Final Peer Review Report

ÉSZAK-ALFÖLD (HUNGARY)
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Executive Summary

In the frame of the SMART Europe INTERREG IVC project 13 partners are working together, coming from 11 different European countries, in order to boost innovation-based job creation across Europe.

In the frame of the project, besides different further activities, so called “peer review”-type study visits are organised.

The main objective of these peer reviews is that the host regions organise a special, one-week long “study visit” for a group of 10-15 experts, coming from at least 3 different countries of the project partnership. In the case of the peer review in Észak-Alföld, experts were coming from Spain, Norway, Finland and the UK.

During the peer review the host region tries to introduce its innovation anchor – the sector that they consider is having the most potential for innovation and job creation in their area.

Why is a peer review more than a general study visit?

First, as the peer group is composed of experts that are actually working on the field that is considered to be the innovation anchor of the host region. Secondly, as the work does not start on the first day of the peer review – on the contrary, even earlier. The host region provides general information to the peers prior to the visit, in order to support their preparation. During the peer review peers have the chance to listen to various presentations, make interviews with important local stakeholders as well as participate on different field visits. In the peer review of Észak-Alföld experts had the chance to meet the representatives of the different units of the Észak-Alföld Regional Development Agency, the INNOVA ÉSzak-Alföld Regional Development and Innovation Agency, the Employment Centre of Hanjú-Bihar County, the Municipality of Debrecen, the Association of Industrial and Science Parks, the Foundation for Enterprise Development in Hajdú-Bihar County, the University of Debrecen, the IT Services Hungary company, the Mayor of Túristvándi, and the Airport Debrecen. The host partner tried to prepare a balanced programme – private-public organisations, city-rural area institutions.

At the final day of the peer review peer partners introduced their preliminary recommendations, which served as a basis for the current report.

The most important findings include the followings:

- a detailed and clearly defined strategy for regional innovation is essential – which should include the description of the roles and responsibilities of the various actors
- the development of an innovation eco-system, which supports SMEs is highly desirable
- cooperation amongst the different stakeholders – public administration, education institutions and private companies – should be supported
  high emphasis should be put on language skills and international cooperation
Section 0: Introduction

This Final Report has the main purpose of being used as a roadmap tool by Észak-Alföld host region for implementing the recommendations described in this document based on the findings of the current situation, related to innovation in the region according to feasibility.

The structure of this report is as follows:

1. Summary
2. Introduction: Smart Europe project and Peer Review Methodology
3. Overview: Description of the Region and Peer Review Focus
4. Analysis in-depth of the competences faced:
   - Strategy
   - Education & Human Resources
   - Innovation Environment
   - Partnership
   - Sustainability of Jobs
5. Conclusions

NB about the acronyms used in this document:

(a) Short introduction to the SMART Europe Project

SMART Europe is based on the concept that smart and targeted regional policies and interventions can be designed to boost the employment directly in the regional innovation-based sectors.

With this aim, a consortium of 13 partners, representing 11 EU regions, will exchange policies and instruments for identifying and supporting the main regional economic actors that can generate job opportunities in the innovation based sectors of their economy.

SMART Europe will support decision makers to improve their strategies with the aim of incorporating the creation of employment as an additional key feature of their activities.

(b) Short introduction to the Peer Review methodology

SMART Europe Peer Review Methodology helps regions to improve their policies in boosting employment in the sector of their “innovation anchor”.

The SMART Europe Peer Review Methodology is an adaptation of the peer review methodology of the Assembly of European Regions (AER), developed directly for use during the SMART Europe project, when assessing different regions’ innovation anchors. The methodology standardizes the relevant aspects that need to be measured, in order to enable experts with different backgrounds, to assess the regional situation in an objective way. By this, they will be able to give appropriate recommendations on the field of innovation-based job creation in the host region.

The other important advantage of peer reviews is the selection of experts, who are practitioners in the field of the assessment, which means that the recommendations given by them after the review will be practical and realistic.
Section 1: Overview

(a) Description of the Region

Észak-Alföld Region is often referred to as a gateway of the European Union to the East. A gateway, that opens on the Eastern border of Hungary for the new-joined member states, Romania and Bulgaria, and it also opens roads to Ukraine and Asia. One of the many strengths of the Észak-Alföld Region is its openness attitude. By reason of this cross-border location Észak-Alföld finds the economic, cultural as well as the cross-border co-operation extremely important.

It is important to designate those fields – sectors –, where the region has advantages and by the improvement of which the competitiveness of the region can be strengthened. Furthermore, the development of the region can be accelerated by examining in more detail, existing disadvantages in the specific fields.

The regional characteristics in the Észak-Alföld Region are the following:

1. The spread of innovation-oriented technologies (bio-, nano-, gene- and agro-technology, pharmacy-innovation, information and communication technology). The region has the opportunity and advantages of intensive development of innovation-oriented technologies. The development of these technologies together with the information and communication technology can enable the propelling powers of the economy to evolve.

2. Logistic. Significant transit transport can be observed in the East-West and the North-South direction in the Észak-Alföld Region, as it is situated alongside international main roads and railways. The advantageous position from logistic aspect is further strengthened by its location near borders.

3. Modern manufacturing industry. The region has significant traditions in the field of manufacturing industry in several sectors. In spite of the decline in the ‘90s, the role of manufacturing industry increased again through several important investments in the recent past. Parallel with the logistics – and connected to them –, the following factors can also contribute to the enhancement of competitiveness: further strengthening of manufacturing industry, producing innovative products with higher value added, increasing the capital endowment of SMEs in the region and promoting business relations between the SMEs and the larger companies in the field of manufacturing industry.

4. Tourism built on the natural and cultural resources of the region. The region is rich in curative thermal water that enables products of (thermal) tourism of international importance to be created with developing the existent thermal water bodies and expanding the services built upon it. The sustainable, complex and environmentally friendly development and utilization of the unique natural resources in the region
(Hortobágy, River Tisza and its oxbow lakes, the Lake Tisza), as tourism resources, can strengthen the domestic and international competitiveness of the Észak-Alföld Region, with special attention to competitors from outside the region and abroad.

5. Environmental and cultural values. One of the important strengths of the region is the abundance of treasures of nature and the preserved environmental and cultural values. Different cultural programmes, initiatives showing local characteristics, can be found in numerous micro-regions and settlements of the region. The region has important natural, architectural, folk art and religious culture. Creating the conditions of the infrastructure and improving the marketing of these cultural values is a task of elemental importance.

6. Rural areas. In the region there is a prominent ratio of rural areas having significant intellectual, cultural, built and natural heritage but suffering from significant disadvantages. Complex development of these rural areas connecting strongly to their environment, contributes to the reduction of the spatial disparities in the region and to the improvement of the quality of life for rural dwellers.

According to Eurostat Regional Yearbook 2012, the regional GDP/capita is below 50% of the EU27 average, and the change of GDP/capita between 2000 and 2009 is showing a negative tendency as well. However Észak-Alföld is still a region lagging behind. The employment rate is less than 60%, while unemployment in 2 of the 3 counties composing the region is above 12,5%, and in the third one is still between 10 and 12,5%. Also of significant importance is that long-term unemployment in the region is 30-40%.


(b) Description of Peer Review focus

Why it was chosen, specific questions and expected outputs of the Host Region

Based on the regional Strategy and Action Plan, as well as the Regional Innovation Strategy of Észak-Alföld, there are three key sectors of development – possible “innovation anchors” – identified: health, ICT and food.

Észak-Alföld RDA tries to focus on these sectors when collecting good practices in the frame of the SMART Europe project, as well as when organised the Peer Review.

Regional stakeholders are interested in the opinion of the international peer expert team about the selected sectors, how they see the role of these sectors in the regional economy in terms of innovation based job creation.

An interesting question is whether the peer team can provide some good examples from their regions’ about well performing partnerships, and other initiatives that can be adapted in Észak-Alföld to strengthen the most important sectors and boost the creation of new jobs – as well as the maintenance of the already existing ones while supporting innovation (both technical and “organisational”).
Section 2: Regional Strategy

(a) Key Findings

As an introduction to the peer-review, the peer review team was informed about the Észak-Alföld regional strategies by the Észak-Alföld Regional Development Agency (EARDA). The overall regional strategy could be summarized as follows:

- Development of competitive, market-driven and innovation oriented economy built on the strategic position of the region (“Dynamic region”)
- Development, preservation and sustainable utilization of the region’s natural and environmental systems, and handling the environment as value. (“Eco-region”)
- Providing the opportunity for healthy life and utilizing the relating endogen potential. (“Healthy region”)
- Developing market-led and innovation-oriented agricultural verticum based on the region’s competitive advantages (“Agricultural-region”)
- Decreasing the territorial imbalances in the region, enhancing the social cohesion and widening the employment („Opportunity providing and catching up region”)

Based on Észak-Alföld Regional Operative Programme 2007-2013 (financed through Structural Funds – ERDF and ESF) the following priorities have been set:

1. Economic development
2. Tourism development
3. Urban and rural development
4. Transport development
5. Environmental protection

Also the following areas were put forward: The development of the EA region should be based upon its natural and human resources, referring to:

- The regions agricultural potential, including the farmlands.
- Utilization of R&D results.
- Utilization of industrial parks.
- Development of regional centers as growth centers.
- Modernization of the education and training systems.

Furthermore the following observations were made during the peer-review:

- The Észak-Alföld region is not an official political body within the Hungarian administration system. The EA region is a unit comprising the counties of: Szabolcs-Szatmár-Bereg, Hajdú-Bihar and Jász-Nagykun-Szolnok. Consequently the governing documents and strategies for EARDA are therefore developed on basis of mutual understanding between the involved bodies, but are not officially ratified.
• Hungary has a quite centralized government with most power allocated to the ministries in Budapest as compared to the counties and the municipalities.

Consequently the strategies developed by EARDA and the EA region would require some alignment in order to make sure that these strategies are implemented efficiently in all relevant areas.

From the various presentations made by the different institutions, as well as the interviews made, during the peer-review it became evident that such strategy alignment was not fully carried out. As an example we could refer to the strategies of INNOVA, the Észak-Alföld region innovation agency, which were as follows:

• Setting a framework for
  o Innovation and technology transfer
  o The cooperation of institutions of higher education and regional enterprises.
• Creating adequate economic conditions for innovative enterprises
• Securing the effective distribution of the funds allocated for innovative activities.
• Supporting the transformation of social attitude (towards RDI)

However, INNOVA have not been allocated the resources needed in order to pursue and implement these strategies in real. Hence it was commented that in general the EA region looks upon itself as a region lagging behind in the innovation area.

Also one noted that the University of Debrecen, held as the innovation anchor in the region, in its presentation seemingly did not refer to such a role and any linkages to the EARDA strategies.

From other presentations made, the link towards a joint regional strategy was neither referred to nor put forward as an important factor.

Now, one could not observe any contradictions between the strategies and initiatives pursued by the various agencies and institutions during the peer-review in the Észak-Alföld region. On the other hand the strategies and initiatives by all involved parties could be better synchronized. Having mentioned this, the team recognize that this problem of synchronization do exist in all organizations and all countries.

The Észak-Alföld region has a large SMEs segment, which is an important foundation for economic growth and increased employment. The Regional Innovation Strategy within this sector and in particular the linkage towards the University is also not very clear in the strategy presented to the PRT. Additionally the Regional Strategy related to the traditionally strong agricultural (including food processing) sector neither is very evident in the material introduced to the team.
(b) Recommendations

Experience does show that a well-coordinated and implemented Regional Innovation Strategy in Észak-Alföld could become a forceful tool in achieving various goals. We would therefore like to stress the potential to get better results by using some effort to align and agree on a joint strategy in the Észak-Alföld region. This would create a smart and targeted regional policy in order to boost the employment directly in the innovation based sectors.

As pointed out above, there is obviously a need for alignment of the present strategy. However, the PRT did observe a possibility to boost and support creation of jobs by relying on own natural and human resources - as observed during the visit to Túristvándi.

Consequently one would dare to suggest aligning the various strategies along the following:

- The EA region natural resources especially linked to its strong agriculture sector.
- The EA region human capital especially linked to its strong University and skilled labor force.
- The large numbers of SMEs as history have shown that a well-functioning SMEs sector could cater for a strong competence based innovation potential.

Agreeing on the role of the University of Debrecen as an innovation anchor, one may suggest developing an action plan including the following elements:

1. Developing an understanding of role of the University of Debrecen as a regional innovation anchor among the whole university staff and all faculties, encouraging the academic staff to bridge with regional business community and in particular the innovation oriented SMEs. One might put forward the example of the Norwegian university of science technology, NTNU, for reference. Link: [http://www.ntnu.edu/business](http://www.ntnu.edu/business)

2. Focus on SMEs would also allow building of a business community which would be more able to handle future crisis as it would create a larger diversity. One may also consider connecting the SMEs sector with the larger companies in a mentor arrangement.

3. Through cooperation with the regional business community, encourage more applied research projects including regional partners addressing regional challenges.

4. Increased focus on entrepreneurship by setting up incubators within the University and connecting these to the business world (See section related to Innovative Environment too) Link: [http://www.ntnu.edu/business](http://www.ntnu.edu/business)
5. Ensuring the necessary competence is available in municipalities outside Debrecen through various cooperation arrangements. This will allow competence innovation to take place in areas having some distance to the University.

6. The action plan should preferably also include focus on international cooperation as another fundament for a sustainable innovative environment.

Based on the above it would be evident that a regional coordination would be beneficial. One may agree that a centralized approach would have challenges succeeding. The physical distance to Budapest would in itself be an obstacle. Additionally, a successful implementation of a well-functioning strategy will require a day to day follow up. The implementation of a regional strategy may not necessarily have to go through the present EA region; however it is necessary to choose an administrative approach securing real ownership to the challenges at hand ensuring that all administrative levels have the same goals. This would require a well-organized process involving all stakeholders, ending in a joint strategy to be implemented at all levels.

In a period with uncertainty related to large scale and foreign investments in light of the economic crisis taking place in Europe, it is becoming more and more evident that the focus on increased employment would benefit from being based on the regional strengths. As the region traditionally is well known from its agricultural strongholds, a focus on strategies related to this sector should be included in the overall strategy.

The above priorities indicate less priority on strategies related to development of industrial parks and general infrastructure. This need not to be the case, but again it should be related to how this could help boost the strategies presented above.

Section 3: Education and Human Resources

(a) Key Findings

- The critical importance of education and skills development to job creation and economic growth is clearly recognized by the regional authorities and support agencies. Észak-Alföld has excellent educational assets and other skills development provision from which to build its economic base. The world-renowned University of Debrecen is a particular strength of the region and plays a pivotal role in encouraging inward investment. Several instances of excellent educational and skills development practice were observed relating to, for example:
  - business start-up support
  - courses for existing SMEs
  - linking investment funding to management education
  - developing employer-led curriculum at the University of Debrecen
• However, these good practice examples appeared to be of limited scale, certainly in the context of the scale of the economic issues the region is addressing. Similarly, although there are regular communications between agencies and institutions, the various activities do not appear to be linked through a clear skills strategy for the region. So, whilst having impact in dealing with individual issues, these educational and skills development activities lack synergy and, as such, are not as effective as they could be in developing underlying capabilities within the region that will help to “sell” Észak-Alföld to inward investors and underpin the creation and growth of local businesses.

• There are no quick and easy solutions when addressing regional skills gaps and getting maximum benefit from educational assets in economic regeneration. Rapid improvements can be made but these will be on a relatively small scale as improvements are made in particular companies or individuals start new businesses. The scale of impact of better utilization of educational assets will increase over time.

(b) Recommendations

The following recommendations address five fundamental ways in which the education system can contribute to economic development and jobs growth.

1. Develop employer-led courses to ensure vocational skills are available as required by employers.

   The University of Debrecen presented some excellent practice in respect of one particular employer. However, in regional terms, the number of graduates involved in this programme is very small. Broadening this type of activity would have benefits in terms of attracting potential inward investors but, equally importantly, could help to make local people more employable and more effective in their jobs, both of which will contribute to regional growth.

   Developing a regional skills strategy is an essential component of ensuring that the broad range of regional skills is relevant to employment opportunities. This is not an easy task, especially where significant inward investment is seen as a major component of future economic activity, but having a view of the skills needed for the future economy and identifying skills gaps will result in a framework for working with employers to produce a workforce possessing skills that are in demand.

   An example of large-scale, employer led curriculum development is the introduction of Foundation Degrees in the UK and good lessons can be taken from the process used in these programmes. Foundation Degrees are vocationally based, two year programmes that have curriculum developed jointly between employers and representative bodies of educational institutions. A framework agreement is developed that represents the generic skill needs of a particular industrial sector or
generic skill set. Individual institutions can develop specific courses and submit these for approval as a nationally recognised Foundation Degree. Foundation Degree graduates can progress to honours degree courses in related disciplines. There are 55 accredited Foundation Degrees in the UK including, for example, Architecture, Business and Management, Computing and IT, Engineering Studies, Manufacturing, Horticulture, Retail. Guidance documents relating to the Foundation Degree and how to develop employer engagement with the process can be found at: http://www.heacademy.ac.uk/fdf

Manchester Metropolitan University itself has a revised system which enables significantly faster approval from within the university’s approval body to respond to industry needs. Originally MMU had similar problems, but developed a revised submission framework, which was agreed by university management. The first stage in speeding up the process is to agree with management a revised procedure. In MMU’s case this involves presenting a ‘shell’ module, that is, an outline, rather than the full detail. This has been adopted across the university and enables a faster, more streamlined and generic approach to submission of new provision. More information is available as required.

2. **Expand the training and development of existing business owner/managers** through non-accredited provision to improve survival rates and growth.

Several good practice examples of such training were demonstrated during our visit. The recommendation is to train more owner/managers within a coordinated programme of provision to avoid duplication and unnecessary competition for students.

3. **Utilise academic expertise within the education system more widely to support the growth of existing companies.**

The value of expertise within the education system, particularly the University and Technical Colleges, goes beyond simply teaching students. As well as developing individuals within a business, this expertise can be used in a consulting capacity to work with companies to improve their economic performance.

In the UK, many different mechanisms are being used to transfer knowledge and technology to businesses in pursuit of economic growth. Relatively short-term interventions can be supported through Innovation Vouchers that fund companies to access technical expertise from universities. ERDF funding has been widely used to support existing businesses to improve their leadership capabilities (LEAD), innovation capacity (KAN), and several others.
Other mechanisms are utilised to assist in the transfer of research knowledge to business to help to develop products, processes and business models to stimulate growth. The most well-known and successful programme is the Knowledge Transfer Partnership (KTP). KTP is a partially funded programme that uses academic expertise from universities alongside a full-time graduate working on strategic projects in SMEs and/or large businesses. Programmes can last from 6 months to 3 years. KTP has been in existence for 37 years supporting knowledge and technology transfer and has produced some spectacular successes. It is seen as the “gold-standard” for knowledge exchange in the UK. Generating economic impact from research is also supported by the Research Councils in the UK through the Knowledge Exchange Opportunities Scheme (KEOS) which funds a range of eligible activities to utilise academic research outputs that demonstrate economic or social impact.

Links:

Innovation Vouchers - [http://www.innovateuk.org/content/competition/innovation-vouchers.ashx](http://www.innovateuk.org/content/competition/innovation-vouchers.ashx)

LEAD: - [http://www.mmucfe.co.uk/services/providing/lead/](http://www.mmucfe.co.uk/services/providing/lead/)

KAN: - [http://www.mmucfe.co.uk/services/providing/knowledge-action-network/](http://www.mmucfe.co.uk/services/providing/knowledge-action-network/)


4. **Stimulate the creation of new businesses**

Although support for people wishing to start businesses is available to a limited extent, it is particularly important to stimulate a flow of new start businesses, particularly in growth sectors. Educational programmes can play a very significant role in this process by delivering pre-start training and support that allows potential entrepreneurs to investigate the possibility of starting a business in a non-threatening environment. Pre-start business training can take the form of short courses, mentoring, business games, business plan competitions and on-line resources. Most commonly, a mix of these methods are incorporated in formal programmes. Running this type of programme acts as a filter so that the majority of participants that start a business have a well-planned idea and understand the personal commitment required for success.
UK examples of this type of programme include the Princes Trust (age 18 – 30), Prime (age over 50), and a range of government funded programmes delivered by private training organisations such as Blue Orchid.

In addition, we identified that there could be some potential for the consideration of other types of ERDF grant funding through the large Structural Fund programme that the region has access to including the potential for the creation of grant schemes to fund business support objectives that can lead to more sustainable businesses, a wide range of examples of these can be found in the UK which have been used to both stimulate the creation of but also to grow businesses (eg specific grants for marketing, web design, etc) but also more innovative ways to combine funding streams into ‘single pot’ grant programmes (eg the Key Fund in the Yorkshire regions which is used to stimulate and develop social enterprise).

Links:


Blue Orchid: - [http://www.theblueorchid.co.uk/service/businessstartupsupport](http://www.theblueorchid.co.uk/service/businessstartupsupport)

Key Fund: [http://www.thekeyfund.co.uk/](http://www.thekeyfund.co.uk/)

5. Develop an enterprise education strategy

Enterprise skills are widely accepted as one of the key components in a competitive and innovative economy. Enterprise knowledge and skills can be learnt and effectively used in a wide range of activities and circumstances. Although most enterprise education models are centred on the processes involved in starting a business, the skills developed are equally applicable as an employee in both private and public sector organisations. As such, an effective system of enterprise education could have a huge impact on economic regeneration in Észak-Alföld.

In the UK, enterprise education started in schools and progressed into further and higher education. School-based models focus, in the main, on competitions and games. In further and higher education, comprehensive programmes of enterprise education have developed that include specialist enterprise degrees, compulsory modules in a range of courses at first year undergraduate level, option modules available on all courses. In many universities, a specific ERDF funded programme is available to students that want to develop their own business with several having their own student business incubators.
In the modern economy, the importance of encouraging graduate business start-ups cannot be over exaggerated. In the UK, a national body, the National Council for Enterprise Education (NCEE) has been created to encourage and support graduate enterprise by supporting research, running events, funding competitions and sharing curriculum material. By exposing students to enterprise education from an early age, the likelihood of steady flow of graduate start-ups will be greatly enhanced along with the competitiveness of larger employers.

**Links:**


Enterprise in Schools: -


[http://www.mosaicnetwork.co.uk/en_gb/portal/enterprise-challenge?gclid=CNvQw-j6_rMCFerItAodFggA0Q](http://www.mosaicnetwork.co.uk/en_gb/portal/enterprise-challenge?gclid=CNvQw-j6_rMCFerItAodFggA0Q)

**Section 4: Innovative Environment**

(a) Key Findings

The key findings related to innovation environment may be summarized to seven observations as follows:

- **There is a lot of innovation potential to be unleashed in the region.**
  Firstly, there is tradition for triple-helix (TH) interaction model and also recent TH practices take place (e.g. ICT/German skills training for ICT services,). However, it seems that regional development policies are not fully utilizing this tradition.

  Secondly, strong University and research centres in the region provide noticeable knowledge base for the development in general and emerging clusters support the TH model. However, TH modes in regional strategy as well as commitment of all parties to common strategy should be ensured.

  Thirdly, TH model could be used also to support the internationalization of the region and to attract foreign investments with strategy and more detailed division of labour between the university, public sector actors, RDAs and private firms.
• **Strong and clear vision how to upgrade the regional innovation system and policy**
  to support the sustainable economic development are the key challenges for the region, and for the TH based development.

Despite the generic regional assets that are applicable to different economic conditions (e.g. knowledge production in university and research, network and process to attract foreign investments), and good relations and intermediating services between the university and industry, are (to some extent) available in the region, **but they are not functioning as a system**. Focusing on **development of comprehensive regional innovation system/ecosystem** (instead of too much direct focus on firms) could support the long-term sustainable development. Lack of vision is related to lack of a proper analysis of current situation and long term foresights, which are integral part of the strategic planning.

- As a part of the strong base for innovation based development, **incubators and industrial parks are hosting significant amount of foreign and domestic international firms**.

However, despite the good figures public financial incentives (exemptions) to build industrial parks may bias the competition and enhance building beyond the market demand. While sites for industry are very important, the premises rented out below the market prices in tandem with cheap labor are not likely to promote the **knowledge based development** of the region in the long-run. It should be noticed, that **sustainable competitive edge is not likely to base of cheap premises and labor, but rather high-quality infrastructure for the knowledge economy, like innovative science parks**.

- **Micro firms especially in agro and manufacturing field they are not actively involved to innovation related development activities.**

This is maybe even more relevant focus for public development activities, than nourishing the needs of multinational companies (MNC), especially in case when MNCs mostly utilize the low costs and do not really strengthen the knowledge based economy of the region. Micro firms especially in agriculture could benefit from the links with more advanced firms and university in the region, since they could up-grade the skill levels of the micro-firms by training and creating demand for more innovative food and health products.

- **There is not much mobility from foreign high-tech firms locating in the region to small and medium sized firms of the region.**

In best cases mobility of highly-skilled individuals would move from global MNC, with high technical and internationally oriented business skills, to SMEs rather than to Budapest or to other countries. This would help to up-grade the knowledge base of local SMEs (‘spillovers’). While foreign investments and foreign subsidiaries locating in the region, or subcontractors of global multinational companies (MNC), are highly
valuable asset, it would be worth building up regional capabilities related to less footloose activities as well.

- **Lack of innovation anchors make regional innovation ecosystem vulnerable.**
For example if knowledge bases of key growth industries are not produced in the region, they are not real innovation anchors. Therefore, if region builds on fields like ICT or biotech, there should be related research and higher education in these fields, and they should be related to industries in the region. Since these fields are in focus of the region, there should be also plans to increase the ‘depth’ of the labor markets respectively, i.e. create jobs that require these skills also outside of the few big (foreign) companies that may be rather footloose.

- **International investments related to policy measures were surprisingly few in the regional development policy.**
Development programs seem to focus maybe too strongly on attracting, administrating and distributing of EU money, instead of developing programs that attract private innovation related investments (e.g. from Chinese and European investors) to the region. This is a bit surprising, since the region was selected as award winner by Financial Times Group as ‘The Best European Region in Eastern Europe for FDI Strategy on European Cities & Regions of the Future’ and also local private sector developer has been highly active in this process (Xanga Group) with national investment office. Too much focus on EU programs and funding may bias the focus, that should be on attraction on private sector investments from all over the world and especially linking of the region with relevant high-tech hubs and markets globally (rather than with administrative capital of Brussels).

**(b) Recommendations**

The policy recommendations may be summarized to three main goals: **Orchestrate, unleash and anchor the innovative potential, they have been split in the following groups:**

b.1- Orchestrate the Innovation System.

b.2- Unleash the creativity and Innovativeness of regional people and business.

b.3- Anchor the innovation activities to regional processes.

b.1 ORCHESTRATE THE INNOVATION SYSTEM

1. **Define the regional innovation system and innovation policy.** Focus on regional innovation ecosystem apart from putting effort directly on firms’ development could be more feasible way to for the long term development.
Define the key actors, their roles and mutual relations in the system.
(including public and strong private sector actors)

Based on this knowledge define the gaps in the system, i.e. in elements or relations between the actors, and focus on fixing of these gaps.

2. **Develop a reliable set of indicators and foresight tools** to follow the knowledge based development in the region and to provide well-grounded scenarios for the future trends including economic development, technological trajectories and societal transformations

- The indicators are linked to the status of the innovation ecosystem. For example Tampere (Finland) is shifting from developing clusters into more open innovation system including multidisciplinary innovation platforms as well as user driven and demand driven innovation. Council of Tampere Region activates the adoption of new models of innovation activity, creates European and global innovation policy networks and promotes the role innovation in the regional development and decision making.

- Anticipating future developments and trends has become an important aspect in planning regional development. For example in Tampere region (Finland) an effort has been made to strengthen the co-operation of different actors in foresight and to create a common context for this work. It has been branded “Pilkahdus” (“Glimmer”). Regional foresight also utilizes benchmarking practices with other regions, and currently there is joint project with five neighboring regions to identify, test and distribute successful foresight practices.

- A fairly good example of traditional approach is the description of the indicator system of Rhode Island.

**Links:**

- **Glimmer**, the foresight portal (currently only in Finnish)
  

- **Rhode Island indicator system:**
  
  [http://stac.ri.gov/assets/509/Benchmarking_the_RI_Knowledge_Economy_2012_executive_summary.pdf](http://stac.ri.gov/assets/509/Benchmarking_the_RI_Knowledge_Economy_2012_executive_summary.pdf)

3. **Up-grade the strategic role of incubators and industrial parks** (as providers of innovate business and jobs and as a tools instead a goal) and **clusters in regional innovation system and policy** (as providers of TH links to the region).

- Key focus on those private sector developers who enhance the development significantly, and use of EU money to develop the practices that will soon
become self-sufficient and able to attract private sector investments to the region by themselves.

- An example of the cluster development could be “Manse Games” from Tampere, Finland. Manse Games is a regional support project aiming to speed up the game industry. Tampere is acknowledged in having world class talent in mobile games development and rapidly advancing skills for PC and console development. Currently, over 100 game industry experts of different fields are employed by 25 game companies in Tampere. Manse Games aims to be an active coach for new game start-ups, game companies seeking growth, industry related companies and even individuals who are considering game industry entrepreneurship. Industry specialized know-how, contacts and supported services are offered for the promotion of the growing companies. The goal is to speed up the growth of the game companies in the Tampere region and to bring up new companies by developing the area as a profitable and fertile ground for the growth of game industry.

**Links:**

**Manse Games:** [http://mansegames.fi/](http://mansegames.fi/)

4. **Link the global investment flows to regional innovation system**

   - Utilize the *Financial Times* related reputation and strong private sector developers’ experience in attracting relevant foreign firms and human capital than can be linked with the regional innovation economy

b.2 **UNLEASH THE CREATIVITY AND INNOVATIVENESS OF REGIONAL PEOPLE AND BUSINESS**

5. **Upgrade the industrial parks and incubators to business creating start-up accelerators** and science parks with clearly defined goals (monitoring number of created firms and jobs with continuous sparring).

   - There are several examples how to set-up this kind of process from Finland, New Factory in Tampere region, or Aalto Venture Garage/Start-up Sauna in Helsinki) or to Silicon Valley (Y-Combinator) that all are rather differently organized, but still have a similar goal to nourish the growth of start-ups and young firms.

   For example New Factory in Tampere (Finland) is an innovation and business incubation. It is based on a concept of open, diversified, and communal modes of operation. Practical innovations and pilots generate not only wellbeing and vitality in the present, but business and jobs for the future. The New Factory project platform comprises operations that enhance innovation activities and, moreover, the acceleration of the business those activities create. The objective is to develop real-life products and services through cost-effective means, to improve outdated processes, and to respond agilely
to developments in different industry branches through an open and social approach to innovation.

Links:
New Factory: http://newfactory.fi/

6. Create practices that enable local firms to connect with global economy and create more business and growth opportunities for them.
   - Increase the IT, management and language skills of local SMEs and create intermediary practices between international firms and local small firms as well as university and small firms in the region.
   - University based IT skills/language training for IT services as a success story to be replicated when attracting more foreign firms to the region, but also when upgrading the knowledge base of local firms.

b.3 ANCHOR THE INNOVATION ACTIVITIES TO REGIONAL PROCESSES

7. Strengthen agro related cluster(s) that support also the innovative local initiatives of small firms by advising and training.
   - For example Debrecen Innovative Food Cluster (and "i-shop".) and Debrecen University based food cluster "Pharmapolis" create base for the further involvement of local agro related micro-firms of the region.

8. Increase the research and higher education and TH links on the strategic fields that will be important in the long-term.
   - More linked the ICT and biotech firms in the region are with the university, sub-contractors and other actors in the region, more strongly they are tied to the regional economy

Section 5: Partnership

(a) Key Findings

- Need for more structured communication between EARDA and municipalities

The Észak-Alföld Regional Development Agency has a wide coverage of the territory, nevertheless has been noticed during the interviews conducted during the peer review week a lack of structured relationship between the agency and the municipalities in order to gather useful information from the municipalities to better know their needs through a direct way in a bottom-up approach, besides to provide them lines of grants, or other good practices developed in other part of the region.
It seems that a clear formalized structured or frequency for such meetings and channels does not exist. And somehow the EARDA is perceived as more focused to Brussels than to the proper region reality despite the efforts made.

- **High potential to engage and create new partnership associations among different stakeholders.**

According with the information found out during the peer review week, it seems traditionally there is no strong culture of association in Hungary, when mostly the effectiveness of this joint efforts and works must be profitable especially for the SMEs, which means around 80-90% of the job providers and the basement of the regional economy.

Even though there are really good examples of real useful activities carried out by the Chamber of Commerce in terms of collaboration with some big companies, a matter of fact is there is **not a formalized interrelation among different stakeholders periodically** rather than isolated actions, mostly among those SMEs, that is why this field could be improved in terms of engagement to **create a permanent relationship** for organizing themselves into sector associations, geographical associations in order to build up a competitive region where each sector and/or group has a common voice and a role to play.

An example of that structured way could be as follows:

a) **Within public sector:** among different public bodies at different levels:

   - **regional – regional:** among different agencies for getting potential synergies
   - **regional – local:** for providing support according with needs
   - **local – local:** for sharing experiences, problems, issues, needs

b) **Within private sector:** the big companies have a predominant role in their relationship with the Regional Agencies instead of SMEs when these are the basement of the economy.

c) **Public – Private,** the big companies are taking advantage of the high potential of students, as a good knowledge base, but unfortunately this model is not replicated among SMEs, here the University can play an important role to create and formalized programmes dedicated to SMEs too.

- **Challenge of sectors as anchors in the regional economy as a part of an added value chain.**

Észak-Alföld region has a wide range of sectors to enhance as those related with innovation-oriented technologies as **agro-technology**, **pharmacy-innovation**, **innovation-oriente...**
information and communication technology, besides there is the logistics sector taking advantage of the privileged location of the region, those are certainly potential sectors in which apply pure innovation as a source of effectiveness for all the sectors, a special attention is pointed out to the information and communication sector since it is the base of the new and global economy.

However, beyond those there are other sectors to be fostered mainly in the rural areas from an innovative approach as the tourism or the green economy due to the long added value chain in terms of related activities therefore where a strong partnership is absolutely a requirement for the success of the comprehensive sector.

In the field of Tourism, even though there is a clear vision by the company managing the airport for creating an integrated offer to the markets, based on the potential of the cultural resources in the city and the natural resources in the region, jointly with good infrastructures and the flows generated by the University students and teachers. Nonetheless there is not a clear offer to be perceived as a tourist destination; surely the potential partnership among stakeholders within this sector could make the region more attractive for visitors.

Concerning the Green Economy sector (Renewable Energies and Energy Efficiency), must be consider as a tool for gaining competitiveness in all the other sectors of the economy, apart from the need to locate the suppliers at local level, therefore meaning local jobs. The first steps have been taken at a little scale with accurate examples learnt during site visits like the case of Túristvándi municipality, where apart from the first stage to attract an environmentally friendly visitor profile, the biomass boiler means need of local companies in surrounding as a way to increase the job creation in a border region with high unemployment rates.

(b) Recommendations

1. Boost the partnership among SMEs

As a recommendation for fostering the association a formalized and structured relationship among different companies must be set in order to get synergies as exchange ideas, experiences, and face issues.

The organization could be organized attending to sectors involved or/and geographical coverage, or even according to the level of suppliers inside the added value chain, anyway, those sectors that must be enhance are: agro-technology / logistics / bio-nano technology / communication and information / tourism and green economy. In some cases a big company could works as engine of the whole sector but always taking into account the group perspective.

Certainly the region has a huge potential for taking advantage of its resources, knowledge and skills according with today’s market trends, so it has a high potential
in this field, but the participants in each sector need to act as almost as an unique identity to be represented in whatever negotiation or commercial event but mostly taking advantage of their closer relationship for sharing knowledge and needs, in the end to become stronger. This is very important in the new sectors/anchors detected since the closer relationship should be settled from the very beginning.

A good example of partnership are the Shared Service Centres, in order to share common, purchasing, marketing services used by different companies or sectors, as a way to improve the service, reduce cost and provide a common position known as “one company” towards competence and allowing to the participating companies to focus on its core business rather that complementary activities.

Another example of good practice to be taken as a little example, it is carried out in Avila, Spain, by hundreds of SMEs within a the Chamber of Commerce and the private company association called Confae (Entrepreneurs Association of Avila) which organize promotional and seasonal campaigns, share marketing cost to increase their competitiveness, marketing survey and so on, to avoid losing consumers on their local products-services therefore maintaining or creating new jobs

- **Minor retailers of the city centre “Avila Centro”** (geographical factor) are organized into a partnership association for organizing seasonal campaigns like the winter ice-skating course + free parking hours, outlet campaigns renting in common fair building for this purpose, specific promotions for tourist and signposting system.

- **Restaurant association “Tapas Contest”,** (sector factor) which are organized periodically for “tapas contest” in order to promote their facilities in a contest in which the consumer vote for the best *tapa of the year*. Other campaigns are seasonal one, like the “mushroom gastronomy weekend”, the “winter tapas”, the “restaurant & bars in the street” as a way for getting closer to the visitor, proactive instead of reactive, looking for visitors instead of waiting.

*Link:
CONFAE Avila Entrepreneurs Associations
http://www.confae.org

The **Tourism showed up as a highly potential sector** in a combination between the Culture and Nature, so the recommendation is to **offer to the market innovative integrated tourism packages, linking both rural and urban areas**, Debrecen with good examples of architecture and historical cultural sites and events, as well as the surrounding of Tisza Lake or the horseback riding in the landscape of the plain area and all the activities developed by the Hungarian Equestrian Touristic Association. On the other hand, the Nature in the rural areas, mostly the combination between the important thermal resources (health and adventure baths) and the wonderful
and amazing landscapes the region owns. Furthermore considering the excellent handmade agro-food products to be linked as raw material to the gastronomy.

The offer could be commercialising as a whole package belonging to the sector rather that particular companies through the new technologies, using social media marketing instead of the traditional channels and all the existing knowledge in the information and communication sector and software industry, so once more as a result of a profitable partnership.

An example of partnership good practice in the field of gastronomy could be found at European level thanks to the Slow Food movement, in which the local products produced according with traditions and ecological ways are highly valued. In Avila county has been launched an identity wide range of local products called Avila Auténtica as a way to preserve and promote regional agroindustry applying innovative approach.

Link:
Slow Food movement
http://www.slowfood.com/
Ávila Auténtica
http://www.avilautentica.es/

Even though there are some traditional destinations across Europe, there are still some niches in the market to be taken advantage of, for instance tourism for disabled people, in these terms Avila has a good practice to be taken as a simple reference, since has been awarded with the European Award for Disable friendly City 2011.

Links:
Avila European Accessible City Award

2. Closer bottom-up approach relationship between SMEs associations and the public bodies.

Once established a formalized partnership among SMEs, they will have a common voice for presenting their needs, issues and campaigns for having a permanent representation within the boards jointly with the policy makers to guarantee their representation in the decision process, then be represented in events, get the support for the public bodies as well as belonging to national or European. It must be highlighted that this process must be born within the association deep core, and then it must be submitted to the public bodies or other partnership in order to get a bottom-up approach.
An example are the Integrated Industrial Development Plans where the administration gives the opportunity to the private sector represented by associations to participate in making decisions about some sectors through the correspondent boards, this is a long term relationship with permanent representatives with common interest and vision of the market.

4. Opportunity to promote innovative and green Economy: Rational Use of Energy

Even though several actions have been developed in this field, nevertheless Észak-Alföld region must incorporate as soon as possible to the green economy, which means to promote a culture of CO2 emissions reduction, a Rational Use of Energy in order to gain competitiveness as a result of the cost cut off, then keep and create new jobs, besides for showing to the market the “green label” in their products and services, no matter the sector this is first a requirement, second and added value for customers.

Mostly applying this innovative approach a regional economy could be boosted based on the concept of local energy supply creating local rural jobs associated to the logistics for providing energy in rural areas, like biomass (bearing in mind the whole supply chain), solar thermal as district heating, solar photovoltaic, geothermal, wind power ...etc in the end is a way to foster SMEs based on the green economy concept like consultancy, Energy Services Companies (ESCO’s). This approach is important to take into consideration in the field of Sustainable Tourism in order to attract an eco-visitor profile.

5. In-Out perspective: Dedicate efforts for potential business opportunities abroad for small added value enterprises

Apart from the efforts made to attract foreign investment into the region, another side effort might be carried out, in terms of highlighting the potential for regional companies at international level, mostly focused on European Level. There are well developed companies within the creative sector, which could be promoted outside of the Észak-Alföld region, even out of Hungary, from the perspective from the inside out. Here the recommendation is first to create a specific association in the sector then try to have presence in the international markets.

Section 6: Sustainability of the jobs created by the innovative sectors

(a) Key Findings

We felt that whilst the Structural Fund programme is a valuable tool to stimulate new enterprise and bring economic development gains, it could be used more effectively to ensure that there are sustainable activities beyond the life of any project and the current
programme, so that activity does not end with project funding. Further examination of
the potential for other ways to carry out projects, either through the stimulation of social
top enterprise which could become self sustainable might be of use. Structural Fund
programmes do not last forever and action should be taken to identify where new
innovative means of their use, perhaps mirroring the JEREMIE programme on a smaller
scale, but which can add value by being ‘revolving’ as SMEs pay back into the loan/grant
pot. This is also true of social enterprise stimulation.

It was also felt that a clearer focus could be placed on the unique selling points of the
region, which includes geography and a highly skilled workforce for example, could be
marketed outside the region more. EA must get beyond a being, or being perceived to
be, only a region of low cost production, it has many more assets that could be used to
actively attract, and more importantly, retain multi national companies.

The region needs more monitoring and foresight to be able to be reactive in terms of
creating new jobs and maintaining them.

(b) Recommendations

1. Create an environment where public and private sector players (municipalities,
region, ministries, state, EU, universities and other educational institutions, "invest
in" promoters, companies etc.) are able to organize themselves (according to their
roles and resources) together to get hold of a potential large-scale sudden
structural change (large-scale termination, bankruptcy, etc.).

   - This kind of overall approach could then be repeatable and scalable in any
   similar situation in the future in other sectors as well. Creative regional
   partnership makes it possible to react quickly to emerging situations.
   Operations may include organized meetings between redundant and other
   companies, training and education organized in order to fast renew
   professional skills and knowledge of those made redundant, and activities to
   facilitate new business development, business transfer to next generation,
   attracting incoming investments, etc. It would be very fruitful for the region to
   make a pilot project and try to visualize the whole system around one real or
   potential case.

For example the City of Tampere in Finland has some examples in the past of
reacting to structural changes: the basic metal industry was renewed and
transformed into automotive industry without losing the whole industry of the
region, and also the structural change in the IT sector (mainly reductions in
Nokia) have been utilized without losing the capacity of highly skilled people in
the region. The Triple Helix (public/private/university) in Tampere region has
been able to change the latest structural changes into a positive diversity of regional economics.

2. **Use wider systematic data collection** as base of information, running different surveys and researches which once analyzed can be used to create a model for proactive actions and **monitor which sectors are able to create new jobs** and what kind of jobs these are, as well as which skills are required in these jobs, in order to adapt the educative offer to tendencies in the market.

Identify, coordinate and encourage **collaboration with those emerging sectors according to market trends** based on the experience in other countries and regions and the own observations and feedback based on the previous data collection. Then prepare and adapt the labor force to the requirements to be made in the coming future by the companies leading markets.

3. **Innovative culture of rational use of energy as a gate towards sustainability of jobs in the long term.**

A low emission economy it has both goals: the environmental one, for mitigating the climate change consequences and to **increase the competitiveness of the companies** since the cost will be reduced and directly for the creation of new jobs based on this innovative approach, for instance the sustainable approach to tourism with a “green” label for making this sector attractive for the eco-visitor profile. The technologies to be faced within this sector are: biomass, geothermal, solar thermal and photovoltaic, wind power...etc.

4. **Focus of development activities on local assets:** SMEs and agriculture as anchors of economic activities in which Észak-Alföld region is traditionally strong, so, it might be find out the added value to be incorporated, and get synergies along the manufacturing/services process within the region radio.
Section 7: Conclusions

Észak-Alföld region presents a high potential for developing an economy based on a more clear Regional Innovation Strategy & innovative approach of traditional sectors. This strategy might be aligned with the governing bodies guidelines through the policy makers for an efficiently implementation.

The efforts of the regional policy, apart from the big companies, must be clearly focused on the SMEs taking advantage of some existing good practice like the outsourcing department model carried out between IT companies and the strong University, furthermore, for encouraging a more applied research projects among local firms.

Even though the EA region has excellent educational assets based on a strong University of Debrecen, however do not appear to be linked through a clear skills strategy, and there is still a gap for the creation and growth of local business.

On the other hand, the EA region has the key challenge of upgrading the regional innovation, based on a clear definition of the regional innovation system linked with the innovation policy, mostly considering the high potential unleashed in the triple helix, including traditional sectors like agriculture, natural resources. Moreover, it might me somehow guarantees the transfer of knowledge from the high-tech firms to the SMEs. Besides, it must be enhance the strategic role of incubators and industrial parks.

A stronger partnership must be built up among the entrepreneurs for achieving synergies, having a stronger position and a common voice through the association, once got that, then to structure and formalize a public-private bottom-up approach with the regional agencies and governing bodies for reducing the gap between the needs on the different economical sectors and territory for a more efficient application of European funds through the regional bodies.

Summarizing, Észak-Alföld region must create a clear Regional Innovation Strategy, aligned with the governing bodies, taking advantage of the human resources skills and knowledge within the region, the strong University, upgrading the innovative environment and entrepreneurs incubators and focusing its efforts on the SMEs, creating a partnership atmosphere and structured relationship between those entrepreneur representatives and the regional bodies, for creating the proper conditions in order to achieve the sustainability of jobs based on the challenge of a green economy from the perspective of innovation & innovative approach.