

UOK - Virtual Manufacturing Support for Enterprises in Serbia

Virtual Manufacturing Support for Enterprises in Serbia was implemented within EDEP program “Support to Enterprise Development and Entrepreneurship Program” with realization period from December 2006 to September 2007.

Partners in the realization of this project were:

- Mechanical Engineering Faculty, University of Kragujevac, Project Leader, one of the most distinguished and the most prestigious educational institutions in the field of technical sciences, modern scientific-educational institution
- Faculty of Technical Science – University of Novi Sad – Novi Sad (FTN) , with experience in a number of international projects such as: TEMPUS, FP6, Bilateral projects etc.
- Regional Economic Development Agency for Sumadija and Pomoravlje Ltd, Kragujevac (REDASP), with intensive experience in developing and providing supporting services to SME sector in the region.

Overall project objectives were:

- To contribute to Serbian enterprises efficiency, quality, and technology potential and overall competitiveness, both national and international by: Stimulating establishment of permanent linkage of R&D institutions and enterprises; Introducing routine of financial participation and implementation of innovations.
- Significant reduction of time and costs in the development of new and improvement of existing products and technological processes in domestic companies by introducing innovative technologies.
- Virtual manufacturing system, which represents integrated computer-based model for product design and manufacture process simulation, as well as rapid manufacture of prototypes and reverse engineering, is applied.

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SWOT ANALYSIS

Strengths:

- Excellent background as a prerequisite for a successful outline of project road – map;
- Well-defined Project objectives, Project management and structure;
- Multipurpose results – introduce quality, timely and inexpensive development cycles as well as aggregation of knowledge and experience;

- The introduction of innovative technologies led to a significant reduction of time and costs in the development of new products;
- Introduce mechanism for cooperation between Academics and Industry;
- The Center for Virtual Manufacturing has received the wide acceptance of many large companies and SMEs from all over the Serbia;
- Marketing and commercialization of R&D results.

Weakness:

- Lack of a clear description of the activities in the education project segment (fields of education, feedbacks from SMEs about their needs etc.);
- Low level of awareness for impact of the offered concept on economic growth and competitiveness among general public, policy-makers and many enterprises;
- The lack of effective linkages between knowledge institutions (HE and R&D) and industry;
- There is no systematic collection mechanism for indenting the training needs of small business;
- Environment “hostile” to innovation (e.g. weak innovation demand and support, low public R&D expenditure, low number of specialized staff etc.);
- Exclusively publicly funded.

Opportunities:

- The project stimulate establishment of permanent linkage of R&D institutions and enterprises;
- Twenty enterprises in Central Serbia and Vojvodina (10 SME) used CeVIP services in innovative development of product and processes and optimization of existing ones, during the project implementation, were involved;
- Improving the level of services that support informativeness of SMEs;
- More stable political system in the last decade.

Threats:

- Lack of local institutional support;
- Lack of Financial Resources;
- Hard to predict model of timely availability of human and technical resources.