

IMPORTANCE OF PROJECTS IN AUTOMOTIVE INDUSTRY

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Abstract

For automotive companies, research and development is the key to success for new generation of products. The aim of this article is to accent the importance of innovations and innovations-focused projects in automotive industry. Relevance of co-operation between automotive industry and educational institutions is noticed in the article, too. Furthermore, history of automotive industry in Slovakia is outlined in the article. Main part of the article is focused on project AUTOCLUSTERS.

Key words

automotive, industry, innovation, project, clusters

Introduction

Automotive industry is one of the most important ones not only in Slovakia but in the region of South East Europe as well. This industry develops continually and belongs to the most quickly advanced sectors. Automotive industry poses claims to many areas and industry segments. An ever-present competition forces the automobile factories to strive be the best in order to keep their market shares. It gives vehemence on innovations and looking for new ways of co-operation.

Automotive industry in Slovakia

The first automobile factory in Slovakia was established relatively early in Bánovce nad Bebravou. The largest expansion of large-scale production for automobiles Tatra was

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registered in the 70's of the 20th century. Later, after the changes in socio-political situation, Volkswagen, an international corporation, entered the Slovak market in 1991. Furthermore, after the Slovak government introduced regulations in area of income tax from 1998, a stream of new investment started to pour into the automotive industry in Slovakia. Qualification, labourers' workmanship as well as low labor costs meant an attractive opportunity for investors. Besides main component suppliers for automotive industry, there were also suppliers of spare parts as new investors, who decided to invest in Slovakia. In 2003, the headstone of the technologically newest automobile factory PSA Peugeot Citroën Corporation was established in Trnava. Last year, this automobile factory became the biggest producer of automobiles in Slovakia. In 2004, the building work of Kia Motors Slovakia plant began in Teplička nad Váhom near Žilina. Kia Motors Slovakia is the first production factory of company Kia Motors Corporation in Europe. These projects attracted many other investors and thereby stimulated the establishment and development of new industrial parks.

Co-operation with educational institutions

High technologies used in automobile industry put demands on people working in this industry. That is why the co-operation of automotive industry with educational institutions is so vital. Such cooperation presents potential advantages for all co-operative partners. Some educational institutions provide methodical and technical support for laborer/employee trainings for particular jobs and work positions. Closer co-operation enables educational institutions transmit up-to-date knowledge from automotive industry to the students. Up-to-date knowledge, applicable study programmes and the hands-on approach enable to educate students whose profile will meet the requirements of the automotive industry. The agreement between the Slovak University of Technology in Bratislava and Volkswagen Slovakia Corporation is one of the most significant projects. The co-operation agreement between the Faculty of Mechanical Engineering of the Slovak University of Technology in Bratislava and Volkswagen Slovakia Corporation was signed in September 2009. The co-operation agreement involves development of the study programmes "Automobile production" and co-operation in the areas of science and research and development. The "Automobile production" programme will be the first study programme with focus on this area in Slovakia. The first applicants for this study programme can apply in the academic year 2010 – 2011. Mutual co-operation should enable to involve students and scientists to do the research and development activities in the area of technologies and production methods.

Increasing requirements in automotive industry

Increasing requirements in automotive industry are typical for their interdisciplinary nature. These demands stem from the area of technologies, performance, safety, environment and many others.

The current focus in the automotive industry is the area of environmental technologies, their development, application and adaptation to the current system. It brings to the fore green innovation and new environmental standards in cars production in order to develop cleaner, more economical and attractive cars. Supply companies must respond flexibly to the development in automobile factories which links strongly to the green car, increasing rate of electronic and software components, requirement for greater security in vehicles, integrated

traffic management, navigation systems, networking and linking intelligent vehicles, reducing vehicle weight and other areas. [1]

Permanent impulses from consumers and competitors call for new technologies, new functions and further implementation of innovations. These demands concern not only automobile factories themselves, but their suppliers as well. That is because the automobile factories derive benefits from using suppliers not only for requested components delivery, but also for development of these components. Automobile factory can thus confide not only in factory development platform but also in development workrooms of factory suppliers. Providing such a development has many requirements, which need to be performed complexly. That is the reason why it is helpful for interested participators to create networks which enable to perform these requirements. Therefore, there is a growing importance of projects, which facilitate establishment of such networks and clusters focused on knowledge transfer to particular subjects in automotive industry.

South East Europe Transnational Cooperation Programme AUTOCLUSTERS

Project “The international co-operative network of educational and research institution with subcontractors and other bodies active in automotive industry” started in 2009 and this project will continue until 2012. Project logo can be seen in Figure 1.



Fig. 1 Project logo

The Project brings together Universities, R&D institutions, SME support facilities from EU-15, NMS as well as IPA to prepare and create the first automotive network in SEE. The second level clustering activities proposed by the project are strictly oriented on the activities which are improving the innovation capacities in the region and improve technology and know-how transfer – improving the innovation circle. The project in the first stage analyses the cluster’s development and best practices across the regions as well as sets up the connection with other existing European activities in the automotive clustering. The second stage of cluster activities in the project is consistently focused on improving the innovative capacity in the region and improving the technology and knowledge transfer, which contributes to the innovation cycle.

The project is focused highly towards producing concrete results, and addresses the main challenges that are specific for both SEE region and across the whole EU territory.

Project aims and schedule

Clustering in automotive industry is at a great level in comparison to some other industries in the SEE region. The clusters identify the issues in innovative capacities and in the innovation cycle, by identifying which project to address by proposing specific second level

clustering activities based on the long time experience in auto industry of some partners and capacities of others. Activities are based on the partner's experience in previous projects in auto-industry and clustering.

Aims

There are three main issues we would like this project to focus on:

- Requirements for implementations of new technologies, particularly according to the new European strategies and policies.
- Innovation capacities - Lack of labour on the market mainly in the area of highly qualified workforce for automotive industry.
- Innovation circle - Lack in co-operation between R&D (universities), SME's and car (part producers).

In case of NMS (New Member States), candidate countries, potential candidate countries and neighbouring countries, co-operation between industries and universities is still at lower level, which is negatively affecting the sustainable development of the automotive industry in SEE.

Primary objectives

The project is built up on the experience from previous activities in Automotive industry (NEAC, Automotive Clusters, Belcar, TCAS, I-CAR-O) and in line with EU policies, especially in clustering and automotive industry. The framework's project aims to:

- Create the first sustainable network in automotive industry in SEE region with specific focus on innovation activities.
- Create partnerships which consist of institutions from New Member States, non-EU members as well as well experienced institutions from EU-15.
- Invite in the network not just clusters and other SME supporting facilities but directly also R&D institutions and universities.
- Improve innovative capability by carrying out the studies of innovation capacities, exhibitions in universities and dissemination outputs of our activities, exchange studies and networking activities.
- Prove the concept by carrying out the project samples and by generating the proposals to FP7.

Secondary objectives

The secondary project objectives are to:

- Speed up the usage of NMS potential (as well as candidate's countries, potential candidate and neighbouring countries).
- Identify the conditions for more efficient technology transfer as well as to prove the concept by pilot project implementations.
- Promote automotive industry to universities and in other R&D institutions.

- Increase competitiveness between institutions in SEE region to focus on and contribute in finding of solutions for global problems in Industry.
- Create conditions for networking in finding solutions to global problems in Industry.
- Identify available opportunities for further development of co-operation through community or national programmes and other funding sources.

Expected outputs of the project and project contribution

The project aim is to develop cooperation among the existing SMEs with research institutes and universities in the automotive industry sphere. This is the second level of implementation of cluster activities in order to enhance innovation capacity, the effectiveness of technology transfer - to improve the innovation cycle in the automotive industry and through projects clearly address global objectives - facilitation of innovation, knowledge economy and information society. The project contribution to the attractiveness of the region has to be also taken into account. Taking the partners of the European Fifteen, the new Member States and candidate countries, together with the proposed activities, including intensive cooperation and exchange will lead to reducing disparities between regions and cooperating significantly contribute to the policy of cementing Europe.

The main project output involves:

- Permanent network of co-operation in the automotive industry of South East Europe.
- Continuous exchange programme activities as a part of a co-operation network.
- Confirmation of the concept through financing small projects from three specified areas.
- Preparation of three proposals for 7th RP and the other three projects from specified areas.
- Preparation of three studies and one methodology, the results can be taken in different industries and regions.

Other results and outputs with highly positive impact on the innovation capacities and innovation circle worth to mention involve ten exchange study visits (with 200 participants), 10 exhibitions at universities (with 3000 visitors), one exchange experience seminar (with invitation of other relevant stakeholders), and two educational seminars in each region.

Project focus on innovation

The project's aim is to develop the network of existing SME facilities together with R&D or universities in automotive industry. The purpose of the project is to realize the second level clustering activities with the objectives to increase innovation capacities, increase effectiveness of technology transfer – improve the innovation circle in automotive industry, and through the project clearly address the global objectives – facilitating innovation, knowledge economy and information society. The contribution into improving the attractiveness of the region should be taken in account as well. The invitation of the partners from EU-15, NMS and IPA countries together with proposed activities including intensive cooperation and knowledge-exchange is a clear contribution to the EU cohesion policy by diminishing the gap between participating regions.

Conclusion

Integration of the Slovak research capacities into the projects focused on automotive industry will secure retention of high skilled labour with high added value in Slovakia. The only chance for Slovakia is innovation, research and development, in case of removing the manual assembling in automotive industry towards East. This is the reason why it is important to focus on high tech laboratories and innovation projects. There is no other way than to prepare people for automotive industry and involve them into the productivity development.

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Fig. 2 Logo of SEE and projects co-funded by the European Union

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