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**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

This report constitutes deliverable 3.2 of the MIRIAD project, which consists of reports of the workshops held in each of the four regions. This deliverable follows on from D3.1, which outlined the materials to be presented at these sessions. These reports, therefore, provide confirmation of those who attended the workshops, an outline of the topics raised and discussed by those individuals and a record of the feedback received by all partners in the MIRIAD project.

This deliverable consists of the following:

- Chapter 2 – Yorkshire and the Humber (UK) workshop report.
- Chapter 3 - Central Macedonia and East Macedonia-Thrace (Greece) workshop report.
- Chapter 4 – Thrace (Turkey) workshop report.
- Chapter 5 - South and East Bulgaria (Bulgaria) workshop report.

CHAPTER 2
WORKSHOP REPORT FOR
YORKSHIRE AND HUMBER (UK)

1. Introduction

This chapter represents the results of a number of discussions with a number of regional stakeholders on the findings from work packages 2.1, 2.2 and 2.3 for Yorkshire and the Humber. These discussions were based around presenting an outline of the current state of R&D in the region as well as other indicators such as GDP, education and skills and overall competitiveness. From this, three scenarios were outlined with respect to regional R&D investment; the first presented a scenario which maintains the status quo; the second a 5% increase in R&D expenditure per annum; and the third, a 10% increase in R&D expenditure per annum.

In total, it was possible for five workshops with a range of different stakeholders to be undertaken. It was not planned to undertake such a large number, but the planned dates for the workshops fortunately coincided with a number of regional events that allowed for a workshop platform. This proved to be a successful strategy as it enabled a wide audience to be targeted, including policymakers, the academic community, technology transfer officers, consultants and practitioners. The full list of presentations and participants is outlined in section 2. This chapter represents the minutes of these discussions.

2. List of Presentations and Participants

The workshops consisted of the following:

- Workshop at Yorkshire and Humber Mapping Innovation Meeting (27/09/06 - Leeds)
- Workshop with White Rose Consortium (06/09/2006 - Sheffield)
- Workshop with Yorkshire Universities (14/09/2006 - Leeds)
- Workshop at Regional Studies Association Yorkshire Conference (21/09/2006 – Sheffield)
- Workshop for Knowledge Transfer Managers (12/10/06 – Leeds).

Participants at the workshops consisted of representatives from the following:

Advanced Digital Institute
bmedi@
Bradford Chamber of Commerce
Business Link North Yorkshire
Business Link West Yorkshire
City of York Council
Creative Sheffield

ECSC Ltd
Electronics Yorkshire Ltd
Hull City Council
Innovation Leeds
Innovation Technology Centre, Sheffield
Leeds Metropolitan University
PMGroup Plc
Regional Studies Association
Sheffield City Council
Sheffield Hallam University
Sheffield Hallam University
South Yorkshire Objective 1
SQW Ltd
The Virtual College
University of Bradford
University of Bradford
University of Huddersfield
University of Huddersfield
University of Leeds
University of Sheffield
University of Sheffield
University of York
Velocity Bradford
West Yorkshire Economic Partnership
West Yorkshire Universities
Yorkshire and Humber Key Cities
Yorkshire Forward
Yorkshire Science.

3. Regional R&D – Key recent developments

- **The Regional Innovation Strategy:** Alongside the regional economic strategy, there is also the newly formulated regional innovation strategy.
- **University Necessity:** Universities want to improve relations with business support agencies as it is forms part of their Third Stream Funding for knowledge transfer activities.
- **Positive Outlook:** New regional initiatives are generally positively received although there is still for more to do
- **Sub-Regionality:** There is a need to bring geography/location into regional thinking on innovation – and innovation thinking into the proposed Regional R&D Investment Strategy.
- **Institutional Learning:** There is a need to understand, build on existing experience and thinking, and integrate Yorkshire Forward's sector and cluster and sector-based approaches.
- **Finance Capital:** There may not be sufficient capital and entrepreneurs in the region to capitalize on R&D, and therefore a requirement for further intervention.
- **Network-Based Cluster Building:** Opportunity to amplify network-based activities cluster activities across the region, where a boost in R&D investment could considerably improve performance.
- **University Innovation Strategies:** Two of the key universities, Leeds and York, are in the process of publishing a draft innovation strategy setting out their plans for interaction with SMEs and the internationalisation of their research output.

- **University Foresight Audits:** The results of the Universities Foresight Audit will be published later this year. This report looks at the offering of all universities in the region in terms of knowledge and expertise.
- **National Health Service R&D strategy:** The region's universities are currently considering the opportunities presented by the National Health Service R&D strategy. The universities of Sheffield and Leeds are attached to two of the largest teaching hospitals in Europe and stand to benefit from enhance R&D opportunities.

4. Discussion Minutes

Project Approach

It was noted by many participants across the workshops that the higher education sector is now often seen as the panacea for the lagging economic development and innovation performance of the region. Although universities - should and do play a role in regional economic development - especially knowledge transfer through third stream funding - it was argued that such is the diversity of roles that the higher education has to undertake, , they cannot alone shoulder the burden for transforming the region's innovation capability and knowledge economy.

As part of the approach of exploiting the strengths of the region's universities in a cost effective manner, it was argued that there is significant lack of intelligence of the current and latent levels of 'demand for innovation and R&D' by the business community. This point was acknowledged by the workshop facilitators, who outlined that a key feature of the MIRIAD process is to gain a more detailed understanding of demand side factors relating to R&D.

The use of the triple helix model was queried and whether it is applicable to the Yorkshire and Humber region. It was argued that the model provides a useful conceptualisation of the regional actors within a regional economy and provides a clear analytical framework to analyse all MIRIAD regions.

The choice of regions for the analysis was commented on, specifically the different levels of development within the regions and whether comparison was fair or useful. The facilitators discussed the ways that MIRIAD is focusing on benchmarking and evaluating best practice in terms of stimulating R&D investment and these can be transferable across regions. Also the different levels of development allow for an understanding of R&D in regional economies at different stages of evolution.

R&D and/or Innovation?

A key issue to be raised in the workshops was the focus of MIRIAD specifically on 'R&D investment' rather than 'innovation investment' as whole, as it was felt that the

narrowness of investment in R&D would miss much of the opportunities to invest and exploit in service sector innovation, particularly of an incremental nature. One participant argued that R&D was a different concept to innovation as innovation covers mainly the development side. Therefore the HE sector in the region is providing mainly the research and the firms are not undertaking the development. This point was followed up with a question concerning the extent to which there is a demand for university research from firms. Therefore, while the HE sector is strong in the region it may not be of use to firms in terms of commercialisation.

The facilitators underlined that the focus of MIRIAD is in line with the FP6 Regions of Knowledge 2 call by the European Commission, and that it is far from the intention of the MIRIAD initiative to exclude the type of investment in research required by a number of the service sectors.

Policy Space

Related to the above issue, the matter of regional policy congestion in Yorkshire and the Humber was also discussed. It was noted that there is already a plethora of existing intervention at both the regional and sub-regional level. Alongside the regional economic strategy, there is also the newly formulated regional innovation strategy.

The regional innovation strategy is the output of the recently established Yorkshire Science, under the auspices of Yorkshire Forward. Although currently at the consultation stage, the innovation strategy is set to become the overarching framework for innovation policy in the region.

It was generally considered that the proposed MIRIAD Regional R&D Investment Strategy should be placed as supporting the innovation strategy through its particular emphasis of raising R&D, and R&D investment levels, through its focus of engaging regional SMEs further in knowledge networks and knowledge transfer mechanisms, which is recognised as an area requiring further support in the region.

It was commented that innovation strategy for the region could be more aspirational in setting bolder targets in order to galvanise action. The present targets were regarded as weak.

The Role of Intermediaries

There was a recognition that links between business support agencies and higher education require improvement. Universities want to improve relations with business support agencies as it is forms part of their Third Stream Funding for knowledge transfer activities.

The effectiveness of intermediary organisations is hampered by the fact there are so many within the region. There is also an issue of focus, as local authorities prefer funds to be directed towards infrastructure (i.e. premises) rather than programmes. One participant actually questioned the usefulness of regional intermediaries if there is little contact with firms as it signifies a lack of demand for their services. The facilitators noted that the SME survey will, to an extent, be able to confirm or refute this suggestion.

It was further suggested that the lack of interaction between firms and intermediaries meant that their roles could be consolidated into fewer organisations as there may be too many in the region.

It was debated whether or not firms and intermediary organisations spoke the same language as they have different priorities and are from different backgrounds. This is obviously a barrier to communication and may be a factor in explaining the low levels of interaction. Related to this, the representative also questioned whether all intermediaries have the same agendas, as targets and sources of funding are different for each organisation.

The Role of Universities

Higher education representatives emphasised the importance of knowledge transfer and that a step change in innovation in SMEs can be realised through the successful

transfer of knowledge and by marketing examples of best practise. They also recognised that for many SMEs undertaking training and/or accessing support with universities and colleges is their most valuable form of knowledge transfer and major source of information on new ideas, equipment, products and processes.

There was a generally positive view of the potential impact of initiatives such as KnowledgeRICH which the universities hope will provide SMEs with greater access to expertise and assist in facilitating the spread of best practise. A criticism of the business intermediaries, made by the higher education sector, is that they are often unaware of what is going on within the universities and where the expertise lies. According to university representatives, referrals from business support agencies are minimal, and it hoped that intermediaries will increasingly access KnowledgeRICH. Currently, KnowledgeRICH covers only certain sectors, which are generally linked to the regional clusters, but there have been discussions regarding expanding its remit.

It was highlighted that business support should also be about building people's skills as well as the technology capacity of businesses and the higher education sectors, as 'the engine of the knowledge economy', has a key role to play in providing solutions to skills issues in the region. Through increasing the understanding of the intermediaries (especially Business Link) regarding what higher education can and do deliver, universities also feel that improvements in support for skills building can be made.

Sub-Regional Context

It was considered that across the region there are distinctive strengths, particularly within the major cities. Strong research universities in Leeds and Sheffield, which are in the top 10 for HEFCE funding; although small also in York, which is in the top 20.

There are also complementary strengths in other city-based HEIs, as well as some proven and developing mechanisms to link with business such as the Science City York initiative, economic development in the advanced manufacturing sector in Sheffield, the West Yorkshire Innovation Pathway. The sub-regional aspects of these mechanisms imply need to bring geography/location into regional thinking on

innovation – and innovation thinking into the proposed Regional R&D Investment Strategy as well the regional economic strategy.

There is a need to understand, build on existing experience and thinking, and integrate Yorkshire Forward's sector and cluster and sector-based approaches. However this introduces a tension between locational and sector-based policymaking. While some sectors/clusters e.g. digital, bioscience, map onto Yorkshire and Humber's cities; other do not. Nevertheless, there may be complementary expertise and opportunities, such as environmental technologies.

More work needs to be undertaken to identify specific areas of opportunity for collaboration networks, by drilling down further into clusters, identifying potential demand for new activity, better marketing, and targeting. Also to take further consideration of other potential innovation groupings e.g. financial services, building on and understanding strengths, local networks and capabilities, and future areas of opportunity.

The White Rose consortium raised the issue that there may not be sufficient capital and entrepreneurs in the region to capitalize on R&D. They stated it may be the managerial culture within regional firms which is the factor constraining growth, i.e. it is not the lack of R&D per se but the lack of the people and finance to commercialise it.

Sector/Cluster Issues

Evident areas of opportunity to amplify network-based activities include digital, bioscience (complementary strengths across the region) and health service-related, environmental technologies (Humber applications). There are also other knowledge-based sectors, where a boost in R&D investment could considerably improve performance. A summary of the discussion on these sectors and emerging policy themes is included below:

Chemicals

- Scope for greater cross-sector collaboration to access ‘innovation overlaps’ and creative approaches.
- There is a Current Chemicals Technology mapping exercise may identify key policy priorities
- The Yorkshire Enterprise Fellowship scheme could be rolled out further.
- There is a potential site specific opportunity to develop Syngenta site in Huddersfield for high tech chemicals

Bioscience

- There is already a strong existing support infrastructure in place, particularly the university sector
- Sector networks are in place and intra-regional working is established
- Leeds, Sheffield and York are the key focus for support, but there is possibly a need to extend this in the future if the region is to maximise its potential.
- The gaps in innovation support are not fully clear at this point in time, and therefore the extent to which policy should continue with current strategies or move in additional or new directions.

Healthcare

- The strength of the sector in the region remains rather hidden, and may need to be marketed more to raise its profile and attract more R&D investment.
- There are significant regional links to clinical centres of excellence.
- A need to create more flagship centres for innovation and R&D adoption.
- Many of the policy concerns cut across the sub-sectors, in particular R&D investment is intricately linked to national structures, especially the National Health Service, and there is a need to be strongly linked to national networks.

Advanced Manufacturing

- There is already significant regional intervention within this sector, with a number of established and new initiatives in place.
- The Manufacturing Advisory Service programme provides valuable assistance in lean manufacture and plant layout, and there may be scope to extend to

advanced manufacturing to take advantage of the range of facilities at the Advanced Manufacturing Research Centre.

- There is also considerable activity in this sector by a number of the Centres of Industrial Collaboration. However, there funding for these is relatively short-term, which may impinge on future development.
- The advanced manufacturing sector is one of the most established knowledge-based sectors in the region, and there already known Case examples of innovation and R&D good practice in the region, which could be further disseminated e.g. Gripple.
- One of the key factors holding the development is a reported lack of seed corn funding in the region.
- There is a need to develop concepts to create synergies with the new Regional Innovation Strategy.
- There is a need to extend R&D activities and organisations downstream into design, e.g. through Boeing and Rolls Royce via inward investment.

Environmental Technologies

- Advanced research and innovation is mainly undertaken in a number of small firms within the region, usually related to fuel cells, hydrogen economy, micro CHP, micro wind generation.
- There is the potential for more large-scale activity in more mature areas such as wind, biofuels, clean coal.
- There is growing private sector interest in renewables in the shape of BP investment and Virgin investments, which the region can potentially exploit.
- The region has significant natural geographical advantages around Hull and the Humber for wind, wave, tidal, biomass, and biofuels R&D.
- The Hull strategy report from IBM-PLI targets renewables as a key sector for the future.

Logistics

- The logistics sector is identified as strategic opportunity for Hull and Humberside.

- Existing strengths and expertise in retail distribution, as well as the large freight activity of the ports.
- There are potentially a number of interesting opportunities in advanced logistics and technologies.
- The sector lacks a core R&D support centre, with a lack of formalised intervention.

Food and drink

- R&D opportunities include resource efficiency - improved waste management, energy and water use, packaging.
- Improved automation – robotics – improved cost base and competitiveness, is directly related to R&D capabilities
- Other areas include product formulation design – e.g. improved flavours, replacement materials (e.g. HVOs), consistency of product.
- There is a requirement for ‘scaling up’ and supporting expansion in small and micro-businesses.
- Across the region there is a lack of systematic intelligence relating to the sector, and more research is required.

Digital

- There is growing demand for content for multi-media and interactive media – Propeller TV.
- The sector is innately involved in cross sector R&D working, e.g. Design Futures and packaging for food companies, AICD for logistics or food suppliers.
- Also, business to business networking e.g. Games Republic sharing skills, staff.
- IP exploitation is often in the hands of large companies with more support required for small firms.
- Such support is mainly related to facilitate new product prototyping and testing, along with affordable and flexible premises.

Alongside the discussion of the above key regional knowledge-based sectors, it was also recognised that regional innovation policy in general needs to reach all SMEs across the broad. Also, as well as the focus on higher education, the wider engagement of young people in R&D through schools and the further education system is a vital means of improving the long-term prospects of the region.

5. Concluding Remarks and Next Steps

It is clear from the above that the workshops provided an informed debate within the region regarding the aspirations of MIRIAD and the state of policymaking in the area of R&D and innovation. Furthermore, it helped cement engagement by the MIRIAD team with a wide array of key stakeholders. However, these initial workshops, along with the consultations, are just the starting point. The forthcoming workpackages will create further synergies, which will both inform the MIRIAD process, as well as ensure that the impact of MIRIAD is maximised.

From the workshops it became abundant that a critical actor for the success of MIRIAD will be Yorkshire Forward, the regional development agency. Therefore, it is vital that MIRIAD engages effectively this institution. Fortunately, Yorkshire Forward not only supported the original MIRIAD bid, but has further expressed a strong interest in furthering regional R&D related policy. In particular, their interests consist of the role of the region's universities and its SMEs, which provides a good connection with the objectives of MIRIAD.

Once the SME survey (workpackage 4) and knowledge supply data gathering (workpackage 5) have been completed, the next round of dissemination will be well placed to inform stakeholders of a more accurate picture of regarding many of the issues discussed at the initial workshops and summarised above.

CHAPTER 3
WORKSHOP REPORT FOR CENTRAL
MACEDONIA AND EAST
MACEDONIA-THRACE (GREECE)

1. Introduction

Further to previous consultations with the participants and their organisation, SEERC organised a workshop called “**Greek Regional Workshop on Research & Development: Central Macedonia and East Macedonia-Thrace**”. This workshop focused on the presentation of the preliminary project findings regarding *the performance and future outlook for research and development (R&D) in the regions of Central Macedonia and East Macedonia-Thrace*. Due to the fact that the final purpose of the project is to propose regional investment strategies for R&D with the direct participation of regional stakeholders (policy makers-research performers-businesses), a number of representatives from various regional organisations contributed significantly to the process.

In this workshop the latest available regional data and overview of recent policy issues were presented and delivered to the participants. Further, some of the participants asked for their potential engagement in the forthcoming policy exchange visits (UK, Turkey, and Bulgaria) and participation in the final strategy report writing to the Commission.

The participants to the workshop included policy makers from regional authorities, representatives of higher education institutions and research centres as well as representatives of business associations from the regions of Central Macedonia and East Macedonia-Thrace. The meeting took place on **Thursday 5-10-2006** at the premises of the South-East European Research Centre (SEERC) in Thessaloniki.

MIRIAD

The Greek Regional Workshop:
Central Macedonia and East Macedonia-Thrace

AGENDA

10.00-10.15: Welcoming of participants and Introductions

10.15-10.30: What MIRIAD is about: A Project Summary

10.30-12.00: Presentation of preliminary findings (WP2):

Issues to be discussed:

- R&D Regional Performance Report
- R&D Regional Knowledge Model
- R&D Strategic Scenario Planning

12.00-12.15 Coffee Break

12.15-2.00: Discussion

2.00-2.30: Next Steps: Engaging Policy Makers Participation in:

- Regional Roundtables and Policy Exchange Visits
- Regional Policy Launch and Consultation for Final Reports
- Dissemination amongst Policy Makers and Key Stakeholders

2.30: Lunch-Buffer

2. List of Participants

- **Technological Park – Directorate**
- **SEPVE (Association of ICT companies for Northern Greece)- Directorate**
- **Democretion University-Liaison Office**
- **URENIO- Research team**
- **Region of East Macedonia and Thrace- Directorate**
- **CERTH – Representatives of research centres**
- **KETA-KEMAK (intermediary)- Directorate**
- **I4G Euroconsultants (incubator)- Management**
- **Aristotle University-Research Directorate**
- **KEPE (National Research Centre of Greece) – Competitiveness group**
- **Technological Education Institute of Thessaloniki (TEI)-Liaison Office**

3. Regional R&D – Key recent developments

The major policy issues that were put forward for the initial discussion were the following:

Questionable regional viability for RTD. Address the question of whether the regional breakdown to 13 regions is viable from the point of view of achieving economies of scale/critical-mass for RTD and whether issues should be addressed at cross-regional level. (Join CM with EMTH or all engulfing within Voreia Ellada)

Sectoral allocation of the economy might call for a more focused RTD strategy. The comparative advantage in traditional sectors and the small RTD market might require a policy focus towards agglomeration in selective sectoral synergies rather than attempts to shift the economy towards hi-tech and highly innovative products. An example: agrobiotech-tourism-ecology-life sciences with Thessaloniki at the core (compatibility with Free-Market?, past experience of interventionist policies?)

The role of market forces in driving RTD strategy. An alternative strategy could arise as a result of more horizontal-neutral policies like combining the triple-helix interaction, the play-out of market forces and state-of-the-art scientific practices. Are these strategies incompatible or is it possible to strike a balance?

Regional policy-makers taking the initiative. Upgrading their expertise in devising and implementing policies suited to the region and becoming more independent from national policy making (e.g. phasing-out for CM).

Building efficient institutional links and coordination. Required at both national and regional levels as coordination amongst ministries, private-public sector synergies and regional actors has not in practise been effective despite the presence of institutional forums.

Targeted allocation of financial resources. Maximising impact through strategic focus rather than fragmented use of financial resources based on general criteria, availability of funds or ease of implementation.

Building synergies between research performers and corporations. Break the self-contained nature of private and public sector RTD to achieve cooperative outcomes and economies of scale.

Reforming the Higher Education System. This is the a major weak link in achieving RTD skills and outcomes that link skill development and research content with relevance to the needs of the economy.

Upgrading the level of entrepreneurship. Information, dissemination of technological developments, training in new technologies, improving the business institutional environment.

Cultivating the right culture amongst economic actors. Awareness of globalisation trends, the place of Greece in this process and what is required by economic actors in order to secure long-term competitiveness and boosting their R&D effort in the process.

4. Discussion Minutes

Policy Issues

During the MIRIAD project workshop, a number of issues regarding research and development were revealed. One of the most significant issues that discussed during the round table was the poor policy coordination between the educational institutes and the business world. According to the representative of the region of East Macedonia and Thrace there is the concern that education ‘products’ can not be applied in a real working environment as a consequence of the lack of communication links between Supply and Demand (Universities-Businesses). However, ‘there seems to be a positive sign for the future since in recent years both sides have been more active in seeking contacts with each other. This trend was also reiterated by the expert of KEPE.

In reference to the above, a representative of the Technological Park expressed some concerns regarding effectiveness of policy implementation by the General Secretariat for Research and Technology (GSRT), with focus on dissemination of R&D policy to business. At this point, the representative of SEPVE stated that the General Secretariat for Research and Technology (GSRT) should be using a more friendly terminology-language when contacting the business world that will be ‘less academic and abstract’. There was general consensus that GSRT needs better communication links with the rest of the stakeholders.

The representative of Democretion University noted that the relation between the ‘need-Demand’ and the broader ‘use-value’ of investment project proposals for regional R&D should be reexamined. There is a conflict of interest between ‘Regions’ regarding financial allocation and project sophistication. This needs to be resolved at both national and regional levels

As far as the definition of the ‘Region’ is concerned, the participants argued that the industry is the factor that should define what a ‘Region’ is and this is because when technology is transferred there are no borders. ‘In the world of businesses there are no boarders and national distinctions’ as a representatives of the Technological Park and

CERTH claimed. Greece as a whole faces a problem within the European Union regarding business culture and participation in networks of excellence.

Many participants (SEPVE-KETA-TEI-Aristotle University-KEPE) expressed the 'mentality' problem as an issue that needs to be discussed in the future and has to do with the role and the attitude of all stakeholders (SME's, the Universities, regional and national authorities).

The URENIO representative said that R&D investment is driven by the leaders of a region (large companies mostly) and not by the SME's, because R&D requires a long-term strategy and resources lacking by SMEs. It is a fact that in the Greek business arena has a tendency toward short-term planning. As a result, leaving R&D to the private enterprise to lead will be ineffective because of the limited number of big businesses in the area. Is it possible to create new leaders, and those that exist in which sectors are they concentrated?

The representative of the region of East Macedonia and Thrace argued that businesses need a defined strategy, mission and be committed to their plan which should be a long term vision in order for the businesses to be practically R&D oriented. This will take time and will require patience on behalf of stakeholders.

Further, the participants argued that the Greek Development Law is too insular and under the responsibility of the Greek Ministry of Economy which acts in an ad hoc manner without any cooperation with other key players like the General Secretariat for Research and Technology (GSRT) and other Ministries. As a result spending on R&D as a whole remains limited.

The representative of KEPE stated that in addition to the above limitations, the taxation system in Greece is a major barrier for R&D since it lacks the flexibility to the treatment of R&D investment. The taxation system in conjunction with the huge and the complicated bureaucratic procedures are major barriers and imply a high time-tax. The fact that our regions rely comparatively more if not primarily on incentives for R&D spending these barriers take a disproportionately high toll on the region and play a critical role for the low R&D investment rates.

According to the representative of the region of East Macedonia and Thrace, another issue revealed from the round table was that Greece has a very centralized decision-making structure where most of the important policy matters are governed directly from Athens. The regions of CM and EMTH are very isolated regarding policy making issues.

The representatives of Democretion University, Aristotle University and TEI mentioned the gaps in legislation regarding explicit R&D funding of higher education institutes and the commercialization of their R&D effort. No commercialization plan even at national level. Hence, EU funds (mostly through the FPs) constitute the major outlet for R&D activity which otherwise remains without base planning and strategy. The latter is limited on how to absorb these funds without any further schedule or long-term vision.

Instead of using the term ‘sectoral’, a participant from CERTH suggested the term ‘thematic’ as more appropriate when looking at R&B initiatives. In order to do sectoral or thematic division, we should give priority to the totality of available resources and not to the separation of those resources by sector. The participant talked about the issue of enterprises focusing on “cost reduction strategy” for competitiveness rather than upgrading the quality of human resource capital and following an ‘innovation development strategy’. Hence, the expenditure of investment funds for R&D remains limited in the corporate sector.

As far as other policy issues are concerned, three more issues were put across during the round table. One was stated by the participant from the I4G who asked which is the competitive advantage for someone to invest in R&D in the regions of CM and EMTH? (This question was set to the participants for answering via email.)

Another one suggestion made from the representative of the KETA-KEMAK who claimed that Thessaloniki should act independently from Athens and other Northern Greek regions. He said that ‘when we discuss about North Greece and Greece in general, Thessaloniki should better not to be included in this discussion’. It should strive for an autonomous R&D policy.

Moreover, according to the representative of the KETA-KEMAK, it is very important to promote the effort by establishing a Marketing department since just a website is not enough to do that task. He argued that R&D should be seen as a product for marketing it across and amongst stakeholders. In reality R&D dissemination is very limited in our region.

Generating the ‘critical mass’ for R&D

SEERC’s main proposition that the lack of critical-mass for the sustainable and self-fulfilling development of regional R&D was recognized as the key issue by all participants. The resolution of this issue will automatically resolve many others and especially funding conditions. The issue of funding the research centers is of great importance, “it is a matter of life and death” as the representative of CERTH talked about. The need for the private businesses to fund the research centers should be explicitly recognized since they are the main recipients of research. This should be stated in research programs. Moreover, the representative of the CERTH concluded that the Greek government needs to directly support financially the research centers more concretely.

Taking into account the above policy issues discussed in the round table, according to the representative of the Technological Park the issue of the Triple Helix model seemed to be very positive methodology for addressing the issue.

As far as the ‘critical mass’ is concerned, according to the representative of the SEPVE it should be seen in an international context and Greece/regions should be seen as players in this global field. As an example, Greece and particularly Thessaloniki should play a metropolitan role in the Balkan region by being the accommodation hub to information technology multinational enterprises.

A body must be created linking Academia, Businesses and Public Policy makers in the region. According to the participants, an optimal size for such an organization is 40-50 people. There was no consensus as to whether this should be independent or be

part of the Regional Authority or linked directly to the General Secretariat for R&D in Athens.

The representative of Democretion University noted that businesses do not seem to show enough interest and activity regarding EU subsidizing programs. This confirms that businesses lack clear targets regarding business operations and their funding.

There are no organized links between businesses and universities, regarding steps after the initial contact step. There is no independent intermediation mechanism to fill this gap. All the participants agreed that an authority that would speak the same language with the business and the universities is missing.

The innovation debate

As far as the need to define innovation, some questions were raised from these discussions which are the following?

- How should the initiatives for R&D investments be decided upon?
- How should innovation be measured?
- How should the funds be allocated to achieve the triple-helix synergies e.g. directly to each stakeholder or through specific intermediaries.

According to the representative of CERTH, another issue is the lack of any ‘patent’ reward program to provide incentives in seeking innovation.

Another question raised during the discussion between the participants was the following: ‘Should at regional level, policy makers focus on a sectoral innovation strategy to achieve agglomeration/economies of scale in R&D? Which should be the sectoral priorities, infrastructures and programs related to the R&D investment?’ The proposal of regional sectoral priorities put forward by SEERC was generally accepted although most participants agreed that this was a particularly difficult issue also with respect to the policy mix between sectoral focus and market driven strategies.

As far as the definition of innovation is concerned, the participant from the Democretion University-Liaison Office offered the following categorization:

- a) Service provision from the research center to the private sector termed as ‘innovation contribution’ or ‘means of specialization’ in some particular technologies by diffusing the knowledge, and
- b) Utilising research results for product and service production which normally last approximately 3-5 years in order to become effective.

The precondition for the above is the presence of appropriate infrastructure and capable human resources. At university level this would require targeted and consistent funding of laboratories.

The representative of the URENIO spoke of the need of a balanced approach between ‘innovation’ and ‘small research’ in order to account for the fact that SMEs:

- are thinking of the cost,
- they have not been asked about the usefulness of research projects,
- nobody explained the projects to them coherently
- they don’t have orientation and support, and
- only few go forward towards R&D.

The role of the Research Community

A positive-opportunity issue discussed from the representative of the KETA-KEMAK was the establishment of the International University in Thessaloniki that:

- a) is going to fill the gap of regional brain-drain.
- b) it will attract foreign investment and capable human resources.

In addition to the above, the fact of the liberisation of the private education sector was supported by the participant of the SEPVE as another means of boosting R&D in the region.

All participants where opposed to the establishment of more and new public universities since it leads to the segmentation and it is a mistake to create new institutions in certain areas simply in order to boost a prefectures market size.

An issue discussed by the representative of CERTH was the great number of Greek scientists leaving abroad because Greece doesn't offer reasonable financial and infrastructure incentives to retain them.

In order to overcome this concern and attract Greek scientist from the abroad:

- a) Greek policy makers should aim to attract foreign investments in R&D
- b) Bureaucratic procedures for foreign investment must be reduced.
- c) The salaries of R&D employees need to be increased

As far as the educational system is concerned, the curriculums are not sufficiently business oriented. The education system is too centralized, highly bureaucratic and as a result not flexible enough to adapt to a continuously changing technological and economic environment. The curricula of education establishments should be redesigned to meet the industry demands of the present and future according to the participant of SEPVE

A problem revealed in the Workshop is the limited information that businesses have regarding EU funding programs. This is also due to the fact that universities attempt to have direct-control of the funds instead of adopting the triple-helix approach. According to the representative of the region of East Macedonia and Thrace, businesses are disappointed by the universities regarding their R&D effort and suitability and are less keen in joint R&D efforts.

The participant of the SEPVE argued about the role of the university professors stating that their role should be more limited in favour of a more collective efforts.

5. Concluding remarks and next steps

The next steps regarding the engagement of regional stakeholders in the MIRIAD project were explained in detail and all participants showed interest in participating in the future workshops, exchange visits as well as contributing to the final policy analysis and contribution.

A number of participants showed interest in contributing to the dissemination effort of MIRIAD. In this respect, SEPVE has asked SEERC to repeat the presentation to the workshop in various locations in Northern Greece as part of SEPVE's annual road-show program at Prefecture level. Similarly, the representative of Democretio University has asked for SEERC's presentation to its annual conference on R&D in the region that will involve all regional stakeholders.

Representatives expressed particular interest in being informed about R&D developments in Bulgaria and Turkey and spoke about the importance of the data-information presented to them for the Greek regions and the need for such a task to be undertaken on a regular basis considering the limited availability of regional R&D data and their outdated nature.

The minutes and a questionnaire will be sent to all representatives asking them to provide further clarification of their positions in writing as a prelude to their further involvement with the project.

CHAPTER 4
WORKSHOP REPORT FOR THRACE
(TURKEY)

1. Introduction

Following the initial interviews with the regional stakeholders of innovation and research in Thrace-Turkey, a workshop called “**Managing and Infusing Research Investment And Development in Thrace-Turkey and Istanbul**” was organised by ITICU to bring the representatives of policy makers, research organisations and intermediary business organisations together. This workshop was focused on the *presentation of the preliminary project findings regarding the performance and future outlook for research and development (R&D) in Thrace-Turkey* as well as discussions on collaboration.

Regional organisations showed significant interest and joined the workshop held in ITICU Central Building in Eminönü, Istanbul on Friday, 22-09-2006. The participants included one or more representatives of research organisations, municipalities, industrial and commerce chambers, techno-parks, universities and big industrial organisations.

In this workshop, recently data recently obtained for MIRIAD was presented and proposals discussed. The dialogue on the obstacles of regional innovation and solution is extended by sharing the current national international projects run in the region. The participants talked about a variety of propositions to develop the regional economy based on research and innovations. The information gap on the available resources to carry out the regional projects and the redundancy of the repeated efforts of data collection and SME access were determined. Further steps to allow collaborative actions are suggested as a result of the meeting.

**MIRIAD****Managing and Infusing Research Investment And Development in Thrace-Turkey and Istanbul****WORKSHOP AGENDA****September 22, 2006**

- 13.45 – 14.00* **Opening Speech**– Prof. Dr. N. Şensoy, Vice Rector of ITICU
- 14.00 – 14.30* **MIRIAD Presentation**–Prof. Dr. S.Ercan, Coordinator
- 14.30 – 15.00* **Regional Data on SME-** M. Kaplan, KOSGEB
- 15.00 – 15.45* **Preliminary Findings (WP2)**–İ. Görgün, MIRIAD Researcher
- 15.45 – 16.00* **Coffee Break**
- 16.00 – 16.30* **Regional Competence-** S. Karaata, Sabancı University
- 16.30 – 17.30* **Research and Innovation Issues** – Dr. Gülgün Kayakutlu
- Discussion on :
1. Obstacles of Research and Innovation in the Region
 2. Available Resources and Accessibility
 3. Regional Collaboration: Avoid redundancy
- 17.30 – 18.00* **Next Steps: Participation of Policy Makers**
- Suggestions on :
1. Regional Roundtables
 2. Data Sharing and Support on research
 3. Regional Policy Exchange
- 18.00 –* **Cocktail**

2. List of Participants

- **ARI Techno Park- Istanbul Technical University- Directorate**
- **ÇERKEZKÖY Industrial And Commerce Chamber- President**
- **ÇORLU Municipality- Vice President**
- **ÇORLU Industrial And Commerce Chamber- Public Relations**
- **ECZACIBAŞI HOLDING- Chief of Research**
- **EDIRNE Municipality- EU Relations Group**
- **EDIRNE Industrial And Commerce Chamber-EU Relations and Synergy**
- **KALDER (Quality association)- Vice President**
- **KOSGEB- Çorlu Representative**
- **KOSGEB- Istanbul Business Development Director**
- **KOSGEB- Istanbul University, Technology Development Center Director**
- **KOSGEB – Yıldız Technical University, Technology Development Center Assist. Director**
- **KIRKLARELI Industrial And Commerce Chamber- Chairman**
- **ISTANBUL Textile Exportation Association (ITKIB)- Research Director**
- **SARTEN PACKAGING CORP.- Chairman**
- **SILIVRI Industrialists' and Businessmen's Association- President**
- **TRAKYA UNIVERSITY-Dean of Faculty of Economy**
- **TUBITAK Marmara Research Centre- Business Development**
- **TUBITAK Marmara Research Centre- Expert Researchers**
- **TUSIAD – SABANCI University Competence Forum- Vice President**

3. Regional R&D – Key Recent Developments

The major policy issues that were put forward for the initial discussion were the following:

Recognition of regional competencies for RTD. The problem of information sharing among the research centres and the industry is addressed. The regional knowledge repositories on “who is who” and “industrial success stories” are determined as an absolute need in order to determine future targets of RTD. Current projects in defining the industrial classes and clusters in the region are requested to be transparent.

Regional economy must drive the focused RTD strategy. The national approach of giving priorities to nano-technology and genetics are not necessarily the competitive need of the region. The environmental technologies and international supply chain innovations are suggested to be the leading focus in the region.

The role of market forces in driving RTD strategy. National RTD policies are defined by the government and the big companies. There is a need for the regional companies and universities to work together with the support of intermediary organisations like industrial and commerce chambers in order to develop the regional policies. Policy and resource sharing among the four cities (Edirne, Istanbul, Kırklareli, Tekirdag) is suggested to be the driver of regional policies.

Building efficient institutional links and coordination. Alliances of private-public sectors and the researchers have not yet been successful due to the university policies which need to be changed on the national basis. The regional culture of individualism is also seen to be an obstacle for collaborations, which can only be changed by the education of regional business investors.

Targeted allocation of financial resources. There is a large gap of knowledge about the availability of national and international financial resources that can be used by the industry. Current allocation policies defined by governmental organisations are mainly focused on individual projects rather than regional alliances, which is to be changed. The regional industrial and commercial chambers need support for mass training. The big companies are to be encouraged to support the research for suppliers and business partners, which would increase the resources.

Regional centres of collaboration. There is a need for managing the regional research and innovation activities, which is expected to encourage the synergy creation by alliances of the industry, universities, TUBITAK and KOSGEB. This will also facilitate the information sharing. The regional success stories will also be more effective than national ones.

Reforming the Education System. There is an unavoidable need for educated personnel in the region which can only be provided by the reform in national education system. Technical high-schools, vocational education and the universities are to be redesigned to allow development of research and entrepreneurial skills. The education programs are requested to be redesigned in accordance with the regional requirements.

Increasing the level of entrepreneurship. Industrialists and businessmen in the region need training in entrepreneurship, research, marketing and international vision. Border projects are quite important for the region and global skills are to be developed.

4. Discussion Minutes

Policy Issues

The infrastructure and finance issues were revealed as the major obstacles of the regional research and development. The communication infrastructure was criticised by the business representatives who mentioned the problems of accessing the research and development support that is announced to be increased. The low percentage of Internet facilities in the region diminishes the effectiveness of the public websites prepared by TUBITAK and KOSGEB. TUBITAK suggested setting a regional round table to present all the available national and international subventions for research. The research centres in the region are founded either by universities or by the big industrial companies which are criticised to be inaccessible for the intermediaries and the SMEs. KOSGEB enlightened the attendees about the new research centre participation program, which is appreciated as one of the solutions.

Collaboration among the Universities and the business was brought up as a developing field. Trakya University has presented their alliances in Edirne and Çorlu to develop industry based trainings and redesigning their education programs by feedbacks from the business associations. Istanbul Technical University presented a recent project they developed with Istanbul Industrialists' Association (ISO) to solve some industrial problems by handling the issues raised by the manufacturing companies as diploma projects for engineers. Both representatives of the academic world and the business world agreed that a reform in the education system is urgently required to avoid the individualistic approaches of the academicians and to promote vocational education to respond to the human resources needs of the region.

KOSGEB has presented the collaboration projects they have developed and highlighted the need for education of small business owners by the major manufacturing companies they serve for. This brought up the general request for the

business organisations to invest more for research in the region. TUSIAD-Sabanci University Representative has presented the proposal of National Innovation Initiative (NII) that was expected to be officially announced on October. In this report, the need for business investment in the regional projects was emphasised and moreover, the NII suggests creating pilot regional projects. It was agreed at the round table that the collaboration of the participants can allow realisation of one of the pilot projects in Thrace-Turkey.

The focus of regional research was discussed as one of the major issues since Silivri Municipality brought up the environmental issues caused by the newly developed industrial centres in the region. Other municipalities contributed to the issue by bringing up the need for innovation in ecological technologies. Purification of regional streams is given as an example. Another regional focus is shown as tourism and biological agriculture issues. The request for reviewing the research policies was addressed to the TUBITAK representatives.

The regional culture of individualism was brought up as an important obstacle for alliances in the research projects. Trakya University and KOSGEB have given examples of company based trainings they have realised to encourage the manufacturer-supplier collaborations. The Chamber representatives accentuated the verification of regional competencies as a solution for the mentioned cultural handicap. They have suggested that a regional catalogue based on clusters is to be prepared to include competencies of regional companies as a driver for integrating companies against the global competition. ITKIB representative has explained about the clustering projects run in textile industry which will result as a regional catalogue in 2007. This project is expected as a sample for other industries in the region.

SARTEN manager brought up the energy policies being as one of the obstacles of supplier-manufacturer alliances. He stressed that the high prices of industrial electricity and natural gas receive a considerable part of the investment budget of the big companies. “Is it possible to spare from the energy inputs to invest in suppliers?” was the question. Techno-Park managers invited the big business companies to benefit the advantages given in Techno-parks which are currently not effectively used.

YILDIZ Techno-park Manager argued that the SME's are not showing interest in the techno-parks because of the recent legislation mainly based on long-term business plans. He added that there exists an SME fear for long term plans which is necessary for entrepreneurship. The KALDER representative mentioned that the economic stability has just been initiated in Turkey, hence, the business is in need of consulting from the service companies. He emphasised that the techno-park policies and research initiatives in Turkey are to be based on new indices in the frame of economic conditions.

The participants also discussed the lack of venture capital in Turkey. KOSGEB brought up the problems of SMEs in accessing the financial resources as long as the bank guarantee, real estate or asset guarantees are requested. Kırklareli Chamber representative suggested that guarantees requested by the public authorities contradict with the definition of entrepreneurship and hence the members of the Chamber ask for at least free training in entrepreneurship, international marketing and research management. Eczacıbaşı has pointed out the problem of confidence in Turkey and proposed a regional programme for attracting foreign venture capitalists.

Furthermore, each member of the round table presented the national or international projects they are currently participating. The group was informed about the social health and education projects municipalities are currently executing. Border projects of chambers with the Greek and Bulgarian peers on innovation for trademarks were also recently heard. Technology projects run in TUBITAK Marmara region excited the business representatives.

Regional Collaboration

ITICU's main proposition of Triple Helix was appreciated by all the stake holders. In University-Industry Relations, Trakya University suggested to create the success stories to encourage both the business and the other Universities in the Region. Chambers are invited to play the active intermediary role. Chamber representative claimed that they are ready to play that role if an academic with business language is assigned to be responsible in the University of alliance. TUBITAK Marmara has also showed interest to represent government policy makers. Municipalities asked for

more active role in the economic development of the region through the research projects they can participate. TUBITAK suggested to prepare a solid plan to attract the big companies to support such an alliance. NII promised to take this suggestion to TUSIAD and that one of the sample projects they propose could be developed in Thrace region.

Istanbul University Research Centre proposed to challenge the regional SME by involving them in the international Thrace projects. Kırklareli Chamber proposed Thrace-Turkey to be the leader of industrial research projects that could include Bulgaria and Greece, which are smaller regions geographically and in terms of number of manufacturing companies. KALDER suggested that the region can be handled as an important centre of logistics for the international supply chain and talked about the success of EKOL Logistics as full automatic warehouse centre of textile.

It was agreed that an initiative independent of the Government authorities must be created linking Academia, Businesses and Public Policy makers in the region. According to the participants, an optimal size for such an organization is 20 people. NII is asked to lead for such a body, whereas, TUBITAK is asked to lead to find funds for such a project.

Regional Innovation

The discussion on innovation started with the definition of the word. NII explained that it is taken as anything ‘new’ but it should be accepted as new products and features that can be converted to money. The monetary part of the definition is claimed to be ignored by the scientific research, and hence there is a need to have the agreement on ‘what is innovative’ among the industrialists and the academicians. Kırklareli Chamber representative suggested that there is a need to define “what is innovative” according to the regional needs and priorities and that is to be the product of business-university collaboration in the short term. The effort of Sabancı University on the subject is appreciated but criticised as only in line with big companies.

An important issue that TUBITAK brought up was the lack of knowledge on patents and licences and that there is no fund allocated to process international patents. It was mentioned that there are not enough complementary laws. The new patent law for the pharmaceuticals is explained by Eczacıbaşı as being the first intellectual property law in Turkey and that the industry finds it unsatisfactory since it does not support the national producers. According to the KALDER representative the lack of 'patent reward program' is another important issue.

The fact that research and innovation needs long term investments of 3-5 years is one of the addressed

The need for an innovation centre for the region is addressed by several participants. The centre is defined to have the following features:

- Sample manufacturing research centres (in industries specific to the region);
- Training Centres;
- Technical education at vocational level;
- Housing for the researchers and trainers;
- With short term, medium term and long term plans; and
- Funds must be generated through financial resources of research and business led by the chambers.

The role of the Research Community

All the participant Universities addressed the lack of research rewarding system in Universities. The insufficient number of academics in the state universities does not allow giving more importance to the research projects; whereas, there are only a few foundation universities that give importance to research. Istanbul Technical University suggested that academicians are expected to come up with more business oriented projects to attract both industrialists and international investors.

All of the participants agreed that there is no need for more universities (state or foundation) in the region but there is a need for new policies to make the existing research centres work more effectively. These policies should include increasing the

academic salaries to avoid individual efforts to give consulting; modify the promotion system to involve equal rewards for national and international efforts; bonus system for research projects that are patented; allowance for researchers to share the revenues of innovations.

Trakya University mentioned the problem of attracting the return of Turkish scientists abroad. The Dean expressed the expectations of the foundation universities to be more dynamic in that subject.

The industrialists are challenged by TUBITAK to increase the investment in research in order to balance the university-business inequality. It is suggested that internal research and patent reward programs are to be developed by the manufacturers.

5. Concluding Remarks and next steps

The next steps regarding the engagement of regional stakeholders in the MIRIAD project were explained in detail and all participants showed interest in the future workshops, exchange visits and smaller round-tables. They seemed enthusiastic to contribute to the final policy analysis and conclusion of the project.

A number of participants showed interest in contributing to the dissemination effort of MIRIAD. In this respect, KOSGEB has asked ITICU to repeat the presentation to the workshop in the regional chamber offices where the industrialists should be invited. Regional industrial and commercial chambers invited the MIRIAD team to their premises in order to discuss the solid steps of alliance in dissemination of the knowledge in the region. They promised to help for the SME scorecards. They also asked help of MIRIAD team to prepare the regional competence catalogue as a European Project.

Representatives expressed particular interest in being informed about R&D developments in Bulgaria and Greece and asked for being informed about all the data collected in the project regularly.

The TUBITAK proposal to have a regional informative round table for the research funds is planned to be realised in the short term. The NII representative will take the proposal of pilot innovation centre project in the region to TUSIAD and Sabanci University.

A small evaluation of four questions was filled in by each participant at the end of the meeting. The evaluation showed that the participants are excited about the MIRIAD project and they believe they can be active in further work-packages. The list of participants and the copy of presentation is mailed to each participant as a follow up.

CHAPTER FOUR
WORKSHOP REPORTS FOR SOUTH
AND EAST BULGARIA (BULGARIA)

1. Introduction

Further to previous consultations with the participants and their organizations, UNWE-Sofia organized a workshop called “**Bulgarian Regional Workshop on the Management and Infusing Research & Development: South-East Bulgaria**”. The main goal of the workshop was to provide an interface between the research and policy perspectives of the project, in order to identify key demand and supply-side priorities for future knowledge-based and R&D-focused policies. The workshop focused on the presentation of the preliminary project findings regarding *the performance and future outlook for research and development (R&D) in the region of South-East Bulgaria*. The meeting took place on Wednesday **27-09-2006** at the premises of the University of National and World Economy in Sofia.

Since the key aim of the project is to stimulate policy intervention focused on raising levels of R&D investment in four regions across Europe, including Bulgaria, representatives from various regional organisations (policy makers from national and regional authorities, representatives of higher education institutions and research centres as well as representatives of business associations from the region of South-East Bulgaria) have been invited to take part in the workshop. The full list of participating organisations is provided below but it is worth mentioning here their variety and keen interest in project developments and future outcomes. Some of the participants expressed their willingness to take part in the forthcoming policy exchange visits (UK, Turkey, and Greece) and in the preparation of the regional strategy on Research and Development that is complementary to the existing policy initiatives and activities already being undertaken.

At the workshop the project team presented: i) latest available regional data and overview of recent policy issues in the field of research and development; ii) the regional knowledge model developed during previous working package and iii) three scenarios for the future development of South-East Bulgaria from the perspective of R&D investment strategies. The presentations were followed by a discussion on the key demand and supply-side priorities for future knowledge-based and R&D-focused policies. A summary of suggestions and comments of participants that emerged from the active discussion is presented below.



MIRIAD

The Bulgarian Regional Workshop:
South and East Bulgaria

AGENDA

13.30-13.45: Participants welcoming and introductions

13.45-14.00: Opening words from the local coordinator

14.00-15.45: Workshop I Session

14.00-14.15: The MIRIAD Project Summary

14.15-15.45: The Preliminary Results Presentations

Issues to be discussed:

- R&D Regional Performance Report
- R&D Regional Knowledge Model
- R&D Strategic Scenario Planning

15.45-16.00: Coffee Break

16.00-18.30: Workshop II Session

16.00-18.00: The Results and Next Steps Discussion

18.00-18.30: Engaging Policy Makers Participation in:

- Regional Roundtables and Policy Exchange Visits
- Regional Policy Launch and Consultation for Final Reports
- Dissemination amongst Policy Makers and Key Stakeholders

18.30: Dinner-Bufferet

2. List of Participants

- **Ministry of Economy and Energy (MEE) - Directorate**
- **Ministry of Regional Development and Public Works (MRDPW) - Directorate**
- **Agency for Economic Analyses and Forecasting (AEAF) – Directorate**
- **Municipality of Sofia - Directorate**
- **Municipality of Plovdiv - Directorate**
- **Center for the Study of the Democracy (CSD)**
- **Applied Research and Research and Communication Fund (ARC Fund)**
- **The Bulgarian Small and Medium Enterprises Promotion Agency**
- **Union for Private Economic Enterprises**
- **University of National and World Economy**
- **National Statistical Institute**
- **Bulgarian Academy of Science**

3. Regional R&D – Key recent developments

Having in mind the main workshop goal and the specific features of R&D activities in Bulgaria the following major policy issues were put forward for initial discussion:

1. What regional level is effective in Bulgarian context from the point of view of achieving economies of scale/critical-mass for RTD?
2. What is the scope for improving the competitiveness of SMEs through the development of knowledge transfer and business alliances strategies within supply chains and across industries and markets?
3. What kind of changes have to be introduced on the knowledge supply side in order to overcome the current contradiction between the market-oriented economy and old and still unchanged system of knowledge-creation?
4. How to improve the co-ordination between national and regional R&D policies and institutions that have not been very efficient so far?
5. How to improve targeting of financial resources devoted to R&D and innovations in the view of Bulgarian accession to EU on 1st of January 2007.
6. What forms of knowledge transfer are most suitable to Bulgarian economy having in mind their existing capability of SMEs to absorb particular types of knowledge (cluster transferring, centres for innovations, branch organisations)?
7. The role of State in supporting SMEs in the absorption of innovations and knowledge?
8. Creating conditions for knowledge commercialization and knowledge-based venturing at the universities?
9. Methodological issues of measuring innovations and R&D activities?
10. The role of intermediary organisations in the interaction between knowledge creators and SMEs?

4. Discussion Minutes

Mr. Borisov (Vice Minister of the Ministry of Economy and Energy) took the floor and welcomed all participants. He supported heavily the idea of involving different innovation actors in the region (firms, research organizations and universities and public administration) in finding out what is needed to encourage investment in R&D. Mr. Borisov underlined that innovation is a result of co-operation, interaction and mutual learning between different actors within the region rather than a result of linear process where knowledge producers receive support from the state and local authorities.

Prof. Georgiev (UNWE) noted that the statistical description of the regional situation, presented by the project team is a good initial step and suggested to analyze and structure it further as well as to understand the region's position in the international context. He expressed interest in receiving information for the other 3 regions included in the project and in making comparisons on R&D performance and investment among them. Particular attention was also given to the methodology of benchmarking against other regions applied by the EU countries such as UK and Greece.

The representative of municipality of Plovdiv raised the question about the size of region in terms of achieving economies of scale/critical-mass for RTD. She mentioned that the region as it is defined in the MIRIAD project is too broad and does not correspond to the territorial and administrative division of the country. It is also difficult (if not useless) to compare a region covering with 2/3 of the Bulgarian territory and population and producing 80% of national GDP with the rest of the country. She suggested keeping 4 planning regions division of South-East Bulgaria in further analyses and project activities together with the total region view. It would be especially important and useful to take into consideration the huge disparities in economic development and R&D performance among the 4 planning regions.

The representative of Bulgarian Small and Medium Enterprises Promotion Agency shared his concerns about the lack of understanding and competencies among SMEs

in terms of what innovation is. For example the most frequently indicated barriers to innovations and R&D by SMEs managers are the lack of financial resources and information about the available support. These answers are too easy to be chosen. In order to accurately address firms' real needs it is necessary to go beyond these answers and analyze other non-mentioned but probably more serious obstacles to innovations such as lack of skills and understanding.

Mr. Kerchev - a researcher working on innovation potential of SMES in transition economies extended the issue of innovation culture reminding that three different types of innovation and technology management competencies have to be considered:

- *technological competence*: the ability to choose, adopt and manage specific technologies that are the most relevant to firm's needs;
- *entrepreneurial competence*: the ability to generate and implement R&D and innovation strategies that are indispensable part of the overall business strategy of the firm;
- *learning ability*: the ability to adapt the firm organization and personnel culture to the conditions necessary for accommodating technological changes and innovations.

Mr. Kerchev stated that usually innovation is considered in the narrow sense – solely as an R&D-based one. So the issue of innovation potential of SMEs in the new market-oriented environment has not been closely studied yet in Bulgaria and any new empirical evidence in this field would contribute to shedding more light on the topic and undertaking the relevant policy measures to encourage R&D activities and innovations.

All participants agreed that the 'mentality' and innovation culture problem are issues that need to be discussed further on at joint meetings of all innovation stakeholders in the region (SME's, universities, regional and national authorities, knowledge transfer organizations).

Following on the previous comments on SMEs potential for innovations Mr. Iliev from the CSD shared their experience from developing the first Regional Innovation

Strategy in Bulgaria for the South Central Region. He underlined the crucial role that the demand side analysis had played in the preparation of the strategy. Having in mind the future tasks of the project Mr. Iliev suggested to the team to concentrate on clear understanding of the needs and capacities of regional firms in terms of RTD and innovations support as well as of factors motivating them to be innovative. In his opinion it is also important to get information on the interaction between SMEs and organizations both local and national that carry out the knowledge transfer.

In addition, Mr. Iliev commented several some important methodological issues. For a successful need analysis he underlined the necessity to identify clearly the type of companies to be contacted. He said that in the questionnaire-based survey on demands for innovation support in the South Central region (that was pilot one for Bulgaria) the segmentation approach to the selection of enterprises was applied. Namely, about 400 enterprises were selected from several priority sectors for the region: agriculture, agro-chemistry, tourism, food industry, mechanical engineering, textile, leather and shoe making, perfumery and cosmetics, electronics and electronic engineering.

The second representative of CSD pointed out that statistical classifications of sectors have to be used carefully as they could lead to unintentional assignment of a wrong technological company profile. For example some low-tech sub-sectors can be incorrectly classified as high-tech due to the fact that they belong to the sector that is largely considered as high-tech, such as manufacturing. The CSD expert concluded with the suggestion that in the region as South-East Bulgaria that has highly heterogeneous sector structure to decide well in time whether the demand survey should focus on strategic sectors with in-depth analysis or cover a cross section of all sectors but less detailed-analysis.

Prof. Petrov (ARC fund) attracted participants' attention on the role of large companies (including multinationals locally presented) for the development of national and regional innovations systems. He argued that the current state of national economy constrains the opportunities for R&D and innovation activities of SMEs. In this situation the large companies play the role of local drivers of RTD and innovations. In addition sometimes they function as technology suppliers and play crucial role in promoting innovation among SMEs.

A sectoral expert on RTD in the defence industry pointed out the need for providing more detailed picture and in-depth analysis of innovativeness of specific sectors. Such information is missing for Bulgaria at the current stage. He reminded that the latest report from the European Innovation Survey showed marked differences in innovation styles of different sectors. The high-tech and medium-high tech manufacturing innovate through knowledge creation while service sector and low-tech manufacturing stress knowledge diffusion. Revealing different types of innovators and innovating styles, especially for the sectors defined as economic priorities by Bulgarian government (tourism, energy, agriculture, telecommunications and high-technologies, infrastructure) will allow developing of targeted innovation policies.

All participants agreed that developing sector specific innovation policies should be one of the priorities because this the most effective way for increasing competitiveness of specific sectors of Bulgarian economy. Currently output and employment in Bulgarian manufacturing are dominated by low and medium-tech industries. The competitive advantages of the country based mainly on the low labour costs are not sustainable. Comparative research on Central and Eastern Europe derives the conclusion that Bulgaria and Romania are facing a real danger of falling into technology trap. Under these circumstances Bulgarian economy requires rapid changes and shifts towards innovation-based industries and respective purposeful state policies and measures.

At this point the expert of National Statistical Institute intervened with the remark that currently Bulgaria is taking part in the European Innovation Survey but on a number of indicators, mainly those related to *transmission and application of knowledge* (such as % of all SMEs innovating in-house, % of all SMEs involved in innovation co-operation, innovation expenditure as % of total turnover) and *innovation finance, output and market* (such as share of high-tech venture capital investment, share of “new to market” products in total turnover) data are not provided. This lack of information is planned to be overcome in the near future thus providing a more reliable statistical base for in-depth analysis of innovativeness of specific sectors.

One more suggestion on the methodology of collecting data for demand side analysis was put forward. Namely, an expert from the ACF proposed to use 1-2 focus groups with SMEs managers and intermediary organizations in addition to the planned internet-based e-mail survey among 50 firms. Her suggestion was justified by the previous experience with the pilot survey conducted for the purposes of preparing Regional Investment Strategy for South-Central Bulgarian planning region. “Survey fatigue” may be likely among SMEs, resulting in low response rate and unsatisfactory quality of data collected. The lack of understanding of the firms what “the R&D investment” really means is another potential problem. The use of focus groups involving a relatively small number of firms/organizations allows for a more-discussion-based approach to answering questions and gathering more qualitative data. The latter prove to very useful especially in case of innovations and R&D activities where firms’ needs and opinions hardly can be standardized and codified in closed questions.

Prof. Georgiev (UNWE) expressed his skepticism towards the positive scenarios for regional R&D development presented at the workshop. He suggested elaborating on the assumptions underlying forecasting scenarios about R&D performance. In this line he raised the question about the realism of the National Innovation Strategy targets. In addition Prof. Georgiev pointed out that even if the optimistic scenario came true it is more important to change the organization of national innovation system rather on focusing on simple quantitative targets. He shared his opinion that changing the innovation system organization is necessary or even compulsory condition for achieving the better quantitative results.

The next part of discussion centered on the role of universities and research centers in the knowledge creation and diffusion.

The vice rector of UNWE strongly supported the finding of the project that the old innovation infrastructure has not been reformed to address new and emerging needs of the economy and has remained primarily government financed without private support. As a result currently Bulgaria has a two-tier knowledge and innovation system - old state research institutes and universities on the one hand and numerous newly established private universities, non-governmental institutions and firms on the

other. The universities have been traditionally viewed as a source of human capital, future employees and, secondarily, as a source of knowledge useful to the firm. Demands for research and innovations by private firms are rudimentary and scarce. The more intensive and formal institutional ties between universities and firms are still missing. Real estate development and formation of spin-off firms are still in embryonic phase. The legislation that currently regulates research in the universities does not stimulate if not hindering knowledge commercialization and capitalization.

All representatives of UNWE and Bulgarian Academy of Science expressed their position that changing legal framework is the first step towards commercialization of knowledge in the universities and research centers. At the same time they admitted the fact that the universities and state research institutes of Bulgarian Academy of Sciences have no clear strategies of research commercialization and are lacking significant and relevant expertise in the field.

An issue discussed by the representative of Bulgarian Academy of Science was the large-scale brain-drain that took place in the first years of transition. He mentioned that the brain-drain process is still ongoing although not as intensive as at the beginning of the transition. In order to retain young researchers in the country special policy measures have to be undertaken, including: more financial incentives to stay and work in their home-country, releasing bureaucratic procedures for performing research projects and commercialization of knowledge. Such measures can be interpreted also as steps towards attracting some Bulgarian researchers to return to their home country.

As far as the educational system is concerned, the curriculums are not sufficiently business oriented. The education system is not flexible enough to adapt to a continuously changing technological and economic environment. The curricula of education establishments should be redesigned to meet the industry demands of the present and future according to the participant from Union for Private Economic Enterprises. Resolving this problem needs more intensive interrelations between universities and professional and branch organizations. The representative pointed out that in this respect UNWE is one of the leading positions among other universities.

Mr. Iliev stressed the desperate need for building up capacity of both universities and enterprises to work in the framework of projects because this will eventually result in better allocating and use of national and EU funds devoted to the support of R&D and innovations. Currently it is of primary importance to develop some specialized university courses or even whole master program in the field of Project Management.

While the role of universities in knowledge creation was discussed the issue about the role of intermediary organizations was raised.

Participants agreed that a large number of private non-profit organizations that help in knowledge transfer and absorption have been operating at both national and regional level. Among all actors, i.e. regional development agencies, commercial chambers, regional and branch associations, technology transfer centers, business innovation centers, business incubators and other organizations supporting SMEs have been the most active in the field of knowledge transfer. The common impression is that the intermediary organizations have no clear idea and understanding about their role in transfer of knowledge and innovations to the enterprise sector. If some of them realize this important role, they do not accept the R&D transfer and absorption as one of their priority activities. Intermediary organizations view financial constraints of the SMEs and resulting innovation demand deficiency as the main obstacle to the innovation process.

5. Concluding remarks and next steps

Prof. Stattev – leader of Bulgarian team, acquainted participants with the next steps of the project and shared ideas for engagement of regional stakeholders in the MIRIAD project and future co-operation on similar activities. All participants showed keen interest in participating in the future workshops, exchange visits as well as contributing to the final policy analysis and contribution. A number of participants showed interest in contributing to the dissemination effort of MIRIAD. Participants expressed particular interest in being informed about R&D developments in Greece and Turkey.

Prof. Petrov suggested the MIRIAD team to join the efforts and competencies with the teams working on the preparation of Regional Innovation Strategies in the 5 planning regions in the country.

The minutes and a questionnaire were sent via email to all participants with a request for further extension of their positions in written form and suggestions for further involvement in the project activities.