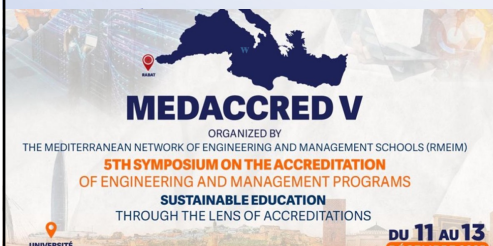


# European standards for quality assurance

*José Carlos Quadrado*

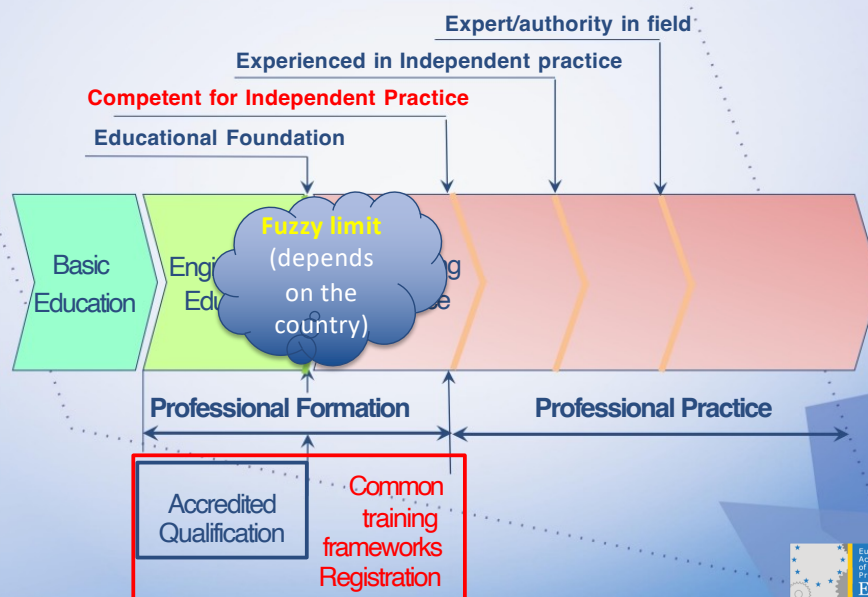
*BSc, MEng, MSc, PhD, DSc, Habil, P.Eng, SCEng, SEFI Fellow, iPEER*

*ENAAE President*



1

## Global vision of the engineer professional trajectory



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2

## In reality...



This never happened...  
In the university



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## Frameworks for engineers

- Engineers activities have a **strong impact on society and economy**; they engage their responsibility, like medical doctors, nurses, architects...
- Need to secure the engineering education as an **entry route to the engineering profession** (pre-professional accreditation)

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## Quality assurance. The world experience

- Validation and state accreditation of Higher Education **Institutions and programs**
- Professional **accreditation of educational programs**
- Certification of professional qualifications of engineers (**Register of professional engineers**) and the professional qualification of educators (**Register of professional engineering educators**) under the ILO/UN

NEW

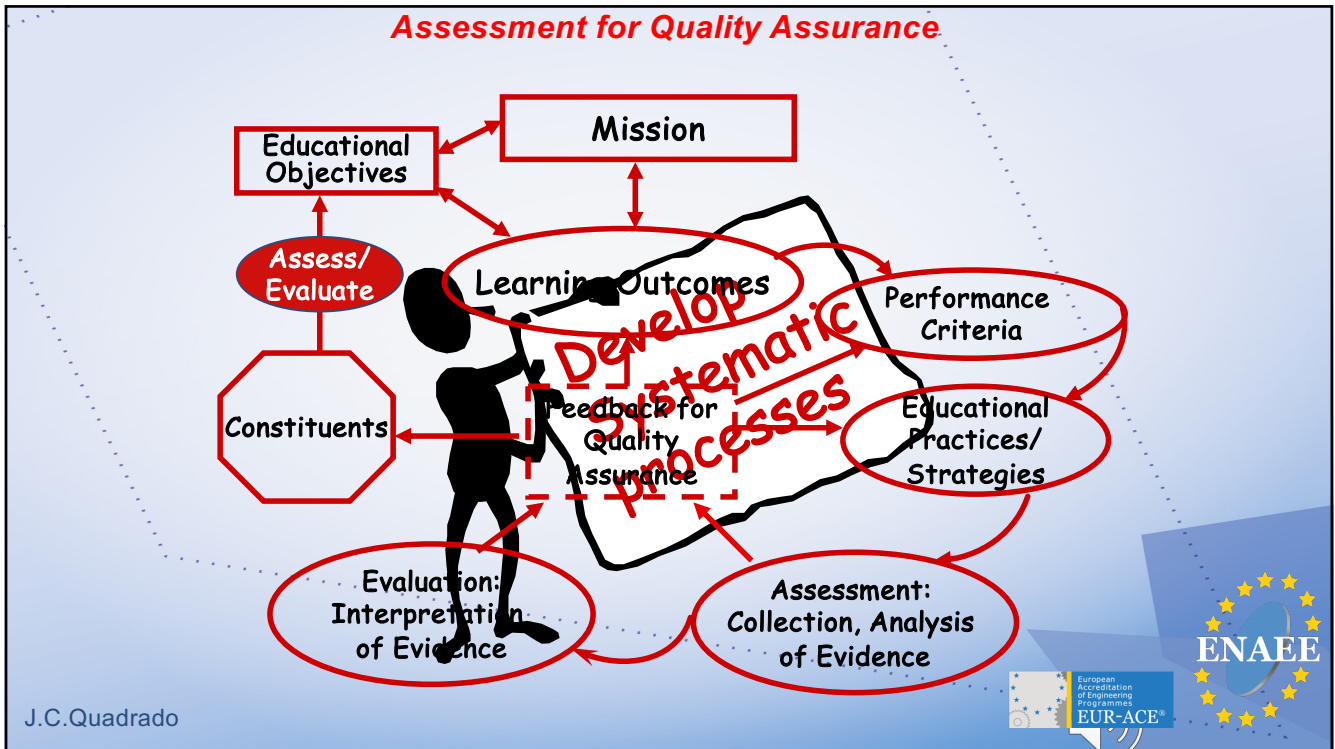


5

Accreditation is  
the way to  
ensure quality



6



7



8



## Program Accreditation a worldwide trend

- Requirements and goals for the educational system to provide engineering graduates with the expected outcomes,
  - ✓ Quality Assurance for the programmes and for the accreditation agencies
- What an engineering graduate is supposed to know and be able to do,
  - ✓ Programme learning outcomes/graduate attributes

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## International Experience on Program Accreditation

A two-stage quality assurance system was implemented worldwide in the training of specialists in the field of engineering - professional engineers.

**The first stage** - professional accreditation of engineering education programs in universities (WA, EUR-ACE and others).

**The second stage** - certification and registration of engineering professionals [NCEES (USA), ECUK (United Kingdom), engineers Canada (Canada), IPEJ (Japan) and others].



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# International Experience on Accreditation

The national professional organizations created international structures (**Engineers Europe**, Engineer APEC Registry, IPEA / EMF), forming agreed criteria for the certification of professional engineers,

+

International organizations, or international consortiums (**ENAAEE**, **Washington Accord**, RIACES, ARCUSUR ...) develop the criteria for quality and accreditation of educational programs in engineering of higher education institutions.

+

International engineering educators (**ENTER Register**) develop the criteria for quality and **registering of the engineering educators** with ILO/UN.

NEW

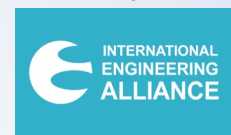


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## 2 global frameworks for engineering education

### International Engineering Alliance

- **Washington accord (1989-Engineers)**
- Sydney accord (2001- Technologists)
- Dublin accord (2002- Technicians)



« *Best practice in accreditation of engineering programmes* » 2015  
(just revised in 2024)

Learning outcomes/Graduate attributes



The European Network for **accreditation of engineering education** (2006-ENAAEE), EUR-ACE® accord (2014):

- **EUR-ACE Label (Bachelor)**
- **EUR-ACE Label (Master)**



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## 2 global frameworks for engineering education

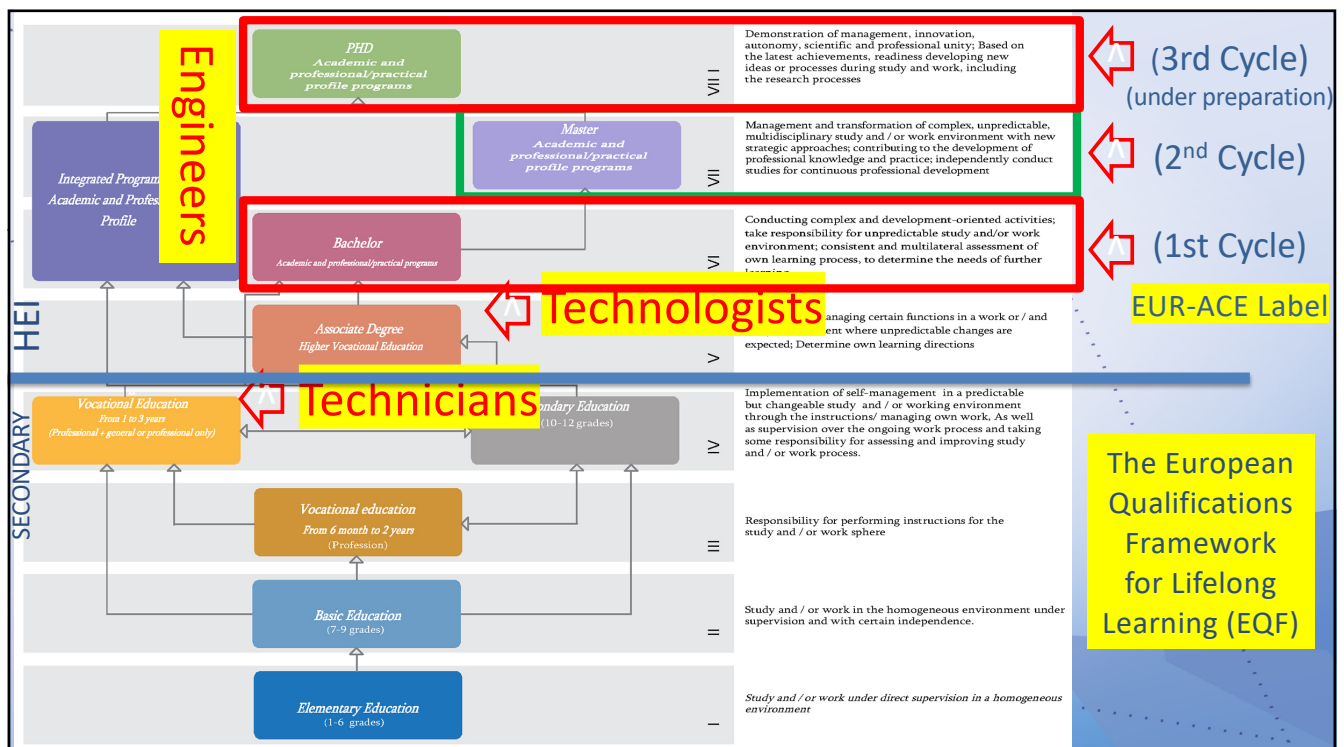


Working together but with different scopes



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**We are the largest network of Engineering Accreditation agencies in the world**

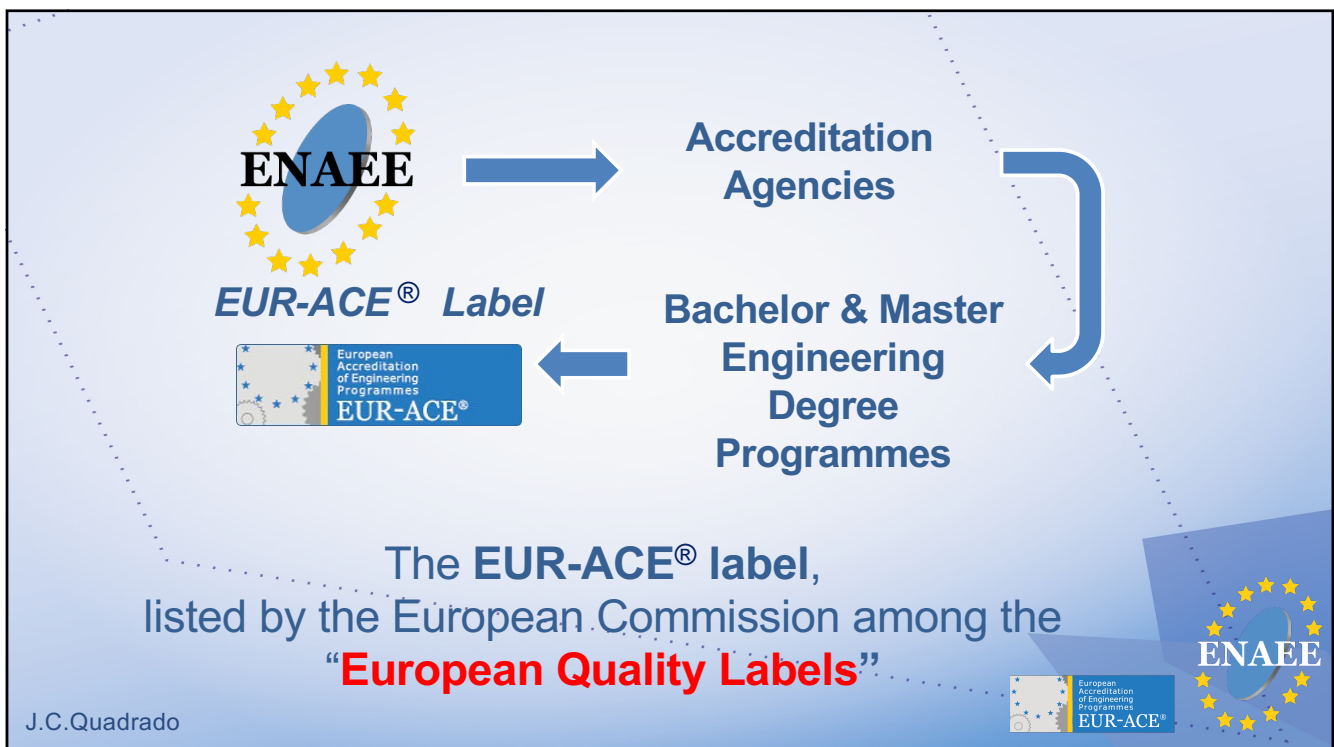
**Awarding the EUR-ACE® label**

**(2025- 16 authorized agencies – around 5000 programs with the label in 60 countries)**



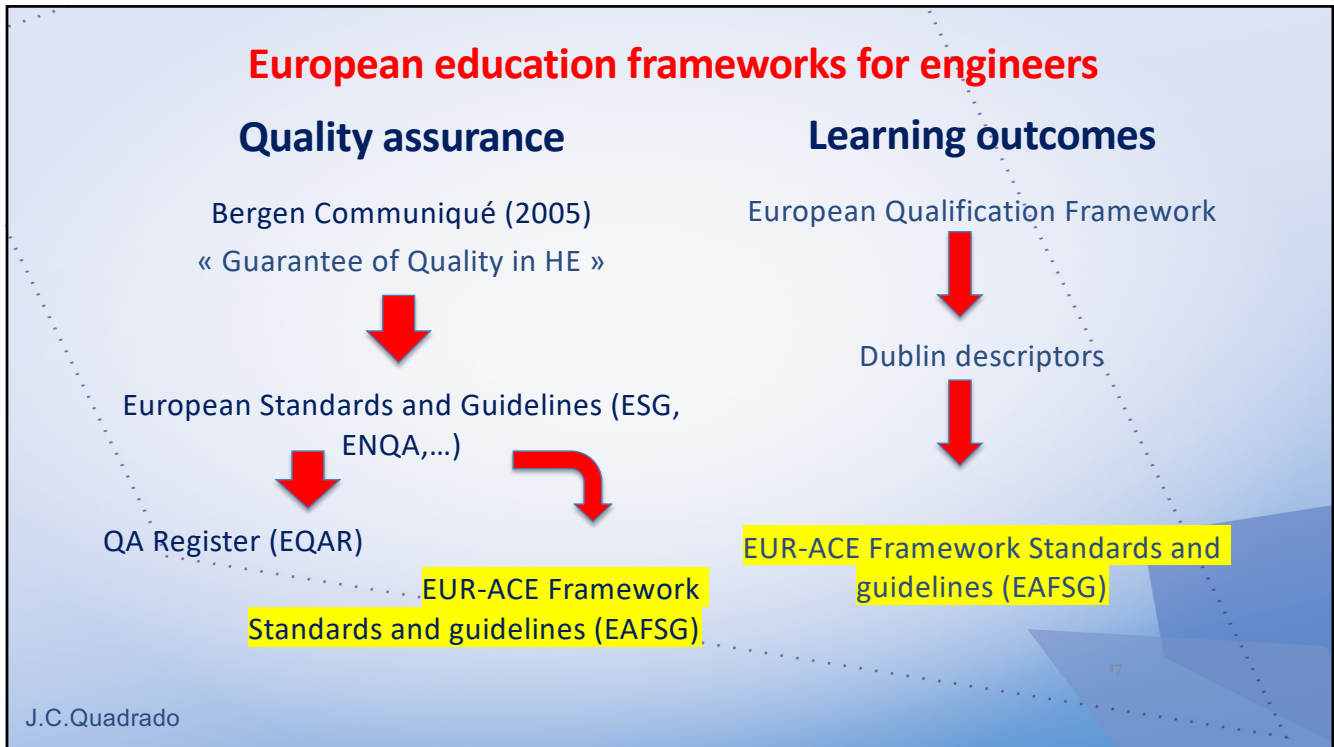

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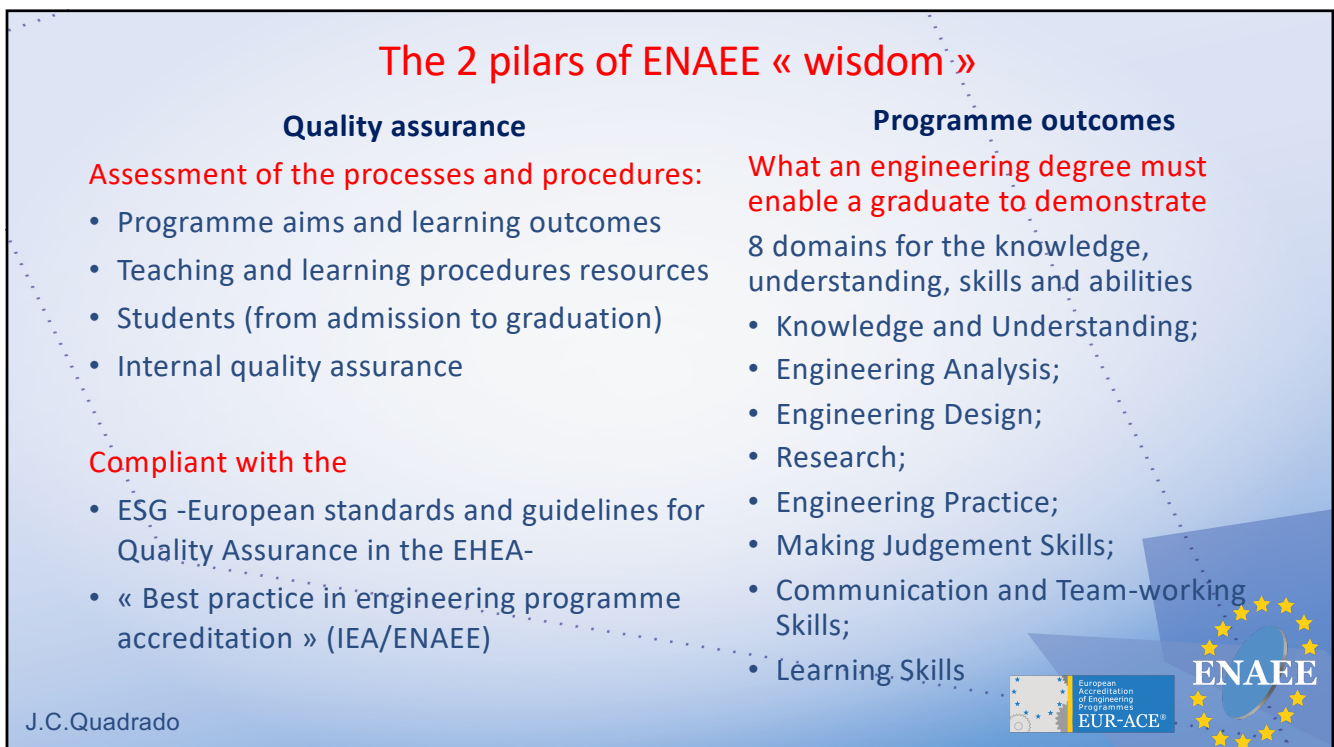


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## ENAAE Authorized agencies (2025)

1. France - CTI
2. Germany - ASIIN
3. Ireland - Engineers Ireland
4. Italy - QUACING
5. Portugal - OE
6. Russia - AEER
7. Romania - ARACIS
8. Türkiye - MUDEK
9. United Kingdom - EC UK
10. Poland - KAUT
11. Switzerland - OAQ
12. Spain - ANECA/IE
13. Finland - FINEEC
14. Slovakia - ZSVTS
15. Kazakhstan - KazSEE
16. Taiwan, China - IEET
17. Türkiye - ZIDEK

EUROPE AND THE EUR-ACE® SYSTEM  
Countries with authorized agencies



ENAAE

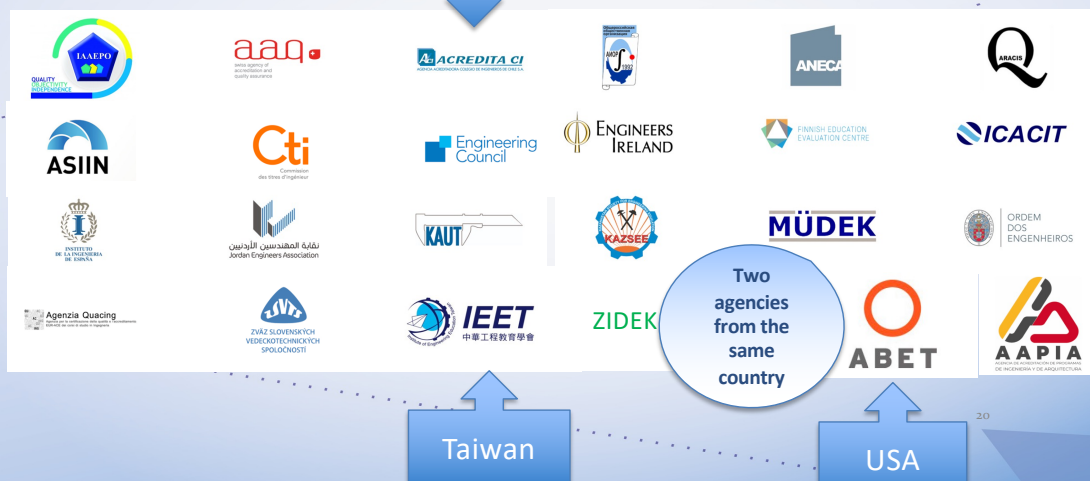


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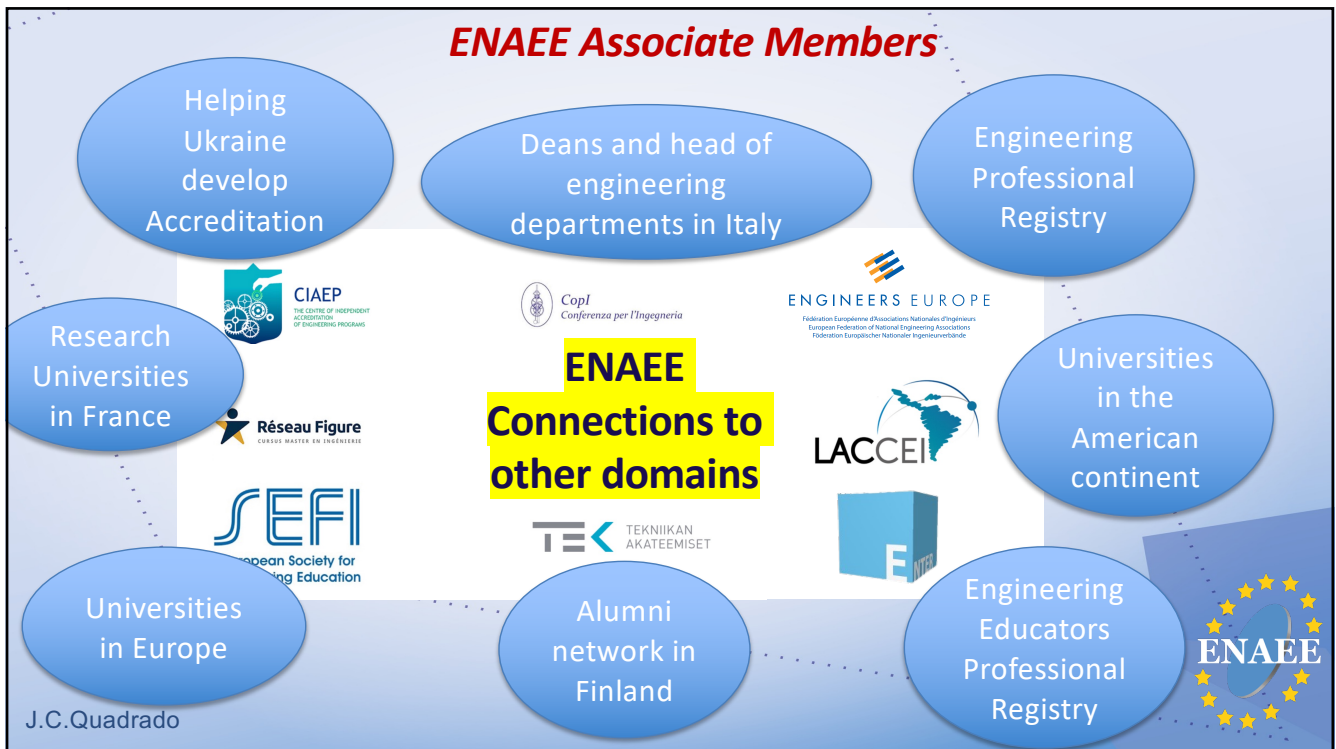
## Growing across the world

ENAAE Full Members



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### EUR-ACE Accord

On 19<sup>th</sup> November 2014, the authorised agencies signed a **Mutual Recognition Agreement** whereby they accept each other's accreditation decisions in respect of Bachelor and Master of Engineering degree programmes which they accredit.

The image shows a large, faded document, likely the EUR-ACE Mutual Recognition Agreement, which details the terms of the accord between engineering accreditation agencies.

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ENAAE  
European Accreditation of Engineering Programmes  
EUR-ACE®

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## EUR-ACE® Database

A single database of accredited Engineering Degree programmes which have been awarded the EUR-ACE label

**Database of Accredited Engineering Degree Programmes which have been awarded the EUR-ACE® Label**

ENAEE (European Network for Accreditation of Engineering Accreditation)

ENAEE grants authorisation to award the EUR-ACE® label to quality assurance and accreditation agencies which satisfy the EUR-ACE® Framework Standards and Guidelines (EAFSG).

The EAFSG provide a set of standards which assure the quality of engineering degree programmes in both Europe and internationally, through the EUR-ACE® labelling system. The EUR-ACE® label is a certificate awarded by an authorised accreditation agency to a Higher Education Institution (HEI) in respect of each engineering degree programme which it has accredited. The EUR-ACE® label thus gives international value and recognition to that engineering qualification.

**Process of uploading information to the database**

- The authorised agency in a particular country uploads to the database the information on its accredited degree programmes.
- When the secretariat and Administrative Council of ENAEE have validated this information, the full details of the degree programme are entered on the database.
- EUR-ACE® Label certificates awarded by authorised agencies are valid only if the degree programmes which are listed on them are listed also on this database.

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## Program Accreditation Certificate

**European Accreditation of Engineering Programmes EUR-ACE® Bachelor**

This is to certify that the engineering degree programme  
**Licenciatura em Engenharia Eletrotécnica – Sistemas Eléctricos de Energia**  
**First Cycle Programme in Electrical Engineering – Electrical Power Systems**  
 provided by  
**Instituto Superior de Engenharia do Porto**  
 accredited by  
**Ordem dos Engenheiros**  
 on 16th May 2023 until 16th May 2029  
 satisfies the criteria for Bachelor degree programmes specified in the  
 EUR-ACE® Framework Standards for the Accreditation of Engineering  
 Programmes, and therefore for the above period of accreditation  
 is designated as a  
**EUROPEAN-ACCREDITED ENGINEERING  
 BACHELOR DEGREE PROGRAMME.**

The President  
 Prof. Dr. Eng. José Carlos QUADRADO

The President  
 Eng. Fernando Almeida Santos

Brussels, 16th May 2023 Lisbon, 16th May 2023

A graduate of this programme may define him/herself "EUR-ACE® Bachelor/Master" as appropriate.



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## Benefits from EUR-ACE

*The EUR-ACE label is  
internationally recognized*

*and*

*Facilitates the academic and  
professional mobility*



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## EUR-ACE Accreditation Benefits



### Benefits for students & engineering graduates

- Assurance that the EUR-ACE® labelled program meets high European and international standards and is recognised by employers in Europe
- Facilitates application to EUR-ACE® Master and doctoral programs in other Higher Education Institutions
- In countries where the engineering profession is regulated, EUR-ACE® labelled programs meet the educational requirements for becoming a Registered or chartered engineer.



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## EUR-ACE Accreditation Benefits



### Benefits for students & engineering graduates

- The EUR-ACE® label facilitates graduate mobility as promoted by the EU Directive on Recognition of Professional Qualification.
- The EUR-ACE® label is the educational standard for the professional card as promoted by Engineers Europe.
- Engineers Europe automatically includes EUR-ACE® labelled programs in its Index which lists educational requirements for the Eur Ing title.



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## EUR-ACE Accreditation Benefits



### Benefits for HEIs

- Is an additional verification of high-quality engineering education– it meets the quality standards set by the engineering profession
- Provides an incentive for prospective students to choose a EUR-ACE® labelled program
- Provides reliable information on the quality of First Cycle programs for admission to Second Cycle programs
- Provides reliable information on the quality of Second Cycle programs for admission to doctoral programs
- Provides access to exclusive networking opportunities



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## EUR-ACE Accreditation Benefits



### Benefits for Accreditation Agencies

- Offers an additional quality label to stakeholders (Higher Education Institutions)
- Certification of quality of accreditation agency according to European Standards and Guidelines for Quality Assurance in Higher Education in the European Higher Education Area (ESG) and employers' requirements
- Integration into the European network of engineering professionals



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## EUR-ACE Accreditation Benefits



### Benefits for Accreditation Agencies

- Possibility of accrediting in other European countries and worldwide
- Emphasizes outcome-based accreditation of engineering programs
- Dialogue between ENAAEE and other similar organisations such as the International Engineering Alliance with the objective of facilitating worldwide mobility of engineers



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## Key Values of the EUR-ACE Label

- International accreditation is a very powerful tool for implementing changes.
- The EUR-ACE accreditation mandatorily brings all the relevant stakeholders on board.
- Accreditation drives innovation.
- Promotes connections

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## EUR-ACE® Promotes Connections



Unleashing the  
full potential of EUR-ACE®

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## Forum Networking opportunities for the EUR-ACE accredited programs

- Double and joint degrees
- Student mobility
- Joint educational projects and initiatives
- Collaborative research opportunities
- Increasing employability opportunities for graduates



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## Forum Networking opportunities for the EUR-ACE accredited programs

- Knowledge sharing and best practices
- Global and Regional Visibility
- Faculty development and collaboration
- Alignment with industry needs
- MOUs and cooperation agreements in general



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## Co-Organisers



European Network for  
Accreditation of Engineering  
Education



Enter Network



European Society for  
Engineering Education



Latin American and Caribbean  
Consortium of Engineering  
Institutions



Istanbul Technical University



MÜDEK - Association for Evaluation and  
Accreditation of Engineering Programs



EELISA - European Engineering Learning &  
Innovation Science Alliance



2026

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## Some evidences from the 2025 EUR-ACE CONNECT



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## Delegates from 24 different countries 2025

 Portugal	 Italy	 Spain	 Romania
 Colombia	 Jordan	 Tunisia	 Mexico
 Ecuador	 Switzerland	 France	 Slovakia
 Finland	 Germany	 Poland	 Ireland
 Kazakhstan	 United States	 Belgium	 United Kingdom
 Türkiye	 Cyprus	 Russia	 Morocco



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## Program at a Glance

	Tuesday 02/6/2026	Wednesday 03/6/2026	Thursday 04/6/2026	Friday 05/6/2026
09:30				
14:00	WORKSHOP Preparation for EUR-ACE Accreditation	WORKSHOP Preparation for EUR-ACE Accreditation	WORKSHOP EUR-ACE Experts	FORUM Delegate Activities
16:30			OPEN DAY Activities	
18:00				CLOSING CEREMONY
20:00			GALA DINNER	
23:00				



2026

ENAAEE



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**EUR-ACE CONNECT**

4 -5 JUNE 2026  
Istanbul, Türkiye

QR Code

Logos: ENAEE, EINTER, SEFI, LACCEI, İTÜ, MÜDEK, EELISA European University

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**EUR-ACE CONNECT 2026 Invitation**



**EUR-ACE CONNECT**

**4-5 June 2026**

**TÜRKİYE - ISTANBUL**



Logos: ENAEE

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## Professional engineering educators

### International Credentialing of Engineering Educators (ENTER REGISTER)

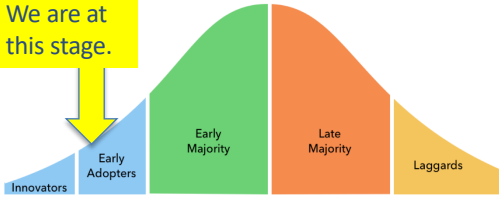
International Labour Organization



[www.enterprof.org](http://www.enterprof.org)

The **only Professional Regulating Body** in the world recognized to **regulate the Profession 2311 (Engineering Educator)** under the ISCO (International Standard Classification of Occupations)

ROGERS DIFFUSION CURVE



**Certification induces educators to improve.**

Over 4000 applicants

Countries with educators that already completed the register:

Argentina **Belgium** Brazil **Bulgaria**  
Canada **Croatia** Colombia **Czechia**  
Ecuador **Estonia** France Georgia  
**Germany** India **Ireland** Italy **Kazakhstan**  
Lebanon **Mexico** Mozambique **Panama**  
Peru **Portugal** Russian Federation  
Slovakia South Africa **Spain** Sweden  
**Switzerland** Tajikistan **Turkey** United Kingdom **United States of America**  
Uzbekistan


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# "He who stops being better stops being good."

Oliver Cromwell

There is always room for improvement...

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