

# IEEE Region 8 PA-EAB Synergies

Madrid, April 19 2013

# Meeting Outcome

R8 SAC

overlap in target  
group

R8 GOLD

overlap in target  
group

R8 PA

Position  
Cooperation  
Targets

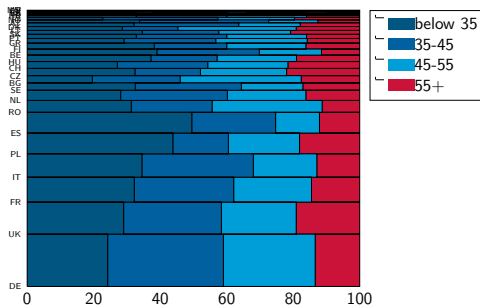
IEEE EAB

overlap in mission

IEEE EU

overlap in mission

# Employed Engineers' age distribution varies within Europe

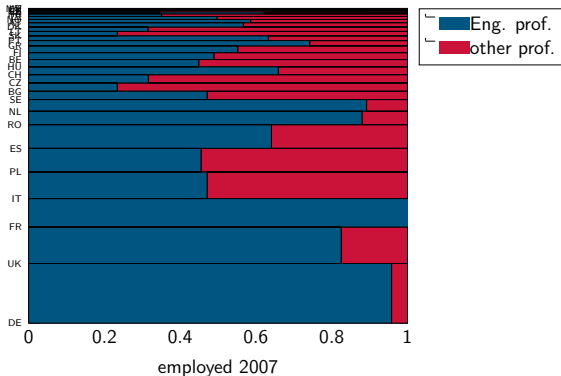


## Replacement

Large share below the age of 35, Ireland and Spain are not likely to encounter replacement problems

Germany, Bulgaria and Norway, however, will face such problems.

# Engineering degree and profession not equal in EU



28% of grad Eng. works in different profession

North-east Europe has high fraction, Eastern europe has very low fraction.

## New Skills Required for Engineers

American ABET (Accreditation Board for Engineering and Technology) and the European EUR-ACE (European Accreditation Board for Engineering Education) have formulated requirements for skills that go far beyond technical knowledge.

- ▶ An ability to function on multi-disciplinary teams.
- ▶ An ability to identify and solve applied science problems.
- ▶ An understanding of professional and ethical responsibility.
- ▶ An ability to communicate effectively.
- ▶ The broad education necessary to understand the impact of solutions in a global and societal context.
- ▶ A recognition of the need for, and an ability to engage in life-long learning.
- ▶ A knowledge of contemporary issues.
- ▶ An ability to use the techniques, skills, and modern scientific and technical tools necessary for professional practice.

Source: <http://unesdoc.unesco.org/images/0018/001897/189753e.pdf>

# Engineer Career Development

Through accredited course

## Graduate Engineer

Through graduate development programme or equivalent

## Fully formed practitioner

capable of independent practice  
post nominal awarded  
Career Foundation

Continuing Professional Development is critical in maintaining stage 2 competencies.

Further training

## Mid-career practitioner

Technical or management of technical or business area  
some leadership

## Later career practitioner

Corporate governance  
super projects  
leadership in industry or the profession  
advisor, invited roles

Knowledge transfer, mentoring

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