

Master Studies Development Program (MSDP)  
*Training Seminar*



# The Role of Master Studies in Development of Knowledge-based Society

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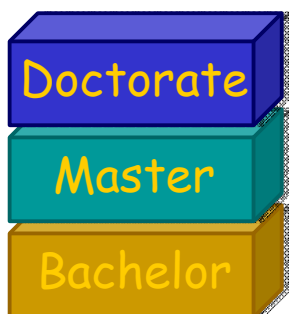


# Outline



## The Knowledge-based Society - Key Characteristics

## The Knowledge-based Society - European path

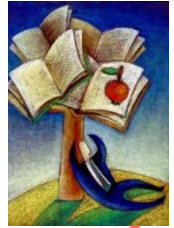


## The place and role of master studies

## Employability



# Information v.s. Knowledge-based society



- **Information Society**

Society in which the creation, distribution and manipulation of information has become the most significant economic and cultural activity. The machine tools of the *Information Society* are computers and telecommunications, rather than lathes or ploughs.

- **Knowledge Economy**

The essential difference is that in a *knowledge economy*, knowledge is a product, in *knowledge-based economy*, **knowledge is a tool**

- **Knowledge Society**

The term *Knowledge Society* refers to any society where **knowledge** is the primary **production resource** instead of capital and labour

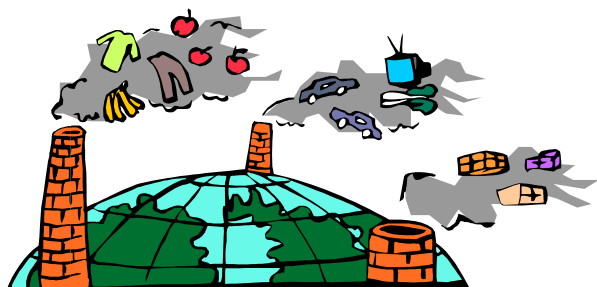
**"A society that creates, shares and uses knowledge for the prosperity and well-being of its people"**

<http://en.wikipedia.org/wiki>

<http://www.digitalstrategy.govt.nz/Resources/Glossary-of-Key-Terms/>



# The Knowledge-based Society



In the industrial society the principle commodity is  
**industrial product**

Labor and capital are primary production resources

Key question "who controls the natural resources?"

In the knowledge-based society the principle commodities are  
**educational and innovative  
intellectual products and services**

Knowledge is the principal tool and resource



# What is new in human history about “knowledge”



- Unprecedented accelerating speed at which knowledge is created and accumulated
- Disparities in the productivity and growth of different countries have far less to do with their abundance (or lack) of natural resources than with the capacity to improve the quality of human capital and factors of production
- The growing relative importance of intangible capital in total productive wealth, and the rising relative share of GDP attributable to intangible capital
- With current technologies, knowledge societies need not be constrained by geographic proximity - globalisation
- Current technology offers much more possibilities for sharing, archiving and retrieving knowledge
- Economic, social, cultural, and all other human activities become dependent on a huge volume of knowledge and information
- The economics are not of scarcity, but rather of abundance. Unlike most resources that deplete when used, information and knowledge can be shared, and actually grow through application



# The Knowledge-based Society - European path



- The ability of a society to **produce, select, adapt, commercialise** and **use knowledge** is critical for sustained economic growth and improved living standards

## **Lisbon Agenda:**

to become by 2010 the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion

Action plan: **e-Europe 2010**



# Prerequisite

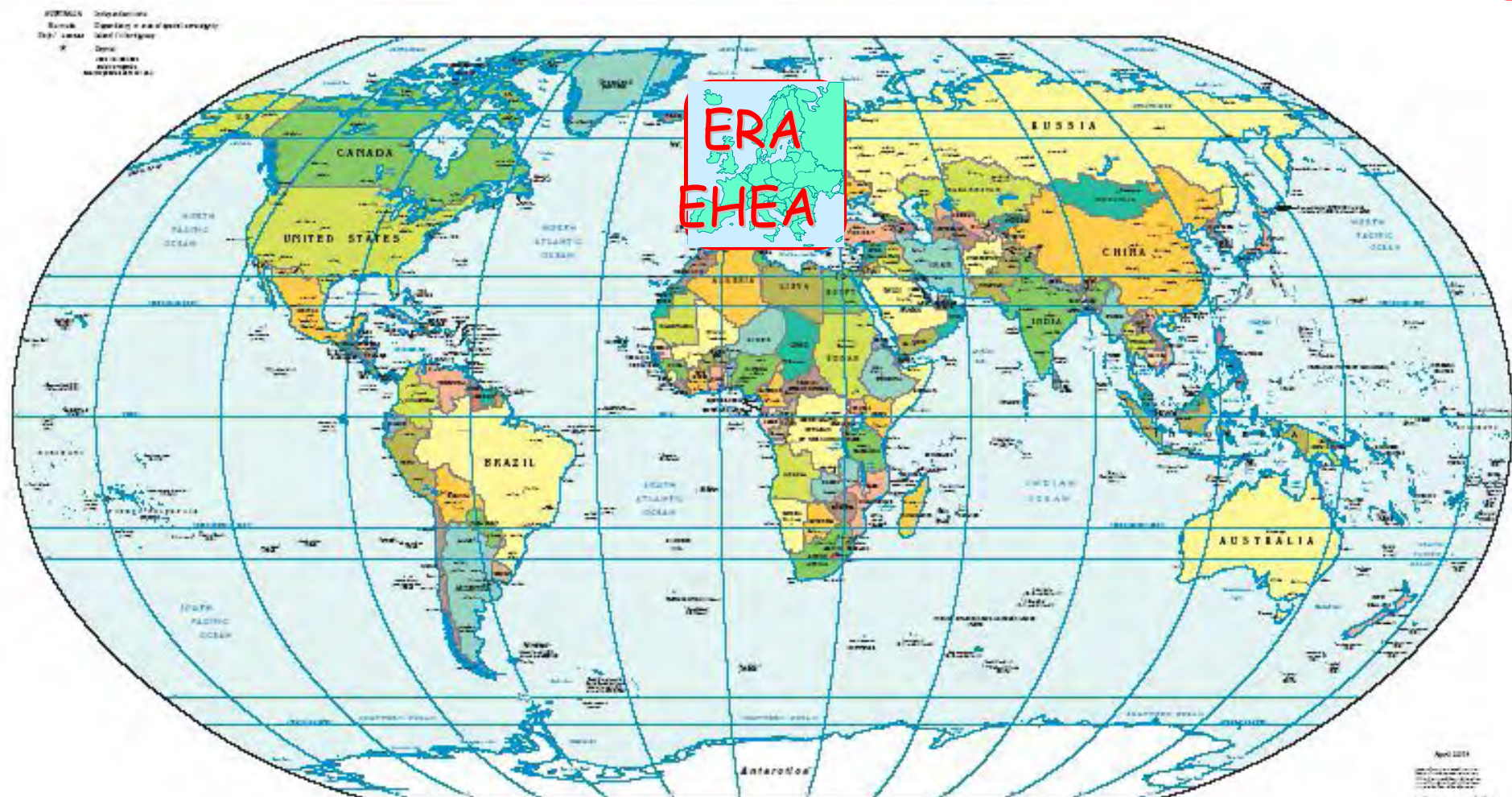
Prior to investing in new mining complex it has to be established that there exists a "critical mass" of ore



Creation of a knowledge based society Europe requires a "critical mass" of human resources



# "Critical mass"



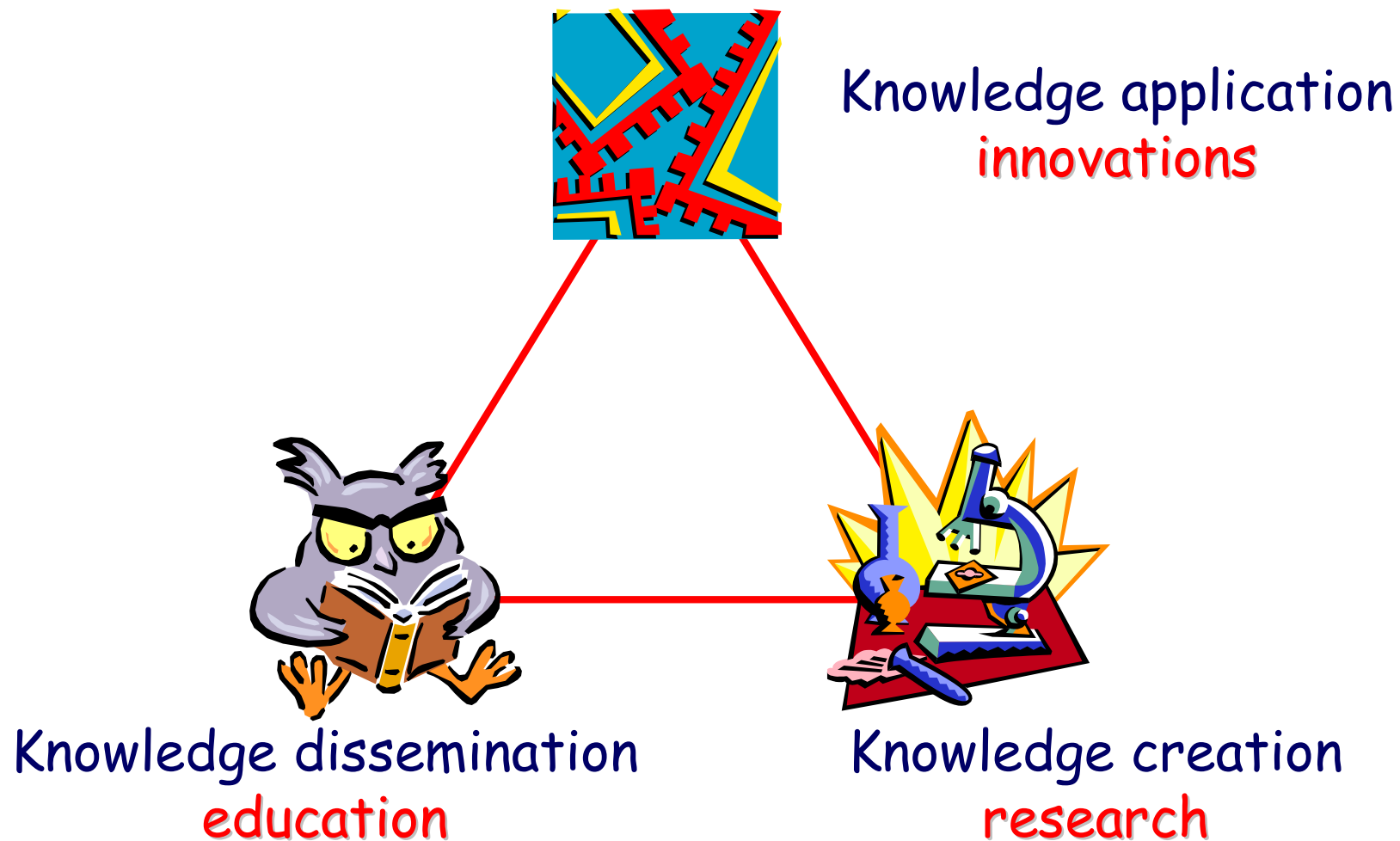
EHEA - European Higher Education Area  
ERA - European Research Area



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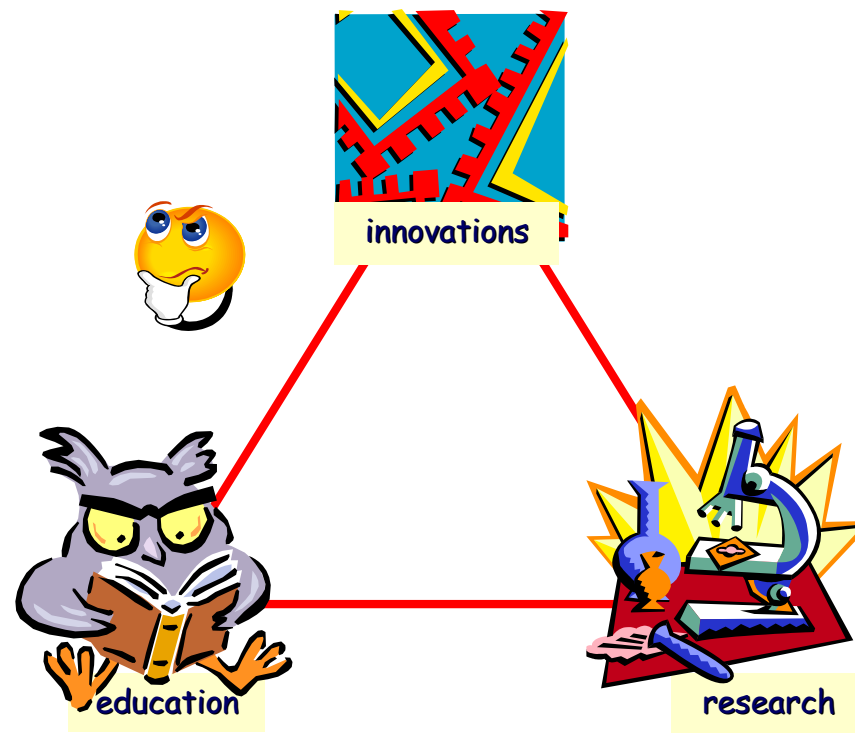
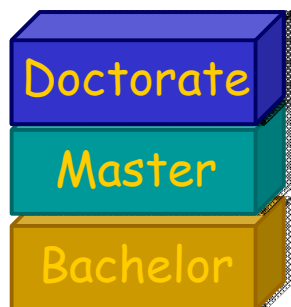


# European knowledge triangle



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# Locating degrees within the triangle



## European qualifications framework : Level 7 - Master

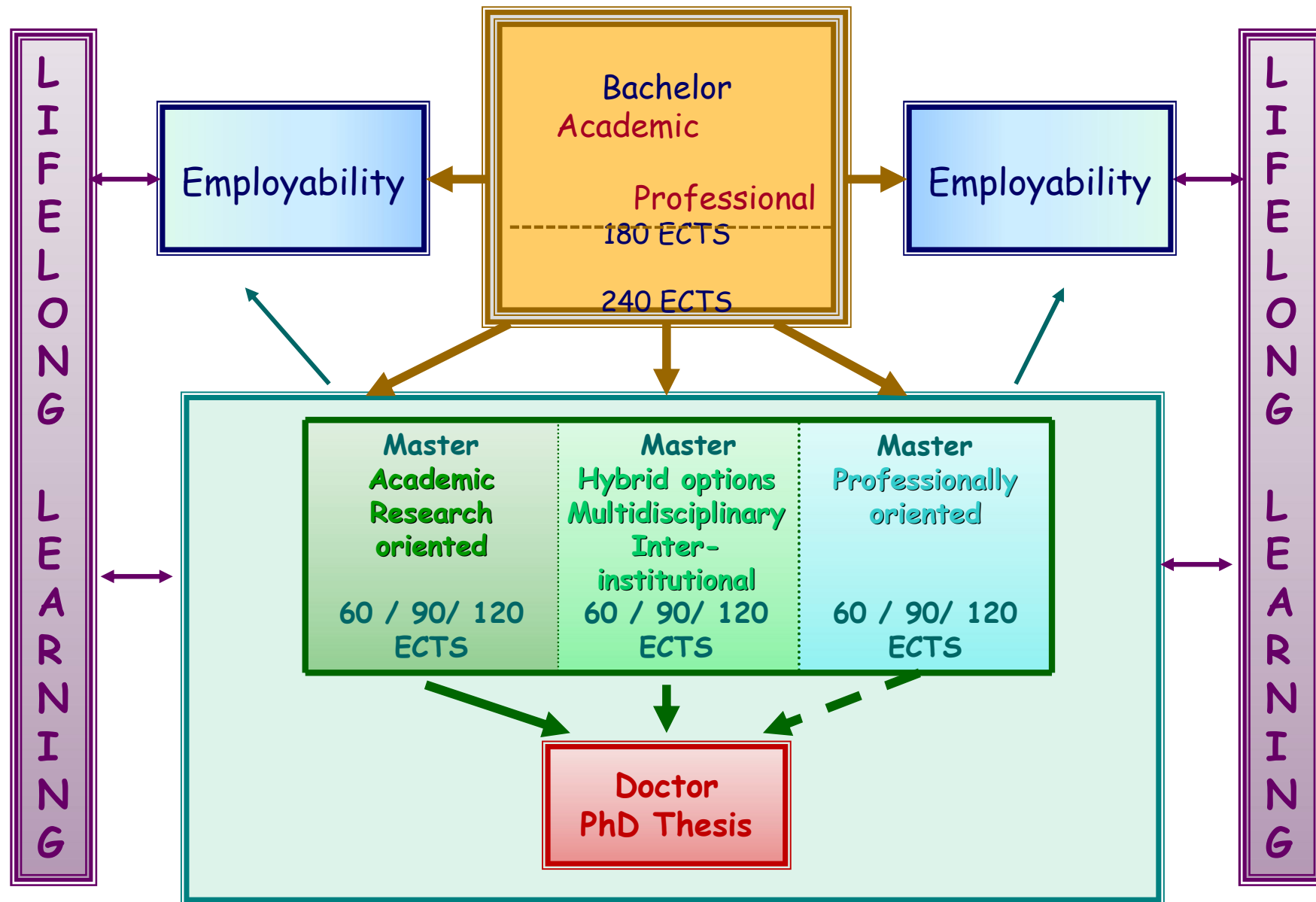
*Knowledge* - theoretical and/or factual

*Skills* - cognitive (involving the use of logical, intuitive and creative thinking) or *practical* (involving manual dexterity and the use of methods, materials, tools and instruments);

*Competencies* - responsibility and autonomy

Knowledge	Skills	Competencies
<ul style="list-style-type: none"> <li>• highly specialised knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking</li> <li>• critical awareness of knowledge issues in a field and at the interface between different fields</li> </ul>	<p>specialised problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields</p>	<ul style="list-style-type: none"> <li>• manage and transform work or study contexts that are complex, unpredictable and require new strategic approaches</li> <li>• take responsibility for contributing to professional knowledge and practice and/or for reviewing the strategic performance of teams</li> </ul>

# The BA-MA-DO Structure





The first degree **is not** only the introduction to the second degree,  
the second degree **is not** only an extension of the first degree;  
both degrees **should have** clearly defined profile

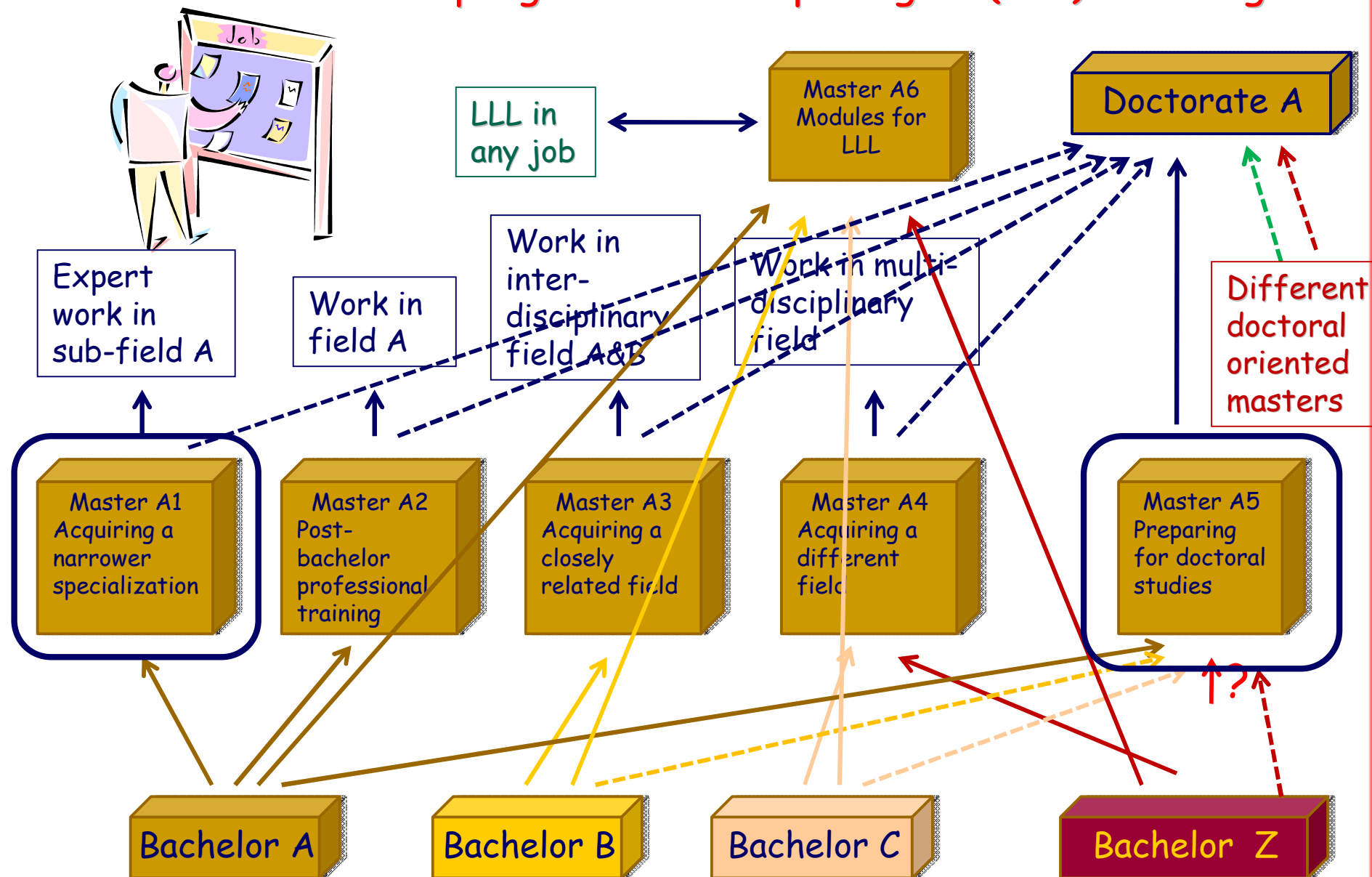
Masters are traditionally, or by very definition **deepening**

But the knowledge based society calls for **widening** the  
experience of learners:

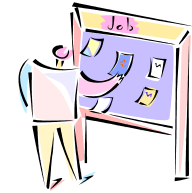
- Incorporate new curricular elements
- No standard route from bachelor in field X and Master in the same field X, but move to a different field
- Master programmes as part of life-long learning: not consecutive in time, but emphasis on a 'widening'

► Current hurdles for entry into Master programmes too difficult for holders of 'other' bachelor degrees (long pre-master bridging courses)

# Nature of Masters programmes: deepening or (and) widening?



# Meanings of "Employability"



1. Helping 'youth at risk' under unfavourable labour market conditions (EU policy)
2. Helping graduates in job search/ employers recruitment
3. Smooth transition (short job search period)
4. Exchange value (income, employment conditions)
5. Overall course of a career and individual's control over it
6. Bundles of knowledge/competencies matching bundles of work tasks
7. Match between field and level of study and job tasks
8. Employability skills: generic & transferable skills, social competencies

# Growing Public Interest

The public interest in the employment and work outcome of higher education has grown over the years in Europe as a consequence of

- *higher education expansion*,  
the expanding study programmes are expected in most European countries to directly prepare graduates for the world of work (cf. in the *Bologna Process* the “employability debate” and the concern about the professional relevance of university bachelor)
- *growing utilitarian expectations*  
harboured with research to higher education (cf. in the *Lisbon Process* the call to make Europe the “most competitive economy” with the help of knowledge enhancement)
- *increasing pressures to provide evidence*  
about proper processes and desirable outcomes (cf. the popularity of terms and measures such as “evaluation”, “accreditation”, “accountability” or “evidence-based policy”).



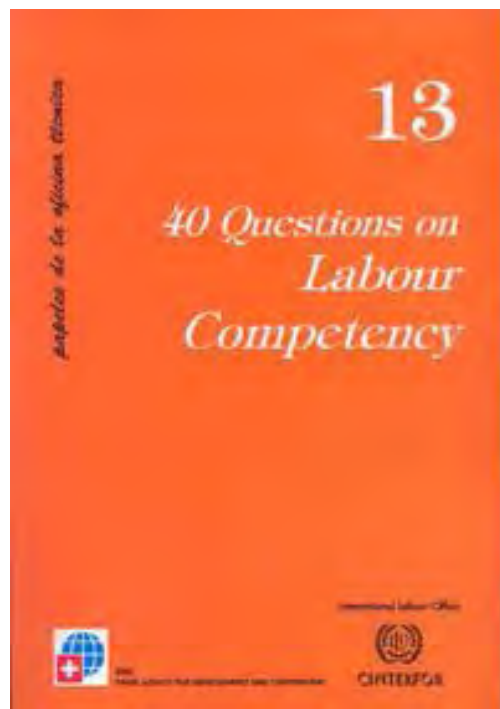
# What do we really know about graduate employment?



- Are graduates more productive than other workers?
- What makes some graduates more productive than other graduates?
- Do graduates make use of what they have learned in HE when they enter employment?
- Why do employers prefer to recruit graduates - or certain types of graduates?
- What is it (e.g. ability, expertise, ambition) that appears to give graduates the edge in the labour market?

# What do we need to know about our graduates?

- Employment
- Work
- Knowledge utilisation
  - as a feed-back in order to reflect the consequences of one of its core activities, i.e. those of knowledge transmission, in the domain of curricula, teaching and learning.
- This holds true irrespective of the extent to which the higher education systems as a whole, certain types of institutions, types of study programmes or fields or study have a “vocational”/“professional” or “academic” emphasis.



## 40 Questions on Labour Competency

Content has been organised in six groups of questions:

- A. Basic concepts on labour competency
- B. Identification of competencies
- C. Standardisation of competencies and quality standards
- D. Certification of competencies
- E. Competency-based training
- F. Competency-based human resources management

<http://www.ilo.org/public/english/region/ampro/cinterfor/publ/papel/13/index.htm>



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# European Project: Higher Education and graduate Employment in Europe (CHEERS project)

- In context of EU programme 'Targeted Socio-Economic Research'
- Graduate survey in 11 European countries: Austria, Czech Republic, Finland, France, Germany, Italy, Netherlands, Norway, Spain, Sweden, United Kingdom, and Japan.
- Graduates surveyed four years after graduation

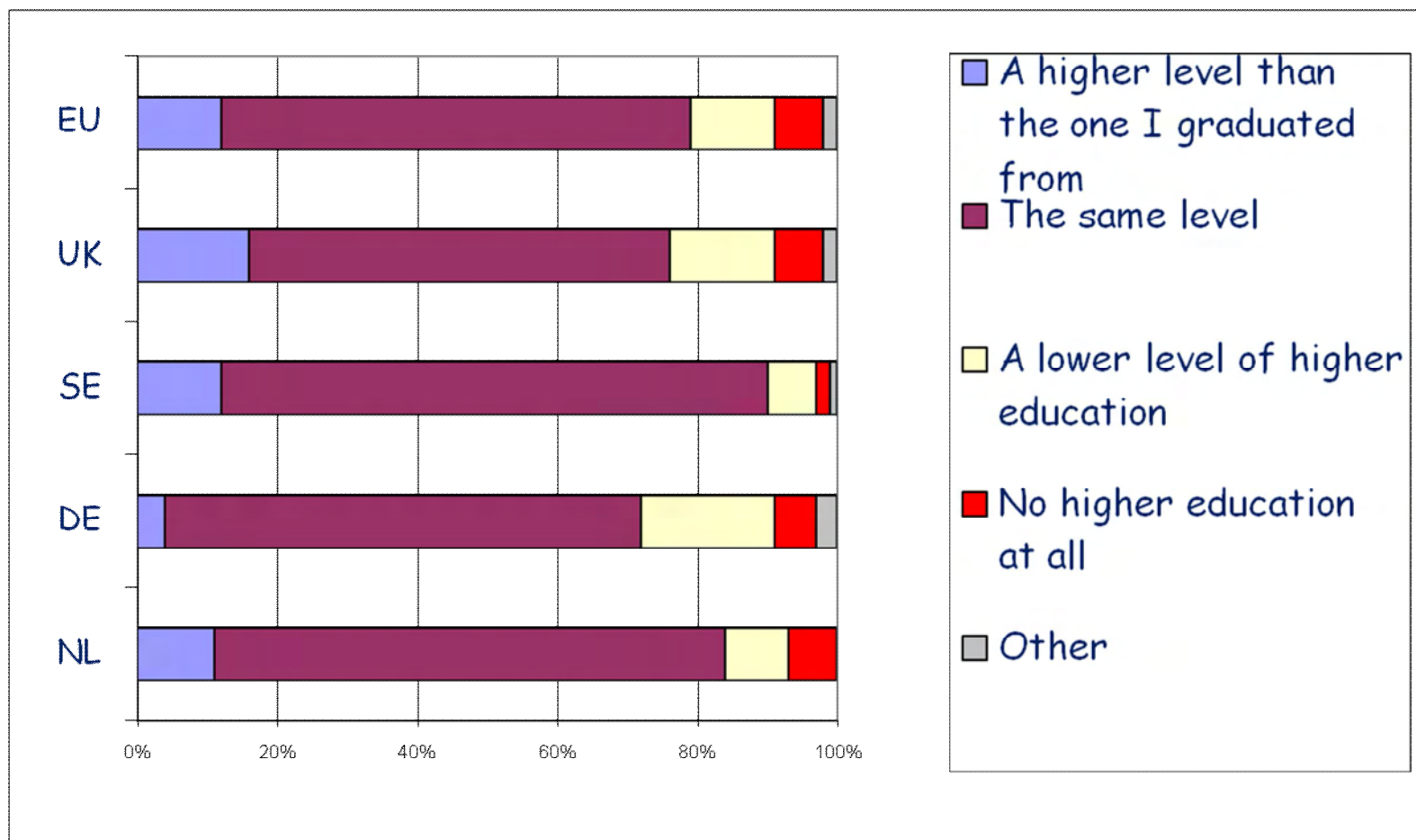
**CHEPS, E.Weert**, Master Studies in Lithuania and Competencies of Graduates on the Labour Market - A European perspective



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## Appropriateness of level of education for employment (%)

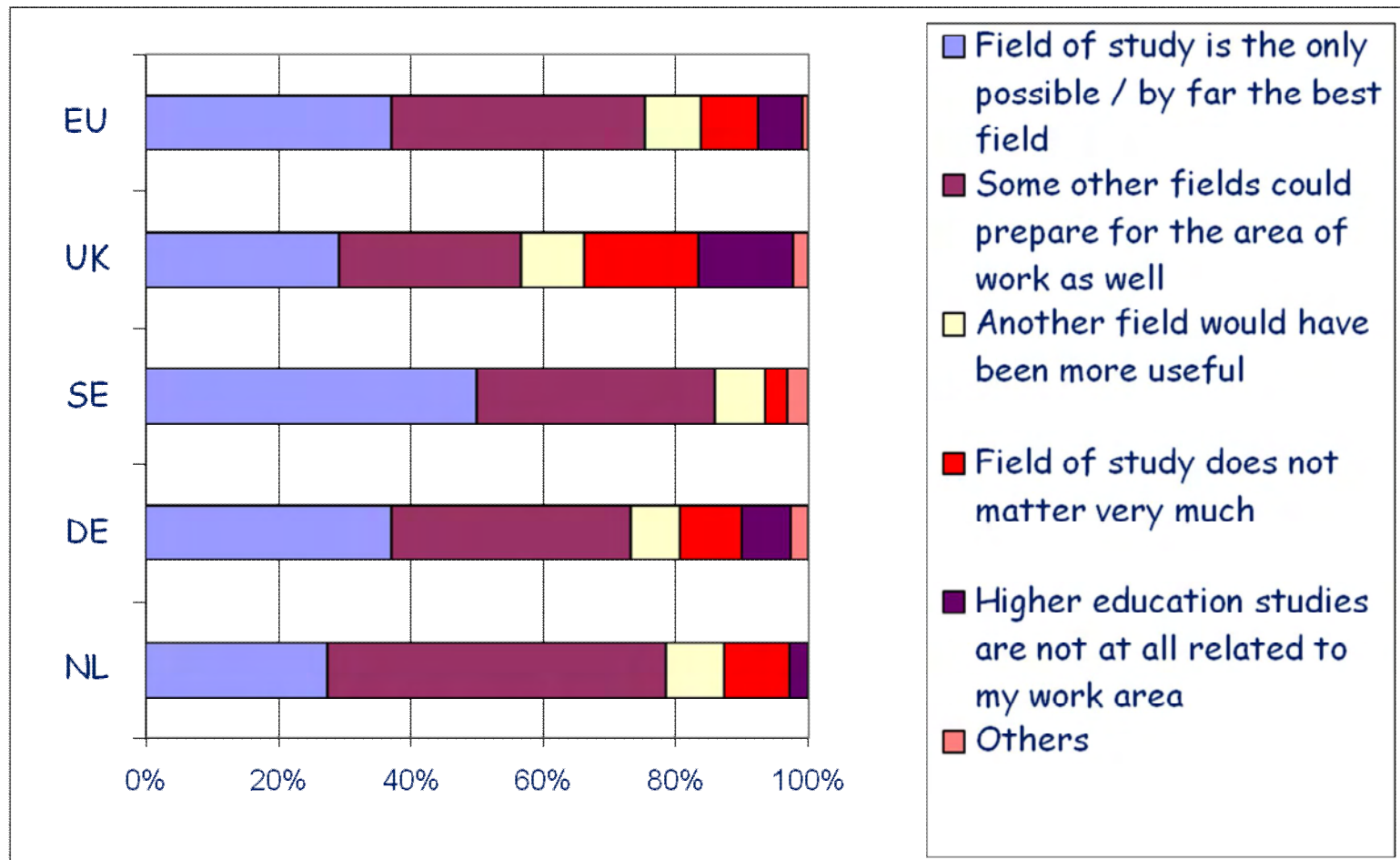


Source: CHEERS, 1999 (CHEPS)



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## Usefulness of field of study



Source: CHEERS, 1999 (CHEPS)



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# Changing demands in the knowledge based society: "The flexible professional"

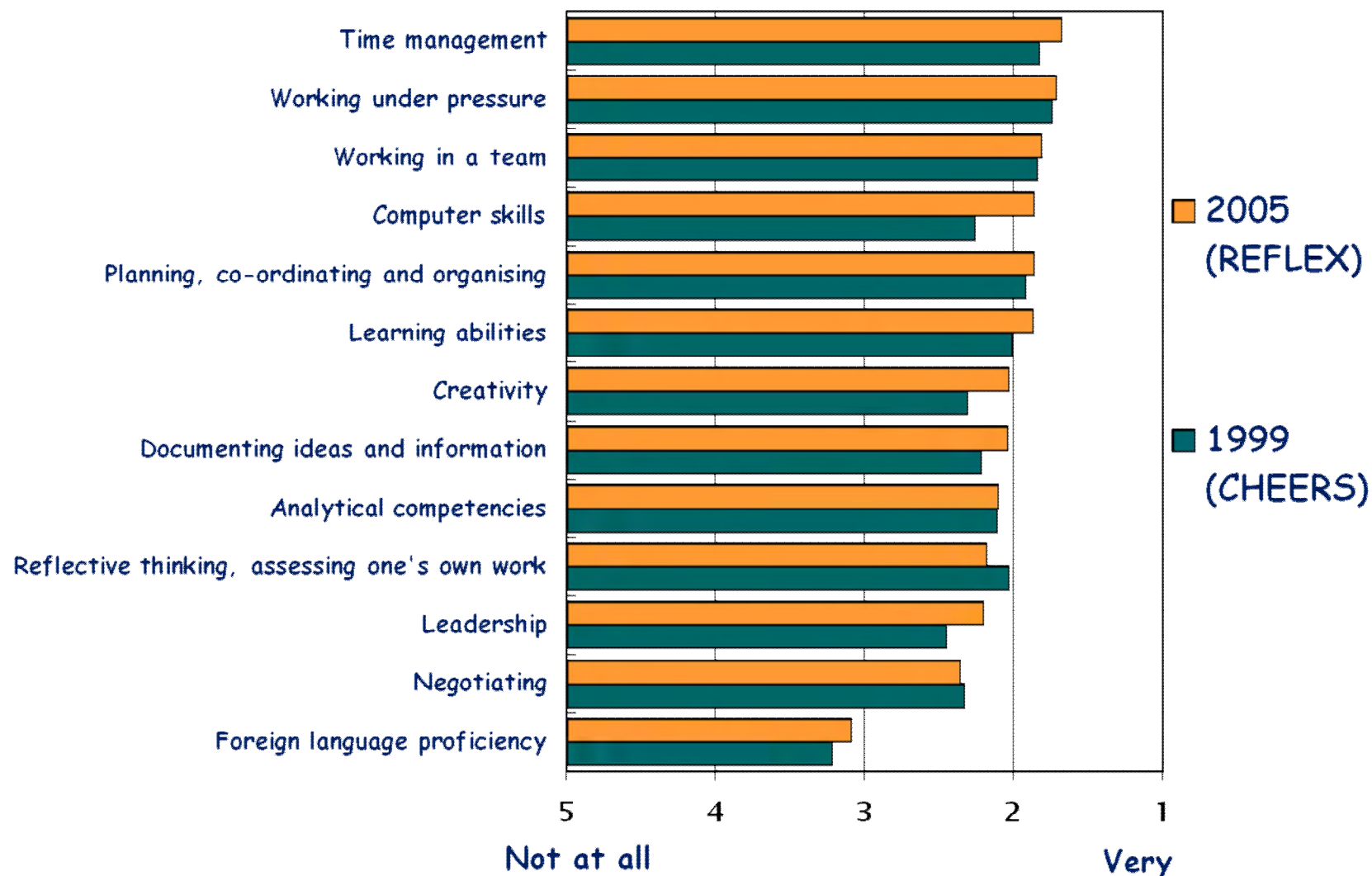
- *Expertise*: specialist knowledge related to creativity and innovation;
- *Functional flexibility*: responsive to diverse challenges, ability to acquire new knowledge;
- *Knowledge management*: developing ideas, implementing, networking;
- *Mobilisation of human resources*: take responsibility for change, skills to change the working environment
- **More Gates than Einstein?**

## "Employability skills"

- *Problem-solving* - transfer of (academic) knowledge to professional work assignments
- *Working styles* (working under pressure, working independently without clear assignments)
- *Working values* ("loyalty", "achievement orientation")
- *Social skills* ("leadership", "team work", etc.)
- *Context awareness* ("adaptation", "reflection", "risk taking", etc.)



## Stability of Work Requirements: 1999 - 2005 (arithm. mean)



Source: CHEERS 1999 and REFLEX 2005; INCHER-Kassel



# Implications of employability for curriculum

- *Strengthen disciplinary and professional knowledge*
- *Broaden knowledge base:*
  - emphasis on independent learning, reflection and critical thinking, integrative and synthesising capabilities;
  - incorporate other disciplines with classical subjects;
  - link technical and non-technical skills
- *Implement different forms of alternating theory and practice: e.g. internships; work-based learning, ...*  
(classical approach: learning precedes doing, practice is application of theory):
- *Competence-based learning:*
  - generic competencies, but not without reference to specific contexts; problem-based learning
- ...



# Possible cooperation between HE institutions and employers

- Involve employers in curriculum development
- Include professional staff in course delivery
- Mobility (or other forms of cooperation) between academic and professional staff
- Active support in organising internships
- Support master students involvement in research projects in collaboration with industry
- Engage in career counselling and placement of graduates



# Wrapping up



We are in 2009, what happened with Lisbon Agenda?

Relaunched in 2005, action plan e2012



EC Communication (2007): Green paper on ERA

A sense of urgency in revisiting ERA stems from the fact that globalisation of research and technology is accelerating and new scientific and technological powers - China, India and other emerging economies - are attracting considerable and increasing amounts of R&D investments.

These developments bring new opportunities for Europe and the world.

At the same time, they raise the question of Europe's ability to sustain a competitive edge in knowledge and innovation, which is at the core of the renewed Lisbon Strategy for Growth and Jobs.



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# Wrapping up

EC Communication (2005): on Universities

Within the next 20 years, Europe's economic paradigm will change fundamentally.

Its manufacturing base will continue to shrink, future growth and social welfare will rely increasingly on knowledge-intensive industries and services, and ever more jobs will require a higher education qualification.

Yet European universities, motors of the new, knowledgebased paradigm, are not in a position to deliver their full potential contribution to the re-launched Lisbon Strategy

Whithin the next two days we shall probably not be able to change this significantly, but might at least try to locate the master studies

