European Observatory for Clusters and Industrial Change

Policy Briefing –

Hauts-de-France

This policy briefing report was carried out for the European Commission by

Authors:
Emmanuel Muller (Strasbourg Conseil)
Jean-Alain Héraud (Strasbourg Conseil)
Andrea Zenker (Fraunhofer ISI)

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Selection as one of 10 regions in industrial transition

The customised advice on modern cluster policy in support of industrial modernisation provided to the 10 regions in industrial transition is funded by the Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW), as part of the European Observatory for Clusters and Industrial Change (EOCIC). The regions were selected as a result of an open call for expression of interest, published and assessed by the Commission services. The Commission launched a first call for expression of interest on 29 September 2017 and, as a result of demand from regions, a second call was launched on 14 December 2017.[1]

The following regions were selected[2]:

- Cantabria (Spain)
- Centre Val de Loire (France)
- East & North Finland
- **Hauts-de-France (France)**
- Lithuania
- North-Middle Sweden
- Piemonte (Italy)
- Saxony (Germany)
- Slovenia
- Wallonia (Belgium)

The aim of the work being provided by the EOCIC to 10 regions in industrial transition is to define a set of actions in the form of a comprehensive strategy to foster regional economic transformation, identify collaboration and funding opportunities and connect with other regions in regional and cluster partnerships.

This pilot will help test new approaches to industrial transition and provide the European Commission with evidence to strengthen post-2020 policies and programmes.

The output of the first phase of the EOCIC advisory services was an assessment report, which summarises the key challenges of industrial modernisation for the region and the potential policy directions. The second phase of the EOCIC advisory services will build on this report to develop concrete policy proposals for each industrial transition region. DG GROW and the EOCIC are working closely with the Directorate-General for Regional and Urban Policy (DG REGIO) and the OECD to provide advice services for the pilot regions.

More information on the activities carried out by the EOCIC is available at the end of this report.

[1] Details on the selection procedure are available at: https://ec.europa.eu/regional_policy/en/policy/themes/industrial-transition/

[2] 12 regions were initially selected for the overall process of the project on pilot regions in industrial transition, of which 10 then engaged with the project through to the final stages of the work carried out by the EOCIC.

1. Introduction

1.1. Aims and objectives of the exercise

The aim of the work in Hauts-de-France is to **support the regional authorities and stakeholders in defining a strategy that facilitates the industrial transformation of the region.** The current report was conceived in close cooperation with the AMI expert[3] assigned to the region.

This document builds on the assessment report to summarise the regional challenges and barriers to, and drivers of industrial modernisation faced by Hauts-de-France. In a second step, the report displays an outline of a regional strategy supporting industrial transformation. In line with this strategy a set of specific policy actions are proposed leading to a roadmap.

To that end, this document includes the main challenges for the region through a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis and a PEST (Political, Economic, Socio-cultural and Technological) analysis. Both are described in Chapter 2. Based on these challenges, Chapter 3 provides a customised strategy designed to address the needs and challenges identified. Chapter 4 presents two specific recommendations for policy intervention. Their respective action plans are in Chapter 5The report is based on: i) desk research, ii) interviews, iii) a study visit in Lille (26 & 27 March 2018), iv) a policy review meeting (5 December 2018); and v) interactions with the AMI expert. The regional strategy was developed in interaction with the main regional stockholders, i.e. the Région Hauts-de-France and the regional innovation agency (HDFID).

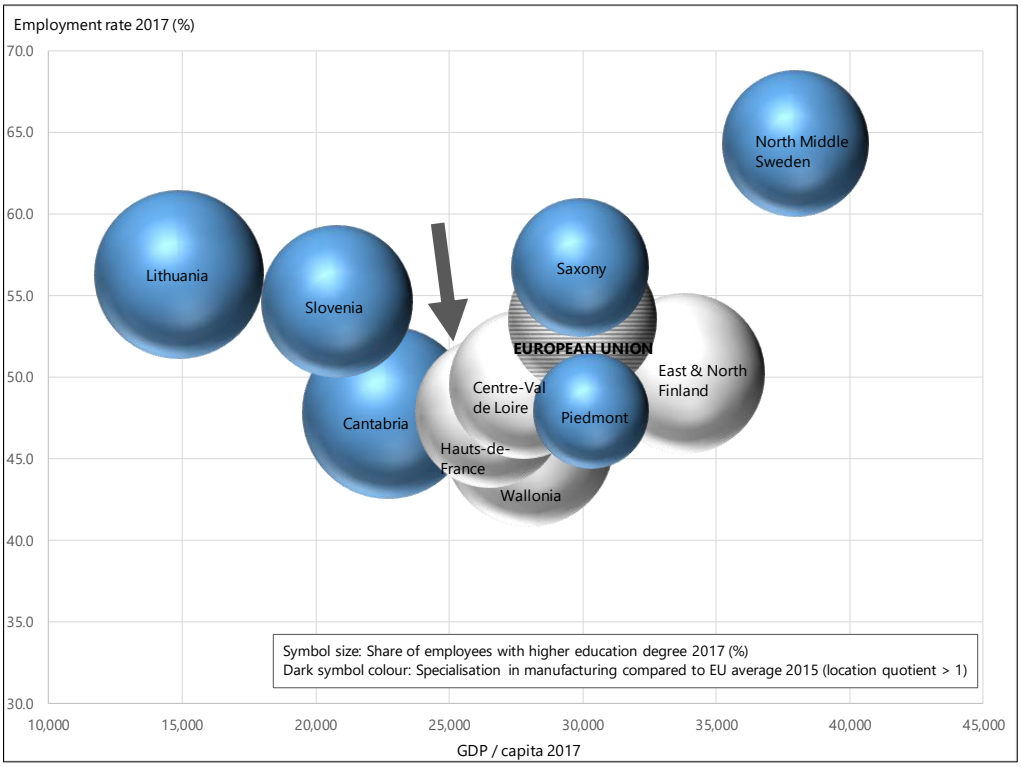
[3] External experts contracted by DG REGIO to provide support to the pilot regions in industrial transition

1.2. Key economic and innovation indicators for the pilot region

In 2017, Hauts-de-France had a gross domestic product (GDP) of EUR 26 500 per capita, which is below the EU level of EUR 30 000 and the national figure (EUR 34 300). Of the 10 pilot regions, the French pilot region Hauts-de-France ranks seventh after North Middle Sweden, East & North Finland, Piemonte, Saxony, Wallonia and Centre-Val de Loire.

Figure 1 combines selected economic indicators for the 10 pilot regions. It shows that both Hauts-de-France's GDP/capita and employment rates are below the EU level. With 34.9% of employees with a higher education degree, Hauts-de-France ranks rank among the pilot regions and has a slightly above-average level of highly educated employees compared to the EU average (34.4%), but a below-average figure compared to the national share (40.0%). Compared to the European Union, neither France nor Hauts-de-France are specialised in manufacturing.

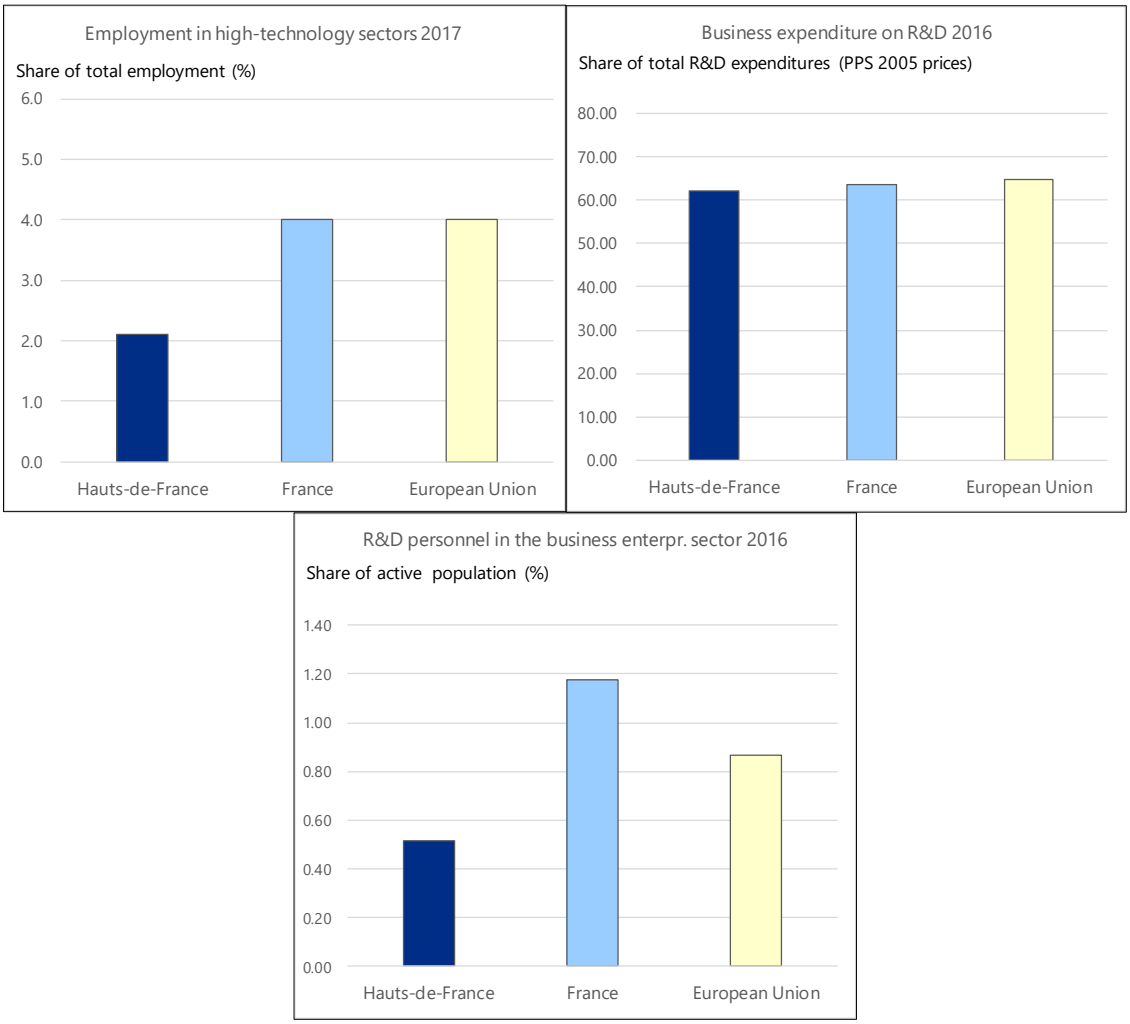
Figure 1: Selected economic data for the 10 pilot regions: GDP/ capita, Employment rate, Share of employees with higher education degree and Specialisation in manufacturing



Source: EOCIC, based on Eurostat data and own calculations

Hauts-de-France's share of employment in high-technology sectors (high-technology manufacturing and knowledge-intensive high-technology services) is below the European and the national averages. The business enterprise sector in Hauts-de-France spends only slightly lower shares of total business expenditure on research and development activities than enterprises in France and the European Union. However, the region's share of R&D personnel in the business sector is below the national and EU figures (figure 2).

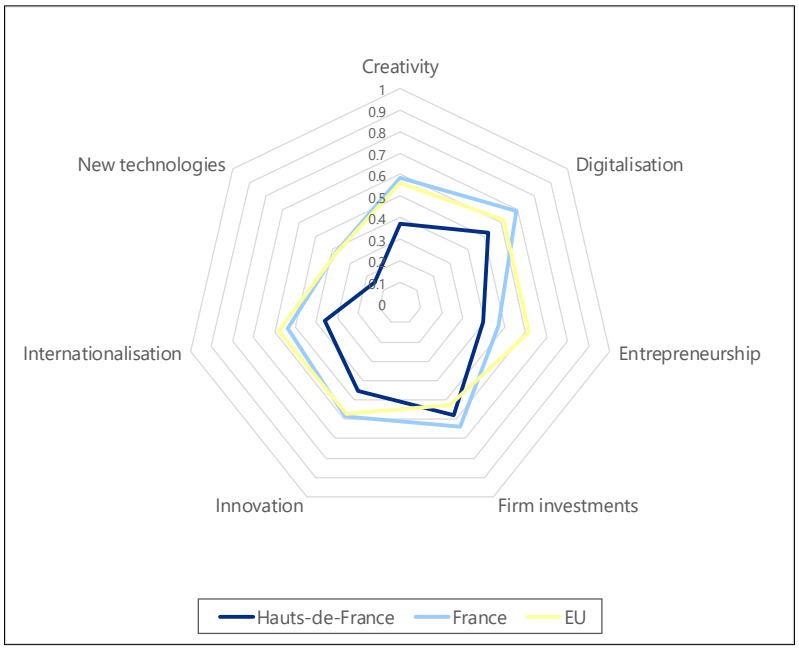
Figure 2: Selected technological indicators for Hauts-de-France



Source: EOCIC, based on Eurostat data and own calculations

In order to provide insights into industrial modernisation, the European Observatory for Clusters and Industrial Change (EOCIC) provides composite indicators on seven dimensions: Evolution towards a more innovative regional economy; New and emerging technologies; Digitalisation; Firm investments; Internationalisation; Creativity; and Entrepreneurship. Each dimension is represented by a set of specific indicators, which are condensed to a composite indicator. Figure 3 presents the results for those seven dimensions in Hauts-de-France. With the exception of the firm investments dimension, the pilot region scores below the national and the EU levels. Its highest scores are for firm investments and digitalisation, while the lowest score is for the new and emerging technologies dimension.

Figure 3: Composite indicators for Industrial Change: Hauts-de-France

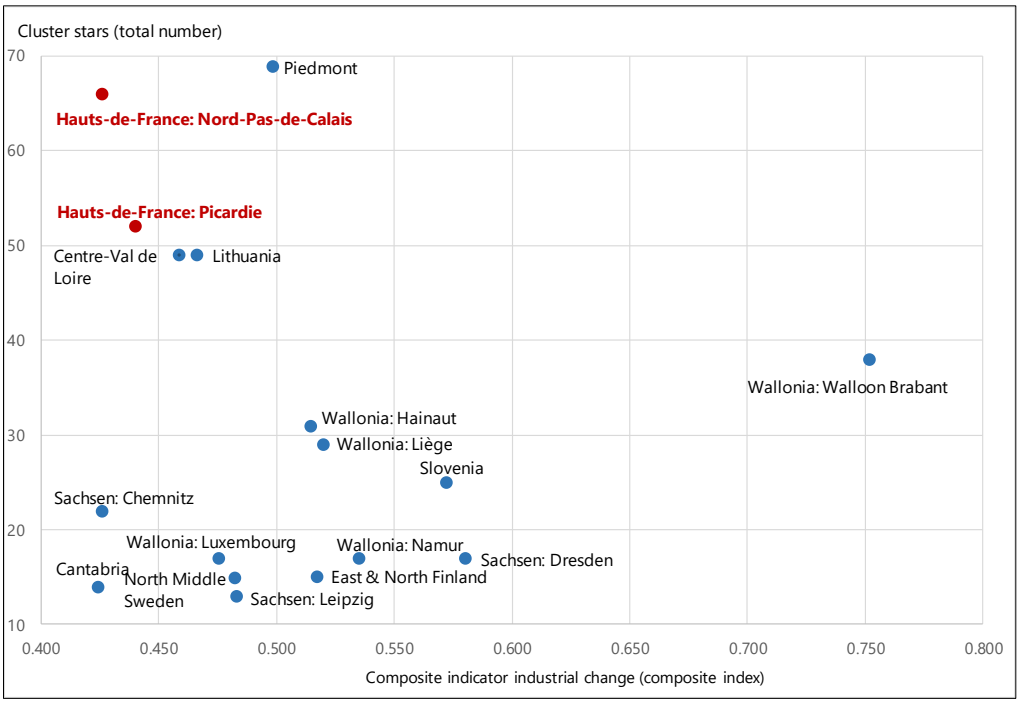


Source: EOCIC, based on various data sources and own calculations

Figure 4 shows the most recent total composite indices for industrial change and the total number of cluster stars in the pilot regions (NUTS 2 level). The composite indices show industrial change in a range between 0.4 and 0.8 between 10 and 70 in the 10 pilot regions, and the total number of cluster stars in a range between 10 and 70 in the 10 pilot regions. Five NUTS 2 regions have 45 or more cluster stars. Piemonte is the clear leader (69 stars). Picardie (52 stars) and Nord-Pas-de-Calais (66 stars) also belong to this group. However, neither NUTS2 region is among the leading regions on the composite indices for industrial modernisation. By contrast, various regions have 20 or fewer cluster stars – among them Cantabria (14 stars). Figure 4 also shows that the industrial change ranking is led by Walloon Brabant: on a scale of 0 to 1, this NUTS 2 region has a score of 0.751.

Mapping the pilot regions' industrial change and cluster stars reveals three different types of region: (1) high number of cluster stars, but moderate composite index of industrial change (below 0.5) Piemonte, Nord-Pas-de-Calais, Picardie, Centre-Val de Loire, Lithuania), (2) regions with moderate figures for both indicators (below 35 cluster stars and composite indices of industrial change below 0.6) (Hainaut, Liège, Slovenia, Dresden, Namur, East & North Finland, Leipzig, Luxembourg, North Middle Sweden, Cantabria, Chemnitz), and (3) Walloon Brabant (composite index of 0.75 and 40 cluster stars). In the second group, Hainaut, Liège and Slovenia stand out from the other regions due to the higher numbers of cluster stars. In part, this is also the case for Chemnitz, but it has a lower index for industrial change.

Figure 4: Composite indicator industrial change (total index) and cluster stars (total) for pilot regions



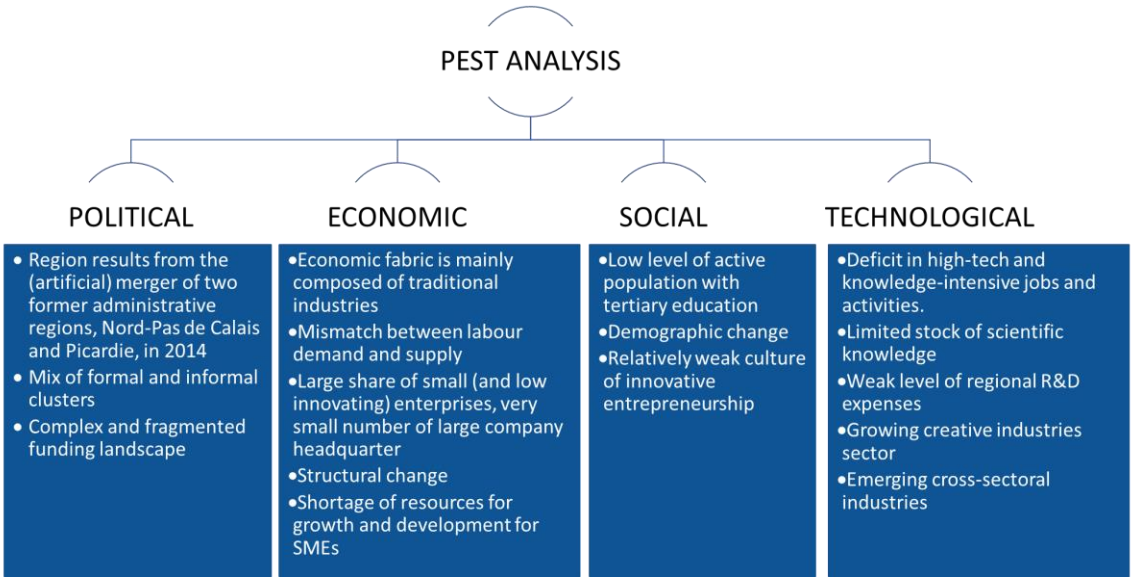
Source: EOCIC, based on various data sources and own calculations

2. Key challenges, barriers, and drivers of industrial modernisation in Hauts-de-France

This chapter summarises, in tabular form, the political, economic, socio-cultural and technological framework conditions in Hauts-de-France. In a second step, the regional key strengths, weaknesses, opportunities and threats are discussed. The assessment report as well as interactions with the AMI expert led to the findings presented here.

Table 1 details the political, economic, socio-cultural and technological (PEST) features, conditions and challenges for Hauts-de-France.

Table 1: The regional ecosystem and framework conditions in Hauts-de-France



Source: EOCIC

Table 2 details the strengths, weaknesses, opportunities and threats of industrial transition in Hauts-de-France.

Table 2: Strengths, weaknesses, opportunities and threats of industrial transition

Strengths	Opportunities
• High level of resilience (of companies which resisted the former deindustrialisation shocks). • A strategic foresight vision related to the "next industrial revolution". • A vision and a roadmap for the bioeconomy. • Geographic situation (lies at the heart of Europe's wealthiest pool of consumers). • Formalised clusters (*pôles de compétitivité*). • Resistance of textiles to deindustrialisation by innovating. • Car and rail construction sectors benefit fully from the economic recovery. • Long tradition of large retailer companies. • Sectoral diversity.	• Most global megatrends are seen as an opportunity to grow. • Strong potential for the development of academic, applied academic and sectoral research institutes. • Raising the level of competence of the workforce with less employable skills. • Providing more internal coherence to the innovation eco-system. • Recovering a territorial identity. • Located at one end of the Silk Road and coastal region.
Weaknesses	**Threats**
• Very heterogeneous region (due to the merger, no real regional system). • Remains marked by traditional activities such as metallurgy, and iron and steel, which are experiencing difficulties. • Low level of attractiveness and relatively poor image in the rest of the country. • High level of unemployment. • Poorest French mainland region in terms of GDP per capita. • Low level of active population with tertiary education. • Low share of population involved in life-long learning. • High level of students starting university and not finishing their course. • Sub-optimal funding landscape. • Existing research and innovation infrastructure not fully accessible to local industry (especially SMEs). • Small businesses lack networks and information.	• Increasing level of unemployment. • Insufficient level of private and public investment and innovation required for development of key opportunities in promising sectors • Increasing spatial discrepancies and centrifugal patterns: developing areas are located either in the northern border space around Lille, or in the deep South where Paris acts as a polariser. • Lack of attractiveness and image problem: younger well-educated people tend to leave the region at the end of their educational/training programme. • Brexit: breakdown of commercial exchanges and logistics issues.

Source: EOCIC

The SWOT and PEST analyses above led to the formulation of three main challenges that need to be addressed:

1. **Competence updating**: Raising the level of competence and regional mobility of the less employable segment of the workforce (1a); raising the level of firms' entrepreneurial capabilities (1b);
2. **Systemic coherence**: Providing more internal coherence to the innovation eco-system;
3. **Identity and common vision**: Recovering a territorial identity and growing together as a single region after the merger of Nord-Pas-de-Calais and Picardie.

The next chapter outlines a regional strategy to provide a starting point for addressing these three challenges. The discussions with the stakeholders led to the conclusion that the strategy to be developed should focus specifically on accelerating industrial transition through increased mobilisation of companies and a strengthening of human capital. The policy review meeting adopted in consequence the following title: "*Accélération de la transition industrielle en Hauts-de-France : mobilisation accrue des entreprises et renforcement du capital humain*". (Acceleration of industrial transformation in Hauts-de-France: mobilising companies and reinforcing human capital).

3. Proposed regional strategy to address the challenges

The policy review meeting associated cluster managers, representatives of cluster facilitation agencies and representatives of most local actors involved in the regional research and innovation ecosystem. It established that the common drivers behind the three challenges set out above are: i) the difficulty of mobilising companies to enable them to benefit from innovation-supporting policies; and ii) the need to strengthen the region's human capital in order to improve the innovation capacity of Hauts-de-France.

As a result, the aim of the regional strategy is to develop a proactive approach to mobilising and stimulating cluster-related potential. Three types of obstacle need to be addressed by the regional strategy: human capital, structural factors and governance.

First, a large proportion of 'fragile' (not just unskilled) workers characterises the local economy. Several generations of regional inhabitants were hired by traditional mass-production industries. De-industrialisation has left a situation of labour market mismatch in terms of professional skills as well as socio-cultural attitudes.

The issue, therefore, is not only re-training, but also a change in mentalities: rebuilding self-confidence and self-esteem which decades of poverty and unemployment have downgraded. The attitudes required for the new job opportunities (and not only in high tech) relate to mobility: geographical mobility within the region, professional mobility, cultural flexibility, etc.

Those in employment and their employers are also facing the challenge of structural change, since they have inherited an "engineering" culture at a time when more "product marketing" competences are required. When it comes to innovation, the region's problem is the difficult relationship between inventors and business people. This is probably one of the most striking difference between Hauts-de-France and the most innovative European regions, where even SMEs consider formal or informal R&D activities almost as an ordinary way of doing business.

Second, the issues around structural factors are linked to deindustrialisation in a broader sense. Old industry areas are characterised by the human resource problems mentioned above, but the post-war Fordist development model also influences agriculture in the southern part of the region (Picardie). This tradition was consistent with mass-production of agricultural commodities; it is not the ideal context for developing the agriculture of the future.

In most areas in the region, the main structural obstacle relates to the size of the companies. There are many very small enterprises; the large production units generally belong to multinational groups, not local market economy; the missing category is the medium-sized independent enterprise. Furthermore, SME managers lack ambition. Because of the shock of past de-industrialisation waves, the territory is still relatively poor in spontaneous clusters. Present cluster policy is trying to remedy the situation, but the result is still partial, in particular because of a concentration around the regional capital.

Third, there are governance problems at various levels. There is no self-evident regional "ecosystem". The issues are too many structures – whose respective roles are not easily understandable by potential users; fragmentation of public support; lack of interaction between institutional actors. Uniting common interests in a single value chain seems difficult to achieve. In symbolic terms, territorial identity has still to be built. The old industrial/agricultural identities have been challenged, but the new common

representations of identity have not yet been designed. The official cluster organisations reflect this syndrome: the clusters work locally, but still need coordination one with another. Furthermore, they are too strongly concentrated geographically. It is probably necessary to organise at least some of them as networks extending outside their current perimeter in order to benefit the whole region.

The table below maps these elements against the three challenges identified in the previous chapter.

Table 3: Overview of the regional industrial modernisation strategy for Hauts-de-France

Problems
• Obstacles related to human capital: unskilled workers lacking confidence and self-esteem. • Obstacles related to structural factors: not enough firms of intermediary size and entrepreneurial spirit. • Obstacles related to governance (public-private): relatively unrelated clusters, too concentrated in some (metropolitan) areas.
Key problem driver
• Low level of mobilisation of companies and human capital: how could more companies be enrolled in innovative programmes and people be motivated to accept necessary changes (at sectoral as well as geographic levels)?
Objectives
• Developing a proactive approach that brings together clusters and mobilises human capital through cluster-supporting activities.
Input/activities
• Federating and extending the existing clusters: the clusters were originally designed as dedicated to specific limited perimeters; the idea was natural in a sense, but it appears now that some of them could and should be extended to activities outside the original perimeters, in order to achieve better coverage of the whole region. • Adapting clusters to the human resources landscape: existing clusters focus on a few relatively developed areas and types of firm; they are not significantly different from analogous clusters in more dynamic regions. The issue now is to address the weaker segments of the regional economy to a greater extent.
Results/outputs
• Better access to innovation and business-oriented resources in all parts of the territory. • Higher level of active population with tertiary education. • Better attractiveness for young professionals (which means retaining the smarter local people probably more than attracting external talents). • Developing life-long learning for the more unskilled and 'fragile' workers.

To sum up, what the region needs is a thorough cultural transition addressing the human capital as well as the private governance structure. One way for cluster policy to help improve the situation is to network the existing clusters in two ways: better coordination of the clusters as they are, and extension of their perimeter of action.

To a certain extent, the existing clusters reflect local opportunities without responding to the region's broader issues. They are fully relevant in tapping into specific science and technology resources, but many parts of the region are left out.

Another issue is benefiting better from international opportunities linked to the region's border situation. There is an opportunity to develop cross-border clusters. Such developments can certainly be considered with neighboring Flanders and Wallonia. The economic relationships with Britain are possibly endangered in the present context of Brexit. Developing stronger partnerships with the Benelux area could be a counterweight to the negative impact of the new situation with the UK.

4. Specific recommendations for policy intervention

4.1. Federating and extending the existing clusters

4.1.1. Description

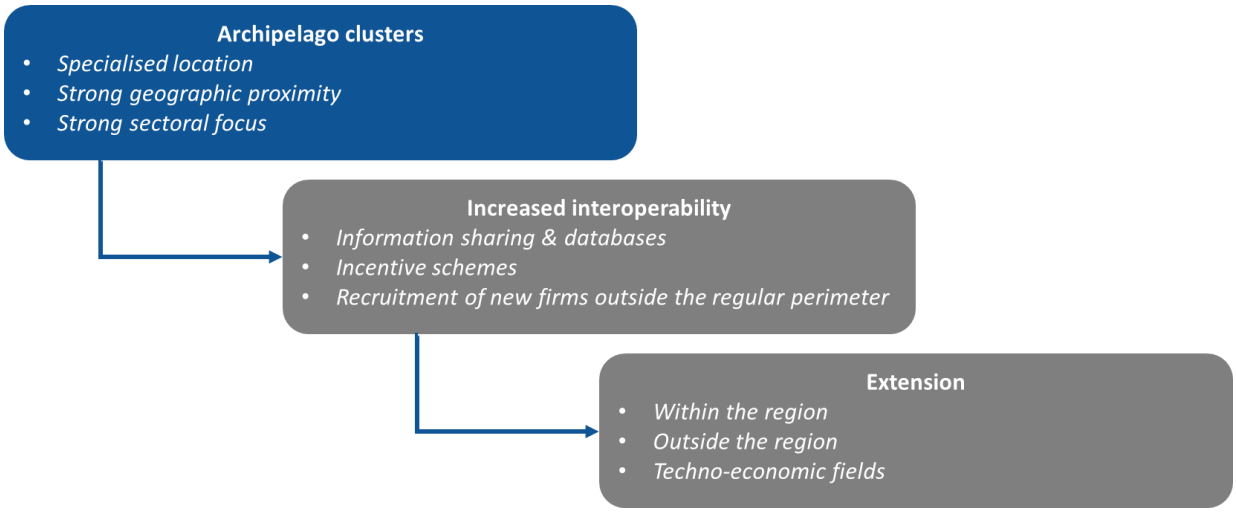
The first recommendation for Hauts-de-France cluster policy is to extend the perimeter of action for certain clusters at least and at the same time to complement the existing set to better respond to the needs of the whole region – which is relatively heterogeneous in economic specialisation and in terms of the level of innovation. The concept is a form of cluster federation, i.e. better coordination of all the existing clusters as well as decentralisation of individual clusters. The idea might be considered in contradiction with the nature of a cluster (embeddedness in a precise, smaller territory), but that is not the case. Clusters can be designed as archipelagos of specialised locations. Within a region, the distances are not so great anyway. The French experience of *pôles de compétitivité* has already included geographically distant points – even between different regions like Aerospace Valley in Occitanie and Nouvelle Aquitaine. The aim here is to cover the whole new Hauts-de-France region starting from a situation where most of the clusters have started in the North.

The way in which this federation of clusters would operate would be through systematic exchange of information: regular meetings, but possibly also shared databases. The progress in IT tools has made interoperability of information systems easier. Each cluster needs also proactively to extend its activity geographically by recruiting new firms outside its regular perimeter.

The method for achieving the federation relies on a specific relationship between the clusters and the regional authorities – more precisely the regional innovation agency HDFID. A form of co-working space would be developed, where the regional administration brings its knowledge of the set of businesses with innovation potential and helps to orient each candidate towards the relevant cluster. In the logic of such a system, the clusters' clients can come from across the whole region. Compared to the present 500 clients of the seven main *pôles de compétitivité*, the number of potential innovators is estimated at some 7 000. It will be a major task to visit all of them and to try to convince as many as possible to enter a cluster.

A subsequent project is to associate Belgian territories, taking advantage of the geographical situation of the North of the region as part of a densely populated cross-border area. This initiative could boost the cross-border relationships in future-oriented fields of activity. The Hauts-de-France Region already has experience of a pioneering cooperative activity with the Belgian Regions of Flanders and Wallonia (Interreg program GoToS3). This project (2014-2020) could be extended (2021-2027) based on the philosophy described above and encompassing all sectors, technological fields and sub-regions more systematically.

Figure 5: Intervention logic for federating and extending the existing clusters



Source: EOCIC

4.1.2. Benefits and Costs

The first benefit will be for the businesses: a simplification of the institutional landscape. The gains in this case come from policy efficiency. However, the federation also has the advantage of helping the new region (formed recently from the merger of two previous regions) to create a unified project for the future, a new identity built on pro-active foundations. This is a way to escape locked-in perceptions and behaviours based on past activities and many sources of local inertia. Since one of the main problems of Hauts-de-France is its image, the dynamics triggered by the federation of clusters could contribute to writing a positive new narrative.

The extension of the cluster networking to some places in neighbouring Belgium would be very beneficial to this Northern part of France, which has been artificially separated from its natural hinterland by national borders in past centuries. There is a cost in extending the perimeter of action for each cluster. The geographical extension presupposes, for instance, more people and/or time to replicate actions at points located in the other part of the region (typically, a cluster in the former Nord-Pas-de-Calais region will need to associate companies in the former Picardie region). It is probable that during a transition period at least, the cluster will function less efficiently overall since the new territories will have less experience and less of a cluster culture.

The region will probably need to invest in cluster management by reinforcing the teams (in people, travel and equipment). The general idea is that every cluster must extend its activity across the whole region (and even possibly beyond the borders). Will the operating cost be higher? Certainly, but there is a general trend in the policy setting to charge for the clusters' services (or at least for them not to be completely free). Therefore, recruiting more "clients" does not necessarily lead to increased public spending.

4.1.3. Risks, obstacles and challenges

As underlined above, the federation of clusters implies extending the perimeter of each cluster. The associated risk is that the nature and the territorial embeddedness of the clusters will change. There is a potential solution: applying the principle adopted by the Hauts-de-France Region for the next S3 phase and set out in its SRADDET document (a regional scheme enforced by national regulation), i.e. choosing for each broad domain a principal location where the present clusters mainly operate, and a secondary

hub in another part of the region. To a large extent, it should be possible to have one location in the former Nord-Pas-de-Calais region and the other in ex-Picardie.

Several aspects must be considered in terms of risks, obstacles and challenges. First of all, the policy needs to fight against the natural "silo thinking" tendency. The cooperation must be structured properly. Second, the mobilisation of the stakeholders involved will require additional funding. Allocating this will require a communication effort to ensure the allocation of resources is fair and transparent in order for those involved to come to a positive subjective perception of the changes. Third, the governance structure will be crucial. This needs to be more than just an informal club. There needs to be a means of setting clear priorities without this being an additional piece in the 'techno-administrative' puzzle. Fourth, it may be difficult, at least in a first step, to establish concordance between the different actors in terms of techno-scientific and economic preferences (e.g. high-tech versus middle-tech or strongly export-oriented versus focus on national markets). Finally, institutional and cultural differences between French actors and those in other countries must be taken into account (even if there are already several cases of collaboration with Belgian counterparts).

The obstacles could be in the minds and not only in economic and organisational terms. Working with new partners and new territories is difficult almost by definition for a territorial organisation like a cluster. The Region will need to devise incentive schemes to deal with this type of local identity resistance. This challenge will probably be even more difficult in the case of a cross-border network, for cultural and linguistic reasons. A major additional challenge lies in the national differences in institutional settings (administrative rules, legal frameworks, technical standards, etc.) Support from the European institutions might help overcome institutional barriers in cross-border activities.

A very general issue in all policy settings is to find the right balance between short- and long-run objectives. Short-run strategies consist of selecting the most interesting businesses for each cluster. Serendipity (smart opportunism) is indeed an important component of creativity but developing visions for the future is equally important. The role of the federation's governance should be to increase and diversify the set of businesses targeted, and at the same time to encourage a global and progressive process of smart specialisation convergence. In this context, the optimum cannot only be the result of the opportunistic behaviours of clusters picking locally anticipated "winners".

4.2. Adapting clusters to the human resources landscape

4.2.1. Description

The core issue in Hauts-de-France is to redevelop a territory marked by major structural problems. The necessity of reinventing industry (particularly in the North) and agriculture (particularly in the South) should be kept in mind when designing the cluster policy. The socio-cultural hindrances inherited from the context of long-term poverty and unemployment must also be addressed. Therefore, clusters should not be mainly centred around the supply of science and technology, and other high-tech assets. Off-the-ground clusters can be efficient on their own, can benefit their local environment and contribute to the global image of the region, but will not solve the huge problems of social and territorial inclusion of Hauts-de-France.

A part of the traditional economic policies fail in areas where the classical tools are inefficient: fiscal incentives or training programmes are inefficient if people (individuals or firms) are demotivated, risk-adverse and have partly lost self-esteem. Reconstructing mindsets is possible, particularly in a region where there are still positive characteristics in the population to draw on: the value of work, pragmatic technical competences, trust and benevolence.

Linking cluster policy and the development of the human resources landscape in Hauts-de-France could take the form of an initiative integrating social enterprises into the "traditional" activities of clusters. The main novelty would be in associating the classical aim of competitiveness and an aim of social development. The hypothesis is that clusters (and more generally the regional economy) can benefit from being used for (or engaging themselves in) addressing societal challenges/multiple purposes.

The interplay between typically technological and social innovation could be favoured by the implementation of mechanisms financing this type of partnership. This would require a redefinition of some existing funding instruments in order to allocate resources to activities specifically targeting individual skills development and regain of self-esteem. As a consequence, it should be possible to address three strong needs felt locally: i) the shortage of skilled employees; ii) insufficient social inclusion; and iii) sharing and exchanging best practices and experiences for mutual learning between "traditional" and "social" enterprises. Cooperating within the framework of the existing clusters would allow these two types of enterprise to share risks and would facilitate access to the necessary skills to generate collaborative development (see the intervention logic in).

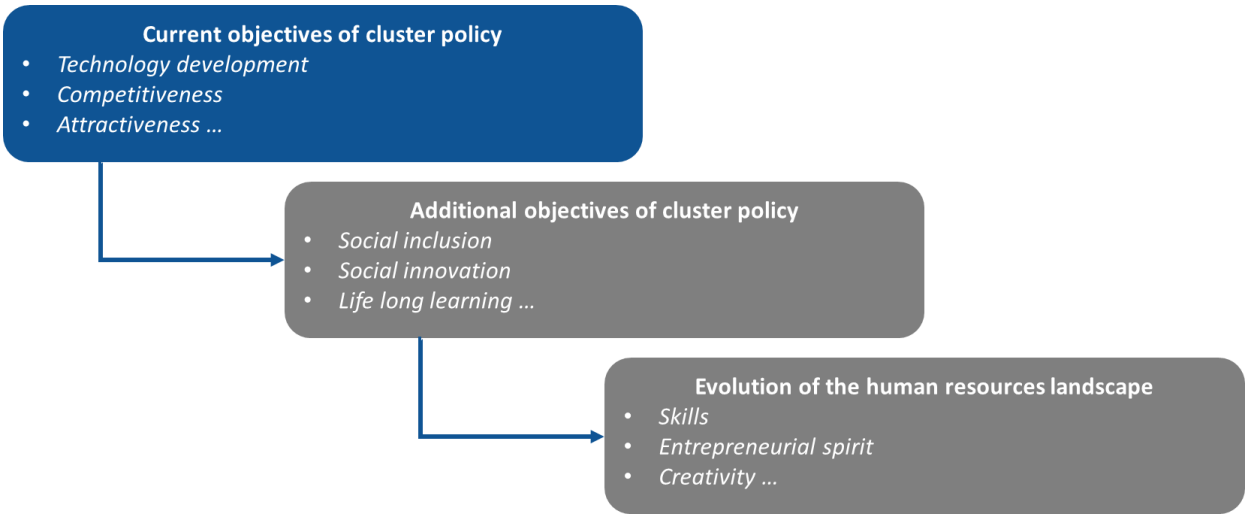
Different dimensions of such a political initiative should be considered, studying international examples of creative urban or rural redevelopment schemes (e.g. Manchester, Mannheim, Montréal); introducing more social sciences in cluster design and cluster management, and extending the concept of innovation policy from a purely knowledge-based vision to an entrepreneurial discovery process (which is, moreover, very much the understanding of the founding fathers of the smart specialisation strategy).

One suggestion for meeting the challenge of inclusive development is to target a relatively new sort of "company" for the cluster policies: non-for-profit organisations in the social and cooperative sector (the French concept of *Economie Sociale et Solidaire*, ESS). A typical example could be the associations that help people return to the labour market by experimenting with collective activity, such as product and materials recycling, small-scale intensive agriculture, etc. Such organisations are very useful and a way of allowing the fragile to create their personal entrepreneurial project and restore their self-esteem. Nevertheless, many of these organisations need improvement in terms of efficiency and quality management. Can we imagine clusters of ESS organisations that share their experience, disseminate best practices, benefit from academic expertise, etc.?

The entrepreneurial discovery process can also be experienced in a real commercial context. The first important step towards that is to uncover the existence within the territory of people with projects and to help them test their idea. The role of a cluster organisation is then to help find the potential partners (complementary in knowledge or finance). It is not necessary for the technology to implement it to be found within the territory: the region's policy should focus on finding local potential entrepreneurs, not on systematically finding applications for the local supply of science and technology.

The organisational setup for uncovering potential entrepreneurs/innovators currently starts with a call for proposals, followed by stages of selection and support for experimentation. Actually, the issue is that many such programmes exist – each level of governance has its own policy. Such a variety can blur the regional landscape and reduce the coherence of the S3 process. Therefore, a recommendation could be to let regional authorities monitor the system.

Figure 6: Intervention logic for adapting clusters to the human resources landscape



Source: EOCIC

4.2.2. Benefits and Costs

The main benefit would be to contribute to the social development of the region. Hauts-de-France is clearly a "poor" region in the French context (in terms of GDP per capita), characterised by a high level of unemployment. At the same time, the regional economy is suffering from a shortage of skilled labour. Integrating a social economy dimension in the local cluster policy could be beneficial for both cluster competitiveness and the extent of employability of part of the regional population. Attacking demotivation, risk-aversity and low self-esteem could constitute an additional mission for clusters. This recommendation could possibly be combined with the first (i.e. federating and extending the existing clusters).

Traditionally, cluster policy has aimed more at the development of high-tech activities than at dealing with societal issues. Clusters develop contacts with research institutions, but not so much with educational/training institutions. Given the nature of regions in transition like Hauts-de-France, it seems reasonable to induce clusters to consider partnerships with secondary educational establishment specialising in technology (*lycées techniques*). The corresponding cost could be compensated for by financial participation on the part of the relevant training curricula. For instance, clusters could sell the service of courses and presentations in the schools.

4.2.3. Risks, obstacles and challenges

Overall, implementing S3 in the right philosophy of an *entrepreneurial discovery process* will probably cost more in the short run than the classical "technology transfer" model. The policy rationale carries with it the intrinsic risk of testing entrepreneurial initiatives, particularly with people not yet recognised as sound professionals. Failure has a cost, but people learn through their trials. In the long run, such costs can be considered investments (in human and social capital).

The main challenge is to select and support pilot operations that would be able to produce "quick wins" in order to show the feasibility of such activities and to pave the way for scalable experiments. Quick wins are also important for the political representatives – who are always eager to show results in the short term.

A possible risk is a negative perception of social inclusion issues in terms of the competitiveness of cluster activities. It will be of crucial importance to demonstrate that adapting clusters to their human resources landscape (in terms of the labour force as well as traditional business management) is not holding them back but can reinforce their strengths.

The perception of entrepreneurial risk can vary by country. In various European countries it often happens that, due to a cultural mind-set or other particularities of a certain context, there is a conception that entrepreneurs are not allowed to fail, and this leads them to lose confidence. The biggest challenge for organisations and individuals is the acceptance of risk. In implementing any sort of entrepreneurial discovery process a strong narrative has to be delivered on that point: the policy does not aim to maximise the proportion of successful projects; it does not target the 'usual suspects' and select the *a priori* winners. Here, the idea is to adapt the cluster policy to a regional landscape where large parts consist of weak territories that need to be given a second chance. This is clearly a riskier policy, but it is more valuable in the long run than a "picking winners" strategy. In a word, we recommend accepting a challenge of entrepreneurial *exploration*, not to develop a policy of optimal *exploitation* of known assets.

5. Roadmap and action plan with activities, timeframe and actors

To deliver the specific recommendations set out in chapter 4, the table below summarises the actions required, their timing and the relevant action owner.

Table 3: Action plan

Action	Timing of the action	Owner of the action
Federating and extending the existing clusters		
Set up steering group	September 2019	Région Hauts-de-France/HDFID
Pilot activities	October 2019	Steering group
Manifesto	January 2020	Steering group (together with external expert advice)
Make financial commitment	February 2020	Région Hauts-de-France
Disburse funding	March 2020	Région Hauts-de-France
Learn lessons	December 2020	Steering group
Replicate	January 2021	Région Hauts-de-France/HDFID
Adapting clusters to the human resources landscape		
Set up steering group	September 2019	Région Hauts-de-France/HDFID
Call for proposal pilot activities	October 2019	Steering group
Selection of pilot activities	December 2019	Steering group
Performance of pilot activities	January 2020	Steering group
Learn lessons	September 2020	Steering group
Detailed action plan	November 2020	Région Hauts-de-France/HDFID
Make financial commitment	January 2021	Région Hauts-de-France

European Observatory for Clusters and Industrial Change

The European Observatory for Clusters and Industrial Change (#EOCIC) is an initiative of the European Commission's Internal Market, Industry, Entrepreneurship and SMEs Directorate-General. The Observatory provides a single access point for statistical information, analysis and mapping of clusters and cluster policy in Europe, aimed at European, national, regional and local policy-makers, as well as cluster managers and representatives of SME intermediaries.

The aim of the Observatory is to help Europe's regions and countries design better and more evidence-based cluster policies and initiatives that help countries participating in the COSME programme to:

- develop world-class clusters with competitive industrial value chains that cut across sectors;
- support Industrial modernisation;
- foster Entrepreneurship in emerging industries with growth potential;
- improve SMEs' access to clusters and internationalisation activities; and
- enable more strategic inter-regional collaboration and investments in the implementation of smart specialisation strategies.

In order to address these goals, the Observatory provides an Europe-wide comparative cluster mapping with sectoral and cross-sectoral statistical analysis of the geographical concentration of economic activities and performance, made available on the website of the European Cluster Collaboration Platform (ECCP) [4]. The Observatory provides the following services:

- **Bi-annual "European Panorama of Clusters and Industrial Change"** that analyses cluster strengths and development trends across 51 cluster sectors and 10 emerging industries, and investigates the linkages between clusters and industrial change, entrepreneurship, growth, innovation, internationalisation and economic development;
- "**Cluster and Industrial Transformation Trends Report"** which investigates the transformation of clusters, new specialisation patterns and emerging industries;
- **Cluster policy mapping** in European countries and regions as well as in selected non-European countries;
- "**Regional Eco-system Scoreboard for Clusters and Industrial Change"** that identifies and captures favourable framework conditions for industrial change, innovation, entrepreneurship and cluster development;

[4] European Cluster Collaboration Platform, *Official Website*. Available at: https://www.clustercollaboration.eu/.

- **Updated European Service Innovation Scoreboard**[5], that provides scorecards on service innovation for European regions;
- **"European Stress Test for Cluster Policy",** including a self-assessment tool targeted at cross-sectoral collaboration, innovation and entrepreneurships with a view to boosting industrial change;
- **Customised advisory support services** to twelve selected model demonstrator regions, including expert analysis, regional survey and benchmarking report, peer-review meeting, and policy briefings in support of industrial modernisation;
- **Advisory support service to European Strategic Cluster Partnerships**, in order to support networking between the partnerships and to support exchanges of successful practices for cross-regional collaborations and joint innovation investments;
- **Smart Guides** for cluster policy monitoring and evaluation, and for entrepreneurship support through clusters that provide guidance for policy-makers; and
- **Brings together Europe's cluster policy-makers and stakeholders** at four European Cluster Policy Forum events, European Cluster Days, and at the European Cluster Conference in 2019 in order to facilitate high-level cluster policy dialogues, exchanges with experts and mutual cluster policy learning. Two European Cluster Policy Forums took place in February and April 2018, and the European Cluster Conference is scheduled for 14 to 16 May 2019 in Bucharest (Romania).
- Online presentations and publications, discussion papers, newsletters, videos and further promotional material accompany and support information exchanges and policy learning on cluster development, cluster policies and industrial change.

More information about the European Observatory for Clusters and Industrial Change is available at: https://www.clustercollaboration.eu/eu-initiatives/european-cluster-observatory.

[5] Previous versions for 2014 and 2015 were developed by the European Service Innovation Centre (ESIC), see http://ec.europa.eu/growth/tools-databases/esic/index_en.htm.

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