Regional representation of creative and knowledge workers in the Amsterdam region

A preparatory analysis for surveying the creative and knowledge economy

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Regional representation of creative and knowledge workers in the Amsterdam region

A preparatory analysis for surveying the creative and knowledge economy

ACRE report [*4.1*]

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

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AMIDSt, University of Amsterdam

ACRE

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1. INTRODUCTION

1.1. Rationale

The Amsterdam region is the hub of the creative knowledge economy in the Netherlands (Musterd 2006, 1328; Kloosterman 2004, 249). It comprises 24 % of all Dutch creative knowledge companies (Bontje and Sleutjes 2007, 80) and it continuously expanded in the last five years (ibid., 42). Therefore, this research area offers the opportunity to study the interplay of an advanced creative knowledge economy and the urban development.
The aim of this report is to gain detailed information about the structure of the creative knowledge economy in order to select suitable candidates for four coming surveys of native and foreign employees, graduates and managers. How are the different creative and knowledge branches and workers represented in the region? What are the most important locational shift in the region of those branches? Which six creative and knowledge branches are suitable for an in depth analysis? What are the most important demographic and occupational structures that shape the distribution of creative knowledge workers in the Amterdam region?
After a few methodological remarks, the structure of the creative and knowledge economy is discussed, and a strategy is proposed to conduct a survey with 180 respondents in total. In the second part, the academic qualification level of highly skilled professionals in the active population and the inflow from the universities and other higher education institutions are examined in general and for the art related fields in detail. A proposal for the selection of 50 graduates is finally introduced. In the third part, a suitable selection scheme for 25 managers is worked out. Finally, several selections methods for foreign employees are assessed which aim at finding 60 suitable research candidates.

1.2. General trends in the Amsterdam region

During the last decade (1996-2005), the number of employees increased by 23 percent and the number of companies rose by 28 percent in the metropolitan area of Amsterdam. This period of large economic expansion was interrupted by an economic downturn between 2000 and 2003. After 2004 the economy recovered and was able to continue to grow. Amsterdam represents the growth machine of the Netherlands. 17 % of all Dutch companies and 15 % of the national labour force work in the region (Bontje and Sleutjes, 2007, 3). In terms of human capital, the region has an above average and continuously growing share of professionals and senior officials (ibid.). The city of Amsterdam amounts only to 40 % of the regional employment due to a continuing expansion of the suburban business locations (ibid.). Overall, three regional trajectories can be identified for the whole economy in this area, although this development is not very strong in general. Relative loss of importance of inner city locations, a relative growth of company size in the outer districts of Amsterdam city, and a relative

decrease of company size in the remaining metropolitan area of Amsterdam outside the suburban sub-centres.

In the following parts of this report, the regional importance of creative and knowledge industries as well as knowledge workers will be identified. Aim of this analysis is to detect representatives for the ACRE survey. Which branches do contribute to the overall growth in the metropolitan region? What is the difference between creative and knowledge worker in this development?

2. CREATIVE AND KNOWLEDGE WORKERS IN THE AMSTERDAM REGION

2.1. Determining creative and knowledge workers

For this study of the creative and knowledge intensive economy, a regional database (LISA) is used which monitors the development of companies and employees for each 4-digit postal code unit in 1996, in 2000, and in 2005. This data is based on the registrations at the Chamber of Commerce and does not represent all entrepreneurs that work in free occupations such as artists, journalists, etc..
For the selection of prospective research candidates, the quantitative importance of the creative and knowledge industry is detected separately. Five major fields are identified in the creative and knowledge economy:

Creative Industries

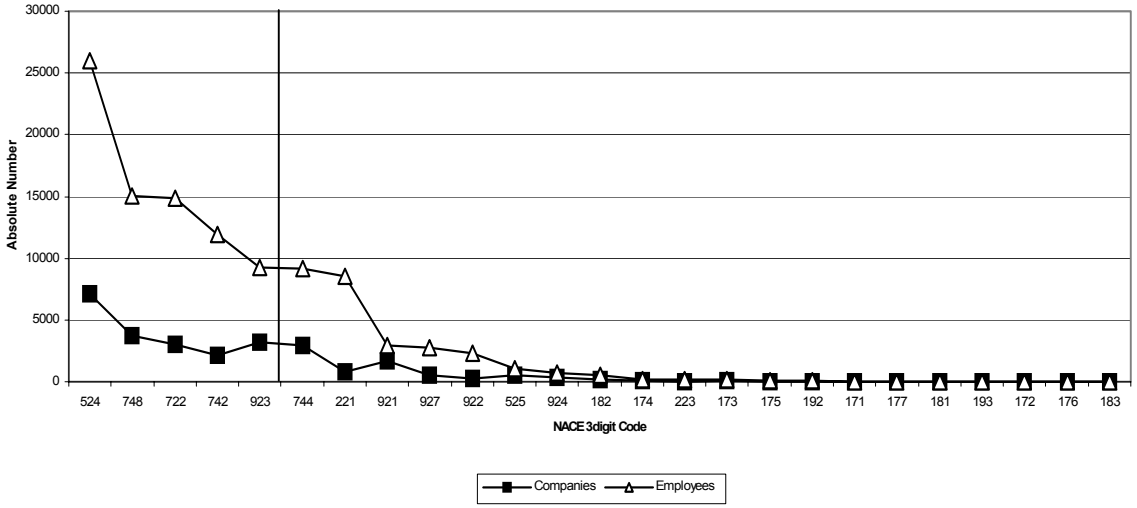
1. **Creative industries** which includes advertising, architecture, crafts, design, designer fashion, video, film, music and photography as well as publishing, computer games and software design and radio and television.

Knowledge Industries

2. **Information and communication technology** which comprises ICT manufacturing and ICT services including telecommunication,
3. **finances,**
4. **law and other business services,** and
5. **research and development and higher education**.

In contrast to other studies such as Scott (2000), fields like furniture production, baggage manufacturing and sporting articles are not included because of the large extent of manual activities related to those industries. In addition to that, this analysis does not attempt to mirror the whole value chain of each field of the creative knowledge economy like many other studies do (Senatsverwaltung fur Wirtschaft und Frauen, 2005; Ratzenbock et al. 2004; Weckerle and Sondermann, 2005). This is decided, because then manual and distributing activities needed to be included in the analysis, too, that can neither be classified as creative nor as knowledge intensive activities. In contrast to Florida's definition of the creative class (Florida, 2002, p. 327f), the analysis uses industrial branches and not occupations to determine the number of creative and knowledge workers (cf. Howkins, 2000, p.86-117). High-end sales and sales management professionals cannot be identified with this strategy. Florida's conception of creative professionals also includes healthcare practitioners (ibid., p. 328). This group is not considered in this study in order not to overstress the meaning of creativity in this analysis. A first investigation of the branches is deducted at the 3-digit level. The results, however, are not satisfactory:

Figure 1.1: Creative Industries – 3 digit code representation



Source: LISA (2005); Nace codes see table 1 in the appendix.

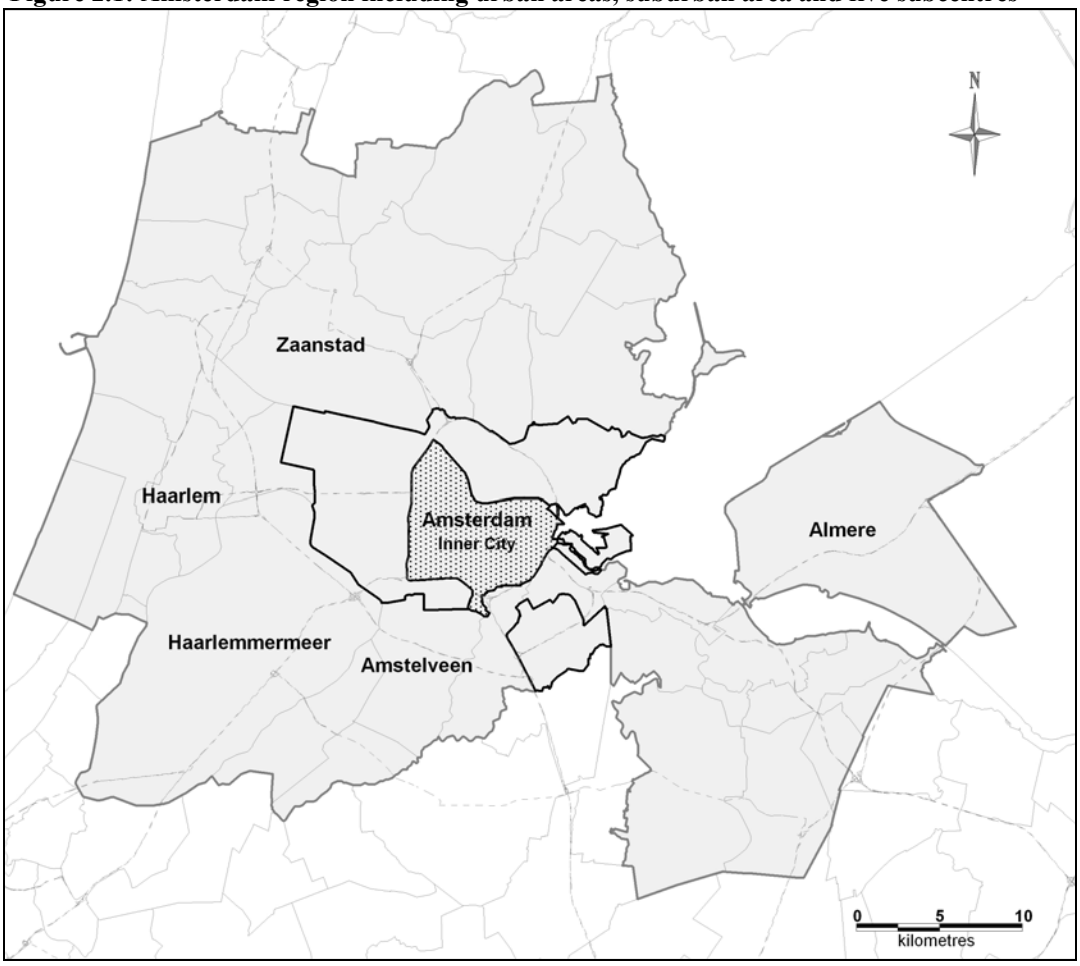
Figure 1.1 shows the quantitative importance of all creative branches in terms of employment and economic activity at the 3-digit level for the metropolitan area in 2005. Large differences in size and scale can be identified. The leading branch is retail, followed by miscellaneous business activities, software design, architecture and entertainment activities (codes see appendix). The so identified branches also comprise large amounts of activities which can hardly be 'approved' as creative in the widest sense. Various fields are merged together: Virtually all fields of retail, highly skilled as well as routine tasks of various sorts of business activities, architectural design as well as engineering and technical consultancy, and performing arts as well as commercial entertainment are included in the selection. In addition, this selection does not only comprise manual and less skilled tasks, it also includes knowledge intensive activities such as engineering.

Similar problems were often mentioned by other studies that also faced similar analytical obstacles, because available statistical classification schemes merge creative and highly innovative activities with standardised work. In one of the first books on the cultural economy Scott states (2000: 7): 'The main problem in this regard is that the categories of the standard classification are rarely fully informative, and this is especially true in the case of the cultural economy. Many sectors, even at the four-digit level of definition, are made up of a collection of establishments whose outputs are quite disparate in terms of their cultural attributes'.

Instead of accepting this low degree of representation, this study takes a further step to redefine the data selection by using the more detailed Dutch 'sbi93'-code. The number of branches is reduced strongly in order to exclude low skilled and non-creative activities. In addition to that, knowledge intensive tasks such as engineering are re-categorised. Some 3-digit codes such as 'miscellaneous business activities' are divided in subcategories and associated with suitable fields. Unclear definitions of branches like those of design or craftsmanship, for instance, could be identified by this procedure. Result and basis of the following analysis is a new scheme, which can be studied in detail in the appendix in table 1.

For better regional differentiation, the Amsterdam region is divided into four spatial categories: inner city, remaining city, five subcentres and remaining suburban area (see figure 2.1) (cf. Musterd et al. 2006).

Figure 2.1: Amsterdam region including urban areas, suburban area and five subcentres



Source: Own presentation, catography: K. Pfeffer.

2.2. Creative Workers

For the following analysis employment was used as a main criterion to determine the quantitatively most important branches. Using companies, branches with small company size would have received more prominence (art, architecture, or design studios). Since employment is also a good indicator of turnover, it is decided to use this as the main criterion for the study. The quantitatively most important fields in the Amsterdam region are in 2005: Software design (18,568 employees), publishing (10,255 employees), radio and television (8,978 employees), advertising (8,604), music and the visual and performing arts (6,482). For reasons of comparability to other ACRE-project cities, however, following branches are selected for further investigation:

1) Software consultancy and supply (code 722; 18,568 employees),
2) Film and radio (code 921: Motion Picture and Video and code 922: Radio and Television; total: 13,453 employees)
3) Advertising (code 74401; 8,604 employees)

Table 2 in the appendix shows that these branches differ in terms of their typical company size, their growth and spatial development in the Amsterdam region.
Typically creative companies in those branches have an average size of five employees per company. Radio and television firm are larger and motion pictures and video companies are smaller (2 employees). Merged into one category 'film and radio', they display average size.
The general development of the creative industries was very dynamic in the metropolitan region during the period 1996-2005 (cf. Bontje and Sleutjes 2007). The number of companies increased by 65% and the number of employees rose by 48%. The three selected branches participated in this growth to a different extent. Software design expanded exceptionally by quintupling employment and quadrupling the number of businesses. Apart from hardware consultancy that only adds up to less than two thousand employees, this steep increase is the strongest of all creative and knowledge branches. Advertising and film and radio followed the average trend, although founding activities were are little more vivid in the later branch. Outsourcing might be one of the underlying features, here. The three selected branches represent positive economic trajectories. Although branches with a negative economic development such as publishing are not included in this selection, the sample mirrors the general positive trend of the creative economy in Amsterdam.
How do the selected branches allocate in the region of Amsterdam? Is it true that creative industries are mainly driven towards inner city districts, so that there is the danger of over-representing one regional category?
The inner city was the most important location for companies of all selected branches apart from radio and television. The largest part of the workforce, however, is not so much oriented towards inner city areas. The majority of professionals in advertising works in inner city areas, but in advertising the suburban area is also focal point for employment. Motion picture and video companies and employees are nearly equally distributed to inner city and suburban locations. Since the company size tends to be larger in the remaining part of the city, it is hardly surprising that the majority of businesses is more likely to be found in the inner city districts. Professionals in software engineering and in radio and television companies appear to gravitate towards the suburban area of the metropolitan region. Apart from suburban sub-centres all parts of the metropolitan region are represented in 2005. How did the existing allocation pattern develop? Is it an outcome of general suburbanisation processes or are there some branches that are merely oriented towards the inner city and have strong urbanisation tendencies?
During the period 1996-2005, the general allocation pattern of creative and knowledge business changed surprisingly little. Each part of the region maintained its regional share of enterprises and employment. The change within the regional structure is a little different in the creative branches. The inner city attracted more creative establishments, but lost importance in terms of employment. The outer urban districts gained both, whereas the sub-centres lost both. The remaining suburban area was again able to increase its regional share in employment and as a business location for creative enterprises. Since this change varies between 0.4 percent and 1.95 percent, no major redistribution of economic activity took place. The allocation pattern of the selected creative branches varies to a larger extent and represents more pathways than the overall picture might indicate. Enterprises in radio and television as well as advertising are driven towards inner city locations during 1996 to 2000. After the turn of the millennium, they were more likely to reduce their presence in inner city areas and grew more strongly in the suburban area. The attraction of inner city locations for employees and

entrepreneurs in software design can be seen in opposition to that. After leaving inner city location in the late 1990s, re-urbanising patterns can be observed for those branches. The allocation pattern for radio and television and the motion picture industry maintained stable. Although there was a slight redistribution of radio and television activities towards the inner city, 84 percent of the employees and nearly half of all television companies are situated in the suburban space. The motion picture and video branch almost sustained its distribution to inner city and suburban locations during the last decade.
In other words, the selected branches represent different allocation strategies in the metropolitan region of Amsterdam: urban flight, re-urbanisation and allocational stability.

2.3. Knowledge Workers

In the knowledge economy, the following five most important branches are identified in the Amsterdam regions in 2005: legal and accounting (62,112 employees), finance (28,935 employees), labour recruitment (10,069 employees), higher education (9,101 employees), telecommunications (8,647 employees). Again, changes are made to garanty comparability with other European cities. The following three branches out of the five are selected:

1.) Law and accounting (code 741; 62,112 employees)
2.) Finance (code 65; 33,984 employees)
3.) Research and Education (code 731,732,803; 14,199 employees)

The overall workforce of the knowledge industries is three times higher than for the creative economy. So it comes hardly as a surprise that the largest single branch (law) is only 15 percent smaller than the total creative economy. The average size of the three selected knowledge fields is at 7.7 employees per company. Finance and higher education companies run their business with 78 (finance) or 56 (higher education) employees on average.
Compared to the creative economy, the development of the knowledge economy was more moderate, but still well above the general economic development in the metropolitan region Amsterdam. The employment grew by 29 percent, the number of companies even steeply increased by 52%. The founding activities were very vivid in the knowledge economy. The average company size decreased during the last decade.
Law was the leading branch in the knowledge economy. One third of all knowledge workers are employed in this industry and their number had doubled within the last decade. The number of companies in this branch expanded by an additional 81 %, which is also high above average. The economic indicators of the remaining two selected branches finance and higher education performed less successfully than the overall economy in the metropolitan region Amsterdam. Whereas the economic development in banking was positive in terms of employment, the number of employees and companies in higher education and financial leasing were reduced. To sum it up: the selected branches represent all possible trends: expansion, stagnation and decline. In contrast to the selection of the creative services, only one branch out of three represent an average trend and two branches even display a negative appearance.
How can the spatial distribution of the selected knowledge branches be described? Is it true that the knowledge economy follows a different, less inner city oriented location pattern?
The most important working locations of knowledge workers are found in the urban core in Amsterdam region. The majority of legal and financial professionals works in the inner city of

Amsterdam (exemption: financial leasing), but the suburban area is starting to compete with the inner city in the case of legal professionals and the outer city boroughs in the case of banking employees. The outer city district of Amsterdam had already been established as a focal point for employees in higher education. In conclusion, the major part of knowledge workers tends to navigate towards urban locations. The regional distribution of the companies shows a slight expansion. The majority of companies is situated in inner city in higher education. Although finance and law show the highest business activity in the suburban area, this is followed by inner city locations. Since the selected branches represent the average location pattern for the knowledge economy in terms of the regional allocation, they are suitable for the coming survey.

During the last decade, the allocation pattern of knowledge industries was a little more dynamic than the overall trend in creative and knowledge branches. Inner city locations lost some importance as company locations, but kept their share of employees. The remaining city received some additional workforce against the suburban areas. The suburban municipalities gained more new companies than other parts of the region. The subcentres were hardly involved in any locational shift. Given this development, the allocation pattern of the knowledge economy differs from the creative industries. A larger underlying suburbanisation tendency cannot be confirmed.

How do the selected branches represent the spatial dynamic in the Amsterdam region? Law and finance companies as well as workers left inner city areas during the late 1990s. After the turn of the millennium, the share of legal enterprises was growing again in inner city neighbourhoods, although this is not true for financial businesses to the same extent. Higher education and research expanded in the inner city in the 1990s, but they left the inner city districts after 2000 again. In general, the change in the allocation pattern was much more dynamic in the selected knowledge industries than for the creative industries. Amongst the selected branches, none is merely focussed on the inner city. In addition, each branch can be characterised by different typical size, different economic dynamic and different allocation patters.

2.4. Selection of Interviewees

Given this background, it is be proposed to select the 75 interviewees in each part of the creative knowledge economy according to table 2.1.

The number of interview partners in each branch is identified according to the size and the allocation pattern. Since there were different regional allocation strategies involved amongst the selected branches, the survey will also represent different spatial development paths.

The interviewees can be approached by three strategies: firstly, companies can be addressed and asked for their participation in the survey. Secondly, branch associations are suitable multipliers for the distribution of questionnaires. Thirdly, meeting points of creative and knowledge workers can be used to approach this group. Kloosterman (2006, 13), for examples, describes architects' football teams as important points of social exchange. Additionally, this provides the advantage that the interview atmosphere is not biased by professional expectations of the employer.

Table 2.1: Selection of Interviewees by branch and spatial distribution

Branch	Employees	Representation	Spatial Distribution of Interviewees			
		Interviewees	Inner City	Remaining City	Subcentre	Suburban region
Software	18568	34	9	7	10	8
Film and Radio	13453	25	5	1	1	17
Advertising	8604	16	7	2	4	3
Law	62112	42	15	6	11	10
Finance	33984	23	10	8	2	3
Higher Education	14199	10	4	4	1	1

Data source: LISA regiomonitor; own calculations.

3. QUALIFICATION AND INFLOW OF GRADUATES IN THE AMSTERDAM REGION

3.1. University graduates of all fields

3.1.1. General level of education of the active population

The following part uses data from the national statical agency, Statistic Netherlands (CBS). The regional classification is different from the regional monitor LISA. Western counties of the region are not included. Thus, the regional territory is smaller, which is described as the Amsterdam region here. In addition to that, information about the ethnic background is always related to ethnic heritage and not nationality. Persons who are described as Moroccans, for instance, might have been naturalised now and might posses Dutch citizenship. Thus, Moroccans are persons who emigrated from Morocco or whose father or mother emigrated from Morocco.

In general the basis of human capital is very high in the Netherlands. 44 percent of the active population acquired tertiary education (national average 30%). Ethnic origin of the population has not any influence on this high share of educated professionals. Differences only appear, if higher education comes into play. Nearly one fifth of the active population graduated from polytechnics or universities. The difference between the Dutch and non-Dutch working population becomes more prominent in this relation (see table 3.1). Considering university education only, differences becomes even more apparent. The labour market in the Netherlands attracted disproportionately many highly skilled migrants from other Western countries.

The majority of the workforce with higher university degrees studied in the field of health science (42 %), followed by economy (27 %) and technical subjects (16 %). Not surprisingly health subjects were more predominant for female graduates in the workforce (56%) and technical subjects were less pronounced (7%). Overall, there is still a visible gender gap between university graduates in the workforce. Whereas 60 % of the university graduates are men, 40 % are women. The picture for graduates of polytechnics is similar. Technical disciplines and economy were more popular amongst former polytechnic students (technical:18 %; economy: 29%). The share of females among this group is higher with 46% of which 74 % graduated in health science and only 5 % in technical disciplines (data source: CBS 2007).

Table 3.1: Qualification level of the active population in the Netherlands

	Active Population				
		Origin			
	Total	Dutch	Non-Dutch	Western	Non-Western
	in Thousand				
Tertiary Occupational Qualification	3262	2653	609	312	297
Polytechnic	1424	1253	171	108	63
University	882	684	197	136	62
	Share of persons by qualification level in percent				
Tertiary Occupational Qualification	44,1%	43,8%	45,5%	45,3%	45,7%
Polytechnic	19,2%	20,7%	12,8%	15,7%	9,7%
University	11,9%	11,3%	14,7%	19,7%	9,5%

Data source: CBS, 2007; own calculations.

Due to the urban economy, the general level of qualification is higher in the metropolitan region than in the rest of the country. Every second professional in Amsterdam and 46 percent of the regional workforce passed higher education (university and politechnic) successfully. During the last decade (1996-2005), the number of highly skilled professionals rose steeply by an additional 29 percent. In the Amsterdam region, this increase is slightly stronger which might also be caused by an underlying selective suburbanisation process. The educational level of the female workforce increased more dramatically. The number of female highly skilled professionals grew by 35 percent between 1996 and 2005 in the city of Amsterdam. In the metropolitan region, it even surged by 44 percent. Nearly fifty percent of highly skilled graduates are female (49.8 %) in the Amsterdam region. In the city of Amsterdam female professionals even hold the majority of the highly skilled workforce with university education (53.8 %) (data source: CBS 2007).

The active population is highly geared to the urban labour market. 72 % of the active highly skilled professionals work within the city of Amsterdam, whereas only 28 % perform their tasks outside the city. This ratio is by one percent smaller for female highly skilled professional who more often tend to work outside the city. When highly skilled women work in scientific professions, even 77 % find their jobs in the city (data source: CBS 2007).

3.1.2. Inflow of graduates into the workforce

In the next section the inflow of highly skilled workers is investigated in more detail. Since the immigration of labour is discussed in section 5, the outflow of graduates from the university will be discussed in the following. How many graduates left higher education in the last decade and in which subjects did they receive their qualifications?

In 2005, 111,300 students graduated at Dutch universities successfully. 75,730 persons graduated in fields which are relevant for the creative and knowledge workforce. Five groups of disciplines are identified to determine this new inflow in the labour market:

1. Social Sciences, Economy and Law (44,320 graduates)
2. Arts and Humanities (9,460 graduates)
3. Engineering (9,170 graduates)
4. Natural Sciences (7,540 graduates) and
5. Personal services, transport, environment (5,240 graduates).

The faculty of education and of health sciences examined some eighteen thousand young academics each in 2005. The definition of the creative and knowledge intensive workforce which is applied in this study does not include health or educational occupations. Due to this, those graduates are excluded in the further analysis. Whether those qualifications have impact on the creative class like Florida assumes in his definition or not, must be discussed elsewhere (data source: CBS 2007).
The majority of students obtained their degree from polytechnics (55 %), whereas university degrees represent a smaller part (45 %). The female participation in higher education increased by 4 percent from 50.5 % to 54.6 % in Dutch universities between 1995 and 2005. Of course, this varies strongly by faculties. More than 60 percent of the graduates in arts and humanities are women, while only 21 percent and 31 percent of engineering and natural science graduate are female (data source: CBS 2007).
In Amsterdam two universities account for the majority of graduates: Free University and University of Amsterdam. In 2005, 10,241 graduates finished their degrees in both university. The majority were inscribed in a disciplines of the faculty of social sciences, but compared to the national data the number of engineering graduates is lower (see table 3). The share of graduates at both universities differ in the field of humanities and health sciences. Since health graduates are not relevant for the aims of this study, it is necessary to rely on the relative share of both universities in the further investigation.

Table 3.2: Graduates of University of Amsterdam and Free University by faculty in 2005

Faculty	Sub-fields	UVA and VU Graduates	Percent	UvA Graduates	Percent
Education		525	5,13	305	5,29
Humanities		1275	12,45	994	17,24
Social Sciences Total		5762	56,26	3300	57,22
	Social Sciences	3054	53,00	2007	90,94
	Economy	463	8,04	200	9,06
	Journalism	43	0,75	43	1,95
	BA and Accounting	1328	23,05	581	26,33
	Law	866	15,03	468	21,21
Natural Science		798	7,79	428	7,42
Engineering		27	0,26	4	0,07
Health		1759	17,18	684	11,86
Planning		88	0,86	45	0,78
Environmental Sciences		7	0,07	7	0,12
Total		10241	100,00	5767	100

Data Source: University of Amsterdam

3.1.3. Selection of graduate interviewees

Two selection strategies for graduate interviewees come to the fore: Firstly, a strategy which relates to the academic qualifications within the workforce. This strategy describes the current situation the best and also gives information about past developments. Secondly, another strategy would take the graduate inflow as a basis for selection. Then, the future development would be more taken into account. Since the ACRE project aims to explain the development and attraction of creative and knowledge workers in order to give political advice for future development, the second strategy is selected to decide on the interviewees. This procedure also has the advantage, that the academic subfields can be determined more accurately. In

relation to the foreign participation of the highly skilled workforce, no differences appear between the active population and the graduates. The workforce is also strongly geared towards the city Amsterdam (data source: CBS 2007). For the calculation of the distribution of prospective interviews, data of the output of the Amsterdam universities was used. Since no detailed data on the national origin was available at this spatial scale, the average national share (20 %) of foreign graduates or highly educated foreign employees in the national workforce was employed to determine the selection of interviewees by origin. The descent of foreign graduates by hemisphere should be considered as well, so that three graduates should originate from western countries and two from non-western states. Both gender should be represented equally.
Given the available background information, following strategy for selection is proposed:

Table 3.3: Selection of graduate interviewees by origin and academic subject

		Faculties					
Origin	Graduate Interviewees	Social Sciences, Economy and Law	Arts and Humanities	Engineering	Natural Sciences	Personal services, transport, environment	Free Selection
Foreign	5	3	1	0	1	0	
Dutch	20	14	4	0	2	1	1

Source: Own Calculations

The alumni office of the University of Amsterdam can be contacted for the survey.

3.2. Graduates of arts and architecture

The outflow of art graduates is very low in absolute terms in the Netherlands. In 2005, 120 graduates left the academy of which are 50 percent non-Dutch origin. They are equally coming from Western and non-Western destinations. Since foreign graduates belong to two thirds to the first generation of immigrants, the attraction of the Netherlands as a centre of education appears to be high (data source: CBS 2007).
In addition to the academic education of artists, two other fields are of relevance: art education (art teachers) and audiovisual qualifications as well as architecture. The successful participation in those studies is much higher. 4,630 persons graduated in art education and audiovisual qualification, for example. Polytechnic education received the main attention there. The majority had Dutch background (63 %). Educational migration and a dominance of Western graduates characterise the non-Dutch graduates. The outflow of graduates in architecture from higher education institution shows a similar pattern. From 3,580 former students more than half graduated at polytechnics. The share of foreign students (20%), especially the western graduates (44%), is little lower (data source: CBS 2007).
It is planned to select 25 interviewees from these fields to give the graduates from art schools are major position in this study. Therefore, the selection of interviewees is not based on quantitative representation, but all three different fields of qualification should be represented equally. Thus, it is proposed to select the interviewees according to the following system:

Table 3.4: Selection of art graduate interviewees by ethnic origin and academic field

	Graduates	Interviewees	Dutch	Western	Non-Western
Art	120	8	4	2	2
Art education and audio-visual qualifications	4630	9	6	2	1
Architecture	2970	8	6	1	1

4. MANAGERS AND SELF-EMPLOYED

The group of managers and self-employed is an important group for the study because of two reasons: firstly, they provide insight in the allocational and business strategies of companies, of course. Secondly, the number of self-employed is very high. More of half of the companies in the different creative and knowledge branches are run by one person (average 53 % of all branches). This differs between the various branches. The creative economy accounts for the highest shares of owner lead businesses: For example, more than three thirds of designers (code 74875), auctioners (code 74874), journalists (code 924) and artists (code 923) are self-employed. In parts of the knowledge economy, however, less than one fourth of the companies are owner run enterprises like in financial leasing (code 652), production of transmitters (code 322), higher education (803), and banking (651) (data source: LISA 2005). Since the data of the regional monitor LISA, which was used here, does not include free occupations, the total share of owner lead businesses is even higher. How many persons work as employed managers in the Amsterdam region?

Table 4.1: Occupational groups in the Netherlands and the Amsterdam region

Occupations	Netherlands	Amsterdam region
	2000	2005
1. Managers & senior officials	13%	26%
2. Professional occupations	17%	17.5%
3. Associate professional and technical occupations	18%	13%
4. Administrative & secretarial occupations	12%	14%
5. Service workers & shops + market sales workers	13%	7%
6. Skilled agricultural + fishery workers	2%	1%
7. Craft & related trade workers	10%	3%
8. Process, plant and machine operatives	6%	7%
9. Elementary occupations	9%	2%
Total	7,567,700 = 100%	606,000 = 100%

Source: Bontjes and Sleutjes (2007, 46); data source: ILO and CBS (2007)

Bontjes and Sleutjes (2007, 46) give a detailed overview about the distribution of occupational groups in the Netherlands and in the Amsterdam region (see table 4.1). The regional definition which is used in this table relates to the smaller definition of the Amsterdam region which was also used in section 3.

According to ISCO-88 classification, managers and senior officials are summed up as a single group. The number of managers is smaller. They comprises 122 thousand persons in total in the Netherlands (data source: CBS 2007). Therefore, this report applies another selection strategy to determine a suitable number of interviewees for the survey. Starting point is the data of the regional monitor LISA, again, because it gives information on the number of companies in each regional subcategory in the metropolitan region of Amsterdam. Since

managers head all companies, the regional monitor is used for identifying the candidates. As said above, this data set does not include free occupations, so that it is biased towards companies with employees. Five candidates shall be recruited out of the free occupations to rebalance this underrepresentation. The remaining 20 candidates will be determined by the following selection strategy. The most important creative and knowledge branches were already identified in section 2. On the basis of this information, the distribution of companies is used for assessing the interviewees.

Table 4.2: Selection of managers

Branch	Companies	Interviewees	Spatial Distribution of Interviewees			
			Inner City	Remaining City	Subcentre	Suburban region
Software	3750	4	1	1	1	1
Film and Radio	435	3	2			1
Advertising	2997	3	1		1	1
Law	12934	8	2	1	2	3
Finance	372	1				1
Higher Education	163	1	1			

Data source: Regional Monitor LISA 2005; own calculations.

The regional distribution is defined according to the regional share of companies in the selected branches. The number of interviewees in the knowledge sector is rearranged. A representative selection would overemphasise law so much, that finance, and higher education would not have been included in the sample. Given this mal representation of branches, it was decided to choose each branch once and assign the remaining cases to finance.
The contact strategies which were described in section 2 can be applied again.

5. FOREIGN ENTREPRENEURS AND FOREIGN EMPLOYEES IN THE AMSTERDAM REGION

5.1. Foreign population in the Amsterdam region

During the last decade (1997-2006), the population in the city and region Amsterdam grew by 3 percent in the city Amsterdam and nearly 10 percent in the whole region. The number of foreign population decreased in the same period in absolute and relative terms. Musterd and Deurloo (2006) monitored a considerable outmigration to suburban destinations. Using data on the nationality of the residential population, the regional structure developed as follows: The share of non-Dutch residents declined from 13.4 percent in the urban core to 12.1 percent. In the region, the segment of foreign population fell from 7.5 to 7.0 percent. This shrinking process involved European nationals and Non-European nationals at the same time.
The ratio of the female foreign population equalises to the ratio of the Dutch population in the region, although women are slightly overrepresented in the non-European foreign population in the overall metropolitan region. In Amsterdam city, the foreign population follows more the pattern of an immigrant society with a small overrepresentation of men, especially in the European population (51%) (data source: CBS 2007).

5.2. Participation in the active population

The Dutch labour market depends strongly on the inflow of foreign population. For the description however, data on the ethnic origin of the labour force is used: 18 percent of the active population do not have Dutch ethnicity. In Amsterdam, the share is considerably higher. Nearly two out of five professionals don't have a Dutch parents. In the metropolitan region this ratio does not shrink strongly. Little more than one third of the workforce comes from different ethnic background. Overall, the labour market participation rate is much higher than for the native population (data source: CBS 2007).
Unfortunately, more detailed statistical data on qualification is not available at regional level. In order to discuss the main disciplinary fields of polytechnic and university education, national data is used. 12 percent of the professionals with higher education (polytechnic and university) originated outside the Netherlands. This share is a little smaller for highly skilled who studied technical subjects (9.8 %) and insignificantly higher for graduates in economy (12.8 %). Unfortunately, the field of study is not stated for the majority of foreign highly skilled (52%). Two third come from a Western country, whereas one third has other origin (exception economy: 41% non-Western professionals) (data source: CBS 2007).
The share of foreign highly skilled at the top level of university education is higher. The group of foreign professionals who received a degree at the master level from universities comprises 21 %. The preponderant majority of this work as highly skilled university educated and come from a Western background (71%). A break down into technical, economic and

health faculties indicates, that the named fields are not the most popular disciplines that foreign highly skilled finished their studies in. They represent only around 13 percent of the active population within those fields. The gender of highly skilled professionals hardly interferes this representation (data source: CBS 2007).
Although the representation of highly skilled professionals by their field of study would be a suitable way to select candidates for the following study, the lack of information is a severe barrier for this. Therefore, the next section discusses the inflow in the workforce by analysing the structure of the foreign graduates.

5.3. Foreign graduates

Foreign graduates contribute to 20 percent of the annual outflow of higher education institutions in the Netherlands in 2005. Their participation rate between polytechnic education and university education varies between 53 percent (polytechnic degrees) and 47 percent (university degrees). Thus, foreign students finish their studies more often with a polytechnical degree than indigenous graduates, although their relative representation in one or the other educational form differs only by few percent compared to the Dutch graduates (data source: CBS 2007).
21 percent of the university graduates have a foreign origin. Their relative representation as university graduates is a little higher than in polytechnic education. The majority (11.1 % of the graduates) come from a Western background, and 9.6 percent derive from a non-Western heritage. Interestingly, the length of stay influences Western and non-Western immigrants in an opposite fashion. Whereas the majority of Western graduates belong to the second generation, the majority of non-Western graduates are counted as first generation immigrants. Apparently, educational migration might be of higher importance for non-Western migrants. This is not true, however, for the traditional immigrant population in the Netherlands from Turkey, Morocco, Surinam or Antillean-Aruba which follows a pattern of generational upward mobility (data source: CBS 2007).
The participation rate in higher education grew tremendously over the last decade (1995-2005). The number of graduates increased by 37 percent. The successful enrolment of foreign students, however, more than doubled (236 percent!). This was the result of a steep increase of non-western graduates (360 %), particularly of the 2nd generation of the working class immigrants (527%). The gap between Western and non-Western graduates was closed during the last decade. The successful enrolment in higher education is for Western and non Western graduates nearly the same in 2005. Ten years ago, two thirds of the foreign student originated in Western countries, whereas one third had non-Western origin (data source: CBS 2007)..
The involvement in the various faculties varies moderately. The highest share of foreign graduates is found in social science departments which also include law and economics, and in the arts and humanity faculty (25%). This is followed by natural sciences (23%), engineering (19%), and environmental sciences (16%)(data source: CBS 2007).

5.4. Selection of foreign professionals

For a calculation for the interviewees for the survey, the given information can be used, because it gives more detailed insight in the typical representation of educational certificates

of foreign population. There is, however a severe objection. Since the majority of students is recruited within the second generation of foreigners, not the graduates themselves, but the allocation choice of their parents is of higher importance. The immigration of their parents twenty to thirty years ago highly influenced the number of foreign graduates at Dutch universities. In addition to this, immigrations laws in the Netherlands do not allow foreign-non-EU immigrants to stay on after their studies. Given this information and taking the weak information on the fields of study of foreign professional into account, another strategy is developed. The academic workforce includes a 20 percent share of foreign university educated professionals. The survey of creative and knowledge workers will already target 30 foreign professionals by sampling 150 persons. It is necessary to include another 30 foreign professionals to achieve an overall sample size of 60 foreign professionals. This can be achieved by approaching twice as many foreign professionals in the survey and rising the number of questionnaires to 180.

For the selection of in-depth interviews, the number of 10 planned interviews should be increased by two. So two foreign employees of each selected creative and knowledge branch can be approached for the in depth interviews. In addition, six out of the ten interviewees should have Western origin and four non-Western descent.

6. APPENDIX

Table 1: Selected branches of creative and knowledge economy.

Field	NACE codes	- Detailled Code 'sbi93'	Detailed Branche
CREATIVE INDUSTRIES			
1.Creativ Industries			
Advertising	744 Advertising	74401	Advertising
Architecture	742 Architectural and engineering activities and related technical consultancy	74201 74202	Architects Town Planning
Arts/antiques trade	Portions of the following sectors: 524 Other retail sale of new goods in specialized Stores 525 Retail sales of second-hand goods in Store 748 (misc)	 52457 52472 52483 52501 74874	 Retail Musical Instruments Retail Books Retail Jewellery Retail Antiques Auctioneers for art, household and other goods
Arts/Arts	925 Libraries, Galleries, Museums	9251 9252	Library and archives activities Museums activities
Design		74875	Fashion design related to textiles, shoes, jewellery, furniture and other interior decoration and other fashion goods

Crafts		3630 3622 2670 2621	Manufacture of musical instruments Manufacture of jewellery and related articles n.e.c. Finishing ornamental and building stone Manufacture of ceramic household and ornamental articles
Designer Fashion	Portion of the following sectors: 17 Manufacture of textiles 171 Preparation and spinning of textile fibres 172 Textile weaving 173 Finishing of textiles 174 Manufacture of made-up textile articles, except apparel 175 Manufacture of other textiles 176 Manufacture of knitted and crocheted fabrics 177 Manufacture of knitted and crocheted articles 18 Manufacture of wearing apparel; dressing and dyeing of fur 181 Manufacture of leather clothes 182 Manufacture of other wearing apparel and accessories 183 Dressing and dyeing of fur; manufacture of articles of fur 19 Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear 191 Tanning and dressing of leather 192 Manufacture of luggage, handbags and the like, saddlery and harness 193 Manufacture of footwear		

Video, film, music and photography	223 Reproduction of recorded media 921 Motion pictures and video activities 748 Miscellaneous Business activitie (*part of it)	 74811 74812	 Photographic activities Fotolabs
Music and the visual and performing arts	Portions of the following sectors: 923 Other entertainment activities	 92311-22	 Artistic and literary creation and interpretation, Operation of arts facilities
Publishing	221 Publishing 924 News agency activities		
Computer games, Software, electronic publishing	722 Software consultancy and supply		
Radio and TV	922 Radio and television activities		
KNOWLEDGE INDUSTRIES			
2. Information Communication Technology	ICT manufacturing: 300 Manufacture of Office machinery and Computers 313 Manufacture of insulated wire and cable 321 Manufacture of electronic valves and tubes and other electronic components 322 Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy		

	323 Manufacture of television and radio receivers, sound or video recording or reproducing apparatus and associated goods 332 Manufacture of Instruments and appliances for measuring, checking, testing, navigating and other purposes except industrial process control equipment 333 Manufacture of industrial process equipment ICT Services and Telecommunication 642 Telecommunications 72 Computer related activities (minus 722 Software) 721 hardware consultancy; 723 data processing; 724 database activities; 725 maintenance and repair of office, accounting and computing machinery; 726 other computer related activities;		
3. Finances	Financial intermediation 65 Financial intermediation, except insurance and pension funding 66 Insurance and pension funding except compulsory social security 67 Activities auxiliary to financial intermediation		
4. Law and other Business services	741 Legal, accounting, book-keeping and auditing activities; tax consultancy, market research and public opinion polling, Business and management consultancy. 745 Labour recruitment and provision of personnel	74501	Personnel search, selection referral and placement supply to others

		74502	Labour-contracting activities
			Personnel search, selection referral and placement in connection with employment supplied to the
		74503	potential employer or to the prospective employee
	748 (miscellaneous)	74872	Fair, exhibition and congress organizers
5. R&D and higher education			
	73 Research and development		
	731 Research and experimental development an natural sciences and engineering		
	732 Research and experimental development an social sciences and humanities		
	803 Higher education		
6. Engineering and technical consultancy			
			Projects elaboration and realization for civil engineering, hydraulic engineering, traffic
		74203	engineering
			Projects elaboration and realization relative to electrical and electronic engineering, mechanical,
		74204	industrial engineering
			Engineering for machinery and industrial plan
		74205	design
			Projects elaboration and realization
		74206	relative to systems engineering
			'Engineering and projects elaboration
		74207	and realization not specified
		74208	Other related technical consultancy
	743 Technical testing and analysis		

Table 2: Distribution of creative and knowledge branches in the Amsterdam region

Branch Name	NACE/ sbi93	Sub-field	Inner City Amsterdam		Remaining City Amsterdam		Subcentres		Remaining suburban area		Total	
			Companies	Employees	Companies	Employees	Companies	Employees	Companies	Employees	Companies	Employees
Advertising	74401		1238	3564	241	1005	662	2198	856	1837	2997	8604
		Advertising	**1238**	**3564**	**241**	**1005**	**662**	**2198**	**856**	**1837**	**2997**	**8604**
Architecture	74201/02		526	2122	124	598	356	1837	510	1259	1516	5816
		Architecture	**526**	**2122**	**124**	**598**	**356**	**1837**	**510**	**1259**	**1516**	**5816**
Retail												
Musical Instruments	52457											
Books	52472											
Jewellery	52483		248	933	44	201	156	1014	182	485	630	2633
Retail Antiques	52501		138	183	4	5	68	124	79	112	289	424
Auctioneers	74874		7	131	5	93	6	20	10	36	28	280
		Arts/antiques trade	**393**	**1247**	**53**	**299**	**230**	**1158**	**271**	**633**	**947**	**3337**
Galleries/Museums Libraries	9251/2		197	2415	26	859	89	913	98	1166	410	5353
		Arts	**197**	**2415**	**26**	**859**	**89**	**913**	**98**	**1166**	**410**	**5353**
Design	74875		608	861	94	202	173	247	294	414	1169	1724
		Design	**608**	**861**	**94**	**202**	**173**	**247**	**294**	**414**	**1169**	**1724**
Ceramic Articles	2621		10	18			7	15	14	16	31	49
Ornamental Stone	2670		9	11	3	11	12	35	23	94	47	151
		Craft	**19**	**29**	**3**	**11**	**19**	**50**	**37**	**110**	**78**	**200**

Preparation fibres	171		1	2					2	14	3	16
Textile weaving	172		2	4					1	2	3	6
Finishing of textiles	173		20	36	7	18	13	68	15	64	55	186
Textile articles	174		9	9	7	49	19	72	55	214	90	344
Other textiles	175		2	4	5	15	16	195	2	3	25	217
Knitted fabrics	176						1	13	1	3	2	16
Knitted articles	177		1	15			1	1			2	16
Leather clothes	181		2	3	2	2	3	5	1	1	8	11
Other wearing apparel	182		86	247	35	104	63	164	84	386	268	901
Fur	183		2	2			1	1			3	3
Luggage, handbags	192		9	20	2	2	3	22	3	3	17	47
Footwear	193		1	2			1	4	3	5	5	11
		Designer Fashion	**135**	**344**	**58**	**190**	**121**	**545**	**167**	**695**	**481**	**1774**
Media Reproduction	223		18	98	3	7	9	12	17	79	47	196
Photography	74811/2		415	534	72	109	146	239	233	390	866	1272
Motion Pictures and Video	921		1138	1920	156	347	192	332	585	1876	2071	4475
		Video, film and photography	**1571**	**2552**	**231**	**463**	**347**	**583**	**835**	**2345**	**2984**	**5943**
Entertainment Activities	92311-92322		1118	4274	152	271	314	615	439	1322	2023	6482
		Music, visual, performing arts	**1118**	**4274**	**152**	**271**	**314**	**615**	**439**	**1322**	**2023**	**6482**
Publishing	221		429	2516	110	3443	171	2429	255	1867	965	10255
New agencies	924		173	283	34	135	99	144	128	236	434	798
		Publishing	**602**	**2799**	**144**	**3578**	**270**	**2573**	**383**	**2103**	**1399**	**11053**
Software consultancy	722		1356	4684	464	3946	961	5285	969	4653	3750	18568
		Software	**1356**	**4684**	**464**	**3946**	**961**	**5285**	**969**	**4653**	**3750**	**18568**
Radio and TV	922		181	931	23	232	47	451	184	7364	435	8978
		Radio and TV	**181**	**931**	**23**	**232**	**47**	**451**	**184**	**7364**	**435**	**8978**

Office machinery	300		5	6	1	44	14	172	11	20	31	242
Wire and cable	313				1	263			1	1	2	264
Electronic valves and tubes	321		3	19	4	31	9	90	7	34	23	174
Television and radio transmitters	322		2	17	2	139	2	39	8	899	14	1094
Television and radio receivers	323		3	3			7	83	7	326	17	412
Measuring Instruments	332		3	3	5	54	20	480	21	199	49	736
Industrial process equipment	333						3	13	8	57	11	70
		ICT Manufacturing	**16**	**48**	**13**	**531**	**55**	**877**	**63**	**1536**	**147**	**2992**
Telecommunication	642		207	1596	86	3576	127	2256	144	1219	564	8647
		Tele-communication	**207**	**1596**	**86**	**3576**	**127**	**2256**	**144**	**1219**	**564**	**8647**
Hardware consultancy;	721		55	78	13	33	303	1019	228	423	599	1553
Data processing;	723		41	205	14	56	45	340	37	245	137	846
Database activities;	724		64	260	21	781	42	107	46	237	173	1385
Maintenance computing machinery	725		28	51	19	113	67	858	48	93	162	1115
Other activities	726		53	217	35	97	52	356	39	1052	179	1722
		ICT Services	**241**	**811**	**102**	**1080**	**509**	**2680**	**398**	**2050**	**1250**	**6621**
Banking	651		113	13221	41	11023	77	2051	141	2640	372	28935
Financial leasing	652		167	1380	61	562	128	1648	142	1459	498	5049
Insurance and funds	660		41	3063	36	1618	36	1561	37	531	150	6773
Brokerage	671		430	3760	86	507	188	1766	245	571	949	6604
Activities auxiliary insurance and funds	672		232	1056	141	2493	427	1968	539	1950	1339	7467
		Finances	**983**	**22480**	**365**	**16203**	**856**	**8994**	**1104**	**7151**	**3308**	**54828**

Legal, accounting, consultancy, polling	741		3914	22690	1167	8697	3051	15961	4802	14764	12934	62112
Labour recruitment	74501-74503		635	3522	277	1367	508	3100	497	2080	1917	10069
Fairs, congress	74872		73	504	15	70	26	56	30	128	144	758
		Law and business services	**4622**	**26716**	**1459**	**10134**	**3585**	**19117**	**5329**	**16972**	**14995**	**72939**
R&D natural sciences	731		84	1832	40	1120	46	804	62	425	232	4181
R&D social sciences	732		80	700	14	70	13	14	21	133	128	917
Higher Education	803		94	3499	33	3990	15	683	21	929	163	9101
		Research and Education	**258**	**6031**	**87**	**5180**	**74**	**1501**	**104**	**1487**	**523**	**14199**
Engineering	74203-74208		317	2001	143	2364	404	2371	513	1811	1377	8547
Technical Consultancy	743		16	28	20	107	38	142	34	89	108	366
		Engineering	**333**	**2029**	**163**	**2471**	**442**	**2513**	**547**	**1900**	**1485**	**8913**
		Grand Total	*14604*	*85533*	*3888*	*50829*	*9237*	*54393*	*12732*	*56216*	*40461*	*246971*

Table 3: Distribution of selected creative and knowledge branches in the Amsterdam region in 2005

Branch Name	NACE/ sbi93	Sub-field	Inner City Amsterdam		Remaining City Amsterdam		Subcentres		Remaining suburban area		Total	
			Companies	Employees	Companies	Employees	Companies	Employees	Companies	Employees	Companies	Employees
Creative Industries												
Software	722		1356	4684	464	3946	961	5285	969	4653	3750	18568
		Software	**1356**	**4684**	**464**	**3946**	**961**	**5285**	**969**	**4653**	**3750**	**18568**
Advertising	74401		1238	3564	241	1005	662	2198	856	1837	2997	8604
		Advertising	**1238**	**3564**	**241**	**1005**	**662**	**2198**	**856**	**1837**	**2997**	**8604**
Motion Pictures and Video	921		1138	1920	156	347	192	332	585	1876	2071	4475
Radio and TV	922		181	931	23	232	47	451	184	7364	435	8978
		Film and Radio	**1319**	**2851**	**179**	**579**	**239**	**783**	**769**	**9240**	**2506**	**13453**
Knowledge Industries												
Banking	651		113	13221	41	11023	77	2051	141	2640	372	28935
Financial leasing	652		167	1380	61	562	128	1648	142	1459	498	5049
		Finances	**280**	**14601**	**102**	**11585**	**205**	**3699**	**283**	**4099**	**870**	**33984**
Legal, accounting, consultancy, polling	741		3914	22690	1167	8697	3051	15961	4802	14764	12934	62112
		Law and business services	**3914**	**22690**	**1167**	**8697**	**3051**	**15961**	**4802**	**14764**	**12934**	**62112**
R&D natural sciences	731		84	1832	40	1120	46	804	62	425	232	4181
R&D social sciences	732		80	700	14	70	13	14	21	133	128	917
Higher Education	803		94	3499	33	3990	15	683	21	929	163	9101
		Research and Education	**258**	**6031**	**87**	**5180**	**74**	**1501**	**104**	**1487**	**523**	**14199**

Data Source: LISA regional monitor

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