The EHEA in 2012: Bologna Process Implementation Report

Prof. Andrejs Rauhvargers, Latvia,

Co-Chair, BFUG Implementation WG

Implementation report is based on

Data collections by:

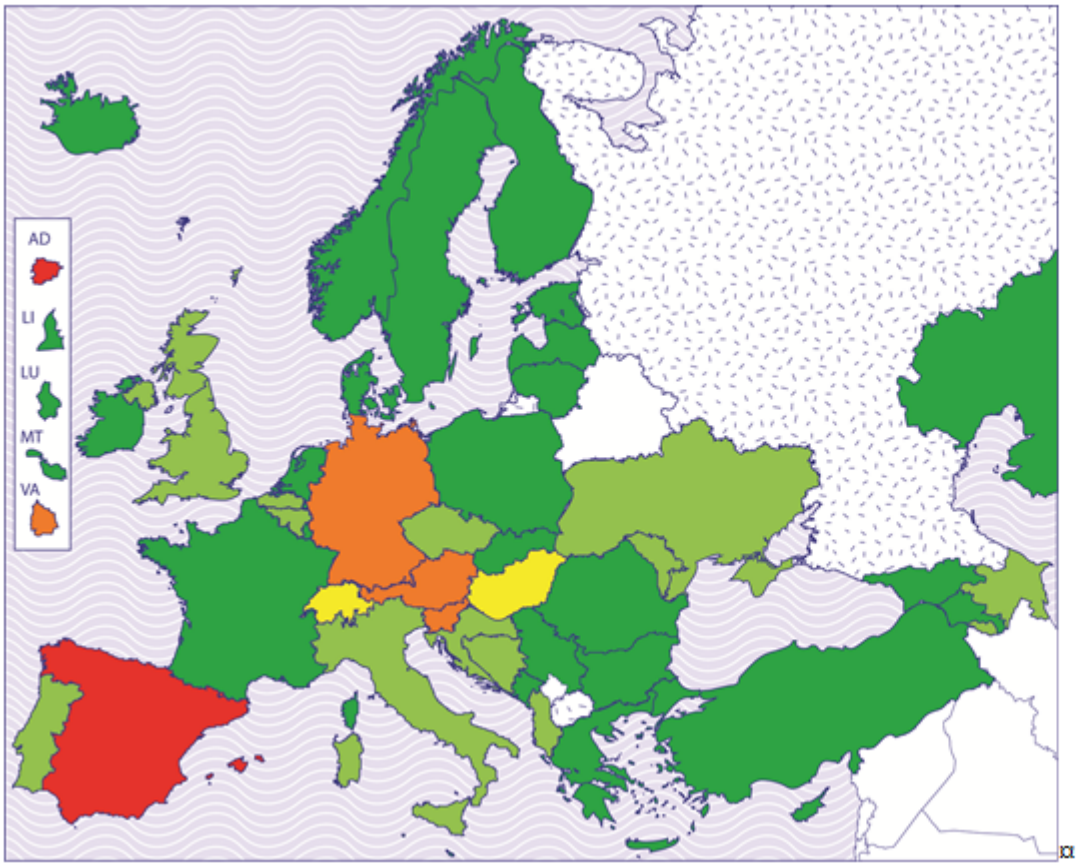
- BFUG WG Implementation Survey,
- EURYDICE,
- EUROSTAT
- EUROSTUDENT

Change in approach to collection of country data

- Direct supply into database,
- Reporting on results rather than laws adopted

- As a result – the outcomes look less «green»

Scorecard indicator n°1: implementation of the first and second cycle, 2010/11

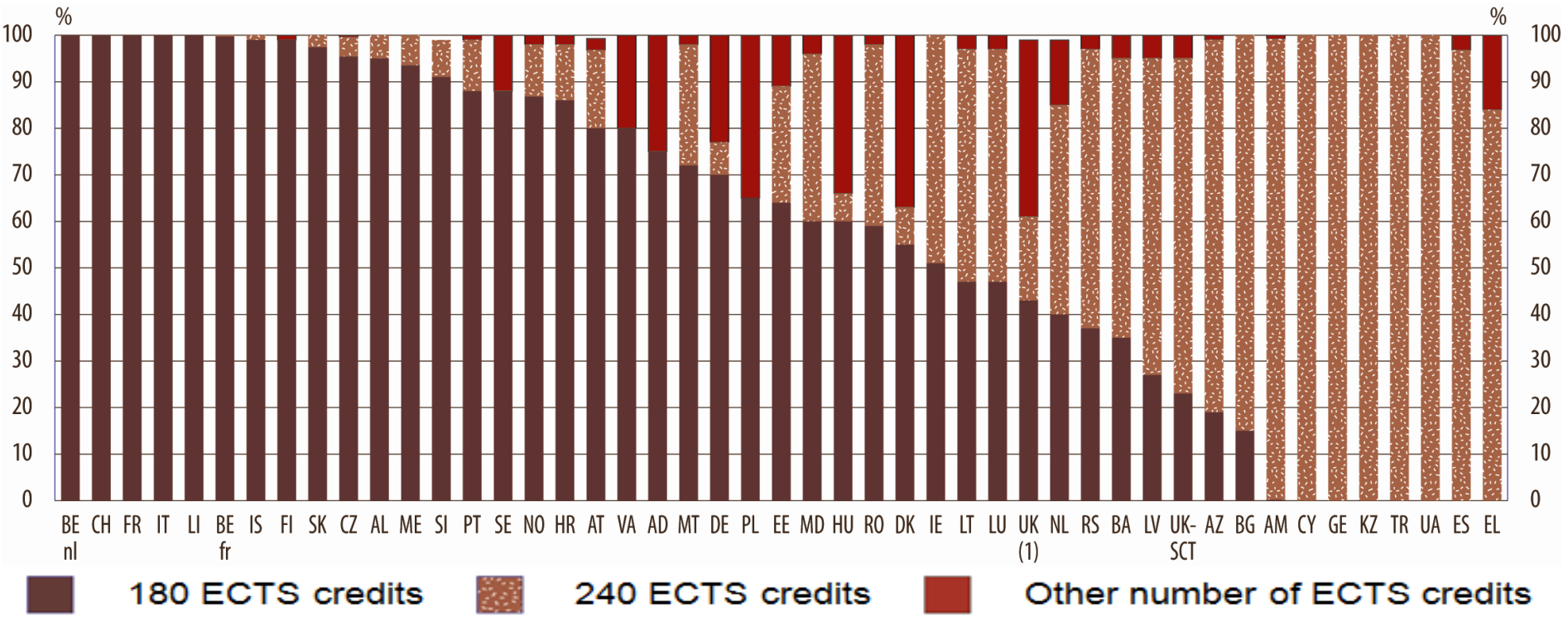


	2012 Report*	2009 Report**
	26	31
	13	10
	2	3
	4	3
	2	1

*Sources: Eurostat and BFUG questionnaire, 2011.

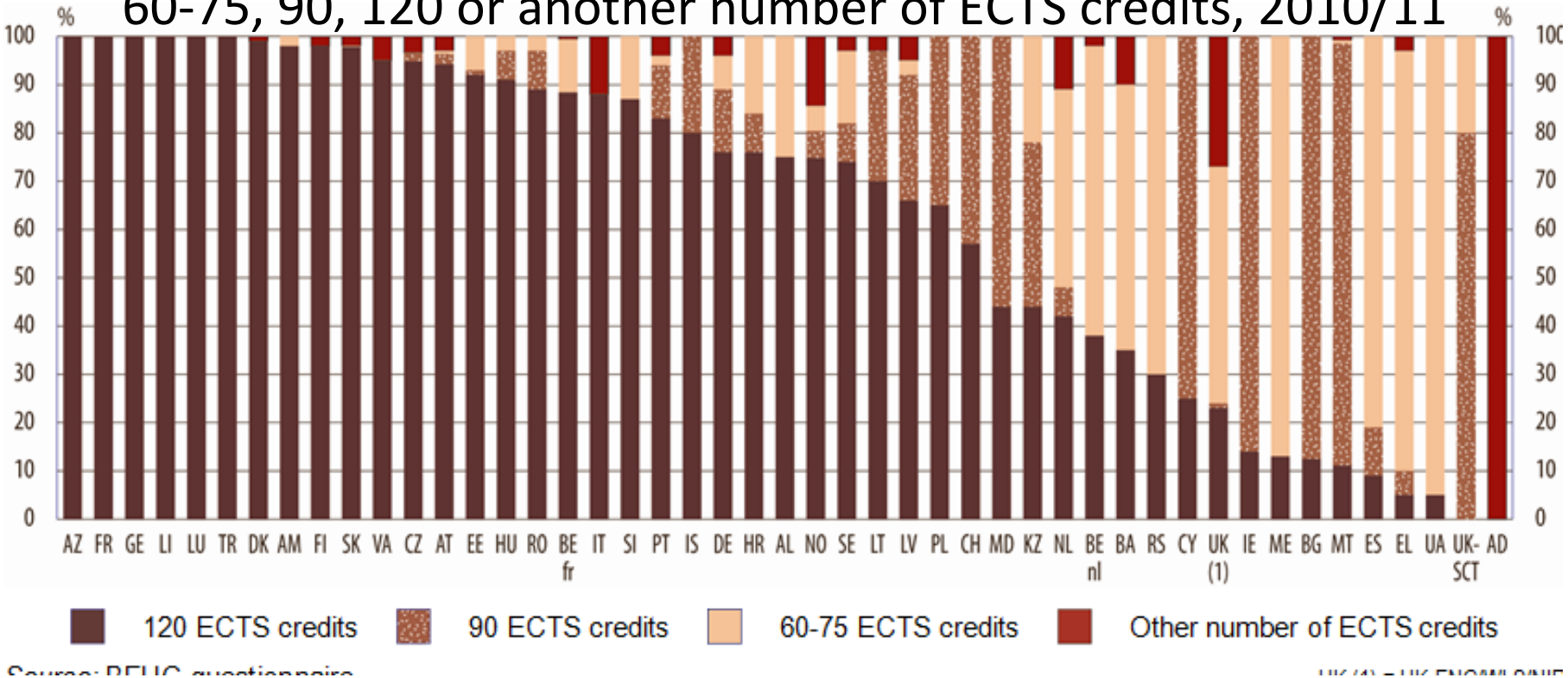
** Source: Rauhvargers, Deane & Pauwels, 2009.

% of first-cycle (bachelor) programmes with a workload of 180, 240 or another number of ECTS credits,



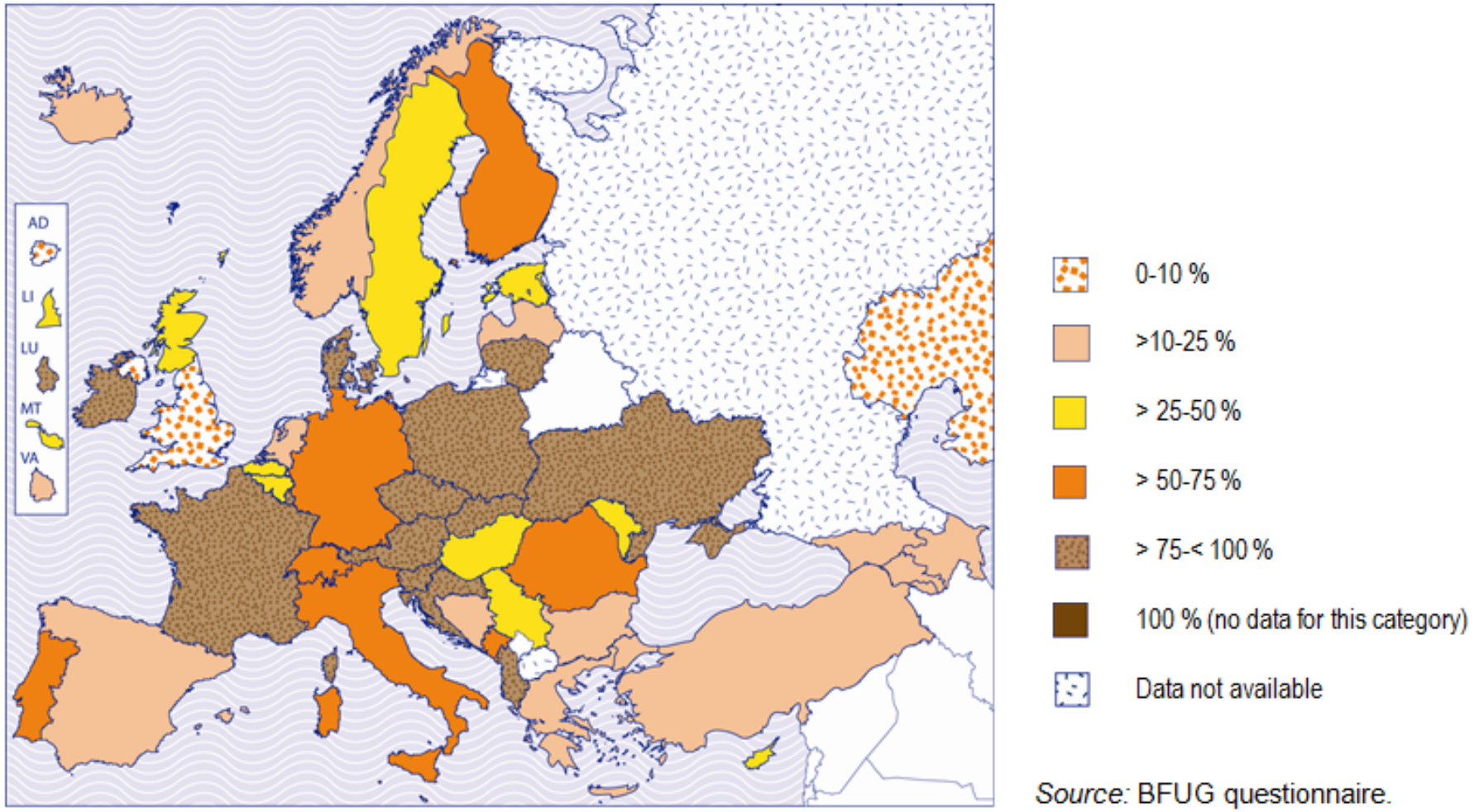
- **180 ECTS Bachelor only:** Belgium Fr , France, Italy, Liechtenstein and Switzerland, prevailing : (75 % of programmes) – in 14 more countries
- **240 ECTS only:** Armenia, Cyprus, Georgia, Kazakhstan, Turkey and Ukraine, prevailing (>75 % programmes): 6 more countries.

Share of 2nd-cycle (master) programmes with a workload of 60-75, 90, 120 or another number of ECTS credits, 2010/11



- 120 ECTS model is by far the most widespread, being present in 42 higher education systems.

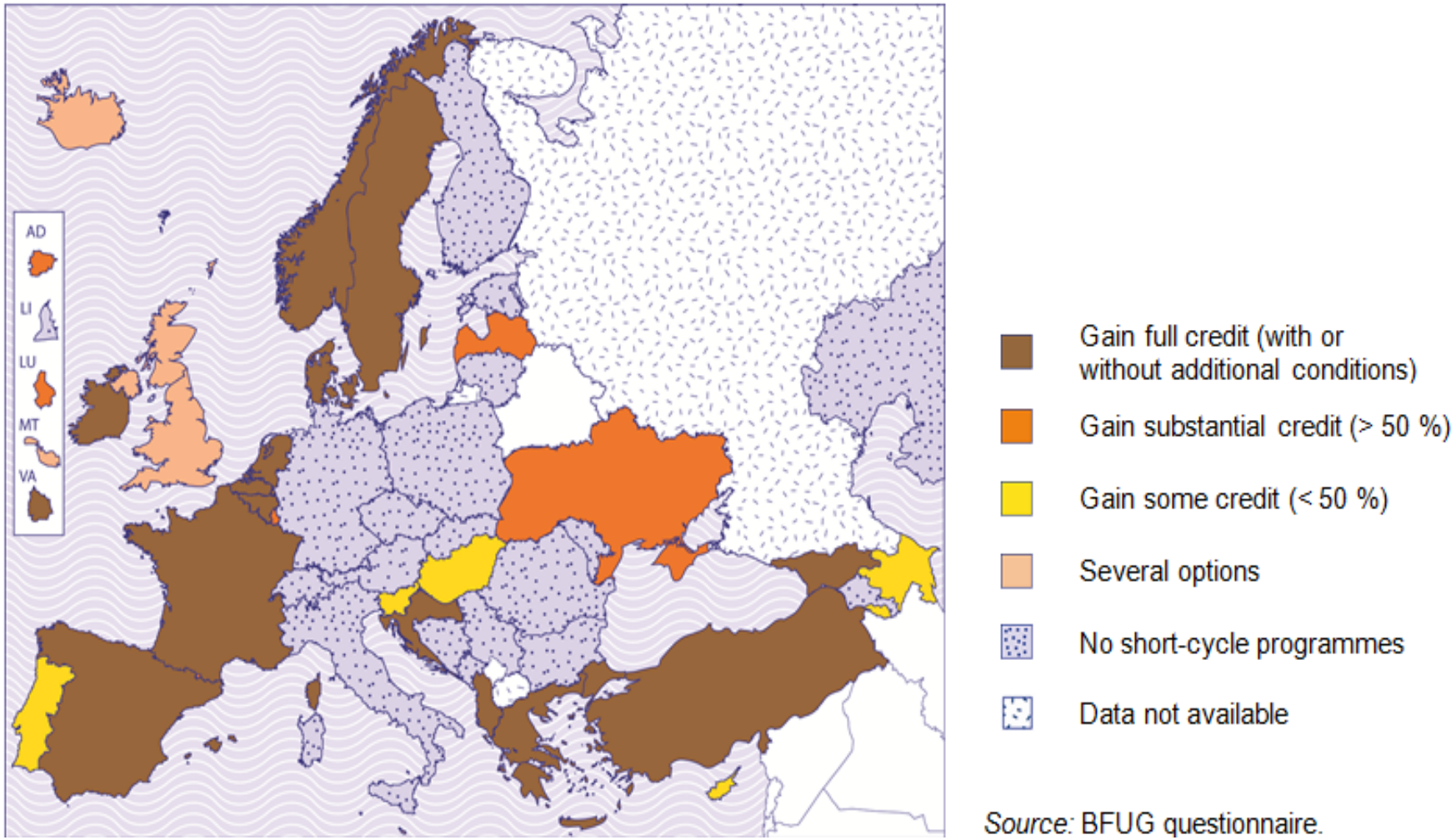
Share of first-cycle students **continuing studies** in a second-cycle programme (within 2 years), 2010/11



Source: BFUG questionnaire.

Theoretical access to second cycle is nearly in place, but actual progression varies between < 10% to 75-100%.

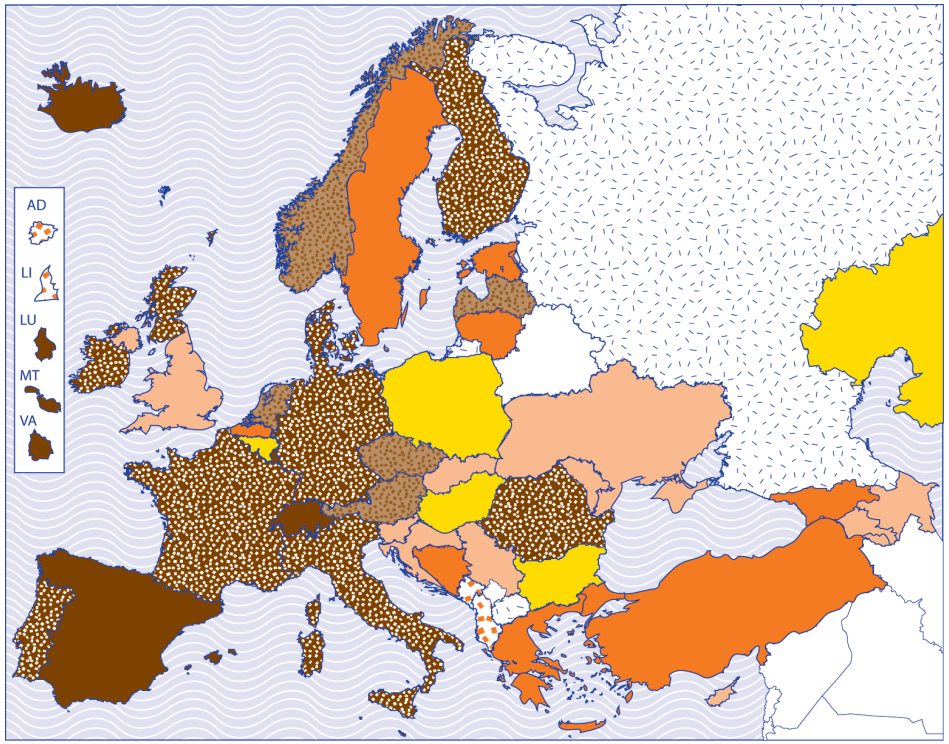
Gaining credits towards bachelor programme in the

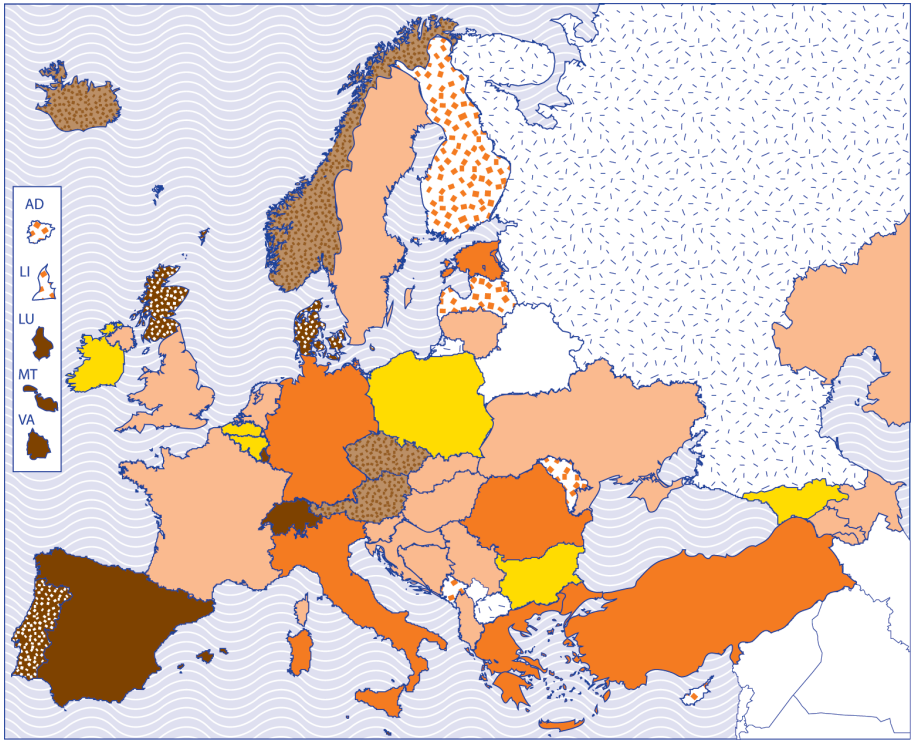


Source: BFUG questionnaire.

- Short-cycle programmes exist in 28 countries, in 22 countries they are well linked to first cycle

Joint programmes and Joint degrees



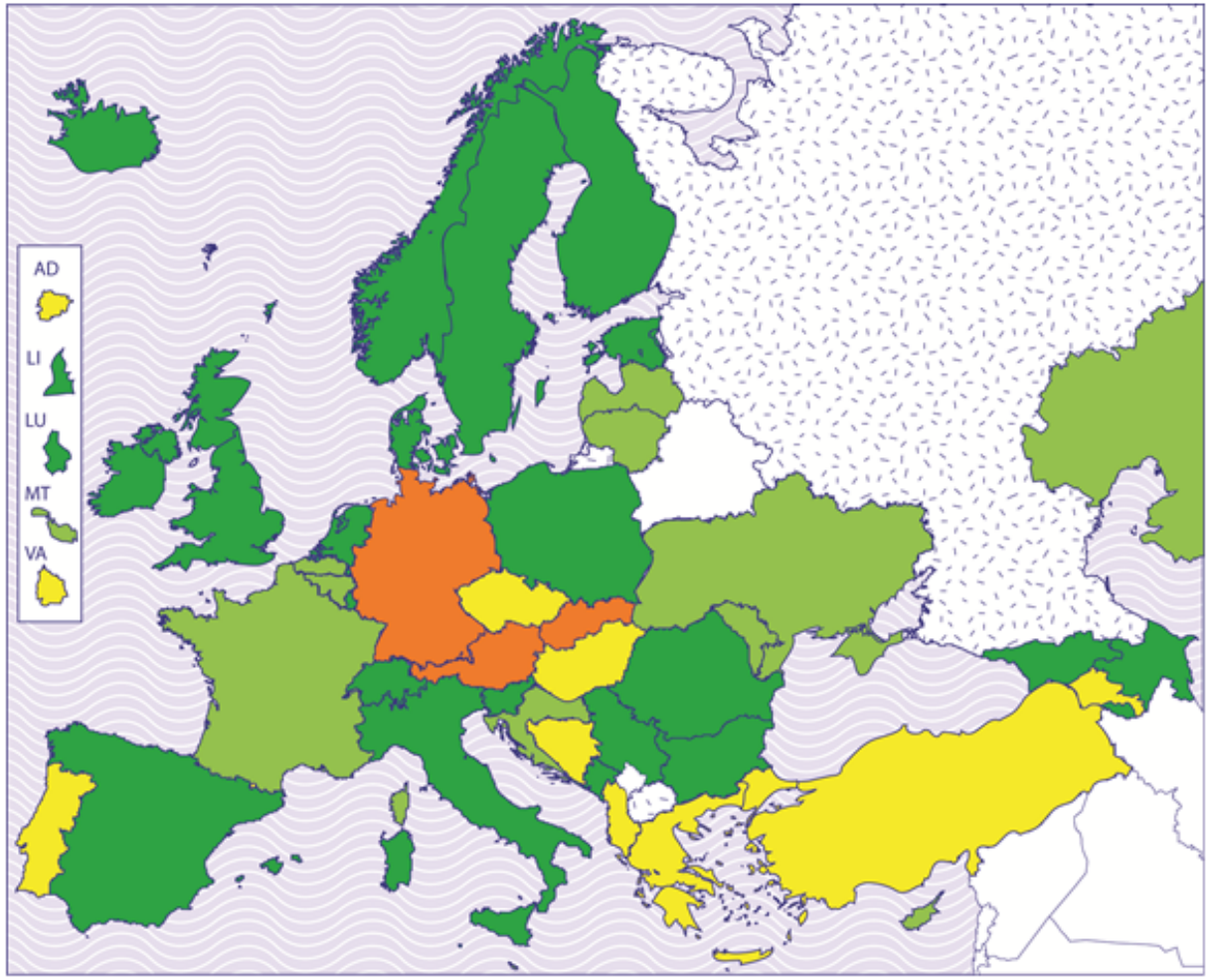


> 75-100 %
> 50-75 %
> 25-50 %
> 10-25 %
> 5-10 %
> 0-5 %
0 %
Data not available

Source: BFUG questionnaire

European Commission

Scorecard indicator n°8: Stage of implementation of ECTS system, 2010/11



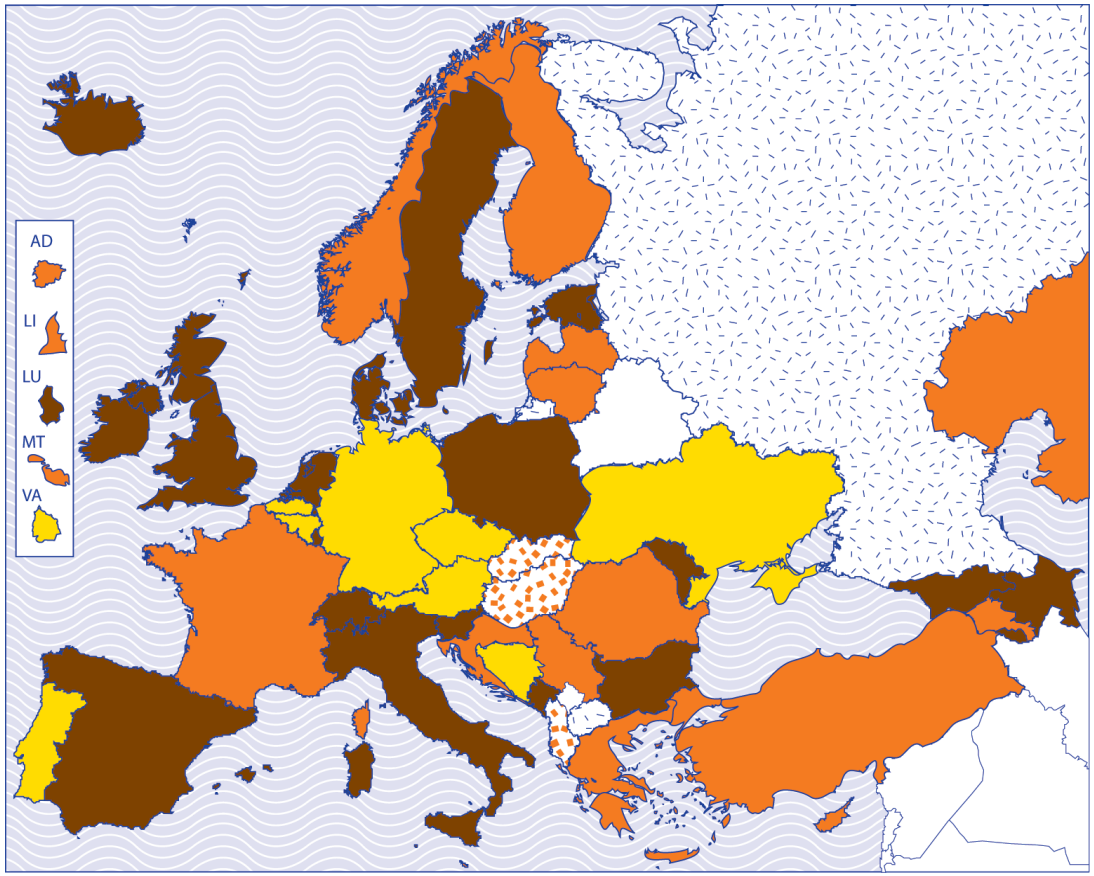
	2012 Report*	2009 Report**
	23	21
	11	18
	10	7
	3	2
	0	0

Data not available

* *Source:* BFUG questionnaire, 2011.

** *Source*: Rauhvargers, Deane & Pauwels, 2009.

Linking ECTS and learning outcomes



No programmes

<5 % programmes

5-49 % of programmes

50-99 % of programmes

All of programmes

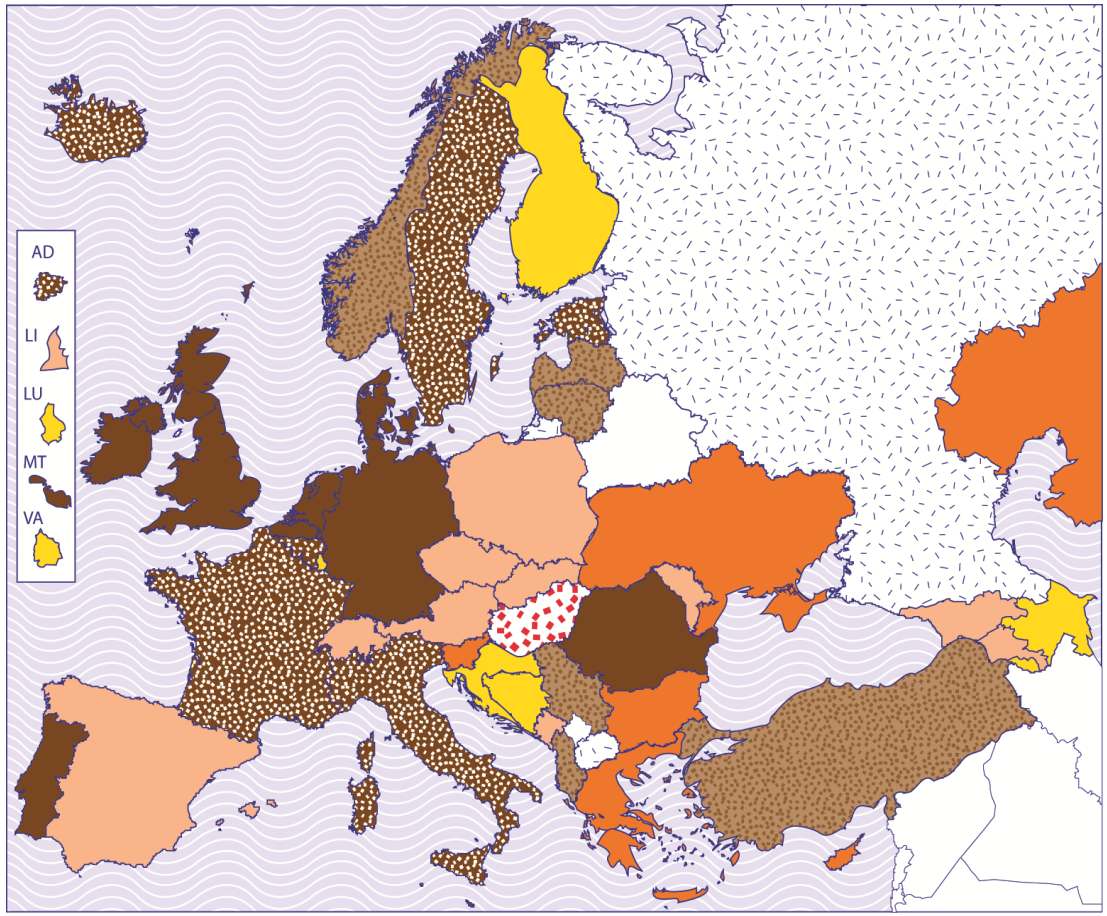
Data not available

Source: BFUG questionnaire

European Commission

Qualifications frameworks

10 HE systems have finished: Benl, DE, DK, IE, MT, NL, PT, RO, Ukewni,UKsc
13 more countries have potential to complete by the end of 2012



- **1 - 4. steps 1 to 4**
- **5. Design of the NQF agreed**
- **6. NQF adopted in legislation**
- **7. Implementation of NQF started**
- **8. Study programmes re-designed on the basis of learning outcomes**
- **9. Qualifications included in the NQF**
- **10. The Framework has self-certified compatibility with European Framework for Higher Education**

Source: BFUG questionnaire.

Data not available

European Commission

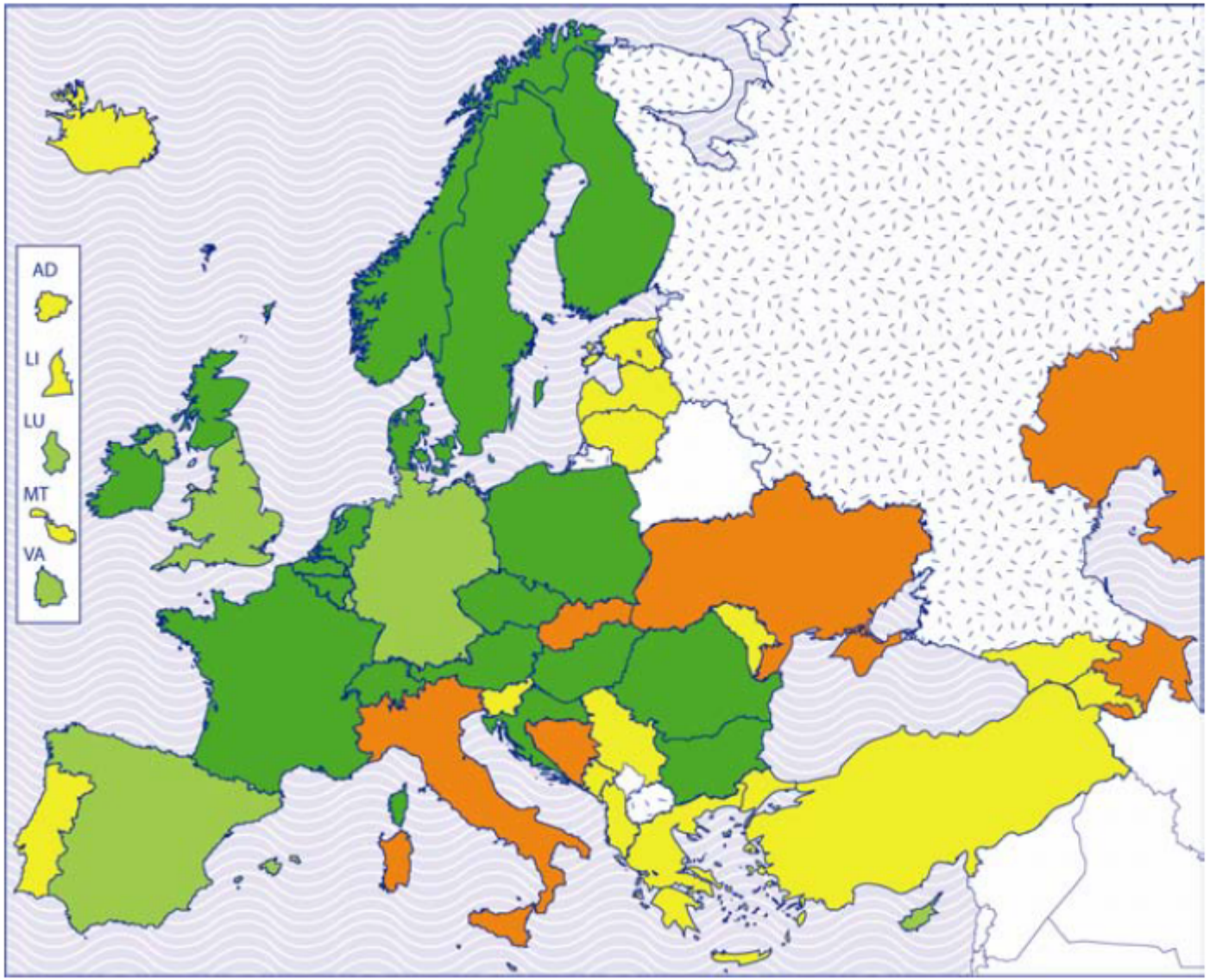
Recognition – implementation of the Lisbon Recognition Convention (LRC)

- Most questions that Bologna Secretariat receives are on recognition
- Despite the ratification of LRC, actual implementation needs to be improved
- In >30 countries decision on academic recognition lies within HEIs
- Government representatives often claim that autonomy of HEIs is the reason why state cannot ensure implementation of LRC legal framework

Quality Assurance

- Enormous progress in establishing QA systems since 1999
- EQAR progressing rapidly (28 agencies, 13 countries)
- Challenges & questions:
  - Only in 22 countries agencies are ENQA full members
  - 11 countries do not have established a QA agency.
    4 countries are small and therefore use foreign agencies, but the remaining 7?
  - International cooperation: despite EQAR, many countries do not allow their HEIs to be evaluated by foreign agencies under equal conditions
  - Assessment of research?

Scorecard indicator n°4: Stage of development of external quality assurance system 2010/11



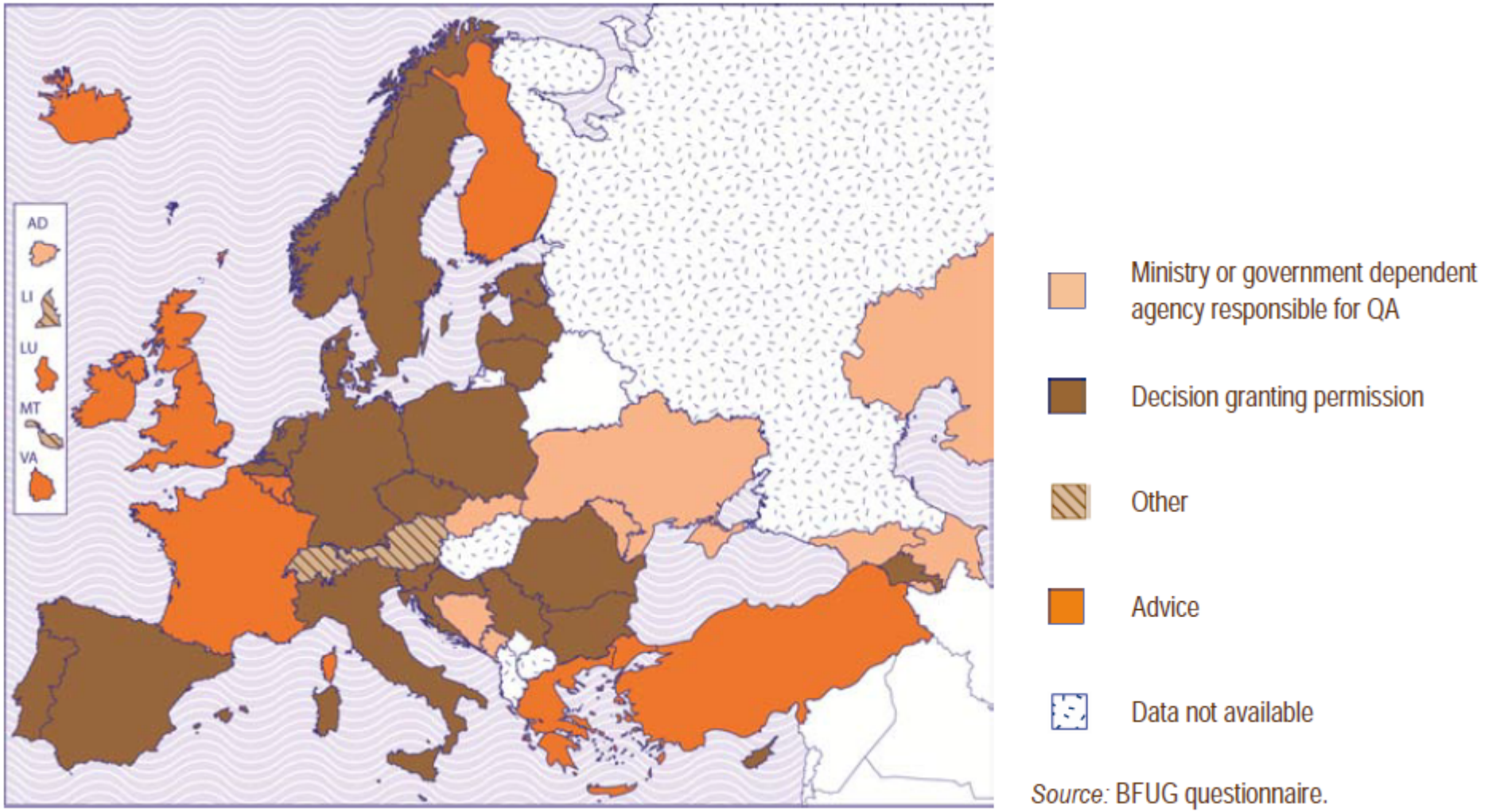
	2012 Report*	2009 Report**
	18	16
	6	17
	17	14
	6	1
	0	0

Data not available

* *Source:* BFUG questionnaire, 20

** *Source*: Rauhvargers, Deane & 2009.

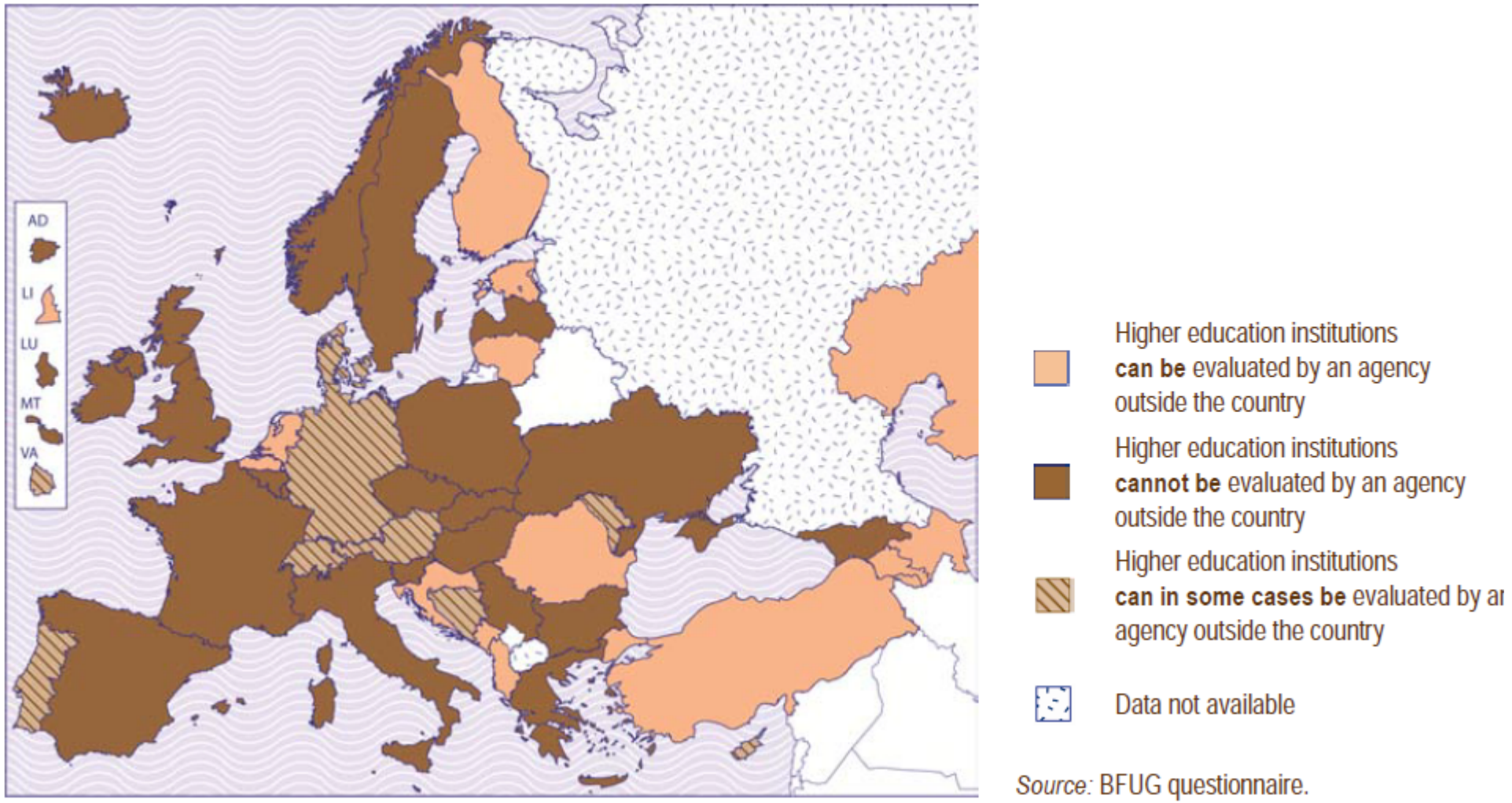
Main outcome of **external** evaluation, 2010/11



Majority of agencies do both programme AND institutional assessment

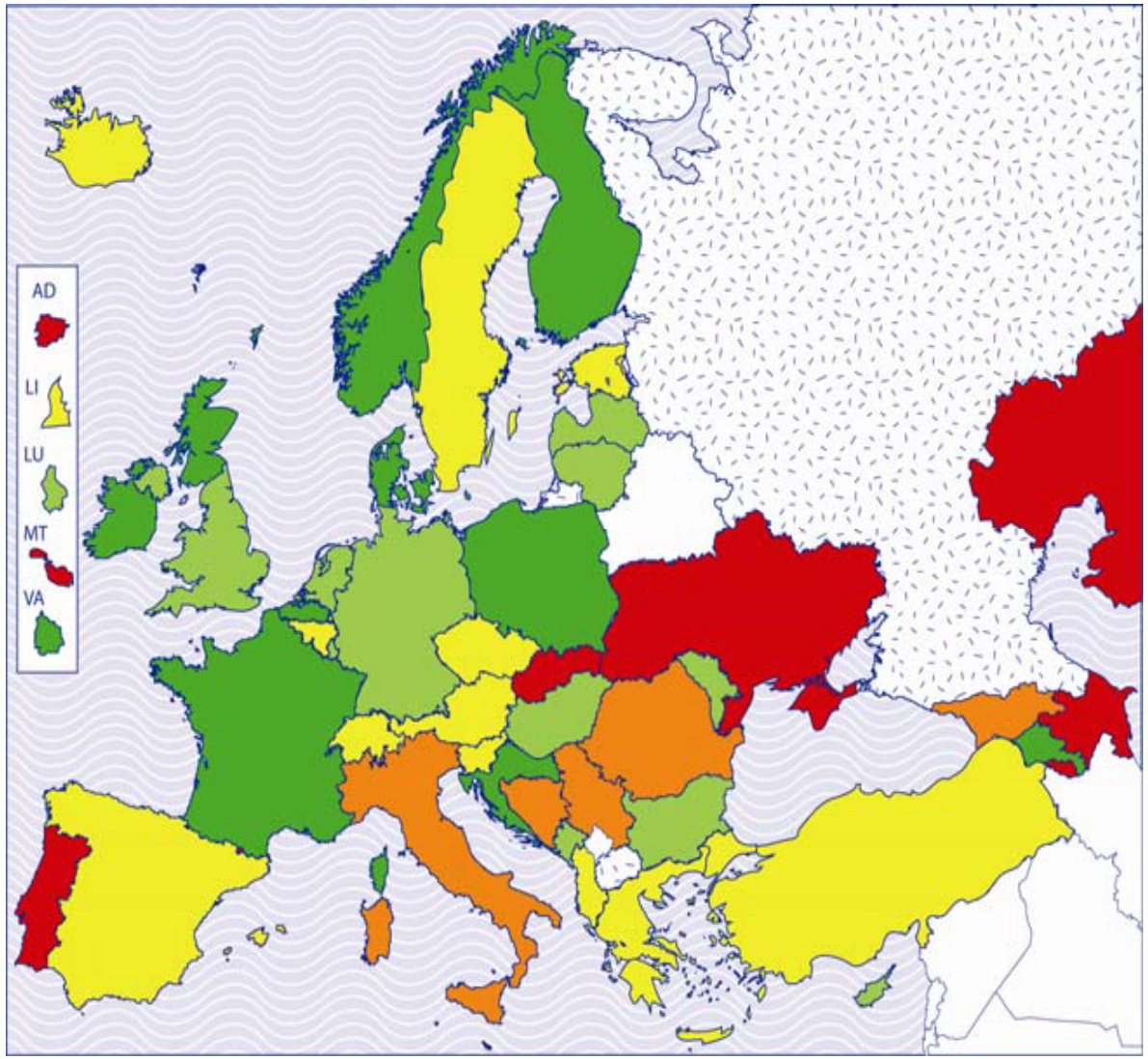
21 – permission, 11- advice, 9- ministry -dependent

Ability for HEIs to be evaluated by an **agency outside the country**, 2010/11



Source: BFUG questionnaire.

Level of student participation in QA:



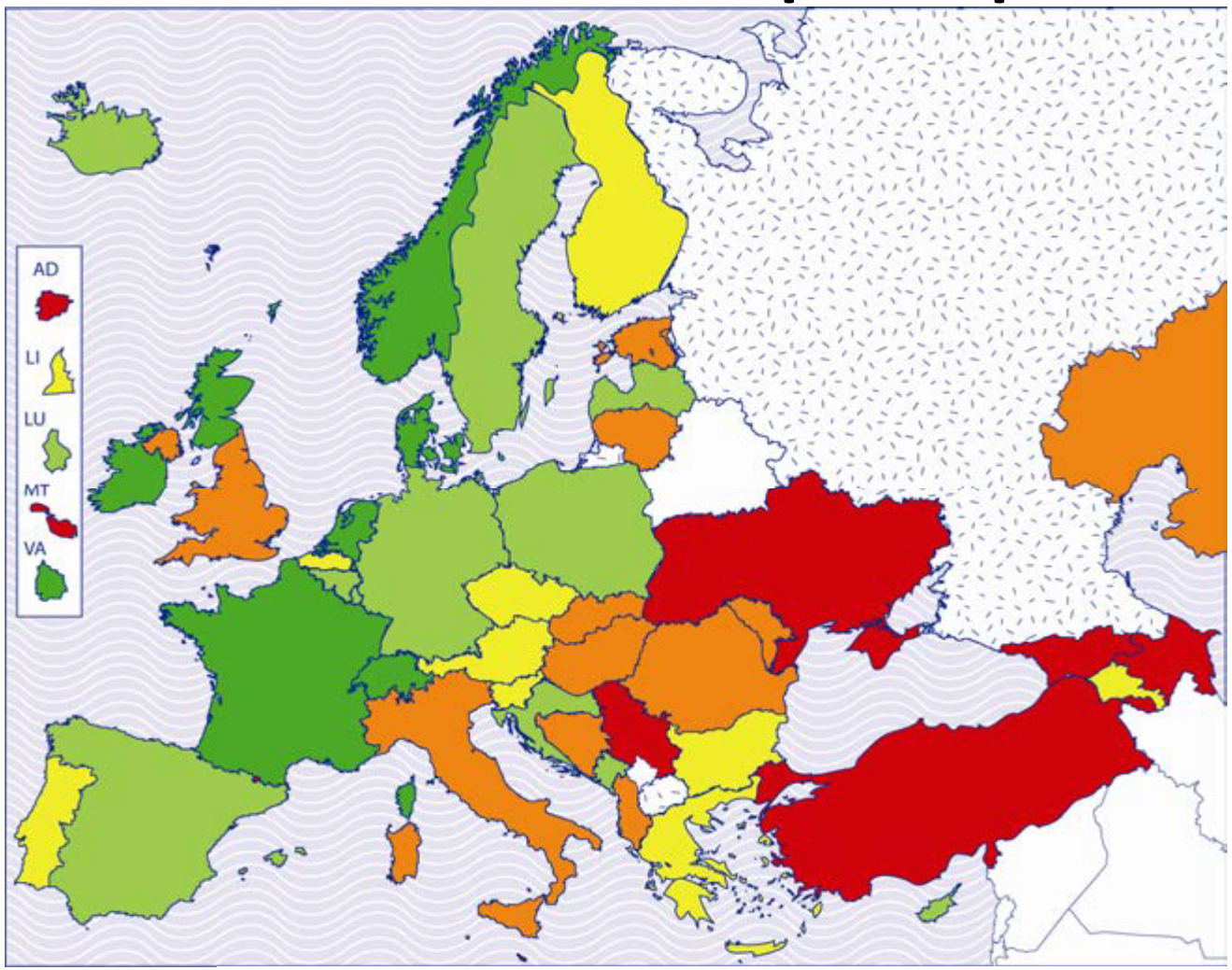
	2012 Report*	2009 Report**
	11	19
	11	16
	13	7
	5	4
	7	2

Data not available

* *Source:* BFUG questionnaire, 2011.

* *Source*: Rauhvargers, Deane & Pauwels,

Level of international participation in external QA



	2012 Report*	2009 Report**
	8	16
	11	12
	10	4
	11	14
	7	2

Data not available

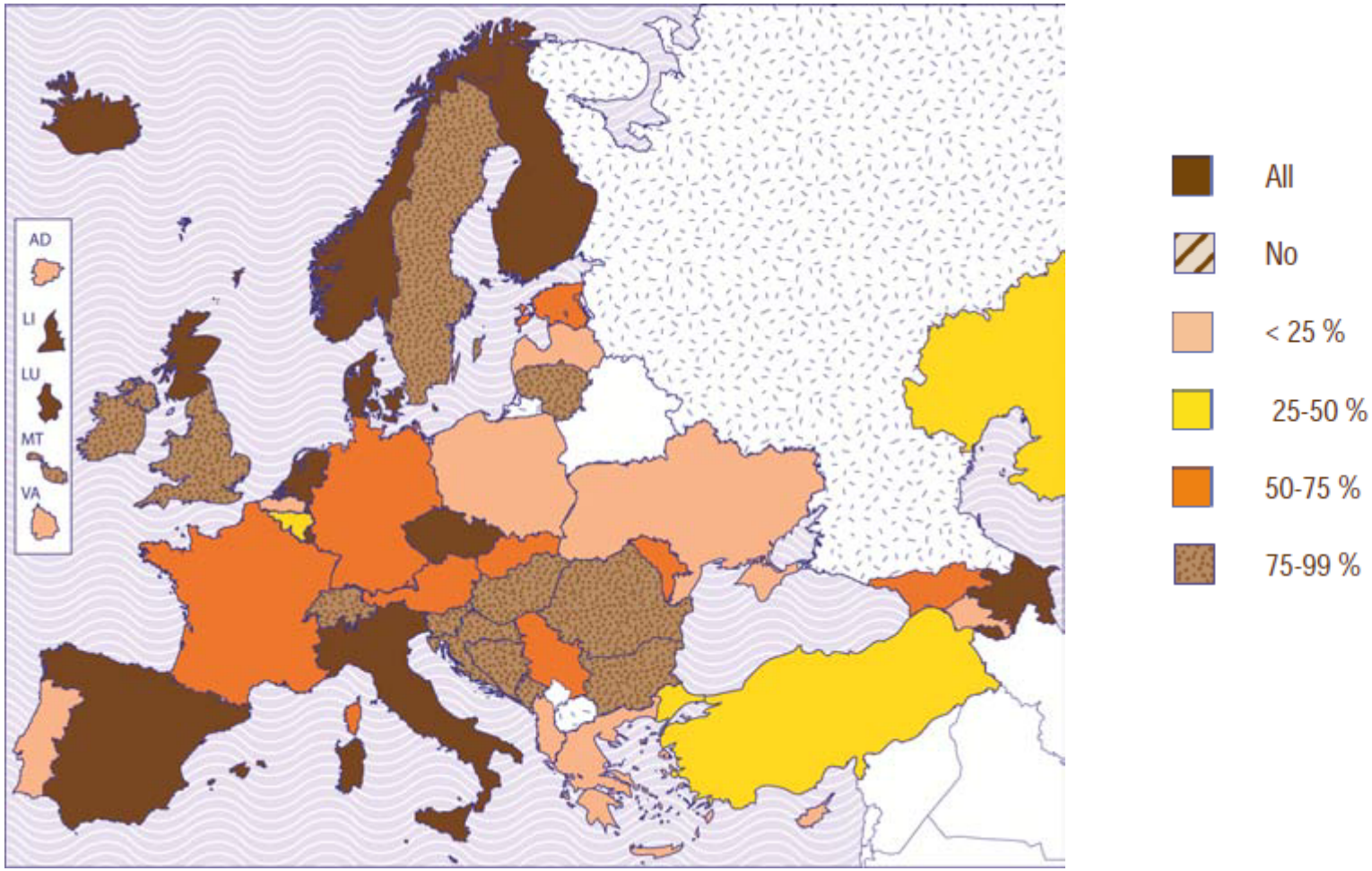
* *Source:* BFUG questionnaire, 2011.

** *Source*: Rauhvargers, Deane & Pauwels, 2009.

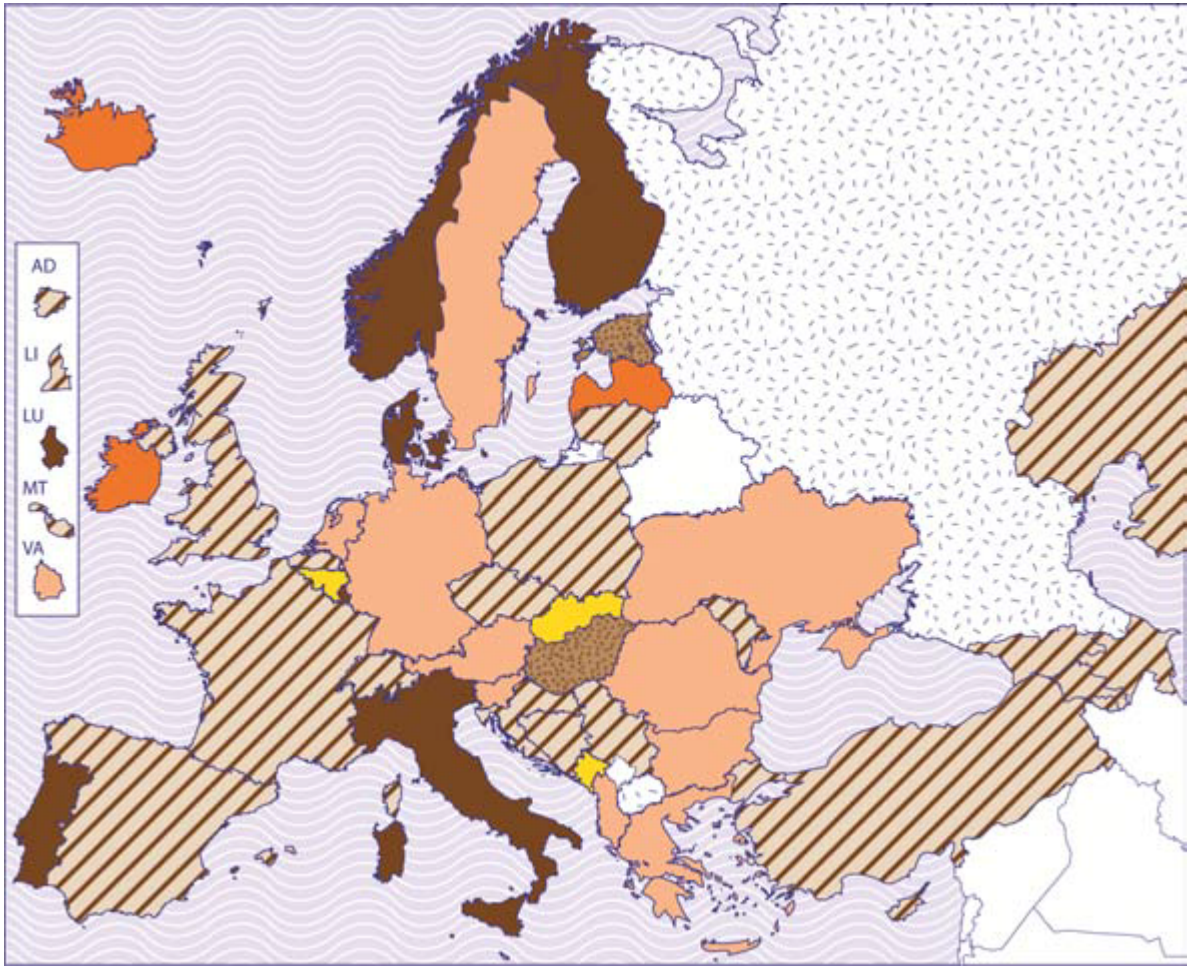
In all cases the following four aspects are met:

- agencies are full members of ENQA and/or listed on EQAR
- international peers/expert participate in governance of national QA bodies
- international peers/experts participate as members/observers in evaluation teams
- international peers/experts participate in follow-up procedures

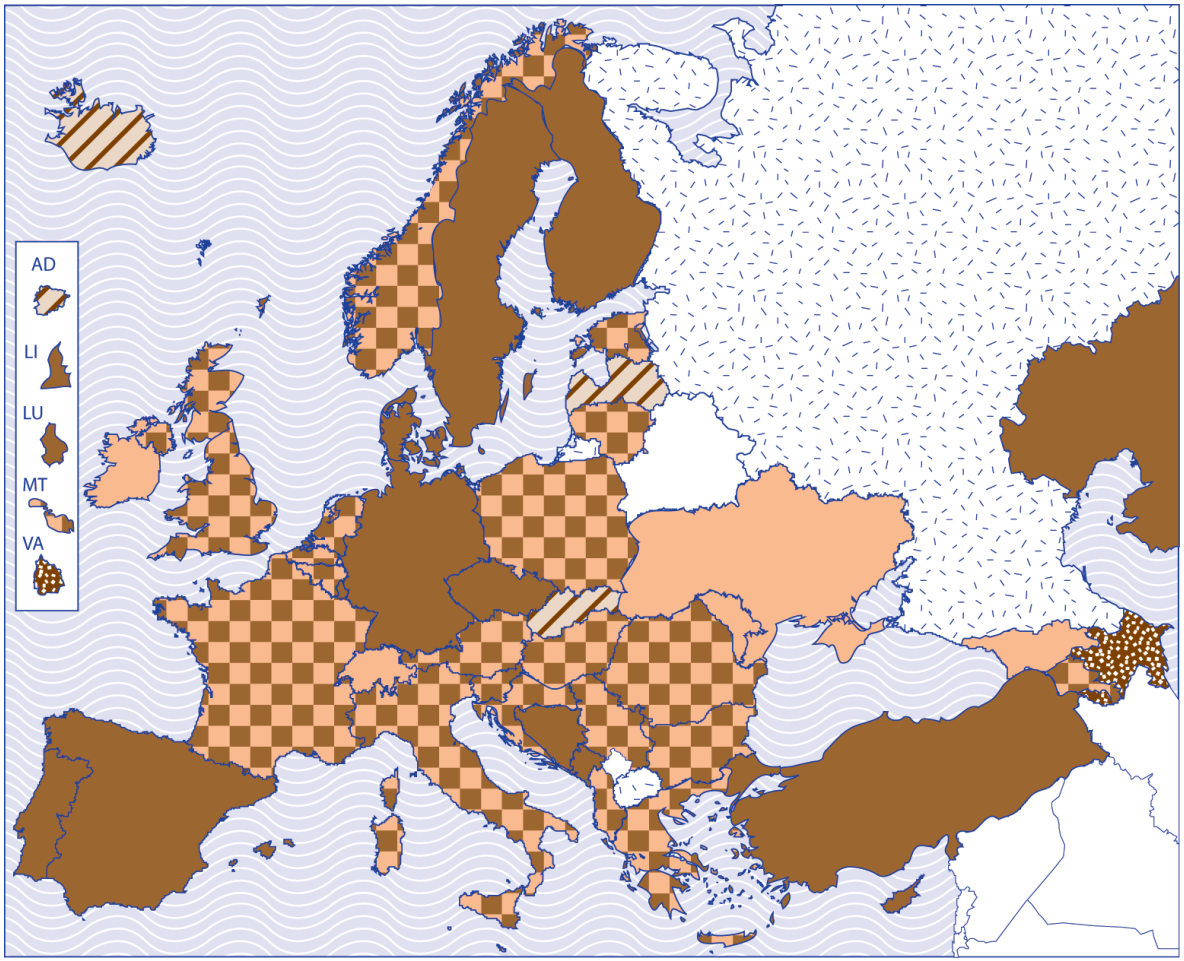
Publication of institutional strategies for continuous quality enhancement in the past 5 years, 2010/11



Publication of critical and negative outcomes by higher education institutions, 2010/11



National policy approaches to widening participation in higher education, 2010/11



Under-represented groups are identified and targeted measures are taken

General policy approach to increase and widen participation in HE

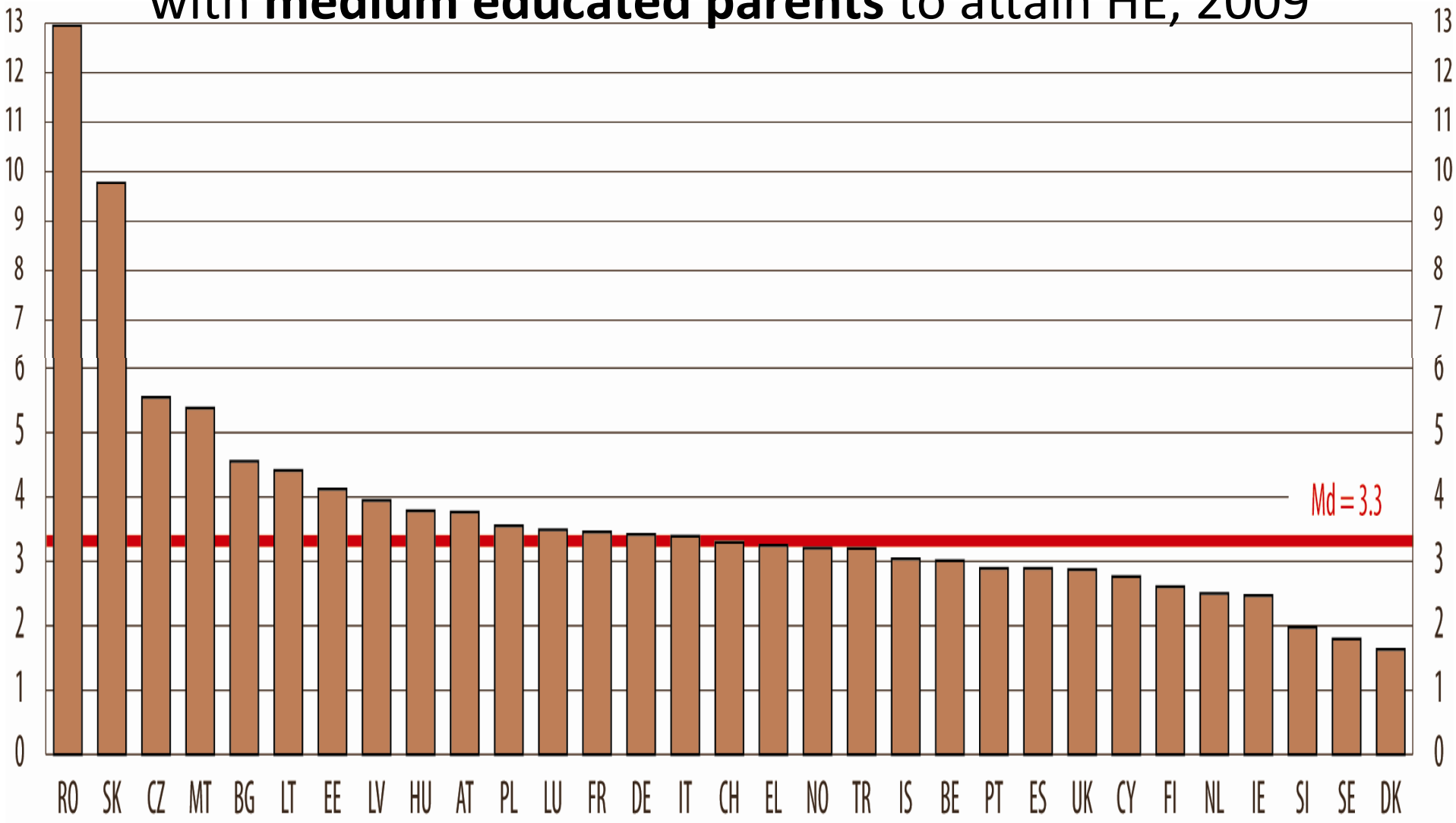
Countries not reflecting the goal of widening participation

Data not available

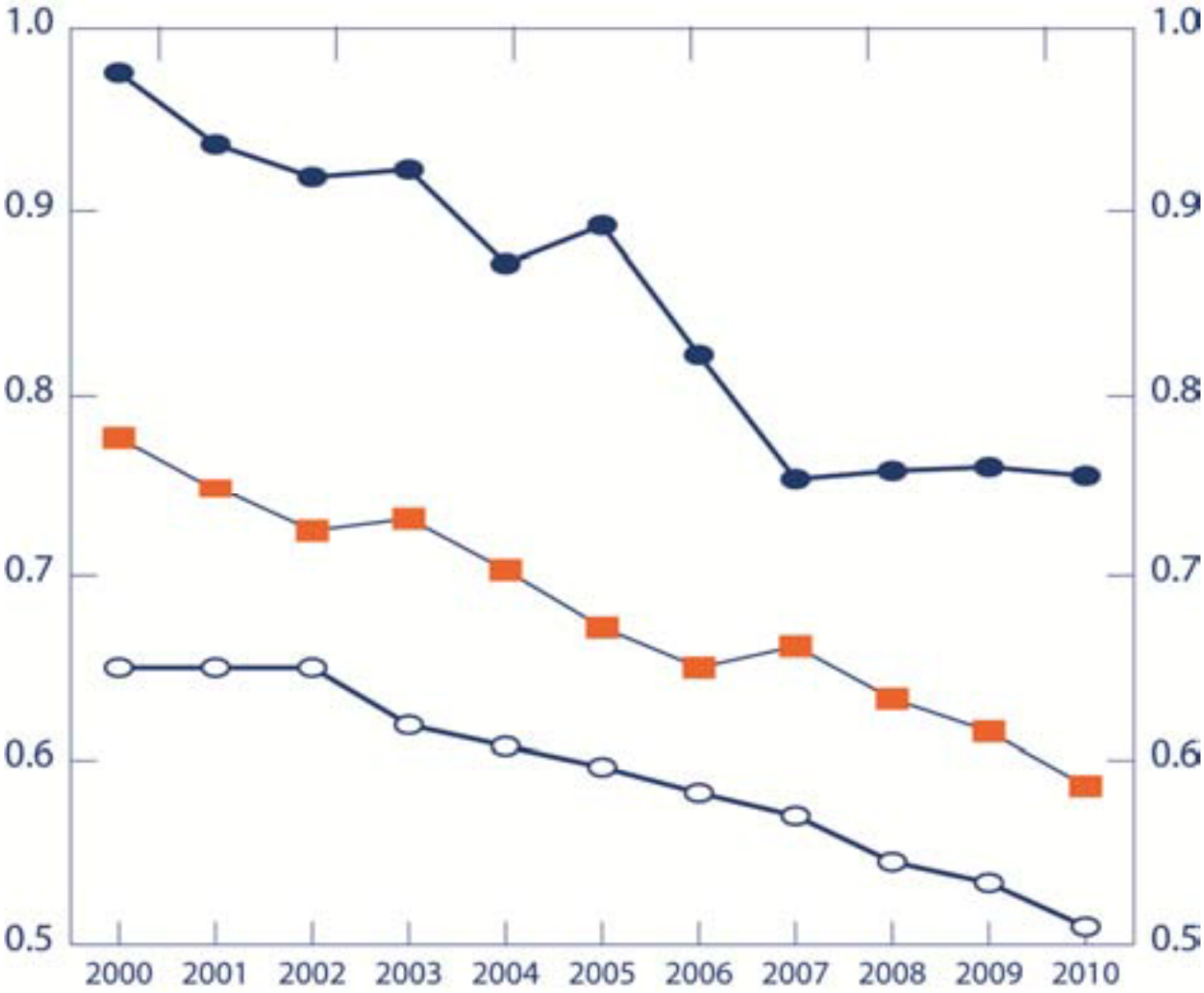
Source: BFUG questionnaire

European Commission

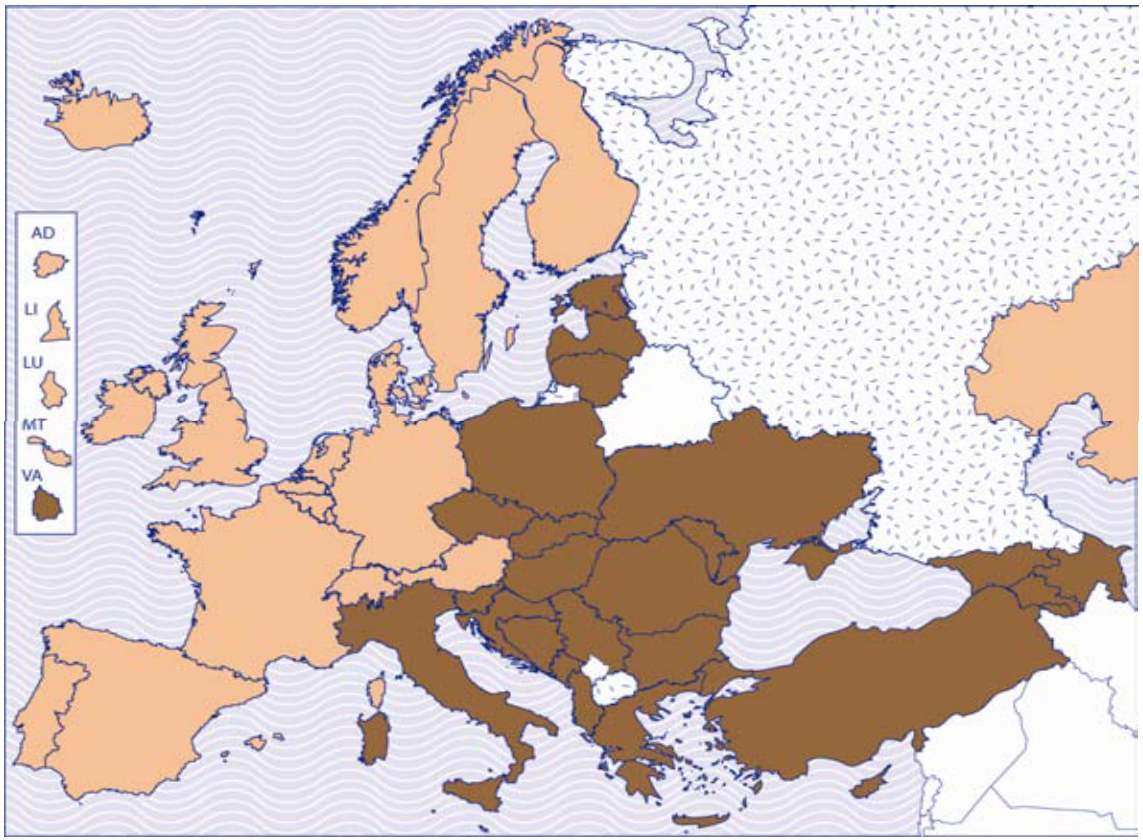
Attainment by educational background: students with **highly educated parents** over students with **medium educated parents** to attain HE, 2009



Attainment by gender: odds ratios of **men over women** to attain higher education, 2000-2010



Alternative routes to higher education for non-traditional candidates, 2010/11



Alternative routes exist

No alternative route

Data not available

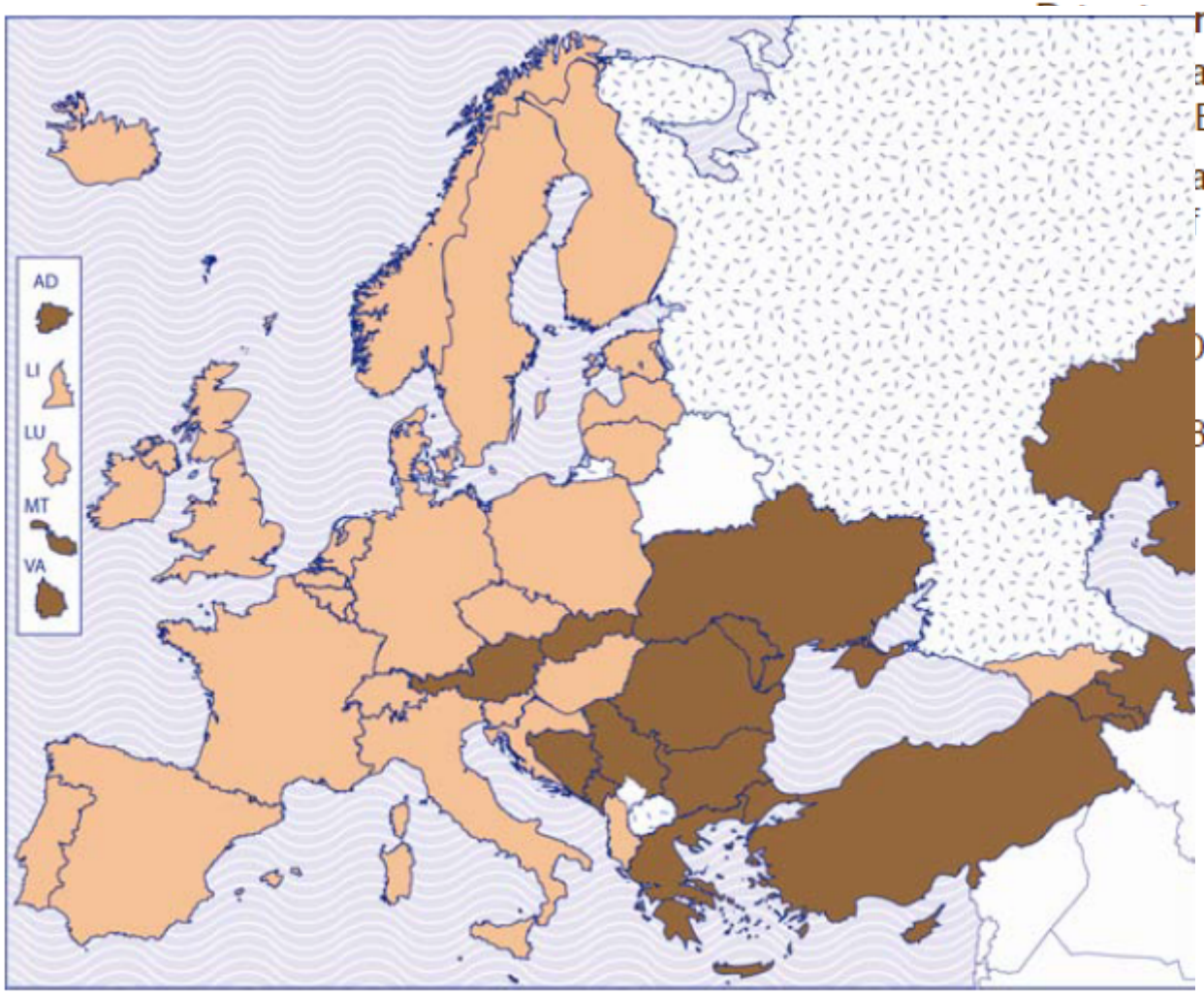
Source: BFUG questionnaire.

non-traditional candidates accepted:

NO, EE, MT, PT, ES, PT, **>10%**

FI, IE **>20%;** UKewni, SE **>25%**

Recognition of prior learning for progression in higher education studies, 2010/11



rning

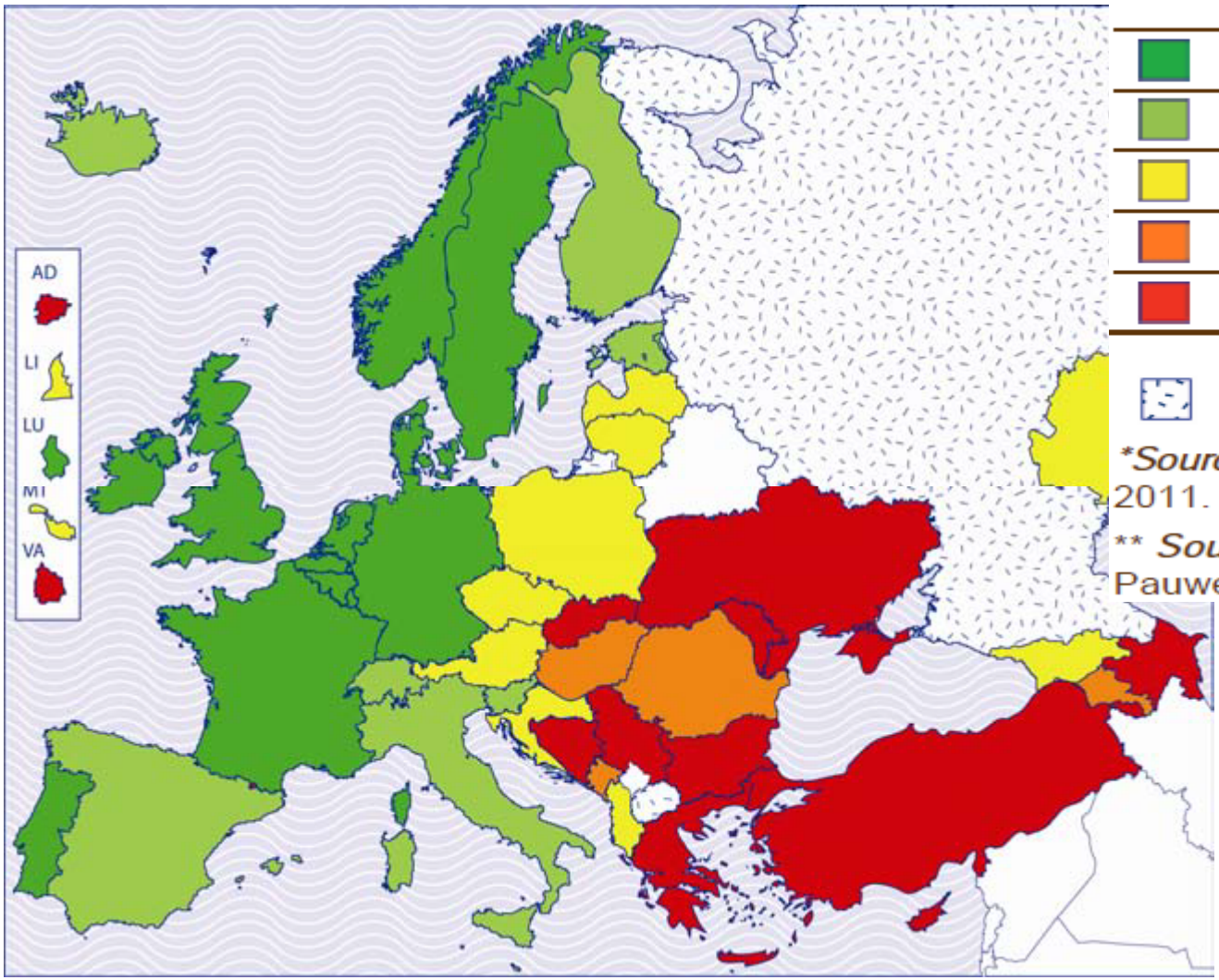
an be used towards fulfilment of a
E study programme

annot be used towards fulfilment
a HE study programme

Data not available

BFUG questionnaire.

Scorecard indicator n°9: Recognition of prior learning, 2010/11*



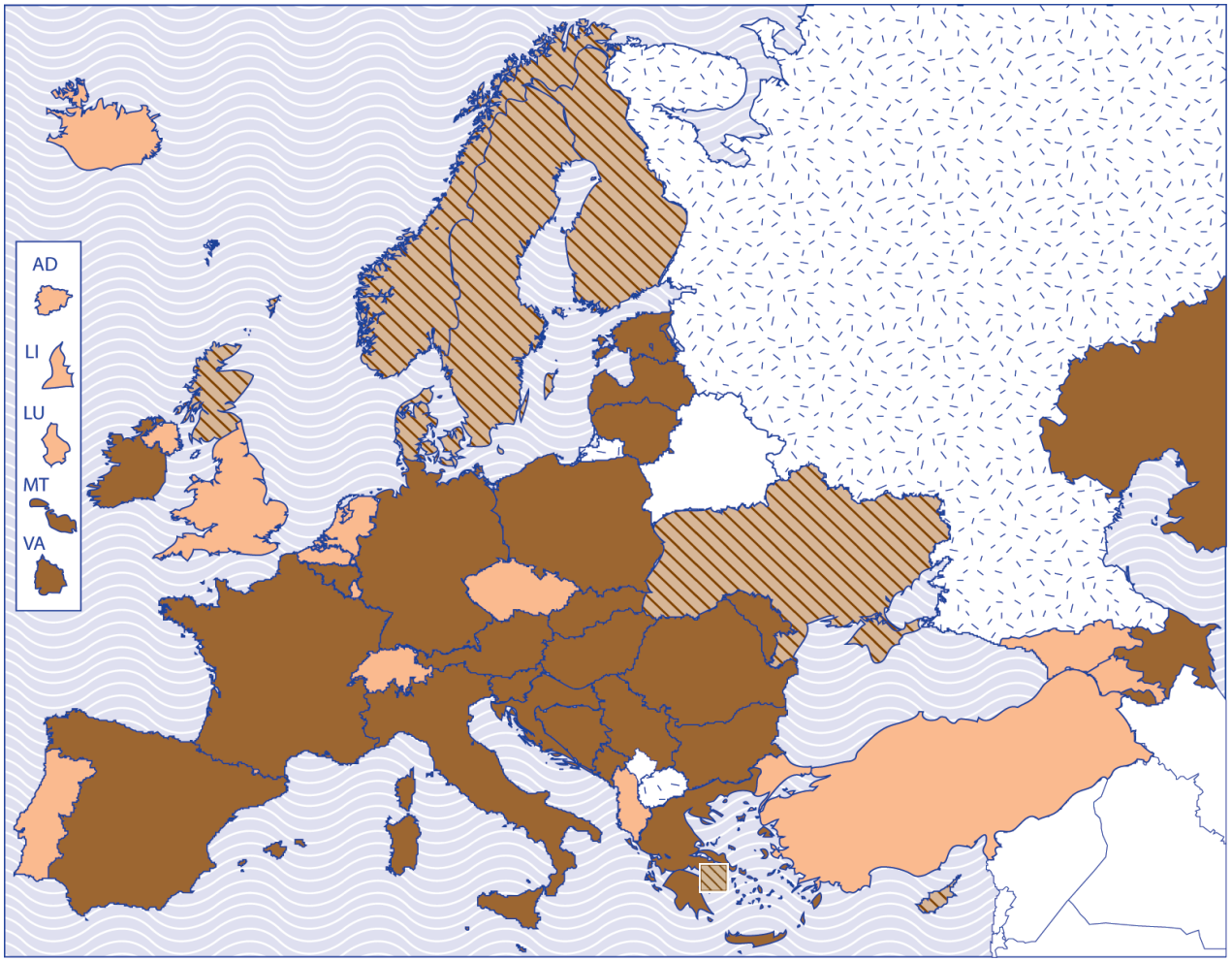
	2012 Report*	2009 Report**
	13	19
	7	4
	11	9
	4	10
	12	6

Data not available

**Source:* BFUG questionnaire, 2011.

** *Source:* Rauhvargers, Deane & Pauwels, 2009.

Fees in the first cycle



All students pay fees

Some students pay fees

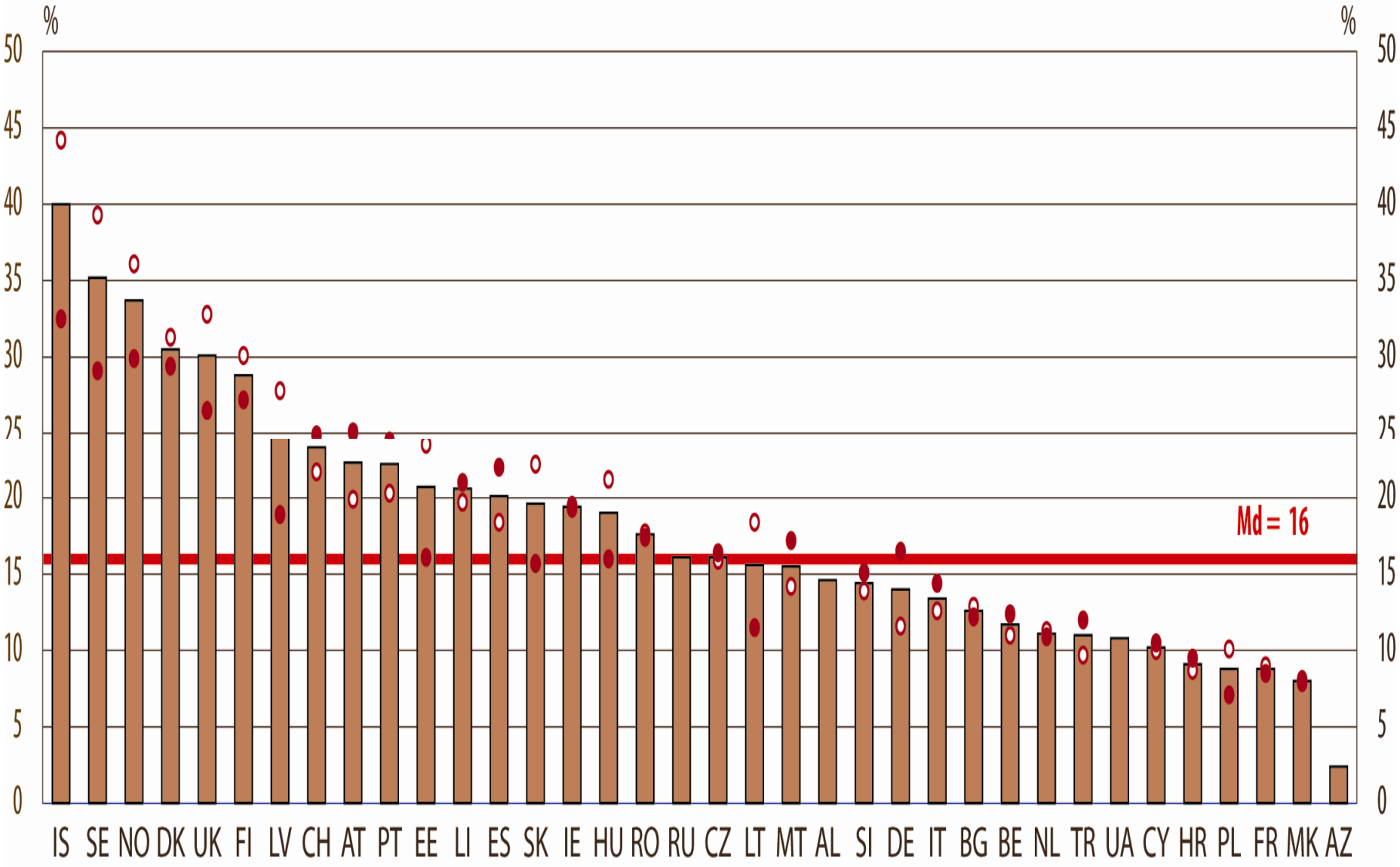
No students pay fees

Data not available

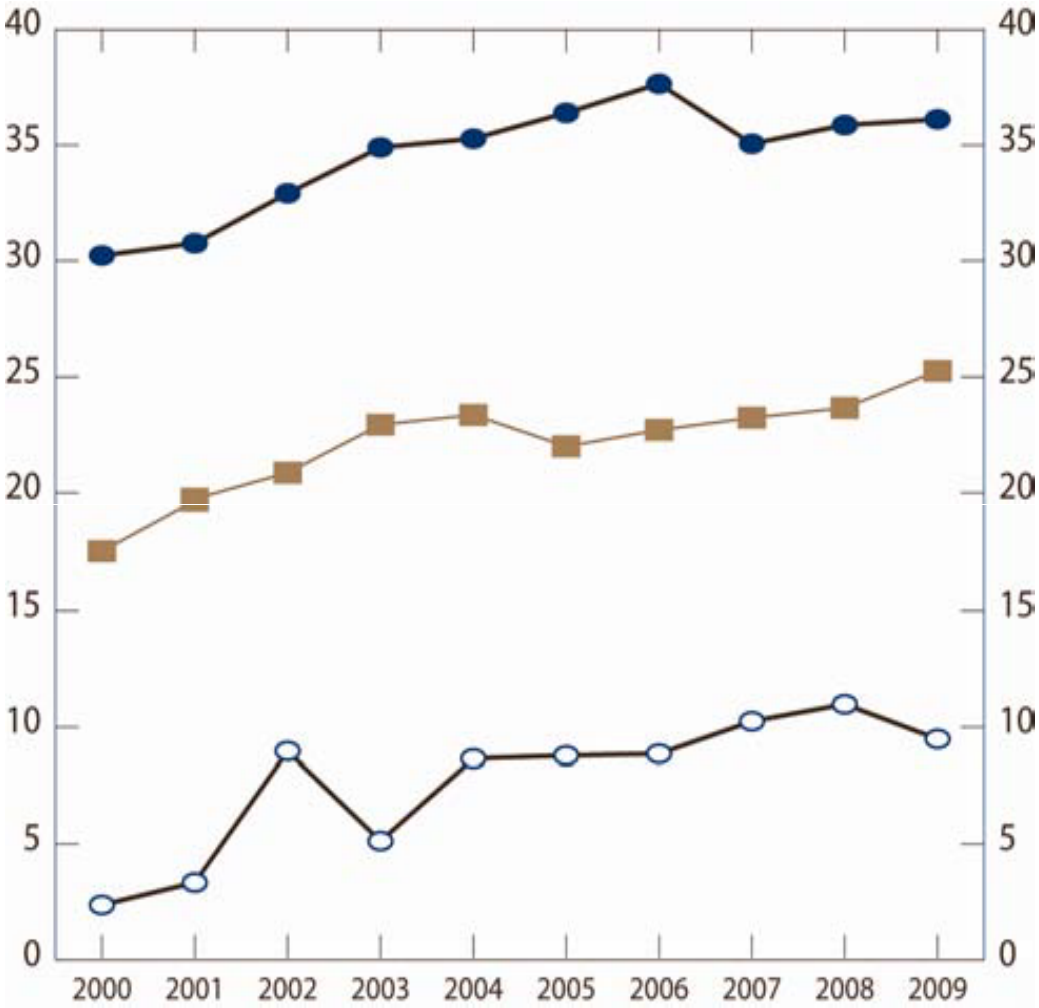
Source: BFUG questionnaire

European Commission

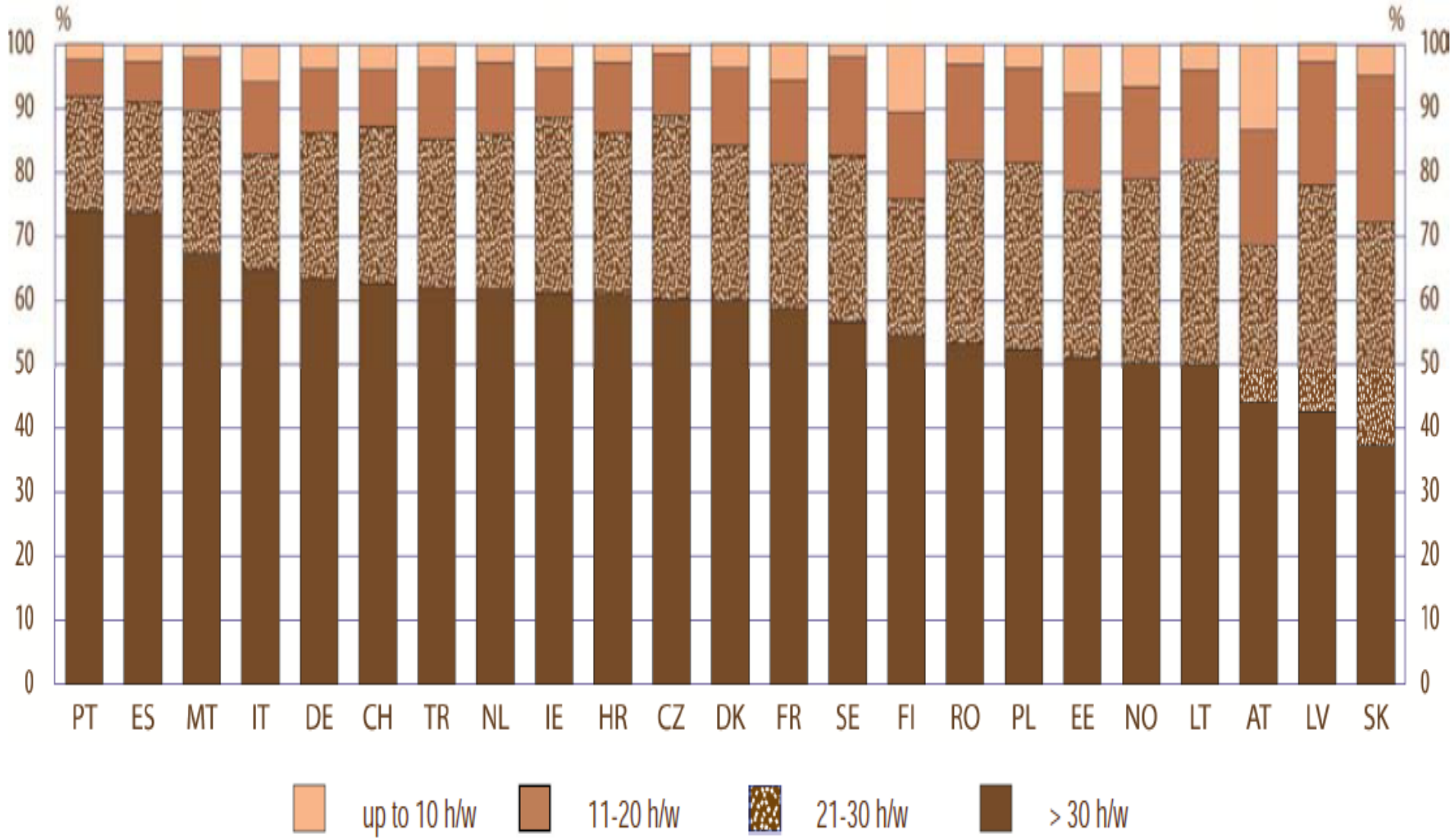
Students enrolled in tertiary education, total and by gender, 30 or more years old, 2008/09



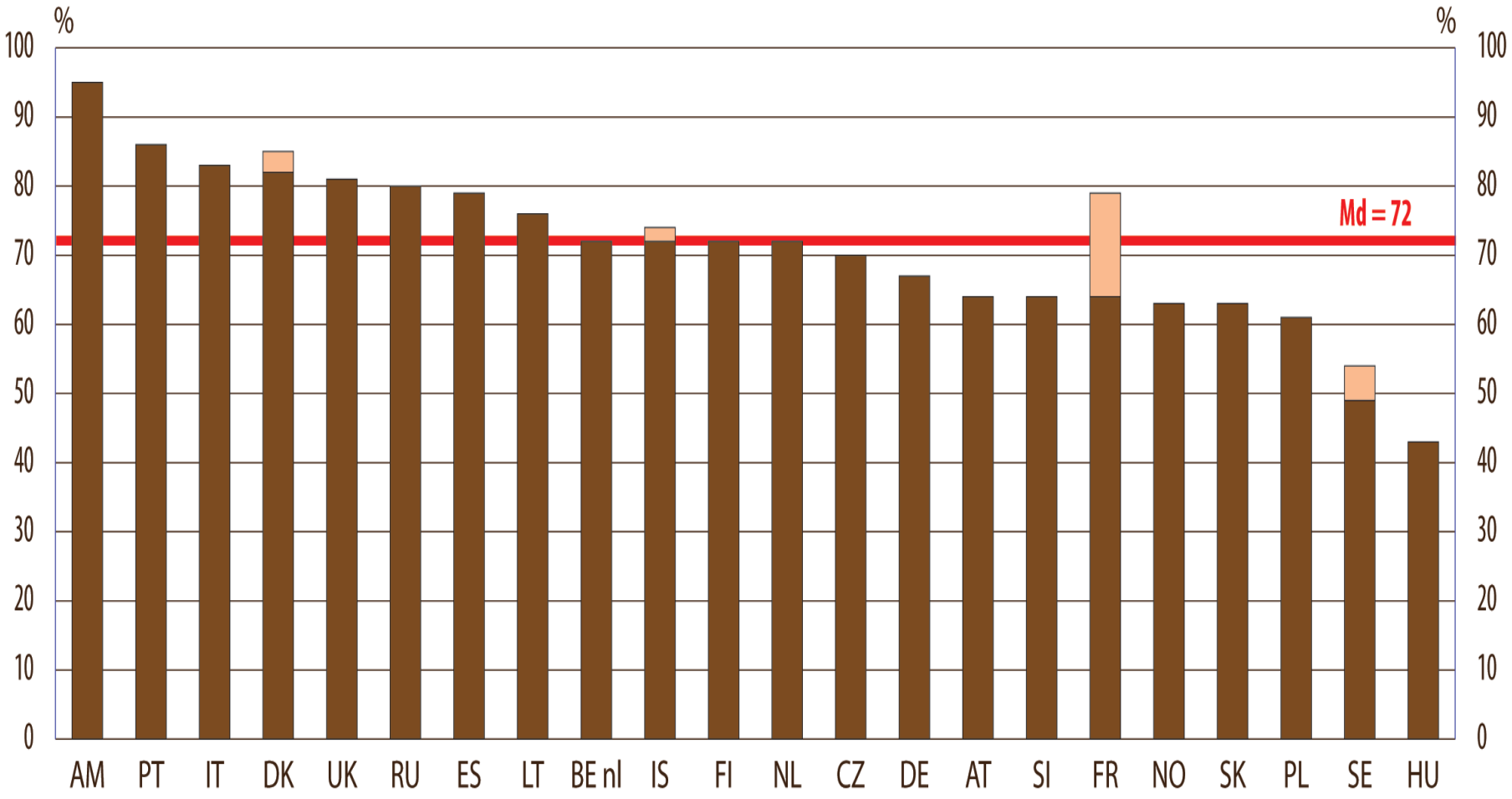
% of students studying part-time in tertiary educaton, by year, 2000-2009



Full-time students by hours spent on study-related activities in a typical week in %, 2009/10



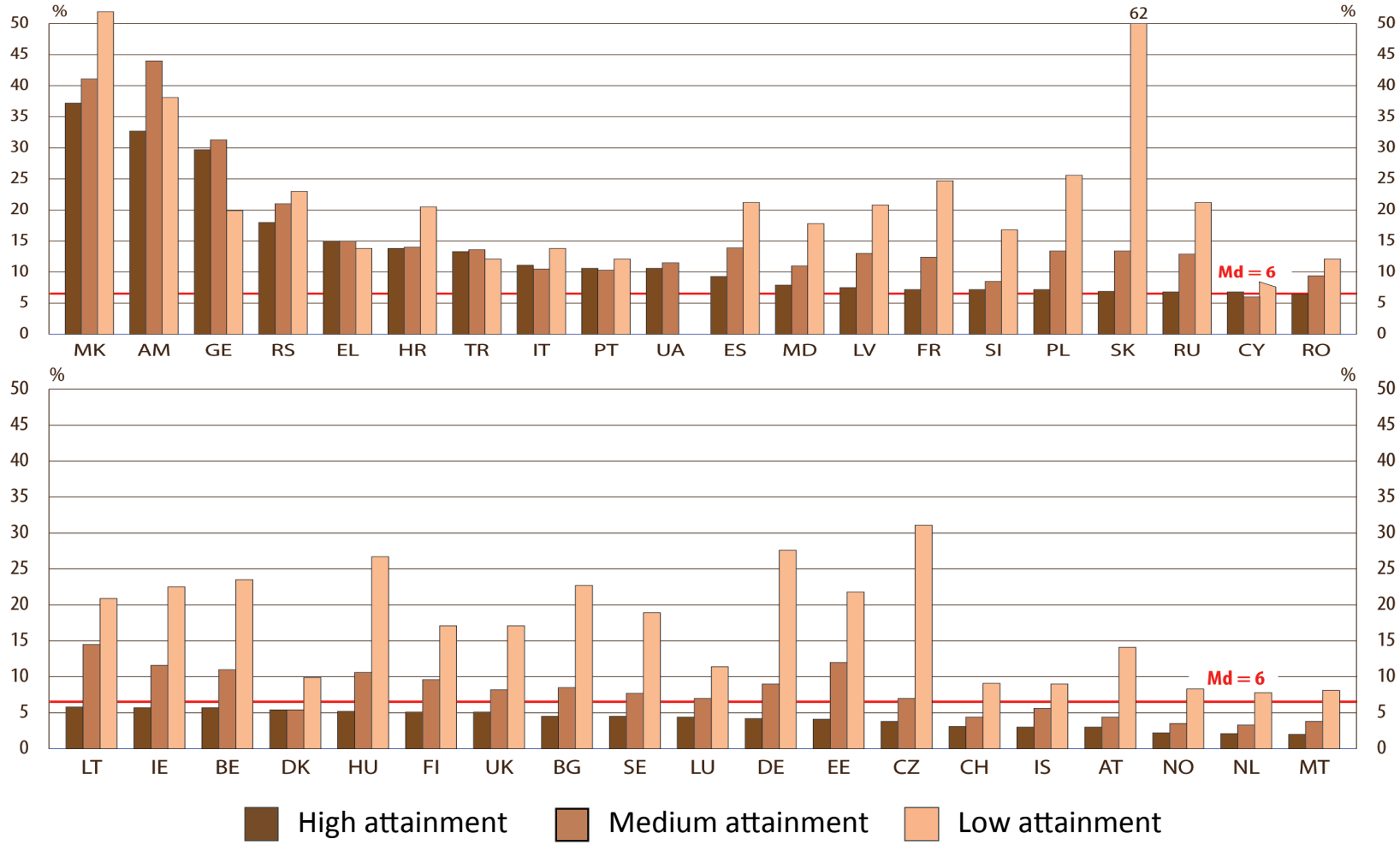
Completion rates



Source: Eurostat, UOE ad-hoc module on completion rates

European Commission

Unemployment ratio of people 20-34 by educational attainment level, average 2006/2010



Source: Eurostat, Labour Force Survey (LFS)

European Commission

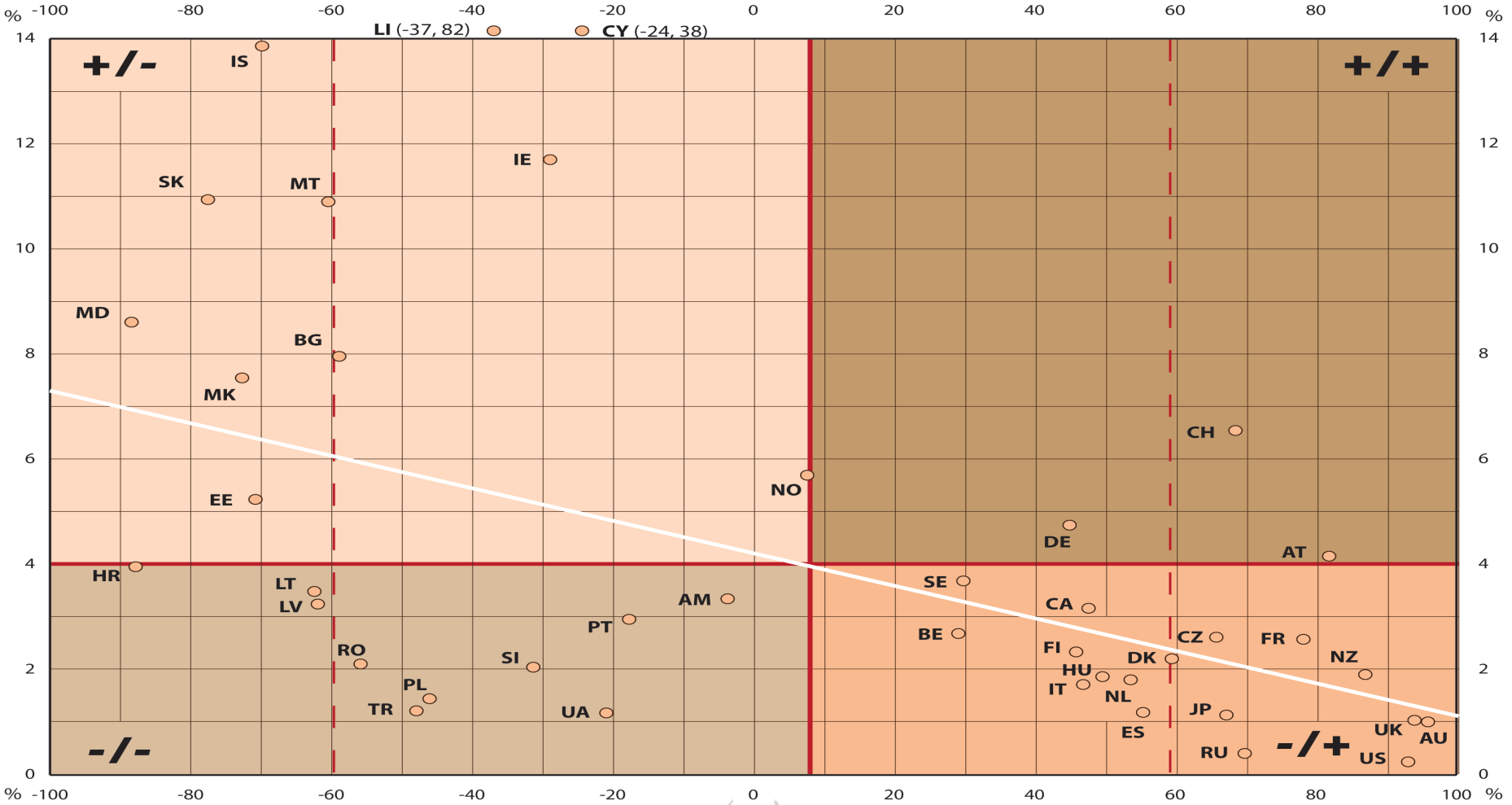
Mobility: « Attractiveness » of EHEA

(high outward and negative balance)

(high outward and positive balance)

"Limited" systems

"Open" systems



"Closed" systems

(low outward and negative balance)

European Commission

"Attractive" systems

(low outward and positive balance)

Bucharest Communique

- **Europe is undergoing an economic and financial crisis** with damaging societal effects.
- **HE is an important part of the solution** to our current difficulties, it should be at the heart of our efforts to overcome the crisis – now more than ever.
- **We commit to securing the highest possible level of public funding for higher education and drawing on other appropriate sources, as an investment in our future.**
- We confirm our **commitment to public responsibility for HE**.
- We recognise the importance of **developing appropriate funding instruments** to pursue our common goals.
- We stress the importance of **more efficient governance and managerial structures at HEIs**.

Priorities

- Strengthen policies of **widening access and raising completion rates**;
- Establish conditions that **foster student-centred learning**, innovative teaching methods;
- **Allow EQAR-registered QA agencies to perform their activities across the EHEA**, while complying with national requirements;
- **Enhance employability**, **LLL, entrepreneurial skills** through improved cooperation with employers, especially in the development of educational programmes;
- Ensure that **NQFs, ECTS implementation and DS is based on learning outcomes**;

Priorities 2

- Countries that cannot finalise the implementation of NQFs by the end of 2012 to **redouble their efforts and submit a roadmap for this task**;
- **Implement the strategy "Mobility for better learning"**;
- Promote quality, transparency, employability and mobility **in the third cycle**, **building additional bridges between the EHEA and the ERA;**

Priorities 3

- Work to ensure that the ECTS Users' Guide fully reflects the state of on-going work **on learning outcomes** and **recognition of prior learning**;
- Explore how the QF-EHEA could take **account of short cycle qualifications in national contexts**;
- **We will revise the ESG** to improve their clarity and usefulness.
  Proposal to be prepared by the
  E4 group + EI, BUSINESSEUROPE and EQAR

Priorities 4

- Examine national rules and practices relating to **joint programmes & degrees**
- Support the work to **explore ways** to achieve the **automatic academic** recognition of comparable degrees;
- **Review our national legislation** to comply with the Lisbon Recognition Convention.
- **Implementation** of the European Area of Recognition **(EAR) Manual**
- Encourage HEIs and QA agencies **to assess institutional recognition procedures in internal and external QA**.

Priorities 5

- We will strive to make higher education systems **easier to understand** for the public, and especially for students and employers.
- We will support the improvement of current and developing **transparency tools** in order to make them more user-driven and to ground them on empirical evidence.
- We aim to reach an agreement on **common guidelines for transparency** by 2015.

Reporting Working Group chairs:

Germain Dondelinger, Luxmbourg, **Andrejs Rauhvargers, Latvia**

Authors of the report

EACEA/Eurydice:	David Crosier, Anna Horvath, Viera Kerpanova, Daniela Kocanova, Teodora Parveva, Simon Dalferth
Eurostat:	Lene Mejer, Fernando Reis;
Eurostudent:	Dominic Orr;
BFUG Reporting Working Group:	Andrejs Rauhvargers

1st International Week
Riga Technical University

Communication and Managing Conflict

Lecturer: Peter Mensah
email: p_mensah@hotmail.com

29/05/2012

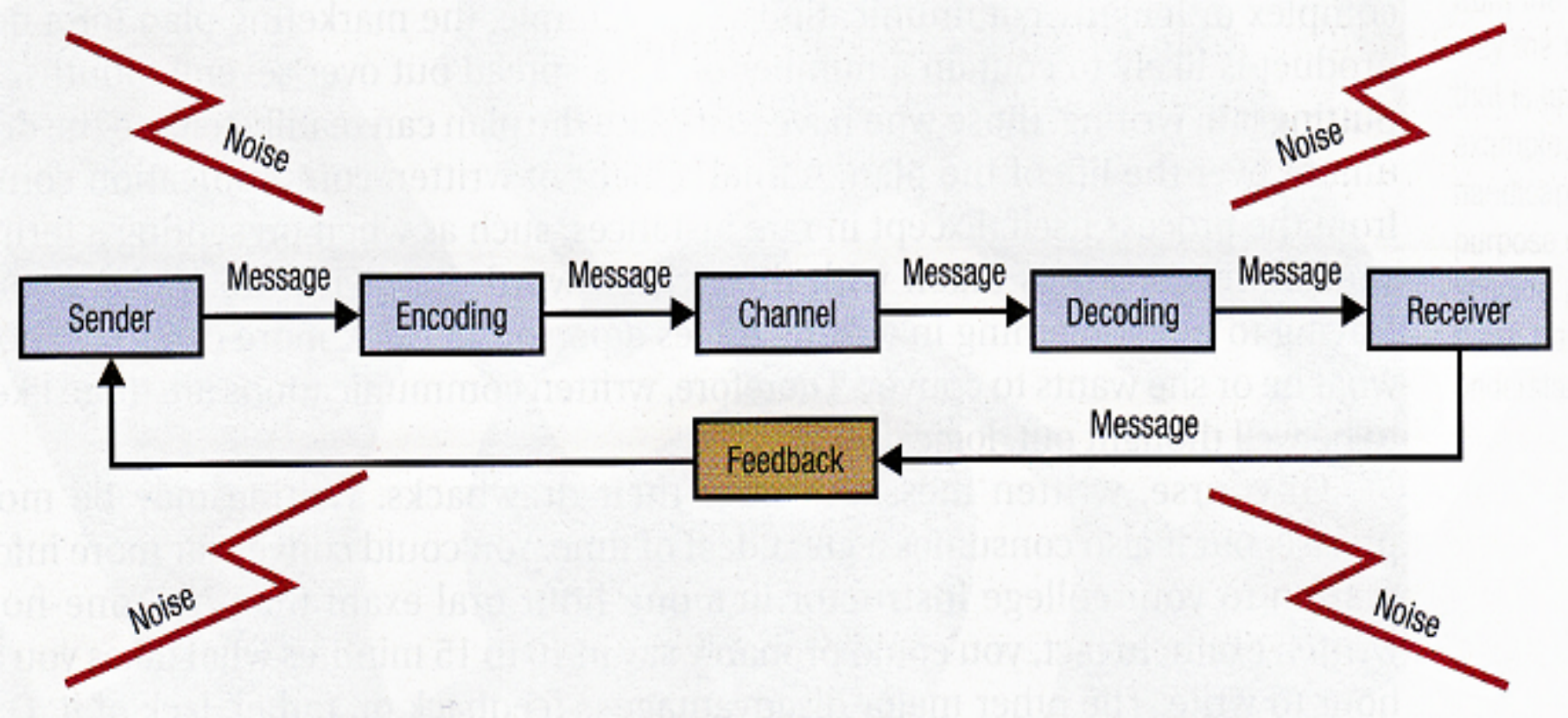
What is the communication process?

- The transferring and understanding of meaning
- An interpersonal process of sending and receiving symbols with messages attached to them.

The Communication Process

The primary purpose of any communication is to get a message from the sender to the receiver in the way the message was intended. How that is accomplished may vary. For example, this international sign for handicap parking clearly identifies the purpose of the message. It's clear and specific. Accordingly, symbols such as these transfer meaning and aid understanding.

The Communication Process



Communication Process Terms

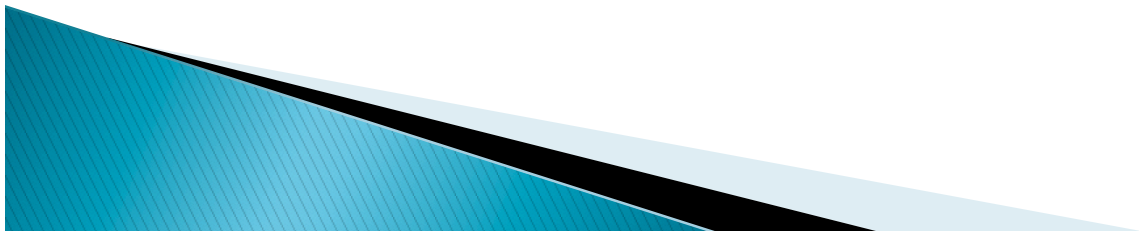
- Encoding
  - The conversion of a message into some symbolic form
- Message
  - A purpose to be conveyed
- Channel
  - The medium by which a message travels
- Decoding
  - A receiver's translation of a sender's message
- Feedback
  - The degree to which carrying out the work activities require by a job results in the individual's obtaining direct and clear information about the effectiveness of his her performance

The Grapevine

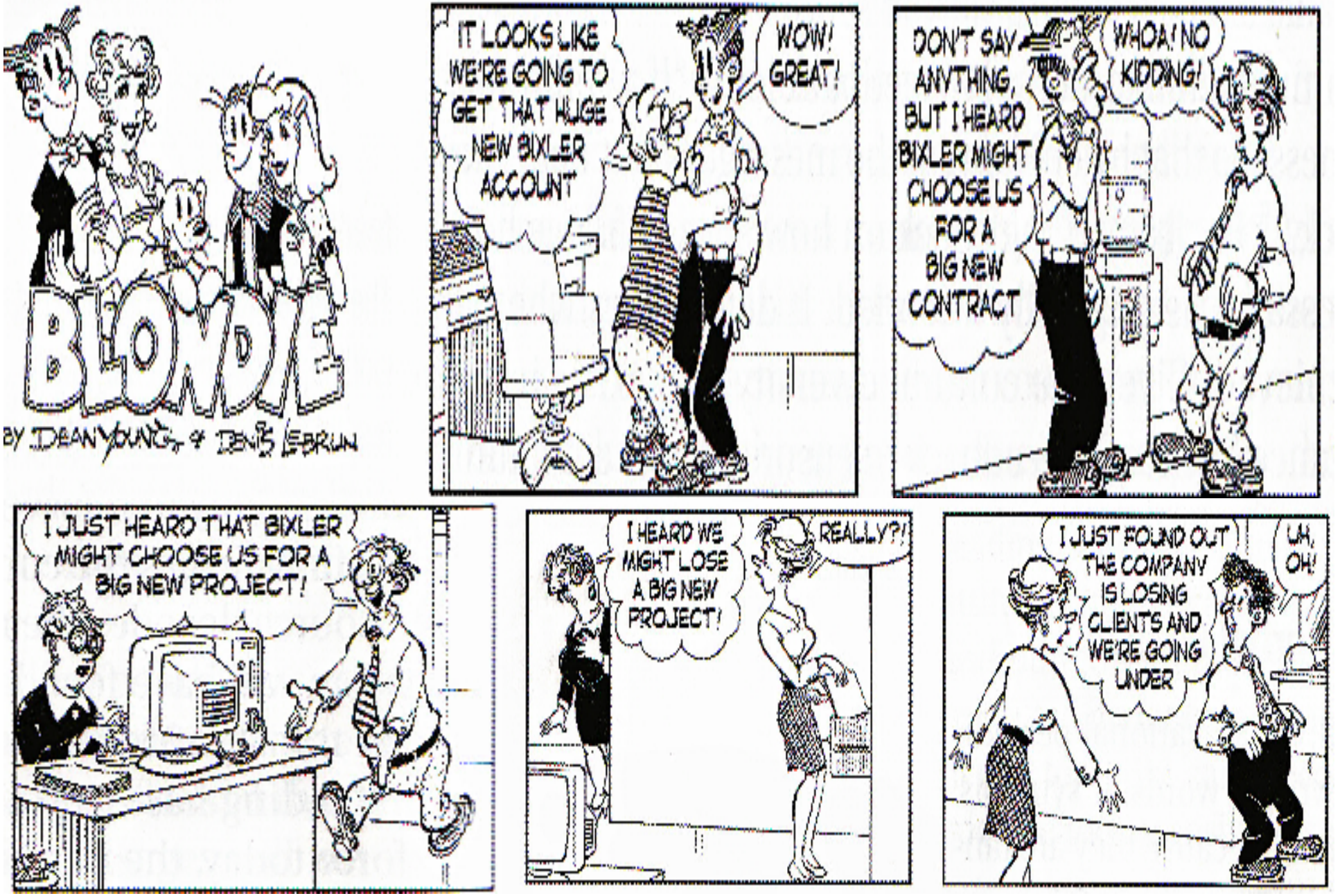
"The grapevine motto: Good information passes among people fairly rapidly—bad information, even faster!"

Grapevine

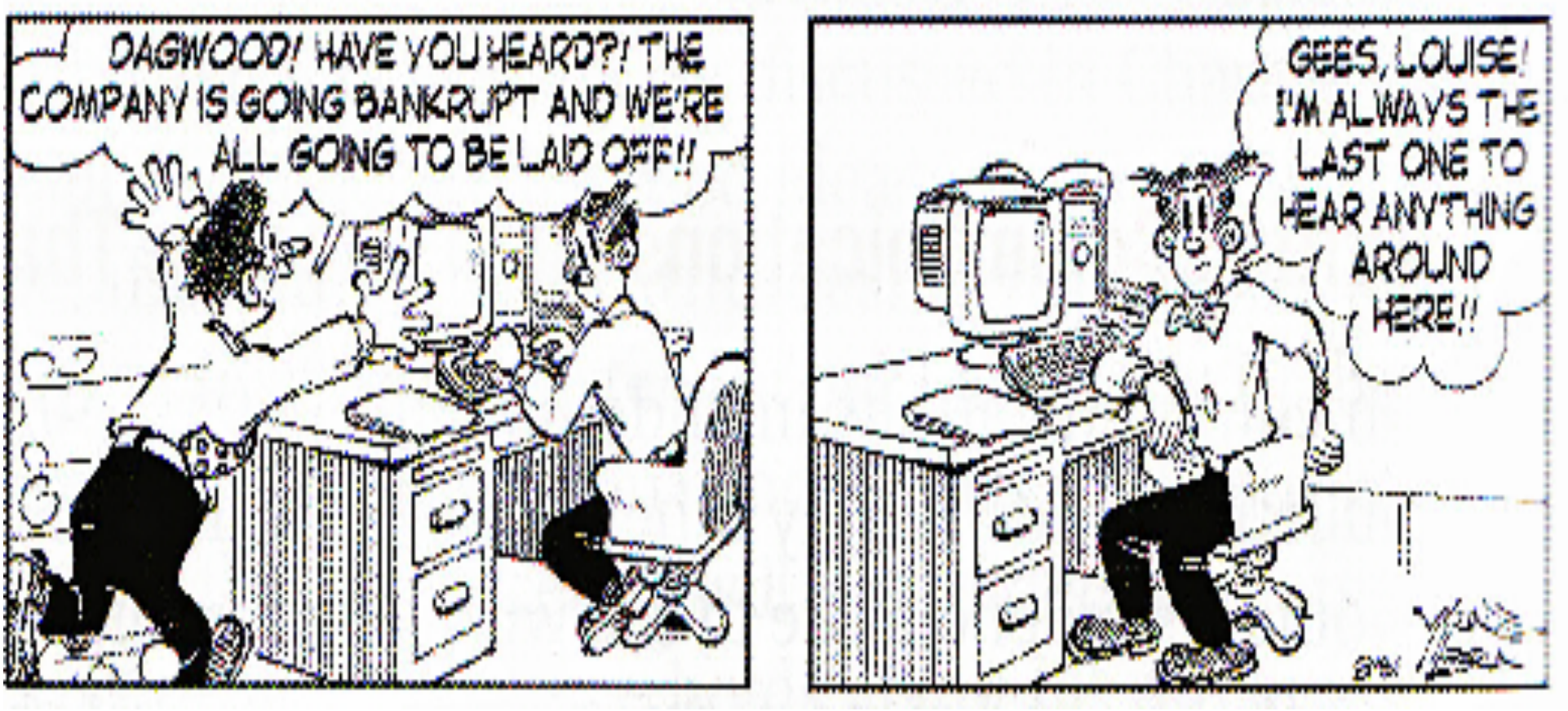
- An unofficial channel of communication that is neither authorized nor supported by the organization.



The Grapevine



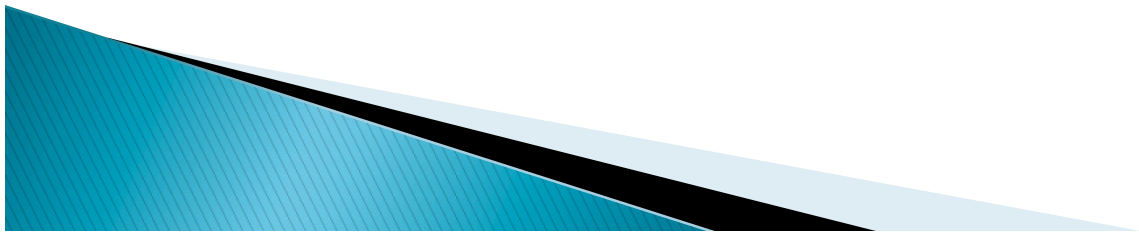
The Grapevine



Source: Reprinted with special permission of King Features Syndicate.

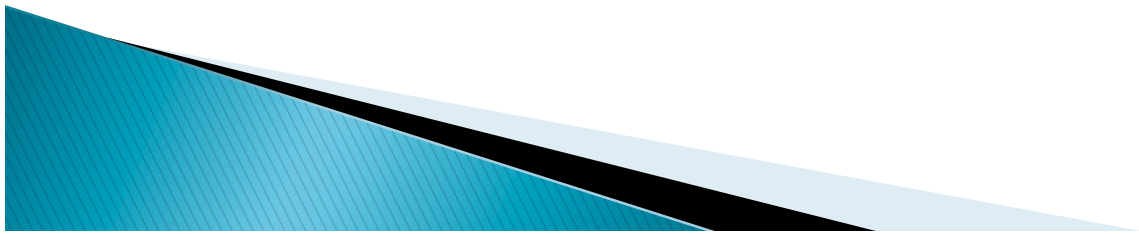
Written Versus Verbal Communications

- Written
  - Tangible
  - Verifiable
  - More permanent
  - More precise
  - More care is taken with the written word
- Verbal
  - Less secure
  - Known receipt
  - Quicker response
  - Consumes less time
  - Quicker feedback

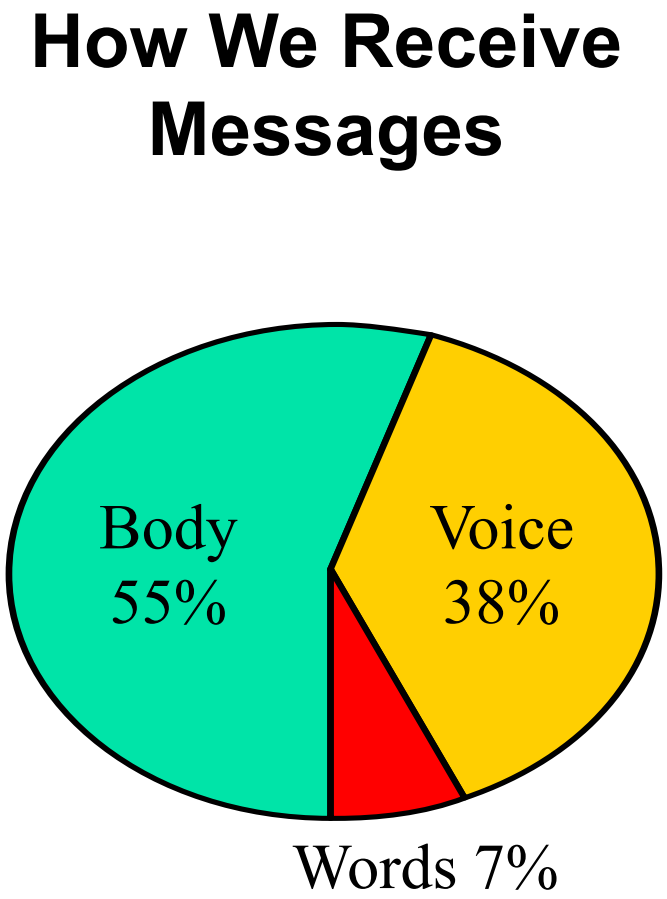


Nonverbal Communications

- Body language
  - Nonverbal communication cues such as facial expressions, gestures, and other body movements
- Verbal intonation
  - An emphasis given to word or phrases that conveys meaning



Nonverbal Communications

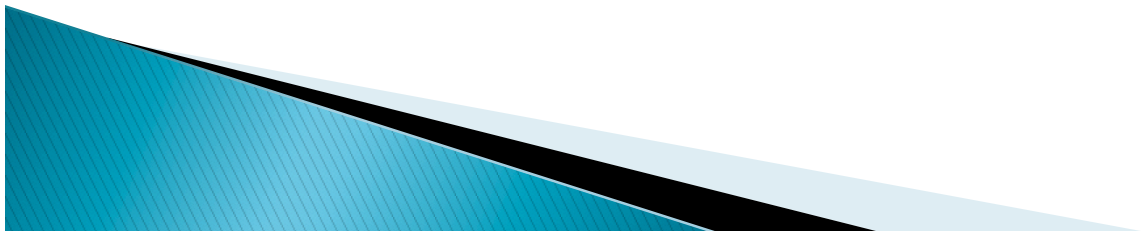


Nonverbal Communications (cont)

Nonverbal communication frequently signifies what's going on with a person. It's painfully obvious by looking at this individual that he is upset and not happy about a given situation. One doesn't need expressed words to recognize that!

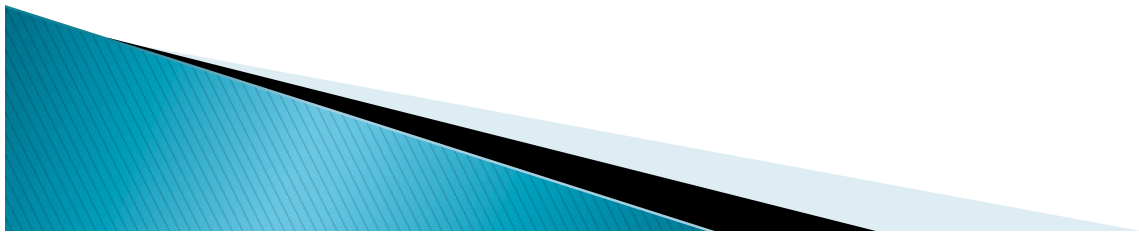
Communication Barriers

- Filtering
  - The deliberate manipulation of information to make it appear more favorable to the receiver
- Selective perception
  - Selective hearing communications based on one's needs, motivations, experience, or other personal characteristics
- Information overload
  - The result of information exceeding processing capacity



Communication Barriers (cont'd)

- Jargon
  - Technical language that is not understood by outsiders
- Gender
  - Men communicate to emphasize status and independence; whereas women talk to create connections and intimacy.
- National culture
  - Communication differences that arise from the different languages and national cultures



Ethical Dilemma in Management

Distorting Information Purposely

As a sales manager, you have just received your department's sales report for last month.

Your boss who works 2000km away is unlikely to see the sales figures.

You are optimistic that sales will pick up this month and the next so that your overall quarterly number will be right on target.

You also know that your boss is the type of person who hates bad news.

You are having a telephone conversation today with your boss. He happens to ask how last month sales went.

What do you tell him?

Culture Clash

What mistakes have been made?

- In a particular country in Africa, a famous food company tried to sell its baby food by advertising it with the picture of a baby on the label.

- *This particular country used labels only to show a picture of the food inside.*

Culture Clash (Cont)

What mistakes have been made?

Let's try the rest:

- A Japanese businessman asks, 'When do you want the report?' 'Yesterday!' Answers the American business woman.
- In an Arabic country, a group from a British company are invited to a dinner party. They all bring gifts and during the evening they continue to talk about their work.
- A Spanish secretary receives an urgent request to email a report to the New York Office before 2/3. She sends it on the 1st March.
- A Latvian secretary did a great job for the French male counterpart. He gave her 4 beautiful roses as a 'thank you' present.

BARRIER	DESCRIPTION
Filtering	The deliberate manipulation of information to make it appear more favorable to the receiver.
Selective Perception	Receiving communications on the basis of what one selectively sees and hears depending on his or her needs, motivation, experience, background, and other personal characteristics.
Information Overload	When the amount of information one has to work with exceeds one's processing capacity.
Emotions	How the receiver feels when a message is received.
Language	Words have different meanings to different people. Receivers will use their definition of words communicated.
Gender	How males and females react to communication may be different, and they each have a different communication style.
National Culture	Communication differences arising from the different languages that individuals use to communicate and the national culture of which they are a part.

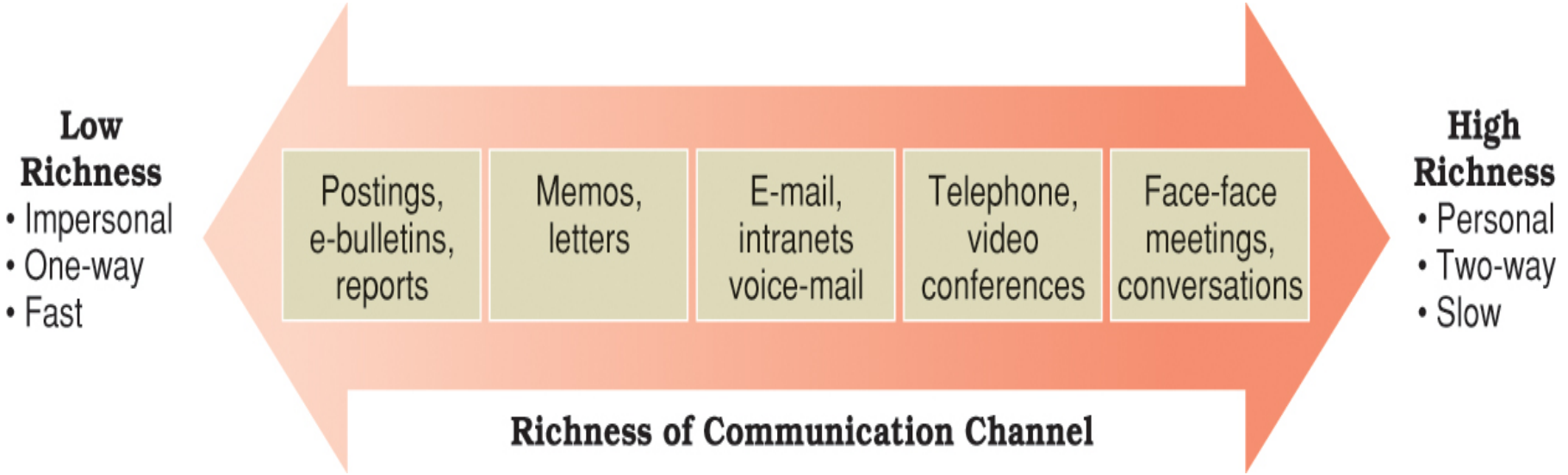
Overcoming Barriers to effective Communications

- **Use Feedback:** Check the accuracy of what has been communicated or what you think you heard.
- **Simplify Language:** Use words that the intended audience understands.
- **Listen Actively:** Listen for the full meaning of the message without making judgement or interpretation-or thinking about what you are going to say in response.
- **Constrain Emotions:** Recognise when your emotions are running high. When they are, don't communicate until you have calmed down.
- **Watch Nonverbal Cues:** Be aware that your action speaks louder than your words. Keep the two consistent

How can communication be improved?

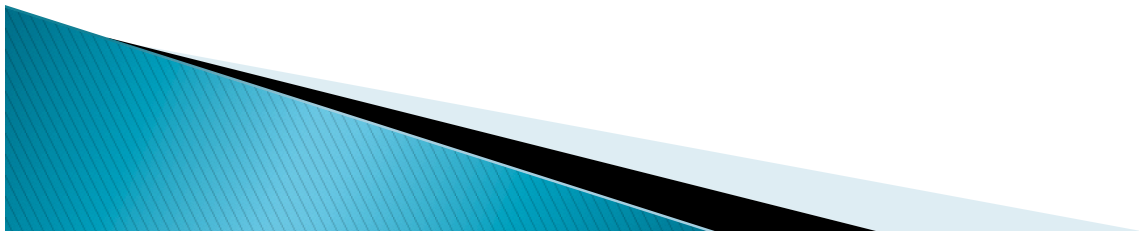
- Use of communication channels.
  - Channel richness is the capacity of a communication channel to carry information in an effective manner.
    - Low channel richness is impersonal, one-way, and fast.
    - High channel richness is personal, two-way, and slow.
  - Managers need to choose a channel with the appropriate richness for the communication.

Channel richness and the use of communication media.



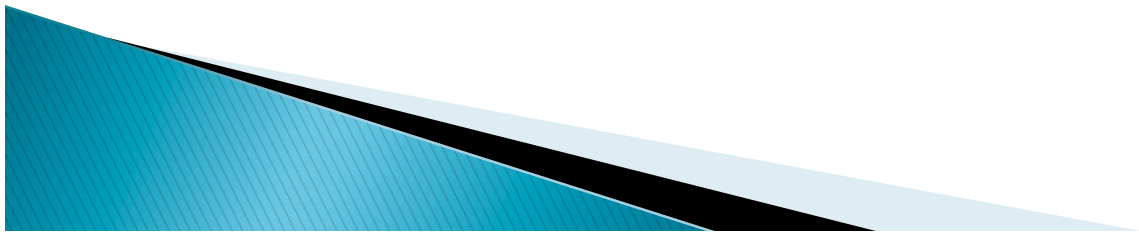
Information Technology (IT)

- E-mail
  - The instantaneous transmission of messages on computers that are linked together.
- Instant messaging (IM)
  - Interactive, real-time communication that takes place among computer users who are logged on to the computer network at the same time.
- Voice mail
  - A system digitizes that a spoken massage, transmits it over the network, and stores the message on a disk for the receiver to retrieve later.



Information Technology (cont'd)

- Teleconferencing
  - Group can confer simultaneously using telephone or e-mail group communications software.
- Video-conferencing
  - A simultaneous conference during which meeting participants in different locations can see each other over video screens.



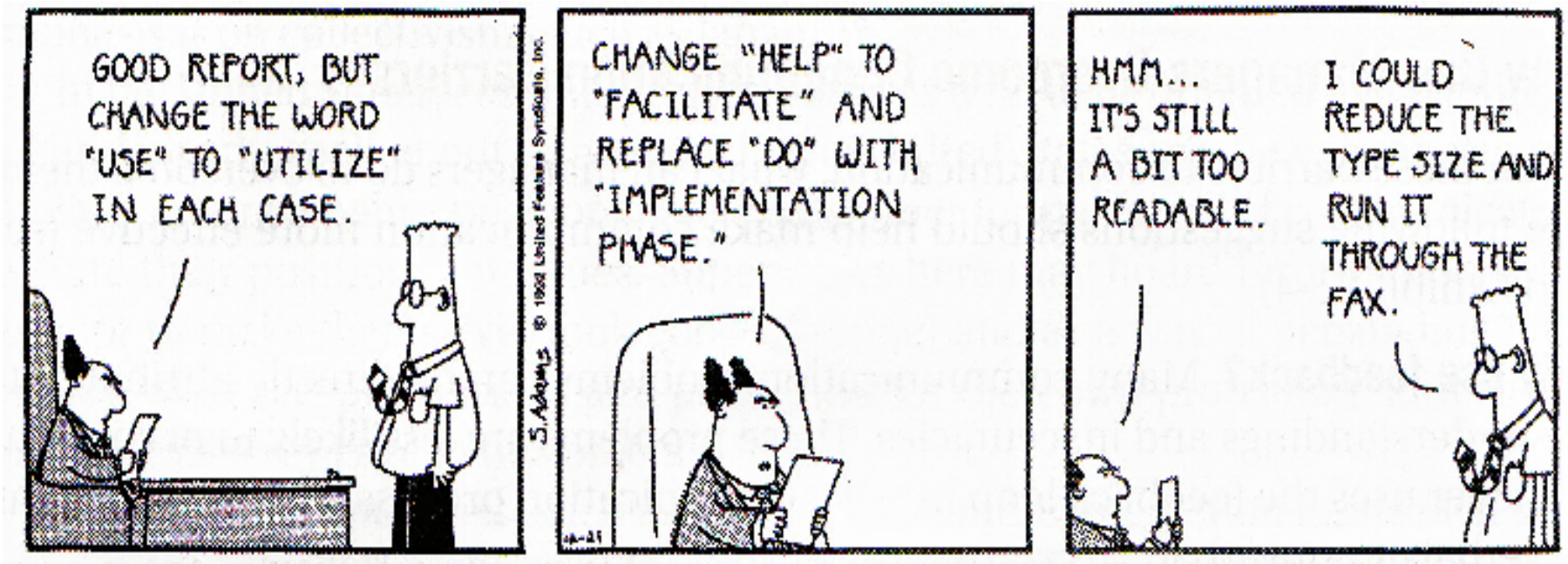
Developing Interpersonal Skills

- Listening Skills – listening or hearing
  - Hearing– Picking up sounds and vibrations.
  - Listening–Listening, in contrast, is making sense of what we hear.
  - Passive listening requires a listener to absorb and remember the words being spoken.
  - Active listening requires a listener to understand the communication from the sender's point of view

Developing Interpersonal Skills

- Listening requires:
  - Paying attention
  - Interpreting
  - Remembering sound stimuli
- Active listening requires:
  - Listening attentively (intensely) to the speaker.
  - Developing empathy for what the speaker is saying.
  - Accepting by listening without judging content.
  - Taking responsibility for completeness in getting the full meaning from the speaker's communication.

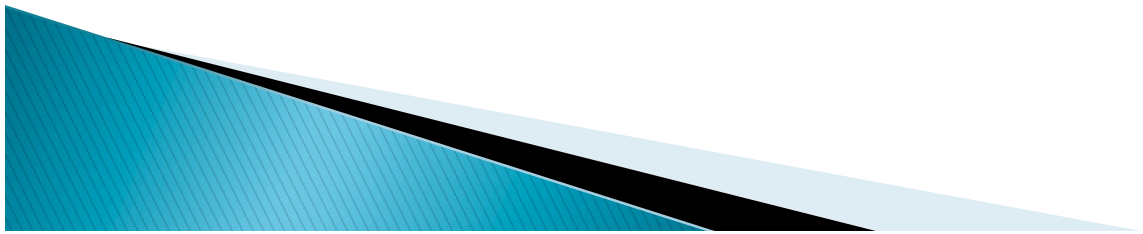
Developing Interpersonal Skills (cont)



Why must we listen actively? When someone talks, we hear. But too often we don't listen. Listening is an active search for meaning, whereas hearing is passive. In listening, two people are thinking—the receiver and the sender.

Characteristics of Feedback

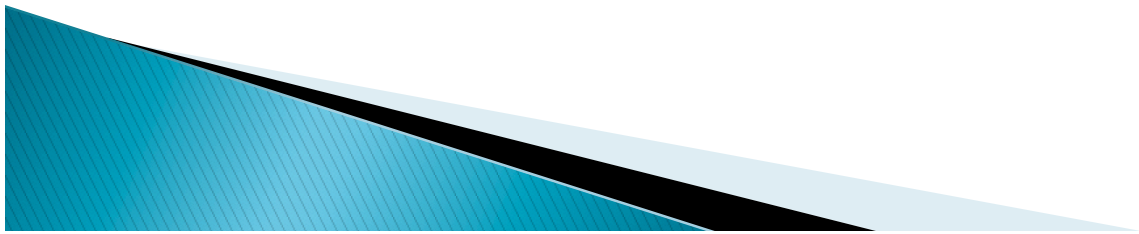
- Positive feedback
  - Is more readily and accurately perceived than negative feedback.
  - Is almost always accepted, whereas negative feedback often meets resistance.
- Negative feedback
  - Is most likely to be accepted when it comes from a credible source or if it is objective.
  - Carries weight only when it comes from a person with high status and credibility.

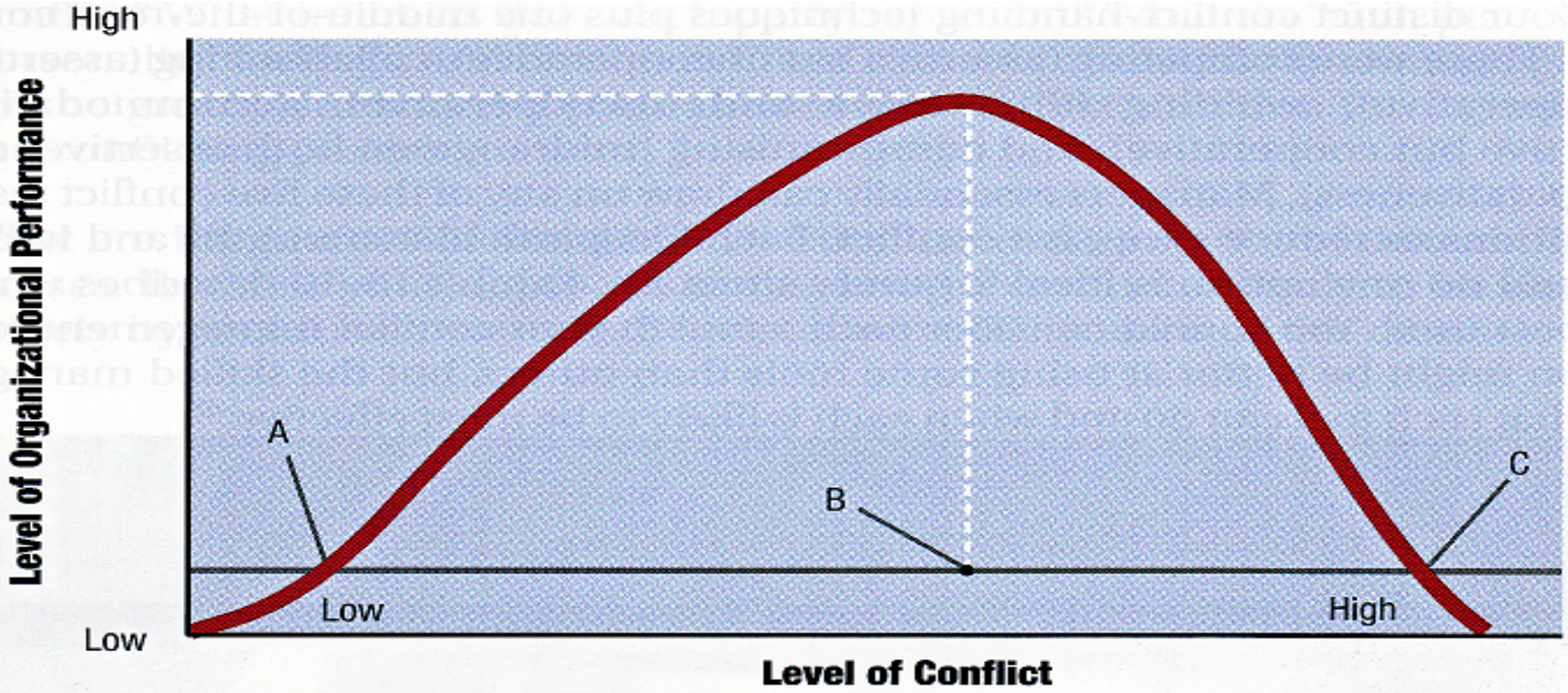


Conflict???

Managing Conflict

- Conflict defined
  - Perceived differences resulting in interference or opposition
- Functional conflict
  - Conflict that supports and organization's goals
- Dysfunctional conflict
  - Conflict that prevents and organization from achieving its goals





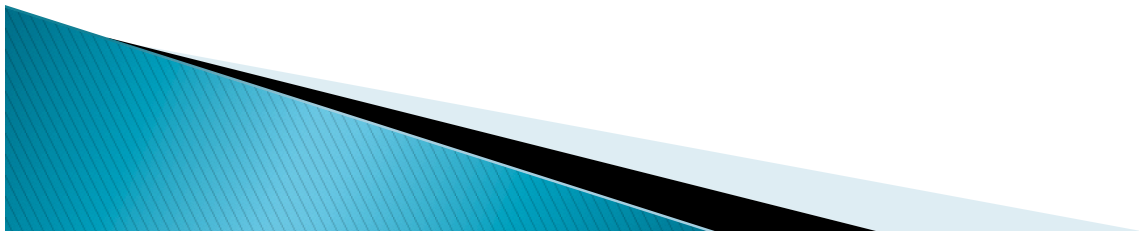
Situation	Level of Conflict	Type of Conflict	Organization's Internal Characteristics	Level of Organizational Performance
A	Low or none	Dysfunctional	Apathetic Stagnant Unresponsive to change Lack of new ideas	Low
B	Optimal	Functional	Viable Self-critical Innovative	High
C	High	Dysfunctional	Disruptive Chaotic Uncooperative	Low

Sources of Conflict

- Communication differences
  - Arising from semantic difficulties, misunderstandings, and noise in the communication channels.
- Structural differences
  - Horizontal and vertical differentiation creates problems of integration leading to disagreements over goals, decision alternatives, performance criteria, and resource allocations in organizations.
- Personal differences
  - Individual idiosyncrasies (habit) and personal value systems create conflicts.

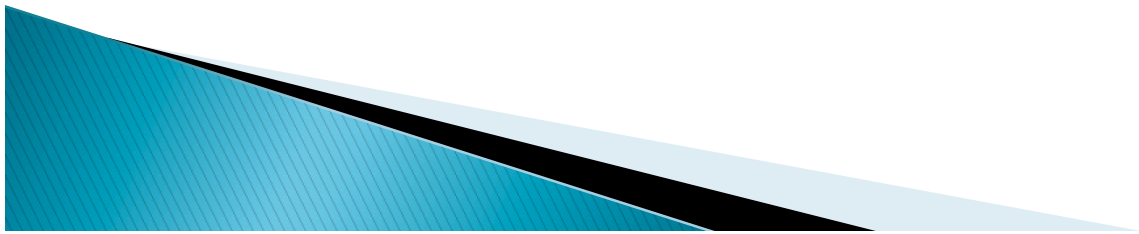
Dimensions of Conflict (Thomas)

- Cooperativeness
  - The degree to which an individual will attempt to rectify a conflict by satisfying the other person's concerns.
- Assertiveness
  - The degree to which an individual will attempt to rectify the conflict to satisfy his or her own concerns.



Dimensions of Conflict (cont'd)

- Conflict-handling techniques derived from Thomas' cooperative and assertiveness dimensions:
  - Competing (assertive but uncooperative)
  - Collaborating (assertive and cooperative)
  - Avoiding (unassertive and uncooperative)
  - Accommodating (unassertive but cooperative)
  - Compromising (midrange on assertiveness and cooperativeness



Conflict Management: What works best when?

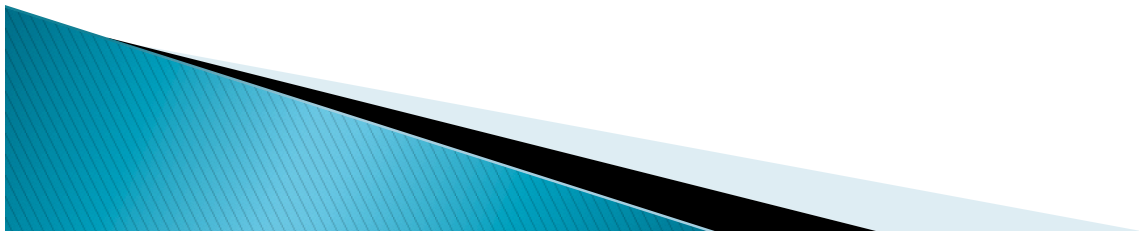
STRATEGY	BEST USED WHEN
Avoidance	Conflict is trivial, when emotions are running high and time is needed to cool them down, or when the potential disruption from an assertive action outweighs the benefits of resolution
Accommodation	The issue under dispute isn't that important to you or when you want to build up credits for later issues
Forcing	You need a quick resolution on important issues that require unpopular actions to be taken and when commitment by others to your solution is not critical
Compromise	Conflicting parties are about equal in power, when it is desirable to achieve a temporary solution to a complex issue, or when time pressures demand an expedient solution
Collaboration	Time pressures are minimal, when all parties seriously want a win--win solution, and when the issue is too important to be compromised

Stimulating Conflict

- Convey to employees the message that conflict has its legitimate place.
- Use hot-button communications while maintaining plausible deniability.
- Issue ambiguous or threatening messages.
- Centralize decisions, realign work groups, increase formalization and interdependencies between units.
- Appoint a devil's advocate to purposely present arguments that run counter to those proposed by the majority or against current practices.

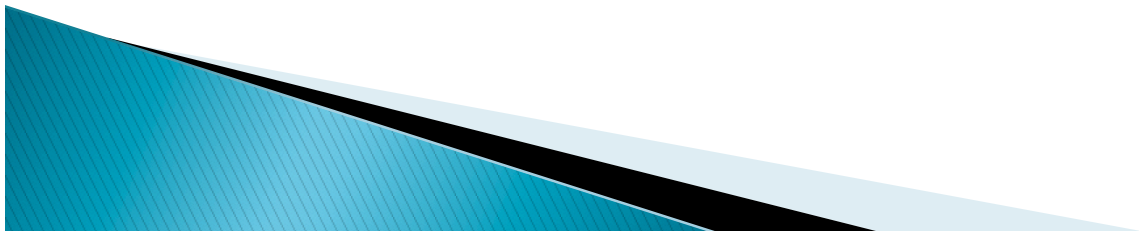
Negotiation

- A process in which two or more parties who have different preference must make a joint decision and come to an agreement
  - Distributive bargaining
    - Negotiation under zero-sum conditions, in which the gains by one party involve losses by the other party
  - Integrative bargaining
    - Negotiation in which there is at least one settlement that involves no loss to either party



Developing Effective Negotiation Skills

- Research the individual with whom you'll be negotiating.
- Begin with a positive overture.
- Address problems, not personalities.
- Pay little attention to initial offers.
- Emphasize win-win solutions.
- Create an open and trusting climate.
- If needed, be open to accepting third-party assistance.



Thank You☺

Innovation and Internationalization towards the 3rd Generation University

Prof. Elīna Gaile-Sarkane
Associate prof. Inga Lapiņa
Assistant prof. Modris Ozoliņš

3rd Generation University

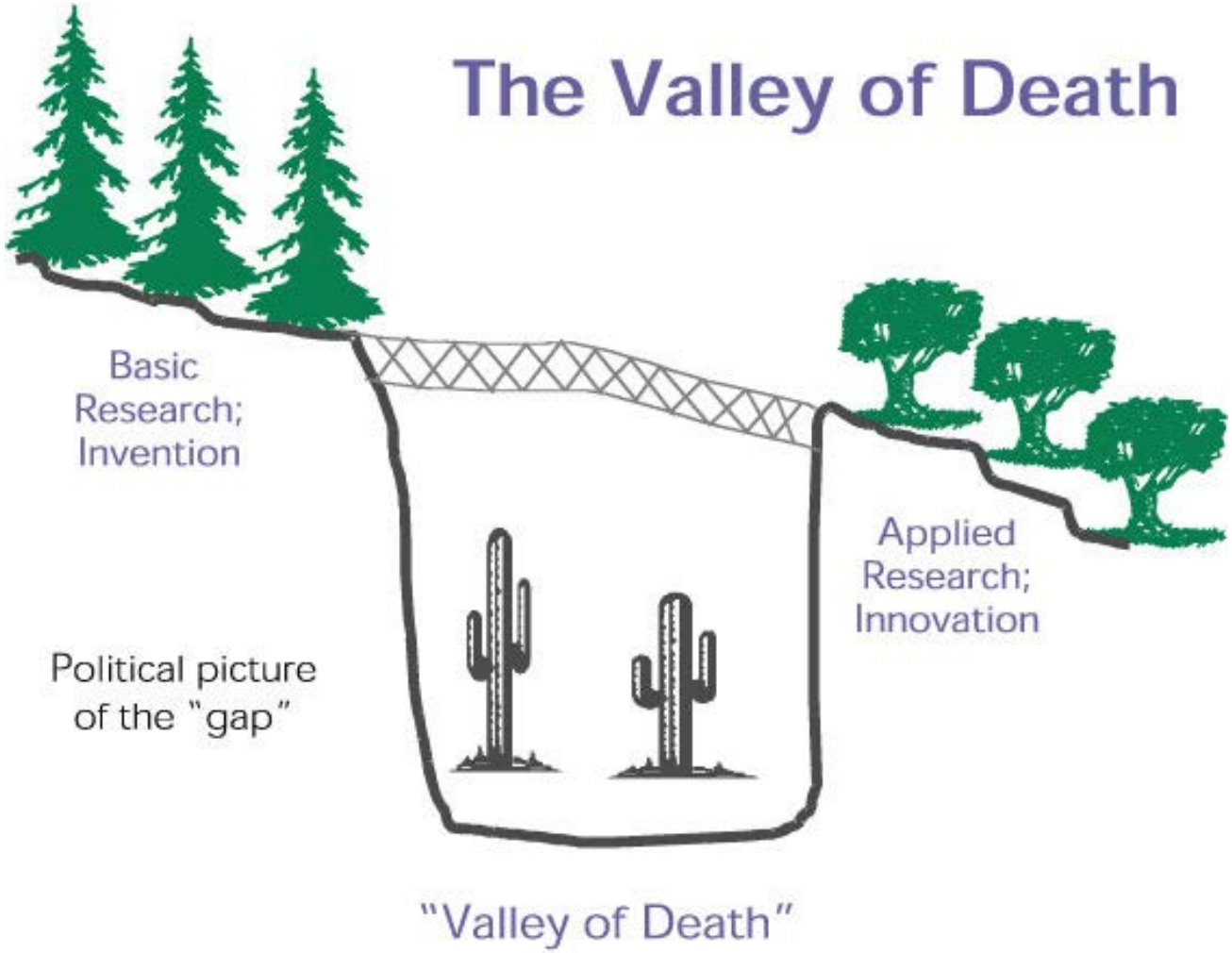
Modris Ozoliņš
Riga Technical University

☺ ☺ ☺

Happy student
Happy scientist
Happy professor
Happy businessman
Happy rector
Happy President, Prime Minister, Ministers and citizen
Happy society...

«Timeless» problem

The Walley of Death


The Valley of Death
Basic Research; Invention
Applied Research; Innovation
Political picture of the "gap"
"Valley of Death"

The different Walley of Death

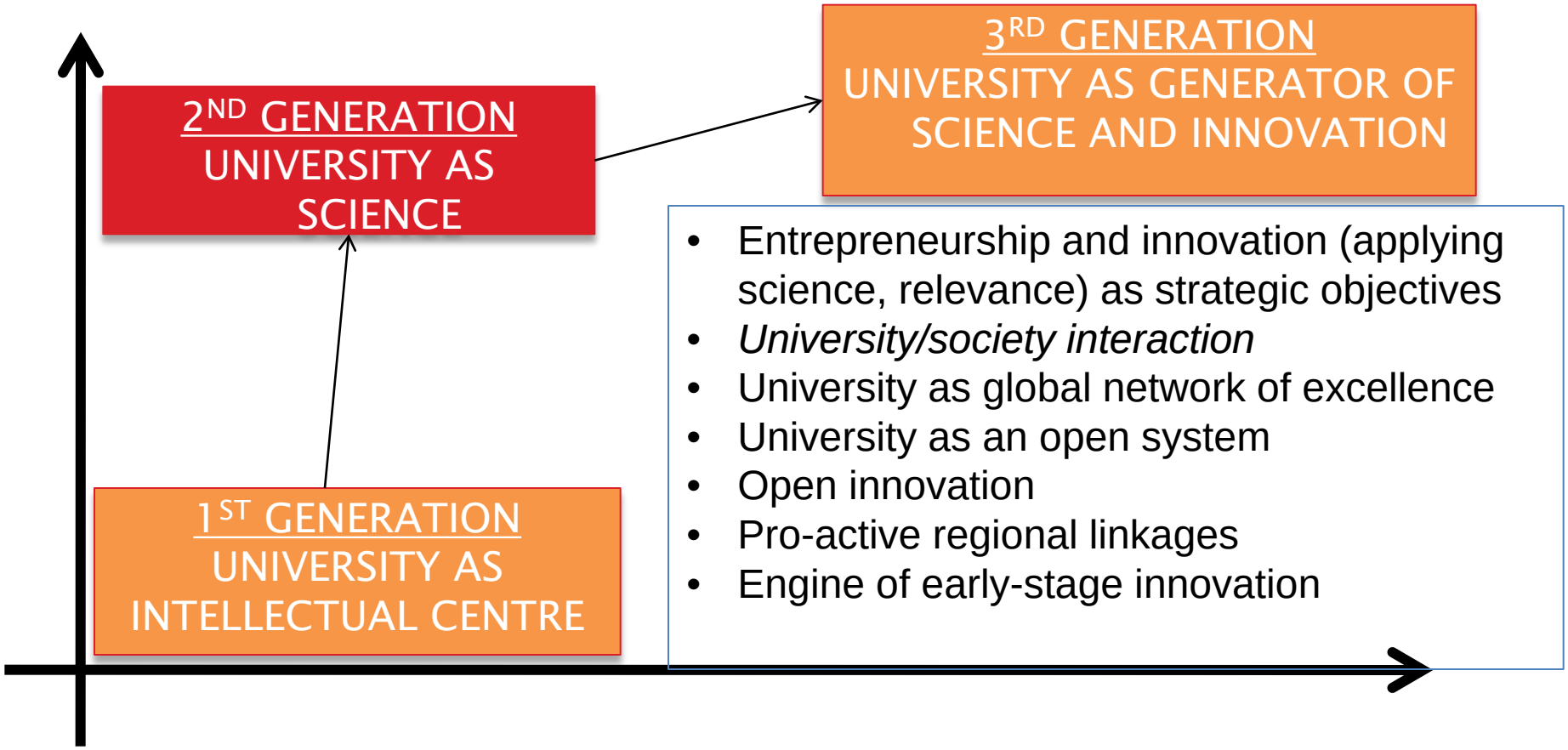
Changes in HE sector in Latvia

- Competition pressure
- Environment changes, industry changes
- Focus on professional degrees
- Bologna Agreement
- Changes in approach – third mission (in addition to research & teaching)
- Funding changes:
  - Diminishing public funding
  - Increasing external funding (FP7, EEZ,…)
  - Productivity pressures
  - Quantitative measures over qualitative
- Innovation needs- Europe 2020 Flagship Initiative Innovation Union

Challenges towards innovations

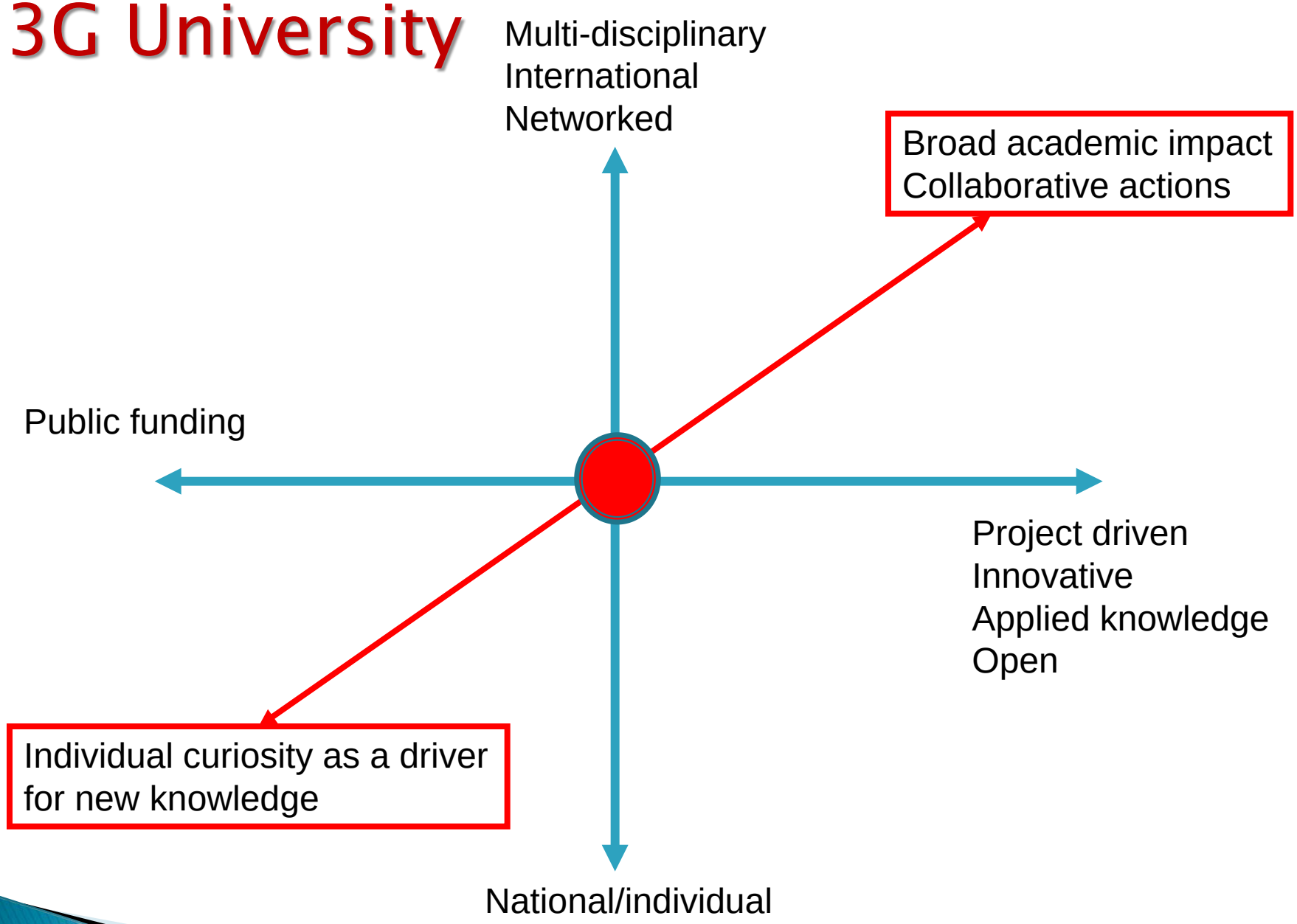
- Need for more collaboration between various disciplines
- Need for more collaboration with external experts
- Need for more international collaboration
- Need for co-opetition
- Entrepreneurship education, not just B-school functions
- Strategic emphasis on third pillar activities/ strategy changes

3G/Entrepreneurial University



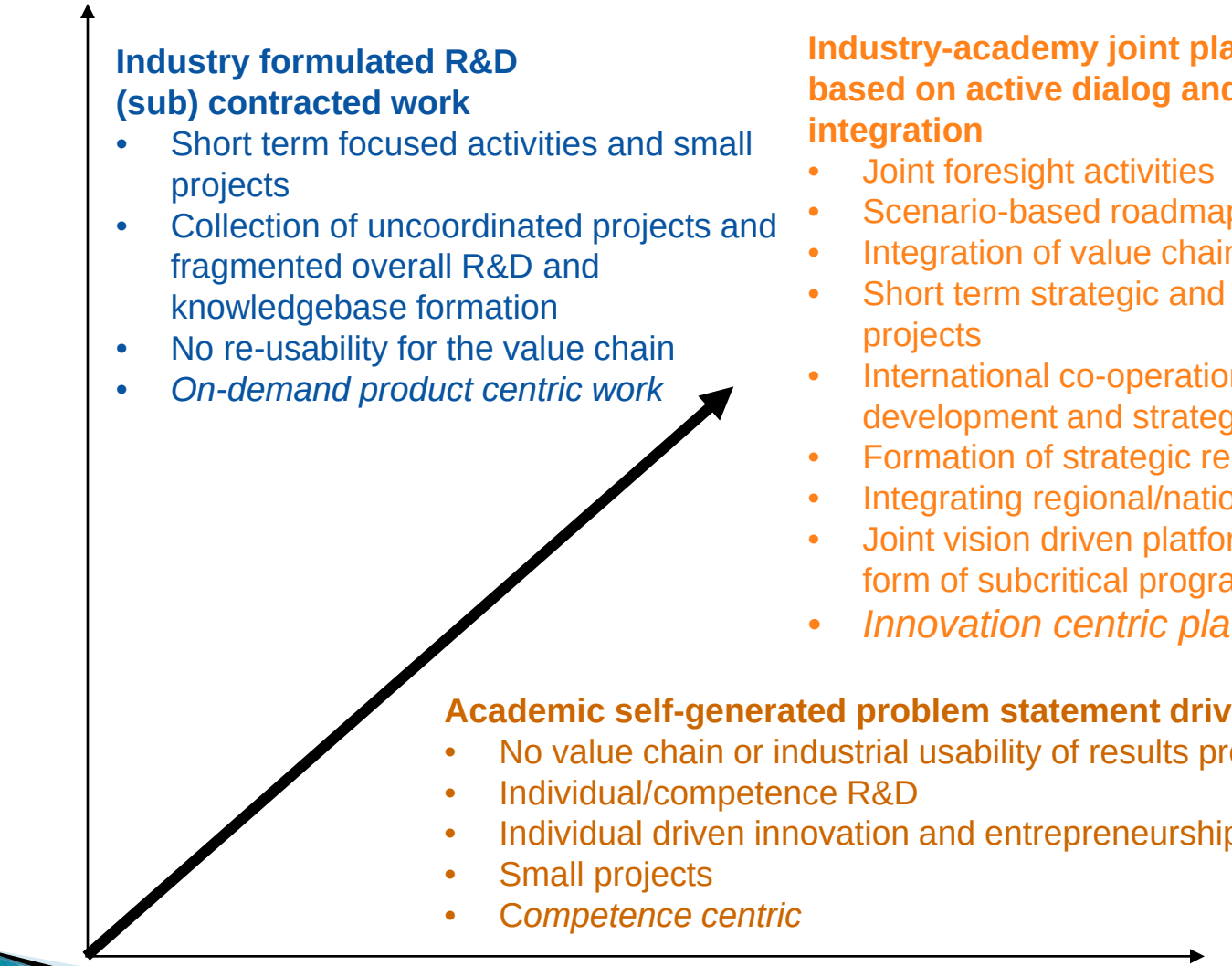
Pasi Malinen
BID Business Innovation and Development @ UTU

3G University



Pasi Malinen
BID Business Innovation and Development @ UTU

University-Industry Co-operation



Industry formulated R&D
(sub) contracted work

- Short term focused activities and small projects
- Collection of uncoordinated projects and fragmented overall R&D and knowledgebase formation
- No re-usability for the value chain
- *On-demand product centric work*

Preferred model

Industry-academy joint platform based on active dialog and value chain integration

- Joint foresight activities
- Scenario-based roadmaps: *VISION CENTRIC*
- Integration of value chains
- Short term strategic and coordinated R&D projects
- International co-operation for business development and strategic R&D
- Formation of strategic regional platforms
- Integrating regional/national knowledge base
- Joint vision driven platform centric work in form of subcritical programs
- *Innovation centric platform*

Academic self-generated problem statement driven research

- No value chain or industrial usability of results pre-defined
- Individual/competence R&D
- Individual driven innovation and entrepreneurship
- Small projects
- *Competence centric*

Pasi Malinen
BID Business Innovation and Development @ UTU

3G RTU offer to partners

Expert of complex technical solutions and sound business calculations to **business partners**; supplier of modern and attractive international studies and promising career to **students**; provider of sustainable development to **municipalities;** and leader of innovative solutions andr of entrepreneursip to **the state** of Latvia.

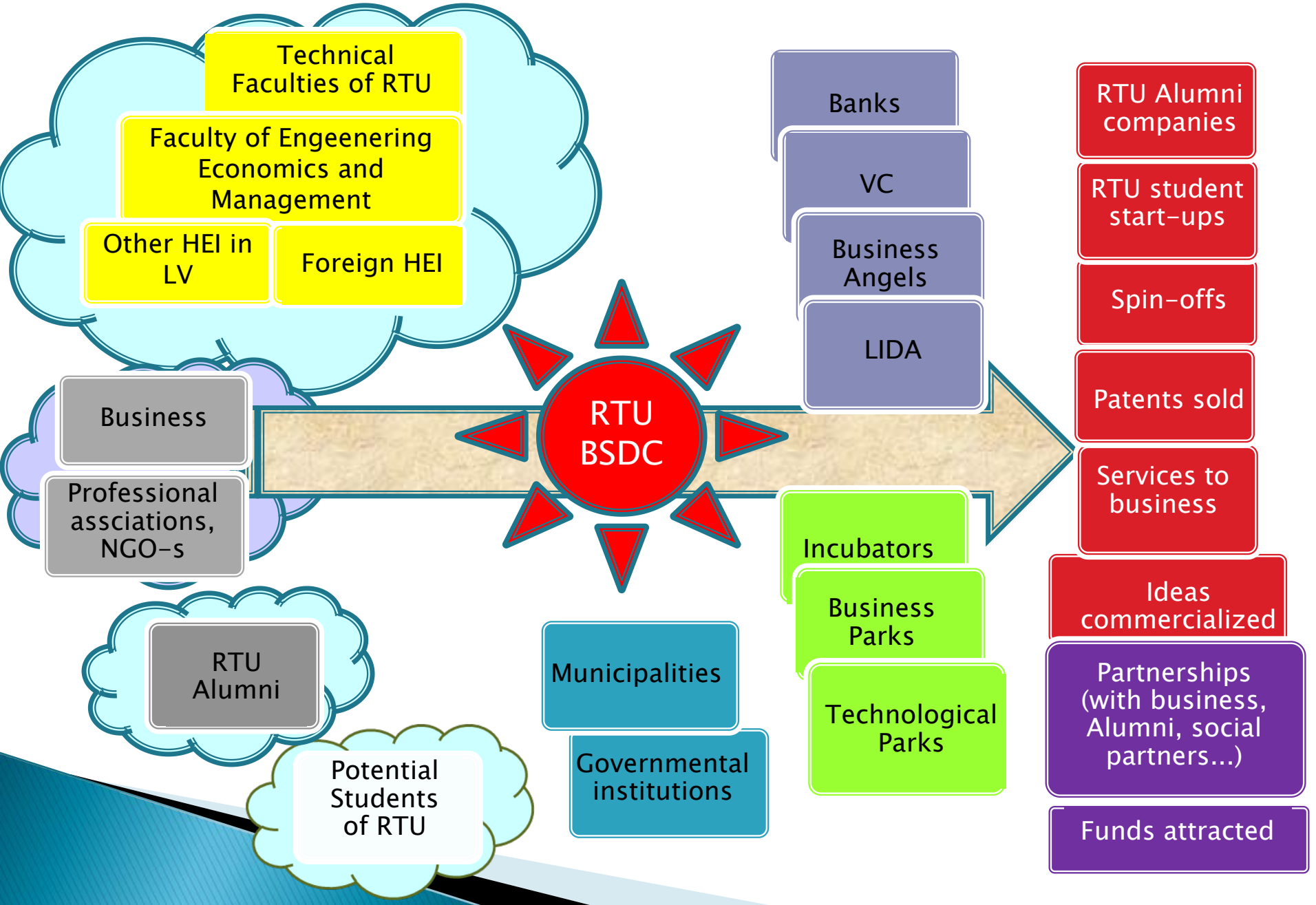
RTU partners

- academic
- business
- professional and industrial associations
- private persons
- municipalities
- State institutions
- NGO-s, interest groups
- financial institutions
- business support institutions

Functional activity groups:

- Fostering of creative thinking, encouragement of innovative ideas creation
- Commercialization of IP
- Fostering entrepreneurship
- Relationship creation and support
- Fund raising
- Service providing

Cooperation Model



Expected results of RTU as 3GU

- **Prestige and role** of RTU in society.
- RTU as **cooperation partner # 1.**
- **Finances** for RTU development.
- **Interest and ability in innovation creation.**
- **Recognition** of RTU scientific work. **Income from IP.**
- Student **satisfaction with studies, aspiration** to be **entrepreneurs.**
- **RTU attractiveness to high school graduates.**
- **Dominating role of RTU in economic development. Impact and role of RTU Alumni business** in LV economy.

Expected results of RTU as 3GU

- **Interest and ability in innovation creation…**

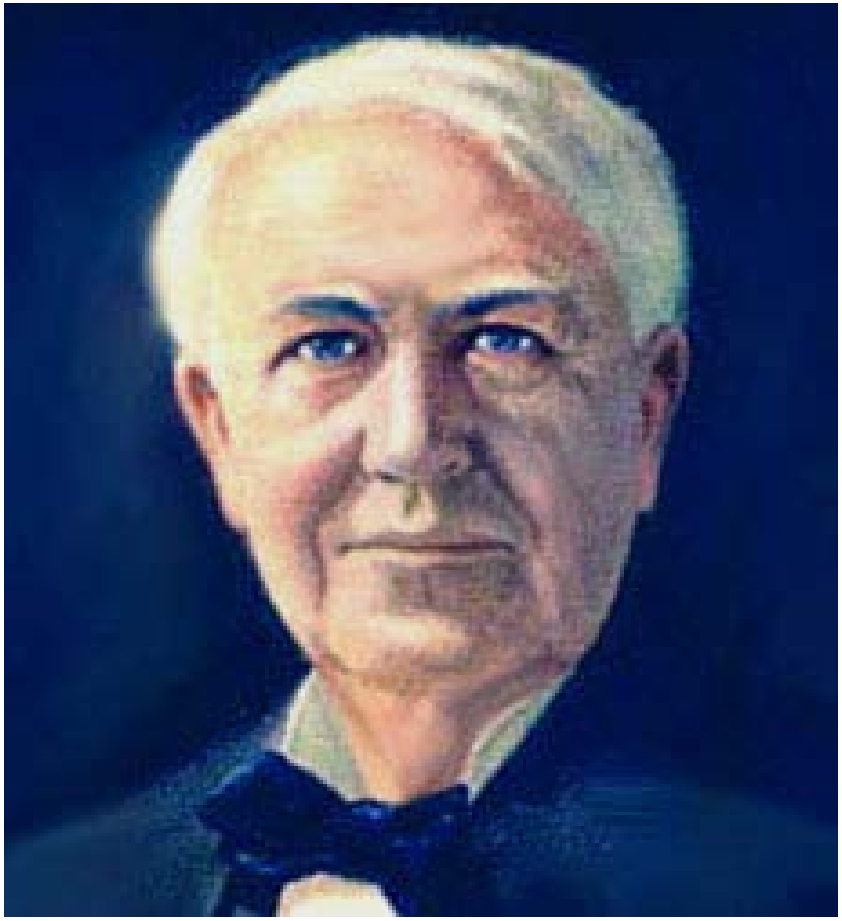
Innovation and Entrepreneurship

http://mba.rtu.lv/en/general-info

MBA study programm "Innovation and Entrepreneurship"

Innovation as Life Style of Growing Business

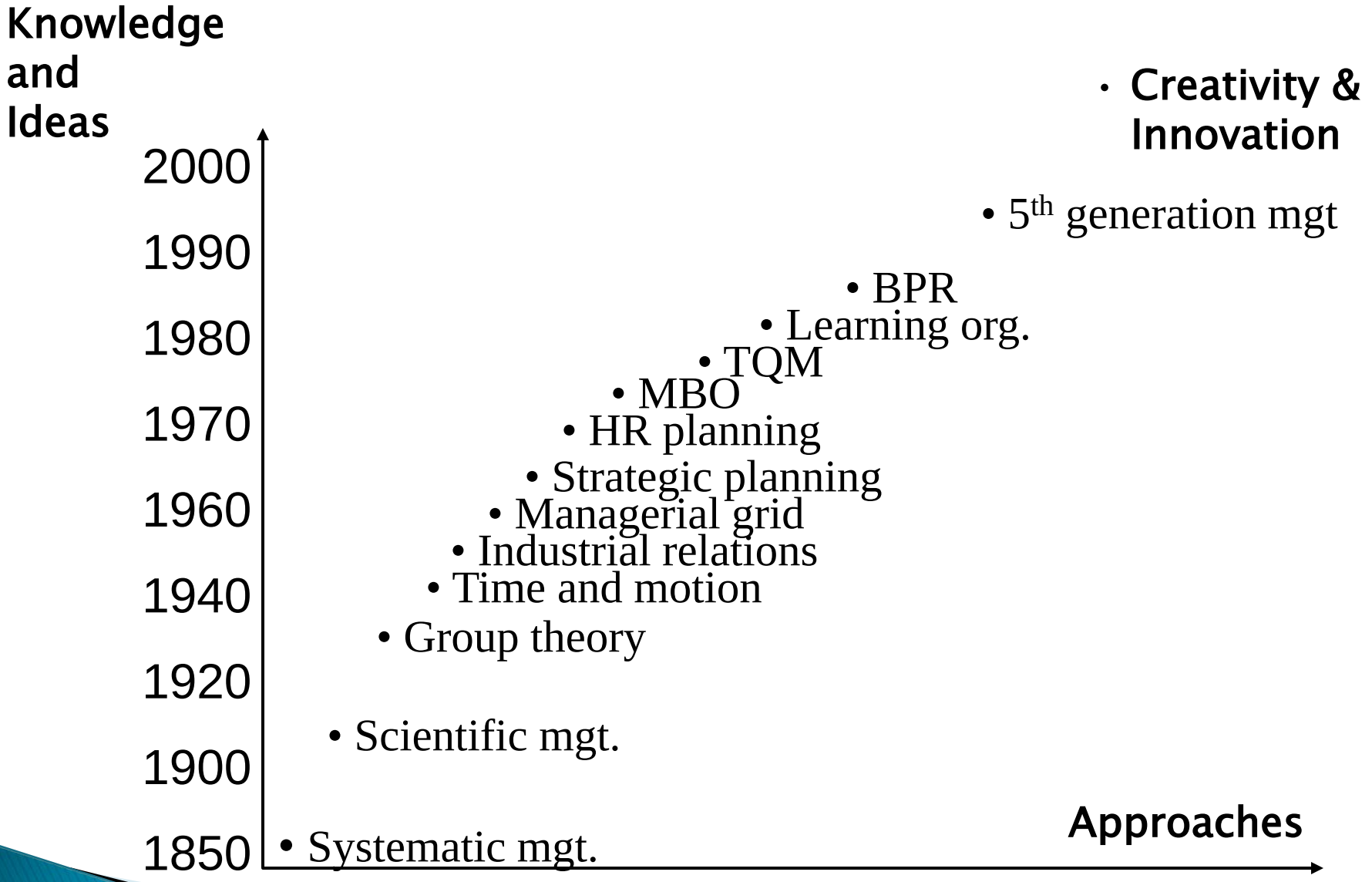
Elina Gaile-Sarkane
Riga Technical University



Thomas Edison

"I have not failed, I've just found 10,000 ways that won't work".

Sources of Competitive Advantage Over Time



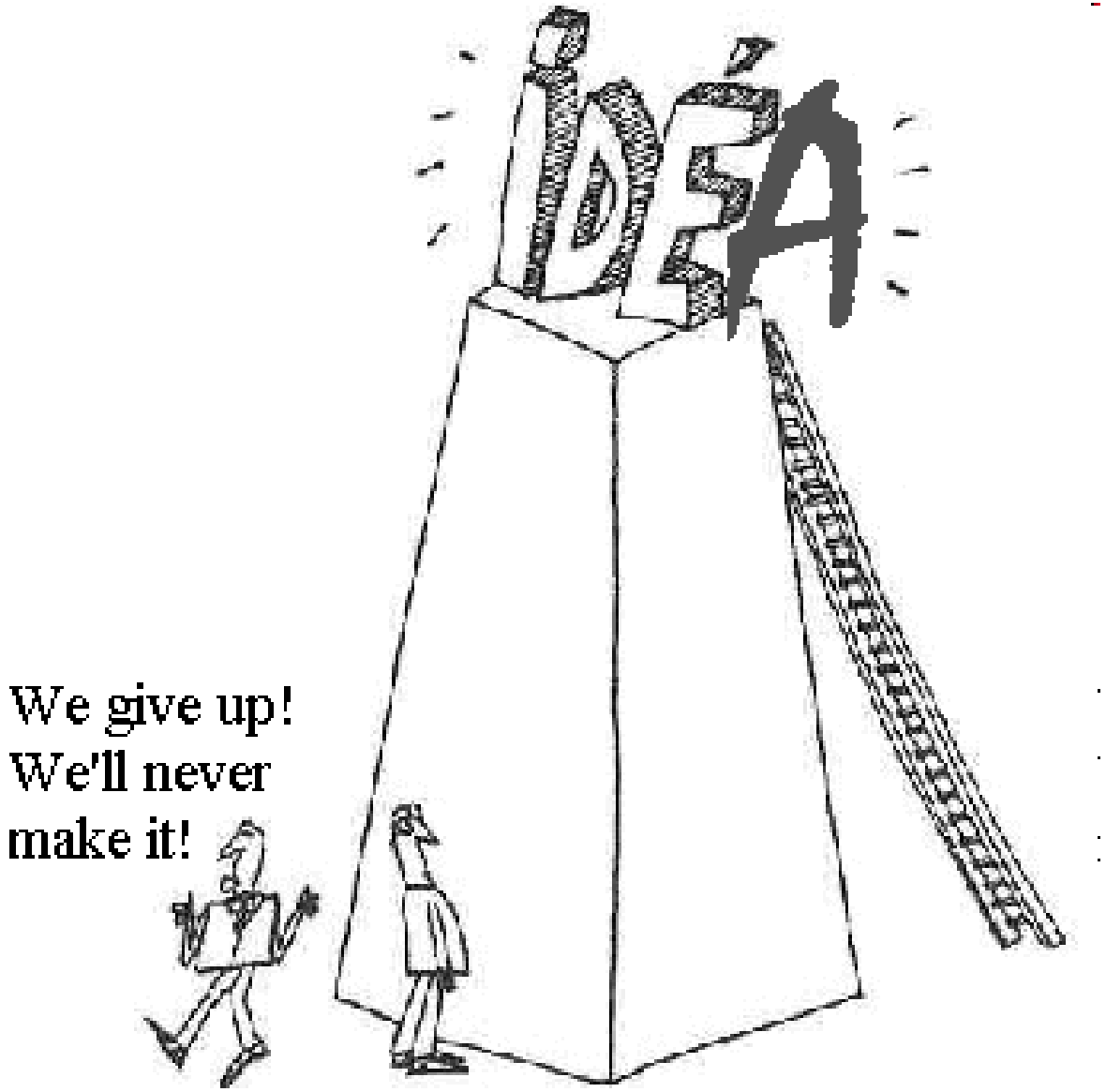
What is innovation?

Why innovation?

- Innovation drives *productivity growth* and competitiveness of all participants in the market
- Innovation promotes *social inclusion* through expanded opportunities
- What drives innovation?
  - People
  - Technologies
  - Investments
  - Environment

Innovation as a lifestyle

"I'll be happy to give you innovative thinking. What are the guidelines?"



Brilliant ideas are often closer than you think!!

Competences developed within university

- Leadership (entrepreneurial approach)
- Open-mind
- Ability to learn
- Teamwork and ability to share knowledge ad experience
- Intelligence and Erudition
- Professional knowledge and skills

How it becomes a lifestyle?

Innovation education at RTU

Innovation at RTU

- 8 faculties
- Research centers, projects, patents
- Business and innovation Incubators
- Changing and supporting environment
- Cross-disciplinary approach
- Examples

PDD within MBA program "Innovation and Entrepreneurship"

- 10 years experience
- More than 80 developed products
- 2 patents (3 applications for a patent)
- Lot of ideas for development of existing products

Step by step in new product development

- From idea to concept
- Development of concept
- Building of prototypes
- Calculating costs and forecasting sales
- Development of Marketing Plan
- Preparation of ‘Contract Book’
- Idea (patent, prototype etc.) selling

Innovation as a life style at RTU

Prototypes

What we have learned from it?

…once you have started, you will never stop…

… if we create creative people, we create innovation …

… innovation is about passion….

Lifelong Learning Programme
Erasmus Intensive Programmes (IP)

Making business work in the new Europe – developing and transferring business knowledge in the Baltic Sea region

Inga Lapiņa
Riga Technical University

IP programme at RTU: "Making business work in the new Europe"

IP coordinator: Riga Technical University

IP content organized by:

Faculty of Engineering Economics un Management

IP partners:

- London South Bank University (Great Britan)
- Tallinn University of Technology (Estonia)
- Siauliai University (Lithuania)
- Ilmenau University of Technology (Germany)
- FEI Företagsekonomiska Institutet (Sweeden)

IP programme at RTU:
"Making business work in the new Europe"

Total number of participants – 62	
International students	**39**
Latvian students	**12**
International teachers	**8**
Latvian teachers	**3**

IP programme at RTU: "Making business work in the new Europe"

The delivery of the IP enhances students' entrepreneurial vision, inter-cultural dialogue, and cooperation. At the same time that generates close linkages among participating educational institutions, it also creates valuable relationships with the business sector in the countries involved.

To pursue objective, the topics included in the IP make certain the employment of a multidisciplinary vision and methodology that involves specialists in management, finance, economics, marketing, social sciences and engineering.

IP programme at RTU: "Making business work in the new Europe"

The most important results from the IP are as follows:

- An IP website, developed by Riga Technical University within the RTU electronic learning system, is available for internal use. This includes the main lecturing and reading materials, and also the details on staff and students taking part on the IP.
- The IP discussions considered problems faced by the business sector in the region. Students were also able to make practical comparisons between the reality of smaller economies (and smaller companies) and that of other European countries (and multinational corporations) with more advanced economic development.

IP programme at RTU: "Making business work in the new Europe"

The most important results from the IP are as follows:

- Students were also able to visit financial institutions and companies in Riga. They were given the opportunity to exchange information and opinions with visiting lecturers and business practitioners from companies.
- Students were able to practice different learning approaches, including lectures, seminar discussions use of computer simulation packages and electronic learning facilities.
- Students were involved in tasks requiring a combination of team work, decision making, leadership and cross cultural communication. There was a particular interest in the discussion of business behavior across different cultures.

IP programme at RTU: "Making business work in the new Europe"

The most important results from the IP are as follows:

- All the activities of the IP were delivered in English. These encouraged and helped students to develop their language skills.
- Students were also encouraged to share experiences during leisure activities that could increase appreciation of the participating countries and cultures.
- Students completing the IP were awarded a Certificate equivalent to 4.5 ECTS.
- It is expected that new exchanges of staff and collaborations between universities (for both teaching and research) will be organized in the future.

IP programme at RTU:
“Making business work in the new Europe”

IP programme at RTU:
“Making business work in the new Europe”

IP programme at RTU: "Making business work in the new Europe"

The main problems that arose during the IP were (from students` questionnaires):

- a lot of studies; really strict programme of activities;
- time management; short of time; the lack of the time to do presentations well;
- not enough time for pleasure; more time for group work and cultural communication; not enough time for lunch and lunch time was too late;
- very different level of students (experience; studies); there is a big difference in the education and knowledge level;
- groups could have been shuffled around more often; working in teams;
- contrast between cultures, rigidity of some participants;
- high sleep dept; too little of sleep ☺.

IP programme at RTU: "Making business work in the new Europe"

The main benefits from the IP were (from students` questionnaires):

- new knowledge; different subjects; different teaching styles;
- opportunity to improve English skills; prepare presentations in English;
- team work experience; learned how to work in an international group;
- different cultures; a lot of different ways of dealing with cultures and problems; to use new information in practice and learn how to work with people from other countries;
- learn how to do good marketing;
- learn about financial marketing and financial crisis;
- find a solution to different economic problems;
- new experience (academic and communication); some new ideas;
- different opinions; communication improvement; discussions;
- learned more about myself; being self-confident;
- very open minded now; a lot of information about stereotypes;
- new friends; social events.

IP programme at RTU: "Making business work in the new Europe"

Students` overall opinion of the IP (from students` questionnaires):

- Very good arrangement in every aspect of learning, cultural exchange, getting to know Riga!
- Different lecturers and new friends, new knowledge about different cultures. Simulation game was also fun.
- Great programme for students to learn how to communicate with people from other countries.
- It is good opportunity to improve your culture intelligence and to know more about the Baltic Sea region.
- It is very important to change the prejudice of Germans about the Baltic Sea region!
- I learned so much more than I expected! I want to participate again!
- I got from the IP what I expected. I am satisfied!
- It was a great experience and an inspiration for my future career.
- It was useful for me, it was very interesting. Thank you!
- It was a great experience! It was fantastic!
- Dynamic, creative and motivating! Enjoyable! Very good! Awesome! Thank you!

IP programme at RTU:
“Making business work in the new Europe”

Thank you for attention!

Questions/comments

RIGA
TECHNICAL
UNIVERSITY

International Classroom

Anna Lejiņa
RTU FSD

Riga Technical University
Foreign Students Department

- The RTU Foreign Students Department is the RTU structural unit, which has been working with International students coming from all around the world for about 20 years.

- Our mission is to support students throughout the whole enrolment and studying process.

- Being internationally driven is essential for the future success of the Riga Technical University (RTU) and especially for RTU Foreign Students Department.

Faculties

Faculty of Architecture and Urban Planning

Faculty of Civil Engineering

Faculty of Computer Science and Information Technology

Faculty of Electronics and Telecommunications

Faculty of Power and Electrical Engineering

Faculty of Engineering Economics and Management

Faculty of Materials Science and Applied Chemistry

Faculty of Transport and Mechanical Engineering

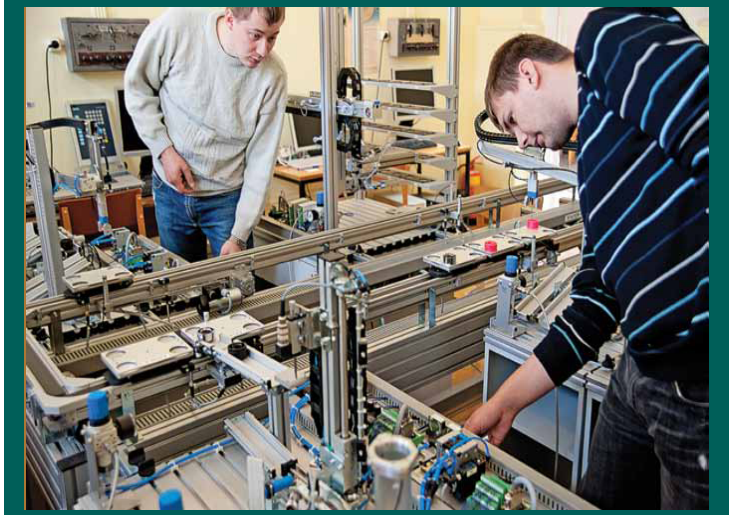
Institute of Applied Linguistics

Full Time Studies

More than 30 programmes taught in English

Degrees issued recognised world-wide

Engineering



- Business Informatics
- Computer Systems
- Geomatics
- Civil Engineering
- Engineering Technology, Mechanics and Mechanical Engineering
- Aviation Transport
- Telecommunications
- Computerised Control of Electrical Technologies
- Medical Engineering and Physics

Business studies

- Entrepreneurship and Management
- Business Finance
- Civil Construction and Real Estate Management
- MBA Innovations and Entrepreneurship

+

more

- Chemistry
- Environmental Science
- Technical Translation

Study Fees

- For Citizens of EU and EFTA member countries, and Citizens of CIS tuition costs starting from 1850 USD
- For Citizens of other countries costs starting from 2580 USD
- Accommodation costs starting from 180 USD per month

Exchange Students

- We have partners in exchange programs from more than 150 universities
- On average each semester 40 Erasmus Exchange students arrive at RTU

International Students
Why?

- Firstly, we are convinced that the quality of research and education is greatly enhanced by the presence of talented international students and scientific staff with international experience.
- Secondly, in the current world international experience is essential for graduates at bachelor, master and PhD level.
- Thirdly, the university's objective is that all graduates should be able to carry out their profession in different cultural environments in which they might have to work. It is therefore essential that they learn to think in international terms, and that they acquire the necessary skills to work and socialise successfully with other cultures.

International Classroom

- Students from different countries. Taught in foreign language by local or guest lecturers. Students from Germany, France, Turkey, Spain, Uzbekistan, Pakistan, Spain, Azerbaijan, Nigeria, Egypt, Poland, Czech Republic, Cameroon, India, Russia ect.

- Both full time and exchange students interact in classroom
- Studies in English
- The University classroom is the main place where internationalization is taking place
- Communication

Challenges of the International Classroom

- Educating in English, at which lecturers and students are non native speakers
- Developing courses with an international perspective
- Dealing with students who come to class with skills and knowledge different from what you may expect
- Fostering intercultural groups that include all students present, local and international
- Doing the above, within the time available and at no extra cost, is a challenging task for teachers at universities all around the world.

Outside Classroom

- Student Parliament
- International evenings
- Buddy
- Couple Learning Program
- Welcome Party/Orientation
- Spring Trip with RTU FSD
- City of Riga
- Latvia

Thank you for the attention!

Questions?

Contacts:

info@rtuasd.lv

rtu.fsd.lv

New International Joint Master Programme in Logistics and Supply Chain Management

Andrejs Romānovs, assoc. professor, Faculty of Computer Science and Information Technology, RTU.
Chair of IEEE Latvia Section

International Week, May 28 – June 1, 2012

Implementation

Logistics and Supply Chain Management (LSCM) study programme is implemented as a joint degree programme on behalf of the four universities:

Autonomous University of Barcelona (Spain)

Riga Technical University (Latvia)

Montan University of Leoben (Austria)

University of Applied Science of Wilday (Germany)

Implementation

Target Group

The LSCM programme is targeting all graduates who want to deepen their knowledge in the area of Logistics and Supply Chain Management combined with an international and intercultural focus.

Objective

The Master programme in Logistics and Supply Chain Management has the main goal of educating professionals able to take decisions in logistics and supply chain management considering its operational, tactical and strategic aspects from an integrated perspective by covering subjects from technology, engineering and business.

The programme encourages students in scientific activities and prepares them for further doctoral studies.

Tasks

- To develop students' theoretical knowledge and practical skills needed for logistics and supply chain management;
- To use both fundamental and modern solutions in studying process, including information technology applications, which provides a variety of effective ways to solve LSCM problems;
- To provide knowledge and experience in different domains in cooperation with academic stuff from various European universities;
- To provide mobility of academic staff and students within the consortium universities;
- To ensure the curriculum flexibility to adapt to the changing labour market requirements and changes in technology;
- To stimulate students' desire to participate in scientific research;
- To prepare and motivate students for future doctoral studies.

Learning outcomes (expected)

- Ability to address LSCM problems in a holistic approach by taking into account general management concepts, human resources, environmental concerns, and quality, technological and economic aspects
- Ability to analyze, structure and discuss situations to identify problems in the field of LSCM and evaluate their complexity
- Ability to select and apply suitable methodologies and strategies to design a solution for an LSCM problem
- Ability to evaluate different alternatives and select the solution to be implemented
- Ability to elaborate solid arguments to convince and motivate decision makers, select the proper LSCM partners and then plan and coordinate the project to implement the solution

Programme structure

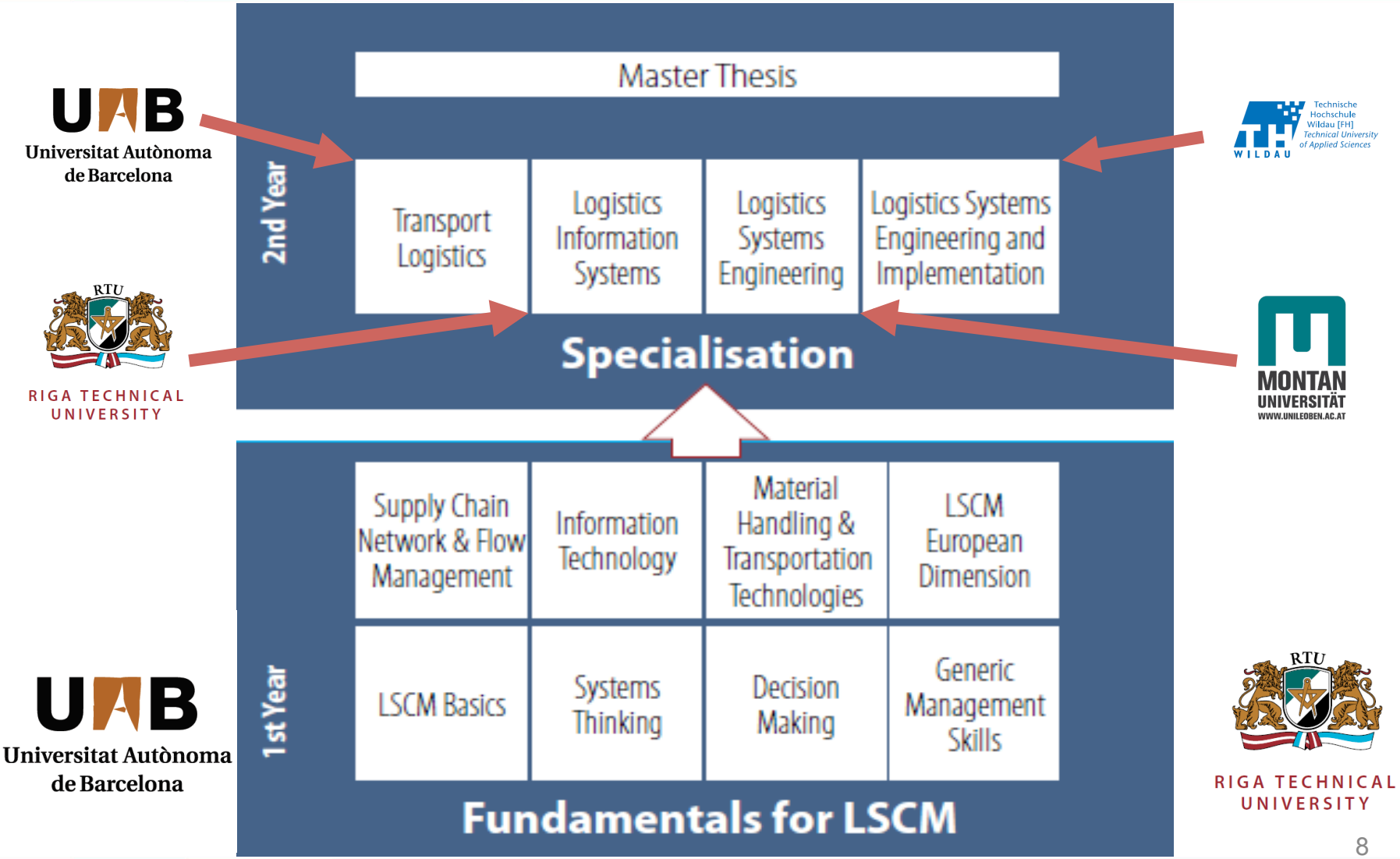
The Master in Logistics and Supply Chain Management is a 120 ECTS (or 80 RTU KP) programme.

The language of instruction is English.

The two year programme is divided into four semesters.

All students begin at Autonomous University of Barcelona (first semester) and Riga Technical University (second semester) before moving to the university offering the selected specialisation.

Programme structure



Programme content

- **General courses**

- Compulsory courses (1st semester): Basics of Logistics and Supply Chain Management, Modelling and Simulation in Logistics, Optimization Methods in Logistics, Systems Thinking, Project Management;

- Compulsory courses (2nd semester): Information Technologies in Logistics, Materials Handling and Transportation Technologies, Supply Chain Network Management Technologies, Global Markets and Supply Chains, LSCM European Dimension, Human resources.

- **Courses of Limited Choice**

- **Specialised courses**

Programme content

- **General courses**
- **Courses of Limited Choice**

This group consists of the following limited choice courses: Marketing Fundamentals, Microeconomics, Industrial Engineering, and Information Technology Fundamentals. The first two courses are offered for students with a bachelor's degree in engineering, but the latter two – for students with a bachelor's degree in social or natural sciences.

- **Specialised courses**

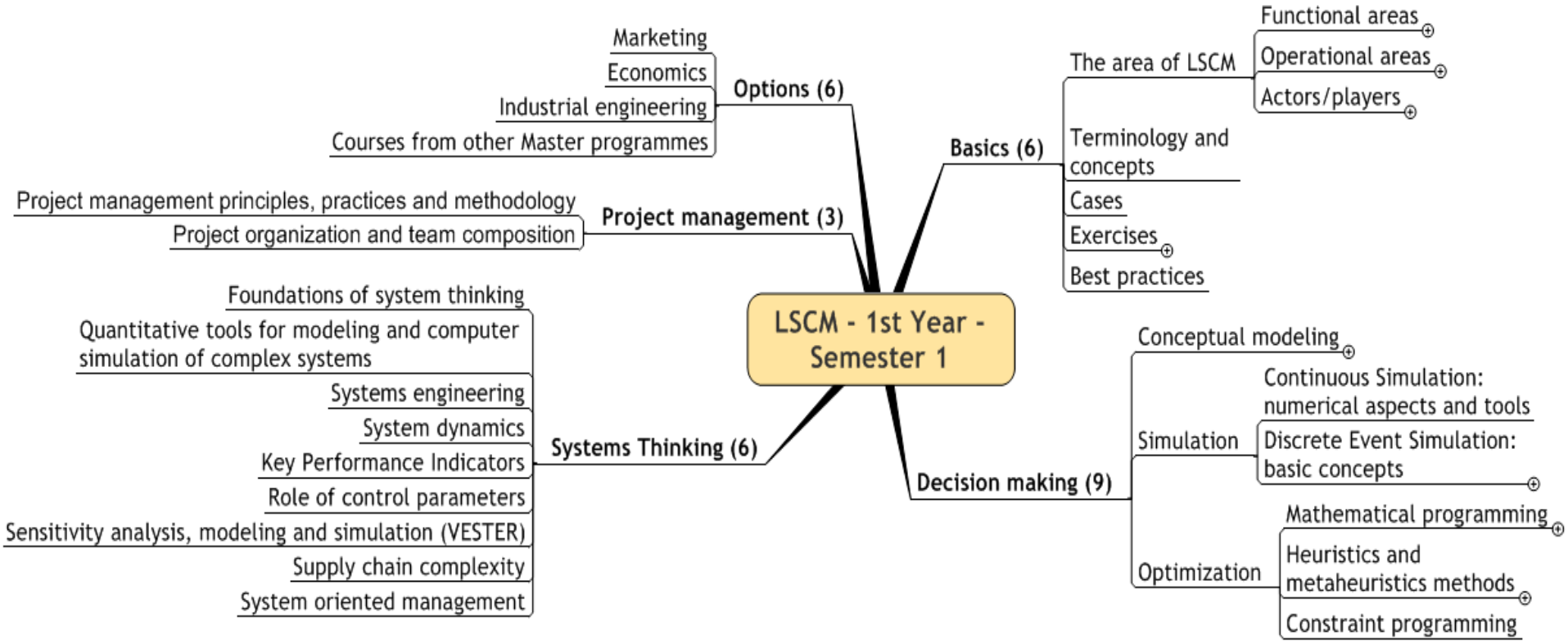
Programme content

- **General courses**
- **Courses of Limited Choice**
- **Specialised courses**

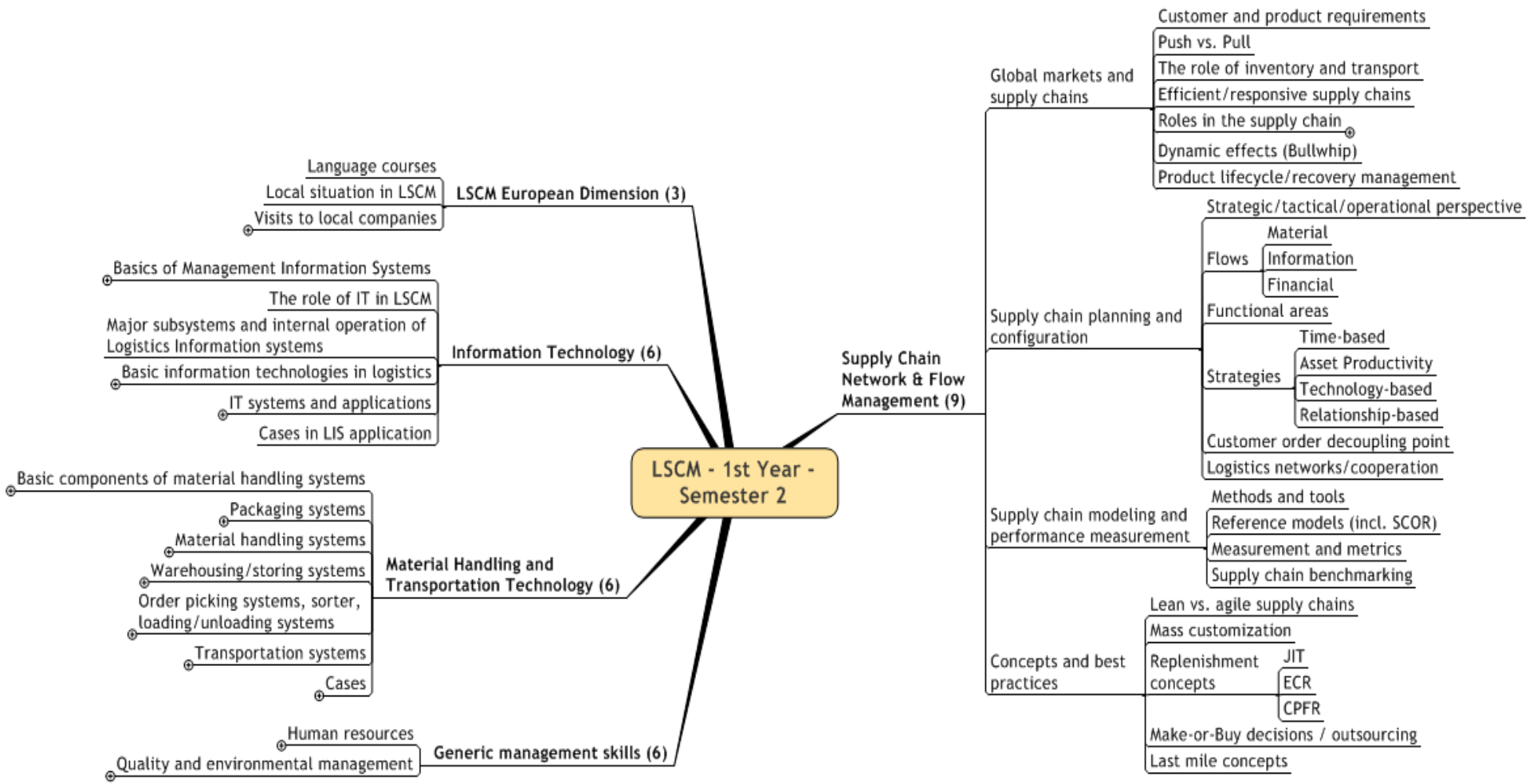
This group consists of limited choice courses, which allows selecting one of the four provided specialisations:

- Specialisation “Logistics Information Systems” (RTU);
- Specialisation “Transport Logistics” (UAB);
- Specialisation “Logistics Systems Engineering and Implementation” (UASW);
- Specialisation “Logistics Systems Engineering” (MUL).

Curriculum structure



Curriculum structure



Curriculum structure

Distribution of second year focus areas

Partner	Manufacturing logistics	Transport logistics	SCM	Specific focus
UAB		X		Multimodal Transport: Operational and Tactical Decision Making
RTU	X	X	X	Logistics Information Systems
UASW	X	X		Analysis, design, evaluation, implementation of material handling, transport, and logistics management and control systems
MUL	X		X	Logistics Systems Engineering

LSCM specialisations

RIGA TECHNICAL UNIVERSITY

Specialisation “Logistics Information Systems”:

Logistics Information Systems, Electronic Commerce in logistics, Systems Analysis, Decision Synthesis Principles and Practice in Logistics

UAB Universitat Autònoma de Barcelona

Specialisation “Transport Logistics”:

Decision Making in Transport Systems, Economy and Legislation of Transport Systems, Modelling and Optimization of Transport Systems, Basics of Trans-port Infrastructures and Services, Transport Systems Management

LSCM specialisations

Specialisation “Logistics Systems Engineering and Implementation”:

Material Handling System Design and Analysis, Transport System Design and Analysis, Logistics management and Control System Specification and Evaluation, Logistics System Implementation and Ramp-up

Specialisation “Logistics Systems Engineering”:

Logistics Systems, Process Engineering, Information Flow Design, Engineering Project Management

RTU specialisation

The Logistic Information Systems (LIS) specialization provides students with ability to design integrated IT solutions for LSCM problems.

A strong point is that it provides a dual expertise in two complementary disciplines: Logistics Management and LIS. Specialization gives students knowledge and skills about Information Systems in Logistics, using of data identification & processing, tracking and tracing technologies, concepts of system analysis, reliability principles and mechanisms of LIS and e-commerce information systems, selection and using the proper techniques and tools for decision making in LSCM as well as using and designing information systems to support problem solving and decision making in LSCM.

RTU specialisation

- Specialization objectives:
  - To provide ability to design and implement integrated IT solutions for LSCM problems
- Specialization competences:
  - Specific competences, after completing the specialization students will be able:
    - to select and apply a suitable methodology to develop a solution for IT-related LSCM problems
    - to evaluate different alternatives in the area of logistic information systems and select the solution to be implemented
    - to solve extended IT-related LSCM problems;
- Generic competences, students will be able:
  - to apply a rigorous and efficient approach to solving of IT-related LSCM problems

Degree

Successful participants of the full Master programme will be awarded the academic degree of

“Master of Engineering”

as a joint master degree of

Autonomous University of Barcelona,

Riga Technical University,

Montan University of Leoben,

and University of Applied Science of Wilday .

Tuition Fee & Application

- 3600 EUR per academic year for EU citizens
- 5800 EUR per academic year for non-EU citizens

Tution fee does not include course material, travel and accommodation costs, which are to be covered by the participants themselves.

The programme has one intake per one study year. It starts on 6 September 2012.

For further information please refer to:

www.master-lscm.eu

Career Opportunities

After successful completion of the master degree in Logistics and Supply Chain Management, the student should able to take on the following occupations:

Early career occupations:

- Material planner
- Production planner
- Purchasing planner
- Transportation planner
- Distribution planner
- Logistics project assistant
- Consultant
- Doctoral student in LSCM, etc.

Experienced occupations:

- Logistics or Supply chain manager
- Purchasing manager
- Logistics project manager
- Supply chain strategist
- Senior consultant
- Lecturer or Professor in LSCM

Thank you for your attention!
Questions?

Riga Technical University

History

1862 – 1896 Riga Polytechnic

1896 – 1919 Riga Polytechnical Institute

1919 – 1958 Engineering faculties incorporated within the University of Latvia and the Latvia State University

1958 – 1990 Riga Polytechnical Institute (RPI)

since 1990 Riga Technical University (RTU)

Riga Technical University

Vision

RTU – modern, prestigious and internationally recognized university – European study, research and innovation centre, a cornerstone of Latvia's development

Mission

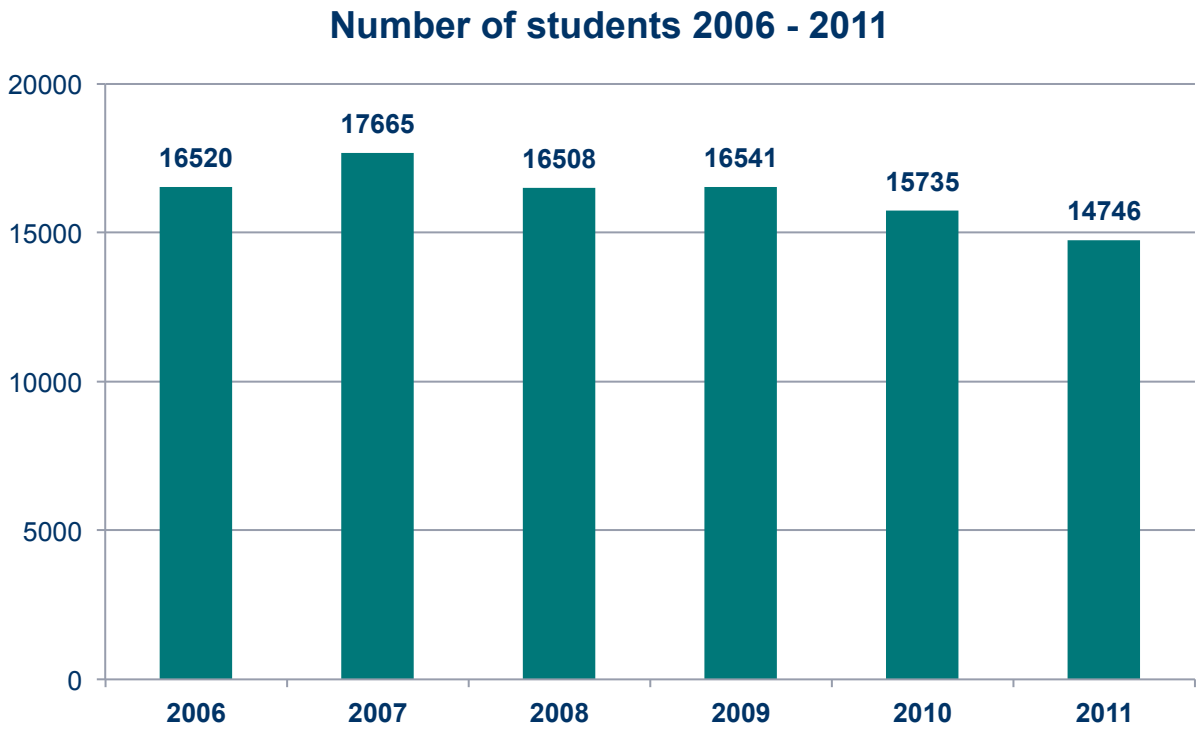
To provide the Latvian national economy with qualified human resources for its stable growth and development

Strategy

- Excellence in research
- Excellence in study process
- Organizational excellence and identification
- Outstanding infrastructure

Facts and Figures

Students – 15 000, Academic staff – 800



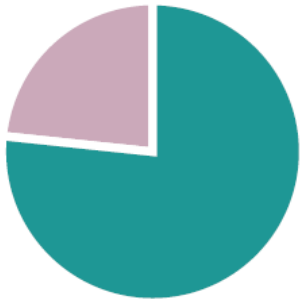
Students and academic staff

NUMBER OF STUDENTS (STATE AND RTU FUNDED /PAYING TUITION FEES)
(01.10.2011.)

- Students whose studies are financed by the State or by RTU: 7609
- Students paying tuition fees: 7137

Total: 14 746

FULL-TIME/PART-TIME
(01.10.2011.)



- Full-time (Day Department) studies – 11294
- Part-time (Extramural and Evening Department) studies – 3452

Total: 14 746

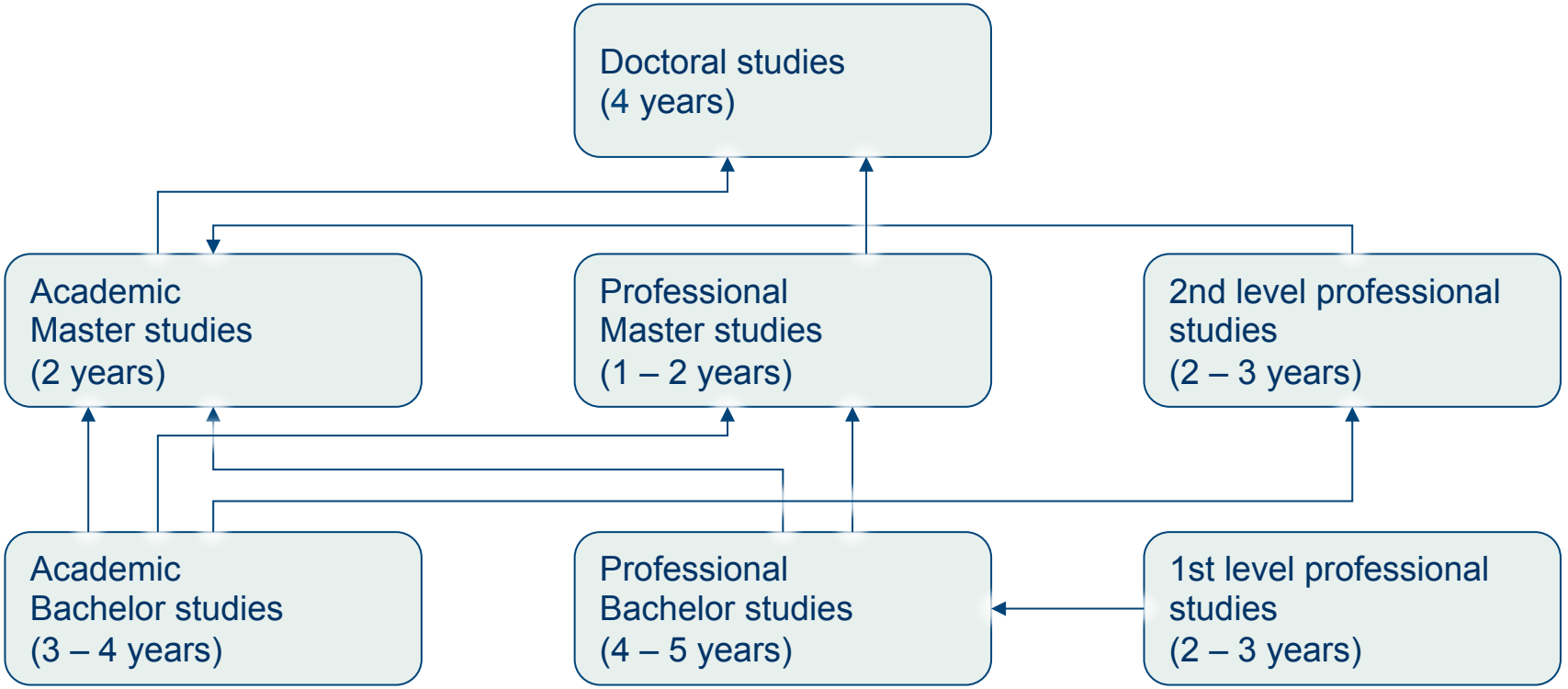
Students and academic staff

RTU PERMANENT ACADEMIC STAFF
(INC. WITH SCIENTIFIC DEGREE)

Professors	139 (139)
Associate Professors	97 (94)
Assistant Professors	135 (111)
Lecturers, Assistants (study)	160 (13)

Academic Staff, Total: 531 (357 = 67.2%)

Studies


Doctoral studies
(4 years)
Academic
Master studies
(2 years)
Professional
Master studies
(1 – 2 years)
2nd level professional
studies
(2 – 3 years)
Academic
Bachelor studies
(3 – 4 years)
Professional
Bachelor studies
(4 – 5 years)
1st level professional
studies
(2 – 3 years)

Faculties

Faculty of Architecture and Urban Planning

Faculty of Civil Engineering

Faculty of Computer Science and Information Technology

Faculty of Electronics and Telecommunications

Faculty of Power and Electrical Engineering

Faculty of Engineering Economics and Management

Faculty of Materials Science and Applied Chemistry

Faculty of Transport and Mechanical Engineering

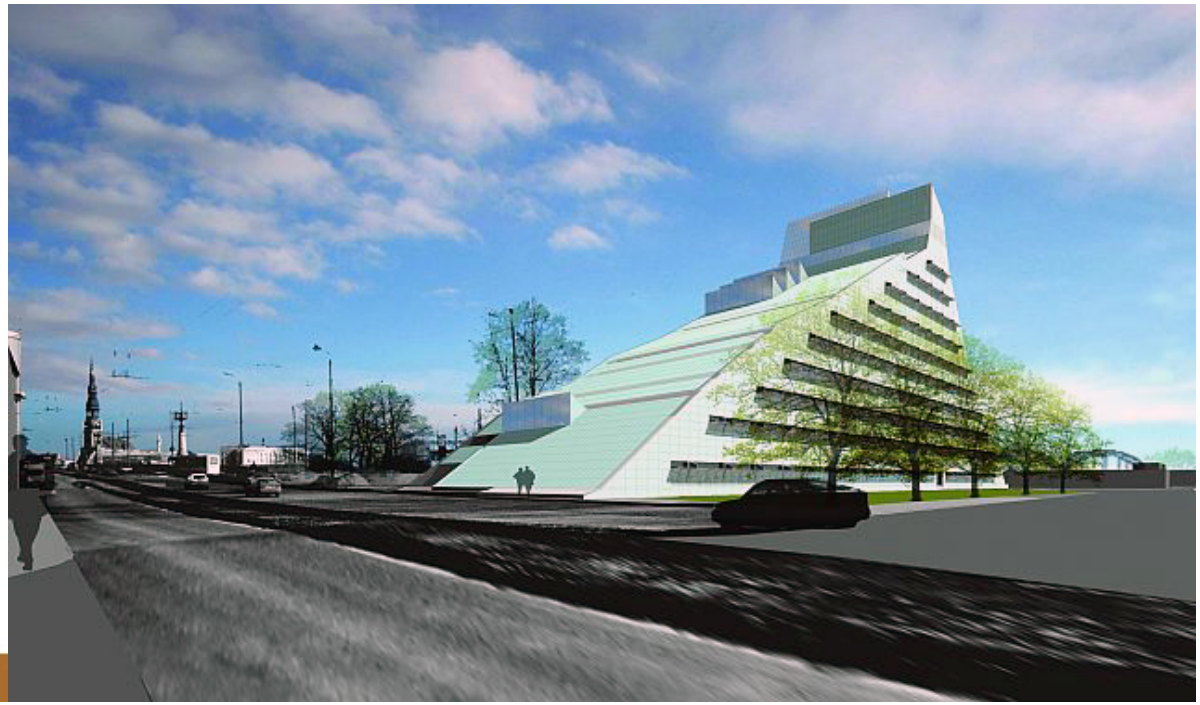
Riga Business School

Faculty of Architecture and Urban Planning

Students – 300

Study programme:

- Architecture



Faculty of Civil Engineering

Students – 2100

Study programmes:

- Construction
- Geomatics
- Technology of heat, gas and water supply
- Transport structures

Faculty of Computer Science and Information Technology

Students – 1500

Study programmes:

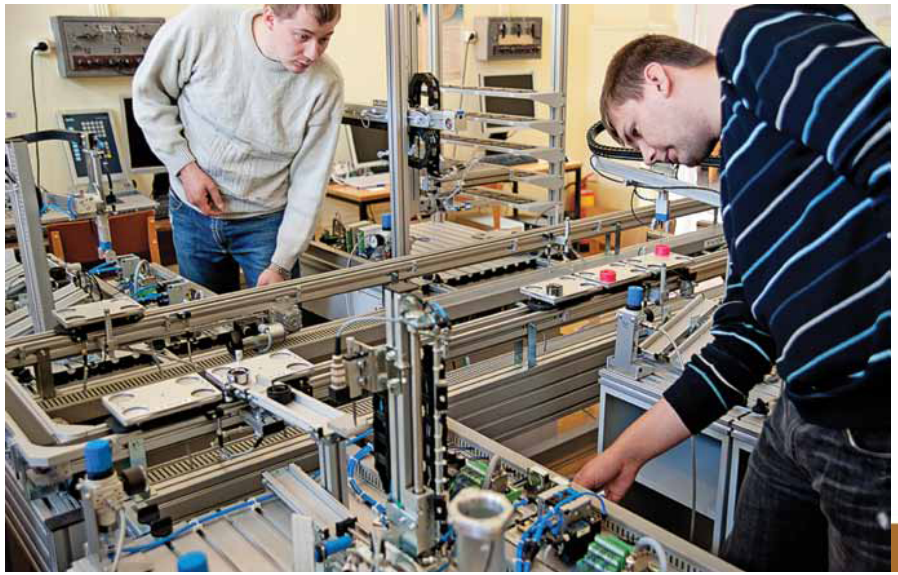
- Automation and computer engineering
- Computer systems
- Information technology
- Intelligent robotic systems
- Financial engineering
- Business informatics

Faculty of Power and Electrical Engineering

Students – 1450

Study programmes:

- Computer-aided control of electrical technologies
- Power engineering and electrical engineering
- Environmental science

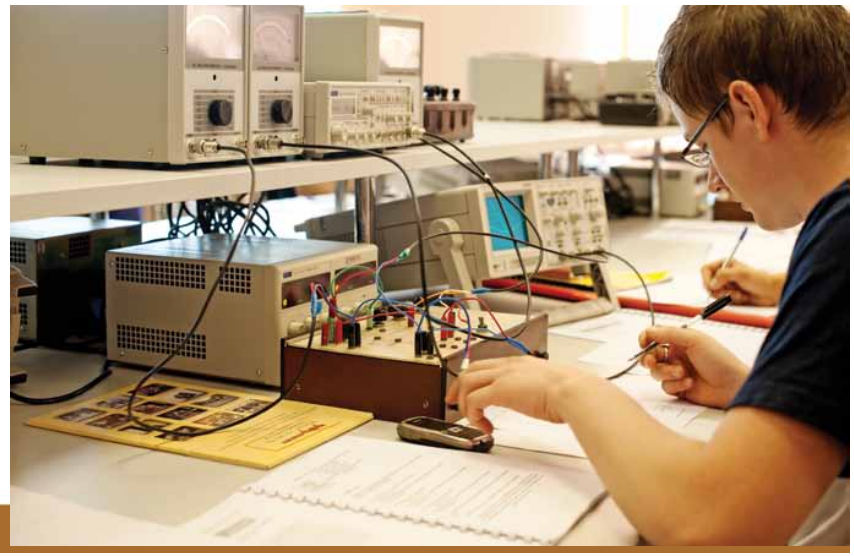


Faculty of Electronics and Telecommunications

Students – 960

Study programmes:

- Electronics
- Telecommunications
- Computerised control, information and electronic systems of transport
- Transport electronics and telematics



Faculty of Engineering Economics and Management

Students – 3900

Study programmes:

- Economics
- Entrepreneurship and management
- Customs and tax administration
- Human resources management
- Occupational safety
- Fire safety and civil protection
- Innovations and entrepreneurship
- Real estate management
- Business logistics
- Total quality management

Faculty of Materials Science and Applied Chemistry

Students – 900

Study programmes:

- Chemistry
- Chemical technology
- Materials science
- Nanotechnologies of materials
- Textiles and apparel technology
- Materials technology and design

Faculty of Transport and Mechanical Engineering

Students – 2000

Study programmes:

- Automobile transport
- Aviation transport
- Railway transport
- Engineering technology, mechanics and mechanical engineering
- Machine building and technical appliances
- Medical engineering and physics
- Mechatronics
- Production technology
- Heat power and heat engineering
- Engineering of transport systems
- Nanoengineering
- Industrial Designs

Quality Assurance System

- ✓ According to ENQA Standards and Guidelines for Quality Assurance in the EHEA
  - ✓ Quality Policy and Procedures
  - ✓ Approval, monitoring and periodic review of programmes and awards
  - ✓ Assessment of students
  - ✓ Quality assurance of teaching staff
  - ✓ Learning resources and student support
  - ✓ Information systems
  - ✓ Public information

Research priorities

Engineering Science

Materials Science and Chemistry

Architecture

Engineering Economics

RTU research traditions

Wilhelm Ostwald (1853 – 1932)

- Nobel prize winner (1909)
- Professor at Riga Polytechnic
- Founder of the branch of physical chemistry
- RPI Honorary member

Paul Walden (1863 – 1957)

- Chemist and historian
- Director of RPI (1902 – 1905), Rector (1917 – 1919)
- RPI academic staff member (1889 – 1919)

Co-operation in research

- Co-operation partners – 127 universities in 28 countries
- Major co-operation partners:
  - Germany (17)
  - Italy (12)
  - Russia (10)
  - Sweden (9)
- Participation in European and international research projects
- Organisation of international conferences

International cooperation

More than 300 agreements with higher education institutions worldwide

29 study programmes in English
More than 300 students from 35 countries

International activities:

- Exchange of students and staff within Erasmus programme
- International study programmes in cooperation with Scandinavian and Baltic states (BALTECH)
- International summer schools
- DAAD scholarship programme
- Language courses
- etc.

Development of Campus

Riga Technical University
1, Kaļķu street
Riga, LV-1658, Latvia
www.rtu.lv

The Role of Joint Study Programmes

U. Sukovskis, Vice – Rector for Academic Affairs, RTU

International Week, May 28 – June 1, 2012

Legal Status

Joint study programmes are legally recognized in Latvia according to the *Law On Institutions of Higher Education*

HEI is entitled, together with the partner institution, which can be another accredited HEI in Latvia or nationally recognized HEI in a foreign country, to develop a study programme and participate in its implementation under the written agreement.

Requirements

- All parts of the programme provided by partners have the same level (e.g., master)
- Each partner implements not less than 1/10 of the programme
- Partners have common requirements, degrees and professional qualifications, and it is one united programme

Requirements (cont.)

- The programme has jointly established quality assurance system
- Student mobility which allows to acquire part of the programme in one or more partner institutions
- Academic staff mobility
- Grade awarded meets the Latvian legislation
- Content of the joint diploma and diploma supplement is approved

These requirements are focused on

Quality Assurance

How to start?

- The programme has to be licensed
  - almost the same procedure and requirements as other programmes in Latvia
- Part of the programme which is implemented in the partner university shall be recognized (accredited) in the corresponding country
- Foreign university must submit proof that it is legally recognized by the state

Joint Diploma

- University is authorized to issue:
  - joint diploma (the content and form determined by the Cabinet of Ministers)
  - diploma of the university the student graduates from

Case Study 1

- Joint MBA programme since 1991 in cooperation with
  - University at Buffalo, USA
  - University of Ottawa, Canada

- Diploma issued by the RTU, while UB and uOttawa issue a certificate
- Top level of study quality

Case Study 2

- The Consortium in Science and Technology "BALTECH" (established in 1998)
- Seven universities from four countries
  - Tallinn Technical University, Estonia,
  - Riga Technical University, Latvia,
  - Kaunas University of Technology, Lithuania,
  - Vilnius Gediminas Technical University, Lithuania,
  - Linköping University, Sweden,
  - Lund University, Sweden,
  - The Royal Institute of Technology, Sweden.

BALTECH

Case Study 3 (cont.)

- Master programme “Industrial Engineering and Management”
- Implemented at the Technical Universities in Riga, Vilnius, Kaunas and Tallinn
- Diploma issued by the university the student graduates from
- Combines engineering and business education

Case Study 3 *(cont.)*

4 semesters (compulsory courses)

Code	Courses	Credits
DMS420	Statistical Analysis	4,5
DOP408	Operation Systems and Strategy	6
EEP586	Innovation Strategy Management	4,5
MRA407	Product Design and Development	4,5
PBM424	International Business	4,5

Code	Courses	Credits
PBM425	Fundamentals of Business Administration	4,5
IRO456	Industrial Marketing	6
DMI503	Manufacturing Planning and Control	4,5
DMI502	Supply Chain Management	4,5
IRO455	Organisation of Small & Medium Size Business	4,5
DSP504	Applied Intelligent Systems in Industry	3

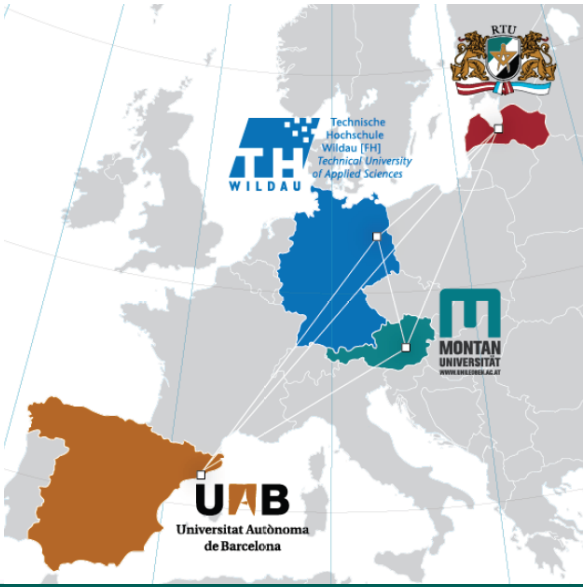
Code	Courses	Credits
DOP409	Information Systems in Production Management	4,5
DMI504	Applications of Manufacturing Simulation	6
IRO513	Productivity Management	4,5
MKI507	Quality Technology and Quality Management	4,5
BTC501	International Industry	6
IDA117	Labour Protection	1,5

Code	Courses	Credits
BTC002	Master thesis	30

BALTECH

Case Study 4

- Master programme „*Logistics and Supply Chain Management*”
- Partners
  - Riga Technical University, Latvia
  - Autonomous University of Barcelona, Spain
  - University of Leoben, Austria
  - University of Applied Science of Wildau, Germany



Case Study 5
New Programmes

- Development of new programmes in engineering and in business with partners in USA
  - Wayne State University, USA
  - University at Buffalo, USA
- Studies at RTU and partner university (3 + 2 or 1 + 1)
- Diplomas issued by both universities

It Works Well When

- Partners are carefully selected
- Partners have common goals
- Continuous cooperation over the whole period of implementation
- Collaboration on both administration and academic level
- Joint quality assurance system is in place

ppt-bird.blogspot.com

Thank you for your attention!
Questions?