

## Report on the regional potential of Central-Transdanubia

### EMERGING INDUSTRIES

- Active Aging
- Sustainable Development / Green Economy
- Sustainable / Intelligent Mobility

### CROSS-CUTTING ISSUES

- Internationalization
- Technology & Knowledge Transfer
- Gender in Innovation, including diversity aspects

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## 1. Introduction

The Central-Transdanubian Region with its 1 090 346 inhabitants (2011) covers 3 counties of the country (Fejér county, Veszprém county and Komárom-Esztergom county). The number of the inhabitants declined during the last 10 years, however the migration level and the unemployment rate of the region is better than the Hungarian average.

Generally speaking the region's development level is under the EU average but the Central Transdanubian area is the third most developed region in the country after Central Hungary and Western Transdanubia (considering the unemployment, migration rate and the GDP/capita value). The region's GDP/capita rate of 2010 was 13725 EUR/person which was under the country's average (15723 EUR/person).

The employment rate in the industry sector is higher than the EU average and its role is the most important in the region. The importance of the engineering industry must be highlighted in the region. Also worthy to note the role of the metallurgy and metal-working, chemical industry and food industry, ICT, electronic and automotive, logistic. The service/third sector and agriculture have lower importance than the industry at the moment however here can be mentioned the potential of these sectors in the near future (e.g. developing tourism services, innovation on food production and research).

In the Central-Transdanubian Region 25 working clusters can be found at the moment. From these 25 clusters 20 are start-up clusters, 1 developing and 4 has got the 'Accredited Innovation Cluster' title.

Most of the clusters can be counted to the 'green economy group' as their main direction. There are several clusters focusing on the active ageing topic and the smallest part is the sustainable, intelligent mobility.

The region prominently performs in the industrial production and the region's industrial production per capita rate is far beyond the national average. (National average is approx. 8500 EUR/person, the region's value is approx. 15000 EUR/person.) The foreign capital investment's level in the region was also prominently in 2007 mostly on industrial field. 16-17 foreign companies per 10.000 habitants can be calculated in Central-Transdanubia. The number of the

foreign-owned companies in the region was 1722 in 2008 (Hungarian Central Statistical Office, HCSO) with complete or mayor ownership. The total number of corporate bodies in the region can be estimated to 48600 and the number of the individual entrepreneur was close to 100000 (in 2012). Among the SME-s and big companies the process industry, in the micro enterprise sector the trade plays the most important role.

Based on the data of the HCSO the region registered 50,7 patents in 2011 from the region. According to the statistical data from 2010 the region's R&D expenditure on GDP was 0,65 % (country average rate was 1,17 %).

In 2011 the Hungarian Central Statistical Office measured in the region 1,3 % employment rate in the science and technology economic branch which rate is lower than the national average with its 3 %. In the same year the HCSO also noticed 5,8 % employment increase in this field at national level. The current level of the regional employment rate can be explained by the low number of the research institutions financed by public. Between 2009 and 2011 the public resources for R+D stagnated, however in the private sector positive progress can be measured. The most relevant R+D institutions are the universities in the regions like Pannon University (Veszprém), College of Dunaújváros (Dunaújváros), Edutus College (Tatabánya) and MTA ATK (Agricultural Institute, Centre for Agricultural Research, Hungarian Academy of Sciences).

## 2. Emerging Industries

- **Sustainable/intelligent mobility**

According to the economic importance and role in employment, automotive industry is the key sector in the region, although neither the number of cluster initiatives operating in this field nor the development of sustainable / intelligent mobility prove this fact. There are only two operating clusters in automotive sector in the region: Bakony-Balaton Mechatronics and Automotive Cluster and Vértes-Duna Automotive Cluster.

The dominant role of automotive industry is not based on internal resources, mainly favourable geographic location of the region and sufficient number of qualified workers were the crucial factors contributing to the strong presence of foreign companies. Unfortunately, multinational companies do not really carry out R&D activities in the region.

Nevertheless, there have been many public transport development projects implemented in the recent years, supported by EU funds in order to promote the service quality of regional bus and railway transport. The project aiming at improving public transport bus services included activities like renewing supporting buildings, building new bus shelters, improving passenger information system, introducing e-ticketing etc. Large-scale EU-funded railway development between Székesfehérvár (one of the most important city in Central Transdanubia) and Budapest has been recently carried out during which the whole section of railway line was rebuilt and railway stations were also renewed and equipped with a modern passenger information system.

In the next programming period, further large-scale EU-funded developments in the regional public transport system are expected to make public transport facilities more attractive for citizens, and therefore public transport will be able to offer a real alternative to a private car in the future contributing to the environmental sustainability of the region in the long run.

#### Strengths:

- presence of multinational companies and their production capacities in the region
- large-scale export of industrial products

#### Weaknesses:

- lack of domestic R&D activities in production
- deficiencies in tertiary education in the region
- insufficient interregional transport connections

#### Potentials:

- further support of SME's to become suppliers of companies

#### Further development:

- more efficient coordination among stakeholders (on county, regional and national level)
- stronger cooperation between political and economic actors
- abolition of parallelisms
- more efficient source allocation

Good practice:

- several developments on the regions sustainable and intelligent public transport services like E-ticketing, modernized passenger information system, harmonized train and bus services.
  
- **Green economy:**

In the recent years, the majority of clusters has been formed in the field of green economy, which shows clear commitment towards sustainability in the region.

Within green economy, particularly the number of application of renewable energy technologies and related investments has been increasing in the last 10 years and this positive trend is expected to continue. It is also important to mention here that the use of renewable energy is become more favourable to households, which is also promoted by specific supporting mechanisms of the New Széchenyi Plan on national level.

Until 2020, Hungary needs to raise the rate of renewable energy to 14,65% in total domestic energy consumption, therefore green economy may have the best prospects for growth in the region among emerging industries identified by CluStrat. The national report also confirms this fact.

Development activities in the field of energy efficiency and rationalization will be proceed, furthermore agricultural energetics is expectedly to improve the use of bioenergy.

The role of the environmental industry, waste industry (biogas factory, sewage management, etc.) becomes more and more important in the region. In the last few years 323 projects were started and other 120 projects were already implemented with the help of the Environment and Energy Operational Program.

Using environmentally friendly technologies are strongly supported nationwide however the costs of the investments are relatively high. The so called green-employment could help to create new jobs and help the rural areas in different ways to improve.

In the region Pannon University (in Veszprém) has considerable potentials on R&D field focusing on different topics of the green economy like increasing energy efficiency, developing energy control systems, etc .

Significant development and innovation potentials are concentrated in agricultural R&D institutes of the region like Agricultural Institute - Centre for Agricultural Research, Hungarian Academy of Sciences in Martonvásár. The most important research aims and projects of the institute include the following activities: plant genetics, plant cell and reproduction biology, cereal gene bank, plant stress resistance etc. Bábolna TETRA LTD., a privately owned poultry breeding company conducts genetic research in the field of animal breeding.

#### Strengths:

- increasing number of developments on the green energy resources
- importance of the these investments are well recognized and supported

#### Weaknesses:

- low rate of the private capital, relative high level of investment costs

#### Potentials:

- need and obligation increasing the level of green energy rate according to the EU regulation
- further investments will be implemented in the next years nationwide

- **Active ageing:**

Ageing of population is an issue in Central Transdanubia, such as it is throughout Hungary and Europe. This negative trend, however, could mean a business opportunity for creating products and services which are created particularly for the elderly generation in order to increase their active living. In terms of tourism, the health tourism does not play a key role in the region compared to other parts of the country, but richness of natural and cultural assets of the area represent real benefits. Particularly, slow-tourism and (active recreation) products are what the region can offer to its guests.

As active ageing related activities, development and production of functional and health protecting foods (e.g. grape seed grist as dietary supplement) are also present in the region.

#### Strengths:

- increasing demand for healthy food
- operation of home help and care services

Weaknesses:

- small circle of clients who could actually afford such services, devices

Potentials:

- extending the services for the senior habitants of the region
- offering specialized tourism packages for the senior target group

Good practice:

- the country's biggest cardiac rehabilitation center is located in the region in Balatonfüred where mostly elderly people are treated and get help to recover from different cardiovascular diseases. At the same time the rehabilitation center also gives opportunity to treat the rheumatic complaints of the patients with the aid of physiotherapy, CO<sub>2</sub>-baths, calisthenics, etc.

### 3. Cross-cutting Issues

Internationalization can be identified as the most important cross-cutting issue in Central-Transdanubia, since the majority of companies exports products, furthermore SME's as suppliers also need to meet international standards.

With regard to technology transfer, there are difficulties in collaborating between research center (university) and the end-user (company), especially in terms of information sharing however, clusters can be intermediaries in knowledge transfer between these actors.

The gender topic is not well recognized in the region. Unfortunately, there is a general problem in the society that women face worse working conditions than men (like earning less money in the same position as men). The percentage of women in the field of science and research is lower than the men and the rate of women in the business enterprises is also much lower. The companies' top management is dominated by men.

Strengths:

- collaboration between foreign companies and domestic research centers

- available R&D infrastructure at universities

Weaknesses:

- difficulties in launching home developed products in international markets
- equal-opportunity dysfunctions in some areas
- inadequate collaboration between research centers and SME's
- the business opportunity in gender related issues are not recognized

Opportunities:

- support for the spin-off companies from higher education and research centers in the region (mainly in green economy, IT and chemical industry)

Good practice:

- IT engineering internship program for young women were started among some IT companies to raise interest for men dominated jobs among women

#### 4. Conclusions for pilot development

During the national policy dialogue the Hungarian partners agreed on the following pilot ideas.

##### Option No. 1. 3

**Topic:** project development

**Title:** Establishment of sustainable ‘Project Pipeline Systems’ at clusters in propulsive industries

**Short description:** The Project Pipeline System would be run as one of the services provided to cluster members to whom it will be offered for free by cluster-management organisations.

As a common cluster service, it would represent a strategic tool in the field of project ideas identification, collection and development.

The main functions of the Project-Pipeline System would be as follows: Attention rising; Collect projects ideas; Support the development of the projects; Proactive use of the project-database; Project monitoring

**Key enabling actors:** Clusters and cluster management organisations related to propulsive industries of Hungary

**Contributors:** Intermediary Bodies related to the EU development policy (e.g. Implementing Agencies of Operational Programmes)

**Relevant clusters:**

Bakony-Balaton Mechatronics and Automotive Cluster (automotive sector)

Vértes-Duna Automotive Cluster (automotive sector)

PharmAgora Quality of Life Cluster (pharmacology and life science industries)

## Option No. 2.

**Topic:** Active ageing

**Title:** Cross-clustering between active ageing related clusters to develop a new product or service (at theoretical level)

**Short description:** Active ageing related clusters and their member companies will create a group for the development of a new product or a service specialized for the elderly people to help their daily life, preserve their health conditions. The concrete idea of the new product or service will be developed and finalized during their meetings. The final output would be a feasibility study of the product/service.

**Key enabling actors:** Clusters and cluster management organisations related to active ageing in the region

**Relevant clusters:**

PharmAgora Quality of Life Cluster (pharmacology and life science industries)

Functional Food Cluster (Egészségvédő Élelmiszerek Klaszter), Innoskart IT Cluster

## Option No. 3.

**Topic:** Internationalization

**Title:** Establishment of a complex programme to increase the international business attractiveness of the Central Transdanubian Region.

**Description:** The pilot project aims to implement a complex programme to raise the international activities of Central Transdanubian Clusters, to create new businesses and international co-operations.

Through the elaboration of the pilot, one or two regions should be selected where there is significant opportunities and interests to co-operation vice versa.

The main actions: creating marketing materials, organizing thematic matchmaking opportunities, B2B meetings and study/company visits.

**Key enabling actors:** Clusters and cluster management organisations, cluster member companies of CT and the other selected partner region(s),

**Contributors:** Hungarian Investment and Trade Agency, venture capitalists, other business actors

**Relevant clusters:**

Bakony-Balaton Mechatronics and Automotive Cluster (automotive sector)

Vertes-Duna Automotive Cluster (automotive sector)

PharmAgora Quality of Life Cluster (pharmacology and life science industries)

Innoskart IT Cluster