

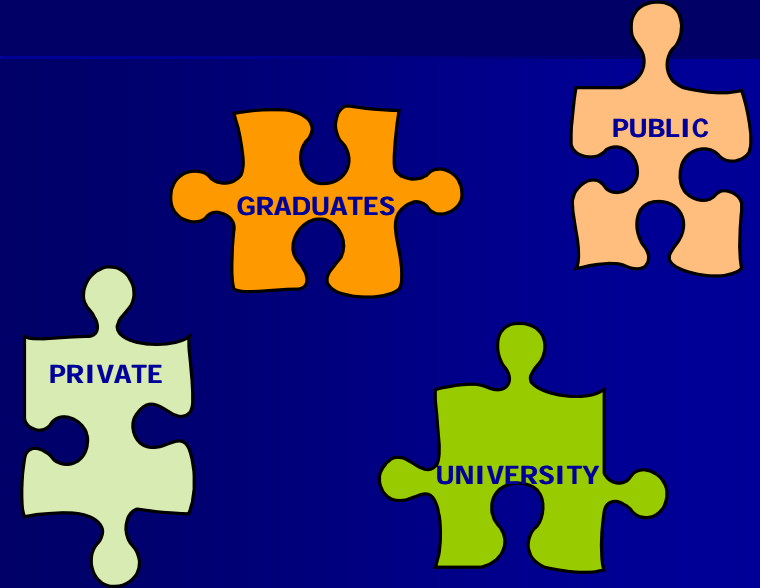
CAN EUROPEAN GRADUATES FULFIL THE EXPECTATIONS OF SLOVENIAN (PRIVATE) ENTERPRISES?

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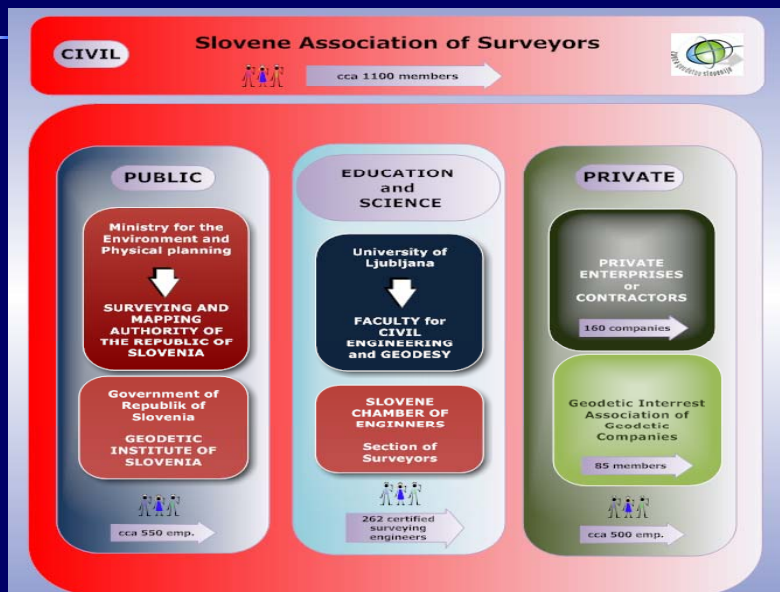
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FIG International Workshop Vienna
February 26, 2009

Main actors

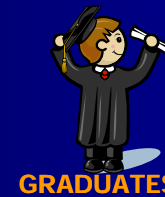


Geodesy in SLOVENIA.....



Free market

Liberalization
Globalization
EU free market
Modernization of higher education



GRADUATES

Regulated part of surveying

Non - regulated part of surveying

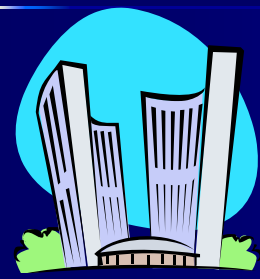
Graduates – labor market



GRADUATES

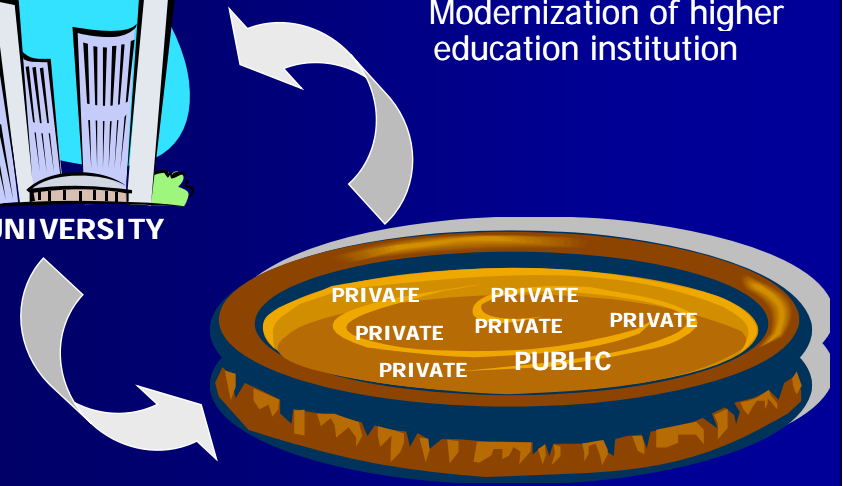


Higher education institutions



UNIVERSITY

Modernization of higher education institution



Slovenian market needs

Labor market needs are changing rapidly

Needs of society Technical development
Globalization trends



Private companies

Adjusting fields of work to the current and future needs

Slovenian market needs

Questionnaire for graduates
(2005)

Questionnaire for employers
(2007)



Inputs for Bologna
process on Faculty of
Civil and Geodetic
Engineering

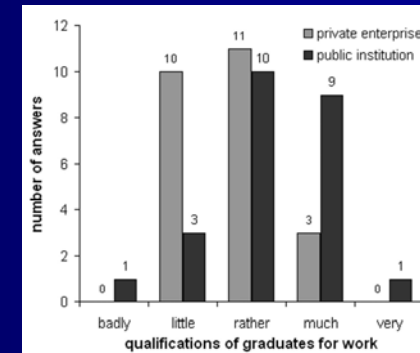
Questionnaire for employers

- (a) general information about company/institution (name, field of activity, number of employees);
- (b) general opinion of achieved graduates' level of knowledge and skills important for the employer;
- (c) evaluation of expected and achieved abilities, skills and knowledge, which should be achieved by graduates of surveying (geodesy) during their higher education: (c1) the ability to apply knowledge in practice, (c2) the ability to develop the profession, (c3) the knowledge of management, (c4) the knowledge of legislation, (c5) the knowledge of standards, (c6) the knowledge of informatics and an ability to use new information technologies, (c7) the ability to communicate effectively, (c8) the ability to lead and coordinate the projects/organization, (c9) other abilities and skills (ethical loyalty, an ability to work in multidisciplinary teams etc.); and
- (d) estimation of five most important abilities among seventeen suggested.

Questionnaire for employers

50 different employers answer

Employers' opinion regarding the qualification of graduates in surveying (geodesy) at the Faculty of Civil and Geodetic Engineering, University of Ljubljana, to begin to work at their companies.



Questionnaire for employers

Representatives of the private enterprises emphasized the skills of graduates in this order:

- the ability to understand and communicate in foreign language,
- the ability to apply knowledge to practice,
- the basic knowledge of surveying and geodesy,
- the basic knowledge of profession (wider area of profession), and
- the ability to create and implement new ideas.

Questionnaire for graduates

- University study programme of geodesy (9 semesters), which was comparable to the master's degree in countries using consecutive system of higher education.

- Higher professional study programme of geodesy (6 semesters), which was comparable to study programmes at Universities or Colleges of Applied Sciences.

In the analysis, 50 university diploma engineers (university study programme) and 48 diploma engineers (higher professional study programme) answered the questionnaires.

Questionnaire for graduates

The questionnaire for graduates contained the following complexes of questions:

- (a) general information about (university) diploma engineer, his/her occupation and position, information about the institution and the field of work;
- (b) evaluation of (b1) the volume of study courses in the time of his/her study; (b2) requirements of study courses; (b3) applicability of knowledge and skills obtained during the study; (b4) importance of knowledge and skills for the future;
- (c) missing knowledge and skills, and
- (d) suggestions for improvement of study programmes.

Questionnaire for graduates

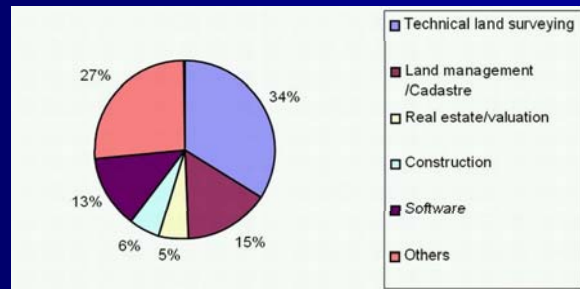
Main outcomes are:

- Volume of courses referring to the real estate registration and real estate management as well as courses in the fields of legislation, public administration and business economics could be enlarged.
- Importance of topics of real estate registration, real estate management, spatial informatics, legislation and business economics should be increased significantly in near future.

EEGECS research



WG 4 – Public/ Private Enterprises made questionnaire.



Companies' main activities

EEGECS research



Number of persons trained per year

Market needs analysis

- we can not directly compare the results of the analysis
- generally demands of enterprises in Slovenia and EU are similar
- private enterprises expect more skills and professional competences
- in Slovenia all graduates get work in less then 1 month (2005)
- expectations vary according to different kind of enterprise (private-public, small-medium-large, fields of work)
- soft skills (project management, communication, time management, team work, economic, foreign language etc.) are more and more important



Market needs analysis

- expectations are getting higher every day
- very difficult for graduates and for the academic institutions to follow development
- graduates get enough of technical and expert knowledge
- graduates not get enough practice and soft skills
- educational competences vs. professional competences
- life long process for professional competences

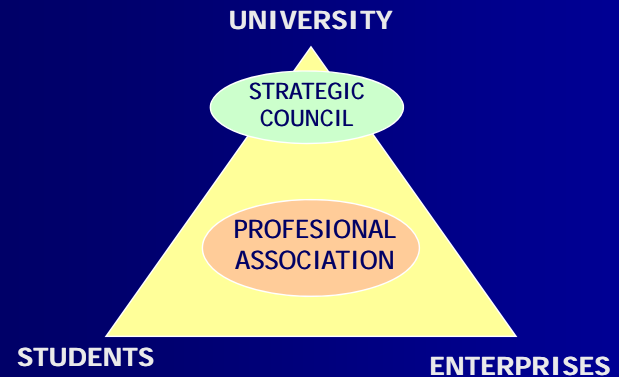


Adjusting the study programmes

- changing the study programmes according to the Bologna process
- great opportunity to adjust the programmes
- wide discussion while renovating the study programme
- the Department of Geodesy in Slovenia acquire the important information from the main actors
- the Strategic Council was established as advisory body
 - members are Surveying and Mapping Authority of the Republic of Slovenia, Professional Surveying Association, Chamber of surveying engineers and private enterprises



Adjusting the study programmes



Enterprises influence

- cooperation between science (universities) and enterprises is an assurance for economy growth
- enterprises should be actively involved in the process of changing the study programme
- every considerable change will not have immediate impact on labour market
- every change is important for the long term development of the profession
- collaboration between professional association (for example in Slovenia we have Chamber of surveying engineers and Association of private enterprises)
- graduates will never have all needed competences in the enterprises
- specific knowledge, which is a short term need in not subject for changing programme

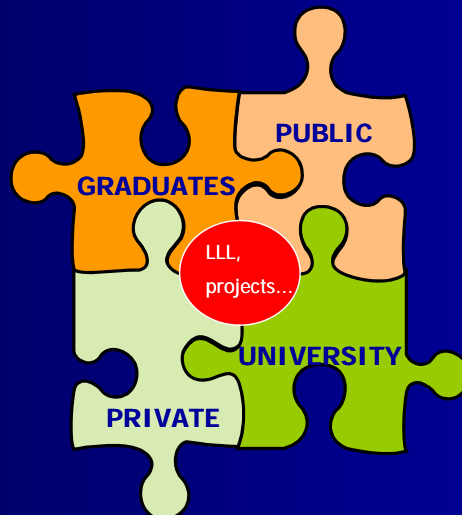


Conclusion

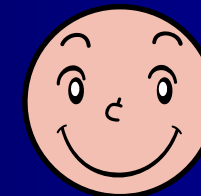
- market needs changing much faster then study programme
- higher educational institutions have to be flexible (not only with study programme)
- life long learning should be part of development of professional competences
- collaboration between main actors is necessary
- Strategic Council (in Slovenia) should be active also in the future



Main actors



Discussion



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