Technical University of Moldova

Agency for Land Relations and Cadastre (ARLC)

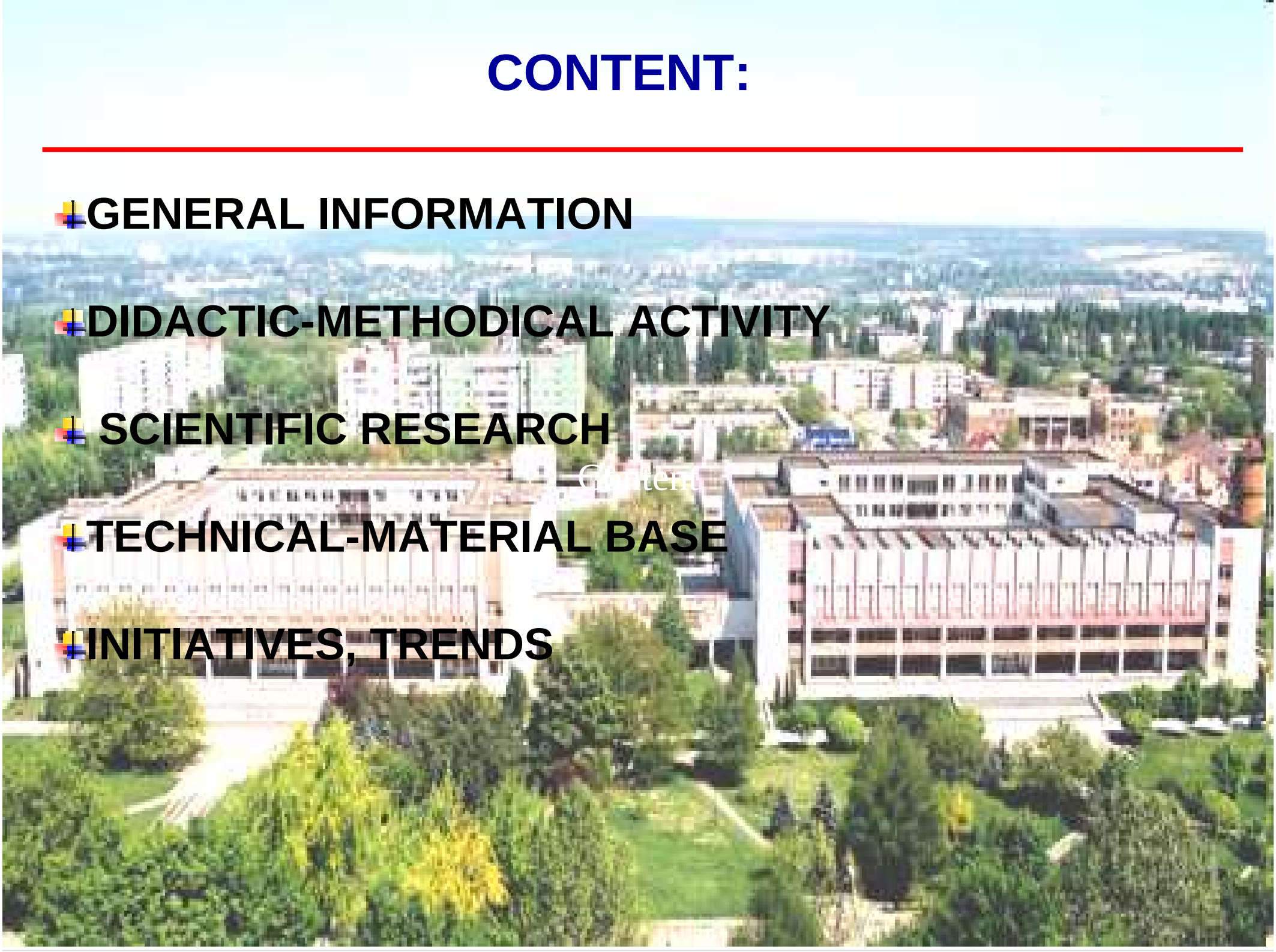
Hochschule Karlsruhe Technik und Wirtschaft
UNIVERSITY OF APPLIED SCIENCES

"STRUCTURE AND MISSIONS OF GEODESY, CADASTRE AND GEOTECHNIC DEPARTMENT"

Dr. Livia Nistor-Lopatenco, Technical University of MOLDOVA

Initial Meeting "Development of a High Capacity Real-Time GNSS Positioning Service for Moldova (MOLDPOS)"

CONTENT:



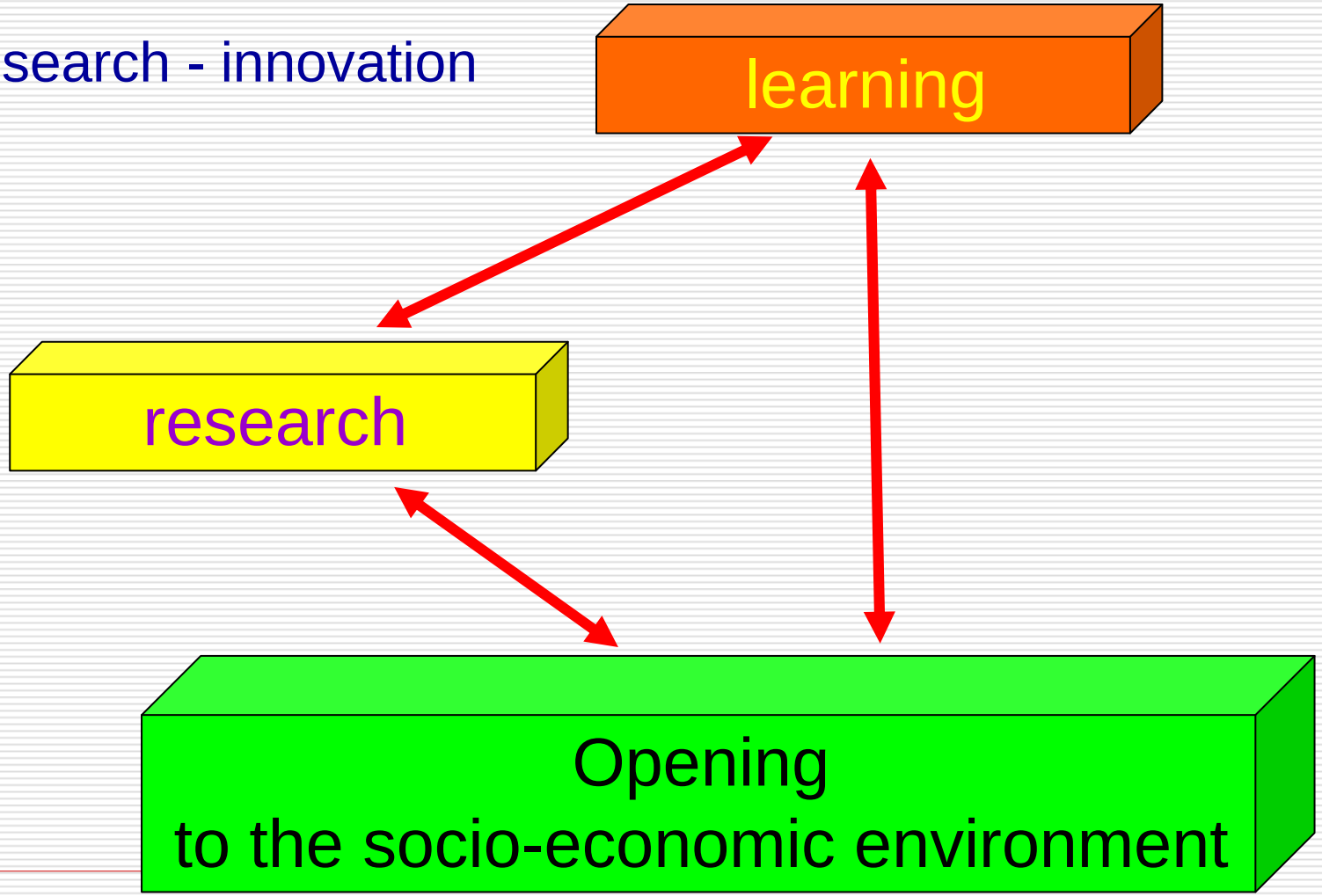
- GENERAL INFORMATION
- DIDACTIC-METHODICAL ACTIVITY
- SCIENTIFIC RESEARCH
- TECHNICAL-MATERIAL BASE
- INITIATIVES, TRENDS

THE JOINING OF RM TO BOLOGNA PROCESS. ACCORDING TO IT:

- Students are easily moving from one university to the other.
- Universities are using marketing techniques to attract the best students.
- European Universities are adapting to the Bachelor-Master-PhD system (3+2+3).
- Curricula tend to become compatible from one university to the other.

MISSION

Education - research - innovation



I. GENERAL INFORMATION

- The chair of *Geodesy, Cadastre and Geotechnics* (GCG) is a component part of the Faculty of Cadastre, Geodesy and Construction of Technical University of Moldova.
- The chair GCG was founded on the basis of the chair of *Engineering geology and foundations* according to rector's decision nr. 267 - r from 08.07.1997.
- The educational process's aim is formation of competences in the following fields - industrial and civil engineering, roads engineering, geotechnical structures engineering, networks engineering.
- In 1995 there were admitted the first students to the speciality - *Geodesy, topography and map drawing*.

SPECIALITY Geodesy, Topography and Cartography (GTC)

Four years of study,

DISCIPLINES STUDIED: Topgrafie, Geodesy, Geoinformatics, Photogrammetry, Surveying Engineering, Survey, GIS, Cartography, Law, Economics and Management, etc..

EVOLUTION

1995 – T.U.M Start a study program for *GEODESY, TOPOGRAPHY and CARTOGRAPHY* specialty.

Strategic objectives of the specialty - to prepare surveying engineers for:

- **Building and maintaining the State Geodesic Networks;**
- **Mapping of different scales (creating of maps), of topographic plans, cadastral maps, etc;**
- **Studies and survey works for design, (localization), execution and monitoring the behaviour of civil and industrial buildings,**
- **Exploitation and operation of an informational system in this domain.**

II. DIDACTIC-METHODICAL ACTIVITY

- The chair ensures the educational process at the following specialities - "Geodesy, topography and map drawing" and "Mine exploitation". The staff of the chair is also responsible for teaching of subjects regarding the following fields - geotechnics, foundations, geology, protection of towns and villages, etc.), which are taught in Romanian and Russian. They also elaborate didactic materials, organize laboratory works and practices according to the syllabuses.

Some achievements of the Department

1. **2001-2003 Cooperation in the frame of Project "Modernization of educational System in Cadastre" Sweden International Development Assistance (SIDA) - 60 000 $USA,**

2. **2004 – 2006 Project "Education in Geographical Information Technology" supported by EU, TEMPUS - 298 000 euros.**

In cooperation with:

- ✓ **KTH Department of Geodesy and Geoinformatics, Sweden ,**
- ✓ **Special School for Public works, Paris, Surveying Department.**

3. ***2010 - Project "Development of a High Capacity Real-Time GNSS Positioning Service for Moldova (MOLDPOS)" – UNIVERSITY OF APPLIED SCIENCES, Karlsruhe***

III. SCIENTIFIC RESEARCH

The main directions of scientific research:

- Investigation of landslides and methods of their control
- Design and using of specialized informational systems
- Elaboration of standards in this field
- Investigation of gravitational field of Republic of Moldova

IV. TECHNICAL-MATERIAL BASE

- ✓ 16 Pentium 4 PCs (desktop/laptop, server/WS)
- ✓ Network accessories for internet connection + Email server
- ✓ 1 Plotter, 2 printers, 4 scanners, 1 digital projector
- ✓ 10 ArcGIS 9.3 licenses + 3 ArcGIS 9 extensions (3D Analyst,
- ✓ Spatial Analyst, Survey Analyst) with 4-years updates
- ✓ 2 Trimble geodetic GPS receivers

  5700 base, 5800 Rover, 10 Geomatic Office licenses, GeoExplorer

  1st permanent GPS station in Moldova !

- ✓ 1 digital photogrammetric WS from Geosystem, Ukraine

Installation & training of photogrammetric WS

- **Digital photogrammetric software from Geosystem, Ukraine**

Establishment of a permanent GPS station at TUM

- Generous donation by Trimble/VEC SRL
- First continuously operating permanent GPS station in Moldova
- Data automatically downloaded to PC once per hour
- Basis for building Moldovan national permanent GPS network
- Potential to provide differential corrections for precise positioning and navigation

V. INITIATIVES, TRENDS

- organization of training courses for specialists in production,
- national and international development projects,
- development of national relations and international collaboration etc..

THANK YOU FOR ATTENTION

Email: nistor_livia@yahoo.com