

# WHITE PAPER

A new industrial policy  
For  
Flanders

Government of Flanders



Flanders  
In Action  
Pact 2020



## 2.4.2. Industrial innovation policy – transformation through innovation

- **A 7 – Sustainable chemistry**

The recommendations of IG Sustainable Chemistry are carried out according to the basic structure as stated under A1.

- **A 8 – Automotive**

The recommendations of the IG Automotive and the findings of the testing ground “electric vehicles” are included in the extension of the competency pool Flanders’ Drive. It will also be examined here as to whether wider strategic coordination with other approaches for the manufacturing industry is appropriate and then with particular regard to the Factory of the Future part.

- **A 9 – Identification of opportunities and challenges and further development and opinion from specific approaches via the IG**

The Department of Economy, Science and Innovation (EWI) follows up the further identification of opportunities and challenges in cooperation with the IWT. There are also the round tables for which coordination between innovation policy, transformation policy and complementary economic policy takes place best on a strategic level. It is therefore also appropriate that the further processing of integrated innovation strategies is advised by an IG consisting of innovation leaders and experts. The following initiatives are envisaged regarding the building sector, the food and agribusiness.

- **A 10 – Link with other innovation hubs**

Possible synergy with other innovation hubs (see concept paper Innovation Centre Flanders) is determined and used.

It is therefore appropriate to have coordination between action lines of the NIP and circular economy, sustainable material management and Cleantech within eco-innovation but also regarding the export possibilities for the Flemish environmental sectors.

The master plan **Green Economy** envisaged in the coalition agreement will be integrated and fast-tracked into the NIP by undertaking a series of concrete projects and investments that build a bridge between industry and economic policy and sustainable material management and energy management. For this, an IG Eco-innovation was contracted in order to advise on an integrated approach for this.

The innovation hubs Green Energy and Green Mobility and Logistics are mainly of importance for sustainability of industry but at the same time they of course offer themselves directly industrial opportunities. The ambitious attainment targets regarding the implementation of renewable energy can thus also offer new industrial opportunities (as well as the ecological and social added value that are delivered). Flanders can use the demand for renewable energy as a basis for stimulating the development from its own industrial sector in renewable energy that can also take its place internationally at the top.

The findings of the testing ground “electric vehicles” will also be considered.

Medical technology and e-health are of course possibilities under the innovation hub Care. And the innovation hub Social Innovation has at least a double relevance for the NIP.

First, there is the interaction with the FF and the new business organization whereby Flanders’ Synergy can play a leading role (see A18).

The transforming economy goes hand-in-hand with the changing society. Challenges such as ageing and early departure, shortage of technical/technological professions on the labour market and the need to deal with new entrants lead to the thinking/rethinking of adjustments to the working organization and otherwise using of talents and competencies. Elements such as workplace learning and workplace innovation are certainly factors whereby Flanders’ Synergy among others can play a role in the latter.



Finally, wider social innovation is playing an increasingly crucial role for the (business) economic success of innovation. It is often not only a pioneer of new economic activities (e.g., recycling shops, open source-based services and applications, microcredit, car sharing...) but just as often supporting for the acceptance and implementation of technological innovation (such as e-health). This insight into the power and importance of social innovation for a knowledge intensive and innovative economy is also at the base of the EU initiative for social innovation and is emphasized in the final report from the IG "Social Innovation"<sup>8</sup>: Advisory letter 156 from the Flemish Council for Science and Innovation (VRWI) however indicates the strong interaction between technological/ economic innovation and social innovation and the opportunity for transposing good practices of social innovation to other economic sectors. It is therefore also pressing for the strong involvement of business.

- **A 11 – Link with Strategic Research Centres (SRCs)**

The Strategic Research Centres (IMEC, VIB, IBBT and VITO) have a special accountability in the transformation process of our industry due to their active contribution to their specific domains. They will therefore also be heavily involved in the strategic industrial research policy. The Minister for Scientific Policy and Innovation ensures that their involvement is laid down in their respective management agreements.

- **A 12 – Collection of information as the basis for the long-term vision**

There is a strategic analysis capacity necessary for supporting the innovation groups and the round tables in identifying opportunities and strategic challenges. This is completed by a Policy Research Centre.

- **A 13 – Norms, standards and regulations as leverage**

EWI (Departement for Economy, Science and Innovation) is contracted to research how norms, standards and rules can be better applied in order to promote innovation and the desired transformation. It is also being examined whether an approach such as the Japanese *Top Runner Model*<sup>9</sup> of phased intertwining of norms based on the best performing applies in Flanders.

The applying of norms, standards and rules according to innovation is becoming a systematic point of interest for the IGs and the innovation strategy and the menu of support measures to be worked out and advised by them.

- **A 14 – Innovative tendering**

The instrument for innovative tendering will be pro-actively used as part of innovative and transformation strategies. For this, among others, the knowledge centre Innovative Procurement is being further extended and the administrations' attainment targets are formulated in order to reserve a certain percentage of their tenders for this attainment target.

- **A 15 – Economic support of lead plants**

A study of lead plants in Flanders<sup>10</sup> shows a significant interaction between innovation and production in the field of product development (pilot plant, test factory) or in the field of process development (developing and continuously improving processes whereby continual efforts are made to increase efficiency in the use of labour, materials, energy and capacity). This is clearly shown in the illustration above (see A6) which consequently the regional innovation system's embedding potential.

In order to reinforce the lead plants' portfolio, the lead plants will be examined to establish how they can be supported in their development via the IVT programme of clustered feasibility studies. It will also be examined how this can be functionally extended to lead companies, these being Flemish businesses that show the same characteristics as lead companies but form no part of a multinational.

- **A 16 – Eliminating obstacles in financing innovation**

Better coordination of and identifying the available financing and economic policy instruments of the Flemish Government (EOI), among others via optimal cooperation between the Partici-



pation Company Flanders (PMV), the Flemish Agency for Innovation by Science and Technology (IWT) and the innovation centres and coordination with the Enterprise Agency (Agentschap Ondernemen) is ensured.

- **A 17 – Support**

The Minister for Scientific Policy and Innovation is preparing a new innovation pact in which special attention is paid to coordination according to the NIP in line with determining the coalition agreement: "This is a positive coalition of government, knowledge and scientific institutions, higher education and industry for use in innovation, modernizing and specialization. Together with the focus on spearhead domains, we are thus achieving a scientific policy with social added value and aimed at sustainable job creation and the greener economy".

### 2.4.3. Competence development and work organization

- **A 18 – from job security to work or career security**

The labour market poses us great challenges among others due to the ever faster transformation of industries and production processes, the increasing number of shortage occupations and the ageing of the working population. Then there is the changing job structure and faster changing of the required competencies that satisfy the needs of businesses.

The attainment target of more people in work, in more workable jobs and on average, in longer careers is translated within the NIP by a new career vision. The attainment target is also working on more competitive businesses.

Against this background, it is important, due to the noted declining job security, that more emphasis be placed on the move from **job security to career security**. All players involved in the labour market must in this case make an effort.

This move is of crucial importance if we wish to achieve the following, among others:

- Creating a competitive and sustainable economy
- A higher employment rate
- Reinforcing people's sustainable employability
- Better harmonization between supply and demand

Transformation from industries and production processes also goes hand-in-hand with social innovation processes: the development of the knowledge-based economy indeed also requires at the workplace other (work) organization models and a large number of innovations are also socially or work related.

These developments also lead to new social innovation processes relating to organization modernization (for example, involvement, knowledge sharing, autonomy, etc.), modernization in corporate culture, regarding quality of work, etc... and respond to concrete problems whereby businesses in the working organization are confronted such as the necessary reconversion of employees, making this attractive in order to recruit new employees, keeping people in work longer due to adjustments to the work organization and getting rid of absenteeism ...

Within the framework of the NIP, we wish to work out an offer for supervising social innovation in transforming sectors. As well as the employers' and employees' organizations, we carry out, among others, a specific role for **Flanders' Synergy** and for *Captains of Industry* as motors of social innovations. The latter can also act as mentors for innovation processes in other businesses.

- **A 19** – Consideration for long-term modernization processes from the school career to study choices for technical professions
- **A 20** – A mobilizing project for industrial talent from the policy regarding science communication to young persons



## 6. INDUSTRIAL INNOVATION POLICY – TRANSFORMATION THROUGH INNOVATION

The Government of Flanders wants to support Flemish industry directly in an accelerated transformation process where the Flemish economy's DNA will be thoroughly renewed. This process of change must make Flanders stronger: economically performing and innovative, ecological and sustainable, warm, solidary and open to the international society.

The economic structure and the welfare creation must be sustainable. In a strongly globalized economy, subject to extreme competitive pressures, this implies a dynamic, open economy strongly focused on innovation. This means at the same time that the economy is ecologically and socially sustainable.

This determines the orientation and the policy priorities of the industrial innovation policy that fundamentally contributes to the desired transformation and reinforcing of industry in four ways:

### 6.1. Industrial innovation strategies

The traditional policy did not always have the desired impact because the innovation conduct and innovation pathway can differ significantly depending on industry or economic activity. This policy must be optimized and especially complemented by a focused innovation policy that dares to make choices, brings focus, puts emphasis and contains specific measures in line with the targeted objective.

The Flemish Council for Science and Innovation (VRWI) already made considerable progress in this sense by pointing out spearheads. These spearheads and the implied orientation of the innovation policy were then included in the coalition agreement.

In order to realize this ambition, focused innovation strategies are formulated for the spearhead clusters with a clear, coordinating attainment target, namely to reinforce the embedding of industrial activity with sustainable and diversified employment in Flanders by encouraging innovation.

The test criteria for these focused innovation strategies are:

- Innovation as a lever for sustainable, diversified employment
- Economic and societal importance
- Fitting and or linking with the spearhead clusters mentioned in the coalition agreement.

### 6.2. Increasing innovative power

Translating innovation initiatives into economic valorization remains an important point of attention. This requires attention for various "push factors" for innovation, which ensure that an idea, an invention finds its way through innovative entrepreneurship to valorization on the market or valuable application in society.

The policy aims to develop actions concerning:

- **Increased valorization:** reinforcing and accelerating the valorization route
- **Network mediation, cluster formation and other ways of facilitating**

Innovation dynamics require the necessary networking and cooperation between the stakeholders (knowledge institutions, companies, Government). The proper organization structures, new



forms of organization and business models present themselves and must facilitate interaction with new application sectors and make these possible as a basis for innovative development of products, processes and services. Focused cluster strategies (see below) are developed for this and further optimization of the working of the innovation centres is encouraged.

- **Innovating entrepreneurship**, through among other things:

- *Attention for the wider innovation process: bringing innovation and non-technological innovation to the market*

In the innovation cycle with sufficient consideration for the market orientation of the innovation, which is why it is important that the supported innovation route is made wider and longer so as to include these crucial success factors in the support strategy.

- *An improved absorption capacity for the management of our companies*

The absorption capacity of (small) businesses regarding innovation is also of crucial importance. After all, entrepreneurs and managers must be able to record, process and use relevant innovation opportunities in order to market innovation. By structurally embedding this innovation perspective, company organizations can reinforce themselves in this area. One way of achieving that is using social innovation. The way the work is organized certainly makes a major difference and can assure that technological innovation has more chances to be successful.

- *A performance innovation set of instruments for SMEs*

It is important that the set of instruments for innovations can be quickly accessed by SMEs as much innovative entrepreneurship plays out within SMEs.

- **Removing obstacles when financing innovative entrepreneurship**

Financing innovation isn't always easy. The Government designed different instruments for this in order to support and to facilitate the financing process. The Government's economic instruments became a support function for innovation.

The Government of Flanders now wants to go a step further by setting up a special, directed investment instrument aimed at accelerating the innovation and valorization process (see below): the Transformation and Innovation Acceleration Fund, abbreviated: TINA fund.

Creating support for innovation with companies both with management and the employees

### 6.3. TINA Fund

The TINA Fund was established by the Government of Flanders at the end of December 2010 with initially € 200 million and placed within the Participation Company Flanders (PMV). The purpose of the fund is to reinforce and accelerate the marketing of innovations with strategic potential and so accelerate the transformation process of the economic structure. The fund makes capital investments in industrial projects by groups of companies.

The Government of Flanders has developed five criteria to verify whether projects have sufficient strategic potential that contributes to an accelerated process of change of the economic structure:

- Carried by a group of companies, to which are added investors, knowledge institutions, research and/or technology partners
- Focused on economic innovation with international market potential
- With impact on (the developing or innovation of) a value chain, which is why the innovation is sufficiently broad (regarding impact) or has a clear platform character
- Economic objectives validated and supported by the group in terms of focus, attainment targets, planning, budgeting and financing. The support is demonstrated by clear and sound com-



mitments of the individual members of the group and thus by participation in the risks.

- Clear transition strategy: economic valorization, further developing...

When investing through the TINA Fund, the point of departure is the spearhead clusters as included in the coalition agreement. We consider the focus to invest through TINA within these clusters as a first important specification of the above-mentioned criteria.

The innovation clusters or platforms are of course embedded in the scientific and technological strengths of Flanders. However, these scientific and technological strengths are necessary but are not sufficient as conditions to proceed to the selection of investment projects. Bearing in mind that this is about investments and therefore, with a view to economic profit, the proposed projects must have an explicit demand-driven character with a clear view of the so-called **Go-to-Market (GtM)**. In other words, this is about the opportunity to obtain an important global market share. The presence and identification of such a GtM can also be considered a **second specification of the criteria**. There can be no financing without this GtM. The GtM criterion must therefore clearly and directly map and list the economic effects of the proposed project.

In order to be able to meet the criterion of GtM, it is also essential that there is at least a large market party (*lead company*) that can and is ready to act as the project motivator. This means very concretely that the company concerned:

- Has the necessary international trade power to actually realize the GtM;
- Sees the investment project the financing of which is being proposed as an essential part of its own company strategy and therefore it is willing to also spend the necessary money and effort. This means that a calculated yield estimate must be available.
- Has the necessary technical capabilities to implement the renovation(s) concerned by itself and/or together with consortium partners (who can be either companies or knowledge institutions)
- The investment project has the potential to work as leverage by generating technological spillovers (learning spillovers).

Only if there is a motivator who meets all these requirements can a project that fits within the clusters and presents a clear GtM be selected. After all, without a motivator, the GtM will be hard to realize. Therefore, the presence of (at least) one **motivator or lead company** can be considered a **third specification**.

In addition, it would be interesting for Flanders if the proposed project also meant the investment concerned led to important **complementary assets** being created in Flanders ensuring that the envisaged innovations become long-term. This means that the proposed project not only creates the necessary cross-pollination (spillovers) but also that the project strengthens the coordination between the technology, knowledge and assets present in Flanders, which then will result in other complementary assets. These **complementary assets embed the innovations** because they explicitly link the developed and used knowledge to a differentiated, unique infrastructure basis. Linking unique knowledge to such complementary assets turns innovation into a unique competitive advantage for Flanders and is also a key element in creating **lead plants**.

#### 6.4. Flanders as an innovation-receptive top region

It is also important that Flanders be sufficiently receptive to industrial innovation. That is why we also want to work on a practical policy focusing on the so-called "pull factors" for innovation and ensure that Flanders increasingly becomes a "lead market" for industrial innovation, quickly connects with important innovation trends and has a strong basis in its society for innovation and industry.

We also have to make sure that Flanders will continuously have the human capital to realize innovation and that state-of-the-art research and innovation infrastructure are available. Research is being conducted as to how industry's availability and access to research and innovation infrastructure can be improved by forms of facility management and ways of cooperating and support by investment.



Both the light coordination structure and the R&D projects contribute to innovation that can be implemented further after the economic criteria have been fulfilled, as TINA projects. The integration of product and process innovation and their sustainability are central to this and are shaped in an FF.

- **A 2 – A suitable implementation strategy for the manufacturing industry**

Research is being carried out to see whether the same approach can be used for the manufacturing industry as for the raw material industry. It will be examined as to how the competency pool FMTC can contribute to a similar integrated strategy.

- **A 3 – Strategic research programme**

A strategic research programme in the fields of technology, design and business models that form the basis for the **“New Factory of the Future (FF)”** and with which Flanders takes part in European projects for *“Key Enabling Technologies”*.

The further identification of opportunities and challenges and the organizing of a wider learning process regarding the FF are followed up by EWI in cooperation with the IWT. This will be based on a Policy Research Centre.

This will also result among other things in the starting of demonstration projects, a “toolbox” for the FF, with instruments from various departments, training programmes, VIS projects, a programme for supervising spin-out projects and an international project in which renowned production sites in Flanders take part.

- **A 4 – Incentive programme for SMEs**

An incentive programme for SMEs via the IWT innovation centres ensures pro-active supervision of projects and guidance towards the suitable (combination of) instruments. It initially ensures the facilitation of the FF. Coordination between the Enterprise Agency and FIT is sought here.

A guidance programme for distributing good practices for “Factories for the Future” for SMEs aimed at certain clusters of activities ensures further support.

- **A 5 – Stimulating international networking**

Stimulating and facilitating **international networking and networks** with specific consideration for SMEs should enable the most renowned production sites in Flanders to learn, improve and be stimulated further to stay at the top. This takes place, among other things, by participating in development, demonstration, benchmarking, production in spearhead domains and ensures international marketing and recruiting.

- **A 6 – Economic support of lead plants**

Location factors such as market demand, production and transport costs exert considerable influence. One must however also have an eye for the business-economic decision-making context and the role of the decision centres in this. A lot of industrial activity in Flanders takes place within production departments belonging to international groups. The level of embedding of this activity is therefore also influenced by the decision-making with the international group and by the internal relative importance of the Flemish establishment. An inspiring concept for an industrial embedding policy that is based on the offered competitive advantage of the regional innovation system in a context of international establishments is that of the *lead plant*.

According to Kasra Ferdows who introduced the concept, a lead plant “draws strength from the presence of knowledge and skills, uses this knowledge to develop products and/or processes and transfers its innovations to the group’s other factories”.<sup>34</sup> The lead plant thus forms an important link in the business’s knowledge network, has a greater strategic value and will therefore have a more stable and secure future. The embedding of *lead plants* is therefore based on the intertwinement with the innovation system.

The concept is based on two dimensions that determine the strength of the position of a factory in an international business, i.e., [a] the decisive advantage of the factory’s location and [b] the level to