Finding common areas of interest in Innovative Textiles partnership
expert's report – part 2

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Executive summary

The report is a further step in the work started in October 2016 for a partnership Innovative Textiles, registered on S3 Thematic Platform Industrial Modernisation. Since the start of work, the partnership grew from 11 to 16 regions, and now includes Auvergne Rhône Alps, Baden Württemberg, Campania, Catalonia, Emilia Romagna, Hradec Kralove, Lombardy, Łódzkie, Norte, North East Romania, Piedmont, Puglia, Tuscany, Valencia, Västra Götaland and West Flanders.

The initial part of work, finished in part 1 of the report, was concluded with the identification of the preliminary project ideas. This was done on the basis of extensive desk research, including a general overview of the situation and trends in textile sector, European-level analysis of economic potential in textiles and clothing, first identification of textile value chain, analysis of research and innovation potential in textiles and analysis of RIS3 documents and surveys from partner regions. In the two leading regions – Valencia and North East Romania also preliminary meetings with stakeholders were organized – an online workshop in Valencia and face-to-face company interviews in North East Romania. The work was concluded with identification of key areas of interest for the partners.

The main objective of the work done within this report was to verify these preliminary project ideas in order to make sure they match the specific needs of regional economies and are interesting to companies that should be the primary beneficiaries of new investment. This was especially important, as during stage 1 of work, it was discovered that the quality of entrepreneurial discovery processes in different regions varies widely and textile companies were not always strongly involved in the identification of smart specialisation priorities. This was the case in the regions, where textiles were made to be a part of broad priority areas like creative sector, or where there is no tradition of dialogue between business and regional governments. The result was that there was that the choice of priorities was too general to identify specific projects, the ideas described were outsourced from experts or strongly research-based and not always matching the real capabilities of companies (for example technical textiles were chosen in a traditional clothing region, which resulted in no interest of companies).

In order to mobilise regional stakeholders to take part in international projects and make sure that the project ideas had a potential to positively impact regional economy and make possible spill-over effects in the sector, it was agreed with the partnership (as a part of the international entrepreneurial discovery methodology described in report 1) that a more detailed picture of textile specialisation is needed in order to verify the significance of different project ideas for regional economies. Data available at European level (Eurostat) allows only for comparison of concentration of employment in the whole sector, which is not enough for detailed analysis. Therefore, at the end of stage 1, partner regions were mobilised to gather more detailed data for subsectors (NACE rev 3 and 4), including not only employment, but also gross value added and number of companies. This data was analysed in stage 2 as a part of preparation for strategic discussion with regional stakeholders. For each region that provided data, a ‘regional portrait’ was created.
that analysed available information (different for each partner). First, economic specialisation was analysed for subsectors based on location quotients (LQ) that show concentration of certain subsectors relative to other regions in the country. This allowed for identification or verification of regional value chains and positioning them on the background of the international one (identified in report 1). Also, trends and dynamics for subsectors were analysed. On the basis of the findings, strategic questions were formulated for discussion with regional stakeholders. In this way, the analytical part provided the quantitative background and basis for fact-based discussion, and the dialogue with the stakeholders added qualitative input that allowed for better understanding observed phenomena and matching them with project ideas that best respond to specific regional challenges but have the potential for international cooperation.

Next stage included mobilisation of regional stakeholders by organization of workshops or interviews in the interested regions, where such an exercise could bring value added. The stakeholder workshops or interviews (depending on the local needs) were organized in 7 regions. They generally followed the methodology agreed in report 1, but it was each time individually adjusted to regional needs by means of expert discussions with representatives of regions during teleconferences and meetings. The objective of this preparatory stage was to identify right stakeholders to represent the regional value chain and have a meaningful discussion on future projects. The agreed rule was to have a minimum 50% participation of companies, but the role of other stakeholders (research, business organizations, regional government) was also discussed and the format of the meeting adjusted accordingly – from 1 to 3 workshops in 1 region, different working groups and, in the case of West Sweden, 6 individual company interviews. After that the workshops and interviews were organised. Altogether, 228 stakeholders from textile and clothing sector were consulted.

The main results of this approach were:

- Mobilisation of regional stakeholders and encouraging them to cooperate in international projects,
- Improving the understanding of regional governments of textile and clothing sector and fastening, restarting or opening a meaningful dialogue,
- Verifying which general project ideas have a best chance to respond to specific regional needs and therefore be interesting to a wide array of stakeholders,
- Generating specific project ideas that can be developed into international projects and identifying stakeholders from different regions that are eager to cooperate on them,
- Ensuring that the projects suggested for further development will gather partners from different regions,
- Positioning partner regions in European value chain,
- Generating additional activities by the regions – additional meetings with the stakeholders, detailed analyses of economic and research potential of textile and clothing sector, acquisition of necessary statistical data, continuing of
the proposed methodology for company interviews, common applications to European projects (Horizon 2020, INNO-SUP, INTERREG), etc.

On the basis of the work done, the suggestion of further work methodology for international matchmaking and the definition of path for catching up regions were also defined.

**Objective of the report**

This report presents the results of the second stage of work with Innovative Textiles partnership of S3 Industrial Modernisation Platform aimed at the verification of preliminary project ideas (identified in stage 1 – see report 1) in order to make sure they match the specific needs of regional economies and are interesting to companies that should be the primary beneficiaries of new investment.

At the moment, the Innovative Textiles partnership involves 16 regions Auvergne Rhône Alps, Baden Württemberg, Campania, Catalonia, Emilia Romagna, Hradec Kralove, Lombardy, Łódzkie, Norte, North East Romania, Piedmont, Puglia, Tuscany, Valencia, Västra Götaland and West Flanders. Such a wide range of partners brings it to over 30% of total employment in textile and clothing sector in Europe. Such a partnership has a good chance to initiate strategic processes that can transform the situation of the sector in Europe, where the scope for innovation and growth of value added is high (as shown in report 1) and the industry can potentially reinvent itself if companies in the main textile regions will be able to tap into the new opportunities coming both from technological but also process, organizational and marketing innovation.

**Methodology**

The general methodology for international entrepreneurial discovery is described in part 1 of the report. It is important to underline that the findings of this report are a natural continuation of the first stage (see report 1), which was concluded with the identification of the preliminary project ideas for international investment. This was done on the basis of extensive desk research, including a general overview of the situation and trends in textile sector, European-level analysis of economic potential in textiles and clothing, first identification of textile value chain, analysis of research and innovation potential in textiles and analysis of RIS3 documents and surveys from partner regions. In the two leading regions – Valencia and North East Romania also preliminary meetings with stakeholders were organized – an online workshop in Valencia and face-to-face company interviews in North East Romania. The work was concluded with identification of key areas of interest for the partners.

This report focuses on steps 5 and 6 as shown below. Also, some additions, improvements and updates were prepared for the previous step, widening the focus from the lead regions to other regions, most interested and ready to progress.

It is worth reminding the main rules adopted while designing the methodology i:
• Taking into account the existing RIS3 strategies and the results of entrepreneurial discovery processes in the regions,
• Active involvement of regional stakeholders from the beginning of the mapping process,
• Quick process to comply with the administrative conditions.

The methods used for each step and necessary input from the partners are shown below. The two important aspects of the proposed approach include:

• Firstly, to concentrate at identifying the specific needs/challenges of each region in order to prepare the ground for further work,
• Secondly, to find the challenges which need international collaboration and to initiate the entrepreneurial discovery at international level.

The analytical part of the methodology (described in detail in report 1), was mostly done during the first stage of work, but with the focus on the lead regions, ane Europe–wide analyses. In the present stage, this analysis has been widened (where needed) to other partners, especially in the areas where the European data provided too general a picture – in the analysis of economic protential which is important to capture the specific needs of stakeholders. Also more regions were assesed in terms of readiness for cooperation and more discussions with regional government representatives and research sector were organized. The first part of work, together with the achieved results is shown in detail in the scheme below (full details are presented in report 1).
The work performed in the present stage was mostly the practical part (see scheme below) that built on the findings from the analytical stage, but mostly concentrated on interaction with stakeholders and proper identification of their needs. Additional objectives accomplished in this part were the mobilisation of stakeholders for international cooperation and identification of detailed project ideas that are viable and generate interest from many partners. In order to achieve these objectives, a lot of work was put into the proper preparation of the stakeholder workshops and interviews, which required additional discussions and meetings with regional representatives, detailed statistical analyses on subsector level and adjusting the methodology to best match regional needs. In general, between 1–3 workshops were organized in 1 region (for 7 regions altogether) and in one case, 6 interviews with companies, and an electronic debate plus a discussion in another case. This work allowed also proposing a methodology for further stages – international matchmaking and procedure of catching up for partners that joined late or needed more time to get organized.
The last part of the agreed methodology (see scheme below) still has to be implemented by the partnership. It will be possible after the international matchmaking events are organized and full project descriptions and future partnerships are identified. Then, more detailed analyses and feasibility studies should be prepared as agreed within the Industrial Modernisation Platform.
Main results

Verification of regional value chains in textile and clothing sector

In report 1, some qualitative analyses of textile value chains made by the partner regions were collected. Also, a general textile value chain was identified, as shown below. In order to identify the specific regional challenges and the significance of preliminary project ideas it was important to compare the position of regional stakeholders in the partner regions.

It was done on the basis of statistical data provided by the regions on the expert’s request and in the template provided. Later, it was discussed with the regional stakeholders in order to identify specific challenges and opportunities that could improve the position of companies in international value chain. The regional profiles below show the results of the verification procedure (depending on the quality of data provided, it differs slightly in other analysed regions).
Norte

Region Norte is the biggest textile and clothing employer in Europe. However, it does not have strong business organisations, which is probably the reason why regional value chain analysis for textiles was never performed. Therefore, the position in the value chain had to be established on statistical basis.

Methodological note for the analysis of all the regions: this analysis is carried out only as an addition to the S3 processes carried out in the partner regions and is not aimed at the identification of smart specialisation, but of economic potential (research and innovation potential were already analysed in report 1) to make sure that the projects identified by the partnership respond to the needs of regional economy and especially critical mass in subsectors. In such a way, there is a highest chance that they have an impact on a high number of companies and there is a chance of a spill-over effect (not possible when only single-company projects are financed). This approach provides return on public investment by boosting processes important to a significant part of regional economy and creating high value added.

The approach taken is based on location quotients (LQ) that show relative specialization compared to other regions in the country (detailed data at European level is not available). Location quotient = 1 means that the structure of regional economy is identical as in the whole country. LQ=1,3 shows economic specialisation (there is higher employment, value added or number of companies in a given sector than on average in the country). LQ close to 3 shows strong specialisation. The analysis is based on NACE codes – rev 2-4, depending on data availability. Numbers C13, 14 and 15 are NACE codes that refer to the main textile and clothing subsectors. Where possible, data on companies, employment and value added was used to verify the findings.
Data on employment

Source: Own elaboration

Looking at the textile and clothing subsectors, Norte has economic specialisation in manufacturing of textiles, which is quite strong and confirmed for employment, gross value added and number of companies (see above). At more detailed level, all the subsectors show also strong specialisation – from preparation of fibres to finishing.

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Economic specialisation for C14 – manufacturing of wearing apparel²

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² For guidance on interpretation of the results see methodological note on page 8
Another strong subsector is manufacturing of wearing apparel, which also shows similar level of specialisation confirmed for employment, gross value added and number of companies (see above). At more detailed level, two subsectors show also strong specialisation – manufacturing of knitted and crocheted apparel and manufacturing of wearing apparel.
Differently than other analysed regions, Norte shows also a specialisation in manufacturing of leather and related products, confirmed for employment, gross value added and number of companies (see above). At more detailed level, only one subsector shows also strong specialisation – manufacturing of footwear.

3 For guidance on interpretation of the results see methodological note on page 8
In terms of employment dynamics, it can be seen (above) that the situation in different subsectors varies significantly. In some of them, the employment fell continuously on the analysed period. These include preparation and spinning, weaving, manufacturing of knitted and crocheted fabrics, manufacturing of carpets and rugs and manufacturing of other textiles. In other subsector it can be seen that the employment fell during crisis but started growing again after 2012. These include finishing of textiles and manufacturing of made-up textile articles. Finally, new sectors, which so far were not strongly present in the region started developing. They include manufacturing of cordage rope, twine and netting and other technical and industrial textiles. This trend is confirmed for value added (see...
below) the strongest growth is observed in new sectors and in finishing, where a lot of new innovative functional finishes are applied.

### Gross value added trends in subsectors – C13 (manufacturing of textiles)

<table>
<thead>
<tr>
<th>Subsector</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacture of cordage, rope, twine and netting</td>
<td>4919</td>
<td>4936</td>
<td>4945</td>
<td>4952</td>
<td>4959</td>
<td>4966</td>
</tr>
<tr>
<td>Manufacture of non-wovens and articles made from</td>
<td>2963</td>
<td>3007</td>
<td>3042</td>
<td>3076</td>
<td>3114</td>
<td>3151</td>
</tr>
<tr>
<td>Manufacture of other technical and industrial textiles</td>
<td>4862</td>
<td>5010</td>
<td>5158</td>
<td>5307</td>
<td>5457</td>
<td>5607</td>
</tr>
<tr>
<td>Manufacture of other textiles, n.e.c.</td>
<td>6483</td>
<td>6702</td>
<td>6923</td>
<td>7144</td>
<td>7375</td>
<td>7606</td>
</tr>
<tr>
<td>Manufacture of carpets and rugs</td>
<td>5701</td>
<td>5917</td>
<td>6134</td>
<td>6351</td>
<td>6568</td>
<td>6785</td>
</tr>
</tbody>
</table>

Source: Own elaboration

As for C14 employment trends (see below), the most significant sector is manufacturing of other outerwear, which experienced diminishing trend until 2012 and after that started growing again. Other subsectors that employ between 2000
and 7000 people each are manufacturing of underwear, other wearing apparel and accessories and knitted and crocheted products. The strongest fall of employment is visible in manufacturing of underwear, while the other subsectors had only a small fall or remained stable.

<table>
<thead>
<tr>
<th>Employment trends in subsectors – C14 (manufacturing of wearing apparel)</th>
</tr>
</thead>
</table>

**Employment in sub-sectors 2**

<table>
<thead>
<tr>
<th>Subsector</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacture of leather clothes</td>
<td>111</td>
<td>117</td>
<td>122</td>
<td>96</td>
<td>87</td>
<td>78</td>
</tr>
<tr>
<td>Manufacture of wearing apparel</td>
<td>829</td>
<td>777</td>
<td>779</td>
<td>746</td>
<td>701</td>
<td>694</td>
</tr>
<tr>
<td>Manufacture of other outerwear</td>
<td>65955</td>
<td>57913</td>
<td>56076</td>
<td>53502</td>
<td>53312</td>
<td>56640</td>
</tr>
<tr>
<td>Manufacture of underwear</td>
<td>5028</td>
<td>5659</td>
<td>5085</td>
<td>4950</td>
<td>8249</td>
<td>1990</td>
</tr>
<tr>
<td>Manufacture of other knitted and crocheted apparel</td>
<td>3016</td>
<td>3071</td>
<td>2927</td>
<td>2699</td>
<td>26682</td>
<td>2616</td>
</tr>
<tr>
<td>Manufacture of knit and crocheted hosiery</td>
<td>92</td>
<td>59</td>
<td>50</td>
<td>56</td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td>Manufacture of fur</td>
<td>1660</td>
<td>1660</td>
<td>1660</td>
<td>1660</td>
<td>1660</td>
<td>1660</td>
</tr>
<tr>
<td>Source: Own elaboration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In terms of gross value added, the only significant growth is visible in manufacturing of other outerwear. In the other subsectors the situation remained stable.
As for C15 employment trends (see below), the most significant sector is manufacturing of footwear, which experienced diminishing trend until 2010 and after that started growing again. There is also a small but growing employment in manufacturing of luggage, handbags and the like.
In terms of gross value added, the only significant growth is visible in manufacturing of footwear. In the other subsectors the situation differed, but the value produced is quite low.
Looking at the efficiency of the subsectors in terms of value added produced per employee (see below), it can be seen that the highest level exist in new and quickly growing sectors – non-wovens, technical and industrial textiles and cordage, rope, twine and netting.
Comparison of employment and gross value added in subsectors (see below) shows that value added grows quicker than employment in most subsectors. The strongest gains over the 5-year period were observed in manufacturing of luggage and handbags, non-wovens and other technical and industrial textiles. This trend well reflects the wider phenomena observed in Europe.

Comparison of employment and gross value added in subsectors
After the analysis, the regional value chain could be established on the basis of existing specialisations, employment and gross value added trends and their
structure (see above). It can be seen that region Norte is strong in the wide middle of the value chain but the position of different parts is changing. The new sectors, which do not yet have a critical mass are growing quickly. These observations gave a basis for further discussion with the stakeholders.

North East Romania

In the case of North East Romania, at first only the national value chain was available in the literature and it covered almost full theoretical value chain for clothing production (see below). Therefore, it was important to understand, which parts of the value chain exist in the region and create its comparative advantage, taking into account that textile and clothing sector is in general very strong in the whole country and the competition can be strong. The first, theoretical picture is shown below.

National picture of the value chain

Source: Lawrence–Pietroni et al, Romania’s Apparel Cluster

The first step of statistical verification was to identify the regional economic specialization based on location quotients for company data (number of local units), showing in which textile and clothing subsectors, the regions shows some comparative advantage over other Romanian regions (having in mind that the textile and clothing specialisation is strong in all the country).
Textile specialisation of North East Romania (LQ)\textsuperscript{4}

The graph above shows the results of the calculation of location quotients for North East Romania. It can be seen that the strongest specialisation occurs in the subsectors classified under C13 – manufacturing of textiles.

Legend:

<table>
<thead>
<tr>
<th>Colour</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dark purple</td>
<td>strong specialisation</td>
</tr>
<tr>
<td>Dark blue</td>
<td>specialisation</td>
</tr>
<tr>
<td>Light blue</td>
<td>lack of specialisation</td>
</tr>
<tr>
<td>Beige</td>
<td>lack of specialisation</td>
</tr>
</tbody>
</table>

Source: Own elaboration

\textsuperscript{4} For guidance on interpretation of the results see methodological note on page 8
<table>
<thead>
<tr>
<th>Regional Specialisation</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation and spinning of textile fibres</td>
<td>![Map of Preparation and spinning of textile fibres]</td>
</tr>
<tr>
<td>Weaving of textiles</td>
<td>![Map of Weaving of textiles]</td>
</tr>
<tr>
<td>Manufacture of knitted and crocheted apparel</td>
<td>![Map of Manufacture of knitted and crocheted apparel]</td>
</tr>
</tbody>
</table>

Source: Own elaboration

The maps above show the relative position of North East Romania as compared to other Romanian regions for the strongest economic specialisations in subsectors. It can be seen, that only for one of them: preparation and spinning of textile fibres, the region does indeed have a dominating position in the country. For the other two, although the regional specialisation is quite clear, there are other regions that show stronger concentration of companies.

5 For guidance on interpretation of the results see methodological note on page 8
For each of the dominating subsectors, the company trends were also verified to see if the position of the region is improving or worsening compared to other Romanian regions (see above and below).
Number of companies – trends for manufacture of knitted and crocheted apparel

Part 1 – Hosiery

Source: Own elaboration

Part 2 – Other apparel

Source: Own elaboration

In the graphs above it can be seen that for 2 of 3 main specialisations, the number of companies is stabilised or growing slightly. However, for the most important
specialisation, preparation and spinning of fibres, it has been falling sharply, diminishing regional advantage in that area. As such, it is one of the challenges that should be discussed in the further work with the stakeholders.

Additionally, the general shares of textile employment were checked (see graph below) – without looking at relative advantage. The highest shares of companies in textile and clothing sector are as follows:

- Manufacture of other outerwear (41%),
- Manufacture of footwear (15%),
- Manufacture of made-up textile article, except apparel (11%),
- Manufacture of other wearing apparel and accessories (8%).

Together, they make 75% of total textile employment in the region.

Source: Own elaboration

After the analysis, the regional value chain could be verified on the basis of existing specialisations, company trends and their structure (see below). It gave a basis for further discussion with the stakeholders.
The low-profit and low skills image of the textile and clothing sector makes it difficult to attract skilled employees and secure bank loans. The exception is technical textiles.

The huge diversity of the textile sector makes it difficult to find good practices, innovations or business models that can be widely applied. In order for such activities (and public interventions) to be successful it is important to identify SMEs with similar needs.

Other important issues and challenges for the textile and clothing sector include product traceability, working conditions throughout the value chain and environmentally sustainable processes.

II.3 Value chain in textile and clothing sector

Textile sector is very diversified and has a complicated value chain (see example below). Moreover, many of its products feed other value chains such as vehicle production, medical products or industry and construction applications such as conveyor belts and insulating materials. Therefore, different 'textile' regions in Europe can have varying sub-specializations.

Examples of regional value chains that are the effects of regional mapping exercises can be found below. It is a first scanning (not always covering the full value chain in the region) that should be later developed with the help of interested regions. The examples below come from the partner regions and are usually the results of qualitative analyses or dialogue with the regional stakeholders. In some cases, the examples come also from scientific articles. Only in the case of the value chain of the fashion sector in Catalonia, the mapping was based on the quantitative surveys.

Source: Own calculations
**Emilia Romagna**

Emilia Romagna had a regional value chain prepared by the local experts (see below), but done on the qualitative basis and not verified statistically, which meant that it was not clear, where the real critical mass lies and regional advantage, compared to other Italian regions where the textile and clothing industry is also strong.

**Regional picture of the value chain**

In order to verify the qualitative picture of the value chain, location quotients (LQ) have been calculated for NACE rev3 subsectors (see graph below). They show concentration of employment as compared to other Italian regions. It is visible in subsectors classified under C13 - manufacturing of textiles and C14 - manufacturing of wearing apparel. In these sectors, there are two more specialised areas. However, it is worth noticing that no strong specialisation (LQ above close to 3 or above) occurs in the region, but there is a clear economic specialisation in knitting and crocheted apparel and wearing apparel.
Textile specialisation of Emilia Romagna (LQ)\(^6\)

Legend:

- **strong specialisation**
- **specialisation**
- **lack of specialisation**

Source: Own elaboration

In terms of the specialisation in bigger sectors (see maps below), there is no specialisation in manufacturing of textiles as compared to other Italian regions (specific data was calculated only for the 5 regions that are partners in Innovative textiles, but the calculation was done comparing to national level). The result for textiles is 0,58, which means only little over half of average national employment in this sector. The situation is similar for manufacturing of leather and related products (0,59), which already verifies the regional value chain in terms of relative advantage. As for manufacturing of wearing apparel, there is a clear specialisation (1,37).

\(^6\) For guidance on interpretation of the results see methodological note on page 8
Strongest regional specialisations for Emilia Romania

C13 – Manufacture of textiles

C14 – Manufacture of wearing apparel

C15 – Manufacture of leather and related products

Source: Own elaboration

For guidance on interpretation of the results see methodological note on page 8
Value added in textiles and clothing

Source: Own elaboration

These results are confirmed, when value added is analysed – in Emilia Romagna, 66% of value added created in textile and clothing industry is created in C14 – manufacturing of wearing apparel (see above). Interesting situation occurs when value added is shown per employee (see below). The most efficient sectors are not only C14, but also C15 – manufacturing of leather and related products, where the region does not have a specialisation in employment.

Value added per employee

Source: Own elaboration

Looking at the employment trends for the subsectors (see graphs below), where the region has a specialisation (data is only available for a three–year period), it can be seen that the employment is strongly falling in the sector with the highest employment – manufacture of other outerwear. There is also a slight fall in the next to biggest subsectors – manufacture of other wearing apparel and accessories and manufacture of underwear. These trends weaken the existing specialisations.
**Employment trends for C14.1 – Manufacture of wearing apparel, except fur apparel**

![Chart showing employment trends for C14.1](chart)

Source: Own elaboration

For knitted and crocheted apparel it can be seen that the employment is slightly falling in both – knitted and crocheted hosiery and other apparel (in the latter it is quite low as well). That means that companies are reducing employment or closing altogether.

**Employment trends for C14.3 – Manufacture of knitted and crocheted apparel**

![Chart showing employment trends for C14.3](chart)

Source: Own elaboration
In terms of the employment shares in textile and clothing sector (see above), more than 1/3 of the employment is created in manufacturing of other outerwear. 14% falls for manufacturing of footwear, 11% for manufacturing of other wearing apparel and accessories and 10% for other knitted and crocheted apparel.

All the above analysis allows for a verification of the regional value chain and reveals areas where the region shows relative advantage (see below). It can be said that Emilia Romagna has an extremely specialised value chain, where most of production capacity is located in just two stages. How to further build a competitive advantage in this situation needs to be consulted with regional stakeholders.
Value chain after statistical verification

Source: Own calculations

Piemonte

Piemonte, did not have an earlier value chain analysis, part form a very old study done in the 80s (see below). Therefore, it needed to be verified.

Source: Citte Studi
In order to verify the qualitative picture of the value chain, location quotients (LQ) have been calculated for NACE rev3 subsectors (see graph below). They show concentration of employment as compared to other Italian regions. It is visible in subsectors classified under C13 – manufacturing of textiles. In this sector, there are two more specialised areas that show strong specialisation – preparation and spinning and weaving.

Textile specialisation of Piemonte (LQ)\textsuperscript{8}

Legend:

- **strong specialisation**
- **specialisation**
- **lack of specialisation**

Source: Own elaboration

In terms of the specialisation in bigger sectors (see maps below), there is a specialisation in manufacturing of textiles as compared to other Italian regions (specific data was calculated only for the 5 regions that are partners in Innovative textiles, but the calculation was done comparing to national level). The result for textiles is 1.81, which means almost double average national employment in this sector. No specialisation has been observed for manufacturing of wearing apparel (0.50) and leather and related products (0.10), which strongly verifies the regional value chain in terms of relative advantage.

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\textsuperscript{8} For guidance on interpretation of the results see methodological note on page 8
Strongest regional specialisations for Piemonte (LQ)\(^9\)

C13 – Manufacture of textiles

C14 – Manufacture of wearing apparel

C15 – Manufacture of leather and related products

Source: Own elaboration

\(^9\) For guidance on interpretation of the results see methodological note on page 8
Value added in textiles and clothing

Source: Own elaboration

These results are confirmed, when value added is analysed – in Piemonte, there is a strong specialisation of value added in manufacturing of textiles (see above). Interesting situation occurs when value added is shown per employee (see below). The most efficient sectors are not only C13, but also C15 – manufacturing of leather and related products, where the region does not have a specialisation in employment. The situation in leather industry is similar in Emilia Romagna.

Value added per employee

Source: Own elaboration
Looking at the employment trends for the subsector (see graphs below), where the region has a specialisation (data is only available for a three-year period), it can be seen that the employment is strongly falling in the sectors with the highest employment – weaving and preparation and spinning. In weaving the dynamics of this fall slowed down, but in preparation and spinning it kept falling in the period analysed. These trends weaken the existing specialisations. In the other subsectors – the employment is stable or slowly rising (the latter in finishing).

### Employment trends for C13 – Manufacture of textiles

![Employment Trends Graph](image)

Source: Own elaboration

In terms of the employment shares in the textile and clothing sector (see below), more than 1/3 of the employment is created in weaving of textiles and almost 1/3 in preparation and spinning. 12\% falls for finishing of textiles and 8\% for manufacturing of other technical and industrial textiles.

All the above analysis allows for a verification of the regional value chain and reveals areas where the region shows relative advantage (see below). It can be said that Piemonte is located in the middle of the value chain, and most of production capacity is located in just two stages. However, normally most value is created close to the end of the value chain. How to further build a competitive advantage in this situation needs to be consulted with regional stakeholders.
The low-profit and low skills image of the textile and clothing sector makes it difficult to attract skilled employees and secure bank loans. The exception is technical textiles.

The huge diversity of the textile sector makes it difficult to find good practices, innovations or business models that can be widely applied. In order for such activities (and public interventions) to be successful it is important to identify SMEs with similar needs.

Other important issues and challenges for the textile and clothing sector include product traceability, working conditions throughout the value chain and environmentally sustainable processes.

**II.3. Value chain in textile and clothing sector**

The textile sector is very diversified and has a complicated value chain (see example below). Moreover, many of its products feed other value chains such as vehicle production, medical products or industry and construction applications such as conveyor belts and insulating materials. Therefore, different ‘textile’ regions in Europe can have varying sub-specializations.

Examples of regional value chains that are the effects of regional mapping exercises can be found below. It is a first scanning (not always covering the full value chain in the region) that should be later developed with the help of interested regions. The examples below come from the partner regions and are usually the results of qualitative analyses or dialogue with the regional stakeholders. In some cases, the examples come also from scientific articles. Only in the case of the value chain of the fashion sector in Catalonia, the mapping was based on the quantitative surveys.
Catalonia

Catalonia had the most advanced regional value chain analysis (see below) – for the fashion cluster it was based on quantitative data - surveys of companies. However, the region had difficulty deciding, where the regional advantage in textile and clothing sector lies, so the value chain has been verified based on statistical data.

![Value chain of fashion’s sector](https://example.com/value-chain-fashion-sector.png)

**Source:** ACCIÓ

**Value chain of fashion’s sector**

- **Public institutions**
  - Generalitat (Business and Occupation Dept., ACCIÓ, Business Promotion and Training Institute, Culture Department, City Councils, Spanish Government (Industry, Energy and Tourism Department)

- **Associations**
  - Sabadell Union, FAGEPI, ASSEGEM, Fashion Design Academy, Textile Engineering Universities, Market research agencies, retail training and branding, and retail consultancy, logistic platforms, architects, franchise consultancy, real estate

- **Clusters**
  - ACTM, Textile innovation Cluster

- **Production**
  - Textile, Weavers, Yarn treatments, Yarn Finishing, Spinning Mills, Dyeing, Finishing, Fabric Weavers, Knitting, Mesh/Net, No woven Fabrics, Preparation, Bleaching, Dyeing, Printing, Finished Fabrics Textile workshops

- **Brands**
  - Retail brands, Fashion brands with stores, Fashion brands

- **Distribution channel**
  - Direct retail, Department Stores, Independent Multi-brand, Organized Multi-brand, With and without own brand, Supermarkets

**Value chain companies and assisting industry**

- **Textile and leather goods**
  - Tanners and leather finishers, Synthetic fabric suppliers, Trimmings and辅料 suppliers

- **Fashion**
  - Apparel cutting, Assembling, Sewing, Pressing, Finishing, Technical Textiles, Clothes

- **Retail**
  - Retail distribution, Fashion brands with stores, Fashion brands

**Source:** Cluster Textil Moda de Catalunya
In order to verify the picture of the value chain, location quotients (LQ) have been calculated for NACE rev3 subsectors (see maps below). They show concentration of employment as compared to other Spanish regions. It is visible in C13 – manufacturing of textiles, where the result is 2.15, which means over double average national employment in this sector. Weaker specialisation has been observed for manufacturing of wearing apparel (1.43). There is no specialisation in manufacturing of leather and related products (0.42).

<table>
<thead>
<tr>
<th>Strongest regional specialisations for Catalonia (LQ)(^\text{10})</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>C13 – Manufacture of textiles</strong></td>
<td><strong>C14 – Manufacture of wearing apparel</strong></td>
</tr>
</tbody>
</table>

![Manufacturing of textiles](image1)

![Manufacturing of wearing apparel](image2)

![Manufacturing of leather and related products](image3)

Source: Own elaboration

\(^{10}\) For guidance on interpretation of the results see methodological note on page 8
Looking at the sub-specialisations in C13 (see below), it can be seen that all the subsectors show strong specialisation in terms of employment varying from almost triple (for preparation and spinning) to almost double (for finishing) of the national average employment in these sectors. There is no data available for C14.

**Textile sub-specialisation of Catalonia – C13 (manufacturing of textiles) – LQ**

![Sub-specialisations in textiles](image)

Source: Own elaboration

**Textile sub-specialisation of Catalonia – G46 (wholesale) (LQ)**

![Sub-specialisations in wholesale](image)

Source: Own elaboration

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11 For guidance on interpretation of the results see methodological note on page 8

12 as above
Textile sub-specialisation of Catalonia – G47 (retail) (LQ)

Source: Own elaboration

As the region has also strongly developed fashion trade, additional location quotients were calculated to show if there exists a specialisation in wholesale or retail. For G46 there seems to be a data mismatch in sales of raw materials (data for Catalonia is too high compared to national level and standard values for location quotients), but a clear specialisation in wholesale of all textile subsectors can be observed (see above). As for retail, the level of employment is similar to the average in the country.

Employment dynamics for subsectors

Legend:

* 2011 = 100

† dynamics 2014

Source: Own elaboration

13 For guidance on interpretation of the results see methodological note on page 8
As the time set of data provided was quite long, it was possible to calculate employment dynamics (see above). In almost all analysed subsectors (with the exclusion of wholesale of textiles), the employment fell over 5 years and did not recover after the economic crisis. This trend weakens the economic specialisation of the region.

**Gross value added dynamics for subsectors**

![GVA dynamics 2015 (2010=100*)](image)

Legend:

* 2011=100

* dynamics 2014

Source: Own elaboration

The situation looks better when gross value added is taken into account (see above). It grew significantly in wholesale of clothing and footwear, textiles but also in manufacturing of machinery for textiles. However, in the basic textile subsectors, the value added did not change over 5 years, and in retail and raw materials, it is at 80-97% of values from 2011, which means that the sector as a whole slowed down after the crisis and did not fully recover so far.

Interesting situation occurs when value added is shown per employee (see below). The most efficient sector is C15 – manufacturing of leather and related products, where the region does not have a specialisation in employment. The sectors, where the region shows specialisation – C13 – manufacturing of textiles and C14 – manufacturing of wearing apparel, create much lower value added per employee.
All the above analysis allows for a verification of the regional value chain and reveals areas where the region shows relative advantage (see below). It can be said that Catalonia has quite a long value chain, with the exception of raw materials supply and retail. However, the textile and clothing sector is clearly struggling in the last years. How to further build a competitive advantage in this situation needs to be consulted with regional stakeholders.

Value chain after statistical verification

Source: Own calculations
Stakeholder workshops

As the level of advancement of entrepreneurial discovery process differs in the partner regions of Innovative Textiles partnership, the general workshop/interview model described in part 1 of the report, had to be modified and adjusted to regional needs. In the table below it can be seen, what was the starting situation after the finish of the first stage of work (Report 1), what the region provided, and what needed to be provided by an expert.

<table>
<thead>
<tr>
<th>Region</th>
<th>Valencia</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Situation after stage 1</strong></td>
<td>As a lead region, Valencia had an online stakeholder workshop in December 2016 – the regional value chain and company needs were discussed. ATEVAL cluster, which concentrates textile companies in the region, had recently prepared a strategic analysis on the sector in the region.</td>
</tr>
<tr>
<td><strong>Data provided (under expert's guidance)</strong></td>
<td>Analysis of regional value chain and ORBIS data on employment, number of companies and turnover in textile and clothing sector – without comparison to national level</td>
</tr>
</tbody>
</table>
| **Support provided – preparation for the workshop** | • Preliminary data analysis – situation of textile and clothing sector in the region  
• 3 teleconferences with ATEVAL cluster responsible for preparation of data and mobilising of stakeholders – discussion on the follow up and types of stakeholders to take part  
• Incorporating European Research Agenda for Textiles to clarify project ideas identified in stage 1  
• Preparing a handout material to be used at the workshop |
| **Needs identified to be addressed during the workshop** | • Mobilisation and involvement of regional government representatives  
• Involvement of companies from home textile value chain  
• Discussion on specific project ideas that are interesting to companies on the background of bigger European trends and the situation in the region |
| **Processes stimulated in the region** | • Collection of detailed data on textile sector that is comparable to other European partners  
• Increasing the involvement of regional government in the support for the textile sector  
• Mobilising stakeholders to take part in |
<table>
<thead>
<tr>
<th>Region</th>
<th>Norte</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Situation after stage 1</strong></td>
<td>There were no previous analyses available for the region and no events organised earlier in the scope of Innovative Textiles partnership. The region was preparing a big textile conference (with around 500 participants) and it was decided to organize Innovative Textiles event together with it.</td>
</tr>
<tr>
<td><strong>Data provided (under expert's guidance)</strong></td>
<td>Detailed statistical data for textile sector and subsectors, including employment, gross value added and number of companies.</td>
</tr>
</tbody>
</table>
| **Support provided – preparation for the workshop** | • Detailed data analysis – situation of textile and clothing sector in the region and identification of regional value chain  
• 1 teleconference with Euratex – discussion on the methodology of the workshop (to be co–chaired)  
• Incorporating European Research Agenda for Textiles to clarify project ideas identified in stage 1  
• Preparing a handout material to be used at the workshop  
• Preparing a presentation for stakeholders |
| **Needs identified to be addressed during the workshop** | • Mobilisation and involvement of regional government representatives  
• Encouraging textile companies to take part in international partnership and kick–start their mobilisation  
• Discussion on specific project ideas that are interesting to companies on the background of bigger European trends and the situation in the region |
<p>| <strong>Processes stimulated in the region</strong> | • Encouragement to better organise textile and clothing companies in the region – although Norte is the biggest textile and clothing employer in Europe, there are no strong cluster organisations to represent stakeholders in bigger projects. Some preliminary steps have recently been taken to mobilise creation of efficient cluster organizations for the sector. |</p>
<table>
<thead>
<tr>
<th>Region</th>
<th>North East Romania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Situation after stage 1</td>
<td>As a lead region, North East Romania had a series of stakeholder interviews in December 2016 – the regional value chain, situation of research sector and company needs were discussed. The entrepreneurial discovery process for the textile sector had only been started, with a preparatory analysis prepared. For a part of the regional value chain, a knitting cluster was active.</td>
</tr>
<tr>
<td>Data provided (under expert’s guidance)</td>
<td>Detailed statistical data for textile sector and subsectors, for number of companies. First results of entrepreneurial discovery in textile and clothing sector.</td>
</tr>
</tbody>
</table>
| Support provided – preparation for the workshop | • Detailed data analysis – situation of textile and clothing sector in the region and identification of regional value chain  
• 1 meeting and 1 teleconference with ADR (regional development agency) – discussion on the methodology of the workshop  
• Incorporating European Research Agenda for Textiles to clarify project ideas identified in stage 1  
• Preparing a handout material to be used at the workshop  
• Preparing a presentation for stakeholders                                                                                                                                                                                                 |
| Needs identified to be addressed during the workshop | • Better understanding of research and economic potential and matching innovation needs  
• Organising three working groups for companies interested in similar projects  
• Encouraging textile companies (from clothing value chain) to take part in international partnership and kick–start their mobilisation  
• Discussion on specific project ideas that are interesting to companies on the background of bigger European trends and the situation in the region, including conclusions from December interviews                                                                                                                                 |
| Processes stimulated in the region           | • Continuation of company interviews – local expert trained by the international expert continues meeting textile companies and identifying their needs  
• Putting a local expert full time on the work of Innovative Textiles partnership  
• Initiative of the local expert to take part in MooC on smart specialisation  
• Mobilisation of the regional development agency                                                                                                                                                                                                 |
to identify textile and clothing projects that can be financed under regional and national programmes

<table>
<thead>
<tr>
<th>Region</th>
<th>Emilia Romania</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Situation after stage 1</strong></td>
<td>There was a qualitative value chain analysis prepared for investment promotion available for the region. No events were organised earlier in the scope of Innovative Textiles partnership.</td>
</tr>
<tr>
<td><strong>Data provided (under expert's guidance)</strong></td>
<td>Analysis of regional value chain. The statistical data was prepared by Piemonte region for all 5 Italian partners – for Emilia Romania data on employment and gross value added in the textile sector was used.</td>
</tr>
</tbody>
</table>
| **Support provided – preparation for the workshop** | • Detailed data analysis – situation of textile and clothing sector in the region and verification of regional value chain  
  • 1 teleconference with ASTER agency responsible for preparation of data and mobilising of stakeholders – discussion on the follow up and types of stakeholders to take part  
  • Incorporating European Research Agenda for Textiles to clarify project ideas identified in stage 1  
  • Preparing a handout material to be used at the workshop  
  • Preparing a presentation for stakeholders |
| **Needs identified to be addressed during the workshop** | • Mobilisation and involvement of regional government representatives  
  • Involvement of companies from fashion and smart textile value chain  
  • Organising two working groups for companies interested in similar projects  
  • Organising an additional workshop for the representatives of research sector  
  • Discussion on specific project ideas that are interesting to companies on the background of bigger European trends and the situation in the region |
| **Processes stimulated in the region** | • Preparation of detailed analysis on textile value chain  
  • Detailed mapping of research potential  
  • Increasing the involvement of regional government in the support for the textile sector |
<table>
<thead>
<tr>
<th>Region</th>
<th>Piemonte</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Situation after stage 1</strong></td>
<td>The region has an active cluster that recently completed a detailed analysis of needs and challenges in textile sector as preparation for regional investment. No events were organised earlier in the scope of Innovative Textiles partnership.</td>
</tr>
<tr>
<td><strong>Data provided (under expert's guidance)</strong></td>
<td>Analysis of needs and challenges in textile sector. The statistical data was prepared by Piemonte region for all 5 Italian partners – including employment, gross value added and number of companies in the textile sector.</td>
</tr>
</tbody>
</table>
| **Support provided – preparation for the workshop** | • Detailed data analysis – situation of textile and clothing sector in the region and verification of regional value chain  
• 1 teleconference with POINTEX cluster responsible for preparation of data and mobilising of stakeholders – discussion on the follow up and types of stakeholders to take part  
• Incorporating European Research Agenda for Textiles to clarify project ideas identified in stage 1  
• Preparing a handout material to be used at the workshop  
• Preparing a presentation for stakeholders |
| **Needs identified to be addressed during the workshop** | • Mobilisation and involvement of regional government representatives  
• Involvement of companies from spinning, weaving and knitting value chains  
• Organising three working groups for companies interested in similar projects  
• Possibility of individual discussions with companies  
• Discussion on specific project ideas that are interesting to companies on the background of bigger European trends and the situation in the region |
| **Processes stimulated in the region** | • Coordination of regional and international project initiatives  
• Mobilising stakeholders to take part in international matchmaking |
<table>
<thead>
<tr>
<th>Region</th>
<th>West Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Situation after stage 1</strong></td>
<td>The region has an active cluster that coordinates regional, national and international projects. No events were organised earlier in the scope of Innovative Textiles partnership, West Sweden joined the partnership later than other partners.</td>
</tr>
<tr>
<td><strong>Data provided (under expert's guidance)</strong></td>
<td>Smart Textiles Cluster bought the detailed statistical data for the region – including employment, gross value added and number of companies in the textile sector.</td>
</tr>
</tbody>
</table>
| **Support provided – preparation for the workshop** | • Detailed data analysis – situation of textile and clothing sector in the region and identification of regional value chain  
• 1 teleconference and 1 meeting with Smart Textiles cluster responsible for preparation of data and mobilising of stakeholders – discussion on the follow up and types of stakeholders to take part  
• Incorporating European Research Agenda for Textiles to clarify project ideas identified in stage 1  
• Preparing a handout material to be used at the during the interviews |
| **Needs identified to be addressed during the interviews** | • Due to the high differentiation of textile companies in the region, it was decided that individual interviews will work better than one workshop – 6 companies representing different parts of regional value chain were interviewed over 2 days  
• Better understanding of the situation in the sector and value chain  
• Mobilisation and involvement of regional stakeholders  
• Discussion on specific project ideas that are interesting to companies on the background of bigger European trends and the situation in the region |
| **Processes stimulated in the region** | • Collection of detailed data on textile sector that is comparable to other European partners  
• Increasing the involvement of regional government in the support for the textile sector  
• Mobilising stakeholders to take part in international matchmaking |
<table>
<thead>
<tr>
<th>Region</th>
<th>Catalonia</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Situation after stage 1</strong></td>
<td>The region has 4 clusters that concentrate companies from fashion, textile, technical textile and smart textile value chains. No events were organised earlier in the scope of Innovative Textiles partnership. A detailed analysis of fashion value chain was provided by one of the clusters and the regional agency ACCIÓ provided a general qualitative overview of the textile and clothing value chain in the region.</td>
</tr>
<tr>
<td><strong>Data provided (under expert's guidance)</strong></td>
<td>ACCIÓ provided the detailed statistical data for the region – including employment, turnover and number of companies in the textile sector.</td>
</tr>
</tbody>
</table>
| **Support provided – preparation for the workshop** | • Detailed data analysis - situation of textile and clothing sector in the region and verification of regional value chain  
• 3 teleconferences and 1 meeting with ACCIÓ – regional agency responsible for preparation of data and mobilising of stakeholders – discussion on the follow up and types of stakeholders to take part  
• Incorporating European Research Agenda for Textiles to clarify project ideas identified in stage 1  
• Preparing a handout material to be used at the during the interviews  
• Preparing 2 presentations for stakeholders |
| **Needs identified to be addressed during the interviews** | • Due to the high differentiation of textile companies in the region, it was decided that 3 workshops will be organised – 1 for research sector and business organisations, 1 for fashion sector and one for technical and smart textiles  
• Better understanding of the situation in the sector and regional value chain  
• Mobilisation and involvement of regional stakeholders  
• Discussion on specific project ideas that are interesting to companies on the background of bigger European trends and the situation in the region |
| **Processes stimulated in the region** | • Collection of detailed data on textile sector that is comparable to other European partners  
• Increasing cooperation between different value chains in the region and identifying their parts that have critical mass |
In the table below, a general overview of the workshops and interviews with regional stakeholders can be seen.

<table>
<thead>
<tr>
<th>Region</th>
<th>Type of event</th>
<th>Date</th>
<th>Participants</th>
<th>Main challenges</th>
<th>Projects identified</th>
</tr>
</thead>
</table>
| Valencia         | stakeholder workshop                   | 3.02.2017        | companies, cluster representatives, regional government representatives     | • Lack of qualified workforce  
• Ageing of employees and difficulties with attracting new talent  
• Need to improve the efficiency and flexibility of production processes | • Intelligent machinery  
• Flexible processes for efficient local production  
• Pilot plants for education and training |
| Norte            | textile conference with a workshop      | 13–14.02.2017    | companies, research institutes, regional government representatives         | • Insufficient mobilisation and organisation of stakeholders                      | Not discussed                                                                       |
| North East Romania | stakeholder workshop                   | 3.04.2017        | companies, research institutes, cluster representatives, government representatives | • Low value added production  
• Competition based mostly on cost and strong rivalry with countries like Ukraine and Turkey,  
• Low sustainability of production processes  
• Disappearance of traditional parts of the value chain (hemp production) | • Innovative high performance textiles  
• Innovative circular value chains for the fashion industry  
• Flexible solutions to adapt to small orders  
• Material requirements planning for textile sector |
| Emilia Romagna   | stakeholder workshop                   | 10.04.2017       | companies, research institutes, cluster representatives, regional government representatives | • Low awareness of stakeholders on quality and sustainability of textile products  
• High share of high quality but craft style textile production  
• Mismatch between research and business needs | • Fashion brand identity for local systems  
• Smart textiles for sportswear |
| Piemonte         | stakeholder workshop                   | 11.04.2017       | companies, cluster representatives,                                          | • Different requirements of big fashion producers in                               | • Integrated CAD solution for supply chain  
• Sustainable production processes |
<p>| | | | | | |
|                  |                                        |                  |                                                                               |                                                                                  |                                                                                     |</p>
<table>
<thead>
<tr>
<th>Location</th>
<th>Event Type</th>
<th>Date</th>
<th>Participants</th>
<th>Textile Chemistry</th>
</tr>
</thead>
</table>
| West Sweden  | company interviews  | 19–20.04.2017      | companies, cluster representatives                                           | • Sustainable production  
• Heating and cooling systems for smart textiles |
|              |                     |                    |                                                                              |                                                                              |
|              |                     |                    | Full, but very small in size textile value chain                            |                                                                              |
|              |                     |                    | High specialisation of successful companies in niche markets – difficulty in finding partners |                                                                              |
|              |                     |                    | Growing needs in terms of sustainability                                    |                                                                              |
| Catalonia    | stakeholder workshop| 24–25.04.2017      | companies, research institutes, cluster representatives, regional government representatives | • Incentives for the sustainable production  
• Smart sensors technology  
• Fashion customization  
• New spinnings  
• Spinning mill fiber and dust bricks  
• Recycled yarns and fabrics |
|              |                     |                    | High differentiation of technical textiles companies – niche product and applications that make it difficult to find partners |                                                                              |
|              |                     |                    | Different requirements of big fashion producers in terms of sustainability – lack of one European standard |                                                                              |

Source: Own elaboration
Interest in project ideas

Most interesting project ideas in the opinion of stakeholders – general view

Source: Own elaboration on the basis of regional workshops

Most interesting project ideas in the opinion of stakeholders – specific ideas

Source: Own elaboration on the basis of regional workshops
Suggested format for international matchmaking

Participants: companies, research institutions, intermediaries (clusters, associations etc.) that expressed the interest in a project idea

Proposition of the format:

- Introduction of project ideas – general presentation
- Participants pick their working group
- Each working group has a moderator who understands how project idea should be written and knows the subject of the discussion
- Ice-breaking/getting to know each other
- Project development – writing of detailed proposal that can be a subject of further support (feasibility studies, in-depth analyses, financial engineering)
- Definition of the potential partnership (who declares to take part, who else is needed)

Additional activities: B2B meetings, thematic panels/presentations/exhibitions

Catching up procedure for new or inactive partners

The regions that undertook the organization of stakeholder workshops or interviews have put a lot of effort including purchasing of statistical data, identification and mobilisation of appropriate stakeholders, the practical organization of workshops etc. The results are concrete project proposals that can be matched with other partners and are confirmed to match the needs of regional economy and be attractive to companies and other stakeholders. In order to join the process, and keep its quality, not making other partners to constantly come back to stage 1, new regions should ensure that the following steps in terms of input and results are achieved.

Input of active regions so far:

- Mini survey and provision of statistical data
- Sharing of analyses, strategies etc. done at regional level
- Mobilisation of regional stakeholders – workshops/interviews

Results achieved:

- Detailed understanding of regional profile, value chain, trends and challenges in the textile and clothing sector
- Verification of stakeholders interest in international projects – international entrepreneurial discovery
- Ready preliminary project proposals (2-3) per region

These results would have to be provided by the new regions with additional expert support.