



# New industry and new industry policy

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The industry has played and still plays a key role in articulating the Catalan economy and creating multiplying effects facilitating the development of the rest of activities and social welfare. Beyond the global economic and financial crisis, a new industrial model with international scope is being created, characterised by a big change in the nature and dynamics of markets and strategies of companies, internationalisation of production processes and their effects on the organisation of companies as well as by the growing relevance of innovation processes.



## Introduction

It is obvious that the industry is not what it used to be some years ago, but fortunately, those voices forecasting its disappearance and replacement by other sectors not a long time ago are gone. Today, the industry is not manufacturing only anymore, that industry with big factories, smokestacks and workers. It is computers, labs and people operating them what is increasingly common now. The industry is fully integrated in the information and knowledge economy. We have entered a new production model, a new industry in which progressive integration and interrelation of industrial and service activities linked with production (so-called *producer service industries*) has occurred, as the EU and the OECD have pointed out. Yet the industry still plays an increasing key role in this new consolidated production model. This role is indispensable for companies to innovate, invest in R&D&I and go international.

In Catalonia, relevant institutional initiatives have been taken to react to the needs caused by this change in the setting in which companies and industries do their activity, e.g. the 2008-2011 strategic agreement for internatio-

nalisation, employment quality and competitiveness of the Catalan economy, the National Pact for Research and Innovation (NPRI) and the Industrial Policy Act of 30 June 2009.

### We have entered a new industry in which progressive integration and interrelation of industrial and service activities linked with production has occurred.

The Industrial Policy Act intends firstly to reach necessary recognition of the indispensable key role of our industry for our economy. It shows the importance we give to industrial policy, the more so in times of crisis like now. With this law, Catalonia spearheads industrial policy and states its firm will of relaunching industrial activity in order to become the driver of the Catalan economy. With the Industrial Policy Act, we align with the European industrial policy, expressed particularly in the Lisbon Strategy passed in 2000 and its later reviews, placing the emphasis on improving productivity and competitiveness. It also acknowledges producer services at companies as a part of the industry.

Thus Catalonia has the legal framework to act on the three ground pillars required by industrial policy to have it become the main driver of the Catalan economy, as has been mentioned before:

- An industrial strategy materialised in the Industrial Policy Plan, which will be the ground pillar of the governmental strategy to make progress in the transformation of the Catalan industrial model.

- Participation of social and economic stakeholders by means of the creation of the Industrial Policy Council of Catalonia in defining industrial policy goals.

### With the Industrial Policy Act, Catalonia spearheads industrial policy and states its firm will of relaunching industrial activity in order to become the driver of the Catalan economy.

- Creation of instruments to implement this industrial policy, mainly the ACCIÓ agency following the merger of the Centre d'Innovació i Desenvolupament Empresarial (CIDEM) and the Consorci de Promoció Comercial de Catalunya (COPCA), especially regarding innovation and internationalisation,

as well as **AVANÇSA** (Empresa de Promoció i Localització Industrial de Catalunya, SA) to assist in the capitalisation of companies in strategic industries for the country.

## From the traditional to the new industry

Like the rest of the world, Catalonia is facing long-term global challenges affecting its economy and the conditions and the way of competing. Globalisation and its economic and social consequences, rapid and deep technological change, the shift in the production structure and consumption habits, the big growth of the elder population, climate change, etc. are the main changes we will need to tackle. Also, we are amidst a deep economic crisis with different sides, doubtless the most important since the 1930s.

This global change, having its local counterpart, raises a new competition framework with a deep shift in business models. Firstly, we have a global competition scenario in both the most advanced and the more traditional companies and industries. Secondly, new players controlling all phases in the value chain are becoming increasingly

important, from product conception and design to distribution. Thirdly, immaterial or intangible capital is becoming increasingly relevant, e.g. brands, distribution channels, R&D, etc. To finish, the borderline between manufacturing industries and producer services tend to disappear and their interrelation and interdependence are growing.

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The traditional manufacturing industry appeared and developed out of the Industrial Revolution, initially in England and some other European countries, from the 17th and 18th century. The industry became increasingly relevant in the economy compared to agriculture, which also became industrialised.

The emergence and growth of the industry was intricately related with scientific discoveries, their technological application and continuous innovation at companies. As Joseph Schumpeter explained, creative destruction going along with innovating processes played a crucial role in industrial development

and economic growth. Also, entrepreneurial capacity and business spirit have been other key items in creating wealth for nations.

As Nicholas Kaldor and other post-Keynesians pointed out, the industry can be considered the driver of growth in present-day economies. In fact, the industry used to be and still is the sector able to create most wealth and be most productive, that is, creating most goods and services per productive factor unit used, the ablest in creating relatively stable jobs, having a multiplying effect and dragging along the economy.

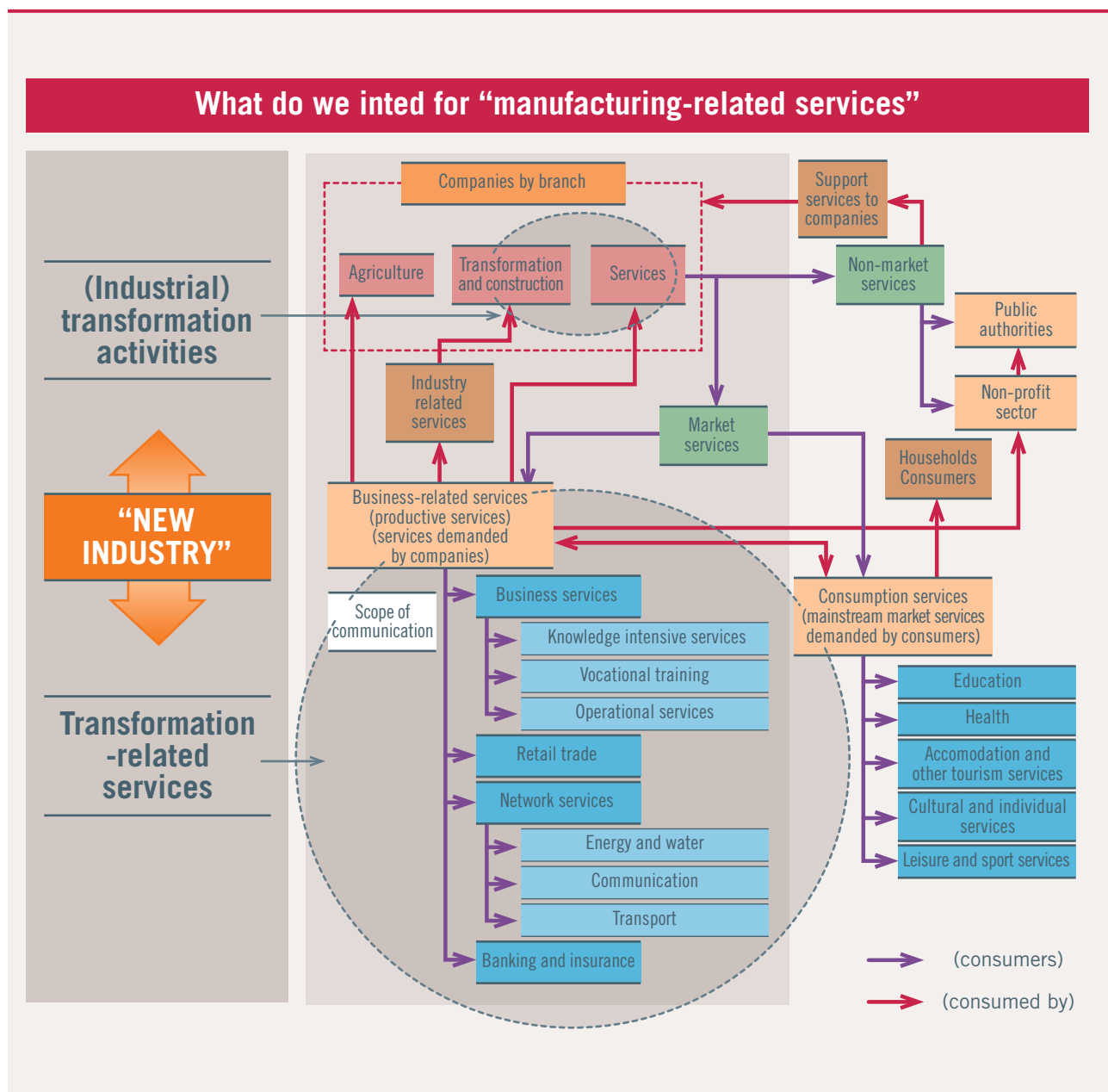
However, deindustrialisation of the most developed economies and a progressive yet accelerated move to a service society and economy began to be an issue in the 1970s. From a statistic point of view, it is true that from that point in history, services became increasingly relevant in developed countries, while the industry went into the opposite direction. Yet statistics usually go behind reality. What was actually occurring was progressive outsourcing of given activities from the industry to services to create so-called producer services industries. These services keep a deep interrelation and progressive integration with the manufacturing

industry (either traditional or not), so both need each other and become indispensable for modern economies to be able to work properly.

This means the emergence of the new industry as the whole consisting of the manufacturing industry and **producer services** or **business-related services**.

This is how the European Commission stated it in its communication *The competitiveness of business-related services and their contribution to the performance of*

**Graph 1. Economic transformation and redefinition of the industry**



Source: Commission from the European Communities. Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions. The competitiveness of business-related services and their contribution to the performance of European enterprises. COM (2003), 747 final. EC. Brussels.

European enterprises (COM, 2003, 747 final of 4 December 2003): a new industry in which service activities more related with information, knowledge, talent, creativity and innovation play a very relevant role.

## The new industry is the whole consisting of the manufacturing industry and producer services or business-related services.

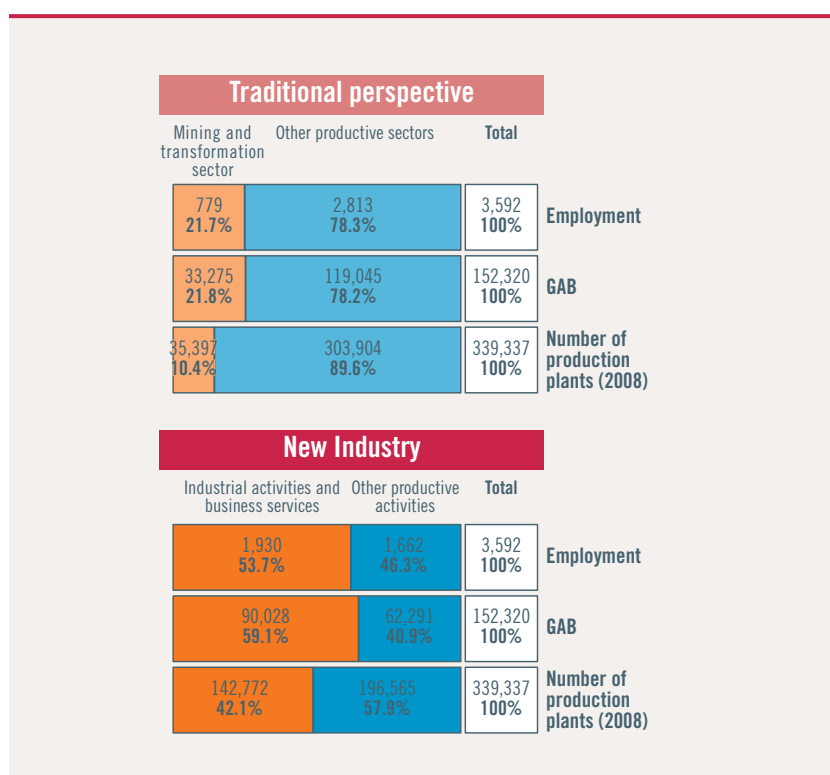
The new industry has become the main driver of growth in both developed and developing economies, as the industry was at its time.

However, the traditional manufacturing industry still plays a relatively relevant role in the most developed countries. Its average relevance in the main OECD economies was 22.6% in 2005. Catalonia takes the sixth position with 23.3% (above average), being among relevant countries like Germany and Sweden.

The new industry is currently the heart and soul of Catalonia's productive fabric. It is the main source of job creation and added value and the economic driver regarding business and job creation. Thus, whereas the traditional

## Graph 2. The industry from a traditional statistic perspective and according to the new vision of integrated systems. Catalonia 2005

Employment in thousands. GAV in million euros and number of companies and employees (absolute value and % of total)



Source: Baró, E.; Vilafañà, C. La nova indústria: el sector central de l'economia catalana. Collection «Papers d'economia», 26. Barcelona: Observatori de Prospectiva industrial (DIUE), 2009.

manufacturing industry amounted to 21.7% of employment, 21.8% of gross added value and 11% of companies in 2005, the new industry made up for 53.7% of employment, 59.1% of gross added value and 42.1% of companies in 2007. Regarding the creation of new companies and thus new jobs, the growth of the new industry in the 2000-2007 period was based on the most knowledge-intensive activities (engineering, consulting, etc.), operative

and management business activities (cleaning, security, etc.) –at a 58% growth rate in both sorts of activity– and distribution and logistics business activities at 22% growth.

In Catalonia, the new industry is quite more relevant than in the whole of Spain and any other Spanish region, including the Basque Country, where traditional manufacturing is even more relevant than in Catalonia.

**In the new industry, service activities more related with information, knowledge, talent, creativity and innovation play a very relevant role.**

Today there is a new transforming, diversified, slim and flexible industry, but we need to make it more intensive in knowledge, talent and creativity. The new industry is mostly made of small and medium-sized enterprises (SMEs) and structured in local production systems, though it needs to be more capable of cooperating by means of strategic partnerships and the consolidation of excellence clusters at European level. Our new industry is very internationalised, but we do not have global companies and we need to have Catalan multinationals being European and global leaders in their branch. We have a new industry with a good technological level compared with Spain but poor by global standards, and there we need to be technologically competitive. The Catalan new industry is too concentrated on the Barcelona area and needs to be rebalanced across the territory.

As professor Jordi Nadal summarised it very well, Catalonia became the

factory of Spain with the Industrial Revolution. With change taken place in the current production fabric, we must now intend to have Catalonia become the hub of the new industry in Southern Europe and the Mediterranean.

However, we are in a very deep global crisis that started as a financial liquidity crisis before becoming a global financial solvency crisis that in some places like Catalonia was replicated with a big real estate bubble. The financial and real estate crisis turned out to hit the real economy very hard, and very especially the industry and the new industry. In the case of Catalonia, an economy with relatively low productivity unable to use competitive devaluation strategies as it used to do, adjustment occurs by means of a strong reduction in activity, especially industrial, and a high increase of unemployment.

**We must intend to have Catalonia become the hub of the new industry in Southern Europe and the Mediterranean.**

All indicators available right now –industrial climate indicator, industrial gross added value, industrial production index, industrial investment, industrial

exports and imports, industrial employment measured by the active population enquiry, registered unemployment and employed according to the Social Security– are negative or even very negative, and this has been lasting for too many months, although there are some first indications that the bottom of the industrial cycle may have been reached.

## **Industrial policy in times of the new industry**

We have to assume that there is no commonly accepted definition of what industrial policy is. However, much literature has been published, especially in recent years, related to a set of areas linked with industry like innovation, technical progress, entrepreneurship, economic growth, etc.

The dominating economic theory justifies industrial policy action, like in the rest of public policies, with the existence of certain malfunctions in markets. From this point of view, industrial policy is justified as existing externalities in R&D or in knowledge creation need to be addressed. In a market situation of imperfect competition, other actions in industrial policy



are justified –despite being also heavily challenged– out of the need of giving support to strategic companies or start-ups in a given country.

### **The dominating economic theory justifies industrial policy action with the existence of certain malfunctions in markets.**

Joseph Schumpeter and his followers think that economic growth is based on the imbalance arising from creative destruction of innovation. Structural change and growth are the result of new technologies and innovations opening doors to new investment opportunities, new companies and new industries. Knowledge, especially that based on experience and learning by doing, and highly skilled and specialised human capital are also critical for wealth and growth creation. In this case, companies need to be the key actors out of their intrinsic capacities and the existence of a strategic plan. Hence industrial policies need to address innovation, technological progress, knowledge and human capital, but very especially developing and strengthening institutions that are to allow profitability of

companies, wealth creation and economic growth. In this respect, clusters are increasingly considered to be determining in competitiveness of the industry and the positive results of innovation.

While industrial policy has been crucial in some countries based on the view of the industry or the new industry as a driver of growth, others have rather followed deindustrialisation or transition to a service society, with industrial policy being non-existent or playing a very secondary role. Germany, France, the Scandinavian countries, Japan and the Asian tigers, the most advanced US states and the Basque Country, to quote a closer case, are examples of the former. However, Spain, together with many less developed countries, as well as Catalonia for a long time in the past, are examples of countries in which industrial policy has been secondary at best.

According to the vision of the basic importance of the new industry as a growth driver and the aspiration to have Catalonia become the hub of the new industry in Southern Europe and the Mediterranean, I think that industrial policy is a key element in economic policy today.

For the medium and long term, we are talking of an

industrial policy able to create the most adequate environment for companies, which are to play the main part, be able to develop all their potentialities and create wealth in the most productive and competitive setting possible. We are talking of positive, proactive industrial policy in which public authorities act as facilitators, supporting and coaching companies requiring it. Hence it is the exact opposite of any sort of interventionist policy.

### **Spain, as well as Catalonia was for a long time in the past, are examples of countries in which industrial policy has been secondary at best.**

Industrial policy needs to be characterised by being:

- ▶ Non-interventionist: it needs to be supportive, facilitate activity and coach companies in their adaptation to change of the industrial model (economic transformation).
- ▶ Selective: as long as industrial policy resources are scarce, they need to be concentrated on few projects with dragging capacity.
- ▶ Aligned: with EU and Spanish industrial policies.



Also, it has to prevent concentrating solely on technologically most advanced activities and consider the needs of a wide range of companies, industries and clusters, especially in a country with a highly diversified industrial structure as is Catalonia.

**Industrial policy has to prevent concentrating solely on technologically most advanced activities and consider the needs of a wide range of companies.**

The goal is thus to establish a strategy to make progress in transforming the Catalan industrial model according to change occurring at international level in order to allow Catalonia to continue being a country in which the industry, the new industry plays an utmost relevant role.

It is a strategy that needs to be settled in an industrial policy plan, as provided by the Industrial Policy Act recently passed by the Parliament of Catalonia (2009-2013 Industrial Policy Plan), which shall set some quantitative goals and their respective action and measures to meet them.

The quantitative goals for the next five years should be the following:

- ▶ Keeping (or increasing) the relevance of the new industry based on what Catalonia already has (54% of employment and 60% of GAV).
- ▶ Increasing productivity considerably to be above the EU-15 average.
- ▶ Increasing R&D&I expenditure till it reaches the level established in the NPRI, i.e. 2.45% of GDP in 2013.
- ▶ Multiplying by 2.5 the number of European patents per million inhabitants.
- ▶ Continuing the process of opening abroad with an increase of the share in global exports and the relevance of Catalan multinationals abroad.

The strategic lines of the new industrial policy, which shall allow to meet the above mentioned targets based on the principles and goals pointed out, are defined by the six following points:

- ▶ Fostering talent, creativity and knowledge, i.e. a good educational and vocational training system, a good innovation and research system, a good system to attract talent, a good system of cooperation and interrelation between companies, universities and public and private R&D infrastructures.

- ▶ Fostering internationalisation with a larger opening abroad and encouraging own multinationals.

- ▶ Stimulation of entrepreneurship and an optimal business size to be competitive, which means measures of entrepreneurial enhancement, strategic capitalisation and search of appropriate financing for companies, especially new ones.

**Consequently, the most urgent in the short term are measures to stimulate demand and facilitate credit needed for financing companies and consumers.**

- ▶ Progress in cooperation and strategic partnerships between companies in innovation and technological progress, international and strategic capitalisation in order to become financially stronger. Simultaneously, development of excellence clusters at European and global level shall be fostered.
- ▶ Administrative simplification at all those levels allowing companies to become more competitive and productive, especially in tax, labour, environmental, urban planning and municipal matters.

► Improving logistics and infrastructure affecting companies regarding land for business activity, transport, energy, environmental infrastructure, etc.

However, considering the very deep global crisis we are experiencing, companies, particularly industrial ones, have more urgent problems in the short term. This does not mean that it is not necessary to do all we have said in thinking of the medium and long term, specifically from the moment the crisis is left behind. It definitely is absolutely indispensable to start working on that and take appropriate measures right now to turn the crisis into an opportunity of being more productive and competitive in the future. However, different things need to be done now to solve the most urgent problems.

Right now, companies are confronted with two big problems: lack of demand as a consequence of generalised mistrust of consumers and companies and lack of financing for investment and the daily business due to the overall solvency crisis of the finance system. Consequently, the most urgent in the short term are measures to stimulate demand and facilitate credit needed for financing companies and consumers.

### Some final thoughts: industrial policy and innovation

Catalonia has been, is and has to continue being an industrial country. In Catalonia, the traditional manufacturing industry still plays a relevant role, as in the most developed OECD countries. If we consider the new industry, that is, the whole of the traditional manufacturing industry plus producer services, it amounts to almost 60% of employment and GDP and more than 40% of companies. Without any doubt it is the heart and soul of the Catalan production fabric. At a given point in history, Catalonia was the factory of Spain, in words of professor Jordi Nadal. Now, to have a productive and competitive country able to grow, create wealth and improve the living standard of its citizens, the goal has to be to turn Catalonia into the factory of the new industry of Southern Europe and the Western Mediterranean.

The Catalan industry, the Catalan new industry is transforming, diversified, slim and flexible. It is made of a dense fabric of small and medium-sized companies that are often organised in local production systems. It is an increasingly internationalised industry open abroad.

### There is a lack of Catalan global and multinational companies being leaders in their markets.

However, the new Catalan industry needs to be more intensive in knowledge, talent, creativity and technology. Also, progress needs to be made in cooperation and strategic partnerships between companies and excellence clusters at European level. There is a lack of Catalan global and multinational companies being leaders in their markets. In some industries, there is also a lack of big dragging companies and a sufficient critical mass of medium-sized companies providing the Catalan production system with solidity, as occurs in the most developed countries and regions in Europe and the world. We need to increase productivity of our productive industries and our economy as well as the technology level compared to Europe and the rest of the world.

Industrial policy is essential for appropriate and sustainable development of the new industry in Catalonia and elsewhere. It needs to allow to set out the most adequate strategy to make progress in transforming our industrial model. This policy needs to be non-



▲ One of the main strategic lines of the new industrial policy needs to be fostering cooperation and strategic partnerships between companies and excellence clusters at European and global level.

interventionist, selective, oriented towards and aligned with the EU Lisbon Strategy. Industrial policy needs to create the most favourable setting possible for economic productivity, it needs to be positive, proactive and facilitate business activity. It needs to allow to keep or increase the relevance of the new industry and its productivity, devote more resources to R&D&I and continue the opening abroad process. Nevertheless, it cannot focus exclusively on the technologically most advanced activities but it

has to consider the needs of a wide range of companies, industries and clusters at all technology levels. The most important action lines of the industrial policy need to be innovation, shaping and attraction of talent and human capital; internationalisation of and fostering own multinationals; stimulation of entrepreneurship; strategic capitalisation action by companies; fostering cooperation and strategic partnerships between companies and excellence clusters at European and global level; and improve-

ment of the logistic and infrastructure setting and bureaucratic simplification.

Innovation is a key matter for adequate sustainable development of the Catalan industry. However, the new industry is a necessary condition for innovation, development and, at least to a large extent, basic research. Without the new industry there will hardly be innovation, development or a relevant part of basic research. We therefore need to keep and develop our new industry while doing research and innovation. They

are two sides of the same coin. An adequate industrial policy with a clear strategy and convenient participation and execution tools is thus also indispensable for an innovation and research policy and a technology policy allowing us to move towards a new production model that is

more efficient, more effective, more competitive and also more equitable. Industrial policy and innovation and technology policy are also interdependent, but the former is wider than the latter. Without the right industrial policy there will hardly be any convenient innovation and technology policy.

**Industrial policy needs to create the most favourable setting possible for business productivity, it needs to be positive, proactive and facilitate business activity.**

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