

CRISIS MANAGEMENT IN TRANSPORT AND SCIENTIFIC - RESEARCH ACTIVITIES

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Summary: In this article are described experiences of Department of Technical Sciences and Informatics (next KTVI) focused on scientific research activities and international cooperation for last five years. The KTVI which is a part of Faculty of Special Engineering and the University of Zilina were processed national as well as international projects. Gained financial support was used for development of cooperation with partner institutions in Bulgaria, Czech Republic, Poland, Serbia and to provide technical maintenance of department.

Key words: Crisis management in transport, transportation of dangerous materials,

1. INTRODUCTION

During the years 2001-2002 on Faculty of Special Engineering (next FSE) had appeared an idea to transform content of scientific specialisation military transport into scientific specialisation called transport services and to create study programme transport in crisis situation. According to prepared accreditation papers were accredited all three degrees of high education in daily and external form. The quality of pedagogical activities done by FSE is closely connected to the outputs of scientific research activities. Due to the fact that majority of employees of KTVI is actively working on international and national projects, the base for theoretical support of second and third level of degree is on more than average level. The fact that KTVI is successful in obtaining grants is the key element which enabled the department to purchase IT technologies, modern software products and building of new laboratories. The evaluation of scientific research activities oriented on transport in crisis situations in transport is one of the key outputs of department. Teams of scholars and scientists are cooperating with mates from other faculties which exist on University of Zilina and also with foreign partners.

2. CRISIS MANAGEMENT IN TRANSPORT (KMD)

The establishment of new study programmes is closely connected to scientific research activities. The support of security engineering is provided by 7th Frame Programme of European Union and grants of national and international scientific agencies. The terrorist attacks on transport joints in London, Madrid and in other cities

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led to detailed investigation of possible trends and risks, which can disrupt ordinary transport.

The crisis management in transport is divided into three phases - prevention phase, solution phase and phase in which are proposed actions which will eliminate threats for future. All three phases are from the scientific point of view oriented mainly on transport of dangerous materials, over-sized shipments and evacuation of inhabitants and on proposing appropriate solutions in order to increase safety. One of the most important aspects is application of telemetric solutions oriented on surface transport types. Thanks to that new intelligent solution for support of managing road and railway transport are available.

3. SCIENTIFIC AND RESEARCH ACTIVITIES RESULTS

The academic research work in the KMD area focus on solving problems connected with transport systems in crisis situations, transport logistic and applied informatics. The department permanently and successfully competes assigning tasks from grant agencies as well as tasks from ministry of transport.

Today members of department work as responsible solvers in Agency for Scientific and Research, European Social Fund, Cultural and Education Agency, Scientific Grant Agency tasks, projects of international cooperation – MVTIS, CONECT, as well as solvers of partial tasks or they cooperate on projects for ministry of transport, post and telecommunication SR and Directorate General of Slovak railways. Basic problems which are solved in these tasks are connected with organization of railway and road transport when a breakdown of transport road occurs, modeling of work, logistic organization of evacuation and complex organization of transport during critical situations.

Elaborated theses are great advantage in academic research work. The department brings up PhD students in study program transport in crisis situations since year 2004. Three PhD students successfully vindicated thesis in this study program.

Solving of crisis situations in transport, as well as joining members of department to research teams of other departments, with emphasis on tasks of general thematic of transport will still remain main difficulty of research tasks. The ways of wider connection to science-research tasks in international solving teams will be searched mainly through good cooperation with teams from Czech Republic, Poland, Bulgaria and Serbia.

The department participates on organization of many science conferences and seminars. The top of these trends is a regularly organization of own science-academic conference with international participation- LOGVD, which focuses on transport

logistic. Its tradition evolves already ten years ago. It produces a book of works from conferences both in electronic or paper form.

The department prepares and organizes every year international science conferences “Solving of critical situations in specific environment” and “Forum of young research workers” which is organized with cooperation of partner high schools.



Fig. 1 – Scientific conference with international participation LOGVD
(Žilina, 2005) Photo: author

In recent years due to successful solution of scientific research grants the participation of KTVI members on international conferences and meeting has increased rapidly. For an evidence KTVI has an excellent cooperation as an specialisation guarantee on conferences in the Czech republic (Brno, Ostrava, Prague and mainly Pardubice), in Poland (Wroclaw and Kielce), in Bulgaria (Sofia) and in Serbia (Beograd and Nis). We also participated on meetings and events in Slovenia, Russia and Italia where were presented results of scientific work of our scholars. The obvious change in trend of foreign journey number is clearly visible in recent period. In 2005 the time spent by foreign journey was 87 man’s day and in 2006 it was 104 man’s day spent abroad. The department is interested in stays of foreign specialists and scientists in Zilina. In year 2006 prof. Cekerevac from Beograd (Serbia) spent two months on our department as a part of his individual tempus project. In year 2007 associated prof. Zamiar from Wroclaw (Poland) and associated prof. Soušek from Pardubice (Czech Republic), both spent a month on our department as a part of national scholarship programme organized by SAIA.



Fig.2 – Meeting held in MWSLiT in Wroclaw (Wroclaw, 2006), Photo: Author

As an important tool to present results of science and research we use magazines. The members of KTVI issue electronic magazine „Security magazine“. Its first year of issue was also issued as a yearbook in paper form. The members of KTVI also cooperate on issuing faculty magazine „Křízový manažment“.

4. ORIENTATION OF SCIENTIFIC AND RESEARCH GRANTS

In evaluation process of scientific and research grants it is very important to analyze previous grants and solved scientific tasks. The members of KTVI took a part in proposing these projects:

- 6FP project SAFLINK, 31.1.2002.
- 6FP SSA, ID 020290, 13.12.2004, Young people education for scientific careers in ecology, environmental procession and risk management in nature and society.
- SOCRATES programme – Preparing and implementing of the new curriculum Crisis Management and Environment, 1.3.2006, Brussels.
- TEMPUS Joint European Project 2006, JEP_41054_2006, 15.12.2006, Brussels 2006.
- LLE Brussels, Crisis Management in Environment, 31.3.2007.

Preview of realised projects:

- TEMPUS MADECISE – Chosen issues of public management II.
- Theoretical solutions of crisis situations in transport, GAČR 103*03/1077.

- ESF – Actualisation of management techniques in rescue and business activities on regional level, code number of project 112300220096.
- TEMPUS Project IMG-SCG3018-2005.

On national level we were solving different scientific tasks and the most important were tasks of governmental research- Technologies and services of intelligent transport in years 2002-2004 and CONNECT in years 2005-2007. We were also solving grants supported by agencies APVV, VEGA, KEGA and we were participating on tasks given by Directorate General of Slovak Railways and by Ministry of Transport, Posts and Telecommunications.

5. VISION OF FUTURE ORIENTATION CONCERNING SCIENTIFIC AND RESEARCH ACTIVITIES

The main aim of KTVI in close future is to do actions which will make scientific research and educational activities of better quality. The KTVI will pay its attention on solving grants and tasks in solution of crisis situations in transport. As a part of this it is needed to develop the issues like logistical support of crisis situation, safety and health protection in transport during crisis situation. Due to the capacity of department and according passed grant support proposals. We need better coordinate of every member not only to solve projects but also to prepare new grant proposals. There is also the way to cooperate on grant international scientific projects as a partner or cooperation institution.

In international cooperation we have plan to develop good cooperation with University of Belgrade on bilateral project, with International school of Logistics and Transport in Wroclaw on preparing common study program for grant agency in EU. With others traditional partners as University of Pardubice, University of Ostrava, Czech Technical University in Prague. We prefer short time lectures stay and common scientific projects oriented on traditional topics. We need new contacts to Germany or other traditional EU country. We are thinking above developing cooperation with Moscow State University of Transport. We will find new possibilities to long time stay and international stay for young teachers and PhD. students.

6. CONCLUSION

The end of year 2007 gives as a possibility to analyze last five years when new study programmes were prepared and realised. At that time KTVI prepares documents and materials for new accreditation, which take a place on spring 2008. The members of KTVI have a serious will to apply recent knowledge obtained in scientific research

into all three degrees of high education. We believe we will be able to successfully continue in our work.

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