Project no. **029490**

Project acronym: **MIRIAD**

Project title: **Managing and Infusing Research Investment And Development**

Instrument: **Coordination Action**

Thematic Priority: **Support for the coherent development of research and innovation policies**

Deliverable reference number: **7.1**
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PP	Restricted to other programme participants (including the Commission	
RE	Restricted to a group specified by the consortium (including the Commission	
CO	Confidential, only for members of the consortium (including the Commission Services)	

FP6 – 2004-KNOW-REG-2
REGIONS OF KNOWLEDGE 2

MIRIAD:
Managing and Infusing Research Investment And Development

Project Participants

Partic. Role	Partic. no.	Participant name	Participant short name	Country	Date enter project	Date exit project
CO	1	University of Sheffield Management School	USFD	UK	1	24
CR	2	South East European Research Centre	SEERC	Greece	1	24
CR	3	Chamber of Commerce University Istanbul	ITICU	Turkey	1	24
CR	4	University of National and World Economy Sofia	UNWE	Bulgaria	1	24

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1. Introduction

The objective of Workpackage 7 is to develop a trans-national regional learning platform and to ensure a high level of interactivity between the partner regions throughout the establishment of a mutual learning platform. There were four exchange visits planned to each of the participating regions. Because of the geographical disparity of the MIRIAD regions the study visit took place on two stages. Study visit stage one to Balkan regions took place from 14th of May to 19th of May and the Study visit stage two to Yorkshire and Humberside region took place from 17th to 20th of September.

The members of the study visit group consist of at least one member of each of the partner teams and one policy maker from each region who already participated in the regional roundtable meetings that were hold across the regions n April and May 2007. The study visit was aimed to promote the translational exchange of practices for enhancing regional R&D investment.

The summary of the presentations and are part of this report.

The report is structured as follows:

- Chapter 2 – Regional Study Visit to Central Macedonia and East Macedonia-Thrace
- Chapter 3 – Regional Study Visit to South and West Bulgaria
- Chapter 4 – Regional Study Visit to Thrace Turkey
- Chapter 5 – Regional Study Visit to Yorkshire and Humber.

2. Regional Study Visit ton Central Macedonia and East Macedonia Thrace

2.1 Introduction

The study visit to Balkan regions commenced in the East Macedonia and Thrace region, with the visit to sights in Thessaloniki on the 14th of May. The main meeting was held at Centre for Research and Technology Hellas (CERTH) where the representatives of individual institutions prepared presentations for the visitors. The presentations were followed by discussions and the visit of the CERTH laboratories. Centre for Research & Technology Hellas (CERTH) has strong collaborative ties with industry, particularly with foreign companies. It acts as a "transformer" between universities and industry.

Thessaloniki Technology Park was established 15 years ago as an incubator. The main aim is to foster technology transfer by bolstering R&D infrastructure, links between companies, information dissemination, and promotion of co-operation with University. Currently the incubator has 9 companies, it does not support a sector approach. It mains focus is on changing e culture of SMEs in the region by communicating benefits of innovation and competitive advantage.

AGENDA

Thessaloniki, 14th of May 2007

10.00 Meeting at the Hotel

10.30-11.00 Visit to Technopolis of Thessaloniki

11.00-13.30 Visit to CERTH (National Centre of Research and Technology)

Presentations by the representatives of:

- Technopolis
- Research Centres of CERTH
- the Regional Authority of Central Macedonia
- the Association of ICT companies for Northern Greece
- SEERC

1.30-2.30 Visit the Technological Museum of Thessaloniki

- Tour and presentation by the Director

14.30-15.30 Lunch at the Technology Museum Restaurant

15.45-17.00 Coffee

17.47 Departure from Thessaloniki to Sofia

2.2 Summary of the presentations

Technopolis Thessaloniki

Mr C. Tramatzas, Director of Technopolis

Investing in Technological Innovation

- Technopolis is an initiative of SEPVE.

- SEPVE is the *Association of Information Technology Companies of Northern Greece*. The association has more than 225 ICT companies as members. It is the only collective body representing the interests of the Information Technology businesses in the regions of Macedonia, Thrace and Thessaly and it plays a major role in assessing and promoting the needs of the Information Society in Greece and South Eastern Europe. One of the initiatives of Sepve, aiming at the promotion of ICT in Greece, is Technopolis.

Profile

- The Vision : The first business driven Technopolis in Greece

- Technopolis is a developing High Technology Park. It is a business driven initiative, which is creating the first real technology park in Greece. The area in which the park is to be located is in the east suburbs of the City of Thessaloniki, an area of 95.000 square meters. The park will also host a 2 business incubators for ICT companies, one of which is Technopolis Incubator.

Technopolis High Technology Business Park

Public and Private Shareholders

- The University of Macedonia
- The Center of Research and Technology Hellas
- Thessaloniki International Fair Center
- The Telecommunication Organization of Greece
- The Exporters Association of Northern Greece
- The Association of IT Companies of Northern Greece

Technopolis is a private owned company. Its shareholders consist of a balanced mix of private and public bodies. The investment of 71 innovative and High Tech companies in Information Technology field is accompanied by local and nationals stakeholders:

- A University: Univesity of Macedonia www.uom.gr
- A research center: Centre for Research and Technology Hellas //www.certh.gr
- A Telecommunications company: Hellenic Telecommunications Organization (OTE S.A.) http://www.ote.gr/

- The : International Fair of Thessalonica http://www.tif.gr/
- 2 associations : the Exporters associations of northern Greece http://www.seve.gr/ and the Association of Information Technology Companies of Northern Greece, www.sepve.org.gr
- Finally, the Prefecture of Thessaloniki and the The Municipality of Pylea

The mission

As the Lisbon Strategy is an undertaken obligation for raising competitiveness foe SME's, Technopolis Thessalonikis S.A. and Technopolis incubator aim at contributing in the field of cooperation among High Technology companies and Research Institutes as well as Educational Bodies offering a liaison between information technology companies, local authorities and international counterparts (private and public). The ultimate aim of Technopolis is to promote the overall development of the local economy by means of promoting Information Technology and Information Society.

Technopolis is expected to

- promote the relocation of ICT SME's into a common Business Park - Solve housing needs of ICT through development of a well organized centre
- offer state of the art infrastructure and services of certified quality and competitive pricing models
- Offer extended services such as a conference centre, catering, health club, day care centre, etc.

While at the same time is aiming at creating a communication and cooperation platform between IT companies and private/public institutions on a local, national and international level. The incubator of Technopolis has already started its operations in January 2007 and it is located near the Technopolis estate, on premises of 1.000 square meters.

Current state

Phase A: pre-construction phase

- Provide legal and construction framework of Technopoli
- Sign property agreements with High Tech SME's
- Cooperation towards the Innovation Zone of Thessaloniki
- Produce all related infrastructure studies.

Under the pre-construction phase, the following has been completed:

Soon the construction works will start. We are expecting that the common facilities builds and campus infrastructure will be ready in a years time. After this phase, the shareholders buildings will start constructions.

Thessaloniki, is a bridge for the developing Balkan economies in ICT. The region has approximately 300 ICT SME's and it is an important trade and communication

center. With the collapse of the communist regimes in the Balkans, the E.U. recognised Northern Greece and Thessaloniki, geographically situated at the crossroads linking the Balkans with Western Europe, as a bridge for the developing Balkan economies. The Greek government has put strong emphasis on the development of the Information Society. The implementation of OPIS, the Operational Programme for the Information Society, proves critical for the status of the ICT market.

The ICT sector is considered by the state to be a thriving force for the development of the other economic sectors and for the entire region Technopolis is located in the east side of Thessaloniki and has access to main high-speed roads towards the city, Athens or Halkidiki. It has a tremendous view over the gulf of Thermaikos and in within an hour-drive one can reach Halkidiki summer resorts.

Reasons for collaboration

1. A user community of digitally literal users
2. The ideal test environment for dynamic promotion of ICT research results
3. The ideal partner for the exploitation and dissemination in ICT projects
4. The ideal opportunity for a fruitful technology and innovation transfer

Related to European IST projects, Technopolis will promote Thessaloniki's innovation zone, support regional innovation strategy and entrepreneurship and demonstrate and disseminate European best practices.

Technopolis is a user community of digitally literal users, will form the ideal test environment for dynamic promotion of ICT research results. It will be the ideal partner for the exploitation and dissemination in ICT projects. In the framework of FP7 and the CIP programme, Technopolis Thessalonikis is interested to participate in research projects acting as a showcase environment, a real life living Lab, of research results for demonstration and evaluation purposes.

CERTH: CENTRE FOR RESEARCH & TECHNOLOGY HELLAS

Prof. C. Kyparisidis (Director)

Outline

- Mission, Location, Organization
- Research Institutes
- CERTH's Achievements
  - *Technology Transfer*
- Future Developments
  - *Infrastructure*
  - *Scientific and Technological Goals*

CERTH's Mission

- High quality scientific research
- Emphasis on technological R&D developments

- Cooperation with Universities and Research Institutes
- Strong collaboration with industry

MINISTRY OF INDUSTRIAL DEVELOPMENT & COMMERCE
GENERAL SECRETARIAT FOR RESEARCH & TECHNOLOGY - GSRT
CENTRE FOR RESEARCH AND TECHNOLOGY HELLAS – CERTH
CENTRAL ADMINISTRATION

1. CHEMICAL PROCESS ENGINEERING RESEARCH INSTITUTE (CPERI)
2. INFORMATICS AND TELEMATICS INSTITUTE (ITI)
3. HELLENIC TRANSPORT INSTITUTE (HIT)
4. INSTITUTE OF AGROBIOTECHNOLOGY (INA)
5. INSTITUTE FOR SOLID FUELS TECHNOLOGY & APPLICATIONS (ISFTA)
6. BIOMEDICAL AND BIOMOLECULAR RESEARCH INSTITUTE (BBRI)
7. MANUFACTURING INSTITUTE OF THESSALONIKI (MITh)

- Presentation of the Institutes
- Achievements / Technology Transfer
- Key Performance Figures for the Period 2000-2006
- Funding Sources
- Personnel
- External Evaluation of CERTH's Institutes
- Key Technological Achievements

ENERGY & ENVIRONMENT

- New hydrogen production method from solar energy
- Quality improvement of fossil fuels

INDUSTRIAL APPLICATIONS

- Development of novel catalytic and environmental processes (e.g., for refineries)
- 3D stereoscopic image analysis

ARGOBIOTECHNOLOGY

- Prions detection protocol (mad cows disease).

TRANSPORT

- Development & implementation of methodology & tolls for assessing quality of public transport services
- Integration of inter-modal route planning heuristic algorithm in web-based info mobility service made available by major Greek telecommunication service provider.

SUPPORT OF NEW ENTERPRISES

Spin-off Companies Development

VRSENSE S.A.
Informatics and Telematics Technologies

CPERI SOLUTIONS
Applications and exploitation of energy and environmental processes

Future Developments at CERTH's

Biomedical & Biomolecular Research Institute

Congress Centre

CERTH – Future Goals

- Strong central administration and decentralization of research activities
- CERTH has to continue developing unique technology
- Collaboration with established research institutions
- Collaboration with the Universities is a key to its success
- Technological achievements at international scale
- Future developments in emerging research areas
- Biomedical Engineering and Manufacturing are key priorities.

FACTORS OF SUCCESS - CERTH AS A "TRANSFORMER"

Providing focus for universities and basic insight for industrial partners.

REGION OF CENTRAL MACEDONIA

REGIONAL INNOVATION POLE OF CENTRAL MACEDONIA

Panos Georgopoulos
President of the Project Management Unit
General Secretariat of Region of Central Macedonia

Title, Budget and Duration
In March 2007 a **4,1** million Euro project entitled "**Development of Regional Innovation Pole in Central Macedonia**" was officially launched. The project duration is two years.

Project Objectives

- The main objective of the project is the creation of a strong network in the Region, to support research and technological development activities as well as knowledge-intense entrepreneurship with strong viability perspectives.

- The network is focused on the domain of Information and Communication Technologies (ICT) and in particular on the areas of broadband internet services, telecommunications and software.

- The target of the project is the development of technological innovation in the Region, through the intense use of ICT in a wide spectrum of production, commercial, business and administrative activities.

Consortium and Work Structure

The project consortium is composed of 36 participants

It includes:

- The Academic and Research Institutions of the Region
- Business and Industry Associations and
- Innovative SMEs.

The project incorporates 26 independent but complementary activities including R&D activities, creation of spin-off companies, creation of regional technological platforms and horizontal actions.

The Role of the General Secretariat of the Region of Central Macedonia

The General Secretariat of the Region of Central Macedonia participates in the Regional Innovation Pole, as the responsible partner for the horizontal actions.

In particular the General Secretariat will coordinate and implement the foreseen activities for the **Strategic Planning and Viability Study** of the Regional Innovation Pole of Central Macedonia.

REGIONAL INNOVATION POLE OF CENTRAL MACEDONIA

- Activity 1: Horizontal activity: Innovation Pole strategy and viability
- Activity title: Innovation Pole strategy and viability
- Activity Description

The pole's strategy focuses on the development and advancement of innovation within the IT companies of the region in cooperation with the research community. Moreover it focuses on the modernization of the production base of the region through innovation with the use of information and telecommunication technologies.

- Task A: Development of the Innovation Pole's Identity and fostering of the internationalization of the Region's authorities.

- Task B**:** Development of the Innovation Pole strategy and organization as well as its expansion prospective and its evaluation.

Expected results

Innovation Pole's strategy is expected to define:

- The main technologies for the ICT sector's long term development.
- Its expansion in other sectors and compatibility with the Innovation Zone of Thessaloniki.
- Its Long term sustainability.
- Sources of funding through the 4th programming period of the structural funds.
- The need to create a permanent organization or network that will manage and further develop the Innovation Pole in the long run.
- To offer strategy definition services to the IT companies of the region.
- The project's contribution to the Region's development

Strategy's targets

- Adoption of innovation as a main future of the IT sector
- Assist enterprises on strategy issues. Ο προσανατολισμός και υποβοήθηση των εταιριών σε ζητήματα στρατηγικής
- International cooperation with European and other Greek regions to advance the innovation culture.
- Annual innovation awards
- Design of permanent innovation advancement mechanisms for a) entrepreneurial intelligence, b) innovation financing c) technology transfer, d) new product and new technologies development
- Promotion of the cooperation between the region's IT companies and companies from other sectors as well as the research community in Greece and abroad.
- Continuously informing IT companies on the latest developments in the sector.
- Advancement of the sector's enterprises in a way that contributes to the country's participation to the Information Society.

Work packages (WPs) and Deliverables (D)

WP1.1 IT Sector Strategic Plan

D1.1. ICT enterprises Innovation Strategy Study
D1.1.a. Innovation Pole development Plan and assessment of its contribution to the development of Central Macedonia.
D1.2. Web page

WP1.2 Promotion of innovation strategy best practices to ICT companies

D1.3 Best practices identification.
D1.4 Creation of guides for case studies (Best Practices Innovation Form).

D1.5 Creation of an electronic library and a content platform.

WP1.3 Innovation strategy consulting support to ICT companies

D1.6 Development of consulting services training material
D1.7 Three training Workshops
D1.8 Final event

SEPVE
Association of Information Technology Companies of Northern Greece

Mr. S. Ignatiadis (Director)

SEPVE's background

- SEPVE was founded in April 1994
- It is based in Thessaloniki.
- The Association today numbers more than 230 members. (http://www.sepve.org.gr)
- It is the only collective body representing the interests of the Information Technology businesses in the regions of Macedonia, Thrace and Thessaly.
- It plays a major role in assessing and promoting the needs of the Information Society in Greece and South Eastern Europe.

SEPVE's vision

Key role to foster:

- Information Technology as a lever of development for the whole of Greek society
- Thessaloniki and Northern Greece as a centre for Information Technology in the broader geographical region
- SEPVE as a bridge for business cooperation with South Eastern Europe

SEPVE's role in the Greek IT sector

- Consultant to the Ministry of Macedonia and Thrace on the potential for development and exploitation of the Information Technology businesses of the region
- Consultant to the four regional authorities of Northern Greece and Thessaly on means of funding Information Technology SMEs
- Advisory services to the Ministry of National Economy to assist in the more effective development and use of electronic data interchange systems
- SEPVE is one of the main sources of information on technology issues for the Prime Minister's office
- Recommending and advising the Ministry of Development on new measures, projects and initiatives under the Development Act.
- Advisory role for the Information Society Programme

SEPVE activities

- Offering information to both existing and future members on the latest developments in the Information Technology sector, on both the national and international levels.
- Fostering the growth of Information Technology within Northern Greece
- Promoting an enhanced status for IT businesses, thus making a positive contribution to Greece's advance into the Information Society
- Coordinating and submitting business plans and proposals to government departments and agencies in order to enhance the development of its members' businesses.
- Creating an effective communication and collaboration platform among its members, and between its members and the public sector as well as other business sectors.
- Organizing educational and information seminars, round table discussions and conferences, in order to improve the administrative and technical skills of its members.
- Promoting cooperation between its members and related businesses in the Balkan countries, as well as in the Mediterranean region and the Middle East, thus taking advantage of the key geographical position of northern Greece.

SEPVE participation – EU & national projects

- Organisation, management and coordination of the 1st & 2nd INTERBALKAN IT FORUM in Thessaloniki 1998/2000
- ADAPT - 1998
- INTERREG II - 1998
- FP5 - IST-Programme – ISIS Project - 2001
- LEONARDO-Programme – 'Web Content Manager' Project – 2001
- "Aristeia" - Innovative Action Programme for Central Macedonia - 2002
- New Employment, New E-quality: Promoting Industrial Relations and Social Dialogue in the IT Sector - 2003
- LEONARDO-Programme – 'ViPiA - Virtual Pre-Incubator Accelerator' -2004
- FP6 – IST-Programme – EUROPEAN IST - 2004
- ETI / FP6 -INNOV5 Project SEE-INNOVATION - 2005
- ETI / FP6 -INNOV5 Project EASIER – 2005

New proposals:

- action n°: *2005/33:* "Enhancing the cooperation between ICT suppliers and SMEs at regional level"
- INTERREG III A Phare CBC: Integrated Programme for the development of Human Resources in the IT sector for the creation of co-operations between Greece and FYROM.

South-East European Research Centre (SEERC)

Nikos Zaharis, Director of SEERC

What is SEERC?

- A unique cooperation between the University of Sheffield and City College of Thessaloniki
- South-East European Research Centre
  is an Anglo-Greek Research and Educational Partnership based in Thessaloniki
- A non profit organisation established by the University of Sheffield and CITY Liberal Studies.
- An interdisciplinary Research Centre designed to extend South East Europe's research capacity and role in the European Knowledge Society.

MISSION STATEMENT:

SEERC's mission is to support the sustainable, long-term political, economic, and social development of South Eastern Europe (SEE) by conducting pure and applied research and policy analysis in and for the region.

SEERC's ACTIVITIES

- **RESEARCH**

1. Conduct Applied & Policy – relevant research
2. Undertake Research projects of importance for the region
3. Build & Develop international multidisciplinary research groups

- **NETWORKING**

1. Act as a "Hub" for the region
2. Develop regional expertise and promote regional scientific synergies

- **DOCTORAL PROGRAMME**

1. To increase the number of highly trained researchers in the region
2. UoS Scholarships

- **CONFERENCES-WORKSHOPS-PUBLISHING**

1. Promote independent objective analysis and public discussion
2. Disseminate findings to policy makers, NGO and INGO leaders, scientific community, general public

SEERC Research Tracks

RT1. Enterprise, innovation and development

- Innovation and competitiveness
- Regional development

- Logistics
- SME competitiveness
- Human resources management
- Organizational Analysis

RT2. Information and Communication Technologies

- Intelligent Systems
- Software Engineering
- Information & Knowledge Management
- Educational Informatics
- Information Society policy

RT3. Governance, politics and society

- European integration
- Social Policy
- Media and culture
- International relations
- Migration
- Public administration

RT4. Risk and well-being

- Substance abuse
- Psychological aspects of chronic diseases
- Mental health
- Cognitive Neuroscience

2.3 Conclusions

The presentations were followed by a fruitful discussion. During the discussion a few policy aspects emerged and will be fed back at the final workshop that SEERC will be holding in Thessaloniki, under the auspices of the MIRIAD project where a broader range of participants from the whole region of South Eastern Europe as well as R&D experts from international institutions is expected to participate. The issues raised in the discussion could form a core component for future consultations between key R&D stakeholders.

3. Regional Study Visit to South and East Bulgaria

3.1 Introduction

The study visit continued to the region of South and East of Bulgaria and took place in Sofia on the 15th of May 2007. The MIRIAD partners visited two institutions, the Ministry of Economy and Energy (MEE) and the Applied Research and Communications Fund (ARC). The morning session was held at the *Ministry of Economy and Energy* and provided the participants with outlines of the state policy in the field of innovations and investment policy in the country and gave an overview about the number of patents registrations and the related legislative documentation.

AGENDA

Sofia, 15th May 2007

10.30 - 12.00 Meeting 1

Ministry of Economy and Energy (MEE)

Bulgarian National Innovation Policy (A presentation by the representatives of the MEE, followed by discussion)

12.30 – 13.30 Lunch

14.00 - 16.00 Meeting 2

Bulgarian ARC fund

Regional Innovation Strategies in Bulgaria (A presentation by the representatives of the ARC fund, followed by discussion)

19.30 Dinner

3.2 Summary of the presentations

Mrs. Gergana Tzareva, Director of the "Registration, Licensing and Control" Directorate, explained that MEE is one of two ministries in Bulgaria, responsible for the innovation policy. The ministry has three directorates: "Business climate and innovations" Directorate, "Investment Policy" Directorate, and "Registration, Licensing and Control" Directorate. MEE and "Registration, Licensing and Control" Directorate in particular undertakes serious steps towards the intellectual property protection, for example in optical disks production Bulgaria has reached a good progress.

The specific details of the implementation of yearly action plan in the field of intellectual property were presented. The plan and its measures are of a very high importance for the innovation encouragement in the region. The plan was adopted in the light of the country's commitments under the *acquis communitaire* in the field of intellectual property protection and the EU recommendations. According to this plan MEE has to maintain a public register of licenses, to introduce additional legislation, and to carry out periodical inspection. It was stated that in 2005 and 2006 the Bulgarian government has been under the surveillance and subject to inspections from the EC. The European Committee during their Partner Mission regarding the issues of intellectual property expressed a satisfaction with strong political will to solve the problems, with the programme for launching an information campaign in the public domain, the establishment of the Council for Protection of Intellectual Property; the implementation of the measures envisaged in the Action Plan; the improved dialogue with the industry.

The representative of the "Investment Policy" Directorate commented on issues concerning the R&D investments. The main sources for funding innovation in the Republic of Bulgaria were outlined in the state policies. The representative stressed the role of the National Innovation Fund as the primary financial instrument for the implementation of the National Innovation Strategy. There are two key documents: 'Act of Infusing Investment Policy' and 'Strategy on Investment Policy' directing policy up to 2010.

The Directorate's role is to:

- promote the adoption of new technologies,
- set up high-technology business parks to encourage investment and innovation,
- improve incentives for high-tech businesses in Bulgaria;
- promote e-government.

Mr. Mitushev from "Business climate and innovations" Directorate presented the main conclusions of the 2006 Annual Report on the Bulgarian National Innovation Policy which can be summarized as follows:

National Innovation Fund approved 218 projects in high tech and traditional sectors; the work of Bulgarian National Innovation Council intensified dialog between business, science and education; a rising innovation culture which were obtained trough the creation of entrepreneurial centers at universities and secondary schools, the formation of clusters which promotes productivity, attracts investments, stimulate research, consolidates the industrial base and the creation of specific products and services; implementation of projects managed by different stakeholders such as ministries, governmental agencies and NGOs. Mr. Mitushev also outlined the main challenges to the national innovation system developments which require further measures such as: creation of intermediaries, support of knowledge and new technology transfer, innovation management skills, development of better financial instruments supporting innovations, coordinating the measures under the National Innovation Strategy. He also commented on strengths and weaknesses of the national innovation system and its main actors. The Enterprise Policy Directorate focuses on SMEs and innovation policy and is concerned with national aspects of R&D, each

region has its own strategy for enterprise and innovation. The National Innovation Strategy and the National Innovation Fund provides subsidies of up to 500.000 EUR. It also established 4 enterprise centres within the universities. It lacks links between public and private sectors, therefore communication needs to be improved. It encourages graduate entrepreneurship. The aim of the regional strategies is to bring researchers and businesses together through the establishment of 'technology transfer offices' and promoting cluster formation.

In the afternoon the MIRIAD partners visited the **Applied Research and Communications Fund (ARC).** The ARC Fund is a private non-profit, one of the leading Bulgarian non-government organizations (NGOs) working to advance the development of a modern knowledge-based society that works in favour of applying the power of information technologies and innovations into practice. The programme director of Innovation and Technology Transfer Department of ARC – *Mrs. Zoja Damjanova* gave an overview about the institution's main activities. It became clear that the ARC Fund is actively involved in shaping the policies and developments towards information society and knowledge economy on national and international level. The fund conducts applied research and analyses on a regular basis and assists the development and the implementation of public policies. The products of the fund service policy makers on central and regional level, and help the practitioners from different businesses and industry associations as well as NGOs and civil society actors. It connects the business with the government, enhancing the cooperation in building information society. The fund provides support to companies at the sectoral level, most of which concentrated in the ICT sector and some also in the food industry. The programme director explained that ARC fund specialises in two main thematic areas of the knowledge based economy – information society and innovation and technology transfer. In both fields ARC fund is trying to influence the adoption of innovative concepts and policies by government, universities, business and NGOs. It became clear that ARC fund supports the formulation of public policies by supplying policy-oriented research and analyses of the innovation system.

Prof. Milanka Slavova talked about the concrete innovation activities of the ARC fund. She underlined that the ARC fund worked on two of the regional innovation strategies in Bulgaria, one for the South Central planning region and the second for the South Western planning region. She pointed out that ARC fund also issues regular reports and other publications in the field of innovation. The most important is s Innovation.bg Report, which analyses the state of the national innovation system and makes recommendations for enhancing the innovation performance of the Bulgarian economy. Prof. Slavova pointed out that this year there will be a review of the European innovation policy which will highlight the opportunities for Bulgaria. Every year ARC fund organizes a National Innovation Forum, where the latest developments in Bulgaria's innovation environment are discussed. The representative of the ARC fund *Mr. Ruslan Stefanov* presented a few conclusions of the latest analysis and commented on the main barriers in the innovation process faced by different R&D actors.

3.3 Conclusions

The presentations were followed by a discussion. The major issue raised during the discussion was concerned with the EU funds capacity absorption of the companies. The representative of the Centre for the Study of Democracy shared his concerns about the demand from EU funds. It was concluded that the production structure of the economy does not work in favour for utilizing the EU funds. The economic agents following the profit maximization principle are oriented to activities which yield highest rates of return. The latter activities in Bulgaria are trade, real estate and production lines which do not have the potential to absorb the financial resources and be able to finance innovative activities. Finally the ARC representatives and MIRIAD team discussed some issues about clusters development and their sector specialization.

4. Regional Study Visit to Thrace Turkey

4.1 Introduction

Istanbul was the last third place visited in the Balkan regions. The MIRIAD partner, ITICU hosted the project partner representatives and the guests who were representatives from the regional policy. The study visit to Istanbul took place on 17th and 18th of May 2007. The participants visited the national research institute TUBITAK MRC which is run by the Government; Sabancı University which is an example of the Foundation Universities and a private research organisation VESTEK Electronics R&D Corp., which is part of the Ari Techno-park of Istanbul Technical University.

The visit commenced in TUBITAK MRC, where the representative of Business Development Unit Mr. Demet İşkodra introduced the Institute. Then the participants visited specialised research centres such as the Food Institute, Materials Institute, Genetic Engineering and Biotechnology Institute and were provided with an overview of research activities of these institutions.

This was followed by the visit of the Sabanci University, where recognisable achievements in research in both social sciences and future technology were achieved. The research initiative which focuses on collaboration with the business world, Competitiveness Forum was introduced by Hande Yeğenoğlu. The Computer Vision & Pattern Analysis Laboratory was introduced by the director Prof. Dr. Aytül Erçil.

The following day the participants visited Ari Techno-park and VESTEK Electronics R&D Corp. Metin Salt, Director of VESTEK, gave a presentation to the participants and provided them with an overview on İTU –Arı Teknokent and the TV broadcasting technologies research company VESTEK.

Programme

Istanbul, 17th – 18th of May 2007

DAY ONE - 16th of May 2007

Arrival of the participants to Istanbul and Hotel: Free Day

DAY TWO - 17th of May 2007

09.00 Meeting at the Hotel (travel organised by mini-bus)

10.00-12.00 Visit to TUBITAK – Marmara Research Centre

10.00 – 10.30 TÜBİTAK MRC Presentation - Demet İŞKODRA, Business Development Unit

10.30 – 11.00 Food Institute Visit
11.00 – 11.30 Material Institute Visit
11.30 – 12.00 Genetic Engineering and Biotechnology Institute Visit

12.00 – 1.00 Lunch

2.00 - 4.30 Visit Sabanci University and Competitiveness Forum

6.00-7.30 Dinner

DAY THREE - 18th of May 2007

10.00 Meeting at the Hotel (travelling by mini-bus)

11.00-13.00 Visit VESTEK (VESTEL - Electronics Research and Development)

14.00-18.00 Tour of Istanbul

4.2 Summary of the presentations

TUBITAK MRC

Establishment
TUBITAK was established in 1963 with the aim to develop, support and coordinate the R&D studies in science in Ankara. The scientific R&D is run by subject oriented institutes forming the TUBITAK organisation. The TUBITAK GEBZE CAMPUS is established in the north of İzmit Bay and cover area of 8.000.000 square meters. MARMARA RESEARCH CENTER was built in 1972 as an example of a scientific research campus. This centre reports directly to the General Management of TUBITAK and it is responsible for the development of research institutes in parallel with the national needs. The currently operational institutes are shown in Figure 4.1.

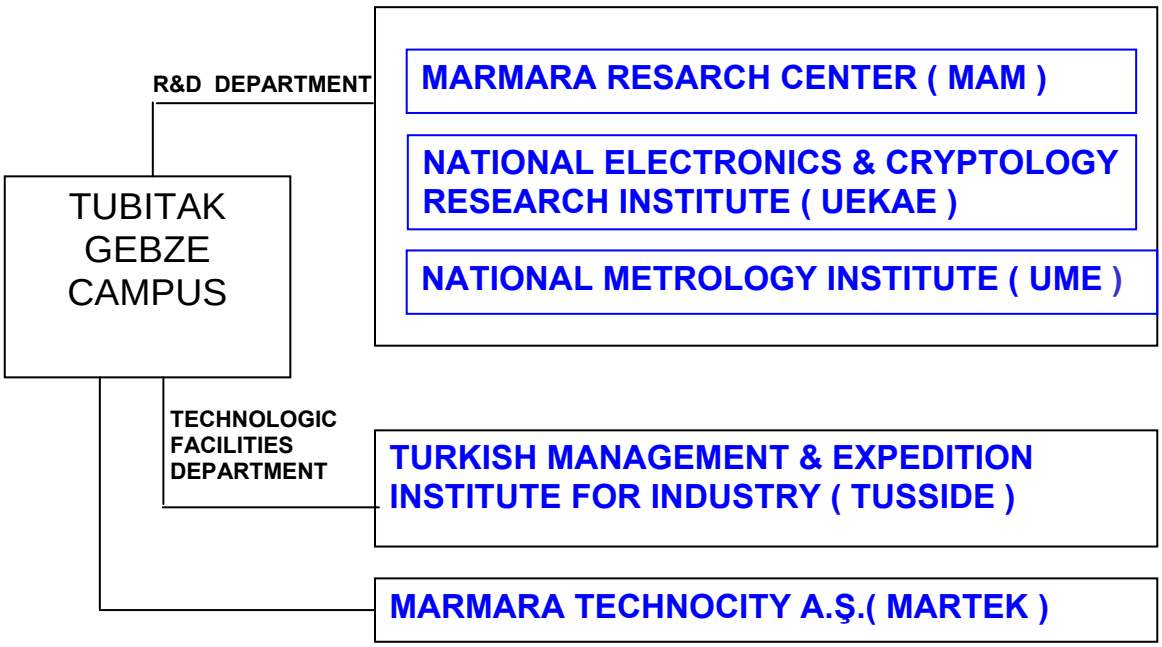


Figure 4.1.

MARMARA RESEARCH CENTER

The vision of Marmara Research Centre (MRC) is to be one of the World's most prestigious scientific and applied research centres. The centre helps to increase the global competition power of Turkey by using the science and technology, as part of TUBITAK organisation (Figure 4.2).

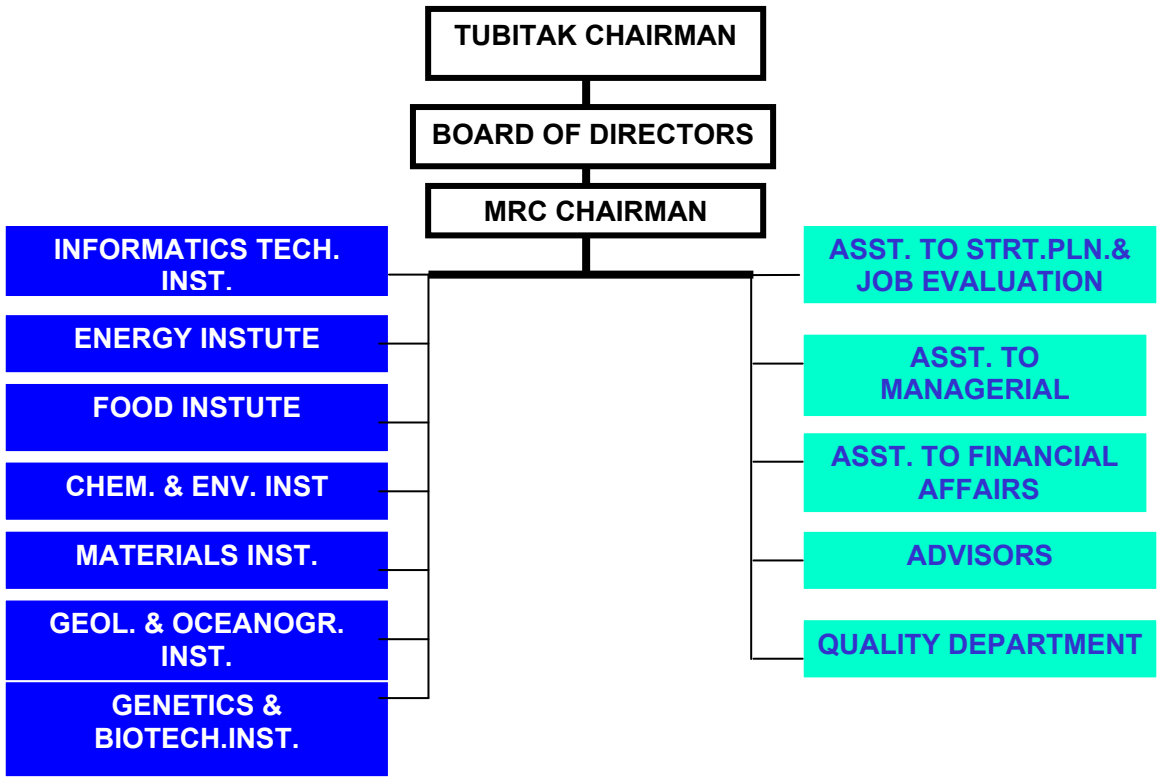


Figure 4.2. MRC in TUBITAK Organisation

There are 862 employees in MRC including

- 21 managerial positions, 2%
- 599 researchers, 70%
- 208 administrative, 24%
- 34 security personnel ,4%

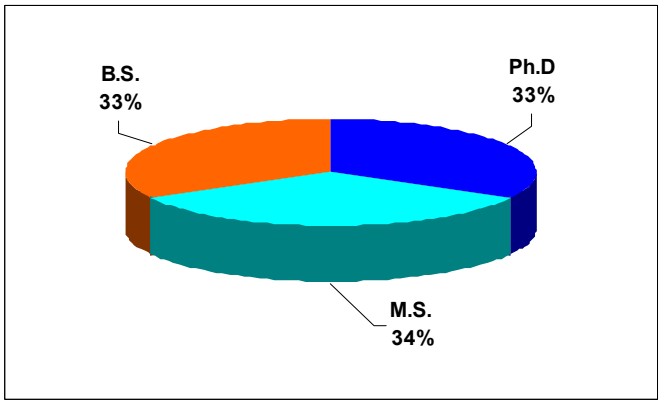
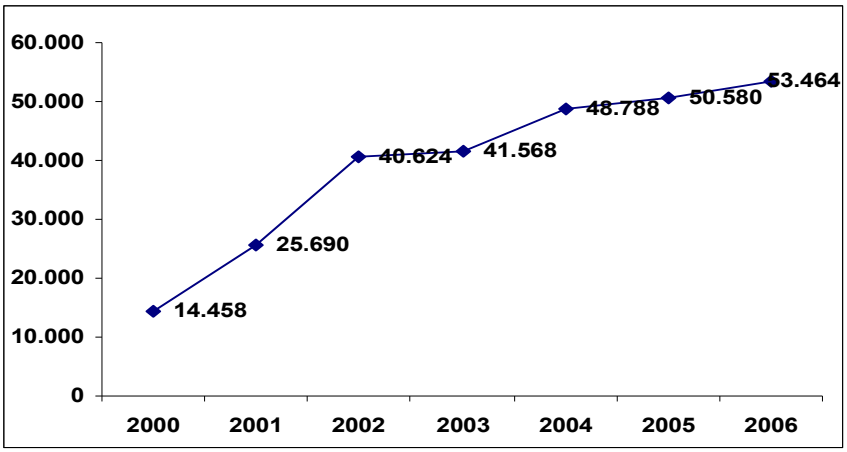


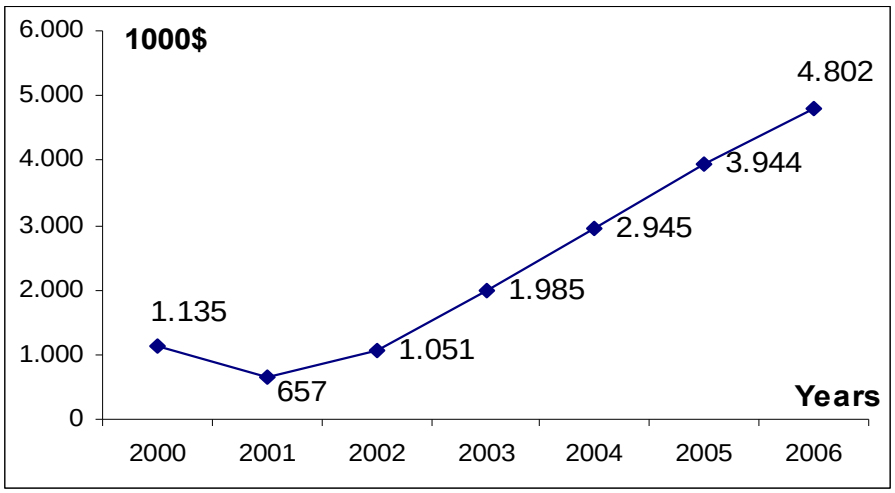
Figure 4.3. Researcher Profile of MRC

Within the last six years a number of researchers who have a PhD increased from 115 to 154. In 2001 there were 36 PhD students and now there are 66. Services of Marmara Research Centres are listed in Industrial and Strategic Projects, Industrial Services including tests, analysis, advices and education and the Organisation of International and or National Scientific Conferences. MRC carried out 119 research projects with a financial value of 14,662,000$ in 2000. The performed number of projects has increased to 190 in 2004, and then has decreased to 176 projects in 2006 which accounted for 125,813,000 $.

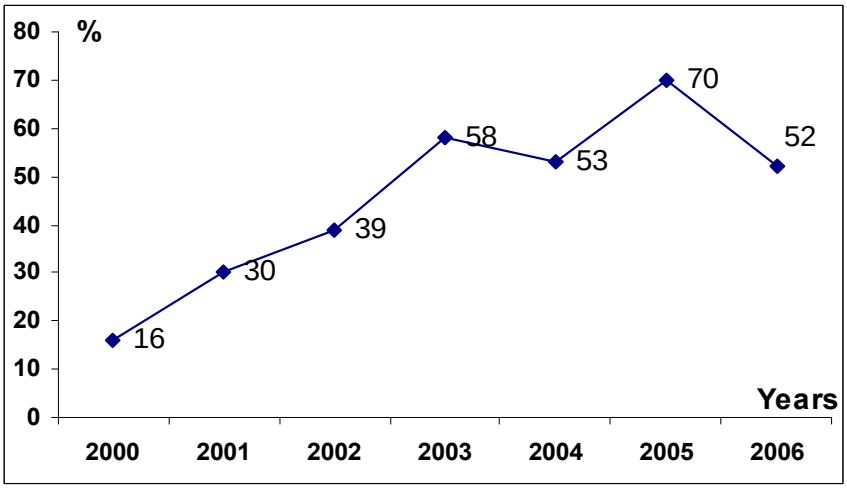
The number of industrial services within the Centre,



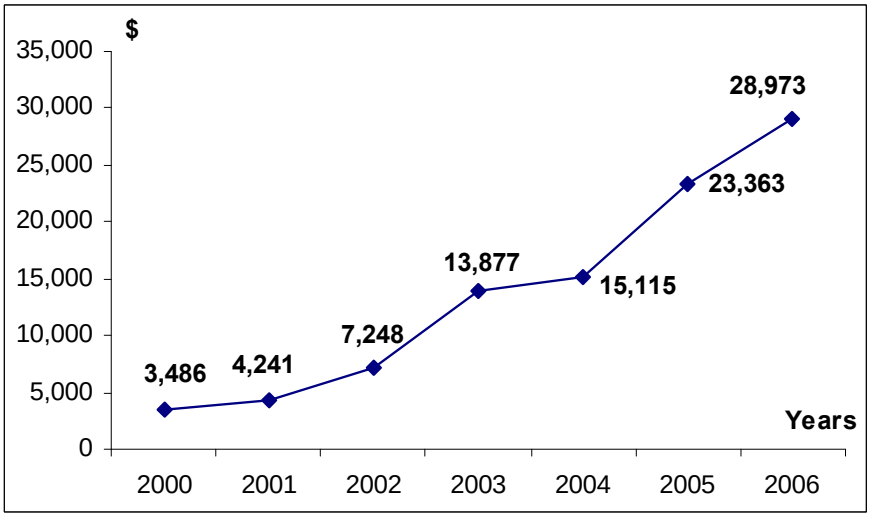
The income of the Centre from industrial services



Self-sufficiency of the centres



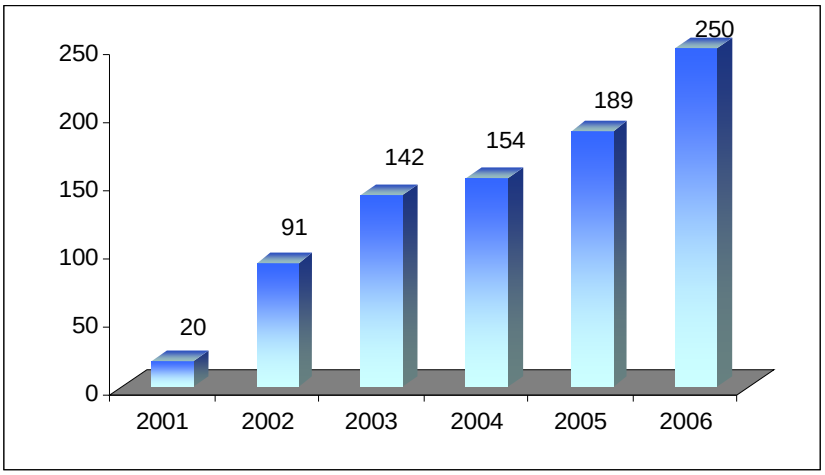
INCOME (in 1000$)



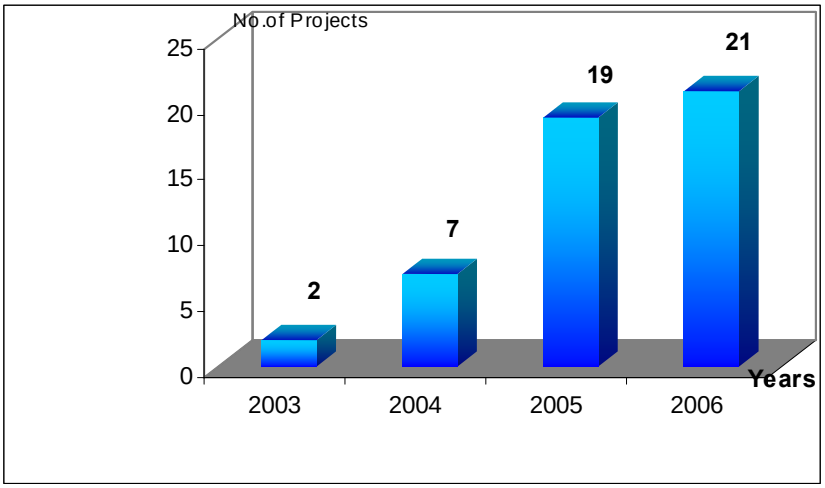
The centre has ISO certifications and obtained other quality certificates and awards such as:

- ISO 9001:2000 Quality Management System Certificate for all MAM Institutes.
- ISO 14001: 2004 Environment Management System Certificate for all MAM Institutes.
- ISO 17025: Accreditation Certificate for service laboratories. (EE, GE, ME, KÇE)
- Good Laboratory Applications. (KÇE)
- AQAP 160 Quality Certificate.
- 2003 National Quality Success Award.
- National Confident Graded Plant Security Certificate.
- NATO Confident Graded Plant Security Certificate.
- Production License Certificate.

The number of accredited studies



EU 6th FRAMEWORK PROGRAMME STUDIES



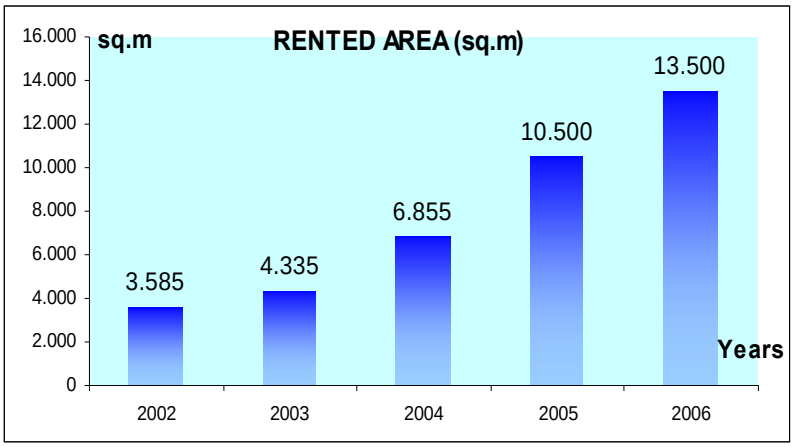
MARMARA TECHNOCITY A.Ş. (MARTEK A.Ş.)
According to the same decree as TUBITAK, Marmara Research Centre TUBITAK MRC has been authorized to establish and operate at the free zone. In June 2001 The Law of technology Development Zone was put into force and according to this, TUBITAK MRC techno-park was declared as a Technology Development Zone.

Main partners of Marmara Teknokent A.Ş are TÜBİTAK (96%), Turkey technology Development Foundation (TTGV 1%), İstanbul Chamber of Industry (İSO 1%), Adapazarı Chamber of Commerce and Industry (1%) and Kocaeli Chamber of Industry (1%). MARMARA TEKNOKENT A.Ş. and started their activities as of 10.06.2003. The companies which applied to TEKSEB should fulfil all necessary conditions in application and acceptance procedure specified by management company Marmara Teknokent A.Ş with TÜBİTAK MAM institutes.
MARTEK consists of Techno-park and Technological Free Zone.

MARTEK manages Technological Free Zone (TEKSEB) and Technological Development Zone (TEKGEB). The aims of TEKSEB and TEKGEB are:

- to help for technological development which are based on R&D,
- to accelerate the entering of high technology to the country,
- to provide the acceptance and development of transferred technology,
- to contribute to the advantages of extended Free Zone for the companies which operate on TEKSEB.

Total area of The Marmara Technocity is 740.000 sq.m.



The supports obtained to TEKSEB & TEKGEB are:

- The office and laboratory areas rent with feasible prices
- The permission to use the TUBITAK MAM feasibilities
- The support of employees and equipment
- The permission to use the library
- Business and office services
- The permission to use the guest house
- The permission to use the health and social activities
- Engineering services (area planning, projecting, legal permissions)
- Free participation to EOP

INDUSTRIAL COOPERATION PROGRAMME (EOP)

There were 89 participant organisations of EOP in April 2007**.** This service programme was developed to widespread the cooperation of knowledge of TUBITAK MAM, the results of R&D studies and the basic facilities with the Turkish Industry.

The main purpose of industrial cooperation programme is:

- to search the technological needs of Turkish Industry,
- to provide the coordination for solution and
- to profit in the long term from high added values of R&D studies together with the Turkish Industry.

Partners of TUBITAK MAM in EOP are

- TUBITAK National Metrology Institute
- TUBITAK Bursa Testing and Analysing Laboratory (BUTAL)
- Turkey Management & Expedition Institute for Industry (TUSSIDE)

Free services of EOP are

- Electronic Communication Media: On the web page of TUBITAK MAM the following information can be found Daily news, Digital data, Public news, Participants' interpretations, New participants and New Projects.
- Uniform Information Transfer
- e - journal
- Access to the Project Results
- Free Consultancy
- Permission to use the Library at MAM

TÜBİTAK National Metrology Institute, TÜBİTAK Institute for Genetic Engineering and Biotechnology and TÜBİTAK National Research Institute of Electronics and Cryptology are based in the same campus of research institutes of TÜBİTAK Marmara Research Centre. They collaborate with 900 scientists in the area. Industrial enterprises are accepted by TÜBİTAK MAM EOP as Direct Participant Enterprise and are located in TEKSEB.

Food Institute Visit

The unit was established under the name "Nutrition and food Unit" in 1971. The unit had different names in previously years. Later on it was transformed into an institute during the reorganization programme under the TÜBİTAK MAM and since 1997 it continues its activities as the "Food Institute". The institute contributes to the food industry aiming to improve its technological ability and strengthen its competitiveness, the assurance of food and consumer safety and resolution of nutrition related problems by using science and technology.

Quality policy of the institute meets the expectations and needs of stakeholders by providing them a high quality, true and reliable services and ensures the continuous improvement in the areas of R&D, test, analysis, training and consultancy activities in the field of food science and technology. The institute is committed to provide services that meet standards of EN ISO/IEC 17025 general Conditions for the Qualification of testing and Calibration Lbs., EN ISO 9001:2000 Quality Management Systems-conditions and ISO 14001 Environmental Management Systems that are required by its stakeholders.

Activities of this institute have a multidisciplinary character. Researchers are representatives of various professional groups, as food engineers, chemist, biologists, veterinarians, agricultural engineers and mechanical engineers. Total number of staff is 65, 29 % of them have B.Sc. degree, 46 % of M.Sc. degree and 29 % have a Ph.D. The organizational structure consists of Strategic Business Units (SBU) such as SBU1-Food Processing Technology and Nutrition and SBU2-Microbiology and Fermentation Technology.

- SBU1: Food Processing Technology and Nutrition

The unit conducts studies on the development of new products and related production technologies based on the consultancy demands and choices of the consumers. The research efforts in this field cover the entire food chain considering the nutritional values of the food products. Scientific data is derived from R&D studies, and thus it contributes to production of safe and high-quality agricultural products through the

food chain. There are two working groups: Food Processing Technology Group and Preservation and Packaging Group.

- SBU2: Microbiology and Fermentation Technology

The main function of this unit is to ensure microbiological quality and safety during the processing and storage of food. Other activities are concerned with an investigation of the impact of the food processing method on the microbiological load of food products, decontamination measures, development of microbiological quality control analysis methods, and production of industrial important micro-organisms/metabolites and fermented food and beverages by fermentation.

Selected projects of the Food Institutes are:

- Development of processing Conditions of Major Export Food Products, and Improvement of Their Quality (NATO-SfS, The German Tech. Coop. Org.) 1992-1998.
- Production of bio-degradable Polyester Using Microorganisms (EUREKA Project) 1997-2007.
- Determination of the damage Known as Embryo Disease on Wheat, Investigation of its impact on Product Quality and Assessment of Potential Risk on Human Health (Istanbul Chamber of Commerce) 1998-1999.
- Application of MAP and CA for Different Varieties of Table Grapes (Tekirdağ Viniculture Research Institute) 1998-2000

This institute gives importance to the participation at the EU Framework Programmes with the purpose to integrate and strengthen the Turkish food science and technology research area within European research. The institute has participated in 6 different projects since the beginning of the FP6.

Some of them are:

- Heat-induced Food Toxicants, Identification, Characterization and Risk Minimization –EU FP6 (2004-2006)
- Improving Quality and Safety and Reduction of Cost in the European Organic and "low input" Food Supply Chains – EU FP6 (2004-2008)
- Integration of Mycotoxins and Toxic Molds in the Global System for Food Safety – EU FP6 (2004-2007)
- European Food Information Resource Network – EU FP6 (2005-2010)

National collaborators in these projects are Ministry of Health, Ministry of Agriculture and Rural Affairs, Universities, Turkish Standards Institute (TSE), Chambers of Commerce and Industry, KOSGEB, MÜSİAD and Agriculture and Sales Cooperative Unions. Besides the international memberships like IIR (International Institute of Refrigeration), France; CCFRA – Campden Chorleywood Food Research Association, UK; INC – International Nut Council, Spain; and EAFS – Safeconsortiim, Brussels.

Material Institute Visit

Material Institute runs R&D projects with the aim to develop the Material Science and Technology in Turkey. This institute collaborated with universities, public and private sector enterprises, domestic and abroad research centres.

Main areas of specialisation of the Material Institute are:

- Metallic Materials,
- Advanced Ceramic Technologies,
- Sensor Technologies,
- Other Materials Technologies,
- Covering Technologies,
- Electromagnetic – Electronically Material Technologies.

The structure of Material Institute consists of 3 different main strategic work units (SİB):

1. Metallic Materials, Ceramic Technologies, Sensor Technologies, Electromagnetic – Electronically Material Technologies, Functional Sensor Technologies
2. Aluminium, Foundry, Nanotechnology – Composite and TM – Acoustic Technologies
3. Technological Supports
    - Micro-structural metallographic analysis, characterization and damage analysis,
    - Techniques of Electron Microscope: Micro-structural characterization of materials; Characterization of Nano-structure techniques,
    - X-rays,
    - Mechanical test,
    - Analysis, process and characterization with Laser and optical spectral methods.

Research Institute for Genetic Engineering and Biotechnology Visit

TUBITAK-GMBAE was founded in 1983 as the Department of Biology of the Research Institute for Basic Sciences, Marmara Research Centre of TUBITAK. At the beginning, research activities of the department focused on the transfer of enzyme and hybridoma technologies and investigation of early diagnosis of hereditary diseases at the DNA level. In 1987 the department carried out two important international projects which were supported by NATO Science for Stability and UN Industrial Development Programmes. The progress of these projects contributed to a significant development of the department. New laboratories (i.e. plant biotechnology and transgenic animal laboratories) were established and fermentation facilities were completed.

In 1992 the Biology Department was reorganised as the Research Institute for Genetic Engineering and Biotechnology as a decision of TUBITAK's Science Board. This transformation gave GMBAE a new impetus in its development into an institute in

which research facilities cover most of the areas of the genetic engineering and biotechnology.

TUBITAK-GMBAE's organisational structure is formed by the Management Board, Advisory Board, the Institute's Director, Deputy Directors, Research Units, Technology Transfer Unit, Administrative and Financial Affairs Unit and Support Unit. The Management Board consists of two representatives from TUBITAK, one each representative from academia and industry and the Institute Director. The Advisory Board is composed of maximum 15 members who are selected from academic experts, industrial and public organisations who have broad experience and knowledge of the subject.

The aim of Research Institute for Genetic Engineering and Biotechnology is to play an important role in helping Turkey to reach an effective and leading position at the international level in the field of biotechnology, gene technology and biology and to become a pioneer institution in the development of Turkish biotechnology industry by means of the knowledge and technology creation. TUBITAK-GMBAE carries out research activities in the fields of genetic engineering and biotechnology (specific areas includes plant, animal, medical biotechnology and micro organisms).

The main activity of the institute is to conduct R&D projects in the field of gene technologies and biotechnology. Other activities include the following:

- To publish, patent and commercialise research results,
- To facilitate development of researchers,
- To organize scientific meetings and seminars,
- To develop research and development projects with universities; to provide educational and technical support; to educate students from various universities through internships,
- To assign committees for bioethics and bio-safety regulations within the institute and to administer these regulations in order to contribute to the preparation of legal regulations that will govern bioethics and bio-safety issues countrywide.

Sabancı University

TUSIAD-Sabancı University Competitiveness Forum Visit

TUSIAD-Sabancı University Competitiveness Forum is a research centre formed jointly by the Turkish Industrialists' and Businessmen's Association (TUSIAD) and Sabancı University. It was established in March 2003.

The mission of REF is to help improve the competitiveness of Turkish private sector in international markets by conducting and supporting research on competitiveness, innovation and technology management and benchmarking. General approach to research activities is to conduct studies on competitiveness, international benchmarking and determination of the best practices in accordance with their mission and taking part in these research groups.

Activities of REF: REF groups their activities into three broad categories such as research activities, dissemination of knowledge and collaboration.

Table 4.1 - Structure of Research Activities

Permanent Research	General Purpose Areas	Sector Specific Areas
International Benchmarking Study	National Innovation Initiative (TUSIAD*)	Turkish Food Processing Industry Competitiveness (GıdaSa* and SOFRETU*)
Benchmarking Turkey's Competitiveness in Exports	Innovations in Manufacturing (TÜBİTAK*)	Biotechnology Sector Project**
Innovations in European Manufacturing (with Fraunhofer Institute)	Strategy Development for SMEs in Clusters-SMEexcel (The EU Leonardo da Vinci Programme*)	Nanotechnology Sector Project
Innovations in Manufacturing Industries in Turkey		

* Supporting Institution

** Published

International Benchmarking Study aims to measure Turkey's competitiveness via various macroeconomic and structural indicators with the aim to establish how well Turkey performs in comparison to other countries. By pointing out to the best values achieved in OECD countries, the report indicates target values for Turkey. The countries analyzed in this study are NAFTA countries (United States of America - USA, Canada and Mexico), Japan, South Korea and European Union (EU) which are members of OECD.

Benchmarking Turkey's Competitiveness in Exports

This application aims to provide an investigation of the export competitiveness of the Turkish economy at two-digit Standard International Trade Classification (SITC) product category or at the industry level. During the years 1995-2005 various indices were used to explore the ways how export performance of Turkey compares to those countries that are in the periphery of European Union (Algeria, Egypt, Iran, Israel, Jordan, Morocco, Russia, Syria, Tunisia, Ukraine) to China that emerged in international trade as a strong competitor and to the countries that are on the periphery of Turkey (India, Indonesia, Korea, Malaysia, Thailand); to European Union members with population exceeding 4 million, as well as the candidate states; and to the remaining OECD countries (Australia, Canada, Iceland, Japan, Mexico, New Zealand, Norway, Switzerland, USA). This application also comprises various import indices of the preceding countries for the period of concern.

Innovation Models and Implementations in Manufacturing Industry 2006/07

The general objective of this project is to make research one of the important components which shapes the current and future economic structure, namely, "innovation". This project includes both conceptual and theoretical dimensions of innovation and field studies. This study includes main sectors and industries and covers Marmara region where a high percentage of the industrial added value of

Turkey is generated. This project is covered with innovation of firms and innovation networks. This project is supported by TUBITAK and partners are REF, Sabancı University, Gebze Institute of Technology, Yeditepe University and SEDEFED (Federation of Industrial Associations). This project started on January 1st 2006 and it duration is 24 months.

European Manufacturing Survey 2004

This project is an international project conducted through a consortium comprised of Austria, Croatia, France, Germany, Italy, Slovenia, Switzerland, Turkey (REF) and United Kingdom under the supervision of Fraunhofer Institute for Systems and Innovation Research (ISI). The innovation related data has been gathered in 9 cities from 4 provinces (Istanbul, Kocaeli, Konya and Kayseri) using a face-to-face interviews with 135 firms. It was conducted in parallel with the Innovations in Manufacturing 2004/05 Project. It started in 2006, later on two new countries joined (Netherlands and Greece) and now the project consortia comprises 11 countries and it includes representatives of manufacturing industries. The main objective is to measure the innovation capabilities and the technology readiness of the European manufacturing industry; to monitor technical, organizational and managerial innovations of the European manufacturing industry; to share the findings of the study with the manufacturing sector; to assist in the diffusion process of the new technical, organizational and managerial concepts and developments within the manufacturing sector.

Strategy Development for SME's in Clusters

SMEexcel Project is supported through the Leonardo da Vinci Program of the European Commission. It started in November 2004 and was completed on December 31, 2006. The objective is to develop and diffuse methodologies to help SMEs in their collaborative strategy development. This project includes that develop a methodology for collaborative strategy development and to prepare training programmes in order to provide a base for SMEs in their efforts for collaborative strategy development. The partners are Ireland, Scotland, Poland, Czech Republic and Turkey (REF). The partners from Turkey are TAYSAD (Turkish Automotive Parts and Components Manufacturers' Association) and Farel has joined the project as a trade association and an SME.

National Innovation Initiative (NII)

The objective of this project is to consolidate and promote cooperation among private sector, university and non-governmental organizations to develop and implement innovation policies in Turkey; to contribute to the development of innovation policies in Turkey by promoting the dialog between political authorities and public institutions and extending opinions; and eventually to increase public awareness on innovation. NII has 21 members from universities, private sector companies, chambers and industry specific organisations. Their working group consists of 106 members. The working group has 5 different sob-groups (Turkey in 2023 and Innovation, Financing of Innovation, Human Resources and Skills for Innovation, Environment and Infrastructure, Innovation in Public Sector). Their report published in October of 2006.

The organization has also a bulletin which is an online periodical to which a free subscription is offered on the website. The Bulletin covers studies both from REF and from other centers on competitiveness, productivity, innovation and benchmarking as well as information and announcements on such activities.

Collaborators of REF

- World Economic Forum (WEF)
- As set down in the framework agreement with the World Economic Forum's Global Competitiveness Programme, REF implements Executive Opinion Survey annually in Turkey since 2004.
- Lund University – Division of Innovation - Sweden
- Institute for Knowledge Economy and Enterprise Development (IKED) – Sweden
- Duisburg University – Institute for East Asian Studies - Germany
- Federation of Industrial Associations (SEDEFED) - Turkey

Sabancı University - Computer Vision & Pattern Analysis Laboratory Visit

The partners visited laboratories of Computer Vision & Pattern Analysis and were introduced to the Safe Driving Project which started two years ago. Mr. Hüseyin Abut talked about studies which were conducted in Japan in automotive industry.

ISTANBUL TECHNICAL UNIVERSITY – ARI TEKNOKENT Visit

VESTEK Electronics R&D Corp.

Vestel Group of Companies is one of the main groups of ZORLU Holding. Vestek was founded in September 2005 with the aim to advance research development in consumer electronics. Vestek is located in 4 sites which are ARI Teknokent in Istanbul Technical University, Georgia Tech University in Atlanta, Urla Teknokent in İzmir and Manisa.

The goal of Vestek is to carry out innovative and result oriented research and to carry out research on emerging technologies and trends in conjunction with universities and research centres.

23 Patent applications were made in Europe, States, Japan in the last year including plasma and LCD TV patents, digital picture improvement patents, data managements patents, mobile business patents and video compression patents.

Collaborators of Vestek are:

- Georgia Institute of Technology, Atlanta
- Istanbul Technical University, Istanbul Turkey
- Bogaziçi University, Istanbul Turkey
- Sabancı University, Istanbul Turkey
- Işık University, Istanbul Turkey

- Bilgi University, Istanbul Turkey
- Bahcesehir University, Istanbul Turkey
- Izmir Institute of Technology, Izmir Turkey

Most of the Arıkent 2 Techno-park are occupied by software houses that are working for Vestek.

4.3 Conclusions

It can be concluded that Thrace, Turkey has started investments into the innovation fields. It was good recognise that both the public and private sectors invest in innovation projects. Collaboration which started between the universities and public and/or private organisations has advanced and international collaboration is also developing. The visit concluded that Thrace Turkey is already collaborating with Greece and Bulgaria.

5 Regional Study Visit to Yorkshire and Humberside Region

5.1 Introduction

The second phase of the study visit was conducted in Yorkshire and Humber region from 17th of September to 21st of September 2007. The MIRIAD partners had a change to visit various sites within the region and different organisations to learn about knowledge transfer activities within these organisations. Partners visited the Enterprise Innovation Centre in the Science Park York where a presentation on Science City York Activities was given. Participants had a chance to participate in the discussion on Technology Transfer methodology at University of York. The following day participants visited the research institutes of the University Of Sheffield - North Campus Kroto Research Institute and Bioincubator. This was followed by a visit to Leeds where participants visited the Yorkshire Universities, Yorkshire Forwards and Yorkshire Science and Yorkshire Cities. The presentations were followed by discussions. The project partners also visited Innovation Technology Centre in Rotherham.

AGENDA

Monday 17th of September
Study Visit - York

8.30	Meeting at the train station in Sheffield (**train departure 8.54am** to York – arriving 9.48)
10.30	**Visit to Science Park, York (Bio Centre)**
10.30	Welcome and refreshments
10.45 – 12.00	An overview on activities of Science City York (Paul Taylor) An overview on activities of the Enterprise & Innovation Centre, Science Park (Simon Newton) Questions and discussion on Technology Transfer issues
12.00	Lunch
13.00 – 17.00	Visit to the York Cathedral/Castle Museum or Railway Museum
18.00	Return to Sheffield
20.00	**Dinner - Las Iguanas, West One, Sheffield City Centre**

Tuesday 18th of September

Project Management Meeting (John Carr Library, Mappin Street, University of Sheffield) and Study Visit - Sheffield

9.30 Refreshments

9.45 – 10.30 Management Committee Meeting

- Reporting on project progress

10.30– 11.30 Issues related to the final project report

- Preparing for the audit - University Of Sheffield FP6 Office (Joanne Watson)

11.45 - 14.00 Visit to North Campus - Kroto Research Institute

11.45 Welcome and tour of Kroto Research Institute (George Rees)

12.15 Tour of Business Incubator, Kroto Innovation Centre (Mark Sanderson)

12.45 - 13.45 Lunch and informal discussion.

14.00 - 15.00 Visit to Bioincubator (Mark Tock)

15.00 – 17.00 Project meeting to be continued

20.00 Dinner - Wig & Pen Bar & Restaurant, Campo Lane, City Centre

Wednesday 19th of September
Study Visit - Leeds

9. 00 Meeting at the train station in Sheffield (train 9.21 – arriving to Leeds at 10.02)

10.30 – 12.00 Yorkshire Universities (Michael Noble)

12.30 – 13.00 Welcome and lunch at Yorkshire Forward

13.00 – 14.00 Yorkshire Forward (Jim Farmery) and Yorkshire Science (Trevor Gregory)

14.30 – 15.30 Yorkshire Cities (Matt Brunt)

16.00 - 17.30 Sightseeing in Leeds

20.00 Dinner - Baan Thai Restaurant, Ecclesall Road, Sheffield

Thursday 20th of September

Study Visit to Innovation Technology Centre, Rotherham and Project Meeting (Engineering Faculty Boardroom Mappin Street, University of Sheffield)

9.00 Depart from Sheffield to Rotherham

9.30 - 11.00 Visit to Innovation Technology Centre, Rotherham

9.30 Arrival - tea & coffee

9.45 ITC overview by Melissa Goodrich & tour of ITC facilities

10.15 Visit ITI Energy (renewable energy company for gasifier manufacturing)

10.30 Visit Fripp Design (3D Rapid prototyping company)

10.45 Depart to Sheffield

11.15 – 13.00 Project Committee Meeting

13.00 – 14.00 Lunch

14.00 - 15.30 Project Committee Meeting

- Presentation of the UK Regional R&D Strategy

19.30 Dinner – Pasta Bar Sharow Vale Rd, Sheffield

5.2 Summary of the presentations

Science City York

Agenda for Meeting

- Introductions
- Overview of MIRIAD Programme – Rob Huggins
- Presentation on Science City York Activity –Paul Taylor-Project Director
- Discussion on Technology Transfer methodology at University of York – Joe Ross, Business Development Managers
- Questions
- Lunch

Science City York is a unique partnership between the City of York Council, The University of York, The York Business Community

Economic Drivers – Science City York

- **York economy** – in mid 1990's undergoing significant structural change, faster than UK rate and this continues

- **Traditional sectors:** Confectionery, tourism, service industries, rail and manufacturing

- **Key characteristics**
  - High level of manual and semi skilled opportunities
  - Limited career options
  - High level of casual/part-time career positions
  - Low spend capacity
  - No catalyst to transform economic base

- **Forecast in mid 1990's:** Ongoing annual shortfall of 4500-5000 jobs to meet needs for current and future workforce and the growth of the City.

Development of Science City York Concept

The first step in the mid 90's was to create:

- Origins: Local key players including Smith & Nephew, Nestlé, Central Science Laboratory DEFRA and University - backed by City of York Council.

- Focus: Collaboration in key areas including HR, information resources, research equipment and training – not seen at first to be significant for the wider economy but having scope for exploitation

- Future vision: Brief to Ernst & Young Consultants in 1997 to review future bioscience and wider opportunities for a *'York Science City'*

- Priority: An integral part of York's , North Yorkshire's and the region's Economic Development Strategic Policy

Science City York

- **Vision**
  - Science City York's vision is to create prosperity from knowledge for the City, the region and the nation.
- **Mission**
  - Science City York aims to be recognised internationally as the UK's leading Science City, creating over 15000 new jobs and £1 billion investment in Yorkshire's knowledge base by 2021.

- **Organisation Statement**
  - Science City York nurtures growth through the development of key sectors in bioscience and health, IT & digital and creative technologies, as a leading partnership between the University of York, City of York Council, Industry and Yorkshire Forward, established in 1998.

- **Science City York Background**
  - Launched in 1998 by Lord Sainsbury, the UK government's Science and Industry Minister. Science City York's strategic vision was founded to develop:
    " a leading organisation at the forefront of innovation, creativity and change within a prosperous and thriving economy"

  - Recognised as a successful exemplar for the UK as a collaboration between City of York Council, the University of York and private business

  - In 2005 the UK Government created 5 more Science Cities – Manchester, Newcastle, Birmingham, Bristol and Nottingham to form a National Science cities Development Group.

Science City York

- In York and North Yorkshire over 35,000 people are employed across science and technology-related sectors (10% of labour market)
- There are over 2800 science and technology-related businesses in the York and North Yorkshire Area
- 139 businesses employing approx 6100 people including Environmental Technologies and Healthcare
- 191 businesses employing approx 1900 people
- 236 businesses employing approx 5600 people

Science City York – Activities:

- Cluster Development – networking, steering groups, training programmes, professional and community linkages, organisation of business networking events
- Business Development – nurturing new businesses, preparing plans, identifying finance, signposting to resources (marketing, communications, training, HR) mentoring
- Technology Transfer and Funding – protecting intellectual property, providing access to funds (POCF,TGF), Angel investor networks, licensing or business formation
- Infrastructure Projects- supporting clusters and the development of Science City York in partnership with the Universities and Yorkshire Forward
- Skills Development - working with cluster groups and businesses to develop a 'Skills Pipeline' especially in technical skills
- Public Engagement & Community Science – working with schools and families to promote more knowledge of Science and Technology issues and career options.

Key Objectives

- Expansion of world leading science and knowledge-based clusters
- Accelerating Knowledge Transfer
- Creating the environment for new technology business creation
- Enhancing Business Performance
- Driving Learning & Skills Development
- Promoting Public Engagement of Science
- Building Science City York's international reputation

Science City York: What Has Been Achieved?

- A track record of success in the last 9 years:
    - 87 new technology businesses
    - More than 2800 new jobs
    - 8000 people working in knowledge-based clusters in York with 35000 in York and NY
    - 1 in 10 now employed in SCY clusters
    - Over 500 creative, science and technology firms already based in York
    - Significant investment by the RDA valued at £3 million over 4 years.

York Science Park Assets

- Site: 21 acres - outline planning permission - 260,000 sq ft
- Smith & Nephew - building - 83,000 sq ft; completed Autumn 1992; 200 staff.
- Innovation Centre completed August 1995 - units from 100 sq ft to 3,000 sq ft - fully let on completion. Extension completed Jan 2001

- Terraced units (Genesis) for expansion, inc. by IC tenants
- Biocentre - completed Spring 2002
- IT Centre - completed July 2003
- Biocentre & IT Centre supported financially by RDA
- Further, detached buildings completed and sold
- Final sites and Park completed 2006
- Employment: Estimated ~1500 jobs in steady state on completed development

Future Infrastructure Assets

- Heslington East – major strategic 70 hectare £500m development doubling the current size of the University of York, and its excellence in research, teaching and knowledge transfer
- Vangarde – technology park providing essential grown-on space for young businesses
- York Central – 35 hectares brownfield land for mixed use of which 10 hectares would be zoned for SCY related employment use
- Terry's The Chocolate Works – £26m mixed use redevelopment of 51 acre site with integrated creative and digital business centre
- Northern Way Growth Fund Investment - £2.63m to support the development of SCY's future infrastructure needs
- [British Sugar; Nestlé]

Future Priorities

- International & National: Build on our national 'Science City' status to exploit competitiveness and innovation capabilities, both in trade and investment collaborations.
- Regional: To partner with other Yorkshire Cities to foster collaboration between universities and business in the three clusters and those emerging. Inform the Regional Investment process in innovation and infrastructure strands.
- Local: Implement 4 year £2.3m programme of investment in Science City York
    - Extend level and focus of cluster services into York and North Yorkshire
    - Develop community and skills initiatives to support local workforce
    - Create a further 800 jobs, and 50 new businesses across all SCY clusters up to 2009
    - Build and extend the infrastructure with £2.6 million investment from Yorkshire Forward.
    -

Kroto Innovation Centre

Kroto Innovation Centre has Business Incubator for Technology Start-up companies. At the heart of the campus, in the Nanoscience & Technology is the business incubator designed to support technology-based companies at an early stage.

Located in the same building as the EPSRC National Centre for III-V Semiconductor Technologies, the business incubator available for occupancy in summer 2006 offers:

- Dedicated and open-plan offices
- Dedicated product test laboratories
- Managed clean room facilities
- Business support

Multi disciplinary research offers a number of important benefits.

- Several of the emerging areas of science & technology that offer greatest benefit to industry and society span multiple traditional scientific and engineering disciplines.
- Cross-fertilisation of techniques and concepts between different disciplines allows faster progress and stimulates research breakthroughs.
- Industrial solutions almost invariably require input from multiple disciplines.

The development of North Campus, including the Kroto Research Institute and the Nanoscience and Technology Centre, reflects the University's view of the growing importance of a number of critical multi disciplinary themes and the commitment to provide the infrastructure for such research. The site will provide an environment where, in addition to collaborating on specific projects, researchers from different scientific and engineering disciplines can work alongside one another to facilitate broader interaction.

Departments represented on North Campus include Chemical and Process Engineering, Chemistry, Civil and Structural Engineering, Clinical Dentistry Computer Science, Electronic and Electrical Engineering, Engineering Materials, Mechanical and Aerospace Engineering, Physics and Astronomy and others. This new multi-disciplinary initiative puts Sheffield at the forefront of University practice. Recognising the importance of multi disciplinary research to industrial applications the site will also offer facilities to accommodate hi-tech businesses.

Sorby Nano-Investigation Centre

The Sorby Nano Investigation Centre gives industry access to the benefits of the latest microscopy techniques that are fundamental to any technology development. It offers companies a full range of cost effective micro and nano scale investigation capabilities. These encompass the latest light and electron microscopy instruments capable of analysing the most demanding advanced materials and biological specimens. The Sorby Nano Investigation Centre is housed within the Kroto Research Institute on The University of Sheffield´s multi-disciplinary North Campus. In collaboration with Sheffield Hallam University they are able to capitalise on a full range of world leading research and development expertise.

The Bioincubator

Sheffield has great strength and depth in its bioscience, particularly in genomic medicine, drug discovery, biomaterials, tissue engineering, stem cell biology and environmental biotechnology. These strengths drive an expanding nucleus of bioscience companies ranging from established firms to developing early stage start-ups. This growing and vibrant community is being supported by regional cluster development and priority investment strategies making Sheffield an attractive proposition to companies able to spot the opportunity. The cluster also includes two world class universities, centres for industrial collaboration and bioscience support networks. Together, these partners are encouraging greater innovation, higher productivity, increased inward investment and are supporting growing numbers of spin out companies. Many of the region's most exciting new companies have spun out of the University of Sheffield. A number of government/public laboratories and health authorities within the region also engage in bioscience research.

Bioscience companies locating in Sheffield can access current and emerging technology and innovations by engaging the University of Sheffield, Sheffield Hallam University, and other members of Sheffield´s collaborative bioscience community. Sheffield's central location and excellent transport links enable collaborations with the wider bioscience community.

Yorkshire Universities
Michael Noble Chief Executive Officer

The regional context:

- regionalism – Regional Development Agency (Yorkshire Forward), Regional Assembly, Government Office, National Health Service, etc.
- regional strategies - Advancing Together, Regional Economic Strategy, Spatial Strategy, Innovation Strategy, Housing Strategy, Transport Strategy, etc.
- economic, social and cultural role of HE
- collaborative funding approaches (Yorkshire Forward, ERDF, HE Funding Council, NHS
- local, sub-regional and regional HE partnerships
- pan-regionalism: The Northern Way [Growth Strategy]

Yorkshire Universities:

- originally established in 1993;
- developed over time in line with regional agenda;
- major growth over the last seven years;
- company limited by guarantee and registered charity;
- Twenty-two staff;
- £4M+ annual turnover.

Mission:

" To promote the region's HEIs as providers of world class knowledge and learning opportunities and as major contributors to sustainable regional development and community regeneration"

Members are the VCs/Principals of:

Universities - Bradford, Huddersfield, Hull, Leeds,
Leeds Metropolitan, Open, Sheffield, Sheffield Hallam, York, York St John.

HE Colleges – Leeds Trinity and All Saints, eeds College of Music.

Associate Members are the VC/Principal of:

University of Lincoln,
Northern School of Contemporary Dance

Strategic Themes:

1 Support the contribution of Higher Education to regional development;

2 Promote the role of Higher Education in contributing to social cohesion;

3 Promote the development of a quality Higher Education sector;

4 Provide quality services to the Higher Education Institutions.

Principles for Yorkshire Universities to act:

- Where regional and sub-regional activity can bring
- Where it would be difficult or inefficient for HEIs to act independently;
- Where new initiatives appear to demand a regional response;
- Where best practice may be shared by the HEIs to mutual advantage.

Support the Contribution of HE to regional development:

- Contribution to making of regional policy;
- Importance of economic impact of HE in the region;
- Strategic Alliance with Yorkshire Forward;
- Key focus on Knowledge Transfer;
- Sharing of good practice and information – Meetings of KT Pro-Vice-Chancellors, and of Heads of KT Offices in the HEIs.

Ceri Williams Director of Knowledge Transfer
Yorkshire Universities

Previous Experience

- 5 years leading Science and Innovation at Yorkshire Forward
- Committed to utilising the knowledge economy to effect regional transformation
- Helped develop the Regional Innovation Strategy
- Much experience of the need to engage and mobilise partners in order to implement any regional strategy

Background to the Post

- Created through national Government funds
- Based on the premise that the UK needs to maximise the value from investment in R&D (Warry Report to Government)
- Funds allocated to UK Research Councils and the Regional Development Agencies
- The post created in this region is unique.

The Nature of the Role

- Aligns with the Regional Innovation Strategy
- Business Innovation Culture
- Innovation Environment
- EU and Global partnering to add value
- Research and Technological Demonstration Development

KTD Activities

- Strategic intelligence flow between the UK Research Councils and key partners in the region
- Proactive alignment of regional research priorities with national funding priorities
- Stimulate and mobilise the right academic-academic and academic-business partnerships
- Proactively drive the activities of regional knowledge transfer practitioners
- Showcase and platform examples of effective knowledge transfer.

<u>Regional and National Perspective</u>
7 UK Research Councils

- EPSRC
- BBSRC
- ESRC
- MRC
- NERC
- AHRC

– STFC
- RCUK Coordinating Body

EU and Global Perspective

- Strategic partnerships with those regions we can learn from and share our own knowledge with
- EU Framework programme key to Lisbon agenda and strategic partnering aspiration
- Structures and frameworks in this region now better support pan-EU collaboration
- UK Trade and Investment is keen to see global partnerships forming to drive trade, R&D and knowledge transfer.

Knowledge Transfer Good Practice

- Network of regional KT Champions in the universities
  –How to mobilise?
  –How to embed a culture in universities and in the region where innovation, entrepreneurship and knowledge transfer are valued?

- Connectivity to UK, EU and Global opportunities to share good practice and learn
- Develop the right framework and system to recognise and reward effective KT and innovation in a region
- Develop the right environment to stimulate demand side pull for knowledge and expertise to deliver value in businesses, organisations and individuals.

KNOWLEDGE RICH - THE EXPERT NETWORK
Becky Ascough
KnowledgeRICH Business Development Manager
Yorkshire Universities

What we are

- A business dedicated brokering service for companies requiring University expertise
- A Yorkshire Forward funded project
- Delivered by Yorkshire Universities
- 10 HE Partners

Our aim

'To provide a business friendly front door to the wealth of expertise and facilities commercially available in Yorkshire & Humber's research intensive Universities.'

Our Process

- Initial contact & technical brief
- Universities source expertise & provide proposals
- Client makes informed decision
- KnowledgeRICH facilitates contact with expert

The Benefits - You are eligible

- No eligibility criteria
- Regional SME's
- Large companies
- National & International
- Any sector

Case studies

Types of enquiry:

Technical:
Product development, process improvement, innovation, prototyping

Non-technical:
Marketing, web development, business planning

Case studies

What is in the offer?

- Consultancy
- Design and product development
- Training
- Equipment hire/ rent a lab
- Tap into ground breaking research

Added Value

- Strong partnerships with regional support agencies
- Signpost to funding
- Signpost to technical support e.g MAS
- Signpost to business support e.g Bus. Link & UKTI
- Publicity/Success stories

The Future

- Changing regional landscape and policy drivers – RIS, YU/YF alliance
- Enhanced Business Gateway
- Broader offer eg. High level skills
- HEI Cross referral

Where Next? – some issues:

- Implementation of Regional Innovation Strategy;
- ERDF new Operational Programme - focus on Innovation and Enterprise;
- New regional Business Support Gateway and interface with HE;
- Government Sub-National Review, city regions.

Yorkshire Forward

Regional Innovation Activity to Date

- Supply side Provision
  - Exploiting the science base
- CIC Programme
- Knowledge RICH
- Demand side Provision
  - Targeted business support for innovation
- Manufacturing Advisory Service
- Strategic Cluster Champions

Drivers for Regional Innovation

- European Commission has issued a renewed set of Lisbon priorities:
  - improving the **attractiveness of Member States, regions and cities**;
  - encouraging **innovation, entrepreneurship** and the growth of the **knowledge economy**; and creating **more and better jobs**.

Drivers for Regional Innovation

- Regional Economic Strategy for the Yorkshire and Humber region
  Four main drivers
  - Enterprise
  - Innovation
  - Investment
  - Skills

Drivers for Regional Innovation

- 'Science and Innovation Investment Framework 2006: Next steps' document

stresses the need to react to the increasing threat of global competition for knowledge intensive business activity through five key policy areas, including ***'Maximising the impact of public investment in science on the economy through increasing innovation'***

Drivers for Regional Innovation

- Spend in the universities on R&D is more aligned with the national average Yorkshire & the Humber is ranked highly for university spin-outs and graduate start-ups
- suggests the culture of innovation and enterprise in the region's HE institutions is now starting to be better exploited commercially.

but…

- Business R&D expenditure expressed as a percentage of GVA is the lowest in the UK
    - Businesses in our region are second lowest in the country for levels of both total expenditure and employment in R&D activities

Drivers for Regional Innovation

- Firms in Yorkshire & the Humber report that they expect to invest more in 'Product and Process Innovation'
    - Expected investment levels are also generally higher than the national averages
    - A third of companies in the region regard 'creativity and innovation' as a contributing factor to their business competitiveness

but…

- The region has low levels of companies that are members of 'specialist industrial networks' in order to help them innovate
    - Only 31% belong to such a network, the 8th lowest in the country.

Where do we want to be?

How are we going to do it?

- Innovation needs inspiration, creativity and design to work together.
- Innovation may result in a new product or process, new organisational structure or new marketing method.
- Virtuous circle of investment and value creation – culture of innovation.

The Strategy

Four major themes:

- Innovation culture
- Developing a region- wide Innovation Environment
- Targeted European engagement
- Pan-Northern activity

Growing the region's innovation culture

To create a culture of innovation by:

- Stimulating open innovation
- Develop business/knowledge base collaborations
- Strengthening supply and value chains
- Dedicated team of innovation advisors
- Yorkshire Global Business Network (YGBN)

Developing a region-wide innovation environment

Innovation Hubs

- Concentrations of innovation
- Theme-specific and world class in 'knowledge excellence' and 'business competitiveness'
- Embedded incubation centres
- 'Innovation specialists' part of the infrastructure
- Connected ***innovation satellites*** **–** enhance critical mass of the hubs.
- Targeted European engagement
- European engagement:
- Stimulate key R&D centres to lead European R&D programmes.
- Develop strategic alliances with European partners to learn and share best practice.
- Influence the targeted utilisation of Structural Funds.

Yorkshire's City Regions – innovation capabilities
Presentation to MIRIAD Project

Who we are…

- David Williamson, Knowledge Transfer Director, West Yorkshire Universities
- Matt Brunt, Project Manager, Yorkshire Cities

Aim of Yorkshire Cities
The main aim of 'Yorkshire Cities' is to improve the economic competitiveness of the region through its main urban centres. It will do this through innovative collaboration, targeted research and sharing best practice.

Cities and city regions are key to the innovation process

- Key factors
    - Agglomeration benefits – size, density and proximity; access to markets
    - Concentration of knowledge 'assets'
    - Presence of key sectors and clusters
    - 'Thickness' of labour market
    - Quality of place and attractiveness
- An 'ecology of innovation' (NESTA)

City Regions Innovation Working Group

- To work together to strengthen the combined city region's innovation 'offer'
- To share innovation developments from city regions
- To join up and integrate local, city regional and regional innovation activities
- To develop shared understanding of the evidence for innovation activities and best practice within city regions
- To collaborate on common issues across the city regions

Regional Landscape

- Overarching strategies (RES and RIS)
- Funding – many sources, big requirements…
- E.g. ERDF, YF Single Pot, YFDF, Public partners (Gov't, LA, HE etc), Private sector…

Some City Regional Challenges

- Spatial variations –
  - Differential performance of towns and cities
  - Intelligent competition - assessment of strengths, weaknesses and distinctiveness
  - RIS 'aspatial' at present; and relationship between region, city –region and local not well described by RIS
- Science and technology led – what about the rest?
- Role of place – supporting environment; and developing 'ecology' for innovation

Leeds CR - Priority themes and sectors

- Size means a broad base of sector strengths
  - Healthcare and healthcare technologies
  - Digital & creative industries
  - Others remain important (e.g. FBS, Bioscience, Food and Drink, Chemicals, AEM) therefore:
    - Cross-sector innovation
    - Young people and innovation (Bradford-led)

Sheffield CR - Priority themes and sectors

- Advanced engineering and materials.
  Building on AMP development, improving knowledge transfer and supply chain opportunities from major inward investors
- Digital and creative industries
  e-campus development, the Design Futures CIC
- Healthcare technologies – esp. instruments, devices and precision engineering.
- Strengths but not CR priorities
  Bioscience and Food & Drink

Hull & Humber Ports CR - Priority themes and sectors

- Developing a formal mechanism for innovation Sectors
  Environmental technologies
  Value-added logistics
  Healthcare
- Strengths but not CR-level priorities
  Chemical and Food & Drink

Next Steps

- Focus on 3 key priorities:
  - Young people
  - Growth Sectors – health; and environmental technologies
  - Beyond science… financial and business services; Cultural and Creative Industries; Sport; Logistics; and Public Services

Contact
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Matt Brunt – matthew.brunt@leeds.gov.uk

Innovation Technology Centre on The Advance Manufacturing Park, Rotherham

Vision for the Innovation Technology Centre

- Focus on incubating new technology businesses
- Aim for the Advanced Manufacturing Park to be a high tech hub of the AEM cluster
- Aim to increase the number and quality of spin-outs and start-ups in the Region
- Aim for some highly visible successes

Role of the ITC

- Business incubation for advanced manufacturing companies.
- A conference and meeting centre.
- A centre of activity for the whole of the Park.
- A location for spin-out activity from universities, corporates and organisations on the Park.
- A centre for investment in new materials technology businesses
- A marketing centre for the Park hosting visitors, delegations and events.
- A publicity generator for the whole Park.

- A champion of the concept of the Park and a champion for the success of its own tenants.
- A venue for an annual high profile event

Core Activities

- Innovation Centre Management
  - Manage the centre as a sustainable business
  - Manage the infrastructure and facilities
- Support for start-ups and spin-offs
  - Business support
  - Technical support
- Economic Model, Reporting, Governance

Oxford Innovation

- Oxford Innovation is the UK market leader in management of Innovation Centres
- Oxford Innovation is experienced in starting new ITC's and can rapidly deploy a start-up team
- Oxford Innovation has unrivalled experience in Economic Models for Innovation Centres
- NAMTEC is the UK national centre for metals technology and is locally based
- NPL provides fast track access to DTI research and company support
- The proven partnership can meet the full range of needs of the target organisations

Delivering Best Practice

Oxford Innovation

- Management of 13 Innovation Centres with over 320 companies
- High tech cluster Innovation Centres (BioCity; Silverstone)
- SEEDA Enterprise Hubs
- Investment Networks (£19.5M investment in 90 technology companies in 5 years)
- Technology Commercialisation Platforms

Regional Impact

- Graduation onto the Advanced Manufacturing Park
- Inward Investment
- Development of the AEM cluster
- External skills combined with local knowledge
- Leverage of the partners
  - Oxford Innovation: knowledge; access to finance
  - NAMTEC: National Centre based in South Yorkshire
  - NPL: NMS Research
  - Yorkshire Forward is top priority region for NPL industry support; endorsed by DTI

o

Companies in the itc

- **Life IC**: Clean technology business incubator
- **Comocri**: Design and manufacture of filtration systems
- **Ncapsa**: Software for embedded microprocessors
- **nCode**: Engineering software
- **Aspire Creative**: marketing and design
- **ITI Energy**: Novel gasification technology
- **Manufacturing Advisory Service**
- **Bromley Ice & Snow Sports Technologies**
- **Rolls Royce Pro-laser:** Laser & CNC press brake
- **Arrow Technical:** PCB design & manufacture
- **Materialise:** 3D software & rapid prototyping
- **Pulse Tidal:** wave to electrical power generation
- **Fripp Design:** 3D design & prototyping
- **CenFRA:** Robotics & automation

ITI Energy Limited

An Introduction to the ITI Gasifier, Innovation Technology Centre, Rotherham, South Yorkshire

Introduction
ITI Energy Limited has developed a patented advanced gasifier which combines the benefits of both downdraft and updraft gasification to produce synthetic gas (syngas). A major advantage of the ITI Energy gasifier is the very low level of tar and oil in the syngas which, combined with a highly effective gas clean-up system, means that it can be fed directly into internal combustion gas engines, dual-fuel diesel engines and/or existing boilers using appropriately designed burners.

Feedstock
The plant has been designed to accept feedstock made up of any type of densified combustible solid material, this includes:

- Municipal Solid Waste (MSW) / Refuse Derived Fuel (RDF)
- Wood chips / waste
- Straw
- Petroleum Sludge
- Nut shells
- Sewage sludge
- Olive pips
- Sterilized Clinical Residue
- Leather waste
- Food Waste
- Tyres
- Sugar Cane Bagasse
- Bone meal

- Energy crops
- Oil seed rape husks
- Coal fines
- Packaging Waste
- Chicken Waste

The gasifier's design allows it to operate on feedstock that has been processed into a briquetted or pelletised form. RDF is envisaged as being the primary feedstock due to the large quantities which are available. The resultant syngas is passed through a clean-up system which comprises cyclones for particulate control, a venturi water scrubber to wet and cool the gas and condense out impurities and an electrostatic precipitator to remove fine particulates from the gas stream. On exiting the clean-up system the syngas is of a quality to be utilised in internal combustion engines or boilers.

5.3 Conclusions

The learning platform that emerged form the study visit in Yorkshire and Humberside region was evaluated by the MIRIAD project partners as informative and provided the partners the opportunity to learn about the knowledge transfer initiatives that are conducted by organisations within the Yorkshire and Humber region. The learning that partners underwent will be used by partners when constructing further strategies within the Balkan regions. For example the Turkish partner together with the policy maker were inspired by the UK study visit and stated that the following strategies would be beneficial to build into the regional strategy in Thrace Turkey.

- Regional innovation policies are to be detailed by establishing not only the Helix collaboration but also forming collaboration among universities.

- TUBITAK cannot only define the national policies but should help establishing regional innovation policy maker like Yorkshire Forward.

- The extended policies for technology parks can be applied in Thrace/Turkey to make them more effective.

- Examples of building liaison between the big companies and the spin offs would be also beneficial for the Thrace Turkey region.

- Learning achieved in Yorkshire and Humberside Region will certainly add onto the regional strategies that will be defined for Thrace/Turkey.