al., 2006), and that this would result in an acceleration in the growth rate of GDP per capita by 0.4% per year, by 2030 the regional GDP would have increased 19.6%.

The process of promotion of human capital does not happen quickly, despite the adoption of appropriate measures. In the decade from 2004 to 2014, the average education in Lombardia increased by around 0.8 years, from 9.4 to 10.2 years, of education on average. Assuming that this tendency will continue at similar pace, it would require over thirty years to bridge the gap with similar realities to those of Denmark, Germany and Norway, with an unrealistic assumption that the number of years of education in these countries remains unchanged.

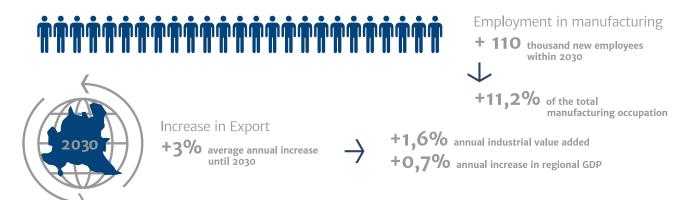
The level of education acquired during study determines a relatively low level of employees in jobs with a high scientific and/or technological content. This is hindering the ability of businesses to develop new company strategies aimed at innovation and internationalization and resizing the growth potential of the production systems.

In Lombardia, the share of the workforce involved in activities related to science and technology in 2014 was 30.2%, around 8 percentage points lower than that recorded in the 'lle de France. If this gap were to be bridged, according to CSC the beneficial effects on the economic system in Lombardia would lead, "ceteris paribus", to a GDP increase of around 10.9%.

### FIGURE 6.

#### **EXAMPLES AND SIMULATIONS OF MACROECONOMIC TARGETS**

Equating the best ranking regions for each of the 12 industries may imply a total increase of 110 thousand new employees in the whole manufacturing industry (which is about 11.2% of the total manufacturing employment). This might imply:







+ 5,9 points in the female employment rate
+4,1% increase in the Lombardy GDP



3 additional years in the education level + 19,6% growth in regional GDP by 2030



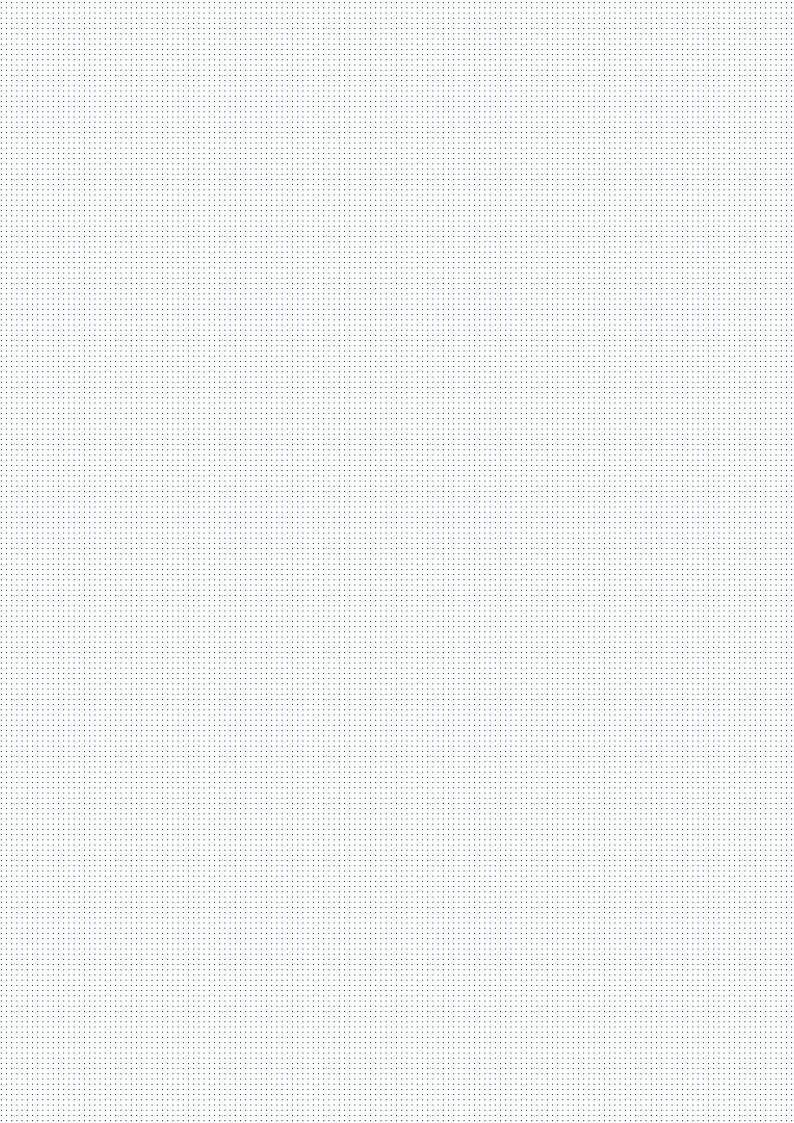
Increase in science– and technology–based industries workforce from current 30% to +38%  $\xrightarrow{}$  +10,9% increase in the regional GDP by 2030

All this will allow to Lombardia to fill in the competitive gap with other leading European regions and to reach a higher prosperity level for the region, thus, guaranteeing to its inhabitants a better standard of living and a growing and sustainable wellbeing. The Strategic Plan of Confindustria Lombardia is, thus, a key document – a visioning and guiding document – through which such a competitive development can be obtained.

Lombardia is the most competitive region in the country.

And not only that:

Lombardia is also among the most competitive regions in Europe.



## A strategy for the manufacturing sector in Lombardia



3.1. Strengths and opportunities

As outlined in previous chapters, in particular Chapter 2, Lombardia retains a leading role in the national context and competitiveness against comparable European regions.

Within this framework, it may outline the strengths and opportunities of Lombardia; the following was gathered from interviews with the Territorial Associations of Confindustria and from the Éupolis Lombardia report (2015), and is divided into three main areas.

"The Italian industry, despite everything, is still strong. There is still desire to do, there is entrepreneurial capacity, there is a love of risk, there are important skills in the workforce. We are a country that can still play a leading role in the global economic scenario and production worldwide"

(Associazione Industriale Bresciana)

## **Economy**

Lombardia continues to play a leading role in the national economic network (and beyond), even and above all through the capacity expressed by the network of businesses and, in particular, to manufacturing that, despite the crisis, is viable and competitive and still very present in the entrepreneurial ecosystem. The strength of the productive system is demonstrated by the share of industry in total value added and, more in general, by a strong predisposition to entrepreneurship (with birth rates of new businesses higher than the national one).

To understand the reasons behind this vitality it needs to look at the factors that enabled these performances.

First, the process of internationalization. Lombardia businesses have a high capacity not only to export (the value of exports for Lombardia, in 2013, exceeded 108 billion euro – equal to 27.7% of national exports and more than 30% of regional GDP), but also to find on the international market the skills and technology they need (demonstrated by the high degree of market opening, measured in terms of imports in % of GDP). The businesses also show great ability to "follow" their customers. In new markets, new technologies continuously adapting products and services, identifying and overseeing market niches neglected by large generalist manufacturers, and moving towards more and more high value added production, gradually abandoning those more "basic" for which competition with emerging countries is not sustainable.

<sup>&</sup>lt;sup>3</sup> Featuring typically known and mature technology, low requirements in terms of specialization of labor, competition based solely on cost, and high incidence of labor costs and/or energy.

It is also always the high attention and propensity towards continuous innovation, developed internally (the number of people engaged in research and development per thousand inhabitants is above the Italian average and the number of patents per million inhabitants it is higher than the national figure).

If the points mentioned above are added to the productivity in recovery over recent years, the availability of a diverse galaxy of competent suppliers, located within a few kilometers, and a marked and widespread ethic and dedication to the work of the entrepreneurs and also all employees and suppliers, it may easily guess the performance level of the Lombardia entrepreneurial network.

"Small, medium or large, the entrepreneurs are because in them the spirit of independence is strong, of doing something not only for themselves but also for their own collaborators and the collective"

(Associazione Industriale Cremona)

As a direct consequence of the above, namely of the force

and vitality of the business network, it has a high per capita GDP, higher than that of all the regions (with the exception of Valle d'Aosta and Trentino Alto Adige).

### **Employment**

Also, on the employment front there are important signals. In fact, the male employment rate is above the European average and the Europe 2020 target (75% between 20–64 years of age), rates of employment and feminine activities (between 15–64 years of age) are high, higher than the average of the North West and Italy, as well as the employment rate within the industry, with an increase in employment of people with an education level equal to or greater than that of a Diploma. The direct result is that the unemployment rate, especially male's, is below the European average and unemployment rates, in particular male and of long duration, are lower than the Italian average. Lombardia also boasts a higher number of graduates in technical and scientific subjects than the national average.

## **Training**

Lombardia is characterized by good and articulate scholastic provision and training and tertiary education, with strong attention on the latter that therefore has seen the growth in the number of students enrolled on professional training courses. It also records a low number of young women who drop out of their academic studies (less than that of young men) and young women of good academic performance (better than that of young men).

### 3.2. Weaknesses and threats

Despite the competitive environment, Lombardia is facing several challenges, summarized in its points of internal weaknesses and external threats. Using the same sources and previous areas of analysis:

### **Economy**

On this front, there is large room for improvement. The average size of businesses continue to be very small and not always best suited in the light of global competition but, in parallel, the evident entrepreneurial individualism, reduces the possibility of networks, collaborations, alliances and mergers present, but largely unexploited, and does not allow taking full advantage of the opportunities arising from open innovation and technological collaborations that are also known, but equally underutilized. This last point in particular, when read in conjunction with other data related to the theme of innovation (expenditure on R&D that is inferior to the European average and that grows less than the national average, innovative capacity less than that of the North West and Centre of Italy) highlights potential area of future weakness. Other elements of business network weaknesses refer to the not always high sophistication of company operations and management culture and the timeless theme of generational change; on these topics they have been working a lot and so their impact has been reduced, but still remains present.

## **Employment**

The participation of women in economic life (the employment placement of young women is lower than that of young men, despite the higher level of education and the employment rate for women being below the European average) it remains below the European average and certain age groups (employment rate for over 55 years of age is below the European average, growth of young people NEET<sup>4</sup> share, has a value above the European average), to add a strong increase in workers involved in a crisis situation, the long-term unemployment and inactivity among men and young people.

### **Training**

There has been a **mismatch between demand and supply of labor**; the skills acquired in the training programs are not what businesses need, failing to cover some of the job positions due to lack of human resources with appropriate training. This skills gap is often solved with the corporate training and training-on-the-job. This mismatch between demand and supply of labor is also manifested in the phenomenon of over-education (a tendency to stretch their training, creating figures with levels of skills and expectations not in line with the market's needs).

<sup>&</sup>lt;sup>4</sup> NEET: stands for "Not (engaged) in Education, Employment or Training ', it is used to refer to people (15–29 years) who are not engaged in education (scholastic or academic), in training, they do not have a job nor do they seek one, and are not engaged in other similar activities. And, 'therefore, are a totally inactive and disillusioned youth population.

## 3.3. Vision 2030 - Towards "Industry 4.0"

It is not easy to predict the future, if looking to a future 15 years from now. However, the Vision that Confindustria Lombardia has for 2030 is not a forecast, but its own vision of where it wants to go, what it wants Lombardia to have: an even more developed and prosperous region, with a high standard and quality of life, with full employment and integration of all its social components in a sustainable and safe environment.

In quantitative terms, it wants to not only see an increase in **GDP per capita**, but this growth has to be a result of increased **competitiveness of the business network** ( that means

"... Join forces, to create a network on a vision of development centred on the return to industy, which is a return to the future, because of course we are not talking of the grate industry of the twentieth century, but the industry of the future, based on quality manifacturing and technological skills, on what the European union has called enabling technologies"

(Confindustria Pavia)

a growth in terms of: number of active manufacturing businesses, density of local units of manufacturing businesses, added value of industry, ability to export products to high productivity, productivity per employee, direct net investments overseas of the region in percentage of GDP, the ability to attract direct foreign investment, number of patents registered at the European Patent Office, and a manufacturing surplus) to be accompanied by **social improvement** (a decrease in unemployment rate and increase in employment rate, particularly women, increase higher education enrollment, particularly in scientific and technological disciplines and a diminution in the NEET rate) and **environmental** (increased incidence of environmental certification and sites of organizations with ISO 14001 environmental certification).

In summary, it intends to pursue social and cultural growth of the region (and leverage the country and all of Europe) through prosperity generated by its businesses that reverberates on all stakeholders.

To reach this goal of prosperity it is necessary to increase the level of competitiveness of the region, levering its many strengths and seizing the opportunities that the global competitive context offers.

Among the strengths that have to release their full potential is definitely the business network and, within this, the manufacturing sector. It is starting from the centrality of the manufacturing and the entire Lombardia production network that it may evolve and face the passage of Industry 4.0. This evolution will, in fact, be an inclusive transformation because, in addition to the manufacturing sector, it will cover crafts, services and generate skilled employment thus increasing employability. The great development potential of this new sector will not only be the integration of innovative services and computer technology in industrial production, but above all. the creation of a real innovation ecosystem that it faces to draw for the whole of a territory's economy.

Speed, flexibility and automation will be the keywords of the new industrial revolution that will only increase the added value for businesses and, upstream, for the entire production chain, following the customers and their increasingly changing needs. However, to do that it is necessary to "gear up".

The paradigm shift will be – once again – radical and to be accompanied along a steep path it is even more necessary to have the same vision and the declination in operational projects that only a large Industrial Association can be put in place: the challenge can not be addressed by a business alone; it is a challenge for the entire network of the region and of the country.

For Lombardia, it will mean the global challenge of a wider geographical area (focused, in particular on Lombardia with Piedmont, Veneto and Emilia-Romagna, but also on the neighboring Switzerland) in order to become a great economic hub at a global level that can be drawn to the regional and national economies. This challenge must start from the awareness that global competition will focus on attracting human capital and innovative companies, in a continuous "contamination" with territories, more and more "distant" skills and technologies, thus making the permeability of the network one of his best assets.

The ability to attract, but also to maintain.

The number and strength of the innovation hub, of a country or territory, states its fortune or decline. And so, the promotion of talent, of the innovators and of the best forces, being them natives or foreigners, will have so much more weight with respect to attraction.

Parallel to the development of places where it physically produces things more and more advanced, new trends will appear. The cities with a high percentage of highly educated workers will become the new factories, production centers for ideas, knowledge and value in shared workplaces; open spaces for the generation of ideas and artifacts.

Therefore, in summary, and in reference to the data presented in Chapter 2, the goal for 2030 is that Lombardia gains the top positions in competitiveness and prosperity, in comparison with the best performing regions of Europe, and beyond. An ambitious goal? It is true, but the premises and conditions for this "quantum leap" are all there.

If the Lombardia network has one of its strong points in *medium tech*, this should not overlook the phenomena of radical change that is appearing on the horizon, it having, indeed, the ability to drive and not to undergo these changes and integrate them as effectively as possible in the existing context.

## This great change is called "Industry 4.0."

The digitalization of production processes is a huge opportunity as well as a reality: advanced economies have, in fact, long been enacting the fourth industrial revolution, a conversion of production processes based on production digitalization.

The transition to the new technologies of the fourth industrial revolution represents the peak time of an ongoing long process by which physical objects dialogue with each other, creating a complex industrial network and interconnection at a global level. The recent McKinsey report gives an idea of what will be the impact of this historic transition, "It is estimated that productivity can increase by more than 25% thanks to the digitalization of the entire production chain that will allow it to respond more effectively to a constantly changing demand."

The intelligent factory through the whole value chain of production, and digital technologies represents the element of revolution of the production system incorporating the new paradigms of Industry 4.0. One may summaries the concept of Industry 4.0 as the integration of human beings, objects and systems that create a digital network and interconnected between businesses, involving the entire value chain, able to self-organize and optimize itself in real time: all in order to create greater value through increased competitiveness.

The previously mentioned McKinsey report categorized the production plants of new generation: (I) automated plant, fully digitalized and of low cost for mass production; (II) plant for large scale production of customized products to respond to market trends; (III) the "e-plant in a box" adapted for production of niche products and easily detachable depending on demand. For a country like Italy, the last two types are certainly the most important. Not only industrial productivity but, potentially, even new business models.

It is, in fact, of technologies that are changing the way of designing, realizing and delivering products around the world and that can create a digital "fil rouge" throughout the industrial supply chain that allows to organize and manage large amounts of information. The successful implementation of digital technologies in production will depend on the construction of smooth communication between all links in the industrial chain, transforming the continuous stream of data into a coherent digital track. This is why the "benchmarks" are to be found in the consumer-based applications features and cloud-based software that make them updatable, intuitive to use and quite affordable in price.

The challenge is important because the digitalization of the supply chain not only makes possible the communication between operators and machines, with a clear advantage of cost-benefits, but could also facilitate innovation and competitiveness. First, the immediate availability and analysis of large amounts of data that come from the entire life cycle of the product allows to improve the functioning of machinery, thus reducing the *time to market*, until getting to better understand the needs of consumers. This would make the product innovation even more effective and even more efficient and again linked to a task of analysis, testing and simulations.

The potential of Industry 4.0 is very promising: the production lines will be able to automatically reconfigure themselves in order to optimize productivity, dynamically respond to new orders or variations of the same, predicting their failures and initiate the appropriate maintenance processes independently, etc.

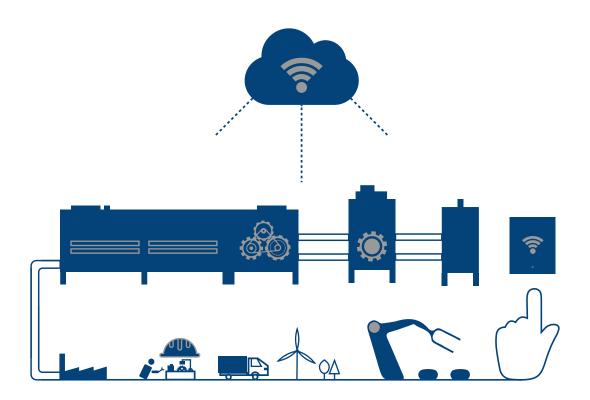
Also expected is an increase in the flexibility of the processes up to the line that can produce any type of product without the need for a transition from one batch to another, or of a long and expensive *set-up* but, for example, through a setting of the profiles of *robots* dictated by the plant, gradually, while progressing along the line products.

Along its entirety, the digitalizing impacts directly on the supply chain that becomes fully integrated and coordinated, on the synergies between suppliers, on the response times to the infinitely faster market needs, on the interconnection of systems, on reducing production times and related costs, on flexibility, on Customer – Marketing proximity, on the meeting between customer needs and the efficiency of mass production and, finally, on the on-demand manufacturing.

Thus, the already noted technologies and innovations combine synergistically to create conditions for a new multi-dimensional industrial revolution. A challenge for the manufacturing of Lombardia.

## FIGURE 7.

## Industry 4.0



## 3.4. The competitiveness profile of Lombardia

Lombardia is a region that already has numerous and obvious strengths that are given from those that the scientific literature defines as endowments that is, the resources from its geographical position, history and tradition that Mother Nature gave to it. But it does not stop there. It also has weaknesses and threats (unemployment and exclusion of certain age groups from the labor market, small and individualistic businesses, fiercer global competition, etc.). The challenges to be faced are important.

Although Lombardia has a seemingly high competitive profile, it shows signs of contingent suffering and, more importantly, it shows strategic weakness and a slow, but gradual, loss of competitive position. The phenomenon is not obvious; it is slow and disguised by the unquestionable wellbeing that over time the Lombardia region has been able to build.

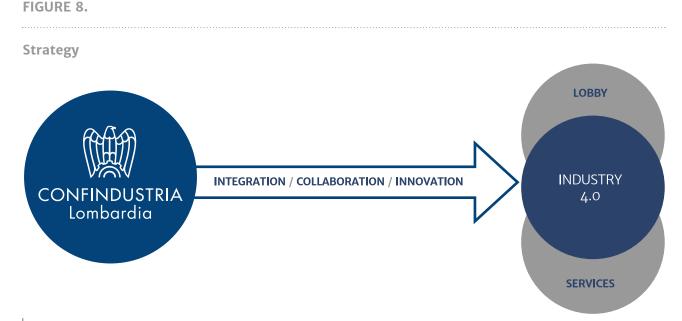
However, it is not today what we look, it is tomorrow and, in fact, even further towards 2030.

As shown, in maintaining and improving competitiveness it is necessary to implement all the measures that can sustain and improve productivity. This requires action on the determinants of competitiveness affecting more closely the development of the network of businesses (the so-called micro-economic determinants) and their surroundings, more precisely:

- Create a strong pro-industry culture
- · Improve the quality of the business environment
- Grow the state of cluster development
- Enrich the sophistication of strategies and business activities

Only by acting at this level it will achieve competitiveness and, thus, a widespread prosperity.

The Strategic Plan "#Lombardia2030" has precisely this objective, acting on this level of the determinants of competitiveness to make Lombardia more competitive and, thus, more prosperous.



### 3.5. Main strategic challenges and priorities of intervention

Through a long process that led to the sharing of content with representatives of Confindustria network listed in the methodological note, the most important strategic challenges faced by Confindustria Lombardia have been identified, and are the challenges to make Regione Lombardia prosperous and competitive.

The interviews and "work-out" sessions have clearly indicated the following areas as the most important strategic challenges:

## Area of "Generation of pro-industry culture"

• Dissemination of an enterprise culture: A business is still seen by governments, local communities and citizens as "a problem and not a s an opportunity"; there is, in all the territories, a certain aversion to businesses that creates many criticisms. It is, therefore, necessary to spread the relevance of the business's importance in the economic and social system, as a creator and distributor of wealth and skills for all the services of the territory;

## Area of "Quality of the business environment"

- Vocational training: alignment between the skills required by businesses and training (primarily schools), safeguarding and transmitting the "know-how", typical of Lombardia manufacturing businesses. There are territorial experiences and therefore good practices to be replicated;
- Lack of physical infrastructure: the territorial associations have shown that, in many areas of Lombardia, there is still a lack of physical infrastructure (highways, ports, railways, broadband, etc.) that would enable an exponential development of the territory;
- Excessive burden of bureaucracy: bureaucracy has assumed a role now overflowing. Rules and regulations are complicated and cumbersome; open to the most varied interpretation at all levels (Municipal, Provincial, etc.) legislative and procedural production is not coordinated, thus generating disparity and complexity. The resources businesses invest in fulfilling these formalities are unsustainable.

## Area of "State of cluster development"

• Development of Clusters: Clusters, geographical concentrations of sectorial businesses, universities and schools, institutions, etc. have shown to be exceptional "flywheels" of development and competitiveness. Lombardia, having experience of industrial districts, is a territory in which the development of clusters can have a significant impact. This should be supported and followed.

## Area of "Sophistication of business strategies and activities"

• Internationalization: the opening of markets and globalization has long been an evident phenomenon, accompanied by threats and opportunities. Businesses that have performed well have been able to grasp the challenge and, therefore, all businesses should have the equipment that would enable them to operate in international markets.

These lines of strategy work alongside a transverse and common theme: the need to communicate the region potential in Europe and the rest of the world, overcoming the prejudice generated by some rankings that penalized us. Improving then, the image and perception of Lombardia while making the most out of its skills and quality.

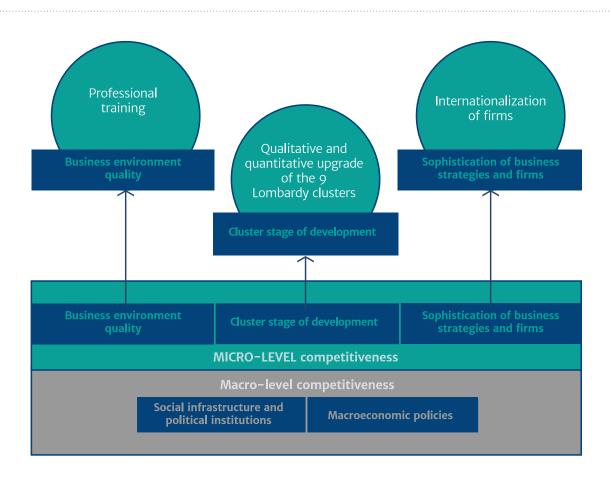
However, despite all the great impact, for the competitiveness of Lombardia region, these challenges require a course of action and different levels of priority.

The courses of action are two: direct and indirect actions. Direct actions are those lines of strategy that Confindustria Lombardia and the Confindustria network may influence directly, by activating activities and operational programs that influence without intermediaries, the development of the strategic line. They belong direct to the mode lines of: (I) vocational training, (II) Dissemination of enterprise culture, (III) Development of Clusters and (IV) Internationalization. Indirect actions are understood as those lines for which direct action is not possible, where Confindustria Lombardia may only play a lobbying role and put pressure on the legislature and institutions. A role that belongs to its core business and in which more and more will have to collaborate, and in a constant dialogue with the other stakeholders. Connected to the indirect mode the lines are (I) Lack of physical infrastructure and (II) Excessive weight of bureaucracy.

This Strategic Plan, therefore, revolves principally around direct actions, in order to improve micro-economic competitiveness and to the theme, transverse, of the spread of enterprise culture.

Le azioni indirette – che hanno effetto sulle determinanti della competitività macroeconomica Indirect actions – that impact on the determinants of macroeconomic competitiveness – will be the ground on which to develop continual and effective lobbying. The different levels of progress of the lines of strategy will influence relative operational activities.

FIGURE 9.



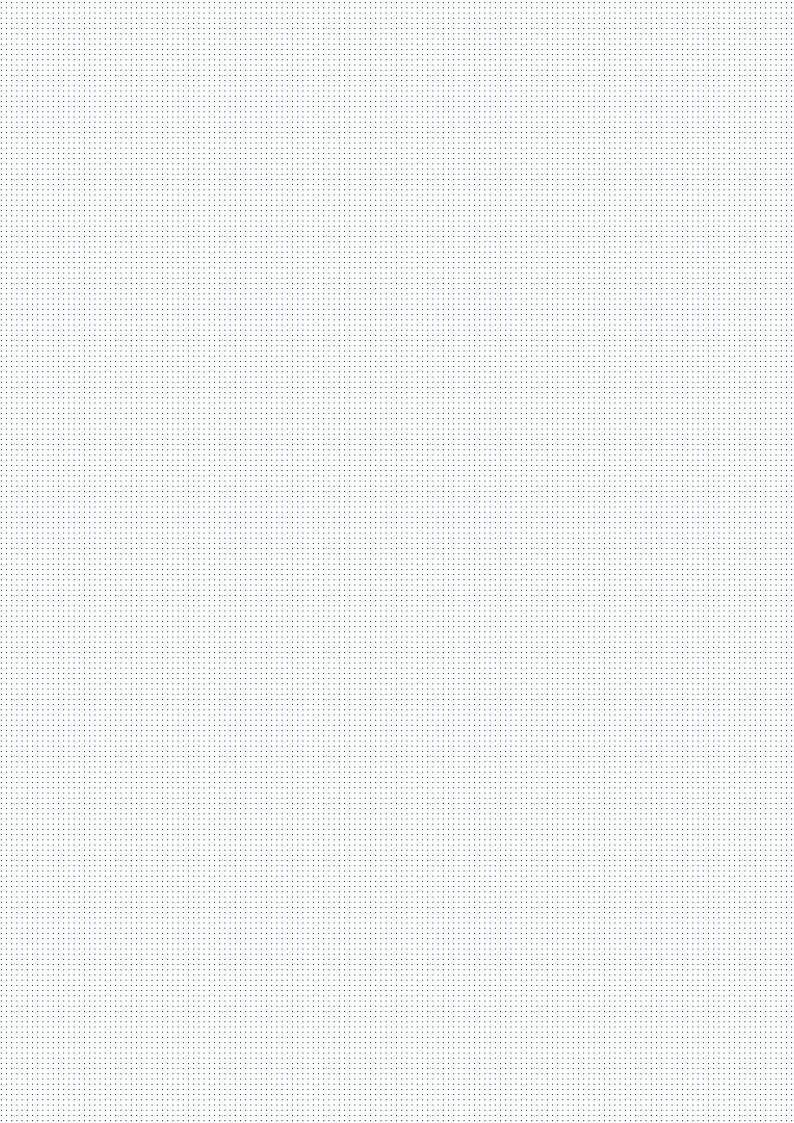
Speed, flexibility and automation will be the key words of the new industrial revolution that will only increase the value for the businesses and, upstream, for the entire production chain, following the customers and their increasing needs. But to do this it is necessary to "gear up".

The challenge can not be faced by a single business, it is a challenge of the entire regional and country network.

For Lombardia this signifies a global challenge of a large geographical area to become a great economic hub at a global level

that can be drawn to the regional and national economies

This challenge should start from the awareness that global competition will be concentrated on the ability to attract human capital and innovative businesses, in a continual contamination with territories, skills and technology always more "distant", making permeability of the network one of its best assets.



## The promotion of a pro-industry culture





4.1. Introduction

A strategic lever is that of the promotion of a strong pro-industry culture. By this, it means the knowledge and awareness of the positive impact on society due to the presence of a dynamic business network that will not only generate and distribute wealth, but innovate products and services, improving the lives of all who are able to integrate themselves in a responsible way in the economic and social fabric of local communities and territories, and who are able to take on objectives other than profit.

At the base of this enterprise culture there is a value system

- made of honesty, transparency and responsibility
- that it is part of the entrepreneurial tradition of Lombardia.

"In the territory manufacturing businesses have been able to proudly defend their identity, trying to overcome the "negative anthropology" that wants the entrepreneur to be a synonym for evader, for polluter, for small that does not grow. In fact, they are showing the ability to act as a guide towards an exciting new phase of development centered on quality and proximity to the market"

(Unione degli Industriali of Varese province)

It is thanks to the contribution of entrepreneurs, people who work in the business, of research and innovation, and who also have passion and a great motivation and dedication to work, that the positive impact on society grows and feeds on itself.

Enterprise culture, therefore, is not only like a synthesis of knowledge and traditional values, but also like a source of growth and progress.

In this scenario, Confindustria Lombardia intends, in close co-operation with the analogous area "Enterprise and Culture" of Confindustria and the many initiatives of other territories throughout Italy, to define a model of Lombardia pro-industry culture and to use it to grow a strong awareness in public opinion and in public administrations, that will clearly and effectively identify the history, values, vocations, objectives, image and identity of the Lombardia industrial network.

### 4.2. Objectives and reasons

Creating and spreading a pro-industry culture and, therefore, to really know the business network and the benefits generated, in order to create a favorable climate, signifying a cascade that generates a number of positive impacts that may facilitate the survival and growth of this fundamental component of society and, therefore, first guaranteeing and then increasing the positive impacts described above. For example, this strategic lever is transversal and synergic with respect to the strategic lever of human capital: in fact, spreading an enterprise culture means to attract the young and the talented into a company career and then reinforce the area of training. Doing this will contribute to full employment and to make businesses once again more competitive.

The diffusion will be impactful and widespread, not only among the main economic actors, in the ruling class, but also the entire civil society.

Conversely, not overseeing this area means that the general sentiment towards businesses is based on preconceptions or incorrect or partial information that are based on a few isolated incidents of malpractice that then lead to distrust, and resistance if not to open opposition.

According to the results of research by GfK Eurisko (commissioned by Confindustria and articulated on a sample of associates, of small and medium entrepreneurs and citizens operating in the sector) enterprise culture should be increased in public administration, in politics and in political parties, and in the public opinion in general. The research shows the belief that an enterprise culture should focus on the development of a company, the territory in which it operates and, more generally, the country, thus helping to stimulate the labor market and human resources to create a virtuous circle in the service of customers and consumers.

A widespread enterprise culture can only generate benefits, reduce bureaucracy, promote innovation and professional culture, support training, develop rigor and ethics in business, and promote a true culture of merit, with a strong role for universities in the promotion of enterprise culture.

In summary, better communication and assessment maximize the identity of a business and its values: to make the most of their daily work, to focus on young people, universities and involvement within civil society.

### 4.3. Programs and actions

Following are some examples of initiatives that may be undertaken in this environment, and the definition of the specific programs that should be done in co-ordination with stakeholders.

### I. Definition of the pro-industry culture model

The first part to be developed should be the definition of the main features of the Lombardia pro-industry culture model, a storytelling as close to reality as possible, but also aspirational. A pro-industry culture model, therefore, showing the way forward that pays great attention to the respect and enhancement of resources, in particular human ones, to creativity and innovation; a culture, therefore, being synonymous with foresight and dedication and openness to dialogue and to the needs of consumers who are more and more informed, aware, and demanding, and who prefer companies with whom dialogue is possible.

### **II. Communication**

It is, therefore, imperative that the pro-industry culture model should not remain confined in research and in documents, but communicated and shared – in dedicated moments – with all actors operating internally, both Confindustria Lombardia and the whole Confindustria network in Lombardia.

Communication is, in fact, a strategic lever that is essential to the success of any activity and, to be truly effective, it needs to be addressed internally before externally.

A participatory and informed set of values should help to further the diffusion of a pro-industry culture. In this perspective, the motivation and the emotional involvement of staff is crucial in order to transmit a positive image externally.

### III. Initiatives / actions

Several initiatives are already in place, organized by Confindustria, and supported by local territorial associations. In particular:

- ORIENTAGIOVANI An annual event that Confindustria dedicates to businesses and young people;
- A week of business culture another annual event organized by Confindustria for the territories to tell the public of the richness of the values of Italian industry in new and original ways.
- SMEs DAY national days of Small and Medium Enterprises organized by Piccola Industria of Confindustria in the territories, intended to open the doors of companies to students, teachers, local administrators and the media;

In this context, Confindustria Lombardia aims to be the subject catalyst to ensure that good practice is extended to all the territories through direct action of lobbying towards Regione Lombardia and, more generally, to the institutions.

The role of Confindustria Lombardia should be as an intermediary between activities organized at the national and territorial level, as well as a pivot and coordinator of different initiatives to raise awareness and promote enterprise culture organized by territorial associations in order to express, through synthesis and enhancement work of various territorial peculiarities. A strong Lombardia identity identifying new expression and dissemination networks. This path, declined in concrete actions, should be shared, enhanced and amplified in the media with employer associations.

'A business, as an element that creates cohesion and enriches the social fabric of a territory, contributing to its well-being', it is the principle that should guide Confindustria Lombardia in a series of activities to spread the pro-industry culture:

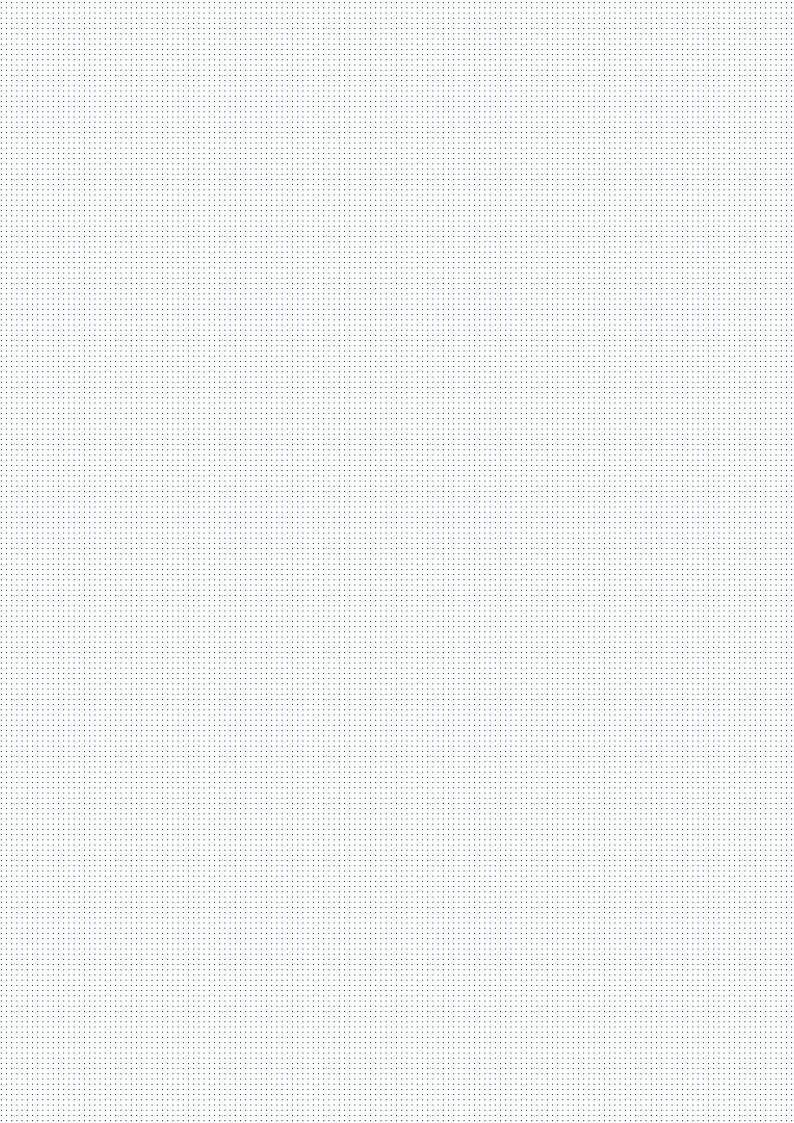
- a road-show travelling to factories in various Lombardia territories open to the media and citizens;
- mapping of historic companies as an example/model of the 'know-how' in Lombardia;
- communication and awareness raising activities in the territories in order to raise awareness of the role of the businesses in creating cohesion and wealth in the regional social fabric;

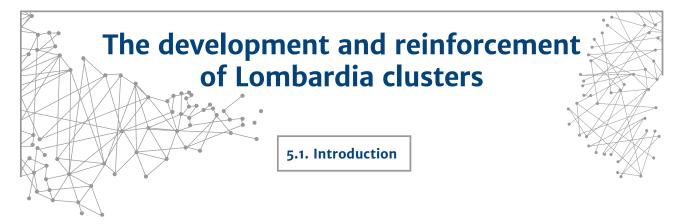
All should be supported by local associations, but above all, with the fundamental side of stakeholders: to spread the pro-industry culture, uprooting in a definitive way the "anti-business culture"; it is, in fact, necessary for the support of local entities, regional authorities, associations active in the territories, and think tanks.

The **stakeholders**: Territorial associations – members of Confindustria Lombardia, Confindustria (national level), Regione Lombardia, the European Union, local authorities, think-tanks, civil society, universities and schools.

A widespread pro-industry culture that can generate benefits, reduce bureaucracy, promote innovation and professional culture, favoring training, to develop rigor and ethics in business, to promote a true culture of merit, with a strong role of universities in the promotion of pro-industry culture.

In synthesis, to communicate better and assess to the maximum the 'identity of the businesses and their values: to make the most of its daily work, focus on young people, universities and involvement inside civil society.





A cluster, in an industrial environment, is a "geographically proximate group of interconnected companies and associates institutions in a particular field, linked by commonalities and complementarities", (Porter 2008) according to the definition of Porter.

Such aggregation models have largely proven their effectiveness over time, that is, the creation of a "competitive advantage that comes from the presence of local external economies and joint actions", higher than that of the same sector but that do not belong to a cluster.

"We are convinced that the cluster can offer great opportunities for small and medium-sized businesses, because they are given a real chance to confront, strategically and operationally, with other businesses, universities and research institutes to draw together the future of manufacturing in Italy"

(Confindustria Bergamo)

A cluster facilitates the development of new patents, promotes economic growth and, thus, the creation of new jobs. There is, therefore, a positive correlation between the strength of a cluster and the growth of existing regional industries.

5.2. Objectives and reasons

Lombardia has already developed a similar experience in its past: the industrial district. Continuing this tradition, the future of Lombardia's industry also depends on the development of clusters, given the circumstances of the previous chapters, which will have a strong technological matrix. Clusters are the new frontier to address production development, new technologies and competition in global markets. Competition that is increasingly difficult to address with traditional means and with businesses that are typically of a very small size.

Through collaboration and the development of synergies between small, medium and large businesses with research centers and universities, business associations, public administration and banking entities, clusters make the industries of the territory more internationalized, digitalized, and connected.

For all the reasons previously described, starting with the deliberate strategy at a European level, and implemented at the regional level, of the organization of the territory for supply chain systems, Confindustria Lombardia puts at the center of its strategy the support and long-term strategic direction of the cluster model, making it one of the pins of the Strategic Plan.

### 5.3. Programs and actions

Confindustria Lombardia intends to act as a partner of reference for the promotion and dissemination of the cluster model, at all levels: political, technical and associative, and to represent the "think tank" of the nine Lombardia technology clusters: (1) Intelligent Factories, (2) Agrifood, (3) Aerospace, (4) Energy (5) Sustainable mobility, (6) Green Chemicals, (7) Smart Cities and Communities, (8) Environments of Life, and (9) Life Sciences; each of these pertains to an area of specialization of the Smart Specialization strategy (S3) of Regione Lombardia.

Continuing with the previously mentioned "bottom-up" approach, it intends to strongly involve businesses in community life and in the governance of clusters, making at the same a real communal "home". Similarly it aims to promote an active role of local territorial associations in community life and cluster animation, with participation in the Cluster Organization (the co-ordination structure).

This approach is consistent with best practice at an international level: in the most vital and successful clusters the "Institutions for collaborations" play an essential role.

As in the actions previously described and in the following paragraphs, hereafter there are examples of programs and actions viable in this area. The actual operational application will be the result of interaction and collaboration with all stakeholders.

### I. Promotion and dissemination of clusters

Internally and externally of the Confindustria network, it intends to launch intense activity of promotion and dissemination of clusters through meetings at individual territorial associations for the promotion of the activities of clusters. It also aims to provide support and promotion for the organization of *road shows*, seminars and dedicated *workshops*. This action for the diffusion of the concept of clusters and of the operative activities of existing clusters is extremely important, not only for the implications, in terms of *commitment* and participation in existing clusters, but also of culture for an economic development model that has proven its effectiveness.

### **II. Cluster Management**

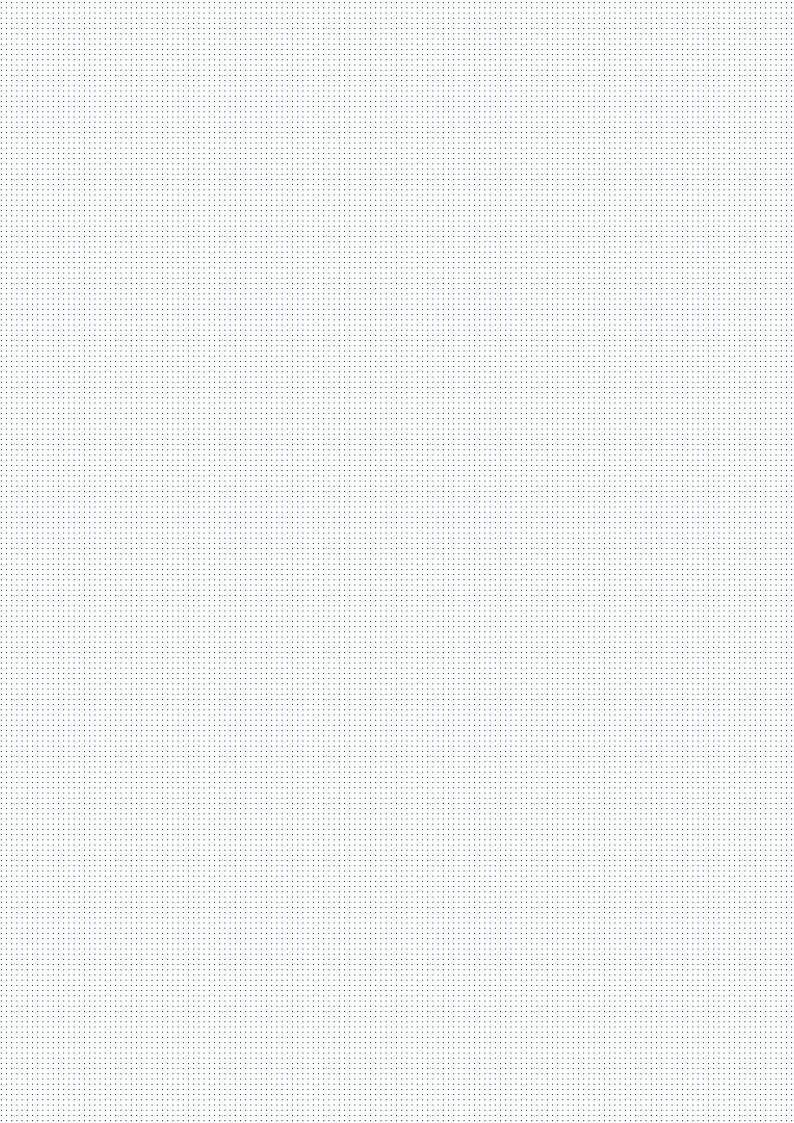
On the management front it intends to promote adherence to the cluster by local associations, participating in activities or, in an even more incisive way, "adopting" one or more reference clusters and acting within the cluster *organization*.

The fact remains that each cluster may have more than one territorial association present. Confindustria Lombardia intends to act as a point of connection and coordination, along with all the territorials, of these actions. Confindustria Lombardia is also available as a *repository* of skills, good practice and information on the theme of cluster management, available for the whole network.

**Stakeholders:** Territorial associations – members of Confindustria Lombardia, craft associations, Regione Lombardia, Finlombarda, businesses, universities, research centers, Lombardia cluster technology, European clusters, European institutions and banks.

Clusters facilitate the development of new patents, promote growth of the economy and therefore the creation of new jobs. There is therefore a positive correlation between the force of clusters and the growth of existing regional industries.

Through the collaboration and the development of synergy between small, medium, and large businesses with research centers and universities, business associations, public administrations and banking entities, clusters make the industry of the territory more internationalized, digitalized and connected.



## Human capital and professional training





6.1. Introduction

A human capital of excellence is the basis of a territory's ability to be competitive.

Human capital is built through scholastic education and training in the classroom on the one hand and, on the other hand, training in the field and in the workplace, following two different paths of learning and accumulation.

With a strong tradition of high-level training and of the alternating school-work experience that has very deep roots, Lombardia's educational network has always stood out for its ability to respond to the needs of knowledge and professionalism required by businesses.

"... Half of this unemployment is due to the gap between the skills required by companies and the skills of young people. That is, we have a problem of mismatch between expectations and reality. Nearly one-third of youth unemployment can be attributed to the difference between the required profiles and skills of the candidates"

> (Assolombarda Confindustria Milano Monza and Brianza)

Over time, however, and also because of the tendency to choose orientation inconsistent with the demands of the market and an economic crisis that has severely undermined the industrial network of the region, it **has gone on to delineate two strong critical issues**: rising youth unemployment and a mismatch between the skills required by businesses and those possessed by jobseekers (both in terms of the gap and over-statement of misalignment).

Within the Strategic Plan, there is the intention to build a synergistic vision between the two modes of enrichment of human capital, training in the classroom and in the field, so that they reinforce each other: "knowing" and "doing" are thus two sides of the same coin.

### 6.2. Objectives and reasons

The success of businesses has always been tied, hand in glove, with the quality of young people who are formed in the schools. Technical education was born and developed to meet specific needs of the production reality, performing long and successfully the function to train figures that match the demand of professional ability coming from the business world.

In areas of high and historical and industrialization such as Lombardia, industrial technical institutes have always been, for businesses, an extraordinary pool of qualified human resources.

This educational segment has accompanied the economic and social growth of the country. The various stages of development have succeeded by adapting on several occasions and in different ways in the pathways of study, with the specific aim of training those intermediate profiles – the "experts" in fact – who just by virtue of their characteristics and technical and professional skills have been the "engine" of growth of the national industrial context and who have helped to steer the country towards its modern role as an industrial power.

Even today the fabric of small Italian businesses, in particular, is deeply tied to the function performed by the secondary and tertiary technical education system, whose graduates are required in a much higher number than university graduates, and yet are more difficult to find on the labor market.

However, the impression is that, over time, there has been a gradual abandonment of the more strict professionalizing function in favor of a kind of cultural education, general and versatile, but precisely for this it needs more specialized training post– secondary. Technical education, in other words, ended up losing its original identity and has progressively weakened its training function replacing it with its own autonomous and recognized "terminal illness".

It should, therefore, recover the strong link in the territorial and productive context, in order to guarantee to the students of the institutes the technical skills that are always linked to the rapid evolution that characterizes the economic network today.

With the aim of responding to these new challenges Confindustria Lombardia intends to value the best practices realized in the field of education in the various territories, operating an intervention of systematization that allows wider dissemination and sustainable replicability at a regional level and by providing:

- I) the "know-how", built over the years in collaboration with the education and training network, for the preparation of methodologies and experiments to promote teaching for skills;
- II) constant networking with associated businesses in the identification of key competencies for the competitiveness of the territory, and in the activation of school–work initiatives that promote more structured learning of these skills in the workplace.

On this front, the line of strategy of Confindustria Lombardia moves in tune with a context in continual evolution, both at a national level with Law 107/2015 "Reforming the national education system", the so-called "Good School" law, and at a regional level with the regional Law 30/2015 "Quality, innovation and internationalization in education, training and work in Lombardia region". Both measures are among the fundamental points, a strong link between the world of work and education that results for example in the obligatory alternation of school-work and in the promotion of technical and professional training.

## 6.3. Programs and actions

In order for the development of human capital to succeed, it is essential for continuity over time of lines of action that should not be perceived as commercial initiatives but as true "modus operandi".

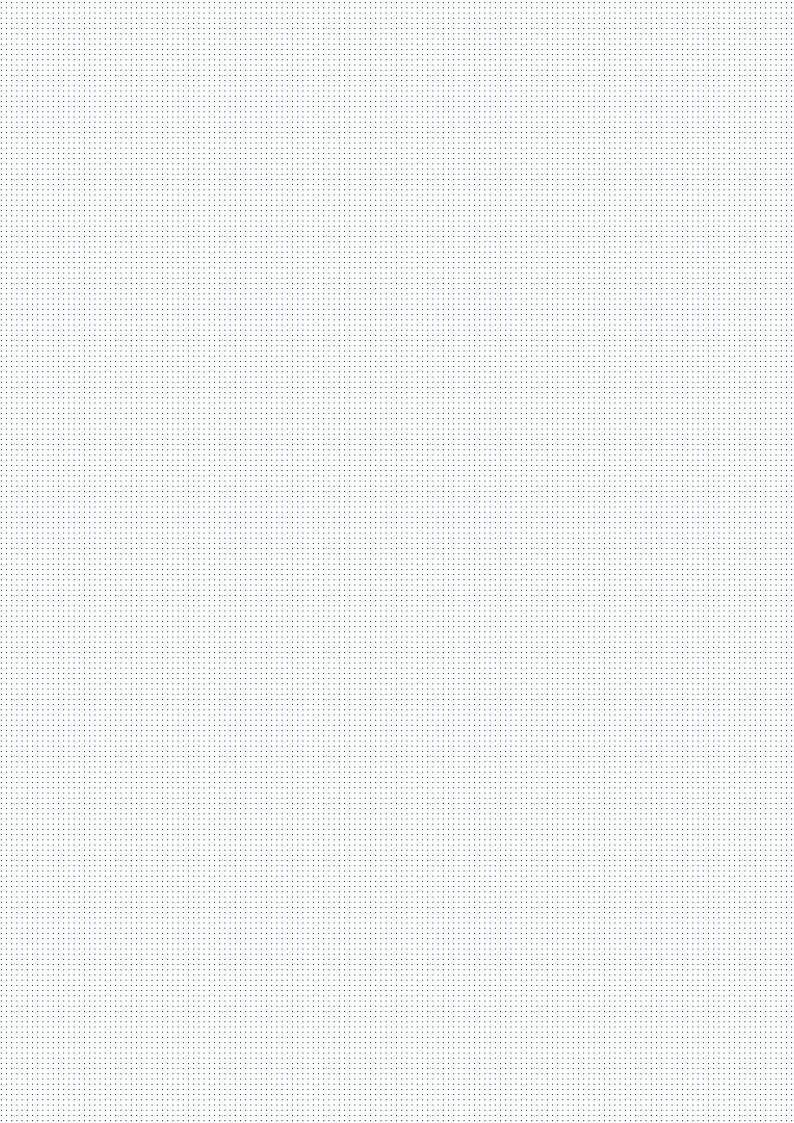
Starting from the good practices developed by the territorial associations, among which for example is the "Progetto Rosa del Club dei 15" that is dedicated to the promotion and the advancement of young women in technical education, there was prepared what follows. In this area, the lines of action indicated will be considered by way of example: the programs and actions will be agreed with the stakeholders.

- I. identification of the needs of businesses and of the evolutionary dynamics of the labor market, with the aim to align the output competencies of young people on study pathways to those considered strategic by businesses, in order to compete in the market. This investigation will necessarily be coordinated with what is emerging in the field of Industry 4.0, with particular reference to the skills required for future professionals of mechatronics;
- **II. enhancement of the alternation of school-work,** as an opportunity for businesses to communicate with schools in the promotion of a teaching articulated for skills and for students to establish contact with the world of work. The development may also occur through the strengthening of post-diploma high school technical education sector, in particular through the consolidation of the training offer from Higher Technical Institutes (ITSs). This approach is intended to strengthen the models tested so far, and also distribute them within small businesses;
- **III. creation of a network of educational workshops (FabLab/corner),** with the aim to optimize and make available to a wider audience of technical and professional institutes a laboratory infrastructure within the territory of Lombardia (at companies, universities, research centers, ...), areas of technical and practical learning, with a view also to their further implementation.
- **IV. mentorship:** a kind of "adoption" formalized in part by a "resource", perhaps a person close to retirement age, to a young person or group of young people, thus giving them a part guided experience in the field and a part in the classroom at the company itself. This coaching has the advantage of enhancing the experience of learning "to do" in view of the positive generational development.

**Stakeholders:** Territorial associations – members of Confindustria Lombardia, Regione Lombardia and all relevant institutions in the field of training and employment, Regional education authority for Lombardia and all the guidance councilors, scholastic and training institutions, businesses, students and families, social parties (employers' associations and trade unions), Fondazione Cariplo.

Human capital of excellence is at the base of the capacity of a territory to be competitive.

A strong tradition of training at a high-leveland experience
of alternating school-work that has deep roots, the Lombardia training network
has always stood out for its ability to respond to the needs of knowledge
and professional requests of businesses
(...). "Knowing" and "doing" are two sides of the same coin.



# Internationalization and European networks



One of the elements of success of businesses has been identified in the management of international markets. It should therefore be of primary importance to promote this line of strategy and facilitate access and expansion of businesses in foreign markets, planned with a wide meaning.

On this basis, Confindustria constructed at national level an extensive and structured comparison with the Ministry of Economic Development on the activities of the "control room" for Italia Internazionale, sharing the definition of the guidelines and objectives set for the year 2015.

We should continue and consolidate best practices in order to adopt a clear and defined framework of policies for internationalization. Only within a well-defined framework, it can be built a strong connection between the different agencies and institutions to optimize resources with a network approach.

Lombardia is a region with a strong international professionalism, home to 4,721 foreign-invested businesses and 47% of all multi-nationals present in Italy. Its export accounts for around 30% of the national total and over 40% is destined for non-EU markets. It is also the most appealing region in southern Europe. Lombardia businesses have maintained good performance even during the economic crisis: since 2009, exports have registered a growth rate of 15% compared to pre-crisis levels. High internationalization is also present in output: its businesses have foreign investment, joint ventures and commercial offices worldwide.

There is, however, much work still to do in order for the internationalization of its businesses to grow and become stable. In this perspective, Confindustria Lombardia, together with all its territorial associations, proposes a strategy for the promotion of the Lombardia industrial network and of its many excellences, such as manufacturing, in order to consolidate new practices and increase trade with other countries, favorable to both parties. In conducting internationalization activities it is also essential to focus on the real needs of businesses.

As emerged from the Internationalization survey of Confindustria Lombardia, carried out on a sample of associates, in fact, the **priorities for businesses asking for strong support from business associations** are: search for foreign counterparts; organization of Business to Business meetings; advice on foreign contract law and international taxation; advice on customs issues.

To support businesses in a variety of bureaucratic activities and to help them find other suppliers and partners does not only mean obtaining a more favorable competitive position for the business, but also ensuring its viability in the long term and the places of work in the Lombardia economy.

The topic of internationalization is already on the agenda of many businesses and institutions, but this is not enough. It must become a pervasive and widespread mechanism, and not the good practice of some enlightened precursors.

Too often the international activities of businesses are viewed with suspicion, emphasizing only their impact on employment in the short term or just the search for low-cost inputs, if not directly practiced, to escape complex and oppressive taxation. Yet the competition that takes place globally and businesses should be empowered to get the best out of what each country can offer. Also the

European Commission recognizes that "Internationalization is not just exporting".

For example, cross-border co-operation, participation in cost-effective networks, and the search for competitive procurement or new technologies are important elements". Within the strategies and internationalization programs it cannot fail to have a place of honor within the European Union, an area in which Confindustria Lombardia is already present and active.

"We have chosen an ambitious title: Europe, one change to develop and to grow. In Europe we must always pay more attention. (...) A communal house for tax, welfare, infrastructure and energy"

(Confindustria Mantova)

In this European space, the possibilities are countless and include (I) the European 2014–2020 programming that coordinates along the line of strategy of the EU's economic growth to 2020 (which is to become a smart, sustainable and inclusive) programs and structural funds, and (II) the EU regional policy and the direct rapport between the EU and regions. These have been, for some time, identified as territorial environments that are optimal for the development of European policies and projects in order to develop and also pivot the previously mentioned 2014–2020 programming.

Opportunities to be educated require specific skills and specific professionalism.

For this, experiences and networks already established by Confindustria Lombardia are equally relevant. Among these, the **Enterprise Europe Network (EEN)** is of great strategic importance, the largest European network of support for small and medium-sized businesses for internationalization, innovation and technology transfer, that provides its services through the Consortium Simpler (Support Services to Improve innovation and competitiveness of businesses in Lombardia and Emilia-Romagna) of which Confindustria Lombardia is a partner. Complimentary to the EEN is a presence in Brussels (along with Confindustria and Assolombarda), to fully exploit the privileged relationship, two-way, between the EU and the regions.

### 7.2. Objectives and reasons

The European Commission has for a long time said that businesses that are internationalized get better results than those that are not, thus strengthening the relationship between internationalization and competitiveness.

In its "Multinational Italy 2014" report, the ICE looked at the international initiatives (including foreign direct investment in the world aimed at the creation, expansion and/or the co-localization of industries and services). The analyses carried out show that the pattern of growth of Italian businesses overseas maintains a strict coherence with the typical features of "Made in Italy" and the industrial structure of the country: a strong commitment to strengthening the commercial presence especially in rich countries, accompanied by strategic relocation processes mostly to "close" areas in a geopolitical, cultural, and logistical sense.

Among the positive signs reported are the increase of an Italian presence in North America and the growing involvement of its SMEs in the process of internationalization of production, accompanied by a good capacity of the overseas presence of large businesses. In the background, however, the persistence of a global gap, especially in reference to the area of the Pacific, the new epicenter of the world economy, and the limited multi-national willingness of many service sectors.

Internationalization has so many ways. If the development of methods for businesses to seize opportunities beyond national borders is very important, it can and should be done to attract foreign companies. The attraction of the so-called FDI (Foreign Direct Investments) is a strong point in the territory that risks implementing such a policy. In fact, foreign businesses setting up bring employment, skills and technology, resources, competition, new business models and they can – therefore – have the ability to revive territories or sectors that now seem destined to decline. Their impact is, therefore, beneficial and makes a territory even more viable and competitive.

7.3. Programs and actions

The programs, actions and projects will arise inside and outside with dialogue, including Confindustria Lombardia and its stakeholders. Therefore, what follows will not bind or limit the range of action, but are some examples of good practices to support internationalization, noted and developed for some time. The areas of action are already known, but they should be articulated with determination. Among the most significant of which Confindustria Lombardia can synthesize and carry to the network are:

### I. Reorganization of intervention policies

Reorganization, also at a regional level, of initiatives and funds dedicated to internationalization is a precondition: to support businesses is key to systematize all individual initiatives developed by different actors (Chambers of Commerce, Regions, special agencies, etc.).

In just making a network, through improved co-ordination and continual synergies, it is possible to optimize available funds and prevent them from being dispersed and fragmented into many small initiatives.

## II. Participation in the life of the local international community

Consolidation of the relationship with the international community, primarily consular representation, present in Lombardia for the promotion of the Lombardia industrial network, and of its many excellences such as manufacturing will be designed to improve existing practices and to increase trade overseas in favor of both parties. It will promote joint actions with the territorial associations in order to support businesses interested in foreign investments, joint ventures and commercial offices worldwide.

## **III. Financial support**

Internationalization of a business imposes additional financial resources. This aspect, along with the "high-value information", is certainly to be given priority. However, it is worth noting that the financial aspect is much more than an issue of cash-flow management or the possibility of access to additional funding; it is also to manage sensitive and specific aspects such as foreign exchange risk, the guarantee of payments abroad, the difficulties for the granting of payment facilities to foreign customers, etc. Financial internationalization means, on the one hand, to facilitate internationalization financial mechanisms (even with training) and, on the other hand, to support access to additional funds required in order to finance international operations such as investment overseas. The "internationalization voucher" falls into this category.

### **IV. Attracting FDI**

To be competitive in a territory it should be able to be appealing when in confrontation with international businesses and international direct investment (Foreign Direct Investments – FDI). To do this, Confindustria Lombardia intends to exploit the full potential of EEN in order to perform an action of development and attraction of businesses and investments in Lombardia. In addition, it intends to carry out constant promotion of the Lombardia industrial network:

(I) organizing Business to Business meetings and missions, (II) meeting, with continuity, delegations from foreign institutions, and (III) promoting clusters and, more generally, the Lombardia network on all occasions and events with international scope.

## V. Actions at a European level

The scope of the European Union is certainly a privileged space for international activities. Confindustria Lombardia can take advantage of an established network of experiences, activities and services that are already in play for businesses. In this environment, the needs and action areas are:

- (I) to promote the removal of obstacles, tariff barriers and, not tied to some countries of particular interest, specifically calling for the acceleration, at a European level, for the conclusion of the FTA agreement between the EU/USA, better known as TTIP;
- (II) to enable a technical and institutional co-ordination at a regional level, enhancing the skills and resources of the Lombardia territorial associations in community institutions, with the aim of having a single space in which to bring together all representatives in Brussels.

In addition, Confindustria Lombardia will closely follow the development of free trade negotiations in progress at a European level, do outreach activities of businesses and diffuse knowledge of opportunities and threats. It is part of this area of action for Confindustria Lombardia to keep continuous relations, diplomatic and institutional, with homologous foreign associations and Chambers of Commerce in Italy and overseas.

In the frame of European intervention, there are inserted actions for the promotion and success of the alpine macro-region EUSALP<sup>5</sup> and of its strategy: the proposal of Confindustria Lombardia is for a region in synergy with contiguous territories and highly integrated within the European context. A region at the center of the pulsating heart of Europe; a recognised leader in development and competitiveness.

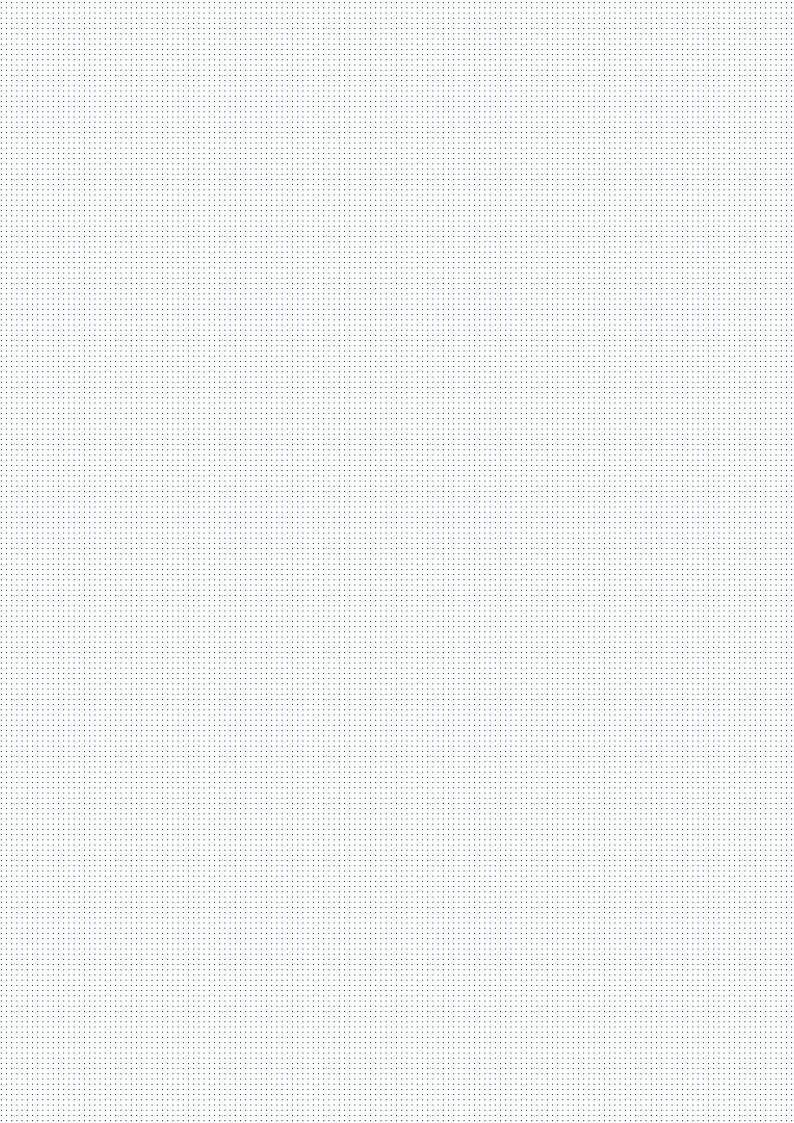
he macro-region EUSALP should be a large functional area to construct a real thinking and interconnected industry. It should activate a multi-level governance that ensures effective inter-territorial co-ordination and define design aspects and financial and regulatory instruments involving all parties, public and private.

To do this it will be necessary to endow the macro-region with recognition, drawing on best practices of measure already tested in other macro-regions. Only in this way will EUSALP aspire to become a space that will attract intelligence and innovation: ideas, capital, people and goods to generate development.

**Stakeholders:** Regione Lombardia, national and regional Confindustria, Lombardia chamber network, Invest in Lombardia, ICE, MISE, consulates in Milan, the European Commission, EUSALP Governance, EASME, associations, banks, SACE, SIMEST.

<sup>&</sup>lt;sup>5</sup> The alpine macro-region, officially Macro-regional Strategy for Regione Alpina, is an agreement signed on 18 October, 2013, in Grenoble, France, between the 46 autonomous regions and provinces that are located around the alpine chain.

Internationalized businesses obtain better results than businesses that are not, strengthening the relationship between internationalization and competitiveness.



# The role of Confindustria Lombardia

**8.1.** The mission and the definition of its role



Confindustria Lombardia, in the environment of a renewal of the whole Confindustria association and institutional context in relation with key stakeholders (Regione Lombardia and the European Union) initiated, in October 2013, a process of listening and involvement of its shareholders aimed at the identification of common and shared objectives. As a consequence, in 2014 Confindustria Lombardia dedicated time to reassess internally, reorganizing according to leaner and efficient logic.

This way of renewal, upstream and downstream, that lasted around a year and a half, has led to a definition of the new identity of Confindustria Lombardia as a hub of an association network of Confindustria Lombardia through the development and integration of existing and excellence and skills and, in particular, to act as a lobby towards Regione Lombardia and Europe focusing on manufacturing of the future.

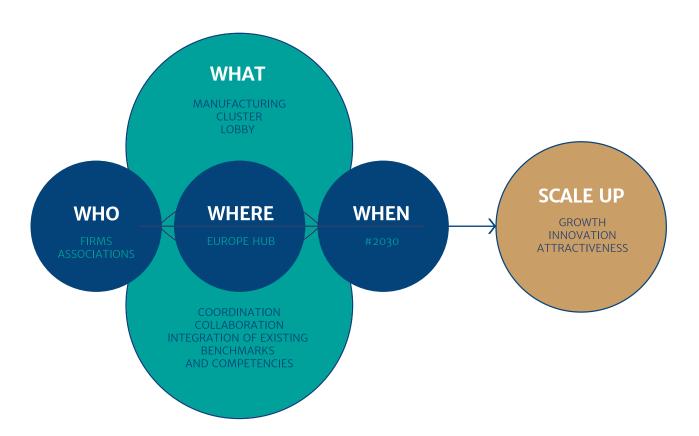
The network of Confindustria Lombardia is the most significant industrial association network, not only of the region but of the whole country, a **great entrepreneurial and production** *hub* **that arises as an active and propulsive object to contribute to the development and growth of the region:** a great wealth of skills, planning and innovation that constitutes a vital force committed to supporting businesses and the territory.

The Strategic Plan is, then, the result of basic shared choices and implemented according to a "bottom-up" logic that will represent the compass of Confindustria Lombardia activities in the coming years and, above all, in a long-term strategy. It is the founding document of the new role for the Regione Lombardia network, that is: to be the unique object of protection for the interests of associate businesses through the territories at a regional and European level to which all stakeholders refer to as necessary for an integrated development of the "district".

For this purpose, also, Confindustria Lombardia intends to:

- on the one hand, develop and co-ordinate the operation in single lines in order to ensure effectiveness, consistency and avoidance of duplication and overlap,
- and on the other hand, to maximize the exploitation of synergies, circularity and ground common between the different lines of strategy with others.

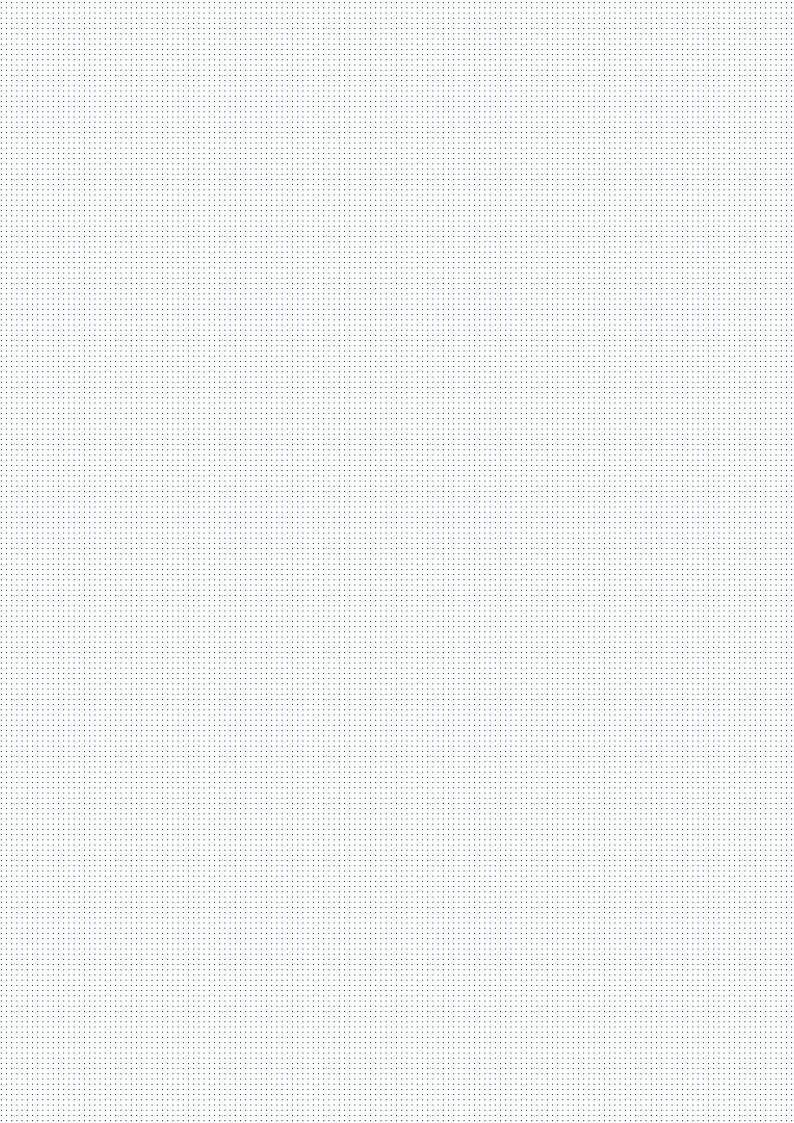
Human capital, internationalization, innovation and recognition in Europe in order to promote the growth of businesses and Lombardia 'know how' are the pillars from which to project competition in a global scenario.



#### MISSION:

Confindustria Lombardia is a hub of the Confindustria association network that acts through assessment and integration of excellence and existing ability, in particular, acting to lobby towards Regione Lombardia and towards Europe

Focusing on the manufacturing of the future.



# **Sharing**

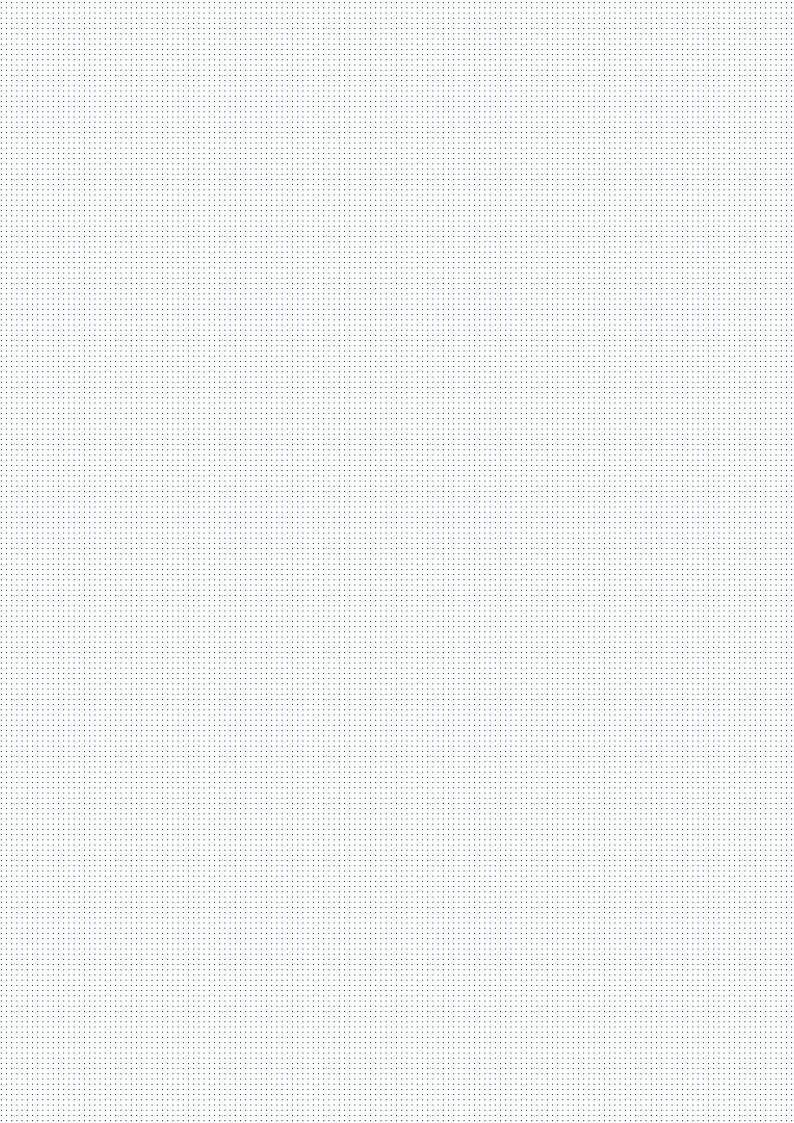
The starting point of this strategic plan is "nothing can be done alone and there is no value creation without sharing knowledge".

The network of Confindustria Lombardia desires to demonstrate a qualified ability, proactive and of a strong opening, for the identification of useful solutions in order to grow the region in the public interest.

The force of the representation is given by the widespread presence in the territory and by the deep knowledge of the productive specializations of the region that participate with the network of Confindustria Lombardia in order to be a reference point for the public decision-maker.

The strong and passionate request of the Lombardia industrial world is to build, together with institutions and other stakeholders, the conditions to continue to develop its design skills, entrepreneurial and innovation, so that it may respond in a "maddeningly" competitive reality to the new needs of the market; characterized by a question that increasingly favors quality of life.

Therefore, the programs, actions and projects will arise from discussion, internal and external, between Confindustria Lombardia and its stakeholders, making the most of experiences, expertise and best practices available, some of which are already known and have been developed for a long time. This approach, hopefully, should also bring greater efficiency and focus of the financial resources dedicated to the various initiatives. The force of representation is given by the widespread presence in the territory and by the profound knowledge of the productive specialization of the region, that participates in the Confindustria Lombardia network to be a point of reference for the public decision maker.



### The Action Plan

Once the strategic priorities of Lombardia have been identified and shared, it will be necessary to translate this vision into an articulate multi-year Action Plan, and to locate operations, maximally effective and of high-impact and visibility that will be monitored and measured in their quantitative and qualitative dimensions through timely identification of performance indicators.

The world of business will desire to promote and **share**, with a spirit of service and respect for the institutional roles, the construction of intervention strategy proposals, together with the institutions and other institutional economic actors of the territory.

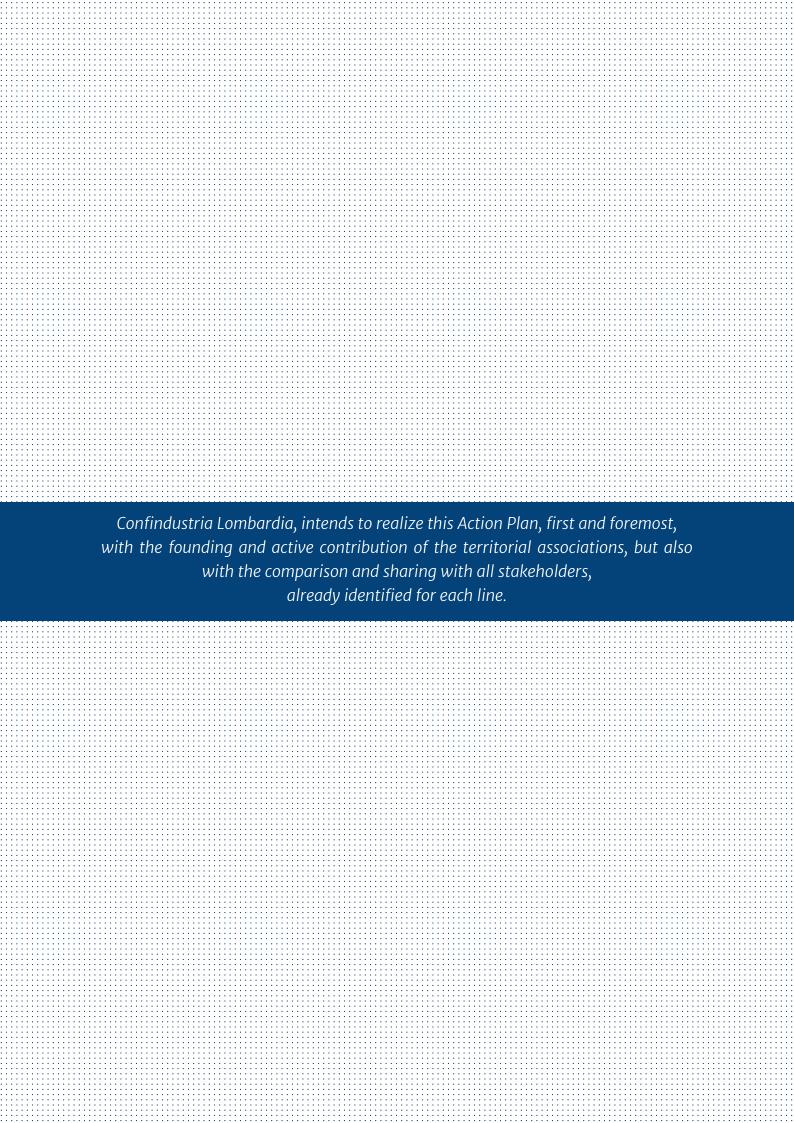
Within the individual lines of strategy there has been suggested, for example, some programs and actions that could be implemented for each of the deliberated strategies. These examples were designed to allow a glimpse, over the strategies, of some possible operating modes.

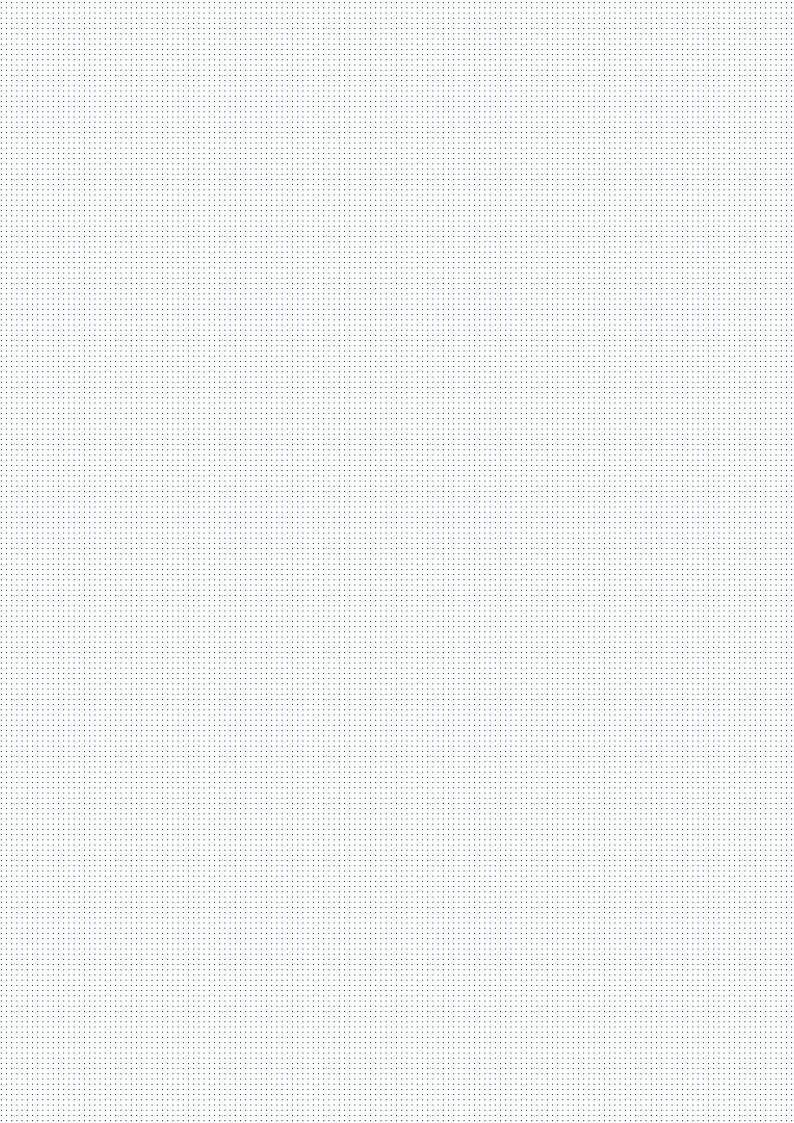
In reality, the document – following and separate with respect to this Strategic Plan – that will be dedicated to the translation into programs and projects of the strategic lines is the Action Plan. Please refer to this document for details and operational depth.

The primary purpose of the Action Plan is, in fact, the presentation of the specific ways in which each strategy is declined consistently in programs, projects and operative activities. The co-ordinated action of these activities enables the achievement of strategic objectives and, consequently, to obtain the desired effects.

Confindustria Lombardia, in line with what has already been presented in the lines of strategy, intends to implement this Action Plan, first and foremost, with the founding and active contribution of all the territorial associations, but also comparison and sharing with all stakeholders, that have already been identified for each line.

This contribution will help to develop an Action Plan that is richer and more comprehensive and able to identify operational activities, maximally effective and of high-impact and visibility, that will be monitored and measured in their quantitative and qualitative dimensions through timely identification of performance indicators.





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