The creative and knowledge-intensive sectors in the Urban Area of Toulouse

A preparatory analysis for surveying the creative and knowledge economy

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ACRE report *[4.11]*

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Accommodating Creative Knowledge – Competitiveness of European Metropolitan Regions within the Enlarged Union

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ACRE

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1 INTRODUCTION

The objective of the report is to provide detailed data on the distinguished target groups working in the creative and knowledge-intensive sectors (employees with high education, managers of creative and knowledge-intensive firms, graduates and international migrants) in order to prepare and implement the coming surveys of WP5, 6 and 7. The report also aims at presenting how these target groups can be selected and approached.

The first section presents statistical data on working population, establishments and employees in the creative and knowledge-intensive sectors in the Urban Area of Toulouse. The objective is to measure the total volume, growth and current importance of these sectors in order to identify the most significant ones in the economy of Toulouse. We also present data on graduates and higher education institutions and on international migrants.

The second section presents the methodology developed to identify and select the different groups of interviewees.

Given the necessity of comparison between the 13 case studies of the ACRE programme a certain degree of standardisation had to be followed regarding the selection of the focus sectors (the final selection includes Advertising, Video, film, music and photography, Radio and TV, Computer games, software, electronic publishing, Finances, Law and other business services, Research & Development and higher education).

In the case of Toulouse the WP2 report had shown that creative industries were not very well developed compared to knowledge-intensive industries. As a result we acknowledge the fact that some of the companies that will be surveyed belong to sectors that are not highly significant in the local economy and in terms of employment (in particular radio and television and motion pictures and video activities). As far as knowledge-intensive industries are concerned the selection of key sectors matches the selection we had made for Toulouse, with the exception of Information Communication Technology (ICT), which is a significant sector in the local economy of Toulouse but was not selected for the surveys.

As stated by the guidelines given for the selection of R & D, and higher education, the selection of type of institutes should be aimed to connect with the sectors that are selected. While this will give the opportunity to search for links between these knowledge institutions and the selected creative and knowledge-intensive sectors one should be aware that, in Toulouse, R&D and higher education are more involved with high technology (aeronautics, space, computer activities) than with creative sectors such as radio and television or advertising, or sectors such as financial intermediation and legal and accounting activities.

The surveys to come will therefore open some new perspectives of research in Toulouse by exploring creative sectors that remain little researched and by diversifying the analysis of the links between R&D, higher education institutions and sectors that are not usually connected to them.

2.1 Working population, firms and employees in creative industries

Two sources of data are used for this statistical analysis. The 1999 national census conducted by the National Statistical Institute (INSEE) provides data on the working population in the creative and knowledge-intensive sectors in the Urban Area of Toulouse. This allows having a picture of the relative importance of the sectors at this date: The database of the Inter-Professional National Union for Employment in Manufacturing and Commerce (UNEDIC, *Union nationale interprofessionnelle pour l'emploi dans l'industrie et le commerce*) provides data on the establishments and salaried staff in the creative and knowledge-intensive sectors in the *private sector* over a ten year period of time (1994-2004) in the Urban Area of Toulouse. This allows getting a picture of the growth of the sectors based on an approach by firms and employees.

2.1.1 Working population

The first set of data comes from the 1999 national census of population (Table 2.1, see also detailed data based on NACE code in the annexure of the Toulouse WP2 report). Unfortunately it is not possible to use the same source to measure the growth of the sectors until now due to change in the methodology of the national census in France[1].

One should point out some methodological issues to help assessing the data:

- The NACE category 1 as available in France does not provide data on craft and design.
- Figures about Art/antiques trades should be taken with precaution as the sub-category 524Z (the last sub-category of the category 524 ‘other retail sale of new goods in specialised stores’) and the category 525 (‘Retail sales of second-hand goods in store’) *include art and antique trades among other goods.* The classification of data does not have a specific line of data for art and antique trades. **This creative sector is clearly over-estimated.**
- Similarly, the category 748 (‘Miscellaneous business activities’) does not solely include activities in the field of video, music and photography. **This sector is also over-estimated.**

[1] The 1999 census is the last one in France making a census of the whole population at the same time. Until 1999 national census were conducted on this basis every eight or nine years. Since 2004 the census of the resident population in France is made on a yearly basis but all inhabitants are not numbered and surveyed the same year. Communes with less than 10,000 inhabitants are conducting an exhaustive census survey every five years (one fifth of the communes belonging to this category make this census every year). Communes with 10,000 inhabitants or more make a poll every year on a sample of about eight per cent of their population.

Table 2.1 - Overview of working population in creative sectors in the UAT (1999)

Sectors of activity based on NACE rev.1	Number of employed persons	Per cent of working population
Advertising	1,787	0.4
Architecture and engineering activities	6,851	1.7
Arts/antiques trade*	1,115	0.3
Crafts	-	-
Design	-	-
Designer fashion	2,284	0.6
Video, film, music and photography	4,320	1.1
Music and the visual and performing arts	2,732	0.7
Publishing	1,852	0.5
Computer games, software, electronic publishing	3,335	0.8
Radio and TV	582	0.1
Total creative industries	**24,858**	**6.2**
Total working population	**400,475**	**100**

*Source: INSEE, 1999 national census * This sector corresponds to portions of sectors 524 and 525, in which Arts/Antique trade is included. As no sub-categories were available other categories of retail sales of second-hand goods are included as well*

According to these data, the most important sectors in 1999 in terms of working population were the following ones: 1) Architecture and engineering activities, 2) Video, film, music and photography, 3) Computer games, software, electronic publishing, 4) Music and the visual and performing arts, and 5) Designer fashion.

The importance of the sector of Architecture and engineering activities is due to the *engineering activities and related technical consultancy*, not to the architectural activities per se. This is important to point out for the comparison between cities. This sector and the sector of computer games, software, and electronic publishing benefit from the specialisation of Toulouse in high technology in the fields on ICT, space and aeronautics. The minor share of employment in other creative sectors (in particular radio and TV and video, film, music and photography) is linked to the high degree of centralisation of cultural activities in Paris.

2.1.2 Evolution of firms and employees

The second set of data provides information on the growth of the number of establishments and the volume of employees in the private sector over a ten-year period (1994-2004) (Table 2.2). The 2004 data are the most recent available data. One should point out that the UNEDIC only includes *establishments* from the *manufacturing and commercial private sector that employ at least one employee* on the basis of a working contract. Establishment is different from firms as it is the place where firm activities are taking place whereas firm is the legal entity. A firm can have different activities in one or more establishments in different places. UNEDIC therefore only provides data on *private salaried staff*, thus excluding the following categories of working population: employees from State (ministries and external services) and other public administrations (regional and local government), employees from administrative institutions (such as Bank of France, National Printing Office, etc.), employees from public industrial and commercial institutions depending on State (national firms, firms with a mixed economy), employees from embassies, foreign consulates and international organisations, etc.

Table 2.2– Overview of the evolution of the number of establishments and employees in creative sectors in the private sector in the Urban Area of Toulouse (1994-2004)

	1994		**2004**		**1994-2004**			
Creative sectors	Number of Etablishments	Number of Employees	Number of Etablishments	Number of Employees	Evolution of the number of Etablish.	Evolution of the number of Employ.	Growth of the number of Etablishments (%)	Growth of the number Employees (%)
Architecture and engineering activities	464	4,676	794	11,351	+330	+6,675	+71.12	+142.75
Computer games, software, electronic publishing	154	2,181	291	4,880	+137	+2,699	+88.96	+123.75
Advertising	171	3,000	208	2,332	+37	-668	+21.64	-22.27
Publishing	92	1,855	106	1,789	+14	-66	+15.22	-3.56
Art/antiques trades	180	622	299	1,561	+119	+939	+66.11	+150.96
Music and the visual and performing arts	240	1,055	323	1,465	+83	+410	+34.58	+38.86
Video, film, music and photography	106	752	113	1,069	+14	+509	+13.21	+67.69
Designer fashion	121	2,331	88	1,111	-33	-1,220	-27.27	-52.34
Radio and TV	19	194	25	441	+6	+247	+31.58	+127.32
Craft	-	-	-	-	-	-	-	-
Design	-	-	-	-	-	-	-	-

Source: UNEDIC

Table 2.3 - Evolution of employees in the selected creative sectors in the Urban Area of Toulouse according to gender (1994-2004)

	1994				**2004**				**1994-2004**	
NACE Codes	Number of Etablishments .	Number of Employees	Number of men	Number of women	Number of Etablishments	Number of Employees	Number of men	Number of women	Growth of the number of Etablishments (%)	Growth of the number of employees (%)
722 Software consultancy and supply	154	2,181	1,429	752	291	4,880	3,406	1,474	+89.0	+123.8
921 Motion pictures and video activities	34	195	105	90	54	371	215	156	+58.8	+90.3
922 Radio and television activities	19	194	115	79	25	441	262	179	+31.6	+127.3
744 Advertising	171	3,000	1,138	1,862	208	2,332	1,104	1,228	+21.6	-22.3

Source: UNEDIC

Data do not include intermittent workers in the sectors of cinema, audiovisual and visual and performing arts (a common status in France) as well as State employees under a secondment arrangement in the private sector. They do not include self-employed and independent workers. The UNEDIC does not provide data on craft and design.
Figures about Art/antiques trades should be taken with precaution as the sub-category 524Z (the last sub-category of the category 524 'other retail sale of new goods in specialised stores') and the category 525 ('Retail sales of second-hand goods in store') *include art and antique trades among other goods.* The classification of data does not have a specific line of data for art and antique trades. **This creative sector is over-estimated.** Contrary to the INSEE the category 748 ('Miscellaneous business activities') of the UNEDIC only includes activities in the field of video, music and photography.

To help assess both the current importance of the sectors and their relative growth over the last ten years, we choose to classify the sectors in two categories (Table 2.4)

Table 2.4 - Ordering of creative sectors according to total volume of employment and growth over the period 1994-2004

The most significant sectors in terms of total volume of employees in 2004	The fastest growing sectors over the period 1994-2004
1. Architecture and engineering activities 2. Computer games, software, electronic publishing 3. Advertising 4. Publishing 5. Art/antique trade	1. Art/antique trades 2. Architecture and engineering activities 3. Radio and TV 4. Computer games, software, electronic publishing 5. Film, video, music and photography

Source: UNEDIC

As mentioned above the growth of architecture and engineering activities is closely linked to the economic specialisation of Toulouse and relates to the engineering activities driven by aerospace activities: in 2004 the number of employees in the engineering and technical consultancy was about tenfold the number of employees in architecture itself. The growth of the sector of computer games, software and electronic publishing is also related to the economic specialisation of Toulouse. The relative growth of radio and TV is linked to the strengthening of local establishments of national channels and networks. While advertising ranks third according to the number of employees in the private sector in 2004 it has been declining over the past ten years. The early 1990's had seen the rise of companies budgets dedicated to advertising but it stopped in 1995 and has remained erratic since then in the Midi-Pyrénées region. The restructuring of advertising groups might explain this evolution. In addition one has to point out that advertising remains highly concentrated in Paris. As in other cities in France the share of employment in this sector outside Paris represents about 1 per cent of total employment. A large number of local establishments belong to national companies whose headquarters are based in Ile-de-France (INSEE, CRCI, 2004).

2.2 Working population, firms and employees in knowledge-intensive industries

2.2.1 Working population

According to the distribution of working population, the most important sectors in 1999 were the following ones: 1) ICT, 2) Law and other business services; 3) R&D and higher education, 4) Finances (Table 2.5). This reflects the economic profile of Toulouse as knowledge-intensive technopole. ICT manufacturing and ICT services had approximately the same share of working population in 1999. Other data available on employment in ICT shows that in 2004 computer industry was the most developed sub-sectors in the UAT in terms of salaried staff.

Table 2.5 - Overview of working population in knowledge-intensive sectors in the UAT (1999)

Sectors of activity based on NACE rev.1	Number of employed persons	Per cent of working population
Information Communication Technology (adapted from OECD definition)	19,969	5.0
Finances	9,684	2.4
Law and other business services	18,518	4.6
R&D and higher education	15,451	3.9
Total working population	400,475	100

Source: INSEE, 1999 national census

Law and other business services benefit from the growth of ICT activities and related services (market research, business and management consultancy). This shows that more and more local companies are outsourcing services.

R&D is well represented: with about 2,800 full time equivalent researchers in public institutions the Midi-Pyrénées region is among the regions in France with the highest number of public researchers after Ile-de-France (Paris), Rhône-Alpes (Lyon-Grenoble) and PACA (Aix-Marseille-Nice). Between 1992 and 2002 the growth of researchers in Midi-Pyrénees was among the highest in France (+23 per cent) compared to +20 per cent as a national average. Public researchers in Midi-Pyrénées represent 55 per cent of all researchers (AUAT, 2006).

The total number of R&D employment in Haute-Garonne département amounts to 8,700 persons, among which 4,140 private researchers. A large share is concentrated in the agglomeration of Toulouse including Labège. The main firms conducting R&D are in the sectors of aeronautics, space, electronics and electricity (EADS Airbus, Latecoère SILAT, ASTRIUM SAS, THALES AVIONING, MOTOROLA, ALCATEL SPACE INDUSTRIES), medicine (FABRE research institute) and pharmacy (SANOFI Research). Public research in structured around centres of excellence: the Paul Sabatier Campus, the House of Research in Human and Society Sciences at the University 2–Le Mirail, the hospital centres of Purpan and Rangueil, the agribusiness pole of the National Institute for Agricultural Research (INRA), the Champollion University.

2.2.2 Evolution of firms and employees

According to the UNEDIC data all knowledge-intensive sectors have grown over the past ten years, in particular ITC and law and other business services (Table 2.6 and 2.7).

Table 2.6 - Overview of the evolution of the number of establishments and employees in the knowledge-intensive sectors in the private sector in the Urban Area of Toulouse (1994-2004)

	1994		**2004**		**1994-2004**			
Knowledge-intensive sectors	Number of Etablishments	Number of Employees	Number of Etablishments	Number of Employees	Evolution of the number of Etablish.	Evolution of the number of Employ.	Growth of the number of Etablishments (%)	Growth of the number Employees (%)
Law and other business services	1,259	13,924	1,900	32,691	641	18,767	+50.91	+134.78
ICT	393	10,312	508	19,897	115	9,585	+54.00	+212.00
Finances	708	7,304	854	8,630	146	1,326	+20.62	+18.15
R&D and higher education	74	2,042	100	3,124	26	1,082	+35.14	+52.99

Source: UNEDIC

Table 2.7. Evolution of employees in the selected knowledge-intensive sectors in the private sector in the Urban Area of Toulouse according to gender (1994-2004)

	1994				**2004**				**1994-2004**	
NACE Codes	Number of Etablishments	Number of Employees	Number of men	Number of women	Number of Etablishments	Number of Employees	Number of men	Number of women	Growth of the number of Etablishments (%)	Growth of the number Employees (%)
741 Law; legal, accounting, book keeping, auditing, etc.	1,061	7,103	3,137	3,966	1,465	13,691	6,547	7,144	38.08	92.75
65 Finance	334	4,190	1,972	2,218	381	4,667	2,003	2,664	10.18	36.42
73 R&D	59	1,709	865	844	76	2,469	1,238	1,225	47.42	87.22
803 Higher education	15	333	102	231	24	661	223	438	60.00	98.50

Source: UNEDIC

To help assess both the current importance of the sectors and their relative growth over the last ten years, we choose to classify the sectors in two categories (Table 2.8)

Table 2.8 - Ordering of knowledge-intensive sectors according to total volume of employment and growth over the period 1994-2004

The most significant sectors in terms of total volume of employees in 2004	The fastest growing sectors over the period 1991-2004
1. Law and other business services 2. ICT 3. Finances 4. R&D and higher education	1. ICT 2. Law and other business services 3. R&D and higher education 4. Finances

Source: UNEDIC

As the UNEDIC does not provide data on public institutions such as universities, other higher education and research institutions and laboratories **the sector of R&D and higher education is highly under-estimated**. In Toulouse almost all higher education institutions are public ones as the case everywhere in France (including universities and engineering schools) and a large share of researchers or personnel employed in R&D belongs to public institutions.

2.3 University and polytechnic graduates

2.3.1 A high level of education in Toulouse

The population of the UAT is one of the most educated in France. 35 per cent of the population have a higher degree than the A-level compared to a national average of 26 per cent. 15 per cent have a higher education degree compared to nine per cent in France. Women tend to be more educated than men. This high level of education results from the generalisation of secondary education in France but also to a more specific local situation: there is a large range of universities and higher education institutions in the region of Toulouse and the arrival of a qualified working population reinforces the share of the graduates within the population
(Table 2.9 and 2.10).

Table 2.9 - Proportion of resident population qualified at level ISCED (International Standard Classification of Education) in the UAT (2001)

Level 1 ISCED	Level 2 ISCED	Levels 3-4 ISCED	Levels 5-6 ISCED
13.44	22.73	12.52	21.79

Source: Urban Audit, LUZ Toulouse (Urban Area), 2001

Table 2.10 - Education attainment of the population above 15 in the UAT (1999) (per cent)

Currently studying	No degree	Primary degree*	Secondary Degree**	First stage of tertiary education (A-level +2 years)	Second stage of tertiary education (higher degrees)	Total
15.1	12.7	37.2	12.2	10.3	12.6	100.0

Source: INSEE National Census, 1999 **CEP, BEPC, CAP, BEP; ** Bac, Brevet professionel.*

Over the last 30 years, the share of the population with a degree has increased: 35 per cent of the population hold an A-level in 1999 compared to 26 per cent in 1991 (INSEE, AUAT, 2002). The persons with no degree represented 15 per cent of the population in 1999 compared to 21 per cent in 1991. The share of highly qualified occupations and intermediate occupations has been increasing while the share in workers and employees has declined.

2.3.2 Students and universities

With 113,900 students in 2005-2006, the Academy of Toulouse ranks third in France after Paris and Lyon (second when only considering 'the province'). The Academy of Toulouse is larger than the UAT: it includes 3,020 communes and eight departments. Higher education is structured around three universities and 12 engineering schools. In addition, there are various training and specialised institutions (AUAT, 2006f). Most of education institutions are concentrated in the Toulouse agglomeration but there are delocalised universities in the secondary cities of the Midi-Pyrénées region (Albi, Tarbes, Montauban, Castres-Mazamet among others).

The UAT concentrates 84.2 per cent of the students of the Academy (95,909 students in 2001-2002 and 97,939 students in 2004-2005). This represents 100 students for 1,000 inhabitants. The UAT is more specialised in university and engineering education than other urban areas in France (Lille, Aix-Marseille, Lyon and Bordeaux) but less than in Montpellier and Rennes (AUAT, 2006f).

68.5 per cent of the students in the Haute-Garonne department are registered in universities and assimilated. There is a high proportion of students in B.A, M.A and PhD: 24.1 per cent of the students in 2005-2005 were registered in the second cycle (in the third and fourth years of study at university) and 12.6 per cent in the third cycle (five years university and PhD) (Atlas régional Midi-Pyrénées 2005-2006). The universities in Toulouse grant 4,000 master's degrees and 700 PhD degrees a year; one fifth of the postgraduates come from abroad. Engineering schools and technical institutes are well represented: they account to 17.5 per cent of the students registered in Haute-Garonne department.

Data from the European University Pole indicates that 12,000 students out of the 113,000 students of the Midi-Pyrénées region are foreign students (10.6 per cent). Foreign students mainly come from Africa: Maghreb (31 per cent) and West Africa (10.5 per cent). Europe is the second continent of origin of the foreign students with a majority coming from the EU (Spain, Germany and Italy). Chine and Libanon are the third origins of foreign students outside Africa and Europe (AUAT, 2006f). The number and share of foreigner students have remained relatively stable over the past ten years.

Key disciplines taught in Toulouse universities are Social and Human Sciences (21.02 per cent of the registered students in the three universities of Toulouse and in CUFR in Albi), followed by Law and Political Sciences (13.2 per cent), and Fundamental and Applied Sciences (12.94) (Table 2.11). The fastest growing fields of study are law and political sciences, life sciences and social and human sciences.

The distribution of students according to the type of higher educations shows that more than half of the students are registered in the three universities (63 per cent), 3.5 per cent are registered in the National Polytechnic Institute (INP), 3.6 per cent in other engineering schools (Table 2.12).

Table 2.11 - Number of registered students in the 3 University of Toulouse (Toulouse 1, Toulouse 2, Toulouse 3) and in University Centre for Education and Research Champollion Albi (CUFR) in 2005-2006

DISCIPLINES	Total	Per cent	Variation 2004-2005
Social and Human Sciences	15,113	21.02	+151
Law and Political Sciences	9,362	13.02	+452
Fundamental and Applied Sciences	9,300	12.94	+13
Languages	5,805	8.07	-192
Medicine	5,364	7.46	-108
Economic Sciences and Management	5,334	7.42	-82
Life Sciences	4,923	6.85	+245
Humanities - Art – Language Sciences	4,130	5.74	-1,278
IUT Tertiary (DUT)	3,364	4.68	-156
IUT Secondary (DUT)	2,653	3.69	+49
Sciences and Techniques of Physical and Sportive Activities (STAPS)	2,371	3.30	-173
Applied Foreign Languages	2,137	2.97	-675
Pharmacy	1,304	1.81	-13
Odontology	568	0.79	+5
Pluri-Sciences	169	0.24	+169
TOTAL	71,897	100.00	-897

Source: SISE Database, 2005/2006, Academy of Toulouse.

Table 2.12 - Number of students according to the type of higher education institutions in 2005-2006 in the Academy of Toulouse

Institutions		Cycles 1, 2 & 3	University Technological institute (IUT)	Total
Universities	UT1 Social Sciences	16,302	287	16,589
	UT2 Le Mirail	24,066	680	24,746
	UT3 Paul Sabatier	23,006	5,050	28,056
	CUFR Champollion Albi	2,506		2,506
	Sous -Total	65,880	6,017	71,897
National Polytechnic Institute (INP)				4,041
University Institute for the training of primary and secondary school teachers (IUFM)				3,545
Engineering schools (outside INP)				4,154
Other schools				1,961
Preparatory classes to enroll in ‘Grandes Ecoles/Elite schools (after A-level) (CPGE)				2,517
Sections for highly qualified technicians (STS)				6,275
Complementary training after A-level				243
Total National Public Education				94,636
Total Private National Education				13,437
Total Agriculture (Public & Private)				1,392
Total Health and Social (Public & Private)				4,479

Total General				113,944

Source: Academy of Toulouse. 0-1st cycle: undergraduates (two years university); 2nd cycle: postgraduates (three to for years university); 3rd cycle: postgraduates (five years university, PhD)

2.4 Migrations

2.4.1 Definition of immigrants and foreigners

Statistics of the INSEE differentiate between immigrants and foreigners. An immigrant is a person born abroad and born with a foreign nationality. This group includes foreigners and persons who have acquired the French nationality. Immigrants are therefore defined by a double criterion: nationality and place of birth. Children born in France from immigrant parents do not belong to the immigrant population.

Foreigners are defined based on the sole criteria of nationality: a foreigner is a resident in France who does not have the French nationality. A foreigner may have settled in France and kept his/her nationality or may be born in France from foreign parents. For the statistical analysis of the target group we choose to focus on foreigners rather on immigrants as the key criteria for identifying international migrants is nationality.

The source of data used for the detailed analysis of foreigners is the 1999 national census as this is the only one providing such data on an exhaustive base for the Urban Area of Toulouse (see comments on the evolution of the methodology of the French national census in section 2.1). Among the foreigners living in France at the date of the census only the permanent residents and those who work or study there are surveyed. This includes permanent workers, persons in training, students, and their families if relevant, with the exception of seasonal workers and border workers. Tourist and persons on a short-term stay in France (less than six months) are not registered. This definition of the national census does not include international migrants who come for a short period of time in France (on a short-term contract base for instance). Statistics about foreigners in Toulouse in 1999 might therefore be underestimated. Additional source of data will have to be used to quantify and identity short-term foreigners workers in Toulouse such as the data registered at the Prefecture.

2.4.2. Foreigners in the Urban Area of Toulouse: nationalities and spatial distribution

The share of foreign population in 1999 in Haute-Garonne (4.5 per cent), and in Midi-Pyrénées region (3.9 per cent), is lower than the national average (7.4 per cent) (Table 2.13). The fact that Midi-Pyrenees has both a low level of urbanisation and industrialisation (as the case for the western part of France) compared to other regions in France can explain such figures. There is a declining trend of foreigners in the region over the period 1968-1999 while the share of immigrants remains relatively stable or slightly decreased due to a restricted national policy towards immigration (Table 2.14).

Table 2.13 - Immigrants and foreigners in Haute-Garonne, Midi-Pyrénées Region and France in 1999

	Immigrants	%	*of which French by naturalisation*	%	Foreigners	%	Total population
Haute-Garonne Department	84,727	8.1	*42,848*	*4.1*	47,316	4.5	1,046,400
Midi-Pyrénées Region	173,606	6.8	*85,756*	*3.4*	99,894	3.9	2,552,125
France	4306094	7.4	*1,556,043*	*2.7*	3,258,539	5.6	58,513,700

Source: INSEE, 1999 national census, quartered sample

Table 2.14 - Evolution of immigrants and foreigners in Midi-Pyrénées Region (1968-1999)

	1968	1975	1982	1990	1999
Total population	2,183,072	2,264,725	2,320,932	2,433,295	2,552,125
Immigrants	161,008	176,340	170,548	170,934	173,606
Share in total population (%)	7.4	7.8	7.3	7.0	6.8
Foreigners	112,288	123,750	114,408	105,326	99,894
Share in total population (%)	5.1	5.5	4.9	4.3	3.9

Source: INSEE, 1999 national census, quartered sample

The Haute-Garonne department has a higher share of foreigners compared to the other departments in the region (47.4 per cent). But in order to measure the attractivity of the department one should also look at the number of immigrants: they represent 8,1 per cent of the population of Haute-Garonne and 6.8 per cent of the Midi-Pyrénées region. Figures about immigrants include numerous Spanish, Italians and Portugueses coming from early waves of migration as well as people from Maghreb that have been living in the region since the mid-1960's and whose share started to rise significantly in the 1980's. The geographic origin of the immigrants and foreigners has diversified over time due to economic and political migrations and to the development of business and scientific cooperation in Toulouse.

In the Urban Area of Toulouse the share of foreigners in 1999 is below the regional average (4.6 per cent of the total population or 44,973 persons). This figure represents 36.1 per cent of the foreigners living in the region, which tends to demonstrate a spatial concentration of foreigners in the Urban Area of Toulouse. The concentration of foreigners is however slightly below the concentration of the population of Toulouse in the Midi-Pyrénees region (38.7 per cent). There is also a concentration of foreigners in the city of Toulouse within the Urban Area of Toulouse: whereas Toulouse represents 38.9 per cent of the total population of the Urban Area (375,687 inhabitants) 75.2 per cent of the foreign population live in Toulouse city. In 1999 the share of foreigners in Toulouse was 9 per cent of the total population (33,855 persons). There has been a rise in the number of foreigners since the 1990 census (28,531 persons or eight per cent of the population). Outside Toulouse the remaining 341 communes of the Urban Area has a foreign population of 11,118 people, among which 7,201 live in the suburbs (64.8 per cent).

Old waves of migrations marked significantly the profile of foreigners in the *city of Toulouse* as showed by the high share of foreigners coming from Northern Africa (43.67 per cent) and to a lesser degree from Southern Europe with Spanish (8.4 per cent) and Portuguese (8.13%) residents among the most frequent nationalities. British and German residents only represent respectively 1.88 per cent and 1.83 per cent of the population of the city of Toulouse. These figures however do not reflect the intensity of industrial and commercial relationships of Toulouse with Europe, in particular in the aerospace sector, as short-term migrants are not included in the statistics.

But the rise of German and British residents have been observed since the early 1980's: while the number of foreigners who settled in Haute-Garonne declined by 14.63% between 1981 and 1991 the number of British and German people have raised by 129.63 per cent for the former and 114.12 per cent for the latter. These figures are higher than the ones at national level: between 1981 and 1991 the number of German residents only rose by 17.43 per cent in France and the number of British by 46.6 per cent. At the same time the number of Spanish and Italian people in the Haute-Garonne department declined by 36.29 per cent and 35.71% respectively due to the fact that many of them obtained the French nationality (they were no longer registered as foreigners but as immigrants). These figures show that the international opening of the city of Toulouse occurs in the 1980's, in particular with new residents coming from Northern Europe.

Regarding the remaining share of nationality there is a wide range of geographic origins with a relative importance of migrations from Asia (9.3 per cent).

In the *Urban Area of Toulouse* (342 communes) figures about nationality are slightly different than in the city of Toulouse (Table 2.15): residents from the European Union (15 countries) represent 40 per cent of the total of the foreign population compared with 25.6 per cent in the city of Toulouse. The share of persons originating from Maghreb is lower (34.93 per cent compared to 43.67 per cent in the city of Toulouse). There are different patterns of residence according to nationality: German, British and other Europeans favour individual housing, and a close proximity with their place of work. They often live in the suburbs (Blagnac, Tournefeuille, Pibrac). A lot of foreigners originating from Maghreb, who have a lower level of income, live in collective housing and are more numerous in the city of Toulouse.

Table 2.15 - Distribution of foreigners according to nationality in the Urban Area of Toulouse (1999)

Nationalities	**Number**	**% per Nationality**	**Men**	**Women**
Portuguese	5,068	11.26	2,682	2,386
Spaniards	4,659	10.35	2,213	2,446
Italians	3,253	7.23	1,777	1,476
Germans	1,964	4.36	986	978
British	1,867	4.14	968	899
Belgians	600	1.33	317	283
Dutch	344	0.76	190	154
Swedish	117	0.26	54	63
Irish	113	0.25	68	45
Austrians	68	0.15	24	44
Danish	58	0.12	20	38
Finnish	36	0.08	16	20
Greeks	29	0.06	14	15
Luxemburg	12	0.02	12	0
Total EU 15	**18,188**	**40.42**	**9,341**	**8,847**
Europe outside UE 15	**1,644**	**3.65**	**747**	**897**
Algerians	7,199	16	3,750	3,449
Moroccans	6,526	14,5	3,701	2,825
Tunisians	1,995	4.43	1,151	844

Total Maghreb	**15,720**	**34.93**	**8,602**	**7,118**
Africa outside Maghreb	**4,442**	**9.87**	**2,327**	**2,115**
Asia	**3,538**	**7.86**	**1,824**	**1,714**
United-States	**407**	**0.9**	**181**	**226**
Canada	**209**	**0.46**	**100**	**109**
Central and South America	**780**	**1.73**	**318**	**462**
Oceanie	**64**	**0.14**	**41**	**23**
Total	**44,992**	**100**	**23,481**	**21,511**

Source: INSEE, 1999 national census, quartered sample

2.4.3 Characteristics of foreigners: places of work, level of qualification and sectors of activities

The majority of foreigners settled in the UAT work in Toulouse (59.46 per cent) and 40.54 per cent in the other communes. Here again patterns of work are different according to nationality: foreigners from Africa and Asia work in the city of Toulouse (71.25 per cent and 73.13 per cent respectively) whereas a majority of residents from Europe 15 work in the suburban communes (51.9 per cent). This relates to the geography of employment and sectors of activity in the UAT: the sectors that are the more open to international cooperation (high technology and industrial and scientific sectors) are located in the suburbs, often in business or industrial clusters. This explains the discrepancy between the place of residence and the place of work of the foreigners.

If we consider all foreigners in the UAT the level of qualification is low (59.87 per cent have no degree or a degree below A-level) but there are great contrasts between nationalities. 50 per cent of foreigners from Europe, and Northern Europe in particular, and from the United-States and the Canada, hold a university degree whereas almost 75 per cent of foreigners originating from Maghreb have no degree or a degree below A-level. These different levels of education play a role in the access to work: a lot of northern European work in the aeronautics, space and research sectors. Other foreigners work in sectors that require a lower level of qualification.

As a result of the importance of migrations from outside Europe, in particular Africa, and of the growing significance of European migrants, foreigners in the UAT mostly work in the construction industry (19 per cent), followed by real estate, renting and business activities (which include computer and related activities and R&D) (16 per cent) and manufacturing (15.5 per cent). In terms of occupations foreigners are more numerous in the sales and customer service occupations sector (level 7 of ISCO-88) (24 per cent), followed by elementary occupations (level 9) (17 per cent), professional occupations (15 per cent) (level 2) and associate professional and technical occupations (12 per cent).

2.5 Managers

Distribution of occupations of the working population in 1999 based on ISCO-88 shows that the main occupations in the UAT are in level three, two and four: associate professional and technical occupations (23.7 per cent), followed by professional occupations (16.0 per cent) administrative and secretariat occupations (13.3 per cent), skilled trade occupations (12.0 per cent), sales and customer services occupations (10.8 per cent), managers and seniors officials

(7.2 per cent), process, plant and machine operatives (6.9 per cent), elementary occupations (7.4 per cent) and personal services occupations (1.8 per cent) (1999 figures) (Table 2.6). Unfortunately there are no comparable detailed data from the 1991 census or more recent statistics to measure the evolution of managers over time.

Table 2.16 – The number and share of managers and senior officials within the working population in the UAT based on ISCO-88 classification (1999)

ISCO-88	Occupations	Number	Per cent of total working population
1. Managers and senior officials			**7.2**
111	Legislators and senior government officials	211	0.1
121	Directors and chief executives	601	0.2
122	Production and operations managers	10,132	2.5
123	Other specialist managers	6,096	1.5
131	Managers of small enterprises	11,704	2.9
	Total working population	**400,475**	**100**

Source: INSEE, 1999 national census

3. METHODOLOGY OF THE SURVEY

3.1 Introduction

This section presents a brief description of the focus sectors selected by the coordination team of the WP4 in creative and knowledge-intensive industries. The methodology used for the identification of target groups to be surveyed is also detailed.

3.2 Key characteristics of the selected sectors

The following sectors have been selected for the coming surveys:
Creative Industries:

- Advertising (722)
- Video, film, music and photography (921) and radio and TV (922)
- Computer games, software, electronic publishing (722)

Knowledge intensive industries

- Finances (65)
- Law and other business services (741)
- R&D and higher education (73, 803)

A database of companies in France classified according to NAF codes - which match the NACE Rev. 1 classification – has provided data on the companies settled in the Urban Area of Toulouse (Point Risk database).

3.2.1 Creative industries

722 Software consultancy and supply
According to the Point Risk database there were 250 companies in the city of Toulouse and 540 in the Haute-Garonne Department (where the other communes of the Urban Area of Toulouse are located). There is a wide range of size (from over 500 employees to one) and of specialisation: from management software (C.I.A.G.) to mobile phone (Atchik), and from Internet websites creation and management (Image du troisième millénaire) to health (Pharmatic) and navigation systems (Ergospace). This sector is characterised by services and consulting activities rather than by the supply and diffusion of software. The market is driven by a demand of high-level technology computer services from the aerospace industries, from the sector of electronics linked to the transport industry and from decentralised institutions specialising in scientific and technical activities. Other components of the sector include management software and management consulting mainly for administrations, banks and local authorities as well as the design of Internet websites and database management. Large companies are active in both in scientific and technical activities and in management and computer networks.

921 Motion picture and video activities
There are 70 companies listed in Toulouse and 114 in the Haute-Garonne department. Due to the high centralisation of creative and cultural activities in Paris the sector is not well developed and mostly relies on small structures outside national brands based in Toulouse. There is a large variety of sub-sectors: motion picture projection with nationally-based large-scale companies such as UGC Cine Cité, Europalaces or more cultural or regionally-oriented cinemas (Utopia Latin, Les cinemas du Rouergue); motion picture production (Les films du Sud), television film production (Les Productions Anamorphose) as well as institutional and commercial film production (Images Entreprise, Atelier d'Oz). There are also companies providing technical services for motion pictures and television (Editions 4-4, Polygone Musique).

922 Radio and television activities
There are ten companies listed in Toulouse and 20 in Haute-Garonne. Again the high degree of centralisation in France makes it a relatively small sector in Toulouse with large radio network (Sud Radio Services SA) or television companies (Toulouse Television, France 3), radio networks belonging to national brands (RFM, Radio Nostalgie Reseau, Europe 2 pays d'Oc), or thematic television channels belonging to a national brand with few employees (M6 Toulouse).

744 Advertising
There are 181 companies listed in Toulouse and 348 in Haute-Garonne. There are many specialisations such as Nouveau Monde DDB Toulouse, specialised in tourism promotion and member of the international DDB network, and which also operates in other cities in France, or Marketing Conseil Finance specialised in the financial sector. Other advertising companies specialised in branding and packaging, especially for food products (Anapurna Design).

3.2.2 Knowledge-intensive sectors

741 Legal, accounting, book-keeping and auditing activities; tax consultancy; market research and public opinion polling; business and management consultancy; holdings
This is relatively large sector in the economy of Toulouse with 181 companies listed in Toulouse and 348 in Haute-Garonne. There are a few large companies in accounting activities (Exco fiduciaire du Sud-Ouest), in market research and public opinion polling (Telecontact) or business and management consultancy (Omnium Finance, Luzenac Europe SAS). There is a wide range of companies between 50 and 10 employees in particular in business and management consultancy (Adaxis, Actifrance).

65 Financial intermediation, except insurance and pension funding
There are 150 companies listed in Toulouse and 248 in Haute-Garonne. This 2-digit code sector includes numerous sub-sectors with variations of size between central banking (Banque de France) and other banks (Credit Agricole, Société Générale, Crédit Lyonnais, Banque Courtois) and other credit granting or financial leasing compagnies (Crédit immobilier de France) or other financial intermediation (Delta Patrimoine Finance Services).

73 Research and Development
There are 26 companies listed in Toulouse and 71 in Haute-Garonne. Companies range from very large internationally known compagnies such as Institut de Recherche Pierre Fabre in Research and experimental development on natural sciences and engineering, small companies (Cayla in natural sciences, Eurisco International in human and social sciences) and micro compagnies (Libragen, Sud Labo).

803 Higher education
There are 9 companies listed in Toulouse and 14 in Haute-Garonne. They are mainly small (Institut Promo Etudes Sanitaires Sociale, Institut Toulousain d'Osteopathie) and micro companies (Classes Préparatoires aux études de santé, Cours supérieur de Physique Chimie).

3.3 Methodology for the identification and selection of the target groups

The survey has been divided into four sub-components:

- Employees in creative industries (75 respondents)
- Employees in knowledge intensive companies (75 respondents)
- University/polytech graduates (25 respondents)
- Art/media school graduates (25 respondents)

In addition the following interviews will be conducted:
- Managers (20 interviews)
- Migrants (10 interviews and a survey of 50 respondents)

3.3.1 Workers in creative and knowledge-intensive companies

The selection of companies in the creative and knowledge-intensive sectors for the survey of workers is based on the following steps:

1. A database of companies in France classified according to NAF codes - which match the NACE Rev. 1 classification - was used to identify the name and the characteristics of the companies settled in the Urban Area of Toulouse (Point Risk database). Several key variables were selected to get a profile of the companies: corporate name, location, number of employees, physical address, date of creation, name of the director.
2. The data on companies obtained by the Point Risk database will be crosschecked by data from the Chamber of Commerce and Industry in Toulouse (detailed data have to be purchased)
3. Within each sector a list of criteria has been established for the selection of the companies based on the guidelines: location (in the central city of Toulouse and in the other communes of the Urban Area), size of the companies (small, medium, large), date of creation (new and old firms).
4. As indicated in the guidelines a random selection will be made among the companies of the focus sectors.

5. A list of companies based on the random selection will be established and will be commented by experts in the selected fields (software consultancy and supply, radio and television activities, advertising, R&D, law and business services, etc.), from the LOP when relevant but also outside the LOP. We expect them to give a qualified opinion on the companies with regard to their significance or their specialisation in the urban economy. It is also part of our approach methodology to associate experts to the survey process in order to facilitate contact with the managers and the employees.
6. Each company manager will be contacted by phone to explain the purpose of the survey and ask for authorisation to contact employees. Once the approval has been obtained criteria such as the level of education, gender and ethnicity of the employees will be considered to select the relevant employees to be surveyed.
7. Contact will be made with the employees to identify who are willing to be interviewed. Face to face questionnaires will be administered using sub-contracting services.

3.3.2 Graduates

The identification of universities and other higher education institutions whose graduates will be surveyed is based on the following steps:

1. Identification of the main public and private institutions (University/polytech and art/media schools)
2. Selection of the institutions to be surveyed based on their size and importance
3. Identification of the alumni associations of these institutions to get a list and contact information of former students and select the ones corresponding to the criteria (graduated 5-10 years ago, age 30-45).
1. Contact with former students to explain the purpose of the survey and identify who is willing to be interviewed. Face to face questionnaires will be administered using sub-contracting services.

3.3.3. Migrants

The identification and selection of international migrants will be made using personal networks and LOP network. International companies based in Toulouse as well as associations and clubs of foreigners in Toulouse could also be used. The interviewees will be selected according to the given criteria (university degree, work on creative/knowledge-intensive sectors, migrants from richer world, gender aspect). The survey will be integrated in the larger survey – when the firms are contacted.

3.3.4. Managers

The managers will be selected via the LOP network. Key professional organisations such as the APEC (Association pour l'emploi des cadres, Association for the employment of executives) in Toulouse, which offers recruitment services and training to companies of the private sector and to all executives and young graduates (with at least a MA degree), could also be useful. Organisations dealing with firm incubators in the selected sectors will also be contacted as well as research laboratories to enquiry about the researchers that have set up their own company. The interviews will be from the same industries that are surveyed in WP5. Top managers will be selected from small and large companies based on the guidelines requirements.

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List of Acronyms

AUAT	Agence d'Urbanisme de l'Aire Urbaine de Toulouse	Toulouse Town Planning Agency
CRCI	Chambre Régionale de Commerce et d'Industrie Midi-Pyrénées	Regional Chamber of Commerce and Industry in Midi-Pyrénées
INSEE	Institut National de la Statistique et des Etudes Economiques	National Statistical Institute
UNEDIC	*Union nationale interprofessionnelle pour l'emploi dans l'industrie et le commerce*	National Inter-professional Union for Employment in Industry and Commerce

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