

# EMPLOYABILITY OF ENGINEERS IN SPAIN

- Why should we be aware of the employment situation in Spain?
- Organization of ICAI and Industrial Engineers in Spain
- Methodology of the study
- Conclusions of the study
- What's next?



# Why should we be aware of the employment situation in Spain?

- 26% of the active workforce are unemployed
- Need to know the status of engineers. Dispersed information
- Understand the situation regarding employment/  
underemployment of engineers
- Two clear objectives
  - Get unemployed engineers back into the labour market
  - Keep employed engineers in employment





# Organization of Industrial Engineers in Spain

ENGINEERING INSTITUTE OF SPAIN



**Aeronautical Engineers**



**Agricultural Engineers**



**Civil Engineers**



**ICAI Engineers**



**Industrial Engineers**



**Mining Engineers**



**Forest Engineers**



**Naval Engineers**

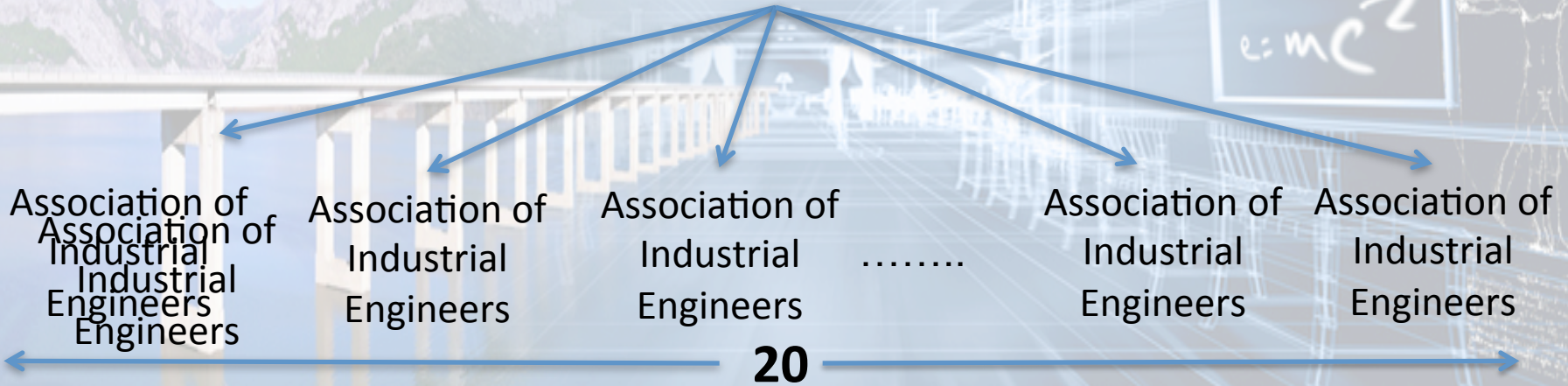


**Telecommunications Engineers**



# Organization of Industrial Engineers in Spain

General Council





# General Council of Professional Associations of Industrial Engineers

## Functions

- To regulate the professional practice of professional members
- Representation of the profession before the government authorities and in the international arena
- Defend the prestige of the profession and the rights of professional members, and to prevent the unauthorised practice of the profession
- Etc...

## Structure

- President
- Vice President
- Second Vice President
- Secretary
- Deputy Secretary
- Treasurer
- Controller
- 16 members

Positions are democratically elected every 4 years using a closed list system.

Number of professionally accredited Industrial Engineers: **41,883**



# Association of Industrial Engineers

## Functions

- To promote the advancement of engineering, putting it at the service of society.
- The regulation of professional practice.
- The representation of the profession. General Council of Professional Associations of Engineers
- The defence of the professional interests of the members

## Services

- Project visa
- Training
- Equipment rental
- Access to technical regulations
- Job bank
- Leisure
- Etc...

## Structure

Depends on each association

- Manager
- Technical secretary
- Managerial team

The larger Associations also have officials responsible for areas; legal, innovation, employment, etc.





# ICAI Association/National School of Engineering

- Single School/Association nationally with 13 regional offices, grouping electromechanical and industrial engineers from the ICAI School of Engineering.
- The Association is an entity which is subject to private law, while the Professional Association is an entity subject to public law. The purposes and functions of both institutions are set out in their respective Statutes; the Association's Statutes dating back to 1920 and the School's Statutes dating back to 1963.

## Boards of Directors and Governors formed by:

- President/Dean
  - Vice President /First Deputy Dean
  - Vice President / Second Deputy Dean
  - Secretary
  - Treasurer
  - 24 members
- **Number of engineers** that are members of the ICAI Association:
    - **3,817** full members
    - 462 student members
  - Number of ICAI professional members: **3,527**; 3,025 in active employment and 502 retired



# Methodology

Survey sent to **all professional members** via email, Facebook, LinkedIn, etc. on employment situation of each professional.

A total of 38,000 **surveys** were sent

**Participation rate:** from 36% in the ICAI to 7% in an Association of Industrial Engineers

**Data processing by**

- Gender
- Place of residence
- Age
- Engineering speciality discipline studied
- Years of experience





# Information requested in the survey

- **Employment status:** in active employment, unemployed, retired
- **Position held:** duration, responsibility, company size
- **Job insecurity**
- **Prospects of job retention**
- **Job search**
- **Entrepreneurship**



# Active workforce (I)

1.- Current position: Technical Office 30%

Management: 20%

Great influence of specialty studied

2. - Length of time working since graduating

Higher percentages between 10 and 20 years

3.- Relationship between length of time in employment and current position

The more experience, the greater the responsibility held in the post





## Active workforce (II)

### 4 - Size of current company

More than 50% work in firms with > 200 employees

Depends on industrial engineers specialties. 35 % work in companies <50 employees

### 5.- Sectors where they work primarily

- Industrial
- Engineering
- Energy supply

**Great versatility of engineers in the labour market**



# Unemployed workforce

- ❑ **The unemployment rate varied widely** from 5% of ICAI engineers to 15.5 % of industrial engineers. Depends on the specialty and region.
- ❑ Women are more affected by unemployment (approximately 20%)
- ❑ Unemployed engineers: 50% < 6 months
- ❑ **Of note:** those with > 25 years experience have spent longer periods unemployed





# Job search (I)

- No school has any committee or similar body to address the issue of employment among professional members.
- All Associations have a job bank, although the way in which they are managed differs significantly.
- 100% of Associations that responded to the survey publish job offers on their websites, although 10 % do not publish job offers from other Associations.
- 95 % of the Associations have no financial support to help professional members integrate into the labour market.
- nal members



## Job search (II)

- ❑ 90 % of Associations do not use social networks such as LinkedIn or Facebook to provide information on career opportunities , job offers, etc.
- ❑ 70 % of Associations have no agreements signed with business associations, human resource companies, etc. in a bid to promote the employability of engineers.
- ❑ 50 % of Associations have conducted training schemes aimed at the employability of professional members.
- ❑ ICAI provides a career guidance service for members and professio





# Job search (III)

## Job search systems

- Contacts with acquaintances
- Internet (LinkedIn, websites)
- Job bank for professional members.



# Entrepreneurship (I)

- ❑ There is no system in place for promoting entrepreneurship.  
There are standing committees to address this issue.
- ❑ Specific actions undertaken by the associations
  - ◆ Talks to promote entrepreneurship
  - ◆ Information on website related to grants, newspaper articles, etc.
- ❑ Large associations in Madrid or ICAI have launched assistance programmes for entrepreneurs.





# Entrepreneurship (II)

- ❑ **ICAI School/Association** have created a company called **ODICEO** and aims to promote and develop technology-based business ventures between our members and professional members.
  - ◆ Mentoring and/or coaching during the early stages of the project
  - ◆ Seeking sources of funding
  - ◆ Seeking investors to participate in the project
  - ◆ Advice in respect of management, with special focus on the financial and economic control during the project implementation process



# What's next?

- Draw up an action plan setting out two objectives
  - Improve the employability of young people
  - Get older workers back into the labour market

Some actions that have been put forward (under discussion)

- To harmonise the various job offers by uploading them onto one single recruitment website
- To improve the training of engineers offering courses coordinated by the Council
- To support language learning, especially for senior engineers
- To sign agreements with various institutions for the integration of new engineers into the labour market
- To promote the spirit of entrepreneurship among our professional members

