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1 Executive Summary

1.1 Objective of the deliverable

The objective of this deliverable is to report on the regional economic fabric of the 7 regions. The report uses a common template for the 7 regions so each partner can develop regional reports with the same structure and information, including a detailed SWOT analysis. This first report on the targeted regions will provide a baseline to support the development of the following reports on the regions later on:

- A contextual analysis of regional innovation policies and strategies in terms of Innovation-led growth paths (Deliverable 1.5).
- List of selected measures for good practice case studies (Deliverable 1.6)
- An inventory of R&D&I support measures and an impact analysis on regional SMEs, using primary and secondary data (Deliverable 1.7).
- Innovation pathways of SMEs in traditional sectors (Deliverable 1.8)

These reports will be complemented by a global analysis at EU level of R&D&I support measures and their impact on the transition of regions from traditional to knowledge based economies on WP2.

Resulting from this research study, a set of recommendations regarding more efficient R&D&I measures will be produced and validated at European level, while the participating regions will serve as a test bed for their implementation by including them in the Local Action Plans to be developed and implemented by the UNIC project.

1.2 Identifying a “traditional sector”

Our concern is with “traditional manufacturing sectors”. We do not define “traditional” only - or even mainly - according to the standard OECD classification of industries as “high”, “medium” or “low-tech”.¹ This approach does not capture the complexities of traditional industries nor does it show the dynamic nature of the firms. For instance, some traditional industries may be low-tech but others are not (e.g., automotive). Indeed, once we define industry at a level meaningful to practitioners - say, at the SIC 4-digit level - characterization of whole industrial sectors as “high”, “medium” or “low-tech” may be misleading.

For example, pottery/ceramic products in SIC 262 includes sectors that may operate at different levels of R&D intensity (e.g., SIC 2621 – manufacture of ceramic household and ornamental articles - and SIC 2624 – manufacture of technical ceramics).² Moreover, even

¹ These categories are defined by research and development ‘intensities’ – that is, OECD average shares of research and development expenditure in sales revenue – of, respectively, more than 10 per cent, between 0.9 and 10 per cent, and less than 0.9 per cent.

² In the British Standard Industrial Classification (SIC), which follows the same classification principles as the EU NACE classification, the principal pottery/ceramic products in SIC 262 comprise SIC 2621 – manufacture of ceramic household and ornamental articles, including table ware, kitchen ware, ornamental articles and toilet articles (excluding large sanitary fixtures); SIC 2622 – manufacture of ceramic sanitary fixtures; SIC 2623 and 2624 – manufacture of technical ceramics; and SIC 2626 –

the same 4-digit industry may include substantially different intensities with respect to R&D and other types of innovation activity (e.g., commodity earthenware producers and specialists in hotel ware).

Our preferred approach to defining “traditional industry” is multi-dimensional, reflecting not only measurable characteristics but also a range of concerns or anxieties.

We define as “traditional” those manufacturing industries with at least the majority of the following characteristics.

Long established. Traditional implies history. One interpretation would be that the industry should have been established at least during the inter-war years (1918-1939) if not before. This is sufficiently broad to include, say, the motor industry but to exclude, say, computing. Most of the industries in which we are interested have been established for much longer, such as leather.

Strictly speaking, age is both a necessary and sufficient condition for an industry to be classed as “traditional”, which suggests the major theme of longstanding processes or products. However, we are also interested in industries with at least some of the following characteristics:

Once a - even the - main source of employment at the sub-regional level (possibly even the regional level in certain cases).

In the mature or declining phase of the industry life-cycle, with recent decline typically associated with globalisation. Because these industries are long established, knowledge has diffused and enabled production to develop in and/or be relocated to new locations with lower costs. This applies to at least some of our industries (e.g., ceramics) although not necessarily to all (maybe food processing?).

Labour intensive, so that relocation of production to low-wage economies has particularly serious consequences for manual employment in the (sub) regional context. Of course not all aspects of production may be out-sourced to low-wage economies such as design and marketing. However, a key element of the traditional nature of the industries is that some or most of the repetitive, low-skilled, manual work is indeed out-sourced from EU countries.

Major sources of wealth creation and employment in regional (or, at least, sub-regional) economies. In spite of recent decline, the traditional industries in which we are interested continue to be important to regional or, at least, sub-regional economies.

Retain capacity for innovation, hence the potential to continue as important sources of wealth creation and employment. This issue can be linked to the core competencies where firms will retain what can add value (make strategy) and out-source what the market can produce more cheaply and/or efficiently (buy strategy). Conversely, traditional industries may be ones in which “conditions of low

manufacture of refractory ceramic products (CSO, 1993). Related industries, but outside SIC 262, include the manufacture of ceramic tiles and flags (SIC 2630) as well as bricks, tiles, and construction products (SIC 2640).

technological opportunities limit innovative entry and restrict the innovative growth of successful established firms” (Breschi et al., 2000, p.393).

Recent and often dramatic decline is why we are especially concerned with traditional industries because traditional industries often remain important sources of wealth creation and employment in regional (or, at least, sub-regional) economies they are of concern to public policy; and capacity for innovation is likely to be both a feature of any industry that survives long enough to be classified as traditional and a necessary condition for a positive return on public sector support for these industries.

This potential for innovation may be more associated with particular industry groups (at the NACE/SIC 3-digit and/or 4-digit levels) firms than with the industry as a whole and, possibly, with SMEs rather than with larger and established industry leaders. Accordingly, we should also be careful to distinguish high-tech and dynamic industries or even firms within broadly defined traditional sectors.

Evidence of significant capacity to diversify from within a traditional industry towards new, high-growth activities: i.e., the possibility of high-tech and dynamic industry groups emerging within broadly defined traditional sectors. Sectors defined at the NACE/SIC 2-, 3- or even 4-digit level may be sufficiently heterogeneous to give rise to industry groups able to diversify into new technologies and products.

An example is the textile industry that as well as the “rag trade” has also witnessed the growth of technical textiles. The general point is to note significant diversification from within traditional industries towards new, high-growth activities.

Additional characteristics, although not necessary conditions, of traditional manufacturing industries might also be:

Substantial contribution to regional (or, at least, sub-regional) **exports**, even if the industry has recorded a deteriorating trade balance as part of overall decline associated with growing competition from imports.

Geographically concentrated; traditional industries may or may not be geographically concentrated and so constitute a “cluster”. This characteristic can vary between industries where economies of agglomeration are useful for some industries, such as ceramics, but not others.

2 LIMOGES - France

2.1 ECONOMIC CONTEXT OF THE REGION

Limousin represents 3% of the national metropolitan space with a land area of 16.942 km². Its territory is composed of trays separated and inclined, with the major part in geological formations which are germane to crystalline Massif Central. More than three quarters of the territory is occupied by grass land, wood and forests, lands and fallow.

Limousin is divided into three departments (Corrèze, Creuse and Haute-Vienne) and 747 municipalities. According to the census of 2009, the population reached 741,000 with an average growth of 0.4% per year over the period 1999–2006 compared to 0.7% at the national level. With exception of Corsica, Limousin appears to be the least populated region (43 inhabitants per km²) in the country.

Limousin is predominantly urban but remains to be less urbanized than the entire country: only 62% of the inhabitants live in urban areas as opposed to 82% in the metropolis.

The population of the region is composed mainly of aged individuals- 28% are over 60 years compared to only 21% at the national level. The other age brackets with the corresponding percentages are as follows: 20.4% of the population is less than 20 years of age, 22.8% is within the age range of 20-39, 28.5% is between 40 and 59 years of age. Creuse meanwhile inhabits most aged individuals with nearly a third of region's aged population (aged over 60 years).

The population growth of the region remains hampered by a negative natural balance. The increase in the regional population is due to a strong migration surplus, which more than offsets the natural deficit. Between 2001 and 2006, Limousin hosted 60,000 people from another region but at the same time, 48,000 people migrated to another region. Half of the foreign population living in Limousin is from the European Union and 30% from Africa. The British are the most represented nationality in the region (20%), outnumbering the Portuguese (15%) and the Algerians (10%).

With a GDP per capita of 24,518 € in 2007, Limousin contributes 1% to national wealth creation. Unemployment in the region is significantly lower than the national average: in the second quarter of 2009, 7.7% of the active population in Limousin was unemployed as opposed to 9.1% at the national level. The structural level of the workforce shows that the social and occupational group of the skilled workers is overestimated (45% as opposed to 41% in the province) at the expense of corporate level workers (6.4% as opposed to 7.5 % in

the province). In 2006, the annual average wage income was 16,500 € in Limousin, slightly lower than the average annual wage income in France (17,100 €).

The Limousin is ranked 22nd among the French regions in terms of exports and the 23rd for imports. Trading abroad has not been significant in the region. However, in recent years, overseas trading has increased dramatically: within ten years, the value of exports increased by 70%. In 2007, exports amounted to 1.66 billion € and imports to 1.56 billion €, with a trade surplus of nearly 99 million €.

The Limousin economy is mainly dominated by agriculture compared to the other regions: 8.6% of the working population belongs to this sector as opposed to 3.9% at the national level.

The Limousin industry is structured around an efficient fabric of SMES/SMIS and also houses the headquarters of competent enterprises in their fields (Legrand in Limoges for electrical equipment, Codechamp in Champagnat for optical encoders, Borg Warner Automotive in Tulle for automotive equipment, among others...).

2.2 SME profiling in the region

2.2.1 SME situation in the region

The regional sectors of excellence include the food processing industry, the private electrical/electronic sector, the metallurgy and mechanical engineering sector, the porcelain and ceramic sector, the wood industry, as well as the graphic industry. Two poles of competitiveness are piloting from the Limousin region : elosys (microwave technology, photonics and secure networks), and ceramics (the Limousin ranks as the third ceramic producer at the national level according to a research conducted on ceramics). It is also associated to 4 other types of competition (science and systems of electrical energy, Viaméca, Pole Cancer bio-health and meats and meat products) and houses in addition 15 rural centers of excellence. The Limousin also has a high-tech city (Ester in Limoges) as well as more than a dozen small scale companies. Tourism however must not remain unnoticed, which represents 5% of the regional GDP and about 9,000 direct or led employees.

2.2.2 SMEs in traditional sectors

The ceramics sector

In 2007, the ceramics sector in Limousin was comprised of 239 enterprises with 2,521 employees, which represents 6.2% of the total employment in the region. Employment in this sector however has decreased over time between 2001 and 2007 by 15.7%

In 2007, the ceramics business has reached over 62 million €, with a rate of value added of 33.1%.

At the initial stage of industrial development during the nineteenth century in Limousin, this activity covered two major areas of production: the porcelain tableware and ornaments and, the porcelain used for sanitation purposes and construction materials.

The traditional activity of the porcelain has generated the creation of a sector which brings together industry makers, manufacturers of materials production and suppliers of materials, chromos and semi-finished products. This sector employs approximately 2,400 individuals, of which 1,500 relate to porcelain.

- *The porcelain tableware*, like the sector of tableware, suffers from repeated crises resulting in closures of undertakings and decreases in the salaried labor force. It is essentially an activity undertaken by small and medium-sized businesses, sometimes integrated within sets of the most extensive luxury sector of the tableware.

- *The sanitary ware* is represented by two important establishments in two of the leading groups: Allia and Jacob Delafon (Kohler). It employs approximately 350 employees.

The main innovative enterprises of the ceramics industry are:

- **Bernardaud**: Manufacturing of ceramic articles for domestic use or ornamental - 2341Z
Head office: Limoges. Capital share: 3,276,990 €.

- **Haviland**: Manufacturing of ceramic articles for domestic use or ornamental - 2341Z Head
office: Limoges. Capital share: 6,670,064 €, Turnover: 9,350,000 €,
Workforce: 185.

- **Royal Limoges**: Manufacturing of ceramics articles for domestic use or ornamental - 2341Z
Head office: Limoges. Capital share: 553,600 €

- **Medard de Noblat**: Fabrication of ceramic articles for domestic use or ornamental- 2341Z
Head office: Sauviat on Vige (87). Capital share: 300 K€; turnover: 6110K€ (Financial Year
2006). Workforce: 51 (in 2006).

Médard de Noblat was acquired by the Dutch group Amefa, specializing in the arts of tableware.

The ceramics, innovative sector:

Emblem of Limoges, the production of porcelain was developed due to the presence of kaolin, water and wood. All the activities linking art and fire gave birth to the term, "The Arts of Fire," which includes porcelain, enamel, stained glass and everything that is related to the extraction and processing of materials from the Limousin sub-soil, gold mines to industrial ceramics. In order to enhance all related undertakings in these sectors, the City of Limoges and its partners, including the Chamber of Commerce and Industry of Limoges and of the High-Vienne are engaged in a broad program entitled "Pole of Economy of Heritage". Alongside the traditional manufacturing are the development of suppliers of their raw materials and equipment manufacturers like dmc2 France (dyes and enamels), KPCL (Kaolin and pulp of the Limousin), ceramic Elmecceram, Matthey-Beyrand (Cookson-Matthey), as well as producers of ceramic sanitary ware.

Today we are witnessing technology transfers of the ceramic pole through innovative enterprises such as I Ceram (design, manufacture and marketing of orthopedic implants and surgical), B.A.T. Graphics (manufacture of anilox ceramics for printing) and Sulzer SOREVI (coatings under vacuum).

In order to consolidate the skills acquired in ceramics and the surface treatment, a European Center of Ceramics will be created in September 2010 that will bring together all training and existing research centers such as the University of Limoges, the national superior school of ceramic (ENSCI), the national superior school of engineering of Limoges (ENSIL), the laboratory study group of heterogenic material (GEMH), the center of technologies for ceramics transfer (CTTC), the center of engineering, treatment and covering of advanced surface (CITRA).

b. The Mechanics / Metallurgy sector

In 2007, production in the mechanics/metallurgy sector included 5,666 workers in 311 industrial establishments and handicrafts, distributed on the three departments of

Corrèze, Creuse and Haute-Vienne which in fact is the biggest manufacturing sector, employing 15 per cent of employees. Between 2001 and 2007, this sector has experienced a growth of 6.3% of the number of its employees.

This industrial sector covers three areas of activity:

- The automobile industry, whose workforce has declined by almost half over the past ten years, particularly due to the downsizing of large institutions.
- The working metal, which consists of approximately 3,900 employees, whose development appears mitigated during the year 2006, bearing risks associated particularly with the under-treatment of capacity.
- Mechanical equipment, in progress over the year 2006, which consists of 3,000 employees.

Basing on the data from the Bank of France in 2006, with a turnover of approximately 750 million €, the Limousin industrial firms in this sector incurred 0.23 % of the national turnover for a workforce representing 0.5 % of the French workforce. The rate of value added is two times higher than is found at the national level. The Limousin represents 0.29 % of domestic investment. More than 20 % of the production in this sector is exported.

The majority of this industry is composed of PMI subcontractors of lower rank. These PMI suffer tremendously from the policy of the manufacturers and suppliers of first rank.

The main innovative enterprises in this sector are:

- **Lavaud steel constructions:** manufacture of builders' metal frameworks, and steel constructions. Headquarters in Corrèze.

The activity of this company is focused on the manufacturing and the laying of buildings to metal framework including coverage, rainwater, cladding, insulation and locksmith. Its market is evenly distributed among a customer base and agricultural industrial clients. It is present in niche markets where it brings its partners a strong value added.

- **Châîneries Limousines:** manufacturing of articles in metal wires, chains and springs – 2,593Z Turnover: 8,980,037 € (in 2009). Headquarters: Bellac (after). Workforce: 73

- **Renault Trucks:** mechanical parts and assemblage of small pieces. Headquarters in Chambon on Voueize (23). Workforce: 450.

On June 1, 2008, the entity Small Series (PRPS) of Limoges Renault Trucks has been sold and has changed its name. This subsidiary is now called Texelis. This change was announced at the first stage of the evolution of the sale. The Unit produces small series of parts and assemblies intended for the Renault group trucks and for ten outside clients, mainly in the rail sector.

- **Acemeto**: Affutage and the manufacturing of cutting tools.

Headquarters in Tulle (19). Workforce: 12

- **Staer**: assembly of automatic manufacture spring. Capital share: 1,000 € (in 2009).

Headquarters: Limoges. Workforce: 8, including 2 in the study group.

- **Sed (Society studies developments)**: medico-surgical apparatus, design, manufacture components, assemblies. Capital share: 200,000 €. Headquarters in Corrèze.

Workforce: 11, including 2 in the study group.

- **Rencast Brive light alloys**: foundry in aluminum pressure. Headquarters in Brive (Corrèze);

Workforce: 200 including 10 in the study group.

- **Foundry Raynaud Augier**: foundry cast iron and bronze axis rapid prototyping.

Headquarters in Feytiat (Haute-Vienne). Workforce: 14 including 2 in the study group. - -

Somac: Mechanical assembly and tooling. Headquarters in La Souterraine (Creuse).

Workforce: 47 including 11 in the study group.

- **ECE**: design and implementation of machine ventilation, special mechanical constructions, molds and tool and subcontracting in mechanics. Headquarters in Limoges. Workforce: 48 including 8 in the study group.

- **Vignaud Sharpeners**: Equipment sharpeners. Head office in Saint-Junien (Haute-Vienne).

Workforce: 5

- **Faure A. and M.**: Manufacture of sharp mechanical tools in all industries. Headquarters in Limoges. Workforce: 43 including 1 in the study group.

- **Faure Equipements:** Mechanical Engineering. Headquarters in Limoges. Workforce: 39 including 5 the study group.

Innovative practices in this sector:

In Limousin, there is a pole of competitiveness in the mechanics sector called VIAMECA and an association named "Mecanic Vallée".

The center at VIAMECA competitiveness was created by the State aiming to promote the jurisdiction of firms in helping them to innovate, create ecosystems with coexisting enterprises, training and research. This pole of competitiveness has a role in council and diagnosis.

Thus, the collaborations between laboratories, technical centers and industrials of VIAMECA between 2006 and 2008 have led to the creation of 24 projects in Limousin. 87% of them relate to the process of shaping materials and the direct manufacture, intelligent systems, robotics and surface engineering. The main practices in terms of innovation are characterized by the use of special machines (dedicated to a given task), special vehicles (characterizing innovation in the intelligence of vehicles) and special structures combined (innovative processes integrated in manufacturing).

c. The automotive sector

In 2007 in Limousin, the automotive sector comprised about 24 industrial establishments employing 1,403 workers or 3.5% of employees from the productive activity of Limousin. Between 2001 and 2007, the number of workers rose by 28.8% in the region; this sector ranks fifth in exports (9.5% of the regional exports total) and is the leader in imports (27.8% of regional imports).

Limousin has several first-tiers, such as Valéo, Meillor, Wagon automotive, Renault Trucks and Borgwarner. The majority however of the industrial fabric is composed of inferior PMI subcontractors. They undergo very strict policies from leading manufacturers and suppliers, such as the sales decline, credit restrictions, and job cuts. The car market also experienced downsizing from 2007 to 2009 due to the financial crisis. Among large manufacturers in the industry, layoffs and relocations have been sustained. Yet it is a very

active sector, which will face new challenges in the next few years: producing better, cheaper, less pollutive vehicles.

Despite the lack of actual visibility from industry players, projects (electrical or hybrid vehicles for instance) remain valid and therefore require reinforcements.

The main enterprises are:

-Renault Truck: military vehicles renovation and parts manufacturing in small series for trucks and industrial vehicles.

It is part of the Swedish group Volvo. Workforce: 800 to 900.

-Sonas automotive: cutting, automotive OEMs, stamping parts structure 2,550 B

Head office in La Souterraine (Creuse). Turnover: 125.9 million €. Workforce: 914.

-Valeo Matériaux de friction: manufacturing of other automotive equipments – 2,932Z

Head office in Limoges. Turnover: 73.5 million €.

Workforce: 400 to 500.

-Borg Warner Automotive Systems Tulle: design and installation of mechanical and electro hydraulic compounds for automotive.

-Turnover: 127,409,597 € (in 2007). Head office in Eyrein (Corrèze).

Enterprise's Workforce: 251 to 500.

According to a report of the Bank of France dated February 2010, the Limousin automotive sector experienced a downturn, besides the decline recorded during the last semester in 2008. The industrial production continued to decrease, and attenuated for most part in 2009. However, improvement has been observed during the last months of the year. This slowdown has led to declining exports in this sector.

Automotive industries were among the first to feel the effects of the crisis in 2008. Although sectors working on cars are often located in niche markets, and oriented mainly towards exports, they have enjoyed a resurgence of activity at the end of the second half. Their production, fairly insensitive to changes in the domestic car market, has since stabilized.

For 2010, business leaders expect an increase in their turnover throughout the year. They expect more precisely a better orientation of the demand already seen in the second half of 2009.

Year-end surveys of the Bank of France in 2009 showed that manufacturers were aware of the fact that their situation has improved, judging from the monthly evolution of the activity again becoming positive. Also, entrepreneurs expected stability of their turnovers. In early 2010, the demands remain lower than expected. Moreover, the underutilization of production capacity would, if they persist, weaken the structures of businesses.

Export prospects are slightly better oriented (about +1.1%). After the downturn in 2009 and real fault prospects for 2010, investment programs remain very cautious.

d. The textile sector

The textile, clothing and leather industry covers more than 80 institutions in the Limousin region and employs approximately 2,050 employees (figure from Assedic), which represents more than the national average (5.5% of the workforce employed in the Industry as opposed to 4.7% for the national level).

This number is declining steadily for years, in line with the decline seen at the national level but more attenuated, in the milder light of regional specificities. In 9 years, the number of institutions has decreased by 40% and 30% of salaried workforce (48% at the national level).

Employment is highly feminized (70% of eligible employees) and the enterprises are undersupervised.

Industry of hand works: the related activities are at a disadvantage compared to imported products.

Department of Haute Vienne (Limoges box and de Rochechouart zone) comprises about 70% of employment in this sector.

Many entrepreneurs develop strategies of niche, and some supplement their products line by reducing imports cost, a condition often required to maintain a manufacturing operation in the region.

The tapestry barely keeps up and must find a new life for technology mastered in an active policy of creating, as well as further cooperation among companies to better promote the product.

The main institutions of this sector:

- **Filature de Rougnat** : preparation and spinning of textile fibers – 1,310Z

Head office in Rougnat (Creuse). Turnover: 794,000 €. Workforce: 13

-**Filature Terrade**: preparation and spinning of textile fibers (1,310Z)

Head office in Felletin (Creuse). Turnover: 240,000 €. Workforce: less than 10

-**C 2000**: outerwear manufacture for great fashion – 1,413Z

Head office in Limoges. Turnover: 934,000 €. Workforce: 41

-**Cheri Bibi** : manufacture of other dresses and accessories _ 1,419Z

Head office in Combressol (Corrèze). Turnover: 838,000 €. Workforce: 14

-**Fabrication de Smuggler**: specializing in retail clothing stores – 4,771Z. Head office in Paris.

Turnover: 4.87 million €. Workforce: 19

-**Tapis tapisserie Aubusson Felletin**: retail sale of carpets, rugs, floor and wall coverings in specialized stores – 4,753Z

Head office in Aubusson (Creuse). Workforce: 41

-**Tannerie Mégisserie Hervy**: tanning and dressing of leather, dressing and dyeing of fur – 1,511Z

Head office in Isle (Haute Vienne). Turnover: 4,769 million €

-**Filterie de Brignac**: preparation and spinning of textile fibers – 1,310Z

Head office in Royères (Haute Vienne). Turnover: 1,167 million €

-**Allande**: manufacture of underwears – 1,414Z

Head office in Le Dorat (Haute Vienne). Turnover: 19,530 million €. Workforce: 148

Practices of the textile sector in terms of innovation:

In order to deal with imports from Asian countries with low cost labor, enterprises in this sector should implement strategies that combine several elements:

- Specialization on a high value added activity
- Branding
- Creation, innovation in products (styling, design, new textiles...) and marketing,
- Better service for customers
- Technological innovation in the manufacturing process (use of new materials),
- Internationalization,
- Improving management (managing human resources, versatility, new skills).

Specialization on activities with high value added is implemented mainly by the use of innovative technical textiles that are specification for certain products (for instance: use of bamboo fiber in manufacturing resistant socks).

Technical textile is mainly represented by two enterprises that have their origin in the manufacture of marquors for stationery. The main unit, COFPA, was recently acquired by the American Albany Group, specialized in bands in the transfer of machinery paperboard, panels and non-woven. Moreover, there is a company (Texinap) specializing in the manufacturing of insulating fiber.

e. The leather sector

In 2007 all leather production included 45 sites, 841 employees or 2.1% of total employment. From 2001 to 2007, the employment rate in this sector decreased to 2.1%.

Leather work in Limousin is based historically on the existence of a branch of production: from cattle and sheep to gloves and shoes manufacturing through tanning and tawning. Despite the downturn of these activities, Saint Junien remains the main focus of French skin gloves. The shoe is represented by high and midrange, with Weston and company Marcel Faure. Leather goods are also present in Corrèze particularly with the Company Le Tanneur.

Main institutions:

Gloves:

-Ganteries Georges Morand: manufacture of skin gloves since 1946

Head office in Saint Junien (Haute Vienne)

-Agnelle: manufacture of other clothing and accessories since 1937 (1,419Z)

Workforce: 35

Bags:

-**Le Tanneur**: retail trade in leather goods and travel goods – 4,772B

Head office in Bort les Orgues (Corrèze). Turnover: 50,130 million €

Workforce: 483

Shoes:

-**J.M Weston**: manufacture of shoes – 1,520Z. Manufacture of shoes since 1891.

Head office in Limoges; Turnover: 50 million €. Workforce: 211

Since its inception in 1891, Weston made its own accessories in its own factory in Limoges. It has, moreover its own leather sold in Haute Vienne at Saint Léonard.

-**Establishment Marcel Faure**: manufacture of women shoes – 1,520Z.

Head office Rochechouart (Haute Vienne). Turnover: 5.067.000 euro

Workforce: 48

Other

- Colombier Tawning: primer and tanning of leathers, preparation and dye of furs - 1511Z

Head office in Saint Junien (Haute Vienne). Turnover: 2.371 million euro

Workforce: 28.

2.3 SWOT Analysis

2.3.1 Strengths, Weaknesses, Opportunities and Threats

The city of Limoges is the flagship of Limousin. It is home to key agencies and poles of competitiveness. A large share of strengths and weaknesses of the study areas,

opportunities available to them are related to the potential offered by this city, its ability to stimulate this sector.

The city of Limoges knew how to preserve its traditional character and keep its heritage intact. "Capital of the arts of fire and porcelain", it has been labeled since 2008 the "city of Art and History". It fulfills all the basic needs in terms of social and cultural life. Based on a diversified economy, the city offers a good standard of living, an education system and quality services.

Strengths:

The city of Limoges has several well-known schools, business combination, competitiveness, research laboratories and organizations which are an advantage for SMEs in the Limousin region in terms of innovation.

- The main factors supporting innovation:

Among them, there are those who play a supportive role in innovation and those who finance innovative projects.

-Funders:

The financing of innovative projects or the financial support of SMEs is provided by OSEO and the Limousin region.

There are several types of financing:

The technology delivery system (PTR): it aims to enable SMEs to become familiar with innovation by incorporating technological dimension in their development strategy. A grant provides funds for technical studies and the filing of an initial patent.

Assisting the transfer of technology: It facilitates technological cooperation between research laboratories and enterprises, especially in clusters.

Assisting research project, development and innovation: it allows helping SMEs to develop products, process or services technologically innovative and having genuine potential for commercialization.

Aid for innovation gateway: it facilitates the partnership of large accounts/Enterprises helping those ones to carry out innovative development which results concern a large account.

Support for strategic industrial innovation project – ISI program: it supports collaborative innovation projects, strategic, in order to promote the emergence of new European and world champions.

Nation research funding: funding is provided by the A.N.R (National research Agency), which amounts to 500,000 €. There are calls for thematic projects and calls for non thematic projects (blank ANR). For this type of funding, there is no criteria on the projects.

International research funding: this funding ranges between 50,000 € and 105,000 €. French do not perform well for this call for proposals. So it is therefore necessary to progress in this area.

Supports cooperative projects of clusters F.U.I (departmental funds only): It is intended to implement a collaborative project involving the development of new products and services with high innovative content. This project must be certified by one or more clusters. This fund is from 500,000 €.

In addition to funds made available to companies to innovate, there is a system called **technology transfer**. This system is based on social action in the short term, that are local and modest designed to encourage enterprises to innovate. This calls for the involvement of both a teacher/researcher and an industrialist.

- Accompanying players:

These factors are mainly public bodies:

The Chamber of Commerce and Industry of Limoges, the Regional Council, the ARIST(Regional Chamber of Commerce and Industry of Limousin), the European center of Ceramics (PEC) which regroup several local players, the ESTER Technopole which support the policy of economic development of the city of Limoges, Recovery Agency for Academy research in Limousin (AVRUL), including through the incubator, VIAMECA (cluster mechanics), the Metal Pole Corrèze, the Mechanic Valley association, Limousin Expansion and the Technological Research Development (RDT) platform.

Weaknesses:

The region of Limousin does not have a prestigious business school, even if there is an Institute of Business Administration.

The region also lacks large-scale events (conferences, workshops, etc.). The city of Limoges has no conference center although several sites can host events.

Besides the fact that SMEs do not export enough, some areas are poorly represented (including textile).

The number of patent and publications are not extraordinary.

Dissemination of best practices through transfer centers of basic research or technology transfer centers are underdeveloped (non-existent for mechanic, textile and leather).

Services via the Internet (e-services) are still relatively underdeveloped, particularly in trading (regarding purchases of products such as porcelain).

The fact that transportation to major metropolitan areas is difficult due to the lack of TGV or a direct highway to Nantes or Lyon.

Opportunities:

The development of the university network called "PRES" (POLE of research and higher education Limousin –Poitou-Charentes officially created in July 2009), which links the Universities of Limoges, Poitiers and La Rochelle and could bridge the gap in training and thus allow other universities to address issues specific to Limousin.

The Institute of Business Administration (IAI), created in 2007 within the university is an advantage in terms of training.

There is a great proximity between all the different actors of this small region : circuits are short and discussions easy.

Most of the actors are susceptible to help and assist companies to innovate coordinate their resources and their objectives.

The city of Limoges organizes an International Salon of the Porcelain every three years, which allows for the discovery, making its porcelain known. While Limoges is still known worldwide as the “City of Porcelain”, it is still necessary to project a strong image for the future.

New cultural centers have been recently opened (Zénith, Maison de l’émail, Museum Adrien Dubouché renovated...)

Limoges has the opportunity to continue to promote sustainable development as a regional priority.

A concept of diversification will be beneficial for SMEs in the region. Indeed, sectors such as textile or mechanics will benefit from increased market share by producing products more and more specific (and also innovative) to be used by sectors such as automotive (there are very few companies which produce technical, textile products in Limousin).

Threats:

There are several competing universities in neighboring cities.

International pressure could weigh more likely in the context of off shoring. Private companies are not confident in their ability to network.

Coordination should be improved between many factors involved in economic development (region, the city of Limoges, University, enterprises, the Chamber of Commerce and Industry on Limoges, the national agencies, etc...)

Further analysis of the Forces, Weaknesses, Opportunities and specific threats to certain sectors:

➤ Ceramics:

- Forces and prospects for innovation in this sector:

Relating to technical ceramics, strong development is expected. University laboratories, Ensci (The Superior National School of Industrial Ceramics) and Ensil (The

Superior National School of Engineers in Limoges), exercise intense activities in this field and in the surface treatments. This activity, extended by the two centers of technology transfer, the CTTC (Center of transfer of Technologies of Ceramic) and the Citra (the Cornell Institute for defining Research on Aging), constitutes a runway of new developments. The third of national public research in this sector is located in Limoges and the cooperation between laboratories, the schools of engineers and regional enterprises are being developed. The creation of the European Center of Ceramics and the construction of the European Center for the ceramics, representing an investment of over 23 million €, have the effect of positioning this center within national and international networks devoted to research and the development of materials in general and the ceramics in particular.

The industrial activity, still embryonic in Limousin, will benefit from these new opportunities. In particular, the local expertise will be strengthened by the creation of antennas, of the technical centers competent in the sector which will extend the register of the services offered to businesses, thus constituting a powerful factor of attractiveness. These developments also offer prospects for diversification for certain firms specializing in porcelain.

The presence of a pole of competitiveness allows boosting the activity of the chain. The potential research and the existence of a complete cluster dedicated to the implementation of ceramics are the source of the response of the European Pole of Ceramics over an appeal to establish competitiveness poles launched in 2004. This appeal was the opportunity to federate the economic sector to create strong dynamism in Limousin. There are different strategic axes relative to the respective sectors. In this context, the European pole of Ceramics is based on five strategic axes which are as follows:

- **The arts of the table**

- Processes: make processes for producing parts for the table decoration more flexible and more profitable.
- Products: introduce to the market new products involving creativity, design and results and outcomes and skills from laboratories.

- **Housing**

Surface treatment of materials, concrete, wood, terra cotta, etc...

New materials: fragment reduced, reconstituted stone, lime clay mixing plant fiber, flexible material.

- **Energy**

New energies: fuel cell (SOFC), with their ceramic components, and the production of gaseous energetic carriers, with CTTC and SPCTS as well as new materials from the nuclear power industry, with GEMH and CEA.

Saving energy: anti-wear treatments, insulation with GEMH, SPCTS and CITRA.

- **Health**

Biomaterials for bone substitute ceramic, with SPCTS and CTTC, in collaboration with manufacturers of prostheses.

Porous ceramic for the controlled release of drugs, with SPCTS, GEFSOD and SPCTS.

- **Electronic and optoelectronic**

Passive electronic components, with SPCTS and the industrials of this industry.

Optic components, optoelectronic and micro waves.

Thus, for the porcelain industry, the idea is to implement measures to give this struggling sector a leeway. This requires improved methods on the materials used, the search for new products and diversification in applications outside the traditional field of activity, especially in technical porcelain. For OEMs, the idea is to develop new manufacturing processes based on innovative technologies for the sector.

Finally, for specialists of engineering ceramics, the idea is to develop materials suitable for new applications in the field of health technology, energy and communication, and for use in homes, and to develop competencies in nanomaterials.

-Training institutions:

The ENSCI (National School of Industrial Ceramics), the ENSIL (National School of Engineering of Limoges) and the ENSA (National School of Arts Department and Ceramic) are the 3 main schools in ceramics. Public research is valorized by incubators within the Valorization Agency for university research in Limousin (AVRUL). The well-known center of

research in ceramic within the University (Institute of processes applied to materials), as well as a mixture unit of research combining the University, the CNRS and the ENSIL are also training centers that welcome engineering students. It plays a significant role in terms of innovation.

The region of Limousin also offers a strong potential for artistic creation and design (CRAFT, ESPRIT PORCELAIN, Gallery, business founders and artisans.

➤ **Mechanics/Metallurgy :**

-Weaknesses:

In a very difficult competitive environment, the industry workforce relies heavily on exports and appears shifted in response to changing ways of life. The upscale products which are partly induced by high manufacturing costs, involves an aggressive supply of commercial brands, mainly based on the famous reputation of Limoges as it relates to certain products. This business approach has a high cost, and is out of reach for most factories.

Some enterprises are involved in manufacturing of items for home equipments, door handles, push plates, button drawer, etc...They are also very vulnerable to the evolution of international competition and the structure of the distribution sector.

-Strengths:

In the field of mechanics, enterprises have a certain capacity for innovation that they must operate through the network by their own initiative. For that they should be encouraged by agencies on which VIAMECA relies namely: OSEO, the CRCI Limousin and the CCI of Limoges.

- Opportunities:

It would be interesting to consider a concept of diversification, because it is not recommended to be positioned in a single market given the circumstances.

The ongoing creation of RAMSEIS, platform technology supported by the IUT of Limoges and high school Turgot, will raise awareness among mechanical innovation businesses.

➤ **The textile:**

-Strengths:

In the region Limousin, the SMEs in textile can benefit from a coaching and the networking of the Direction Régionale des Entreprises, de la Concurrence, de la Consommation, du Travail et de l'Emploi (DIRECCTE).

The textile professional union, in dressing and leather, the ARIST service of the Regional Chamber of Commerce and Industry of Limousin, the Regional Council of Limousin, OSEO Limousin, the regional development and innovation agency of the Limousin region (Limousin Expansion) and the DRIRE enter into collaborative and collective actions (calls for proposals) to promote the diversification and differentiation of the textile business, and to higher value-added use of innovative textile material techniques (for instance, reflecting on fabrics with integrated technology components, electronics, chemicals and new materials for complex functionality.)

-Weaknesses:

The main weakness of the textile sector in Limousin remains to be its small sized companies (substantially less than 10 employees).

2.3.2 Final Considerations

The economic fabric of the Limousin region is mainly composed of SMES. The ceramics, leather, textiles, of the mechanical-metallurgy and automobile sectors benefit from supporting structures of innovation. These facilities support the SMES by playing a role of counseling and networking among industrialists, finance and research laboratories. It includes the Regional Council, The Chamber of Commerce and Industry of Limoges, ESTER Science park, ARIST (Regional Chamber of Commerce and Industry d Limousin), of the Agency of recovery for university research in Limousin (AVRUL) and Poles of competitiveness (VIAMECA and the European Pole of Ceramics whose creation had helped foster a culture of innovation more customer oriented, with the aim of bringing research closer and industry).

In addition, the financial support to the innovation in the region of Limousin is mainly based on both public and private financing following the trend in France and Europe. The

idea is that the main financing sources such as the Region or OSEO propose a set of measures adapted to each innovative project.

In 2009, the activity of OSEO is translated to 7.4 million € of risks taken in innovation (without taking into account the funding of Innovation Limousin), for a total amount of expenditure on research and development of 20 million €; 112 millions € of guaranteed loans, including 63 million € in the framework of the Recovery Plan; 23 million € of financing put in place in partnership with the banks and the organizations of own funds. On that same year, the region of Limousin has made a direct aid in the form of subsidy for as much as 1,632,696 €.

In Limousin, the existing system of innovation is based on a very traditional vision that is primarily based on the technological innovation relayed by the centers of competitiveness. The system has had positive impacts on the regional economic development, and in particular on the competitiveness of enterprises. Public funding has had a leverage effect on private financing of research: the companies involved in collaborative research must indeed systematically offer co-financing.

Public research in the region is also strengthened because the financing have led to the availability of complementary human resources (docs, engineers, post docs...). The creation of innovative enterprises on the sectors of the poles of competitiveness has led to intensifying the fabric of innovative enterprises that are now involved in collaborative projects.

In addition it should be noted that the transfer of knowledge from the laboratories to the regional enterprises is rarely done directly. This transfer is made through collaborative projects which are most often brought by SMES or extra-regional groups. Regional enterprises are only partners.

The approach of the innovation in the region, although based and structured around the channels and responding to poles of technological needs, it is not sufficient. This approach does not support companies in traditional sectors who do not benefit from the existence of a pole of competitiveness as automobile, leather and textiles sectors.

In fact, the regional strategy cannot ignore that a large part of these enterprises and the public authorities must offer them an original organization, which will enable them subsequently to design, test and market services and innovative products. Therefore, the innovation would thus no longer be initiated by the research and would then not be necessarily technological; it would rather be initiated by the needs of customers/users.

In this context of innovation initiated by the users, the identification of a need for society and/or market is the driving factor of innovation. A recovery of information is conducted between the company (users) and the suppliers of solutions (science, technology, and production capacities...) to develop products and innovative services.

This approach allows both a more substantial evaluation of the potential markets involving first, the needs of users (70-80% of the products and innovative services that don't make it to the market fail, not due to the technological problems but because they don't integrate the real needs of end-users); second, a reduction of risks related to technology and marketing, but also access to a multitude of new ideas. It is toward this approach that support for the innovation must lean, particularly for sectors which do not benefit from pole of competitiveness.

Cf. <http://www.spiegel.de/fotostrecke/fotostrecke-41097.html>