CLUSTER REPORT

MORAVIA-SILESIA

19 June 2006

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Abstract

The Report on Cluster Analysis of the Moravian–Silesian Region is focused on introduction of the region and mainly on description of ICT Sector. Report on Cluster Analysis contains the overview of the national and also regional ICT sector and focuses on the cluster itself. Chapter 4 of the Report describes the Evolution of the ICT Cluster, cluster structure and competitive position, factor conditions and also firms' strategies, structures and rivalries, strength, weaknesses, organisational framework and cluster management. The final part of Analysis describes Czech regional and national policies applied at clusters and ICT sector. As the conclusion, the Cluster management ´s core competencies, possible lessons from the experience made and also future plans of the IT Cluster organisation are shown.

CONTENT

1 EXECUTIVE SUMMARY

The Moravian-Silesian Region is situated in the northeast part of the Czech Republic, next to the Zlin and Olomouc Regions. It shares borders with Poland to the north and east and with Slovakia to the southeast.

The ICT sector in the Czech Republic is a growing sector in terms of turnover and value added (especially in NACE categories 30-Manufacture of office machinery and computers and 32-Manufacture of radio, television and communication equipment and apparatus) and stagnating in terms of number of businesses and employees (in the period 2001-2004 only the NACE category 30 had a growing tendency).

From the point of view of availability of regional statistical data on the ICT sector, it is practically impossible to do any analysis. Generally, the commercial Albertina Data database of companies in the Czech Republic, which is not obligatory, is the most comprehensive source of information.

The total number of employees in the ICT sector in the Moravian-Silesian Region is more than 8 thousand people which represent about 5 % of the total number of employees in this sector in the Czech Republic. In the near future there is an expectation of increase of the number of employees in the ICT sector in the Region due to realization of new projects and foreign direct investments. The total number of businesses in the Region is 3,938.

Following the ICT cluster mapping project, a cluster managing organisation named "**IT Cluster**" was established based on the initiative of the Dean of the Faculty of Electrical Engineering and Computer Science (FEECS) of the VSB-Technical University of Ostrava and was officially registered by the Ministry of Internal Affairs on 27th January 2006 as an Association of corporations and individuals.

At present, IT Cluster has a total of 20 members, with 70 active companies (potential members) in the database on a non-membership basis.

The analysis of these 70 firms shows that almost 42 % of firms have from 11 to 50 employees and the total number of employees was 2,398 in 2004. The turnover of these firms was € 219,175,000 in 2004.

IT Cluster joint projects:

- Human resources – HR Supply-Demand Portal: People for IT
- Training and Certification Centre
- Marketing surveys and integrated marketing communication
- Workshops – College for Practice
- Joint R&D projects – regional funding

Because IT Cluster was established as an independent association of corporations and individuals there are all members involved in the management of cluster. The main IT Cluster's authorities are General Assembly, Executive Board and Supervisory Board. The operative activities in the managing of cluster were delegated on the Cluster Manager.

From the analysis of regional and national cluster policies it issued that the activities in this field are determined by following documents:

National level:

- Operational programme Industry and Enterprise (OPIE) 2004 – 2006
- The National Cluster Strategy 2005 - 2008 (NCS)
- Operational programme Enterprise and Innovation OPEI) 2007 - 2013

Regional level:

- Regional development plan 2005 - 2008 (RDP)

2 THE REGION

2.1 THE MORAVIAN-SILESIAN REGION

The Moravian-Silesian Region (M-S Region) is situated in the northeast part of the Czech Republic., next to the Zlin and Olomouc Regions. It shares borders with Poland to the north and east and with Slovakia to the southeast.

The M-S Region is determined by the following districts: Bruntal, Frydek-Mistek, Karvina, Novy Jicin, Opava and Ostrava-city; the region is divided into 22 administrative districts of the municipalities with extended powers, in which there are 302 municipalities in total, of which 40 are towns. With its area is 5,535 sq km, it occupies 7% of the territory of the Czech Republic and thus it ranks sixth among all the regions.

More than a half of the M-S Region's territory is agricultural land; over 35% are forest lands (especially in the mountain areas of Jeseniky and Beskydy). Besides the beauties of nature, there are also rich mineral resources in the Region: primarily decisive domestic black coal deposits, also natural gas reserves, a rich deposit of calcite, granite, marble, slate, gypsum, gravel sand, sand and brick-clays.

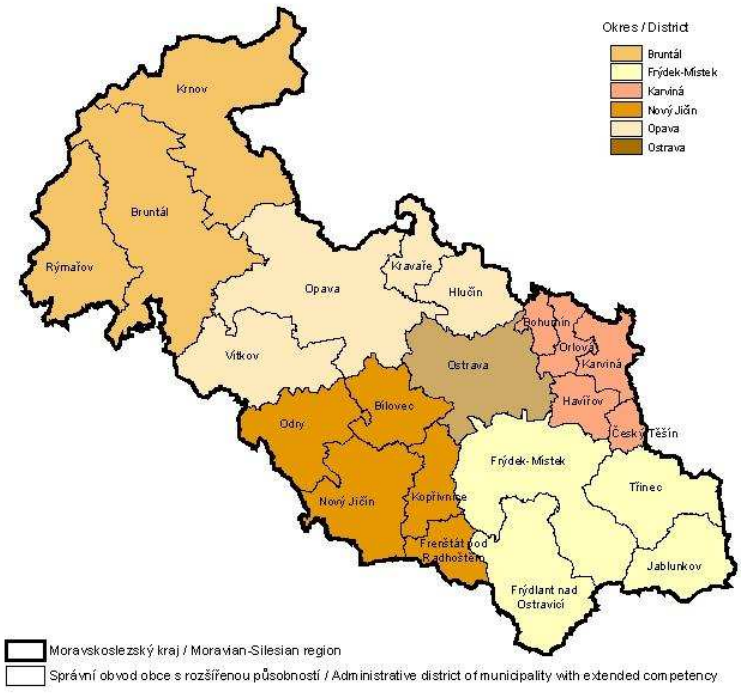
Table 1: Basic characteristics

Area	5,535 km2
Number of inhabitants	1,255,910
Population Density	230 inhabitants per km^2
Regional capital - Ostrava	312,254 inhabitants

Source: M-S Region statistics report 2005

The Moravian-Silesian Region is the most populated Region in the CR (over 1,257,000 inhabitants), but the number of municipalities (302) places the Region among those with fewest settlements. This fact corresponds to the density of population 227.2 inhabitants per square km, while the national figure is 129.6 inhabitants per sq km. The average cadastre area of a municipality is 18.3 sq km, being thus the second largest in the CR and by 50% larger than the cadastral area of the average municipality in the CR (12.6 sq km).

Only less than 2% of the Region's population lives in municipalities of 499 inhabitants and, under 23% live in municipalities of 500 – 4,999 inhabitants, and over 13% live in municipalities of 5,000 – 19,999 inhabitants. Most of the population (almost 62%) live in towns of 20,000 inhabitants and over – such percentage is an exception in the CR. There were over 310,000 inhabitants living in the Region's capital Ostrava, i.e. about a quarter of the Region's population. Other big cities – with the number of inhabitants over 50 000 – are Havirov, Karvina, Opava and Frydek-Mistek.



2.2 BUSINESS ENVIRONMENT

From the economic point of view, the Region belongs among the Czech pivotal industrial localities. It has long been known for its coal mines, which initiated the development of other industrial branches including metallurgy, the chemical industry and mechanical engineering.

Since the 19th century, the Moravian-Silesian Region has belonged among the most important industrial regions in central Europe.

After the fall of Communism in 1989, many important changes took place in and around the regional capital of Ostrava. Restructuring, in every aspect of industrial life, has since left its mark. The mining of black coal was severely cut back throughout the Region, and completely stopped in Ostrava. Production decreases and new ecological enforcement have had a positive influence on the environment. Many restructured plants have been bought by foreign investors. There are now several industrial zones in the region. Domestic and foreign investors can also use the existing industrial areas (brownfields)for new projects.

Table 2: Basic Economic indicators

GDP in market prices	8,786 MEUR
Moravian-Silesian Region share of the CR's GDP	10.1
GDP per capita:	6,981 EUR
GDP compared with the EU 25 average	58.20%

Source: Moravian-Silesian Region statistics report 2005

Despite the current slow-down of heavy industry and raw materials mining, the above mentioned branches of industry employ more than one third of the total number of 522.7 thousand persons, who are employed in national economy, another 11.9% work at trade and repairs of goods, according to sample surveys.

The 2004 average gross wage in the M-S Region was by more than 1,100 CZK under the national average, amounting to the third highest average in the CR (after the Capital City of Prague and the Central Bohemian Region). It was over 16,900 CZK per employee. The distribution of wages among industries is similar to that in the other regions of the CR, the highest wages being paid in financial intermediation, while the lowest in hotels and restaurants and agriculture, hunting and forestry.

The industrial structure of the M-S Region is currently causing many problems that are related especially to the high unemployment rate. The best situation, relatively, is in the Opava and Novy Jicin Districts, while on the opposite side of the scale (in comparison both within the Region and the entire Czech Republic) are the Bruntal, Ostrava and Karvina Districts, which take one of the latest places among all the districts of the CR. What is a really hot problem is the share of the long-term unemployed (for over 12 months) in the total number of the unemployed, which is in the Region distinctively higher than the national average.

2.3 TRANSPORT INFRASTRUCTURE

Regarding the transport infrastructure, the D 47 highway construction started in May 2002; it will become a part of the 6th Multi-Mode European Transport Corridor. The highway between Lipnik nad Becvou and Polish border near Bohumin 80.2 km long should solve transport issues and economic revival. The fundamental routes of the current road network are the following:

- the international road I/11 (E 75) leading from Opava via Ostrava, Cesky Tesin to Mosty u Jablunkova;
- the international road I/48 (E 462) leading from Novy Jicin via Frydek-Mistek to Cesky Tesin;

Both roads go through the eastern part of the Region. They undergo modernisation now, namely at I/48 road that is being transformed to a fast highway R 48.

The M-S Region has two railway lines of European importance: electrified lines No. 270 and No. 320. The line No. 270 is an important part of the main railway route of the CR leading from Prague to Bohumin; it undergoes modernisation at present.

The air transport is ensured by the Ostrava International Airport in Mosnov, which is the second busiest airport in the CR. Its landing runway is 3 600 m long, which enables landing of aeroplanes of all categories without limitation.

At present, there is not any waterway in the region, but there is a project of water connection of the Odra and Danube rivers which would come through the region.

2.4 TELECOMMUNICATIONS AND ICT

The Region is served by the national digital fixed-line network with a wide variety of providers. Internet coverage is improving and expanding quickly, with ADSL and WiFi pick up growing steadily. The three national wireless cell phone carriers (Vodafone, T-Mobile, Eurotel) have almost 100% coverage each throughout the Region.

2.5 SCHOOL SYSTEM

A schooling system of good quality can be found in the M-S Region. At its 422 basic schools, 119,989 pupils are fulfilling their compulsory education. There are 39 grammar schools, 90 secondary technical schools, 53 secondary vocational schools and 12 higher professional schools along with four universities – VŠB-Technical University of Ostrava, the University of Ostrava, the Silesian University in Opava and the Business School Ostrava. The universities comprise 13 faculties and provide study programmes for almost 33 000 students.

3 ICT SECTOR

3.1 OVERVIEW OF THE NATIONAL ICT SECTOR

In this chapter presents statistical information about the ICT sector in the Czech Republic. The data below are from the publication of the Czech Statistical Office - "Information Society 2006".

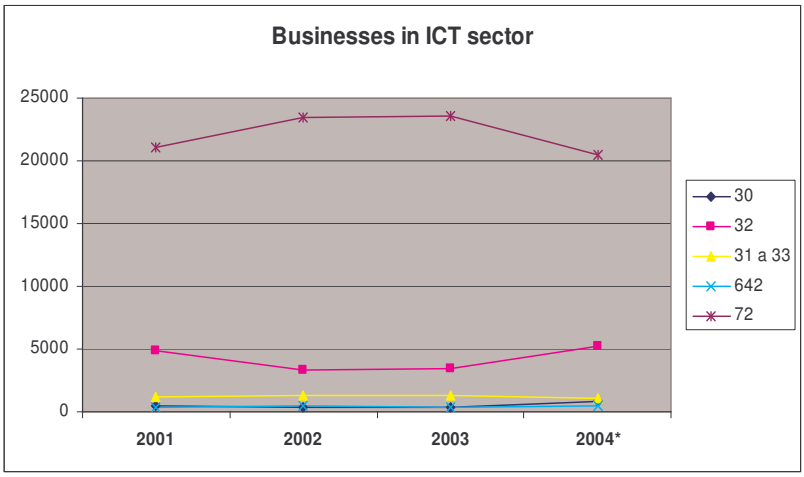
Table 3: Explanatory Note of NACE related to ICT

NACE Category	General Industrial Classification of Economic Activities:
30	Manufacture of office machinery and computers
31	Manufacture of electrical machinery and apparatus n.e.c.
32	Manufacture of radio, television and communication equipment and apparatus
642	Telecommunications
72	Computer and related activities

Table 4: No. of businesses in ICT sector

NACE Categories	2001	2002	2003	2004*	Change 2004 against 2001 in %
30	473	372	388	855	80.8
32	4,827	3344	3,481	5,210	7.9
31 and 33	1,196	1277	1,335	1,087	-9.1
642	387	453	408	420	8.5
72	21,015	23,416	23,529	20,422	-2.8
Total	**27,898**	**28,862**	**29,141**	**27,994**	**0.3**

*Data in 2004 are estimated

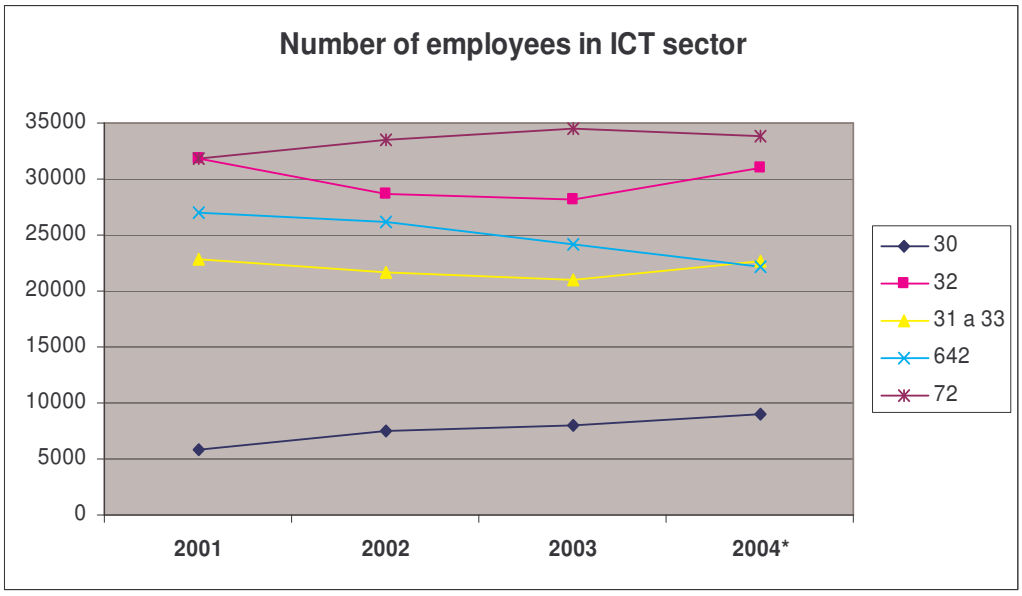


Businesses in the ICT sector are the highest in a NACE Category 72 - Computer and related activities.

Table 5: Number of Employees in the ICT sector (actual persons)

NACE Categories	2001	2002	2003	2004*	Change 2004 against 2001 in %
30	5,891	7,523	7,999	8,930	51.6
32	31,769	28,606	28,160	31,031	-2.3
31 and 33	22,880	21,645	21,031	22,740	-0.6
642	27,024	26,124	24,197	22,218	-17.8
72	31,803	33,557	34,514	33,814	6.3
Total	**119,367**	**117,455**	**115,901**	**118,733**	**-0.5**

*Data in 2004 are estimated

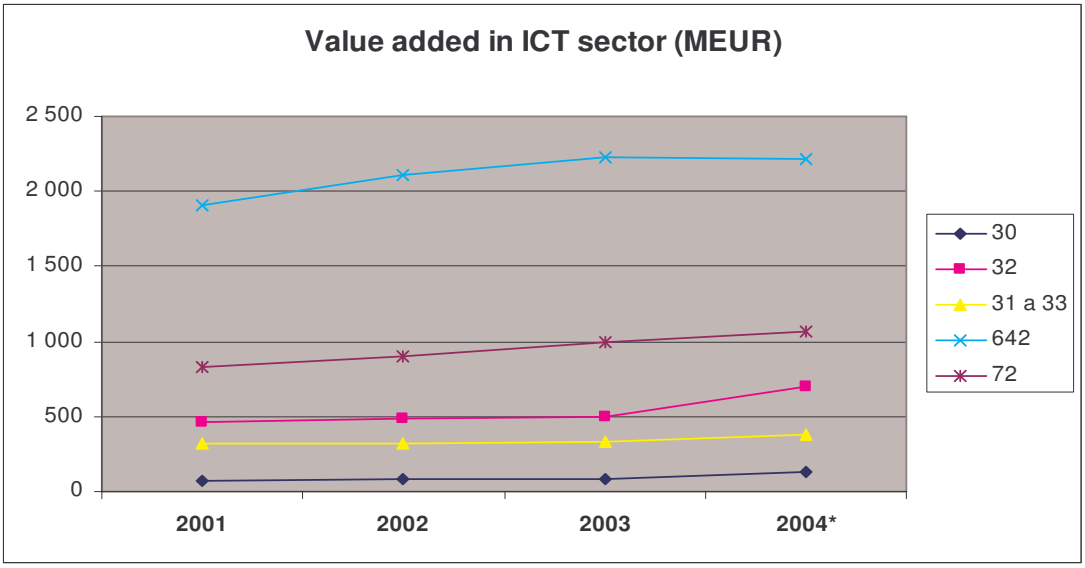


Number of employees in ICT sector is the highest in a NACE Category 72 - Computer and related activities.

Table 6: Value-added in ICT sector (MEUR)

NACE Categories	2001	2002	2003	2004*	Change 2004 against 2001 in %
30	77	85	80	125	63.4
32	457	484	502	703	53.8
31 and 33	324	322	331	377	16.3
642	1 910	2 114	2 230	2 212	15.8
72	824	897	997	1 066	29.4
Together	3 591	3 902	4 140	4 483	24.8

*Data in 2004 are estimated

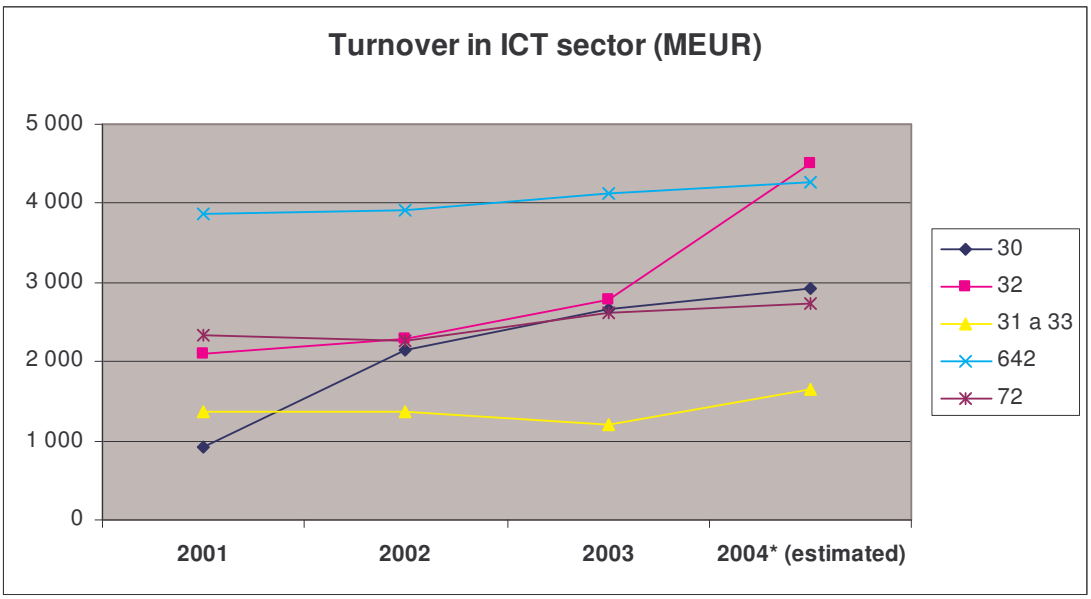


The graph shows that the indicator of value added in the national ICT sector is growing. The highest value added in MEUR is in a NACE Category 642 - Telecommunications.

Table 7: Turnover in ICT sector (MEUR)

NACE Categories	2001	2002	2003	2004*	Change 2004 against 2001 in %
30	921	2,145	2,671	2,930	218.2
32	2,109	2,294	2,794	4,502	113.5
31 and 33	1,375	1,368	1,204	1,647	19.7
642	3,858	3,918	4,128	4,263	10.5
72	2,343	2,262	2,626	2,732	16.6
Together	**10,606**	**11,987**	**13,423**	**16,073**	**51.6**

*Data in 2004 are estimated



Turnover in ICT sector (mil. CZK) is the highest in the NACE Category 32-Manufacture of radio, television and communication equipment and apparatus. In 2001, it was only 2,109 MEUR and in 2004, it was 4,502 MEUR. It means the change of 2004 against 2001 is nearly 114 %. However, the highest change between years 2001 and 2004 happened in the NACE Category 30-Manufacture of office machinery and computers, which is more than 218 %.

3.2 Overview of the regional ICT sector

At this moment, detailed data about the ICT sector on the regional level are not available. While the publication of the Czech Statistical Office - "Information Society 2006" contains the data about the national ICT sector, there is no similar publication or statistics on the regional level. The data about the ICT sector in the M-S Region were obtained from the Albertina database (2003 and 2004) which is commercial, however the most complete source of information about companies.

For the presentation of statistical data about the regional ICT sector the information were divided into the following 4 categories:

- Category 1: Manufacture of electronic components and equipments
- Category 2: Distribution and repairs
- Category 3: Telecommunications
- Category 4: Software and services

Category 1 - Manufacture of electronic components and equipments

This category includes the following NACE categories:

30 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 Telecommunication Equipment
323 Manufacture of Consumer Electronics
332 Manufacture of Instruments and Appliances
333 Manufacture of industrial process control equipment

Size (employees)	Businesses	Number of employees
unlisted	597	-
1-9	101	348
10-49	41	833
50-249	4	352
250-999	0	0
1000+	0	0
Total	**743**	**1,533**

In this category there are 1,533 people employed. This number represents about 2 % of all employees in this category in the Czech Republic.

Category 2 - Distribution and repairs

In category 2 there are included the following NACE categories:

5143 Wholesale of electrical household appliances and radio and television goods
5184 Wholesale of computers, computer peripheral equipment and SW
5185 Wholesale of other office machinery and equipment
5187 Wholesale of other machinery for use in industry, trade and navigation
52847 Retail sale of office equipment, computers and standard SW
7133 Renting of office machinery and equipment, including computers
725 Maintenance and repair of office, accounting and computing machinery

Size (employees)	Businesses	Number of employees
unlisted	646	-
1-9	111	409
10-49	36	830
50-249	8	1,515
250-999	2	940
1000+	0	0
Total	**803**	**3,694**

There are 803 businesses in the category 2 in the M-S Region and in these firms there are 3,694 employees. This number represents about 12 % of all employees in this category in the Czech Republic. The total number of employees is affected by counting of all employees of firm Autocont, which has its seat in Ostrava and employed almost 700 people throughout the Czech Republic.

Category 3 - Telecommunications

Category 3 only covers NACE category – 6420-Telecommunications.

Size (employees)	Businesses	Number of employees
unlisted	92	-
1-9	20	68
10-49	5	129
50-249	1	80
250-999	0	0
1000+	0	0
Total	**118**	**277**

There are 277 people employed in Telecommunications which represents only 1 % of all employees in this NACE category in the Czech Republic. Employees of big telecommunication companies (such as Czech Telecom, Eurotel, T-mobile, etc.), which have their seats mainly in Prague, have not been included. In fact the number of employees in this category in the Moravian-Silesian Region is higher than the number in the table.

Category 4 – Software and services

Category 4 includes the following NACE categories:

721 Hardware consultancy
722 Software consultancy and supply
723 Data processing
724 Database activities
726 Other computer related activities

Size (employees)	Businesses	Number of employees
unlisted	2,039	-
1-9	169	655
10-49	58	1,249
50-249	8	750
250-999	0	0
1000+	0	0
Total	**2,274**	**2,654**

There are 2,274 businesses in the category 4 in the M-S Region and these firms employ 2,654 people. This number represents about 6 % of all employees in this category in the Czech Republic.

Regional ICT sector - summary

The table below shows that the total number of employees in the ICT sector in the M-S Region is more than 8 thousand people which represent about 5 % of the total number of employees in this sector in the Czech Republic.

Size (employees)	Businesses	Number of employees
unlisted	3,074	-
1-9	401	1,480
10-49	140	3,041
50-249	21	2,697
250-999	2	940
1000+	0	0
Total	**3,938**	**8,158**

However, there is an expectation of increase of the number of employees in the ICT sector in the M-S Region due to location of international ICT companies in the region.

Number of employees in the categories monitored in the NICE project

NACE Categories	Number of Employees
30.3 - Manufacture of Office Machinery and Computers	227
31.3 - Manufacture of insulated wire and cable	3
32.2 - Manufacture Telecommunication Equipment	301
32.3 – Manufacture of Consumer Electronics	68
33.2 - Manufacture of Instruments and Appliances	464
33.3 - Manufacture of industrial process control equipment	74
64.2 – Telecommunication Services	277
72 – IT Services	3,136
Total	**4,550**

4 ICT CLUSTER

4.1 EVOLUTION OF THE ICT CLUSTER

The **IT Cluster** (the name of the ICT cluster managing organisation/association) was established based on the initiative of the Dean of the Faculty of Electrical Engineering and Computer Science who invited IT companies to informal meetings which originally called themselves ICT Club since 2004. The reason was to start communication between university and businesses to better understand the needs and expectations on both sides. Then, a decision was made in 2005 to start an official cluster initiative supported by the national cluster programme within the EU structural funds.

For the preparation of the introductory "mapping" study a project team was established. This team carried out the project focused on identification of suitable firms for the ICT cluster including the mapping of the supply (potential members of cluster) and demand sides (customers - firms and institutions in the M-S Region).

To survey the supply side, the interactive internet questionnaire was created which was then completed by relevant companies. The database of potential cluster firms was created so that it can monitor the development of the group in the future. This questionnaire was completed by 70 firms.

To survey the demand side, 75 randomly chosen firms and institutions from the region were interviewed with a questionnaire, whereas three sectors were equally represented:

- public sector;
- industry;
- trade and services;

This questionnaire was filled in by 79 firms from the region.

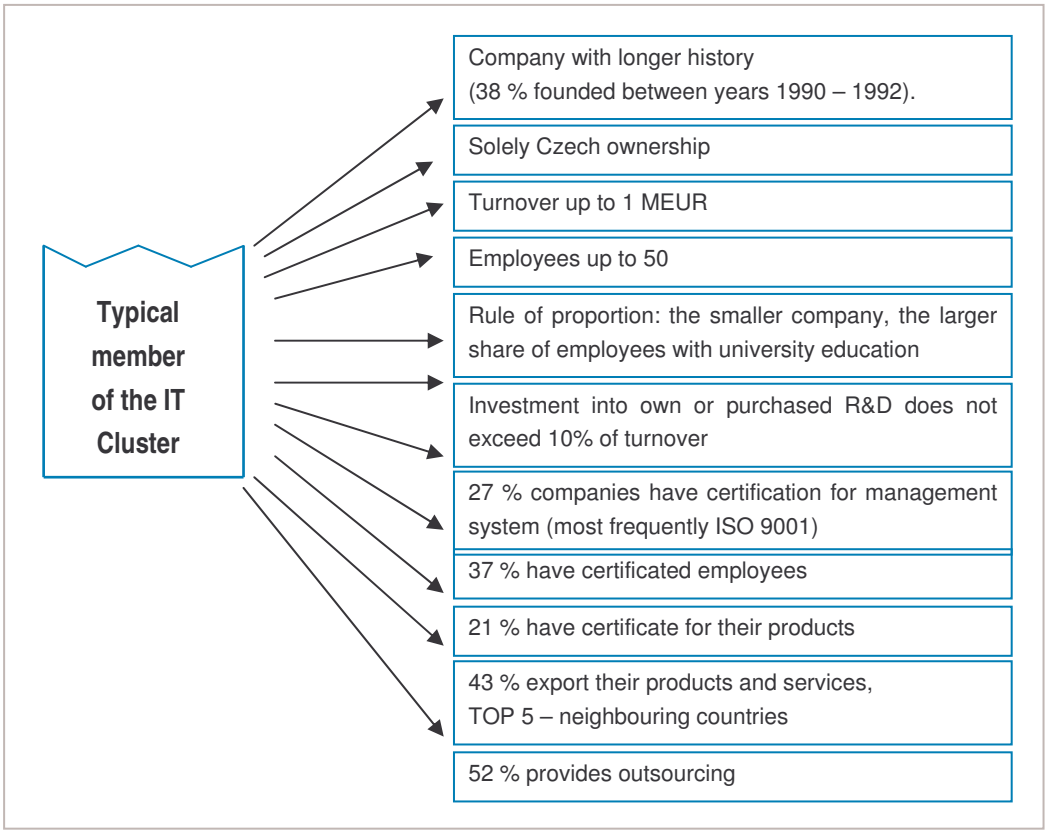
During the 8 months of the mapping study, 4 workshops, a closing conference and many individual discussions took place. Leading Group was created, a Cluster Manager was selected and the legal form of the cluster organisation approved by 17 companies, the future managing organisation founders. **IT Cluster** (the ICT managing organisation) was officially registered by the Ministry of Internal Affairs on 27th January 2006 as an Association of corporations and individuals. The main challenge for the IT Cluster establishment was the common will of local IT companies to ensure high standard of human resources (IT specialists) for their businesses based on close collaboration with the university. During the mapping period the following vision was formulated and approved by the involved companies:

The cluster's vision

„Based on the managed interaction of the public, academia and business sectors, to reach a doubling of the number of graduates of IT in the horizon of 5 years and to build comprehensive specialist capacities with a high added value for industrial applications, public administration and services and thus ensure an international competitive advantage for the Moravian-Silesian Region and its inclusion among the knowledge economies of Europe".

4.2 STATUS QUO

At present the IT Cluster of the Moravian-Silesian Region has a total of 20 members, with 70 active companies in the database on a non-membership basis.



Expectations of cluster members are concentrated into four main areas:

(1) Cluster brand creation and joint activities under this brand

- better access to tenders through cluster
- strategic alliances for tenders in the Czech Republic and in the foreign countries
- organisation of professional events
- identification of opportunities for outsourcing
- attracting of new companies to the cluster
- lobbing

(2) Innovation

- cooperation in innovative projects
- cooperation in research and development with universities
- exchange of experiences and best practices

(3) Information

- information
- trends

(4) Human resources

- development of strategic skills of employees in the field of ICT
- preparation and development of human recourses according to companies needs
- wider cooperation with universities

4.2.1 Clusters Structure & Competitive Position

List of current IT Cluster members and their structure

List of members:

- ASUS
- Crux information technology
- Faculty of Electrical Engineering and Computer Science
- Gity
- Ivo Guňka - IGDesign
- K2 atmitec
- Lenka Mynářová - DATAMAR OSTRAVA
- NAM system
- TECHNISERV IT
- U&SLUNO
- The Secondary Technical School of Electrotechnics & Informatics
- CS21 Nextnet
- DATASOFT
- Radim Adam
- Institute EuroSchola
- KVADOS Mobile Solutions
- Rudolf Kuzník - Informatics
- NetDirect
- TietoEnator
- Tecon Scientific

Table 8: Structure of the ICT cluster

Member		Total Number	Share of Total in %
ICT companies	Applications	11	57,9
	Content	1	5,3
	Core Services	1	5,3
	Infrastructure	3	10,5
Knowledge Centres	Universities, Colleges	1	5,3
	Secondary schools	1	5,3
	Training institutions	1	5,3
Other Members	Individuals	1	5,3
TOTAL		**20**	**100**

The table below contains the information about the major activities of 70 firms which are in the database of potential members of IT Cluster.

NACE	Category	Share in activities of firms (%)	n
722	Software consultancy and supply	66,3	39
721	Hardware consultancy	11,9	27
723	Data processing	20,7	23
52847	Retail sale of office equipment, computers and standard SW	29	21
726	Other computer related activities	10,2	21
725	Maintenance and repair of office, accounting and computing machinery	21,7	20
6420	Telecommunications	37,6	19
302	Manufacture of computers and other information processing equipment	27,2	13
7133	Renting of office machinery and equipment, including computers	6,2	10
5184	Wholesale of computers, computer peripheral equipment and SW	14,5	8
332	Manufacture of Instruments and Appliances	17,8	6
331	Manufacture of medical and surgical equipment and orthopaedic appliances	5	5
333	Manufacture of industrial process control equipment	27,8	5
5187	Wholesale of other machinery for use in industry, trade and navigation	49,4	5
5185	Wholesale of other office machinery and equipment	16	4
323	Manufacture of Consumer Electronics	11,3	3
301	Manufacture of office machinery	27,5	2
313	Manufacture of insulated wire and cable	6	2
322	Manufacture Telecommunication Equipment	4	2
7414	Business and management consultancy activities	40	2
321	Manufacture of electronic valves and tubes and other electronic components	2	1
5143	Wholesale of electrical household appliances and radio and television goods	1	1

4.2.2 Factor Conditions

Most of cluster members have their seats in the Moravian-Silesian Region which you can see in the table below. Many of these firms have also their branches throughout the Region.

	Firm	Seat
1.	ASUS	Ostrava
2.	Crux information technology	Ostrava
3.	CS21 Nextnet	Ostrava
4.	DATASOFT	Ostrava
5.	Faculty of Electrical Engineering and Computer Science	Ostrava
6.	Gity	Brno*
7.	Radim Adam	Ostrava
8.	Ivo Guňka - IGDesign	Ostrava
9.	Institute EuroSchola	Třinec
10.	K2 atmitec	Ostrava
11.	KVADOS Mobile Solutions	Ostrava
12.	NAM system	Orlová
13.	NetDirect	Ostrava
14.	Lenka Mynařová - DATAMAR OSTRAVA	Ostrava
15.	Rudolf Kuzník - Informatics	Ostrava
16.	The Secondary Technical School of Electrotechnics and Informatics	Ostrava
17.	Tecon Scientific	Rožnov p.R.*
18.	TECHNISERV IT	Brno*
19.	TietoEnator	Praha*
20.	U&SLUNO	Ostrava

NOTE: *firms have their seats out of the Moravian-Silesian Region

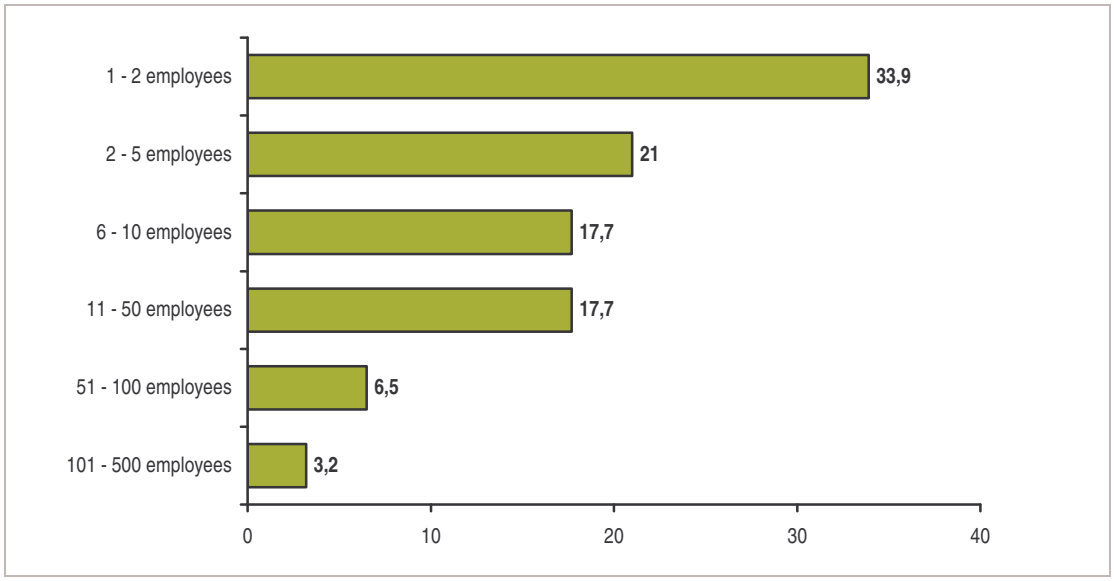
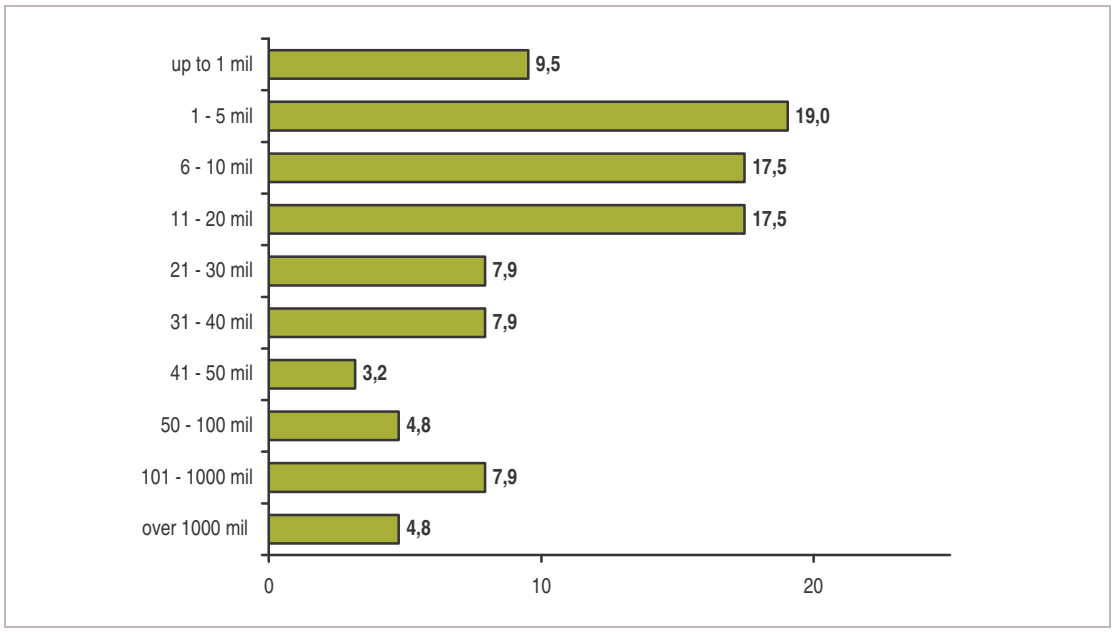


Figure 1: Share of employees with University education

4.2.3 Firms' Strategies, Structures and Rivalries

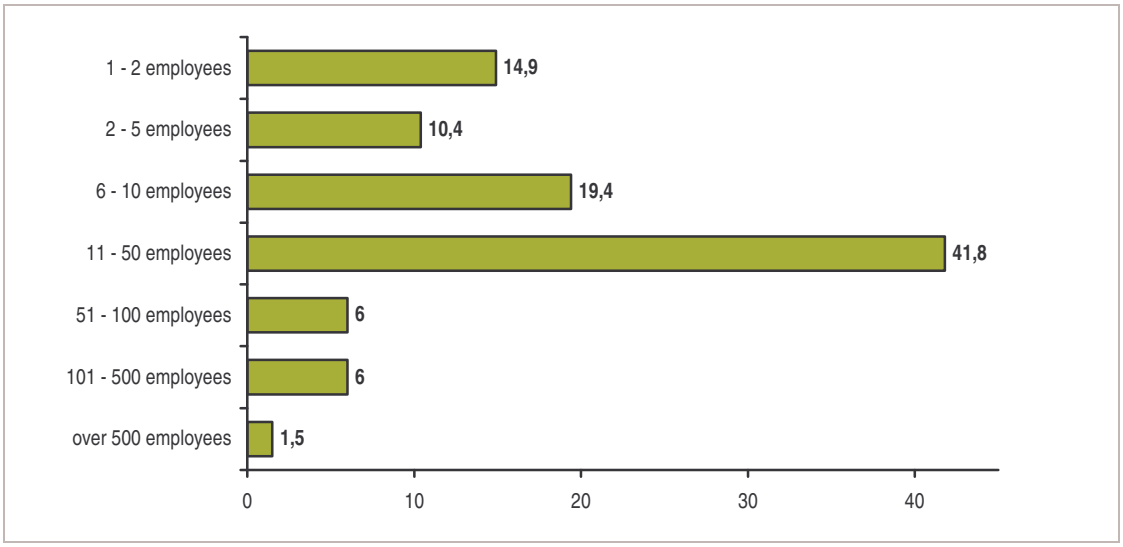
The graph below shows the data in percentage about the turnover of 70 firms from cluster database in 2004. The total of these firms in 2004 was € 219,175,000.

Figure 2: Turnover in %



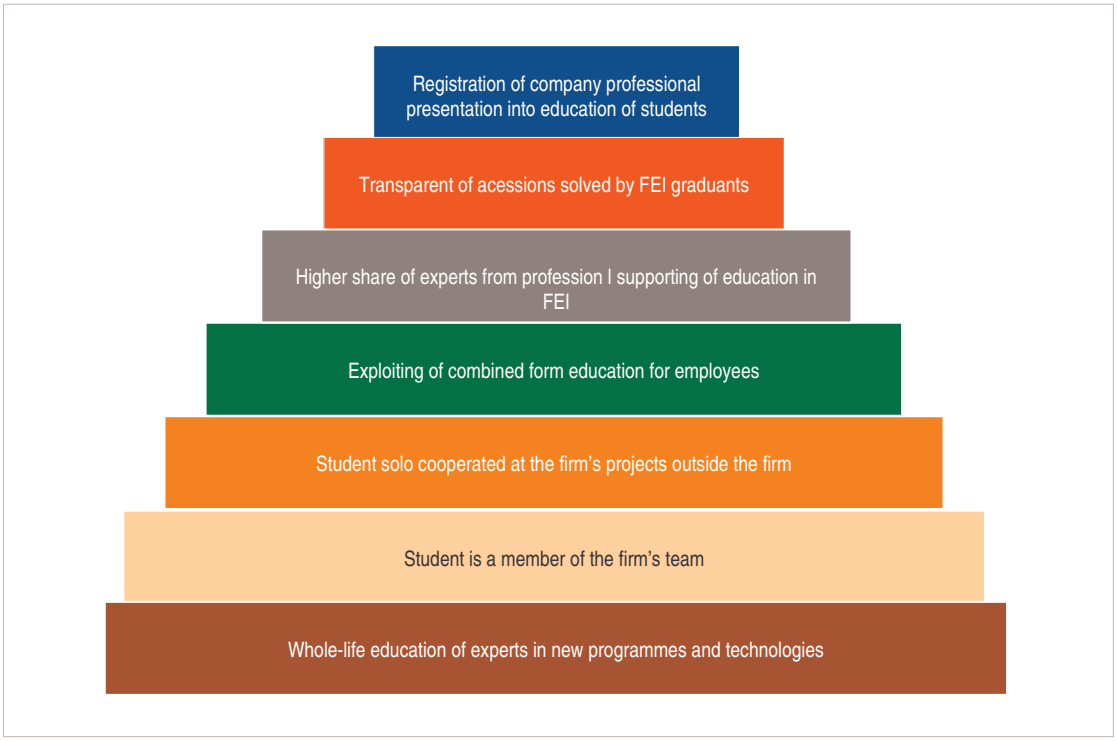
Concerning the number of employees, 41.8 % of firms have from 11 to 50 employees. The total number of employees in 2004 was 2,398.

Figure 3: Number of employees



At the picture below, there are the preferences of cooperation among cluster members and the FEECS (university). These preferences are prioritised in line with intension of each preference. At the top of the pyramid there is the most important preference.

Figure 4: Top 7 Preferences



The relationship and its rate among cluster members can be described as follows (5=major and 1=minor):

Type of relationship	Rate of relationship				
	1	2	3	4	5
Competitors				x	
Partners		x			
Collaborative Network		x			

IT Cluster joint projects:

- Human resources – HR Supply-Demand Portal: People for IT
- Training and Certification Centres
- Marketing surveys and integrated marketing communication
- Workshops – College for Practice
- Joint R&D projects – regional funding:
- Integrated system of the prevention of unfavourable influence of natural phenomena through their simulation and monitoring

4.2.4 Strength & Weaknesses

STRENGTH

- profiled expectations of cluster members
- expectations consistent with sense of cluster
- wild range of potential subjects interested in cluster
- interest in joining between cluster and University

WEAKNESSES

- extemporaneousness of cluster member for cooperation
- scepticism about cluster
- unfamiliarity with principles of cluster functioning

OPPORTUNITIES

- utilization of market place and demand increase in the region
- opportunity for offer of complex services cross the ICT sector
- opportunity for creation of cluster brand and
- for doing cluster activities under this brand
- increase the competitiveness based on the human resources and innovations
- unique cooperation between University and firm's needs and demand

THREATS

- non-performance of the expectations of cluster members
- inadequate marketing and sales activities
- low level of professionalism in the hyper-competitive environment

4.3 Organisational framework & Cluster Management

Because IT Cluster was established as an independent association of corporations and individuals there are involved all members in the management of cluster.

Cluster authorities

- **General assembly**
- **Executive board:** Chairman - Ivo Vondrak (FEI VŠB-TUO), Vice-Chairmen - Marta Novakova (U&SLUNO), Jan Svoboda (Net Direct), Members: Lenka Mynarova (Datamar), Marek Kucera (K2 admitec)
- **Supervisory Board:** Chairman - Zdenek Kaslik (Tecon Scientific), Members - Pavla Bruskova (ARR), Premysl Soldan (TietoEnator)

The operative activities within the management of the cluster were delegated on:

- **Cluster Manager:** Vladimir Mlatecek

Table 9: Cluster management responsibilities

	Rating			
	infrequent	forthcoming	periodical	daily
Cluster events, Workshops, Conferences			X	
Specific qualification offers (e.g. vocational training, certification)		X		
Fostering co-operation			X	
Acquisition (e.g. supplementation of the value chain)			X	
Internationalisation		X		
Infrastructure (e.g. physical, R&D)			X	
Technology issues (e.g. R&D projects, application centres)			X	
Co-operations with knowledge centres (e.g. universities)				X
Market issues (e.g. standardisation)		X		
Supportive lobbying & government relations			X	
Consulting of Start-ups		X		
Positing of the cluster nationally and internationally		X		
Monitoring of cluster management			X	

5 POLICIES

5.1 NATIONAL LEVEL

5.1.1 The National Cluster Strategy 2005 - 2008 (NCS)

This strategy was confirmed by the Government in July 2005. The revision of this strategy will be made in December 2006.

NCS is divided into five measures:

- Cluster conception support
- Support for cluster facilitators
- Cluster mapping
- Cluster development
- Evaluation of the cluster initiative efficiency

Table 10 Financial plan for the activities under NCS in MEUR

	Budget 2005	Plan 2006	Perspective 2007	Perspective 2008	2005-2008
EU Structural Funds	0,93	3,10	3,10	3,62	10,76
National budget	0,31	1,03	1,03	1,21	3,59
Total	**1,24**	**4,14**	**4,14**	**4,83**	**14,34**

Source for financing of NCS are the financial sources from the Operational programme Industry and Enterprise (OPIE) 2004 - 2006 and from the prepared Operational programme Enterprise and Innovation 2007 - 2013.

5.1.2 Operational programme Industry and Enterprise (OPIE) 2004 - 2006

OPIE is governed by the Ministry of Trade and Industry and executed by the implementation agency – CzechInvest. The **Programme Cluster** (Measure 1.4) shall support two types of projects:

- Phase I - Search for companies suitable for clusters („cluster mapping“), assessment of viability and benefits of clusters.
- Phase II - Establishment of cluster organisations and development of clusters.

The OPIE provides the following grants:

- € 6,900 - € 34,500 for activities executed during the phase 1 (max. 75% of eligible costs)
- € 103,500 - € 1,550,000 for the phase 2 – establishment and development of clusters (1st year: max. 75% of eligible costs, 2nd year: max. 65% of eligible costs, 3rd year: max. 55% of eligible costs)

Phase I	Phase II
Recipients	
▪ regional authorities or organisations authorised by them; ▪ tertiary education institutions; ▪ research institutes;	▪ legal entity pursuant to S.18 of Act No. 40/1964 Coll., Civil Code, as amended, existing or newly established for the purpose of supporting innovation and enhancing competitiveness in the given group of economic activities;
Conditions	
▪ at lest 10 companies, tertiary education institutions, research organisations or regional authorities stall demonstrate interest in searching for suitable companies for a cluster; ▪ a preliminary economic analysis of a given region must be conducted;	▪ the cluster stall consist of at least 15 independent organisations - founders; ▪ an institution of tertiary education or a research institute must be a cluster member; ▪ majority of the members (min. 60%) of a cluster shall be SMEs and institutes of tertiary education as well as research organisations seated in the CR; ▪ sustainability of the cluster in the course of project implementation must be demonstrated;

5.1.3 Operational programme Enterprise and Innovation 2007 - 2013

This program is currently being prepared and the cluster activities should be supported in term of priority number 2 - Business and Innovative environment of this program. The Measure 2.1 Cooperation is focused on the cooperation support among companies, research and education institutions and municipalities both on the regional and national level. Support of the international cooperation between new and existing groups is also possible. Identification, establishment and development of clusters, poles of excellence and technological platforms will be particularly supported. The measure 2.4 – Cluster Initiative Support is focused on the cluster establishment support and cooperation following the process of cluster mapping.

5.2 Regional level

The framework for regional cluster policies is the Regional Development Plan 2005-2008 (RDP). According to this plan, cluster activities are supported in terms of priority 1 - Competitive Enterprise, Strategic goal 2 - Create conditions for enterprise and investment development. No funding results from this Plan. Regional financial support is provided from the Moravian-Silesian Regional Authority budget based on individual applications for specific projects.

6 CONCLUSIONS

The cluster management's core competencies are focused on the following:

- To lead the member companies to the fulfilment of the cluster vision;
- To ensure the funding and joint projects proceeding;
- To help to exchange information and communication between members;
- To manage the change in the IT sector towards increased competitiveness of individual companies and the whole region.

The key factors that underpin a successful cluster management are, in particular: supportive relationship with local government, allocations from public budget, scope of activities and services attracting members, cluster growth in terms of members, competitiveness and fulfilment of the goals of the cluster initiative. IT Cluster in particular is expected to contribute to the reputation of the region as a knowledge region and to attract investors of high value added projects.

What can other regions learn from the experience made?

The National Cluster Programme of the Czech Republic within the Objective 1 of the European Structural Funds is a unique tool for the public intervention to encourage companies to start to cooperate and profit of it in all fields of common activities. The Moravian-Silesian Region is the Czech leader in cluster activities and implementation of cluster initiatives. Experiences can be shared in the area of cluster mapping, statistical evaluation, cooperation establishment and development process to reach the strategic goals for the local actors with global impacts. Besides IT Cluster, Moravian-Silesian Engineering Cluster and Moravian-Silesian Wood Cluster have been established, while automotive supplier cluster and hydrogen technologies cluster are under way.

According to this, what are relevant topics for the cluster management workshops?

- Successful government intervention – case study of the Moravian-Silesian Region
- Cluster funding;
- Innovation progress measurement in cluster firms.

A Brief outlook on the expected future development of the cluster (hypothesis)

The development of the IT Cluster Ostrava is planned in three main streams of activities: Human resources development, Marketing and Innovation.

1. HR Development priorities:
    - cooperation with business during preparation of university students and influence on the curricula
    - improvement of the workforce market, exchange of information, identification of quantitative and qualitative needs of cluster members in terms of HR

- further education and retraining of employees, creation of a system environment of on-going training of the staff of cluster members
- motivation of pupils and students to study technical branches oriented towards IT

Common Projects: People for IT (web portal), Training and certification Centre, Science for practice.

2. Marketing priorities:
   - building the brand of IT Cluster as a guarantor of quality, novelty, problem solutions
   - joint participation in expositions and fairs (INVEX Czech Republic, Retail Summit 2007, 2008)
   - creation of a common offer of the IT Cluster – the scale of activities and products available
   - common PR and communication
   - marketing surveys, surveys of the demand side
   - IT Cluster we site development as the basic information and communication platform among members and outwards
   - promotion materials

3. Innovation
   - development of technologies for marketing surveys
   - development of tools for knowledge sharing and project management
   - development of a system of computer simulation and modelling of natural catastrophes
   - intelligent transport systems

The feasibility study being prepared for the application of the funding for the project "Foundation and Development of the IT Cluster" as the 2nd phases of the EU Structural Fund Programme CLUSTERS will set up an action plan and a budget based and on the above activities. This three-year-project will have a total value of €1,500,000 based on an average of 35% of the cluster members co-financing. The IT Cluster should start its routine activities in January 2007 after the approval of the application for funding.