

2<sup>nd</sup> EUROPEAN  
ENGINEERS' DAY

# Accreditation of Continuing Engineering Education



ORDEM  
DOS  
ENGENHEIROS

José M.P. Vieira  
National Vice-President

Brussels, 20th November 2014



## OUTLINE

---

- ▶ Lifelong learning for Engineers
- ▶ Continuing Professional Development (CPD)
- ▶ The AcCEdE<sup>®</sup> system for continuing education
- ▶ Conclusion





## LIFELONG LEARNING FOR ENGINEERS

- ▶ **European Higher Education Area Ministerial Conference** (Bucharest, 2012). **Goals in the coming years:**
  - ▶ Investing in higher education for the future
  - ▶ Consolidate and build on progress in the implementation of the Bologna Process
  - ▶ Providing quality higher education for all
  - ▶ Enhancing employability to serve Europe's needs
  - ▶ Strengthening mobility for better learning
  - ▶ Improvement of data collection and transparency to underpin political goals



## LIFELONG LEARNING FOR ENGINEERS

- ▶ **European Higher Education Area Ministerial Conference** (Bucharest, 2012). **One of the priorities for 2012-2015:**
  - ▶ Work to enhance:
    - ▶ Employability;
    - ▶ **Lifelong learning;**
    - ▶ Problem-solving;
    - ▶ Entrepreneurial skills through improved cooperation with employers, especially in the development of educational programmes



## OUTLINE

---

- ▶ Lifelong learning for Engineers
- ▶ Continuing Professional Development (CPD)
- ▶ The AcCEdE<sup>®</sup> system for continuing education
- ▶ Conclusion



## CONTINUING PROFESSIONAL DEVELOPMENT (CPD)

- ▶ **FEANI policy on CPD** (approved by FEANI GA in Lillehammer, Norway, 1997; reviewed version approved by FEANI GA in Bucharest, Romania, 2008):
  - ▶ FEANI affirms that there is an on-going need for CPD of engineers in Europe as it contributes for **mutual recognition of academic and professional qualifications**
  - ▶ CPD is the acquisition of **knowledge, experience and skills**, as well as, the development of **personal qualities**. It contains both the acquisition of new skills, to broaden competence, and the enhancement of existing skills to keep abreast of evolving knowledge.
  - ▶ CPD is the **core of lifelong learning of professional engineers** at all levels of proficiency. It is a prerequisite for the maintenance of high professional standards throughout an engineer's professional life.



## CONTINUING PROFESSIONAL DEVELOPMENT (CPD)

- ▶ **FEANI policy on CPD** (approved by FEANI GA in Lillehammer, Norway, 1997; reviewed version approved by FEANI GA in Bucharest, Romania, 2008):
  - ▶ CPD **enables the employability and mobility** of individual engineers. It enhances their career in the fast moving world of technology and strengthens their professional satisfaction and well-being. CPD may act as a personal job assurance in the turbulent global job market.
  - ▶ CPD is ultimately the **individual's personal responsibility**. However, it has to be planned and it requires the cooperation, encouragement and support of employers, as well as, professional and academic institutions.
  - ▶ CPD is of **crucial importance for sustaining the competitiveness of European industry** in the global market, where competitive advantage can be gained from the application of high-end skills to leading edge technologies.



## CONTINUING PROFESSIONAL DEVELOPMENT (CPD)

---

### ► Types of CPD (FEANI proposal):

- Formal post graduate academic courses
- In-company training courses or lectures
- External training courses
- Service in professional engineering organization activities
- Technical visits or assignments
- Updating professional development based in individual study
- Preparation and presentation of a technical paper in a conference
- Preparation and technical publication in a journal or a book related with the profession
- Teaching or instructing in CPD related activities with the profession





## CONTINUING PROFESSIONAL DEVELOPMENT (CPD)

---

### ► Credits for CPD (FEANI proposal):

- CPD credits are only **an indicator of the commitment** of engineers to professional development and to practice improvement
- Credits are a **numeric appreciation** of the CPD activities
- This proposal may be used by national engineering associations to:
  - Define procedures to register and acknowledge CPD performed by engineers
  - Record CPD activities of its members
  - Verify CPD periodic requirements of its members



## OUTLINE

---

- ▶ Lifelong learning for Engineers
- ▶ Continuing Professional Development (CPD)
- ▶ **The AcCEdE<sup>®</sup> system for continuing education**
- ▶ Conclusion



## THE ACCEDE® SYSTEM FOR CONTINUING EDUCATION

---

- ▶ **Continuing engineering education. Rationale**
  - ▶ Rapid technological evolution (innovation)
  - ▶ New materials and methods in engineering
  - ▶ High mobility of engineers in Europe
  - ▶ New skills and opportunities for adequate training programmes
  - ▶ Professional qualification of engineers
  - ▶ Embracing lifelong learning in quality culture



## THE ACCEDE<sup>®</sup> SYSTEM FOR CONTINUING EDUCATION

### ▶ OE<sup>+</sup>AcCEdE<sup>®</sup> system accreditation approach

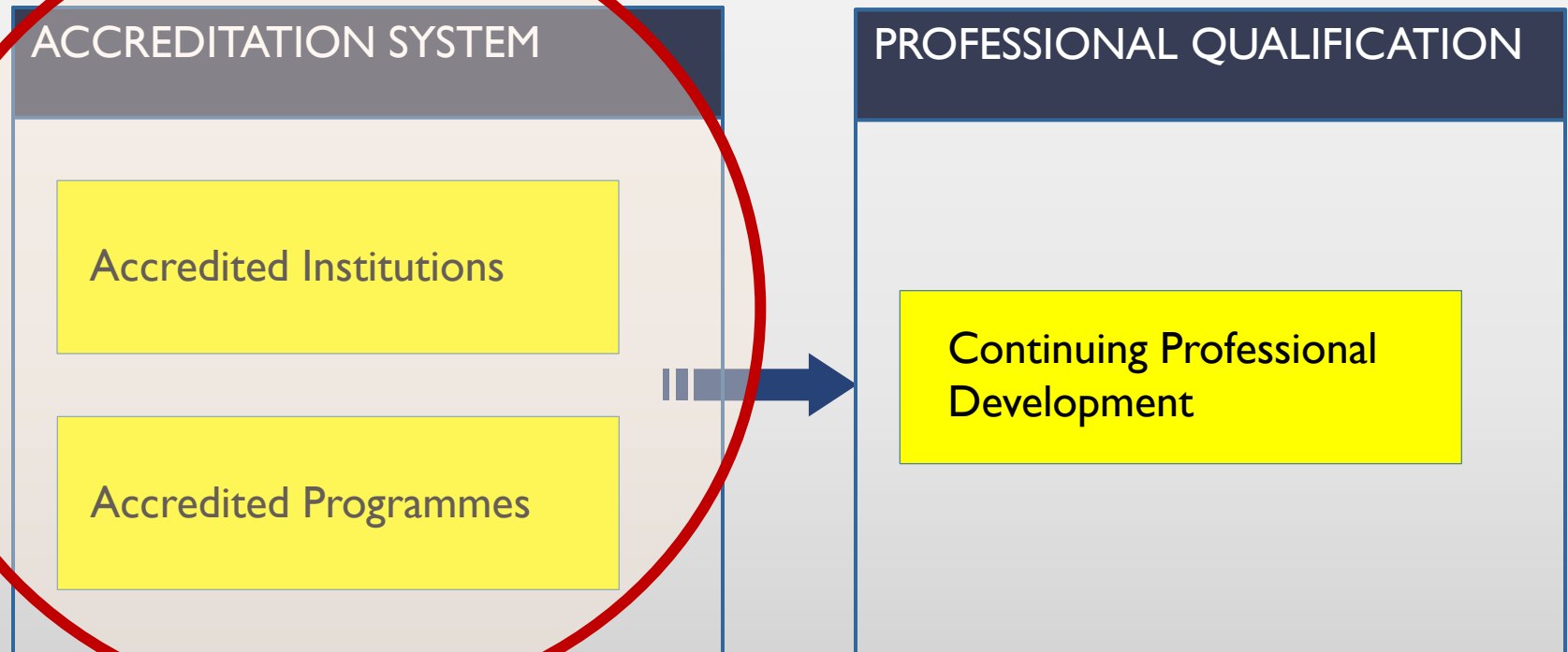
- ▶ Institutional accreditation:  
assesses institutions as a whole
- ▶ Programme accreditation:  
assesses quality of a specific  
programme
  - ▶ Programme accreditation is  
complimentary to institutional  
accreditation





## THE ACCEDE<sup>®</sup> SYSTEM FOR CONTINUING EDUCATION

### ► Continuing education in professional development







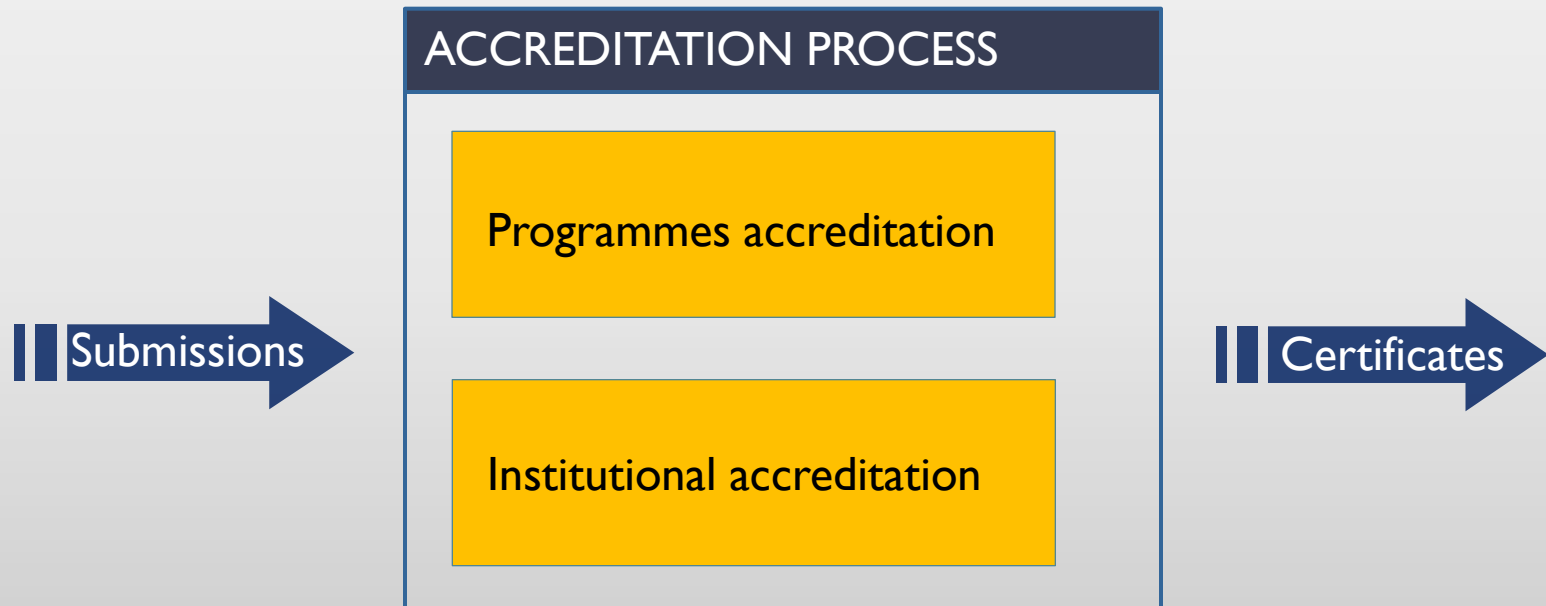
## THE ACCEDE<sup>®</sup> SYSTEM FOR CONTINUING EDUCATION

### ► Accreditation procedure. System implementation (schedule)

May to July

September to November

December





## THE ACCEDE® SYSTEM FOR CONTINUING EDUCATION

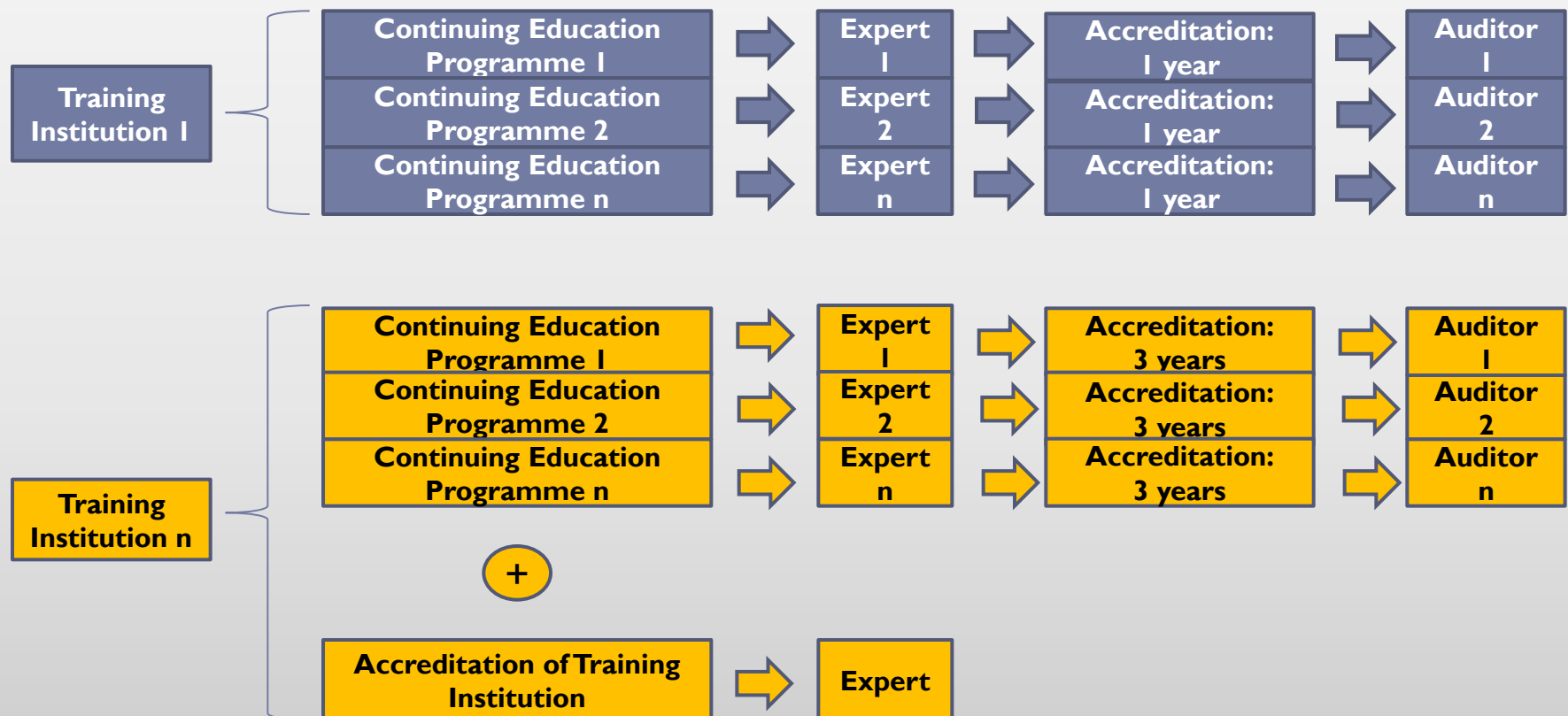
---

- ▶ **Accreditation procedure.** Evaluation team
  - ▶ Independent auditors and experts
  - ▶ Universe of recruitment: members of Ordem dos Engenheiros
  - ▶ Representativeness of all of the 12 disciplines
  - ▶ Engineers from academy, industry and consultancy



## THE ACCEDE<sup>®</sup> SYSTEM FOR CONTINUING EDUCATION

### ► Accreditation procedure. The process





## THE ACCEDE® SYSTEM FOR CONTINUING EDUCATION

### ► Standards and criteria. Education programmes

<b>Criterion 1</b>	Control of documents		
<b>Criterion 2</b>	Responsibilities		
<b>Criterion 3</b>	Human resources		
<b>Criterion 4</b>	Infrastructure		
<b>Criterion 5</b>	Programme planning	<b>Criterion 13</b>	Coherence between the content of the Programme and the competencies to be acquired
<b>Criterion 6</b>	Identification and Traceability	<b>Criterion 14</b>	Coherence between the objective of the Programme and the market to which it is targeted
<b>Criterion 7</b>	Trainee property	<b>Criterion 15</b>	Suitability of the minimum attendance requirements
<b>Criterion 8</b>	Trainee satisfaction	<b>Criterion 16</b>	Updating to the “State of the art”
<b>Criterion 9</b>	Internal audits	<b>Criterion 17</b>	Suitability of the curriculum vitae of the trainers
<b>Criterion 10</b>	Control of non-conformities	<b>Criterion 18</b>	Distribution of programme topics
<b>Criterion 11</b>	Processing of complains	<b>Criterion 19</b>	Suitability of teaching aids
<b>Criterion 12</b>	Corrective actions	<b>Criterion 20</b>	Achievable programme

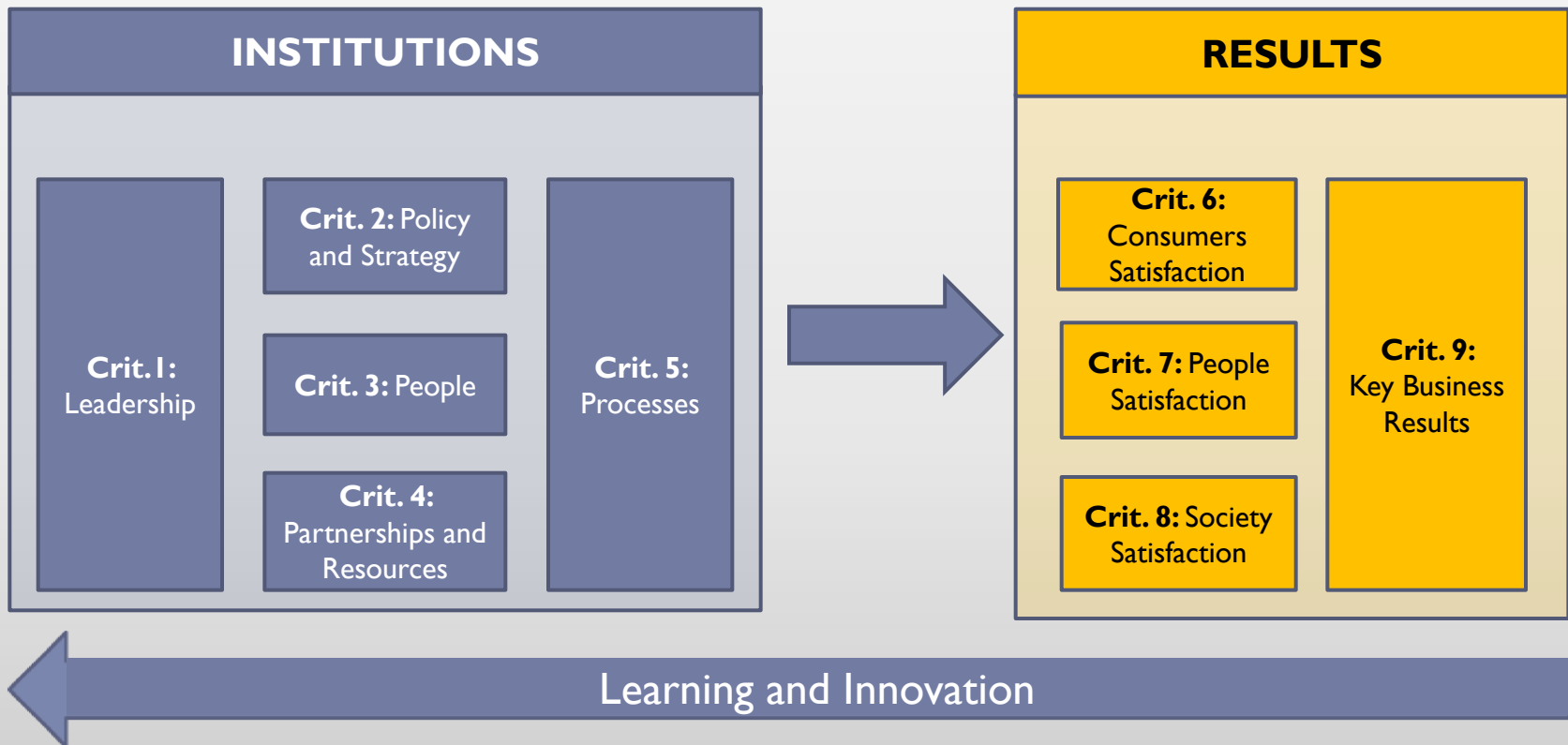
General criteria

Specific criteria



## THE ACCEDE<sup>®</sup> SYSTEM FOR CONTINUING EDUCATION

### ► Standards and criteria. Training Institutions







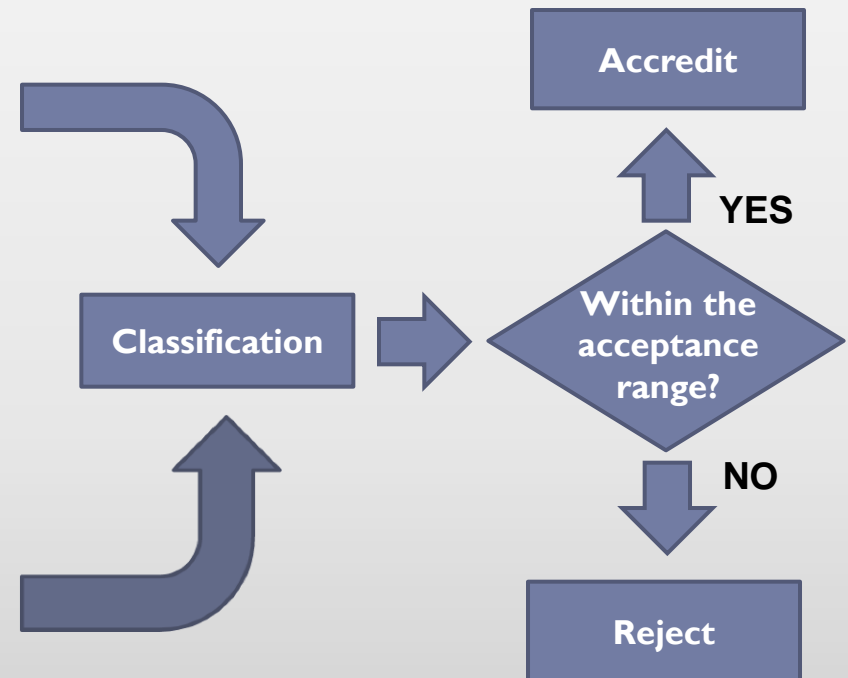
## THE ACCEDE<sup>®</sup> SYSTEM FOR CONTINUING EDUCATION

### ► Standards and criteria. Education Programmes

Benchmarks for accreditation of Programmes			
Criterion 1	Criterion 2	Criterion 3	Criterion 4
Criterion 5	Criterion 6	Criterion 7	Criterion 8
Criterion 9	Criterion 10	Criterion 11	Criterion 12
Criterion 13	Criterion 14	Criterion 15	Criterion 16
Criterion 17	Criterion 18	Criterion	Criterion 20

Benchmarks for accreditation of Training Institutions			
Criterion 1	Criterion 2	Criterion 3	Criterion 4
Criterion 5	Criterion 6	Criterion 7	Criterion 8
Criterion 9			





## OUTLINE

---

- ▶ Lifelong learning for Engineers
- ▶ Continuing Professional Development (CPD)
- ▶ The AcCEdE<sup>®</sup> system for continuing education
- ▶ Conclusion




## THE ACCEDE® SYSTEM FOR CONTINUING EDUCATION

### ► Challenges for AcCEdE

- Explicit understanding that accredited continuing education can measure the required professional skills
- The label acceptability is dependent of a good perception of its relevance by academia, industry and society
- Being 2015 the first year of implementation, this label must have a test period in order to share the experience with other similar European initiatives

Once you stop learning,  
you start dying      Albert Einstein



Thank you for your attention



ORDEM  
DOS  
ENGENHEIROS

José M.P. Vieira  
National Vice-President

2nd EUROPEAN ENGINEERS' DAY  
Brussels, 20th November 2014