Gospodarska zbornica Slovenije

Chamber of Commerce and Industry of Slovenia

Introduction to Innovative Groups of Slovenia

Innovative Clusters and Technology networks

Gospodarska zbornica Slovenije

Chamber of Commerce and Industry of Slovenia

izGTM

interesno združenje grozdov in tehnoloških mrež
national center of clusters and technology networks

Introduction to Innovative Groups of Slovenia Innovative Clusters and Technology networks

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Featuring

Construction Cluster of Slovenia

CCS vision is to remain a succesfull network of construction companies offering complete solutions for domestic and EU construction market. CCS will build further its long term competitiveness on technological and organizational innovations, development and quality.

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http://www.sgg.si

Contact: Mr. Vladimir Gumilar, MSc, Managing director
Founded: 2004
Annual turnover: 600.000 € in RTD projects
Revenues of CCS members: app. 20 mio €
Number of employees of CCS members: app. 3000

Strategic and development goals

Construction Cluster of Slovenia (CCS) is an Economic Interest Grouping established by construction companies and institutions in the fields of building design, consulting, engineering, contracting and production of building materials and products.

The main goal of the Construction Cluster is to improve domestic and international competitiveness of its members through commercial cooperation and networking, R&D and innovation, education, training and policy action.

Competences, fields of activities and references

Activities

By providing its members with infrastructure, services and coordination of development projects, the Construction Cluster of Slovenia creates the conditions for:

- increasing productivity and business efficiency
- increasing innovation and development of technological and transfer of good practices
- the growth and development of competitiveness through the application of clustering principles

- efficient training for personnel
- mutual business and other cooperation in the value chain
- searching for and acquiring new business opportunities in Slovenia, the EU and other developing markets
- protecting interests and cooperating with the government and other public institutions, the research community and financial organisations
- inclusion in the international research and development community, cooperation with foreign clusters and companies.

Key technologies:

- Structural and architectural design of
- buildings
- roads and highways, bridges, viaducts, underpasses, overpasses. galleries and retaining walls
- waste water treatment plants
- hydropower plants
- repair works and special technical solutions
- Consulting, engineering
- of buildings and civil engineering works
- in indoor environment, energy in buildings
- in geotechnics, geology
- technical consulting, quality assurance and supervision, expert opinions
- inspection, examinations and testing of concrete, mortar and of products, aggregates and stones
- conformity assessment and certification
- Construction contracting
- of buildings (apartments, business and industrial buildings)
- civil engineering works
- communal infrastructure
- external arrangements (east asphalt, stone-pits, horticulture)
- Prefabricated products
- for construction
- prefabricated products for apartments, hotels, hospitals and similar
- Construction materials and products, stonecutting
- Building shuttering system (wholesale and distribution, renting. export and import)
- Building and stone restoration
- Sustainable construction, environment management systems ISO 14000, EMAC, IPPC
- Construction R&D

References (Projects)

- Market researches of the EU, east-european, russian, and south-eastern european markets
- Secretariat of Construction Technology Platform of Slovenia
- Implementation of European standards in construction practices
- Establishment of a national system for construction classification
- E-construction site
- Research of the behaviour of thin-walled constructions made from light concrete
- Development of technologies for the construction of sandwich panels
- Electronic archiving of documents
- Analysis of loan policies
- Development of joint venture good practices
- Supervising and maintaining buildings on motorways and high-speed roads
- Rehabilitation of buildings on motorways
- Computer-assisted management of business processes
- Development of innovative construction companies
- Promotion of civil engineering and construction professions
- Sustainable construction
- Intelligent buildings
- e-NVISION, A New Vision fot the participation of European SMEs in the future e-business scenarion, EU, IST FP6
- TECH-TRANSFER - Model of professional qualification structure and quality standards of innovation adaptation and technology transfer in construction sector, EU, Leonardo da Vinci

Links to foreign organizations, memberships....

European Costruction Technology Platform (www.ectp.org)

Labein/Fundación Labein & other project partners (www.labein.es)

The Austrian Federal Economic Chamber (www.austriantrade.org)

Automotive Cluster of Slovenia (ACS)

ACS is a reliable and intensive R&D network of automotive suppliers to global vehicle producers & system suppliers at special segments with complex products of higher added value.

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e-mail: info@acs-giz.si
http://www.acs-giz.si

Contact persons:
Mr. Dusan Busen, Managing Director
Mrs. Urska Gluhak, Project Coordinator

Founded: 2001
Annual turnover: 2,3 billion €
% of exports of ACS members: 80%
Number of employees of ACS members: 18500

Countries of export: Germany, France, Italy, Austria, United Kingdom, USA, Spain, Iran, Hungary

Strategic and development goals

- Profitable growth of sales and added value,
- Attracting new customers,
- Promotion and common marketing,
- Innovation processes,
- Optimisation of supply chain,
- Developmental infrastructure,
- Information infrastructure and
- New basics knowledge.

The goal is to become a regional innovatory system whose main task is to encourage the co-operation between companies and other institutions with the intention of developing, expanding and using new knowledge.

Within the framework of ACS a strategically important project has been carried out: "The polycentric technological centre as an international innovation system of Slovenian automotive suppliers industry" and it is co-financed by Ministry of Economy through European Regional Development Fund. The project began as a

result of the discovery that the situation of Slovenian automotive suppliers can only be improved by common investments and by cooperation between the economic and academic spheres.

Competences, fields of activities and references

Key technologies

- Development processes and dynamics of the means of transport industry
- Cutting and remodelling of sheet metal (laser system)
- New materials and new technological procedures
- Casting and pressure casting of colour metals
- Stamping
- CAD - CAM, CIM, CAE
- Surface protection
- Mechatronics
- Mechanical processing
- Microelectronics
- Technologies for the production of electric machines (coiling, etc.)
- Development of human resources
- Assembly, robotisation, flexible automatisation
- TQM
- Measurement and control procedures and processes
- Harmonised environmental development
- Manufacture of tools and thermal processing

Main groups of products

- Passenger compartment and electronics in passenger compartment
- Supports, screw jack, parking brake, pedal box
- Interior equipment
- Brake Tubes
- Exterior equipment, body lighting equipment
- Door systems, sun window, rear mirrors, joint seals
- Exhaust systems
- Coach - superstructure
- Openings, wings, hood
- Windows wiping and washing
- Cooling system
- Seats and parts thereof
- Security & steering system

- Tyres and wheels
- Breaking system
- Engine and gearbox components
- Colours and paintings
- Assembly and upgrades for commercial vehicles (including buses and trucks)
- CNC, spot welding, processing and assembly equipment
- Progressive, transfer and other tools for automotive industry
- Research, testing and other developmental services

References:

- Project "The polycentric technological centre as an international innovation system of Slovenian automotive suppliers industry" co-financed by European Regional Development

- ACS is also one of the founders of the national technological platform for vehicles, roads and traffic. As the first national platform within the framework of EU TP ERTRAC it will be given special attention and support since it is a pilot project.

-"NEAC – Network of European Automotive Competence" is a project that is co financed from the European fund INTERREG IIIC. It includes organizations that connect automotive industry suppliers in ten European regions. The goals of NEAC project are: to establish communication among partners form different regions, to create a map of regional organizations that connect automotive industry suppliers, to evaluate and present competences and competitive advantages of automotive industry suppliers from individual regions and to find out factors that influence the competition of individual regions.

- Project TCAS – Transnational Clustering in Automotive Sector. The focus of TCAS is therefore on facilitating the exchange of experiences and best practices among European automotive clusters in order to strengthen their performance, creating a transnational cooperation platform and opening up new European business perspectives for the cluster enterprises. Project is financed by program Europe INNOVA within 6 FP program.

- Project "The development of suppliers' network ACS in South Eastern Europe" was organized where it was stated that the main goal is to develop a quality suppliers' net of companies, development institutions and support organizations in South-Eastern Europe for the needs of Slovenian automotive suppliers as a strategically important part of Slovenian economy. Raising the region's innovation and competition will strengthen the competition of Slovenian suppliers and therefore the Slovenian government will support the project with the funds form UNIDO program.

- Optimising the logistics ways within the framework of ACS members has been carried out as a pilot project within the framework of CORELOG. The project CORELOG (COordinated REgional LOgistics) is an international research project that has been carried out within the framework of the INTERREG III B CADSES program. The result will be the establishment of a common information portal that will make it possible to order transport in an uncomplicated way and also to optimize transport services among all the cooperating production companies and transporters (an increased critical mass that enables a higher number of optimal solutions).

- Qualification training and education: »Project management in Automotive Industry« and »ACS School of Quality«

Description of activities

- ACS represents its members' interests, promotes them especially to automotive producers (house fairs, business conferences…)
- ACS plays an important role at encouraging research and development of products and systems of higher added value.
- ACS accelerates the common members' performance to improve the quality of products and business performance,
- ACS gathers information about the trends in automotive industry,
- ACS is central communication point of Automotive Cluster of Slovenia with its supporting infrastructure. ACS also establishes, develops and maintains the informational, educational and research and development infrastructure to meet members' needs.

ACS is a network for business in the Slovenian engineering and manufacturing industries: metal working, mechanical, electrical and electronics, chemical, rubber, textile and transport equipment industries, as well as partners from R&D institutions and other services in the supply chains that create and deliver products and services for the automotive industry.

Cluster's areas of business

- establishing, developing and maintaining infrastructure conditions for operations
- encouraging and assisting in the establishment of links and cooperation between members in all fields
- developing and implementing ACS strategies
- ensuring access to common information, basic and specialised knowledge and communicating this information to members
- representing and promoting interests of ACS locally and abroad, especially at vehicle producers and system suppliers

- monitoring and implementing agreed norms and rules of the ACS
- monitoring fundamental, legal and economic issues and proposing appropriate measures
- joint efforts of the members aimed at improving their products
- Joint efforts of the members aimed at improving business in development, manufacturing, quality and organisation.
- Internationalisation and approaching to new emerging markets

Main customers

Vehicle producers: Audi, BMW, Citroen, Deutz, Daimler Crysler, General Motors, Landini, Lombardini, John Deere, FIAT, Ford, MAN, Nissan, OPEL, Peugeot, Renault, SAAB, SKODA, Volkswagen

System suppliers: Arvin Meritor, Benteler, Bosch, Brose, Faurencia, Ficosa, Grammer, Johnson Controls, Koyo, LEAR, Magna Steyr, NSK, Trico, TRW, Valeo, Visteon, Woco, ZF

Links to foreign organizations, memberships....

ACAROM (www.acarom.ro)
AC BiH (www.ac-bih.ba)
AC Serbia (www.mpriv.sr.gov.yu)
AC Styria (www.acstyria.com)
AFIA (www.afia-afia.pt)
AGORIA (www.agoria.be)
ANFIA (www.anfia.it)
AUTIG (www.autig.dk)
AUTOSAP CZ (www.autosap.cz)
Automobil Cluster Upper Austria (www.automobil-cluster.at)
BAIKA (www.baika.de)
CLEPA (www.clepa.be)
ERTRAC (www.ertrac.org, www.ertac.si)
Europe Innova (www.europe-innova.org)
FIEV (www.fiev.fr)
HGK (www.hgk.hr)
JAMA (www.jama.org)
JETRO (www.jetro.go.jp)
MAJOSZ (www.majosz.hu)
(micro) electronic cluster (www.me2c.at)
NAPAK (www.napak.ru)
RAI (www.autorai.nl)

Shanghai Automotive Trade Association (www.saic.com.cn)
SERNAUTO (www.sernauto.es)
SAS (www.fkg.se)
SMMT (www.smmt.co.uk)
VDA (www.vda.de)
ZAP SR (www.zapsr.sk)
WAF (www.waf.wsm)

District energy cluster

The District Energy Cluster of Slovenia comprises a group of related companies and institutions brought together into an innovative, coordinated system with the aim of increasing our competitiveness in all activities related to district energy, and to provide knowledge transfer and the best services in the wider European and other markets.

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Fax: 00 386 3 896 12 02
e-mail: miran.zager@kp-velenje.si
http://www.zavod-de.si

Contact persons:
Mr. Miran Zager, President
Mr. Rober Hudournik
Mr. Alojz Poredos, PhD

Founded: 2004
Annual turnover: 106.329.166 €
% of exports of the Cluster's memnbers: 4%
Power instalated: 3.176 MW
No. of inner stations dot-rs: 4.009

Strategic and development goals

The goals of further GDES development are as follows:

- Innovation and the ability to manage sudden changes on energy markets
- Long-term, reliable supply of district energy
- Environmental protection in accordance with legal regulations
- Ensuring sufficient sustainable development of the activity and district energy systems
- Improving the quality of all energy products and services
- Enhance recognition of district energy and its development achievements in Slovenia, the EU and the world
- Market orientation of the Institute for District Energy (ZDE)

The Cluster hopes to achieve the following goals by way of establishing, active professional and scientific activities, and coordinated managerial cooperation:

- To improve the cooperation between the state, local communities and end users of energy products and services
- To participate in the drafting of the National Energy Program (NEP) strategy for the field of district energy
- To increase professional and scientific cooperation between local institutions and power sector industries in Slovenia
- To improve the technological development and reliability of all district energy activities in Slovenia
- To participate in the drafting of an ownership strategy and organisation model for district energy
- To create suitable and commercially viable market models for all district energy activities
- To internationally promote Slovenian district energy

Growth and development of the District Energy Cluster of Slovenia

GDES will focus its activities on growth and membership expansion, as well as on participating in the active projects of those members who have thus far not been very active. 12 municipalities, the Chamber of Commerce and Industry of Slovenia, 7 companies and 2 institutions were invited to participate in GDES in 2005. Our target is to annually increase the number of GDES members by 5 on average

International connections

One of our key projects is internationalisation and international relations. Several projects were signed with European partners.

Strategic development

The development stage of the District Energy Cluster of Slovenia (GDES) represents a broader integration of all interested companies and institutions in the field of district energy, with the aim of solving common issues, increasing competitiveness and raising the level of services, planning the efficient use of energy products and energy, planning common visions and business strategies, transferring knowledge and experience, and modernising technology networks training and skill for the purpose of operating at European and broader standards. One of our key projects is internationalisation and international relations. There is also strong emphasis on the international promotion of the Cluster, both in knowledge transfer and the marketing of services.

A key factor in the further development of the Cluster is the establishment of a TECHNOLOGY NETWORK (that accumulates all the knowledge and resources of GDES members), the establishment of resource information and utilization system.

Key factors for success are GROWTH of the Cluster, INTERNATIONALISATION and, above all, establishing a relationship of TRUST among the members.

Competences, fields of activities and references

Key technologies and main groups of products and services

- Pre-investment analysis of thermal energy projects (creation of general conditions for the consumption of heat from the district energy distribution network)
- Composition of applications for grants and subsidies (creation of expert projects for district energy supply conditions in Slovenia)
- Management and investment in district energy activities (creation of comparative analyses of district energy providers and DE supply chains in Slovenia)
- Contracting services
- Creation of expert projects for sustainable development of district energy activities in Slovenia)
- Studies on possible measures for improving the energy efficiency of supply from DE-RS
- General use of fuel cells
- Introduction of modern trigeneration systems in connection with district cooling in Slovenia
- Creation of a modular system for the dynamic operation optimisation of the district energy systems
- Creation of expert projects for measuring and sharing costs for consumed heating energy
- Creation of expert projects for tariff systems for the supply of heating energy.

Links to foreign organizations, memberships....

International District Energy Association IDEA (www.districtenergy.org)

Cniika Institut Moscow (www.cniica.ru)

Austrian Gas and Heat Association (FVGW) (http://www.gaswaerme.at/en/)

Association for District Heating of Czech Republic (www.tscr.cz)

Danish District Heating Association (DFF) (www.energy.rochester.edu/dk/dff)

Danish Board of District Heating (www.dbdh.dk)

Estonian Power and Heat Association (EPHA) (http://www.epha.ee)

Finish District Heating Association (www.energy.rochester.edu/fi)

French District Heating and Cooling Association

Icelandic Association of Energy Suppliers and Distributors (Samorka) (www.samorka.is)

Italian District Heating Association (AIRU) (www.airu.it)

Latvian Association of District Heating Companies (www.lsua.lv)

Lithuanian District Heating Associations

Association of Hungarian District

Heating Enterprisers

German Heat & Power Association (AGFW) (www.agfw.de)

Dutch Energy Associaton (EnergieNet)

Norwegian District Heating Association (www.energy.rochester.edu/no)

Polish District Heating Association

Association for District Heating of the Slovak Republic

Swedish District Heating Association (FVF)

The Swedish Council for District Heating (SweHeat) (www.sweheat.com)

Swiss District Heating Association

Combined Heat and Power Association (CHPA) (http://www.chpa.co.uk)

eAliansa IT Cluster

The IT eAliansa cluster brings together Slovenia IT enterprises and institutions. Most of the enterprises are micro or small companies with excellent references in industrial, business and public services sectors in Slovenia. The companies comprising the cluster are oriented towards the global market and the development of new products and services, and are open to all forms of cooperation.

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E-mail: info@trendnet.si
http://www.ealiansa.net

Contact persons:
Mr. Bojan Oremuz, Managing director
Mr. Igor Razbornik,
Mr. Viktor Vaupot

Founded: 2003
Number of employees: The cluster's administration is contracted to support services. The members of the cluster employ approximately 160 people on a permanent basis.

Countries of export: Italy, Great Britain, Croatioa, Bosnia and Herzegovina, Serbia, Macedonia, Saudi ARABIA, United ARAB Emirates, Singapore, Siria, Kuwait, Pakistan, Iran, Malaysia

Competences, fields of activities and references

Key Technologies

- Document systems
- Planning and developing SW/HW projects
- Planning and developing computer-supported learning
- Automatic programming of CN control stations
- Automation of production
- High-speed control systems
- High-speed control systems
- Control and operator networks
- Internet/intranet application on the J2EE platform
- Construction and maintenance of communications systems

- Development of web applications, web solutions
- Multimedia services
- Business consultancy
- Consultancy in web communication

Main activities

The IT eAliansa cluster is a commercial interest association in the field of information technology. It is an association of Slovenian enterprises and institutions that know and trust each other and which are planning joint activities with the purpose of improving their competitive strength on the market.

Priority fields of cooperation:

- development of new joint products,
- marketing and promotion,
- training.

Economic Interest Association of Geodetic Service Providers

International office for project organisation, partner linking in the field of space management, preparation of spatial data and environmental management.

Economic Interest Association of Geodetic Service providers includes significant part of Slovenian geodetic and geomatic enterprises in area of spatial data management, designing and executing effective spatial information systems on national, regional, municipal and sector levels are ensuring highest quality of our services.

Members of cluster are offering services on international market, that includes whole area of geomatics, from basic geodetic measurements, developing most complex spatial information systems, ensuring aerophotogrametric surveys, to consulting and advising about real-estate evidences. We also successfully work in area of collecting data and establishing geocoded data bases and in development of comprehensive spatial applications. Our principal activities include development, consulting and implementation of services relevant to the wide scope of geographic information systems (GIS).

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Contact persons:
Mr. Dominik Bovha, Managing director
Ms. Simona Ceh
Mr. Darko Tanko
Founded: 1996
Annual turnover of Cluster's members: 25 million €
Number of employees of Cluster' members: about 500

% of exports: 4%
Countries of export: Croatia, Macedonia, France
Main customers: Geodetic institutes

Strategic and development goals

The primary goals we are pursuing as we boost our competitiveness are:

- based on a defined strategy we provide joint technologically advanced solutions for space management;
- to establish a unified working information portal for data about real estate and the topography and execution of our services;
- to enable the conditions for market expansion and improved knowledge and to assist Association members break into foreign markets (consulting, education, marketing, investments, co-operation in preparing or conducting internationally financed projects);
- to become involved in knowledge transfer and projects of managing real-estate records in South-east Europe and a partner when carrying out international projects or services; and
- to become a guide in developmental research field projects and the source for preparing technological solutions for new tasks.

Key technologies:

- Geodetic surveys and mapping
- GPS navigation, tracking, informatics of public infrastructure
- Data-processing
- Data collections designing of real-estate database systems
- Software for geoinformatic applications
- Other computer-related services
- Architectural and construction planning
- Spatial planning, urban planning and design
- Planning and technical consulting
- Organising and planning international projects
- Education
- Exploring and experimental development
- Printing, publishing

Main activities:

1. Geodetic systems and navigation in space:

- Establishing a basic co-ordinates system;
- Measurements of horizontal, vertical and geometric grids; and
- GPS navigation.

2. Real-estate data collection:

- Collection and establishing of real-estate data collections (land cadastre, buildings cadastre, cadastre of economic public infrastructure);
- Arranging land with spatial operations (establishing of a spatial database, arranging space and carrying out new structures);
- Digital analogue transformations of existing data collections; and
- Designing sector and business information systems.

3. Spatial informatics:

- Real-estate data collections for managing real-estate;
- Spatial data collections of activities that originate in space or have an influence on space;
- Geoinformational infrastructure establishing and spreading of a geoinformational centre network;
- GIS, data collections geolocating;
- Creating digital basics for spatial information systems;
- Informatics development of comprehensive informational systems;
- Development and operative tasks in the field of geodetic data collections, geoinformational systems, processing of spatial plans; and
- Consulting and advising in making comprehensive informational systems and methodological revenue.

4. Photogrammetry

- Aerial surveys and aerotriangulation;
- Digital photogrammetry and creating of digital topographic maps and data collections;
- Photogrammetry (collection of topographical and un-topographical data);
- Terestrical photogrammetry; and
- Digital orthophoto maps.

5. Topographic data collections and civil engineering geodesy

- Topographic surveys and designing maps for planning and constructing needs;
- Services in the field of civil engineering geodesy and establishing a cadastre of municipal infrastructure;
- Lay outs; and
- Control measurements and precise measurements.

6. Cartography

- Cartography, topography;
- Reprography and printing; and
- Digital processing of all kinds of maps.

7. International projects

- Planning and organising development projects;
- Advising and consulting;
- Project management and expert services;
- Developing concepts and implementing them in projects and programmes;
- Assisting in comprehensive reform processes and providing support for the political, economic and social changes needed for such reforms; and
- Presenting project results.

References (main projects):

1. Building a central information system of topographic data in space

The projects aim is to provide total space topographical data for all users. The task defines in detail the use of three-dimensional databases, their establishment and use in space planning and management.

2. Project to improve municipal infrastructure management with spatial databases

The goal of this task is to show comparable advantages and build business systems that will, in connection to spatial databases, enable efficient space management.

3. Project of land management

Within the framework of this project the ways of managing land will be identified, particularly at the level of local communities with the purpose of increasing the economic value of local community property. The aim of this task is to settle the role of municipalities in property management, an area that is becoming a core function of local communities through privatisation processes.

4. Project of improving cadastral register data

The purpose of this task is to encourage real-estate owners to actively settle ownership relations stemming from the privatisation period. The task defines ways to upgrade real-estate registers, especially for the land cadastre.

5. Project of establishing a geoinformational system in regional and local centres

This project should provide infrastructure for the network system of regional and local centres with organisational and project-based ways to ensure the foundations for more efficient real-estate management. In this project we seek to cover the entire country through members of the GIZ-GI.

6. Project of establishing a project office for international projects

The project forms part of broader set of activities of organising common appearances in international projects. The project office provides a system of education, while offering expert assistance and preparations for selected projects.

High Technology Products Manufacturers' Cluster

High Technology Products Manufacturers' Cluster links companies, research units and governmental institutions. The goal of this linkage is to achive synergic effects at marketing, development and production of high tech (HT) products and technologies.

The cluster targets a global market. It is designed in a new organizational form of dynamic cluster-type manufacturing structures. The cluster's products are new HT products with high added value, and a complex offer of different system solutions that are based on core competencies at a strategic level.

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http://www.vtg-giz.si/

Contact person: Mr. Marko Jurancic

Founded: 2003
Annual turnover of Cluster's members: 870 million €
Number of employees of Cluster's members: 6384

% of exports: 15%

Countries of export: Germany, France, Austria, Italy, Great Britain, Russia Federation, Croatia, Canada, Macedonia, India, Bosnia and Herzegovina, Iran

Strategic and development goals

The cluster operates on a project basis.

The clusters key strategic goals are the development of new hi-tech products and technology.

Key strategic policies are as follows:

- establishing an efficient organisation of dynamic manufacturing cluster structures
- strengthening and specialising key capacities with affiliated companies

- establishing links and effecting knowledge transfer in the development of high technology products with EU industries
- development and establishment of information and communication platforms and the harmonisation of operating software
- training personnel with the aim of improving their proficiency on the basis of participatory principles and for operating modern technologies
- continual improvement of the cluster organisation and manufacturing processes.

Competences, fields of activities and references

Key technologies and main groups of products/services

- Manufacturing of catering equipment (Catering equipment)
- Production of equipment for hydroelectric power stations (Equipment for hydroelectric power stations)
- Production of refrigerating equipment (Refrigerating equipment)
- Production of industrial and forming equipment (Die casting cells)
- Metal processing
- Computerised control of processes

Main activities:

The principal objective is to bring together companies and institutions within the scope of the engineering and metal processing industries.

Cluster's terms of reference:

- sale of new hi-tech products and the marketing of new hi-tech technologies
- operation of the cluster as prescribed by legislation and internal statutory rules
- participate actively in the coordination of the clusters steering unit - coordination of project
- project management of the cluster
- joint management of quality
- joint marketing system
- harmonised investment in the development of new technologies
- participation in international projects (Eureka!, 6OP)
- coordinated logistics for supplying the cluster with strategic material
- coordination of the cluster's information structure
- operation of a common portal (internal and external use)
- increasing the number of cluster members participating in international projects

The Slovenian Environmental Cluster

The Slovenian Environmental Cluster mission is: “Establishing friendly environment”, and its strategic goal: “Internationalisation of technologies and knowledge transfer from institutes to the practice”.

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URL: http://www.giz-eg.si/

Contact persons:
Ms. Zofija Mazej Kukovic, Managing director
Ms. Jozica Slatinek

Founded: 2003
Annual turnover of Cluster’s members: 105 million €
Number of employees of Cluster's members: 2000

Countries of export: Serbia, Bosnia and Herzegovina, Macedonia, Croatia, China, Romania

Strategic and development goals

The Slovenian Environmental Cluster development strategy promotes its principal goal, being **the internationalisation of technologies and knowledge transfer from institutes to the practice**, through the following fundamental strategies:

- joint development projects
- internationalisation and promotion of the Slovenian Environmental Cluster brand name
- development of innovative environments
- creation of the Slovenian Environmental Cluster’s liaisons with national and international clusters and institutions
- education strategy
- financing strategy.

The Slovenian Environmental Cluster presently operates as an economic interest association. It comprises fifteen members, ranging from engineering and contractor companies to institutes and among them also a bank, which cofinances the projects. To avoid inefficiencies, each of the cluster

members is specialised in one area only. The cluster is open to new members. Approval of such new affiliations is decided by the association assembly. For each of the six key strategies, a project group and a project director are appointed. The cluster should take a shape of a virtual company, with remote team work as a standard form of operation.

Competences, fields of activities and references

Key technologies and main product/service groups

- Water protection technologies (Municipal and industrial waste water treatment plants, water chemical conditioning, water desalinisation pilot plant project)
- Air protection technologies (Power generation and industrial flue gas treatment plants, filtration and dust removal)
- Waste processing with recovery of heat contents (Processing of municipal and industrial wastes combined with the recovery/utilisation of generated energy, waste heat recovery pilot plant project, Utilisation of biomass)

Activities:

The economic interest association Slovenian Environmetal Cluster operations include:

- transfer of fundamental knowledge to the practice
- marketing
- development and implementation of environment protection technologies in the fields of:
- air protection (power generation and industrial flue gas treatment plants)
- waste water treatment (municipal and industrial waste water treatment plants, chemical treatment of water), and
- waste management (thermal use of waste)
- comprehensive environment monitoring
- renewable energy and energy efficiency

Slovenian Plasttechnics Cluster

The Plastics Cluster unites the most important companies and accompanying institutions from the plastics industry. The cluster's members use the latest technology and are the optimal partner for new products and components, from planning through tool-making to production.

Address: Kidriceva 25, 3000 Celje
Phone: +386 3 4258 400
Fax: +386 3 4258 409
e-mail: navodnik@siol.net
http://www.giz-grozd-plasttehnika.si

Contact person: Mr. Navodnik Janez, Managing director

Founded: 2002
Annual turnover of Cluster's members: 296 million €
Number of employees of Cluster's members: 5,200
% of exports: 72

Countries of export: Germany, Austria, Italy, USA, France, Sweden, Belgium, Croatia, Hungary, Spain, Czech Republic, Poland.

Major customers: Iso Kork, Broze, VW, Audi, Mercedes, Ford, Porsche, WBV, Rochling, Gun Sails, Baltic, Sava Trade, IEB Gummitechnik, Artemis, PEZ International, Akvarena, Adria Italia, Cataneo, Eurosavatech, Socanor, Dekathlon, Adria Caravan, Arjo, Seat, Sava Trade

Strategic and development goals

The cluster and its members provide a partnership from the planning of the product through tool-making to production for the following fields:

- R&D of projects, proposals, implementation and cooperation
- development of products, equipment, tools and procedures
- CAE in laser technologies
- construction and manufacture of tools
- injection moulding of products, including GIT, 2K, etc.
- (co)extrusion of profiles, tubes, plates and foils
- thermoforming, welding, printing
- composite products, RTM, pultrusion, autoclave.

The cluster also facilitates the establishment of links with potential customers, primarily with partners in development projects and with other networks. The aim of establishing links is to increase competitiveness through the synergy of development and marketing activities, the flow of knowledge and information, and establishing links with other networks in order to enable integration into the broader European projects on future technology.

Competences, fields of activities and references

Key technologies and main groups of products/services:

- Injection moulding (Automobile parts)
- Extrusion (Parts for E/E)
- Thermoforming (Packaging)
- Blow moulding (Tubes, profiles)
- Tool technologies (Plates, foils)
- CAE technologies (Household equipment)
- Composite technologies (Medical equipment, products for sports and recreation)

Main activities:

The plastics cluster is becoming an european oasis of global providers of high-demanding products/services and comprehensive solutions (concept, development, manufacturing) for the most demanding customers on the global market. The cluster's mission is to ensure the flow of information, cooperation, synergy and funds for R&D in manufacturing and services with the aim of increasing the growth and competitiveness of its partners. The companies in the cluster apply the latest technology in the processing of plastics, manufacturing and construction of tools, CAE, laser and tool technologies, and offer product development and services from this field.

Links to foreign organizations, memberships....

Kunststoffcluster Linz (http://www.kunststoff-cluster.at)
Technologiezentrum Klagenfurt (http://www.kaernten-technologie.at)
k-sector GmbH (http://www.k-sector.de)
Assocomaplast Milano (http://www.assocomaplast.com)
CESAP Institut Milano (http://www.cesap.com)
CRF Institut Italija (http://www.crf.it)

TECOS, Slovenian Tool and Die Development Centre

TECOS brings together experts from industry and science to promote technical and economic advancement of the Slovenian tool and die industry. It is state-of-the-art platform for R&D projects, training and industrial applications.

TECOS is a modern technology centre at the European level that provides R & D support for small and big companies in the metalforming, plastic materials and fibreglass, wood and non-metal composites industries.

Address: Kidriceva ulica 25, 3000 Celje
Phone: +386 3 490 09 20
Fax: +386 3 426 46 11
e-mail: info@tecos.si
http://www.tecos.si

Contact persons:

Mr. Gasper Gantar, PhD, Managing Director
Mr. Bostjan Smuc, MSc

Founded: 1994
Number of employees of the institute: 13

Strategic and development goals

TECOS has high expectations based on Slovenia's long industrial tradition and highly skilled workforce. We are committed to keeping abreast of engineering developments by coupling experts from industry and science with the aim to promote technical advancement and cross national borders. Applied research and transferable metalworking skills will help improve production processes and we see a great opportunity to build knowledge in setting up a college for polymer engineering in Slovenj Gradec. A key to success and a companys most valuable asset are its people well-educated experts with hands-on experience. On the other hand, internationalisation is of crucial importance and TECOS will open offices in other countries to reach out to talent and market.

Competences, fields of activities and references

Key technologies:

Comprehensive support for tool and die industry includes a wide range of services slotted in three segments:

- **CAE Department** (computer-aided simulations of extrusion of plastics, metal-forming/forging and metal casting; 3D digitalisation, reverse engineering and 3D tool designing and construction),
- **Research and development projects** (coordination and steering of local and international R & D projects, organising local and international tenders and tender evaluations, and conducting project-oriented R & D work),
- **training** (organisation of one-day seminars, practical workshops, targeted and certified training. Organisation of conventions, conferences, and tours of plants, R & D facilities, etc.).

Toolmakers Cluster of Slovenia

TCS is one of the pilot Slovene clusters. TCS vision is regional network of high qualified companies and organizations-development partner of the most demanding industries in the EU. Target markets of TCS are automotive, aerospace, IT and domestic appliances industries. TCS is organized as network of virtual dynamic organizations with C-TCS Institute as centre, which is included in numerous Slovene and international R&D networks. TCS enables its partners connections with its members companies, which has great potential for tools and machines development and productions, as well as with its members-institutions, with diversified offer of development, education and training, research, consulting, IT and financial services.

Address: Kidriceva ulica 25, 3000 Celje
Phone: +386 3 424 4202
Fax: +386 3 424 4180
e-mail: info@toolscluster.net
http://www.toolscluster.net

Contact persons:
Mr. Tone Sagadin,MSc
Mr. Brane Semolic,PhD
Ms. Irena Hribernik

Founded: 2001
Annual turnover of Cluster's members: 136 million €

Number of employees of Cluster's members: 1889
% of exports: 63

Countries of export: Germany, Austria

Major customers: VW, Mercedes, AUDI, BMW, Benteler, Magna Chrysler

Strategic and development goals

The development vision of the Slovenian toolmaking cluster is to establish and expand a regional network of highly qualified companies that will serve as development partners to the most demanding industries within the EU, primarily the automobile industry, household appliances, IT industry and aeronautical industry. The aim is to specialised individual companies in their key technologies. Global competition and rapid technological development require such specialisation in

order to make the company (and consequently the cluster) more competitive on the global market.

Competences, fields of activities and references

Key technologies and main groups of products/services:

- Recasting and manufacturing of plastic products technologies (Customer tailored tools and extrusion of plastic)
- Recasting and manufacturing of sheet metal products technologies (Customer tailored tools and recasting of sheet metal)
- Serial manufacture of engine parts for the automobile industry technologies (Manufacture of purpose-built NC machines and appliances)
- Gravitational and pressure casting technologies (Customer tailored tools for gravitational or pressure casting of products)
- 2D and 3D computer projection of tools, machines and appliances (Construction and technological documentation)
- Computer analysis and simulation of procedures for recasting various materials (Computer analysis and simulation services)

Main activities:

TSC is a network of manufacturing, services and research and development organisations that operate as a virtually integrated organisation with the aim of achieving rapid growth and increasing the competitiveness of the companies within the organisation. To this end, it participates in marketing, joint technological development, supply chains and establishing links with key customers and customer networks.

Links to foreign organizations, memberships....

Autocluster Styria, Graz, http://www.acstyria.com/)

University of Bremen, Institute for Project Management and Information Systems, Bremen, Germany (http://www.ipmi.de/)

University of Zaragoza, Zaragoza, Spain http://www.unizar.es/)

Wood Industry Cluster

The Wood Industry Cluster (WIC) connected one-third of the Slovenian wood processing and forestry sector as well as the most important research and educational institutions in the industry.

The leading role in the cluster is played by the executives of the companies whose participation in the cluster's joint activities creates opportunities for the mutual improvement of competitiveness and establishing contacts with foreign partners.

Address: Kolodvorska 9a, 6257 SI-Slovenia
Phone: +386 5 7570 500
Fax: +386 5 7575 502
e-mail: gozd@sloles.com
http://grozd.sloles.com

Contact persons:
Mr. Igor Milavec, Managing Director
Mr. Bernard Likar

Founded: 2003
Number of employees of Cluster's members: 9.000
Annual turnover of Cluster's members: 500 million €
% of exports: 54 %
Countries of export: Germany, Italy, Croatia, Austria,USA

Strategic and development goals

The WIC is expected to evolve into a unique business model which is expected to enable its members to simulating new connections and specializations in order to successfully adapt to changes and competition on the global market.

The WIC will provide companies with a range of support services - primarily good R&D and training support.

The WIC will seek opportunities for the manufacturing and marketing of existing and improved products with a high share of service activities and organise mutual sales and supply routes.

By integrating individual production ranges and specialising products and services, the WIC will try to provide holistic solutions for market requirements.

The WIC will provide foreign markets with know-how in handling modern business systems, manufacturing and other services for those fields of business in which Slovenian forestry and wood-processing companies have a long tradition and a wealth of experience.

Competences, fields of activities and references

Key technologies and Main groups of products/services

- Technology for sawmills and elements (Processed lumber, elements)
- Technology for the production of biomass products (Pellets, briquettes, other biomass products)
- Technology for the manufacturing of veneer, plywood and construction boards (Veneer, plywood, construction boards)
- Technology for the production of builders' joinery (indows, doors)
- Technology for the production of household furniture, tables and seats (Seats, tables, dining rooms, living rooms, bedrooms, kitchens, cabinets, etc.)
- Technology for the production of prefabricated buildings (Prefabricated buildings)
- Technology for the production of chemical products
- Paints, coatings, finishes, resins, starches, adhesives.
- R&D services in the fields of wood processing and forestry
- Certification and testing of wood products

Main activities:

The basic aims of the Wood Industry Cluster are stimulated by the radical changes going on in the world, where knowledge is the decisive factor in progress and competitiveness. Research work, acquisition of skills and achieving synergy in different fields are the most significant tools used to enable the Cluster members to develop into modern, knowledge-based companies, capable of competing in the world markets.

The main fields of the WIC activities are:

- Woodprocessing industry,
- Forestry,
- Renewable Energy Resources,
- Research and Education,
- International Development Collaboration,
- Innovative Systems,
- Transnational Technology Transfer&

The cluster office concentrates largely on coordinating the Cluster's activities, as well as leading and coordinating common projects.

The entire clustering process is expected to mature into an advanced business model, which, through the application of knowledge, innovation and modern information technology, will create specific competitive advantages on the global market.

Links to foreign organizations, memberships....

Holzcluster Steiermark (www.holzcluster-steiermark.at)

The Competitiveness Institute (www.competitiveness.org)

InnovaWood (www.innovawood.com)

The ETI project Woodism (www.tts.fi/woodism/index.html)

HVAC - Heating, Ventilation and Air-Conditioning Cluster

The Cluster's mission is to set up a creative and innovative environment that motivates the members to co-operate and organise joint projects. The HVAC Cluster is a central point where the members can find answers to their questions and stimulation for faster, profitability-oriented development.

Address: Vojkova 4, 5280 Idrija

Phone: +386 5 3734 120
Fax.: +386 5 3734 142
e-mail: info@hvac-cluster.com
http://www.hvac-cluster.com

Contact persons:

Mr. Milos Sturm, Managing Director,
Ms. Tanja Mohoric

The HVAC Cluster is a group of companies and R&D institutions operating in the field of heating, ventilation and air-conditioning in Slovenia.

The industry of heating, ventilation and air-conditioning has a long tradition in Slovenia and Slovene HVAC companies are well-established in the market. Even so, the managers of companies and R&D institutions have become aware some time ago that they would be even more successful if they worked together and provided a common range of products and services. The opportunity for further growth and development was seen in the integration of all actors in the HVAC Cluster.

Strategic and development goals

The members of the HVAC Cluster have defined the principal goals of the Cluster's activities at the very beginning. The principal mission of the Cluster was formed mainly in terms of providing support to its members, namely:

- in the area of production, marketing and research activities,
- when establishing contacts and developing market co-operation between the participating companies and potential buyers, suppliers and other business partners,

- when gathering information and establishing contacts in the field of research and development with experts specialised in specific and complementary disciplines or technologies,
- when attracting new members by creating a positive opinion on the Cluster in the general public,
- when maintaining suitable and optimal organisation of Project Office and Cluster structure,
- when maintaining good relationships with potential partners in the field of HVAC industry in state bodies and institutions.

Competences, fields of activities and references

References (Joint projects)

According to the members of the Cluster, the most significant advantage of such connections is the possibility of forming a joint offer of integrated HVAC system with maximum support of research and development organisations and scientific institutions in the development of new products. Production companies cover all areas of HVAC industry, from the air-conditioning systems to the systems of heating and ventilation. They are focused on building the systems for business facilities, production halls, hospitals, sports facilities and other public facilities.

Some of the members have developed the idea on building a development and technology centre for heating, ventilation and air-conditioning.

The more and more demanding market and awareness of the importance of creating an integrated offer has confirmed the need for a concentration of knowledge, not only in development departments of production companies but also in an institution engaged solely in development of new products and services. Such institution will be able to efficiently participate in international projects by connecting with the universities and external knowledge providers.

The need for such an institution was also expressed by other members of the HVAC Cluster who supported the proposal that the operations of the Cluster, as one of strategic areas, also be transferred to the then established Development and Technology Centre called the “HVAC Institute or Inštitut KGH”. The HVAC Institute started operating in the premises of its founders; nevertheless, the entire documentation on the construction of a new building, intended for the functioning of the HVAC Institute, has been compiled already at the moment of its establishment.

Slovenian Consulting Cluster

Contact persons:

Mr. Zoran Vaupot (zoran.vaupot@sigem.si)
Ms. Sasa B. Mejas (sasa.mejas@okconsulting.si)
Mr Niko Slavic (niko.slavnic@iqbator.si)

No. of Consultants in the Cluster: 150 local consultants

Projects: more than 500 local and international credentials

Annual turnover: 7 millions €

SSG members: 16 consulting companies

Competences, fields of activities and references

- HRM - Human Resources Management
- IT – Information Technologies
- Marketing
- BPR - Business Process Reenginering
- Corporate Strategies
- Corporate Law
- Expert Consulting

Activities:

For our clients:

- wide range of consulting expertise “under the same roof”,
- holistic and flexible consulting techniques enable increased efficiency for/of the client,
- practical implementation of the newest research findings of professional development and scientific institutions worldwide.
- system, legal and economic knowledge of different industries,
- continuous improvement of services and business offers to our clients,

For our professional stuff:

- enhanced professional development via networking,
- we are encouraging researches and development in the cluster,
- constant information flow of consulting related topics in the industry and on the market,
- existing and additional knowledge shearing,
- work in large, expert driven consulting teams,
- long list of important credentials.

Technology Networks of Slovenia (TNS)

Members of the Technology Networks of Slovenia cover research and development (R&D) on various research areas from Information Communication Technologies through Process Control Technology up to Intelligent Polymer Materials and Pertaining Technologies.

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Trzaska 25, 1000 Ljubljana
Phone: +386 1 476 84 11
Fax: +386 1 426 46 47
e-mail: fe-dekanat@fe.uni-lj.si
http://www.fe.uni-lj.si/
Contact person: Mr. Janez Bester, PhD, Leader of the network consortium

Strategic and development goals

Technology Networks of Slovenia (TNS) is a consortium of 3 Technology Networks (ICT Technology Network, Technology Network for Process Control Technology and Technology Network for Intelligent Polymer Materials and Pertaining Technologies). The primary goals of the Technology Networks of Slovenia are:

- To stimulate co-operation between Slovenian companies and institutions in form of joint investment into the R&D projects;
- To stimulate co-operation between individual Technology Networks at creating and executing the research strategies;
- To assure support to the linkage processes and to influence on economy politic;
- To promote Slovenian R&D potentials on global market and to straighten capability for inclusion into international R&D partnership;
- To promote and accelerate co-operation in the industry as instrument for growth of competitiveness;
- To create friendly environment for co-operation, linkage and dialog between all the R&D groups, companies, educational institutions, capital and state.

Competences, fields of activities and references

Activities

Activities of the Technology Networks of Slovenia derive directly from “Strategic and development goals”. In additions to the mentioned activities the consortium is also identifying new multidisciplinary R&D projects.

Key technologies:

In the consortium Technology Networks of Slovenia have more than 80 members, leading and most important R&D institutions and companies. As a whole they possess the knowledge, experience and know-how from following areas (and their sub areas):

- Information Communication Technologies,
- Process Control Technologies and
- Intelligent Polymer Materials and Pertaining Technologies.

Technology network of information and comunication technologies (TM ICT)

Uvodna predstavitev – kontaktni podatki

Seize the Opportunity

Since 2005 Technology Network has been operating as a consortium of companies, universities and its members, public and other research institutions and other legal entities, together 44 members, which have expressed interest in co-operating in the realisation of common development strategy and achievement of consortium goals.

The aim of consortium was to ensure efficient mechanisms for the support of joint technology development projects and establishment of an integrated innovation environment in the field of information and communication technologies.

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Trzaska 25, 1000 Ljubljana
Phone: +386 1 476 84 41
Fax: + 386 1 476 87 32
e-mail: stanko.salamon@eurocon.si
http://www.ict-slovenia.net

Contact person: Mr. Stanko Salamon, Executive Manager of TM ICT

Founded: 2003

Annual turnover of Network's members: € 1,8 billion

Number of employees of network's members: 13.500

% export: 20

Countries of export: Europe, Asia, North America

Strategic and development goals

The vision of ICT Technology Network is based on the indisputable fact that the information and communication technologies are the fastest growing group of economic activities in the world today, playing a decisive role in increasing the

competitiveness of all other economic activities and improving the general quality of life for people.

On the other hand our vision also reflects the abilities of our members to actively participate in this process of transforming the world economy and our way of living. During the three years of its existence and activities, ICT Technology Network has proven that it is by far the most propulsive technology network in Slovenia with the greatest potential of know-how and capital, the most renowned researchers as well as the applicative and industrial projects.

The aim of ICT Technology Network is to further broaden its activities by focusing especially on the key projects and contents where the greatest competitiveness and competence of ICT Technology Network as a whole and its members lies.

Some key common goals are: to develop new technologies, services and contents for achieving greater added value, to develop innovation and development environment, to form new knowledge for the companies in the network and to influence positively other commercial and non-commercial sectors.

Competences, fields of activities and references

Key technologies and activities are: hardware, networks, open standards, interoperability, electronic communications, security and protection, software, services and applications, databases, internet portals, electronic media, basic research and education.

References

The major ICT Technology Network joint projects include:

- **Centre of Excellence for ICT (CE ICT)** (to form and join technical, applicative, innovative, development and research excellence in the wider multi-disciplinarian area of ICT and services);
- **Satellite toll collection system** in free traffic flow (The pilot solution integrates modern complete solutions in the field of telecommunications and information technologies);
- **The Service Enabling Infrastructure (SEI) project (**deals with the development of some basic and at the same time key elements of the modern telecommunications network based on the IMS/TISPAN architecture);
- **The IRIS Home project** (Innovation Independence Intelligent Solutions) (the smart home solutions which would enable disabled and elderly persons to live an independent life in the domestic environment);

- **AMR - Automated Meter Reading** (internet based solution that enables the integration of meters, calculation subsystem, distribution network, energy production, supply subsystem, customers and users, house automation etc. into a uniform system.);
- **Laboratory for interoperability - SINTESIO Bled** (an open, non-profit NGN testing laboratory approved by the European Telecommunication Standards Institute (ETSI) and established by the industrial partners, standardisation bodies and the university).

Links to foreign organizations, memberships....

Some members of ICT Technology Network co-operate with technology platforms in EU:

- The Mobile and Wireless Communications Technology Platform http://www.emobility.eu.org/
- The European Technology Platform for Software and Services - (NESSI) **the Networked European Software and Services Initiative** http://www.nessi-europe.eu/Nessi/
- **The NEM Technology Platform – Networked and Electronic Media**
- http://www.nem-initiative.org/
- **Advanced Research and Technology for Embedded Intelligence and Systems-ARTEMIS**
- http://cordis.europa.eu/ist/activities/activities.htm

Technology network Intelligent polimeric materials and pertaining tehnologies (IPMT)

Economically successful innovation is based on superior basic knowledge.

National technology network IPMT aims to establish the surrounding for the synergy of techno-socio-economic knowledge required for the establishment of 'high-tech' 'spin-off' companies and to fill the gap between the universities and technology parks and incubators. IPMT's activities are oriented towards the integration of advanced knowledge in the field of the new generation of thermoplastic polymer materials and pertaining technologies into those existing production programmes where the material behaviour significantly affects the functionality and technological level of the product. A priority of the network also concerns the development and commercialisation of new 'high-tech' products based on next generation polymers and technologies.

Through the links among 10 research institutions and 12 large enterprises oriented towards high technology, IPMT established the Institute for Sustainable Innovative Technologies (iSIT), which is organized and registered as the European Economic Interest Grouping, EEIG. This new legal entity, based on EU Community law, facilitates and encourages cross-border cooperation in research and development and aims to strenghten public-private collaboration. iSIT offers conditions for the integrative goal oriented interdisciplinary postgraduate education of young, highly-educated entrepreneurial teams capable of organizing R&D-production-marketing chains for 'high-tech' products with the highest added value.

The network IPMT is open to all industrial enterprises and academic institutions, who's goal is the economic success based on cutting-edge science.

Address: Cesta na Brdo 85, 1000 Ljubljana
Phone: +386 1 4771 660
Fax: +386 1 4771 670
e-mail: cem@fs.uni-lj.si
http://www.fs.uni-lj.si/cem/IPMT/IPMT.htm

Contact person: Mr. Igor Emri, PhD, IPMT coordinator

Founded: 2003

Revenues of Network's members: in excess of 1.2 billion €
Number of employees of network's members: over 17.000
% export: more than 80%
Countries of export: World wide

Strategic and development goals

IPMT's strategic objectives are:

- To raise the general technological level of that part of Slovenian industry where polymer materials can affect the functionality of products and consequently the added value
- To implement the best expert knowledge on polymeric materials and pertaining technologies into Slovenian industry in order to increase the competitive capacity of Slovenia within the existing market niches
- To develop and commercialise new "high-tech" products with the aim of opening new market niches with a high added value.

IPMT runs its activities through newly established Center of Excellence (*i.e.*, iSIT), regional Centers of Knowledge, Life Long Learning (LLL) education system and Virtual Laboratory (VL), being freshly initiated. Common information system is under construction.

Competences, fields of activities and references

Activities:

- Establishment of Virtual Laboratory (VL) to support research & development activities in the field of multifunctional polymer materials and technologies
- Life Long Learning (LLL) education system of seminars, workshops and professional excursions on topics, relevant to the field of polymer processing and application
- Development and commercialisation of new "high-tech" products based on next generation polymers and technologies, e.g., intelligent fibres in ophthalmologic and cardiovascular surgery, a new generation of climbing ropes, and intelligent safety belts etc.
- Organization of international conferences and workshops in the field of rheology, time-dependent behavior, multiscale phenomena in polymer structure formation, experimental mechanics

Key technologies (knowledge and competences):

- Multifunctional polymeric materials and technologies
- Multiscale phenomena in nano- and self-organized polymeric materials:
- Modeling multi-scale phenomena in polyamides
- Tailoring of macro-properties through controlled self-organization
- Self-reinforcement via formation of a super-structure
- Effect of processing conditions (temperature and pressure) on time-dependent behavior of nano- and self-organized materials
- Fabrication and characterization of intelligent sub-micron fibers
- Novel experimental methods for characterization of time-dependent material properties
- Expert systems for monitoring measurements, manufacturing processes and quality control, both locally and remotely over the internet

References (current common projects):

- antibalistic plates »CEM Shield«
- climbing ropes and intelligent safety belts
- multifunctional construction material »MURON«
- fast non-invasive diagnostic apparatus for medical applications
- durability of elastomeric rubber profiles for sealing
- thermomechanical properties of polymeric housing for illuminants
- improved functionality of polymeric washing tub
- durability of dynamically loaded elastomeric materials

Partners on common projects: Gorenje, IBI Kranj, Ravne Presses, Intering Holding, Studio Kalamar, Savatech, Hella Lux Slovenia, Goodyear Engineered Products Europe, BASF, Rhodia, Bauman University, University of Austin, California Institute of Technology, National Insitute of Chemistry Slovenia, Faculty of Computer and Information Science, Faculty of Mechanical Engineering, Center for Experimental Mechanics

Links to foreign organizations, memberships....

Professional associations:

Wissenschaftlicher Arbeitskreis Kunststofftechnik (WAK)	www.wak-kunststofftechnik.de
The Europan Society of Rheology (ESR)	www.rheology-esr.org
Society of Rheology (SOR)	www.rheology.org
The British Society of Rheology (BSR)	http://innfm.swan.ac.uk/bsr
Society for Experimental Mechanics (SEM)	www.sem.org

Japan Society of Mechnaical Engineers (JSME)	www.jsme.or.jp
European Technology Platform on Advanced Engineering Materials and technologies (EuMaT)	www.eumat.org
Society of Plastics Engineers (SPE)	www.4spe.org
Polymer Processing Society (PPS)	http://pps.mcmaster.ca
Society for the Advancement of Material and Process Engineering (SAMPE)	www.sampe.org
European Association for Experimental Mechanics (EURASEM)	www.eurasem.org

Academic associations:

American Academy of Mechanics (AAM)	www.aamech.org
New York Academy of Sciences	www.nyas.org
Slovenian Academy of Sciences and Arts (SAZU)	www.sazu.si
European Academy of Sciences and Arts (EASA)	www.european-academy.at
Russian Academy of Natural Sciences	www.raen.ru
Russian Academy of Engineering	

Technology network Process control technology (PCT)

Address: INEA, Stegne 11, 1117 Ljubljana

Phone: +386 1 513 81 00
Fax: +386 1 513 81 70
e-mail: info@tvp.si
http://www.tvp.si

Contact person: Mr. Zoran Marinsek, PhD, Leader of the network

The PCT technology network consists of 11 enterprises representing the majority of the most important companies in the Slovenian industrial processes automation and information services market, and additionally three institutions performing the majority of this kind of research. With introduction of the process control technology in different areas, we are contributing to an increase in economic competitiveness. Process control technology results in increasing the scope and adaptability of production, improving the quality of products, reducing the consumption of energy and raw materials, decreasing the environmental pollution, and increasing the occupational safety, etc.

Strategic and development goals

The development strategy has two objectives. The first strategic objective refers to an increase in the level of technological competence (and consequently competitiveness) of those engaged in individual selected priority development trends (core technologies), and the second strategic objective refers to an increase in the level of technological level (and consequently competitiveness) of the users of the process control technology. These two objectives will be achieved through activities in the framework of the following three strategic policies:

- Accelerated development of new products, services and technologies for suppliers (particularly through applied research and technological development projects),
- Accelerated introduction and dissemination of new (and existing) technologies among users (particularly through demonstration projects),
- Accelerated introduction and establishment of innovative environment (also through the establishment of the Centre of Excellence for Modern Control Technologies and the Technological Centre for Automation, Robotisation and Informatics).

Competences, fields of activities and references

Activities

The network's field of activity comprises processes which take place in "business entities", and problem areas on which the network participants work and which they market as part of their business objectives. These activities comprise the entire pyramid of process control and management in an enterprise: process level, control level, and production level.

Main development areas:

- Production informatics,
- Control of complex systems and processes,
- Fault detection and quality control,
- Support to logistic processes in production companies,
- Control and management technologies which enhance the quality of life and reduce environmental pollution,
- Machinery and equipment automation (embedded systems),
- Technologies enabling the development of new tools and components for control and management systems.

References (projects):

The PCT technology network (enterprises + institutions) is currently engaged on two connected comprehensive projects approved and subsidised by European Fund for Regional Development.

The first project is entitled »Modern Control Technologies for Improving Competitiveness« and consists of three key development projects:

- Advanced elements for an integrated system of computer-supported production control,
- Advanced elements and technologies for the control of demanding batch and continuous processes,
- Automation of machines and equipment.

The second project, named "Centre of Excellence for Modern Control Technologies", comprises six research and development projects:

- Modern methods of regulation,
- Automatic on-line process control and product quality control,
- Remote and distributed control technologies,

- Support to decision-making and production management,
- Information control of the product through its entire life cycle,
- Project management in the procurement system.

National Center of Clusters and Technology Networks (NCCN)

National Center of Clusters and Technology Networks (NCCN) connects its members to enable implementation of relevant projects, surpassing individual activities of members thus creating their maximum added value.

Aim of the National center is to link together relevant carriers of growth, companies, research and educational institutions, representatives of capital and state to form and implement national innovation and development policies.

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Founded: 2005

Strategic and development goals

The NCCN was established with the purpose to support amiable environment and climate for cooperation, linkage and dialog among all carriers of development, research and education institutions, capital (investors) and the state through:

- Long-term cooperation among all carries of growth and innovation
- Investing in research and development projects
- Improvement of the quality of business environment for the development of existing and new products and services
- Succesful inclusions to international development partnerships

Competences, fields of activities and references

The Center is active in promotion of internationalisation of Slovenian clusters, of their know-how and competences through organization of:

- bilateral meetings
- regional cooperation activities

It offers:

- support to planning and coordination of strategic development programmes of individual clusters and technology networks
- preparation of joint proposals for the implementation of technology development and innovation policies to the state
- joint promotion of strategic cooperation as an element of increasing the economic competitiveness
- preparation of programmes and projects for incorporation in international development initiatives and technology platforms
- joint and integral promotion of development potentials
- access to databases, information and lobbying on EU level
- following and forwarding of relevant information, promotion of members' activities on strategic development areas

References (Projects)

- Conference on Clustering and Competititveness in the region of CE and SEE
- Project: Partnership in education (with Plasttechnics and Tecos)