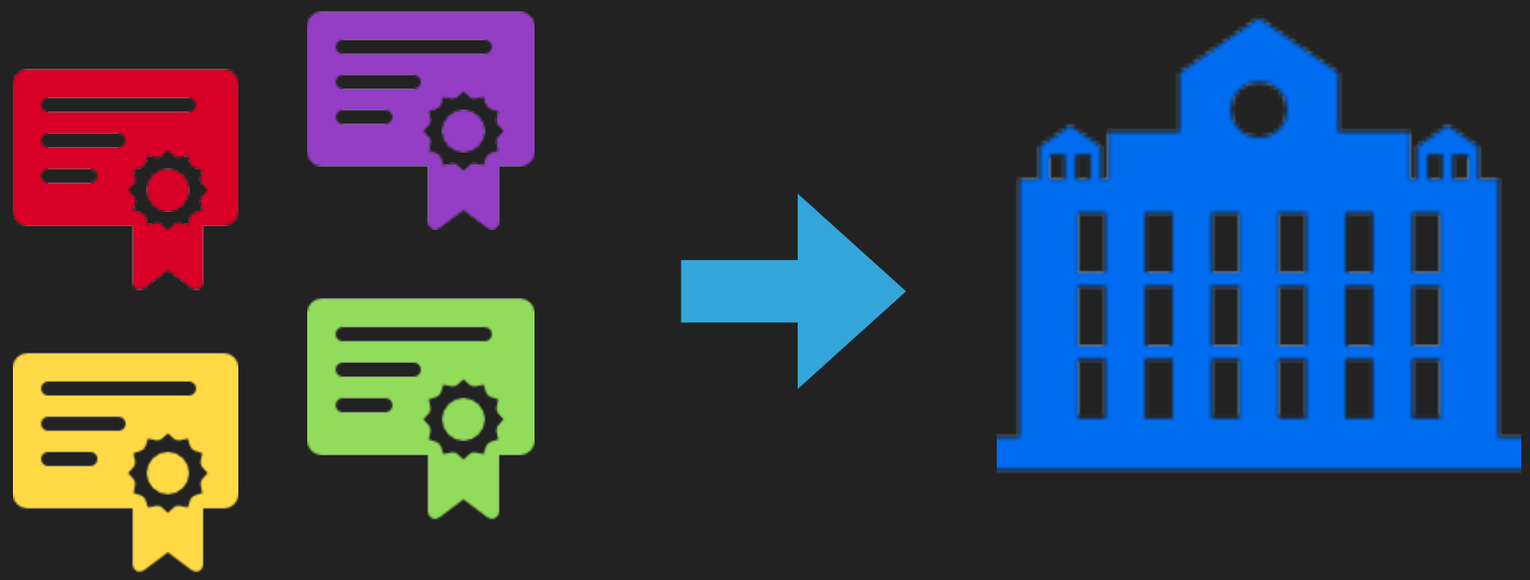
EQANIE ACCREDITATION AND THE INTERNATIONAL ACCREDITATION CONTEXT

EDUARDO VENDRELL VIDAL
EQANIE PRESIDENT

Europe-wide Accreditation of Degrees in Informatics.
Workshop. May-2, 2016. Berlin

- WHY ACCREDITATION?
- WHY INFORMATICS ACCREDITATION?
- THE INTERNATIONAL CONTEXT
- THE EUROPEAN CONTEXT
- THE EURO-INF ACCREDITATION
- HOW TO BE ENGAGED?

THE ACADEMIC PROBLEM



- applicants to a master's programme holding different degrees,
- coming from all over the world,
- how to ensure that **they meet entrance requirements?**

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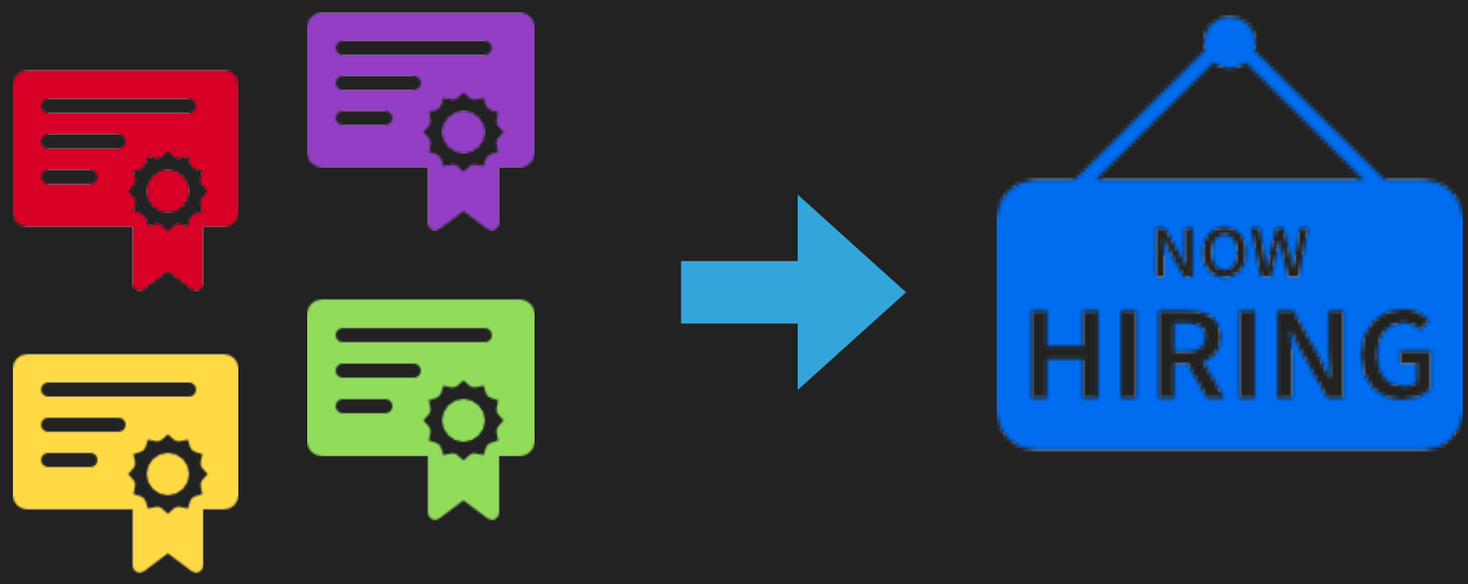
THE PROFESSIONAL PROBLEM



- applicants to a job position with different academic profiles,
- coming from all over the world,
- how to ensure that **they meet professional qualifications?**

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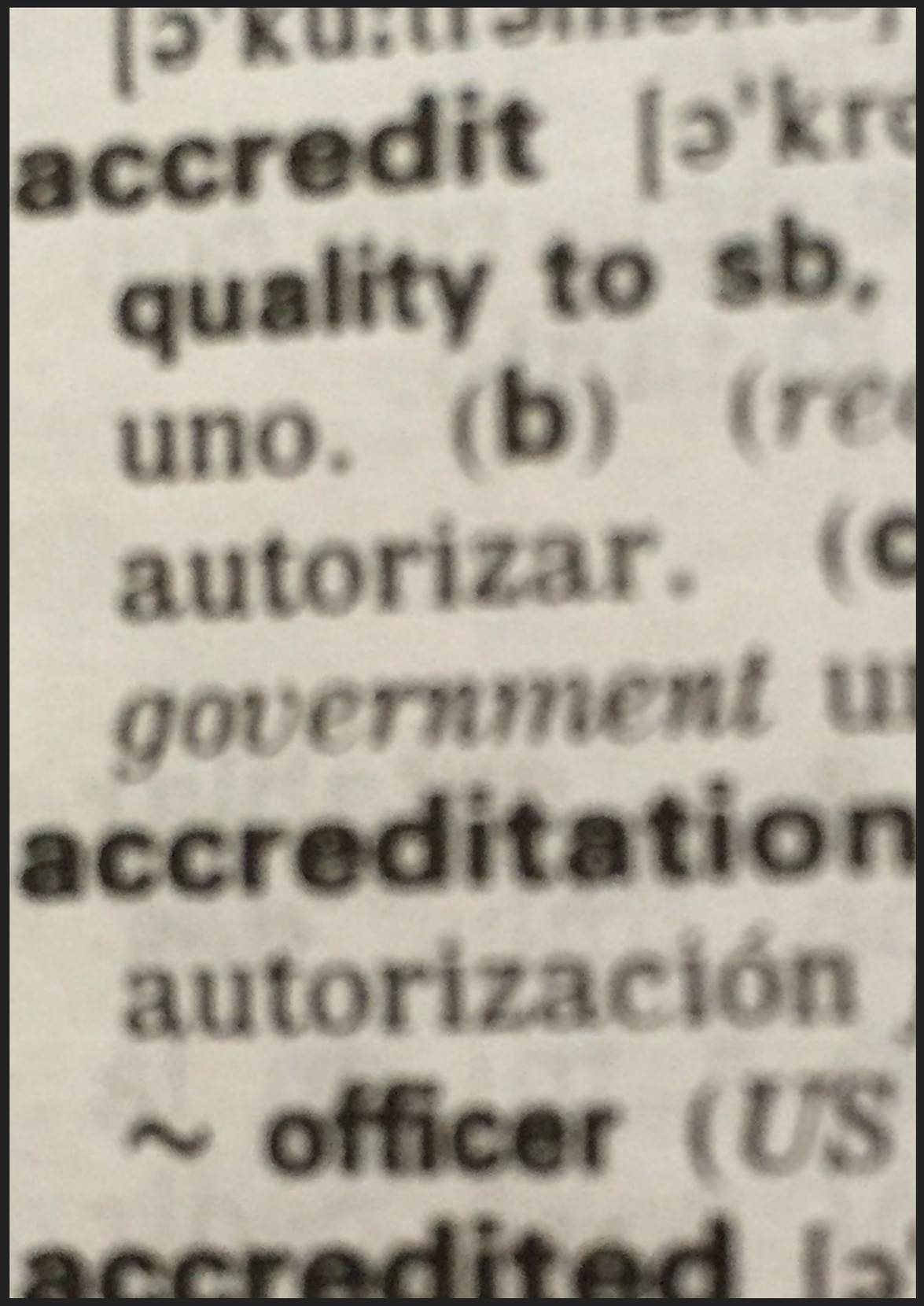
ACCREDITATION |əkrɛdɪˈteɪʃ(ə)n|

“official certification that a school or course has met standards set by external regulators”

NATIONAL ACCREDITATION

- Most countries have defined accreditation procedures through quality assurance agencies
- These procedures could vary depending on degree's type or academic/professional context
- Not every country has clearly defined standards/regulations for every degree



THE BASIC PROCEDURE

- Ensure that competencies/outcomes are well defined, taught and assessed
- Ensure resources and support the degree
- Check related information and basic parameters (enrolment, performance, satisfaction…)
- Check facilities and premises

STANDARD FRAMEWORK BASED PROCEDURE

- Basic procedure check, plus…
- Ensure that syllabus meet with standard academic/ professional framework by checking…
  - Global aim and philosophy
  - List of competencies/outcomes
  - Other requirements (professional profiles, research fields…)

STANDARD FRAMEWORKS

- Provide clearly defined profiles: academic, professional, research oriented…
- Based on student outcomes
- Help in syllabus definition and organisation
- Usually defined for different academic levels (bachelor, master, doctorate) and/or professional profiles (engineering, science, law, medicine…).

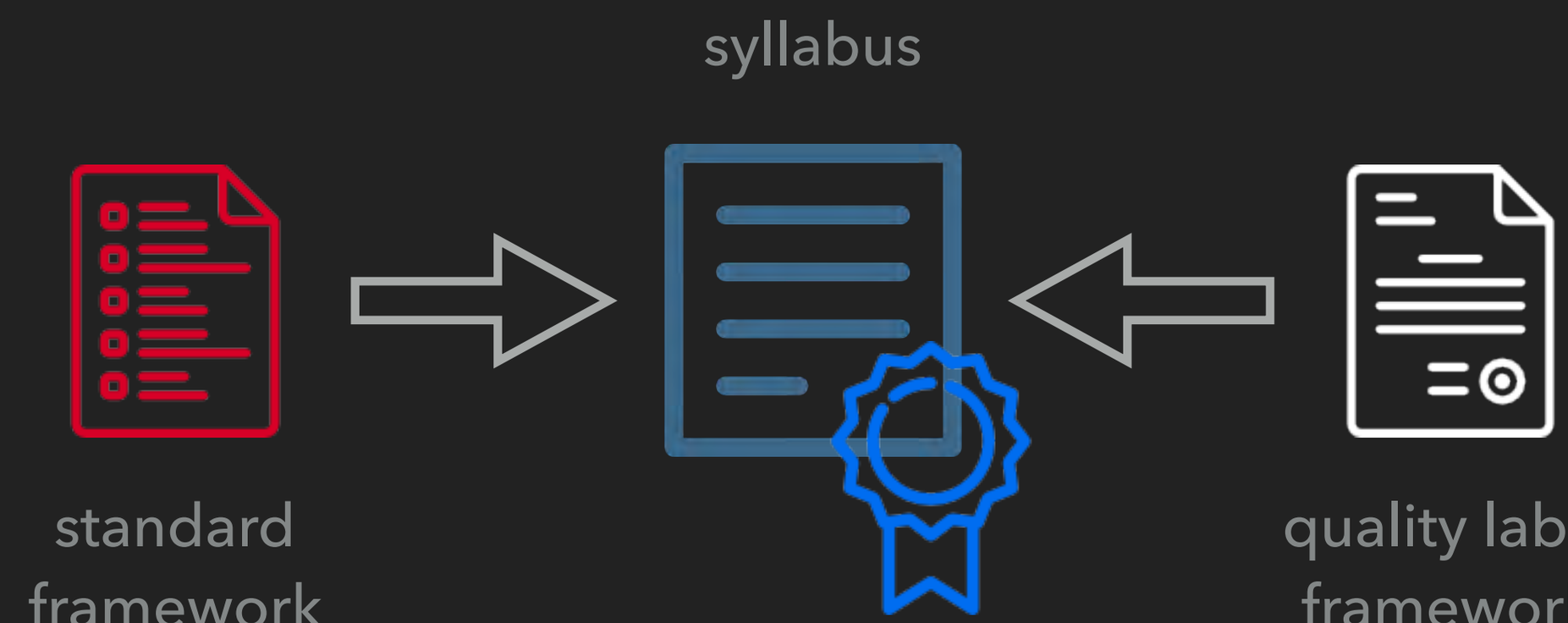
QUALITY LABELS

- Provide transparency and openness to HEIs and their degrees
- Provide a reference framework based on student outcomes
- Certify degrees through a set of standards linked to quality of teaching, resources and management
- Ensure that students meet requirements

WHY ACCREDITATION?

- **accreditation** ensures that degrees are organised according to basic principles
- **frameworks** provide transparent reference profiles for syllabi deployment (and future quality label award)
- **quality labels** help to certify quality of degrees and HEIs

BEST PRACTICE



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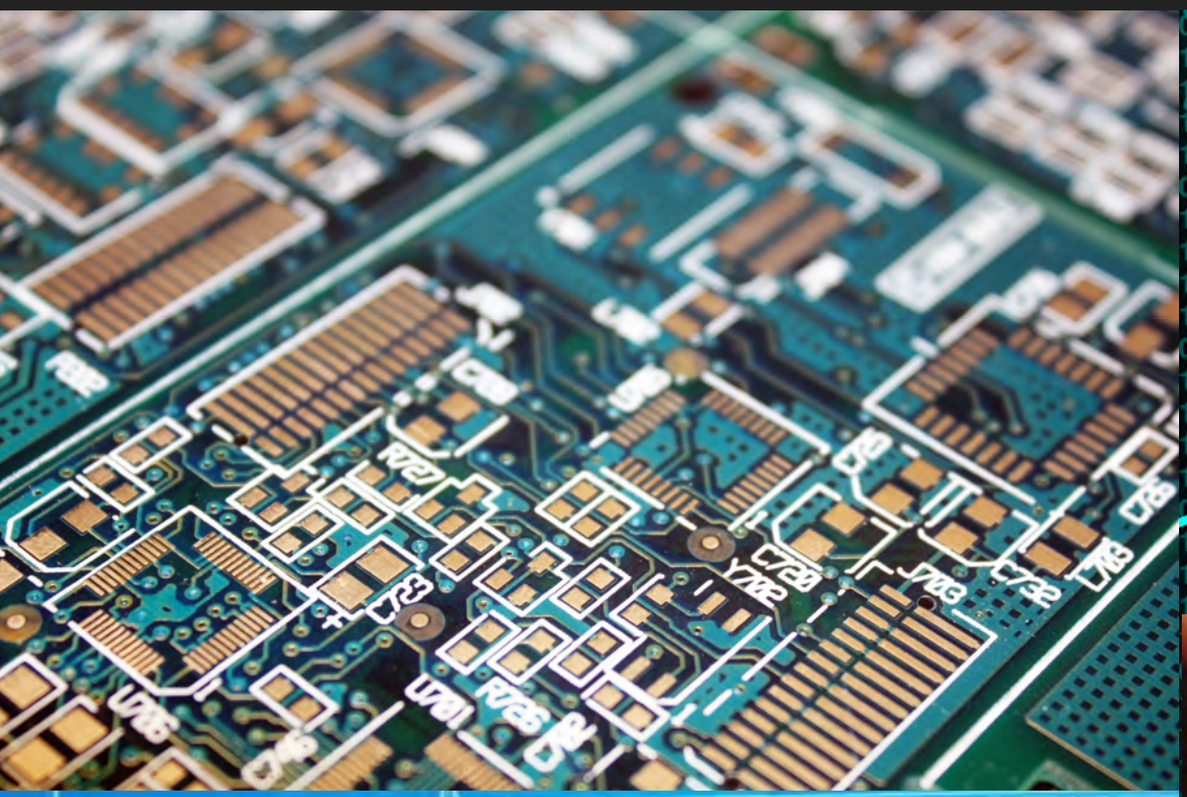
THE MANY FACES OF INFORMATICS



THE MANY FACES OF INFORMATICS

- Informatics is a relatively young discipline that is in constant definition
- There are many different academic approaches to this discipline, leading to different professional profiles
- Informatics is transversal, and it is growing and appearing in many different contexts (health, entertainment, industry…)
- It comes with many different names and appellations (informatics, computing, computer science…)

THE MANY FACES OF INFORMATICS

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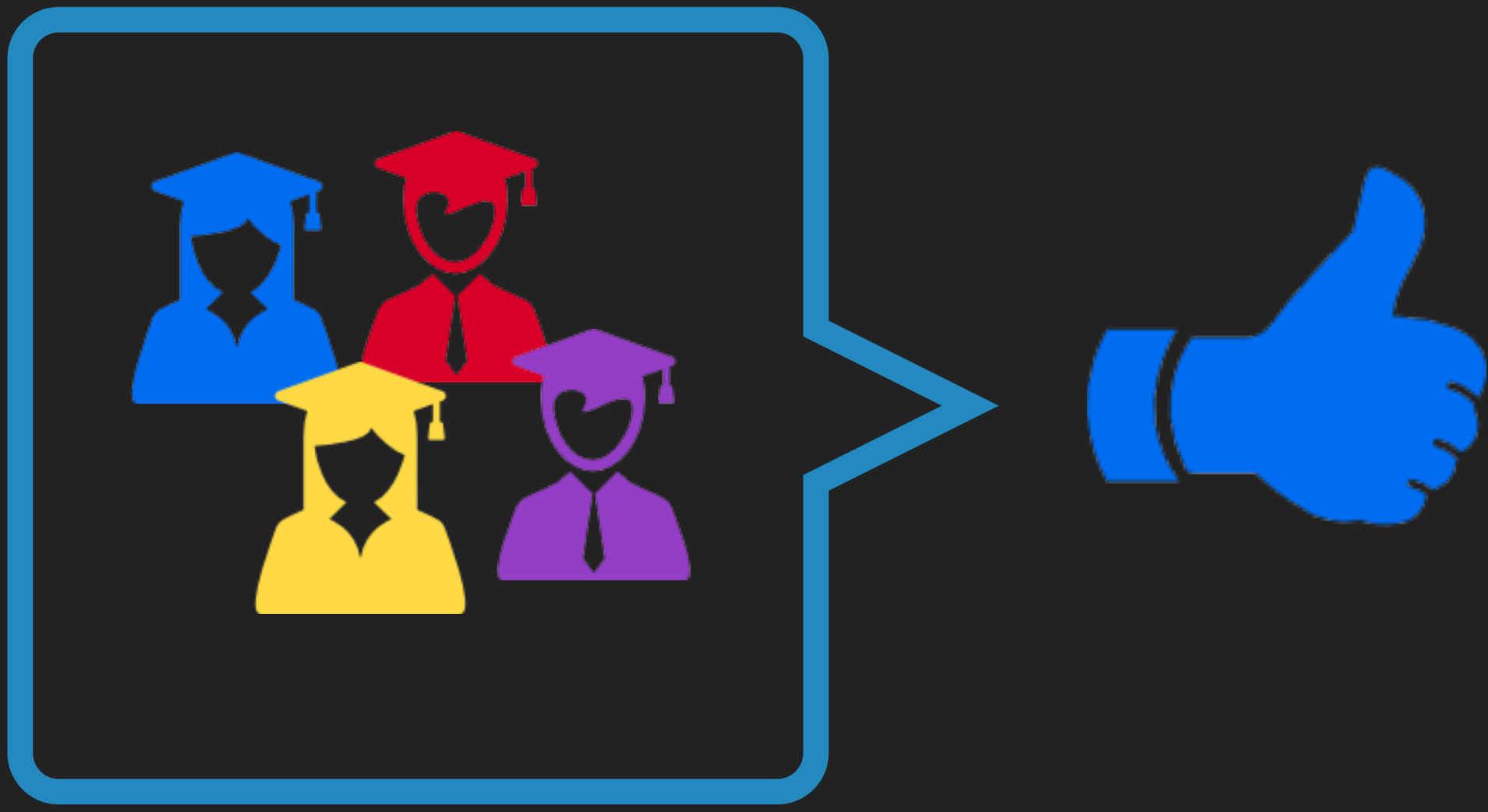
THE MANY FACES OF INFORMATICS > NEED FOR A QUALITY LABEL



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WASHINGTON ACCORD

- *International agreement among bodies responsible for accrediting engineering degree programs.*
- *It recognizes the substantial equivalency of programs accredited by those bodies and recommends that graduates of programs accredited by any of the signatory bodies be recognized by the other bodies as having met the academic requirements for entry to the practice of engineering*

- Accreditation of engineering degrees
- **Mutual recognition**

SEOUL ACCORD

- *Multi-lateral agreement among agencies responsible for accreditation or recognition of tertiary-level computing and IT-related qualifications.*
- *Recognition of Equivalency of Accredited Academic Programs Leading to a Degree in a Computing or IT-related Discipline.*

- Accreditation of computing and IT-related programmes
- **Mutual recognition**

ABET

- *Accrediting agency for programs in applied science, computing, engineering, and engineering technology*
- *It provides assurance that a college or university program meets the quality standards of the profession for which that program prepares graduates*

- Accreditation of programs (engineering, computing…)

THE INTERNATIONAL CONTEXT

ABET

CRITERIA FOR ACCREDITING
COMPUTING
PROGRAMS

Effective for Reviews During the
2016-2017 Accreditation Cycle

Incorporates all changes
approved by the
ABET
Board of Delegates
Computing Area Delegation
as of
October 15, 2015

ABET

Computing Accreditation Commission

ABET
415 N. Charles Street
Baltimore, MD 21201

Telephone: 410-347-7700
Fax: 443-552-3644
E-mail: accreditation@abet.org
Website: www.abet.org

C001 10/15/2015

GENERAL CRITERIA

Criterion 1. Students
Student performance must be evaluated. Student progress must be monitored to foster success in attaining student outcomes, thereby enabling graduates to attain program educational objectives. Students must be advised regarding curriculum and career matters.

The program must have and enforce policies for accepting both new and transfer students, awarding appropriate academic credit for courses taken at other institutions, and awarding appropriate academic credit for work in lieu of courses taken at the institution. The program must have and enforce procedures to ensure and document that students who graduate meet all graduation requirements.

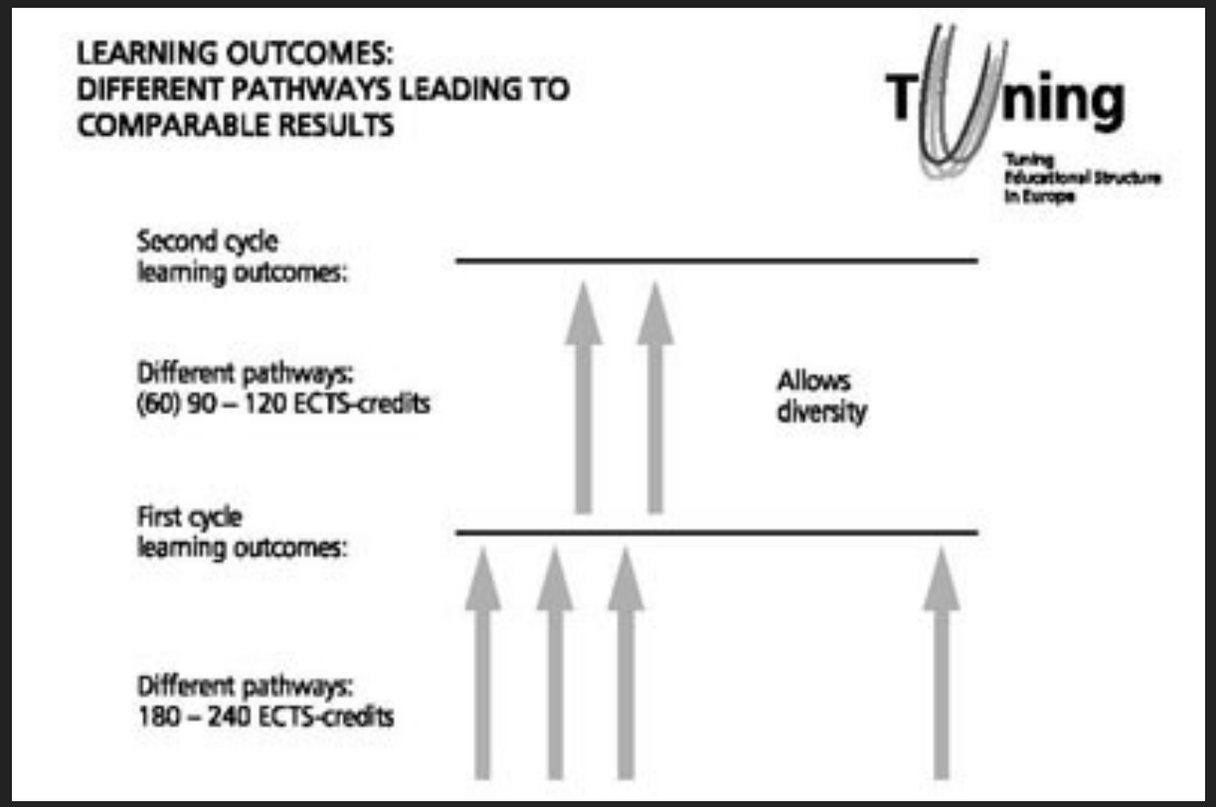
Criterion 2. Program Educational Objectives
The program must have published program educational objectives that are consistent with the mission of the institution, the needs of the program's various constituencies, and these criteria. There must be a documented, systematically utilized, and effective process, involving program constituencies, for the periodic review of these program educational objectives that ensures they remain consistent with the institutional mission, the program's constituents' needs, and these criteria.

Criterion 3. Student Outcomes
The program must have documented student outcomes that prepare graduates to attain the program educational objectives. There must be a documented and effective process for the periodic review and revision of these student outcomes.

The program must enable students to attain, by the time of graduation:

(a) An ability to apply knowledge of computing and mathematics appropriate to the program's student outcomes and to the discipline
(b) An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution
(c) An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs
(d) An ability to function effectively on teams to accomplish a common goal
(e) An understanding of professional, ethical, legal, security and social issues and responsibilities
(f) An ability to communicate effectively with a range of audiences
(g) An ability to analyze the local and global impact of computing on individuals, organizations, and society
(h) Recognition of the need for and an ability to engage in continuing professional development
(i) An ability to use current techniques, skills, and tools necessary for computing practice.

THE TUNING PROJECT



- *TUNING Educational Structures in Europe started in 2000 as a project to link the political objectives of the Bologna Process to the higher educational sector.*
- *An approach to (re-)designing, develop, implement, evaluate and enhance quality first, second and third cycle degree programmes.*
- *Tuning focuses not on educational systems, but on educational structures with emphasis on the subject area level, that is the content of studies.*

THE E-SKILLS INITIATIVE

- Promoting digital skills and literacy in Europe.
- Monitoring and Benchmarking Policies and Partnerships.
- Related actions:
  - **e-Competence Framework**
  - **e-Leadership**
  - **the ICT Professionalism framework**
  - e-Skills for Jobs
  - Grand Coalition for Digital Jobs

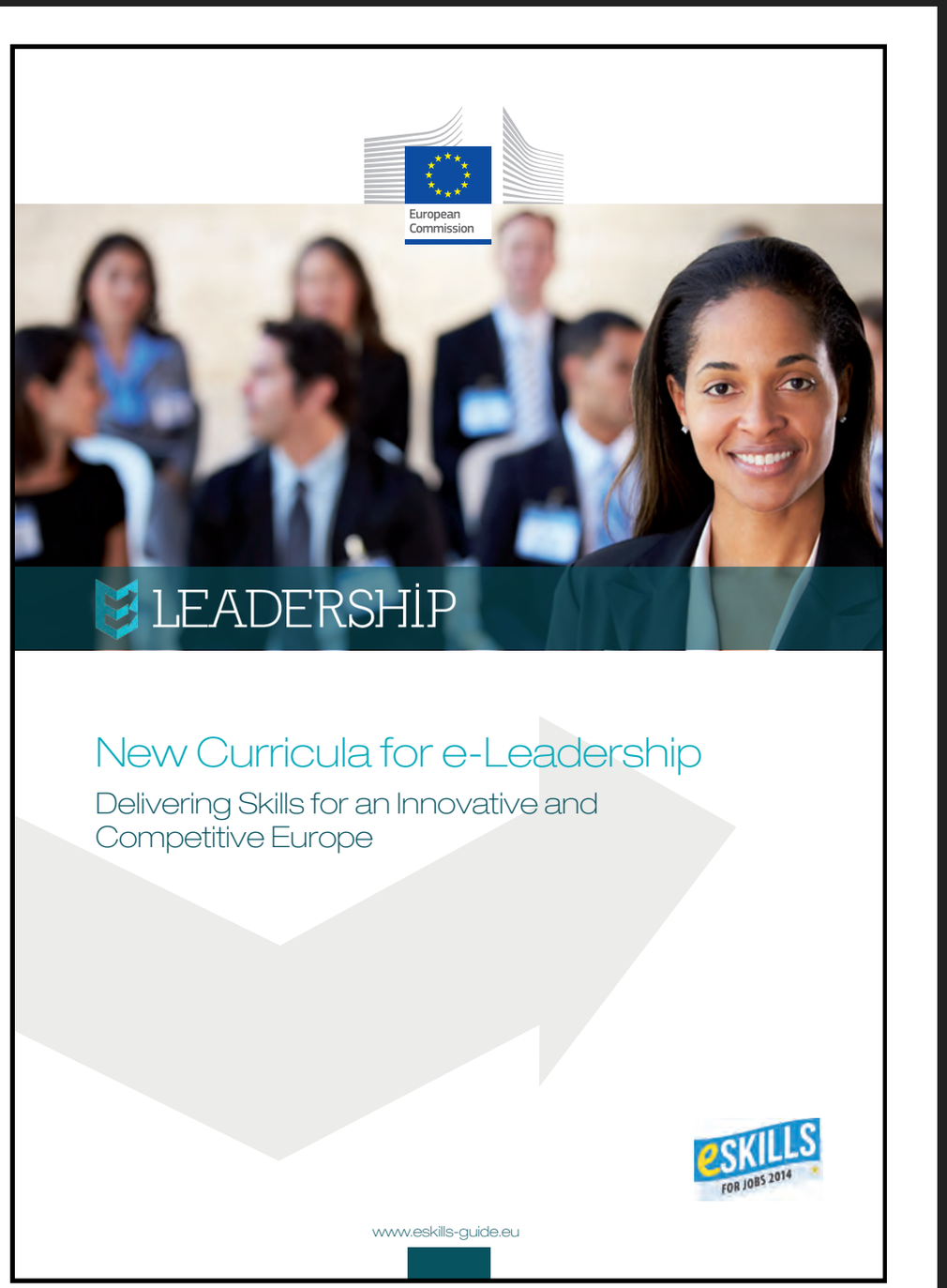
THE E-COMPETENCE FRAMEWORK

European e-Competence Framework 3.0 overview

Dimension 1 5 e-CF areas (A – E)	Dimension 2 40 e-Competences identified	Dimension 3 e-Competence proficiency levels e-1 to e-5, related to EQF levels 3–8				
		e-1	e-2	e-3	e-4	e-5
A. PLAN	A.1. IS and Business Strategy Alignment				■	■
	A.2. Service Level Management			■	■	
	A.3. Business Plan Development			■	■	■
	A.4. Product/Service Planning		■	■	■	
	A.5. Architecture Design			■	■	■
	A.6. Application Design	■	■	■		
	A.7. Technology Trend Monitoring				■	■
	A.8. Sustainable Development			■	■	
	A.9. Innovating				■	■
B. BUILD	B.1. Application Development	■	■	■		
	B.2. Component Integration		■	■	■	
	B.3. Testing	■	■	■	■	
	B.4. Solution Deployment	■	■	■		
	B.5. Documentation Production	■	■	■		
	B.6. Systems Engineering			■	■	
C. RUN	C.1. User Support	■	■	■		
	C.2. Change Support		■	■		
	C.3. Service Delivery	■	■	■		
	C.4. Problem Management		■	■	■	
D. ENABLE	D.1. Information Security Strategy Development				■	■
	D.2. ICT Quality Strategy Development				■	■
	D.3. Education and Training Provision		■	■		
	D.4. Purchasing		■	■	■	
	D.5. Sales Proposal Development		■	■		
	D.6. Channel Management			■	■	
	D.7. Sales Management			■	■	■
	D.8. Contract Management		■	■	■	
	D.9. Personnel Development		■	■	■	
	D.10. Information and Knowledge Management			■	■	■
	D.11. Needs Identification			■	■	■
	D.12. Digital Marketing		■	■	■	
E. MANAGE	E.1. Forecast Development			■	■	
	E.2. Project and Portfolio Management		■	■	■	■
	E.3. Risk Management		■	■	■	
	E.4. Relationship Management			■	■	
	E.5. Process Improvement			■	■	
	E.6. ICT Quality Management		■	■	■	
	E.7. Business Change Management			■	■	■
	E.8. Information Security Management		■	■	■	
	E.9. IS Governance				■	■

- European Comission initiative
- *The European e-Competence Framework (e-CF) provides a reference of 40 competences as required and applied at the ICT workplace, using a common language for competences, skills and proficiency levels that can be understood across Europe.*
- http://www.ecompetences.eu

THE E-LEADERSHIP INITIATIVE



- European Comission initiative
- *Leadership which both relies on information and communication technologies (ICT) and aims to accomplish goals that involve ICT. (…) where leading edge ICT is driving innovation and delivering value to their organizations.*
- It identifies different Curriculum Profiles.
- *http://eskills-lead.eu*

THE E-LEADERSHIP INITIATIVE

NEW CURRICULA FOR E-LEADERSHIP SKILLS

GUIDELINES AND QUALITY LABELS FOR NEW CURRICULA FOR E-LEADERSHIP SKILLS IN EUROPE

March 2015

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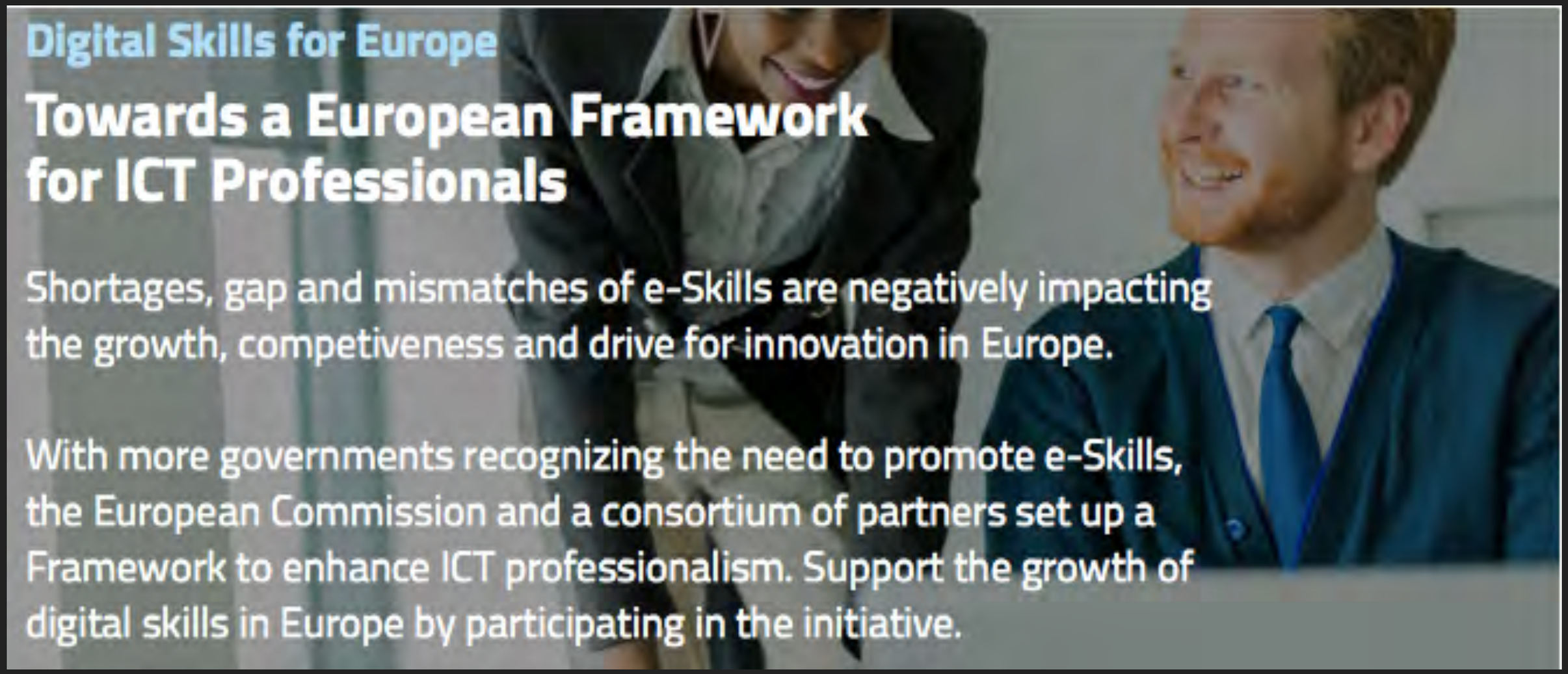
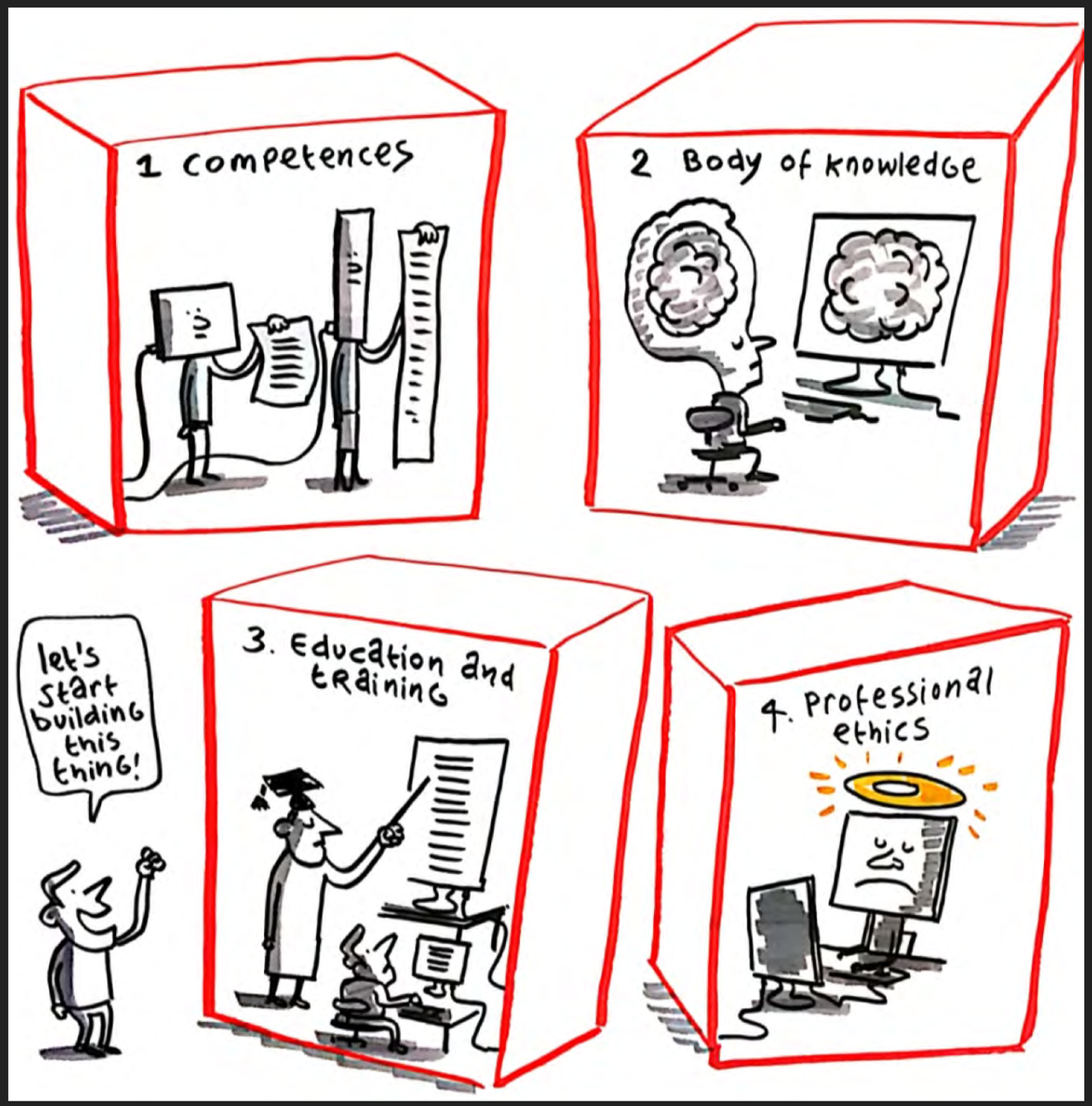
THE ICT PROFESSIONALISM FRAMEWORK



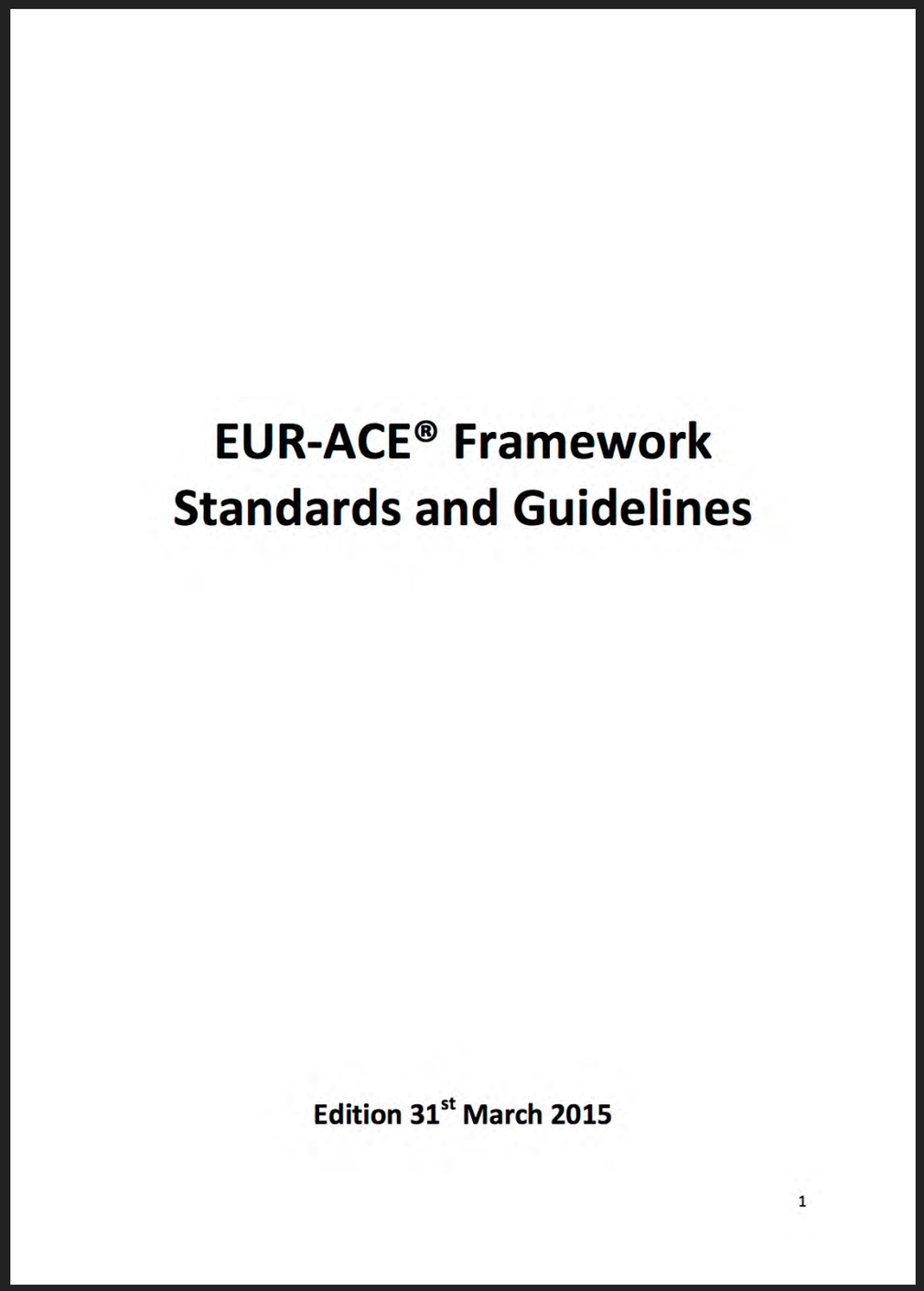
- *http://ictprofessionalism.eu*

THE ICT PROFESSIONALISM FRAMEWORK



- **Competences**: an understanding of the capability and competency needs of individuals working in various roles is essential for organizations to effectively recruit and develop suitable employees.
- **Foundational ICT Body of knowledge**: a comprehensive and up-to-date knowledge accommodating a common ICT body of knowledge and pertinent specialist knowledge and skills.
- **Education and Training**: certifications, qualifications, non-formal learning and informal learning are mutually supportive components of a professional's career development.
- Professional Ethics: a defining aspect of any profession involves adhering to professional ethical conduct.

THE EURACE QUALITY LABEL



EUR-ACE® Framework Standards and Guidelines

Edition 31st March 2015

1

- European Network for Accreditation of Engineering Education (ENAEE)
- *Standards that identifies high quality engineering degree programmes in Europe and abroad*
- http://www.enaee.eu/eur-ace-system/

INFORMATICS 'UMBRELLA' QUALITY LABEL

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INFORMATICS 'UMBRELLA' QUALITY LABEL

- Common framework with basic/transversal competences
- Field specific approach based on student's outcomes
- Considering professional practice and competencies, and ethic and legal aspects
- Open to different informatics approaches

THE EURO-INF PROJECT AND EQANIE

EQANIE FOUNDATION MEETING

FIRST LABEL AWARDED

ASIIN AUTHORIZED

BCS AUTHORIZED

ANECA AUTHORIZED

2008 2009 2010 2011 2012 2013 2014 2015 2016

euro inf

Euro-Inf SPREAD

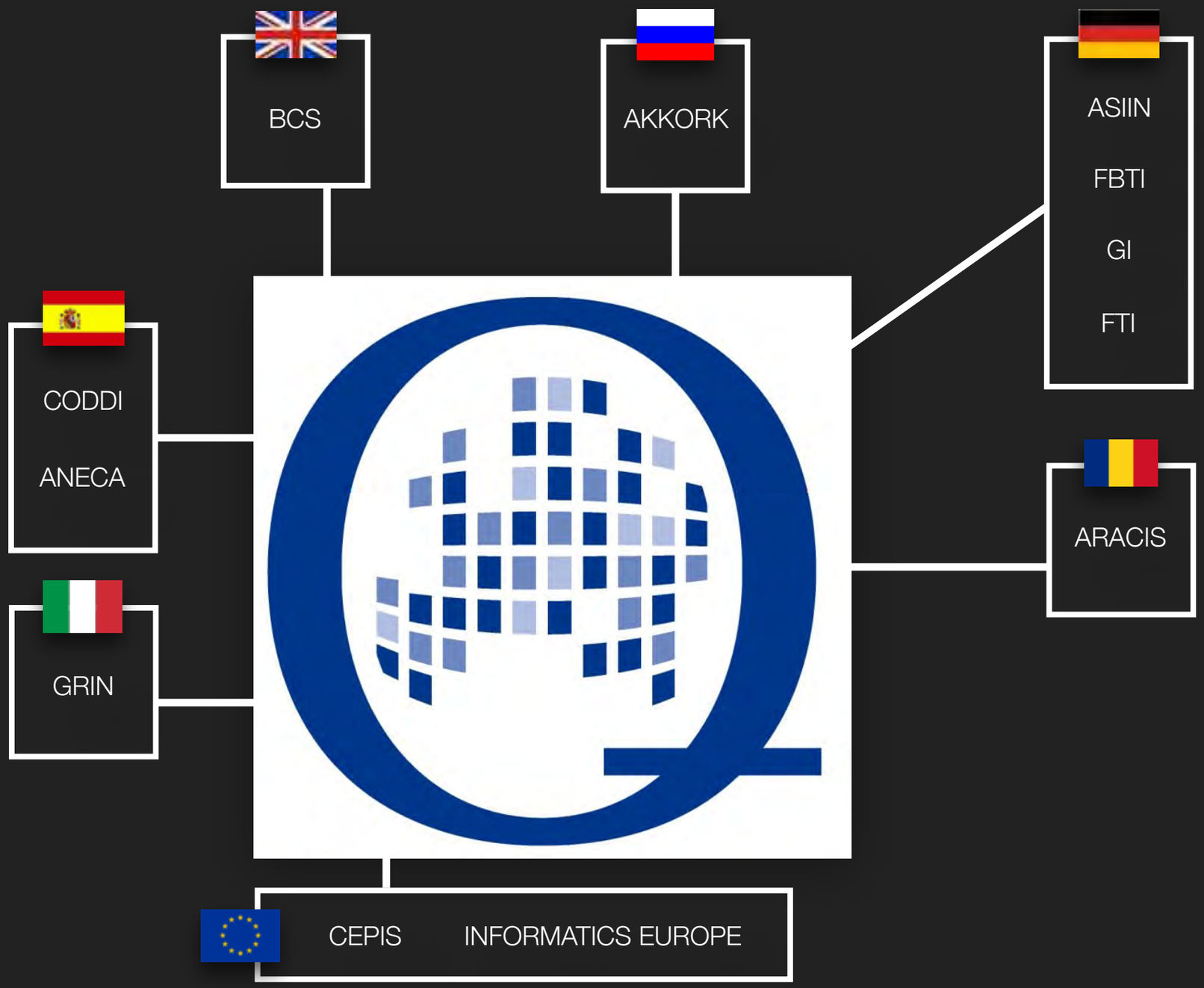
EQANIE

EQANIE

- *The European Quality Assurance Network for Informatics Education promotes the implementation of quality assessment practice for informatics education systems in Europe and beyond.*
- *In particular, EQANIE helps to build confidence in systems of accreditation of informatics degree programmes within Europe.*

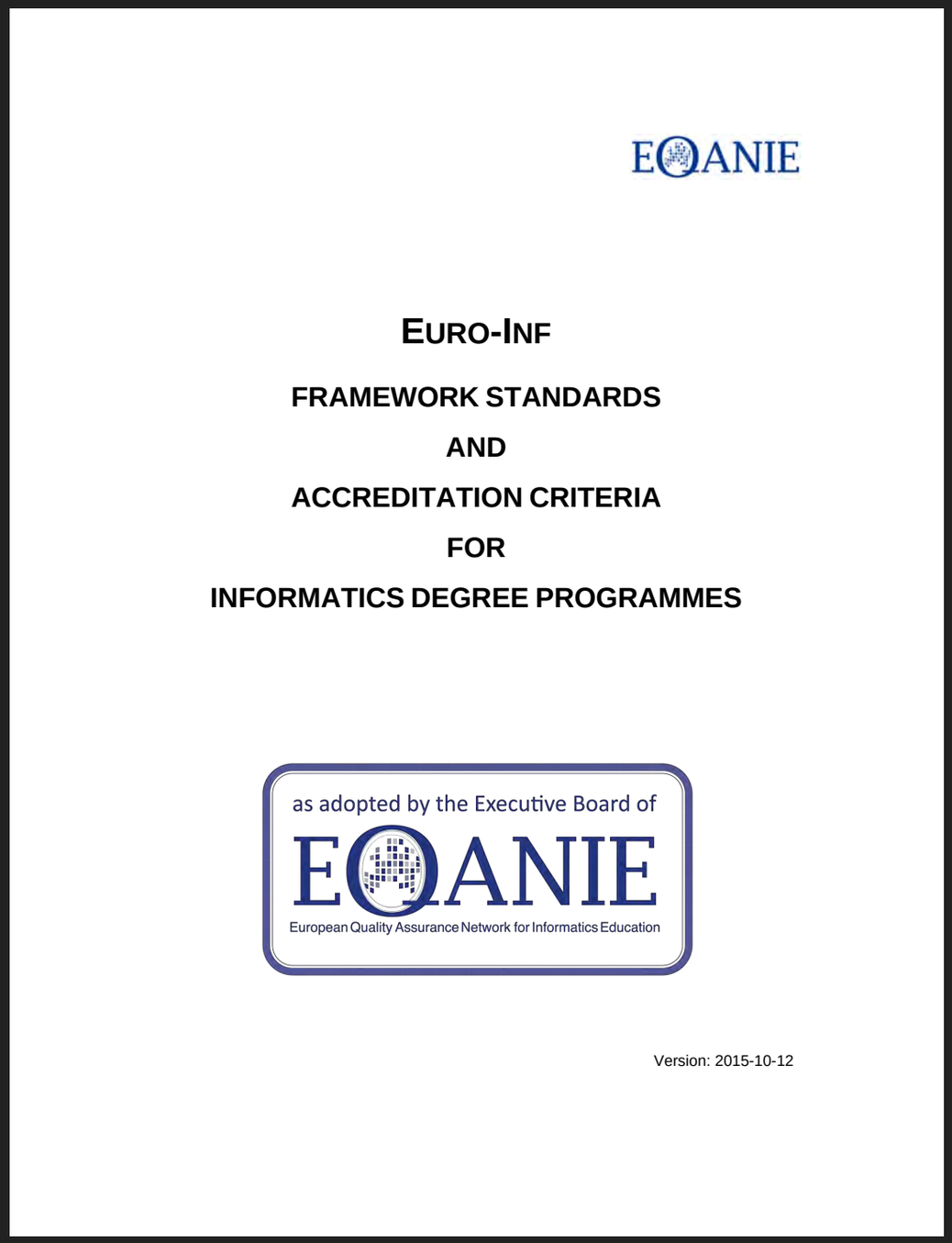
- Partnering with HEIs, professional and academic associations in assessing quality for informatics degrees.

EQANIE



- 12 members:
  - 10 national associations/agencies/ professional bodies
  - from 6 different countries
  - and 2 pan-European organisations
- Present in more than 30 countries

THE EURO-INF FRAMEWORK



EQANIE

EURO-INF

FRAMEWORK STANDARDS

AND

ACCREDITATION CRITERIA

FOR

INFORMATICS DEGREE PROGRAMMES

as adopted by the Executive Board of

EQANIE

European Quality Assurance Network for Informatics Education

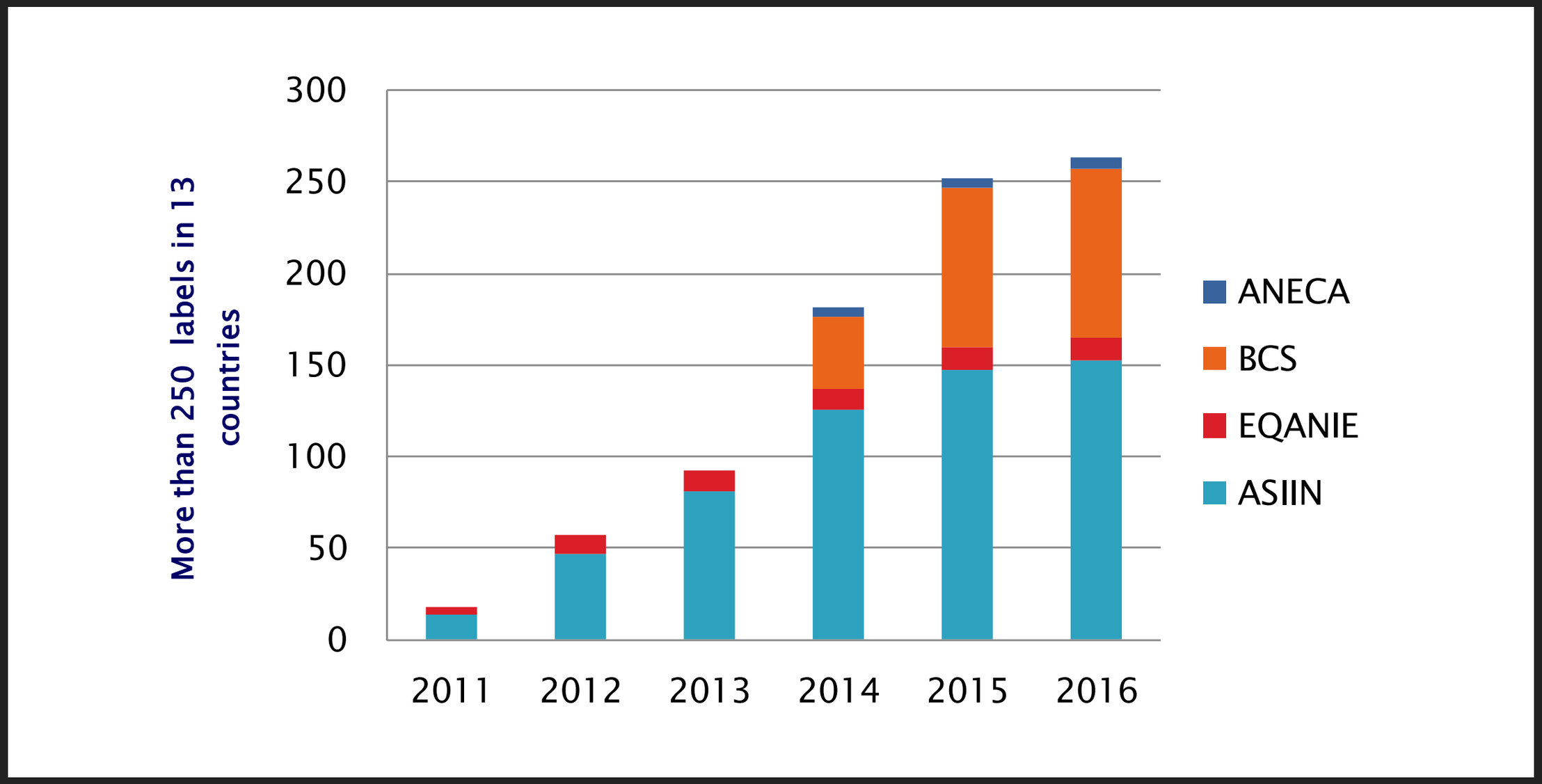
Version: 2015-10-12

- FIELD SPECIFIC (INFORMATICS)
- OUTCOMES APPROACH
- FIRST CYCLE, SECOND CYCLE

6 CATEGORIES:

- UNDERLYING CONCEPTUAL BASIS FOR INFORMATICS
- ANALYSIS
- DESIGN AND IMPLEMENTATION
- ECONOMIC, LEGAL, SOCIAL, ETHICAL AND ENVIRONMENTAL CONTEXT
- INFORMATICS PRACTICE
- OTHER PROFESSIONAL COMPETENCES

EURO-INF ACCREDITATIONS SO FAR

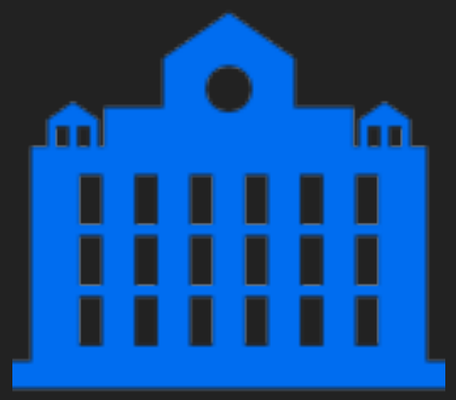


[as of 29.03.2016]

WHY CHOOSING EURO-INF?

- European approach about what it is understood by Informatics
- A pushing framework, well recognised by HEIs
- A coherent ‘tool’ to attract students and link with professional context
- Recognised amongst main quality agencies and academic associations in Europe

EURO-INF BENEFITS > HEIs



- ADDITIONAL CERTIFICATE OF QUALITY
- MEANS OF PROMOTION: PROGRAMME MEETS ACADEMIC AND PROFESSIONAL STANDARDS
- BENCHMARKED AGAINST OTHER EUROPEAN PROGRAMMES
- RELIABLE INFORMATION ON QUALITY OF FIRST CYCLE PROGRAMMES DURING ADMISSION FOR SECOND CYCLE
- INCENTIVES FOR STUDENTS TO CHOOSE PROGRAMMES

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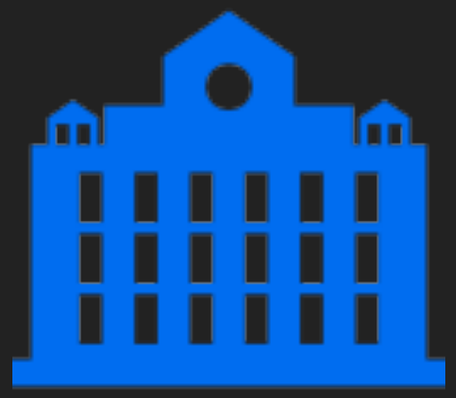
EURO-INF BENEFITS > HEIs (ACCREDITATION EXPERIENCE)



- VALUABLE EXTERNAL FEEDBACK FROM AUDITORS
- LOW EXTRA EFFORT FOR ADDITIONAL CERTIFICATE
- ADDED VALUE, ESPECIALLY FOR INTERNATIONAL STUDENTS!
- DIAGNOSIS OF EXISTING QUALITY ASSURANCE CONCEPT AND PROCEDURES
- OPPORTUNITY FOR IMPROVING THE QUALITY OF THE DEGREE
- DEFINING WITH MORE PRECISION THE MAIN OBJECTIVES OF THE PROGRAMME
- DISCOVERING LACK OF CONFORMITY BETWEEN GOALS OF THE STUDY PROGRAMME AND SEVERAL COURSES
- CONFIRMATION THAT PROGRAMME CORRESPONDS TO SIMILAR STUDY PROGRAMMES IN INFORMATICS IN EUROPE
- ACADEMIC STAFF STARTED TO SHOW MORE INTEREST ABOUT QUALITY ISSUES
- ACCREDITATION STIMULATES ESTIMATING OF STAFF WORKLOAD AT THE LEVEL OF WHOLE PROGRAMME

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EURO-INF BENEFITS > STUDENTS

- ASSURANCE THAT PROGRAM MEETS HIGH INTERNATIONAL STANDARDS
- EASIER ACCESS TO OTHER EURO-INF MASTER'S
- ADDITIONAL QUALITY LABEL RECOGNISED BY EMPLOYERS EUROPE-WIDE
- REQUIREMENT FOR BECOMING CHARTERED ENGINEER
- INTERNATIONAL RECOGNITION OF DEGREE AS MEETING PROFESSIONAL STANDARDS

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EURO-INF BENEFITS > EMPLOYERS

- APPLICANT'S KNOWLEDGE AND COMPETENCES MEET INTERNATIONAL STANDARDS
- RELIABLE INFORMATION ABOUT QUALITY OF DEGREE PROGRAMME WITHOUT KNOWING ITS DETAILS
- NOT ONLY ACADEMIC STANDARD CHECKED BUT ALSO RELEVANCE FOR PROFESSION
- ASSURED COMPETENCES OF GRADUATES
- COMPLEMENT TO DIPLOMA SUPPLEMENT

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HOW TO BE ENGAGED?

1. MAP YOUR DEGREE WITH EURO-INF FRAMEWORK

2. CONTACT EQANIE

CONTACT EQANIE

PRESIDENT
DR. EDUARDO VENDRELL VIDAL
vendrell@eqanie.eu

SECRETARY GENERAL
DIPL.-KULTURW. JANA MÖHREN
moehren@eqanie.eu