



## Active Learning The difficult bit of Bologna

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### What Bologna is about I - European strategic goals

- ☞ Last quarter of the 20th Century - Intense search of new routes for Europe and for the World
- ☞ Culminated with the European Council of Heads of State and Governments, March 2000, Lisbon
  - ✓ Competitive positioning relatively to the other blocks of the Planet
  - ✓ Stating of a strategic objective:  
“By 2010, making Europe 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” .



## What Bologna is about

### II - The three dimensions of the Strategy

- ☞ The Economy Dimension - where we can identify the movement that converged in the creation of the EURO
- ☞ The Social Dimension - seen on the multiple objectives of social nature set in the “Lisbon Strategy for 2010”
  - ✓ In line with the European culture of humanism, reasoning, freedom and democracy
- ☞ The Knowledge Society Dimension - identified with the Bologna Process
  - ✓ with all the social, human capital and economical implications
- ☞ This knowledge dimension is very special
  - ✓ Because its universe goes well beyond the European Union
  - ✓ By its nature, many key aspects escape political and even economical control

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## What Bologna is about

### V - The European Higher Education Area

- ☞ Establishing till 2010, the European Higher Education Area, coherent, compatible, competitive and attractive for european students and for students from third countries
- ☞ A Space that promotes European cohesion through knowledge, through mobility and employability of graduates
- ☞ A Space that promotes the development of new paradigms of education

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## What Bologna is about

### VI - Detailing strategic objectives (I)

- ☞ The building of new European awareness and dimension in higher education, research and innovation:
  - ✓ For what cultural interchange through the mobility of young (and not so young) people plays a major role.
  
- ☞ The increase of European cohesion:
  - ✓ Again through mobility and always through knowledge, this being considered as the only way for strengthening the role of Europe in the World.



## What Bologna is about

### VI - Detailing strategic objectives (II)

- ☞ The re-structuring of the higher education system:
  - ✓ in order to bring higher education nearer to the needs of Society and simultaneously to offer a wider choice to youngsters that may bring them more individual satisfaction.
  
- ☞ An evolution of the teaching and learning paradigms:
  - ✓ adapting this learning process to the prevailing views and concepts of modern societies and to the available pedagogical means,
  - ✓ projecting in particular the education for the adult stages of life, in this way adapting to the evolution of knowledge and to the evolution of individual and collective interests.



## What Bologna is about

### VII - MAIN Instruments for change

#### ☞ *Quality Assurance*

By 2005 national quality assurance systems should include:

- ✓ A definition of the responsibilities
- ✓ Evaluation of programmes or institutions
- ✓ A system of accreditation, certification or comparable procedures.
- ✓ International participation, co-operation and networking.

#### ☞ *Degree structure:*

- ✓ Adoption of a system essentially based on two main cycles

#### ☞ *Promotion of mobility*

- ✓ Establishment of a system of credits - also an accumulation system, to be applied consistently
- ✓ Recognition of degrees: Adoption of a system of easily readable and comparable degrees, through descriptors of competences



## Issues about Bologna

### I - What is relevant for the individual countries?

#### ☞ For sure a smooth transition, BUT:

- ☞ To understand the change of development paradigm ...linked to opportunities of co-operation, which indeed includes also financing of transnational projects
- ☞ To understand the evolution of the Society in requirements and opportunities
  - ✓ New competences
  - ✓ New paradigms of education
    - Learning more centred on the students work
    - Continuous education
  - ✓ New markets of learning and for jobs

#### ☞ Answer the question - What... If I do not change?



## Issues about Bologna

### II - Understanding the new generations

- ☞ Understanding their intuition thinking, using that to catalyse their development of holistic perception
- ☞ Understanding that the evolution of concepts and ideals from generation to generation can only be achieved by having them participating and influencing the discussion of the issues
- ☞ Adapt the offer of higher education to attract young people
- ☞ A major issue in Portugal - review the links and coordination between secondary education and higher education



## What matters...for the discussion Today... Difficulties...

- ☞ Difficulties hindering progress
  - ✓ Yes, we have the required legislation
  - ✓ Hard to change corporative concepts
  - ✓ VERY HARD to change teaching/learning methods
    - They require change of some methods used for decades
    - They require time for adapting or making new dossiers



What matters...for the discussion Today...

**Action - Define Programme Outcomes  
and accredit degrees (I)**

- ☛ **Programme outcomes for accreditation should always be related to potential professional recognition of engineering qualifications**
- ☛ **As such:**
- ☛ **There must be only one set of programme outcomes for accreditation of Second Cycle Degrees**
  - ☛ (Whatever the profile and programme, to be discussed below)
- ☛ **There must be only one set of programme outcomes for accreditation of First Cycle Degrees**

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What matters...for the discussion Today...

**Action - Define Programme Outcomes  
and accredit degrees (II)**

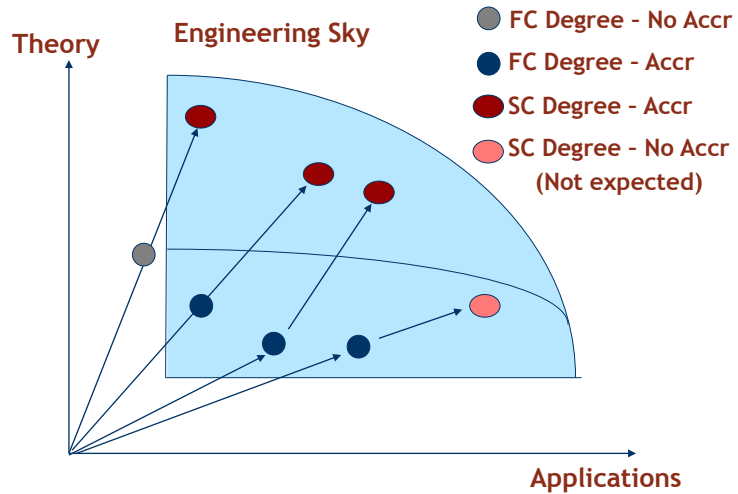
- ☛ **Programme Outcomes must be evaluated in relation with the level of intervention in the Engineering Act**
  - Social responsibility (namely, signing projects)
  - Capacity to tackle large, complex problems
  - Capacity to adapt to new jobs of high complexity and responsibility
  - Capacity for effective activity in the production line
  - .....
- ☛ **For the different subsets of Programme Outcomes, and for the First and Second Cycle Degrees, the differences in requirements are mostly related with**
  - **scope, depth and breath**

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## Engineering Degrees Profiles and Accreditation for Professional Recognition (taken from Prof. JD Woerner, CESAER, Lisbon, 2005)



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## The role of Students

- ☞ Active participants in several issues
- ☞ Pushing forward the correct application of ECTS concepts
- ☞ Actively participating in the enforcing of new methods

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