

# Standardization for Sustainable Mining

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- Private, non-profit independent Association.
- About 500 Members.
- Created in 1986 (called AENOR until 2016).
- Designated by law as the Spanish National Standardization Body
- Member of CEN, CENELEC, ETSI, ISO, IEC, COPANT.

- **Standardization**

- Standardization, research and innovation
- Standards for sustainable mining
- Conclusions



Create **standards** through the joint contribution of knowledge with a common interest.

## STANDARD:

- Technical document, available to public.
- Voluntary application.
- Made by consensus.
- Published by a Standardization Organization.



## DO NOT CONFUSE STANDARDIZATION WITH:

- Regulation.
- Certification.

# Benefits of Standardization

## MACRO-ECONOMIC:

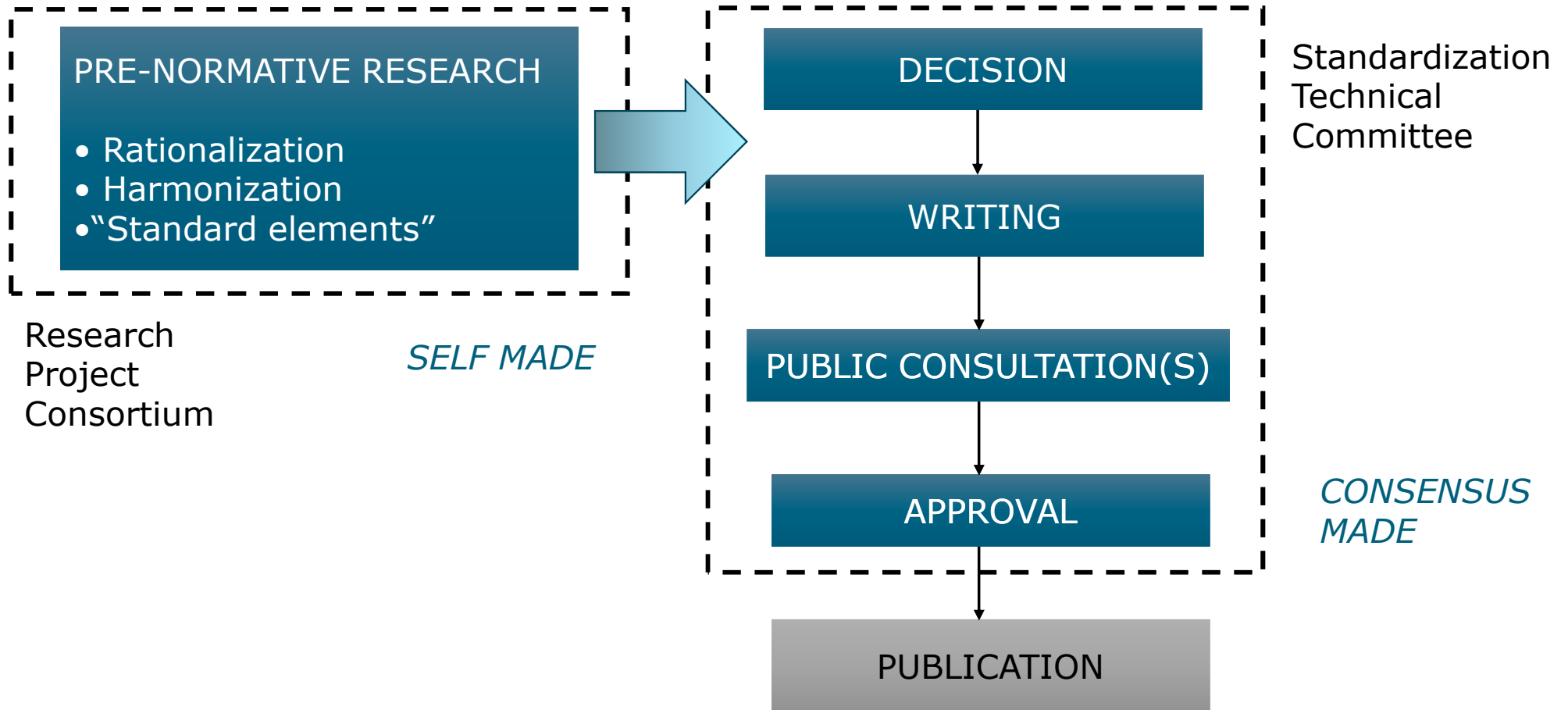
- 1% of GDP (in Spain: about 10.000 M€/year).
- 13% of working productivity growth.
- 92% of world trade.

## BUSINESS:

- Eliminates market barriers.
- Shifts competitiveness.
- Rationalizes products & services, reduces stocks.
- Improves design and purchasing management, reduces costs.
- Sets comparable quality and safety requirements.
- Generates user confidence.
- Improves compatibility.



# Process of Standardization



- Standardization
- **Standardization, research and innovation**
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**To increase the IMPACT of projects on the market, society, etc.**



**Horizon 2020:** General documents, work programmes and specific calls include standardization as a requested or recommended activity in projects.

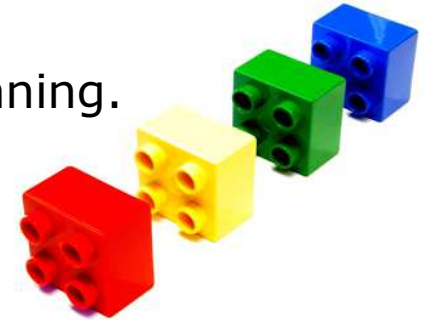
***"Standardization provides interoperability and quality of products, generates users confidence and helps opening markets."***

*(European Commission, Horizon 2020, Work Programme 2014-2015)*



# How to use standardization in a R&I project

**1** – Consider **existing standards** in the project preparation and running.



**2** – Contribute with project results to the development of **new standards**.



## FOR PROJECTS (RESEARCHERS):

Know/use present standards:

- Compatibility
- Simplicity, saving efforts and costs
- State of the art

Include results in new standards:

- Dissemination
- Knowledge transfer
- Market uptake
- Internationalization

## FOR PUBLIC AUTHORITIES (FUNDERS):

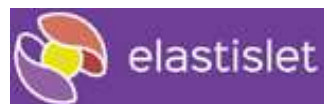
- Increased market impact: economical growth.
- Using a powerful system already established.



- Always consider if standardization can be useful:
  - *Is it required/recommended?*
  - *Will an improvement of the impact help succeeding the funding evaluation?*
  - *Will results be close to the market stage?*
- Include **specific activities** (tasks, deliverables, resources, deadlines).
- Transmit the **concept** (effect on impact) in the proposal.
- Consider if you can **do it by yourself** or if you need some support (National Standardization Bodies).



# Examples of projects



- Standardization
- Standardization, research and innovation
- **Standards for sustainable mining**
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## **UNE 22470:2015 - Sustainable Mining Management Indicators**

## **UNE 22480:2015 - Sustainable Mining Management System**

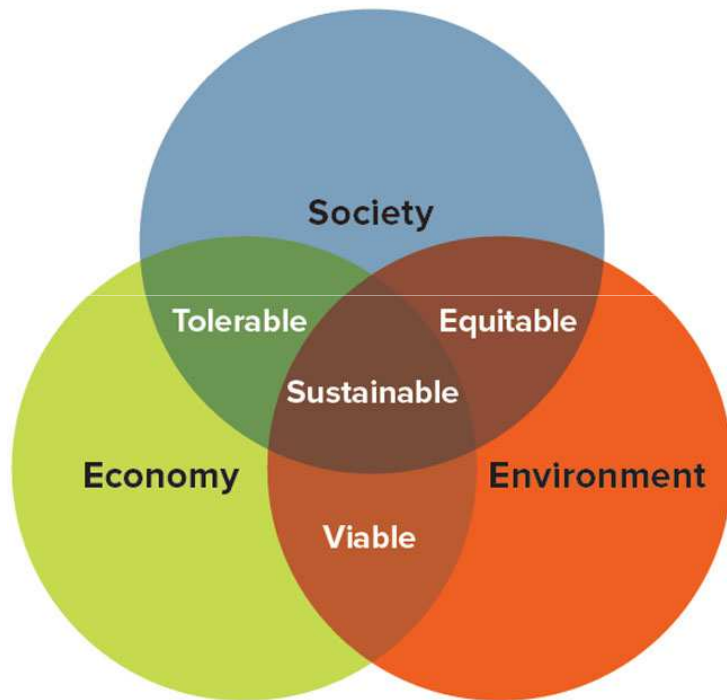


- Developed by Spanish Technical Committee CTN 22.
- First edition in 2008, revised in 2015.
- Currently under revision to include new ISO management systems structure.

- Integration of **continuous improvement** concepts in the sustainability of mining operations
- **Complementary** to:
  - ISO 9001 (Quality)
  - ISO 14001 (Environmental)
  - OHSAS 18001 / ISO 45001 (Health and Safety)
- Well suited for **SMEs**



***6 mining companies  
currently certified***

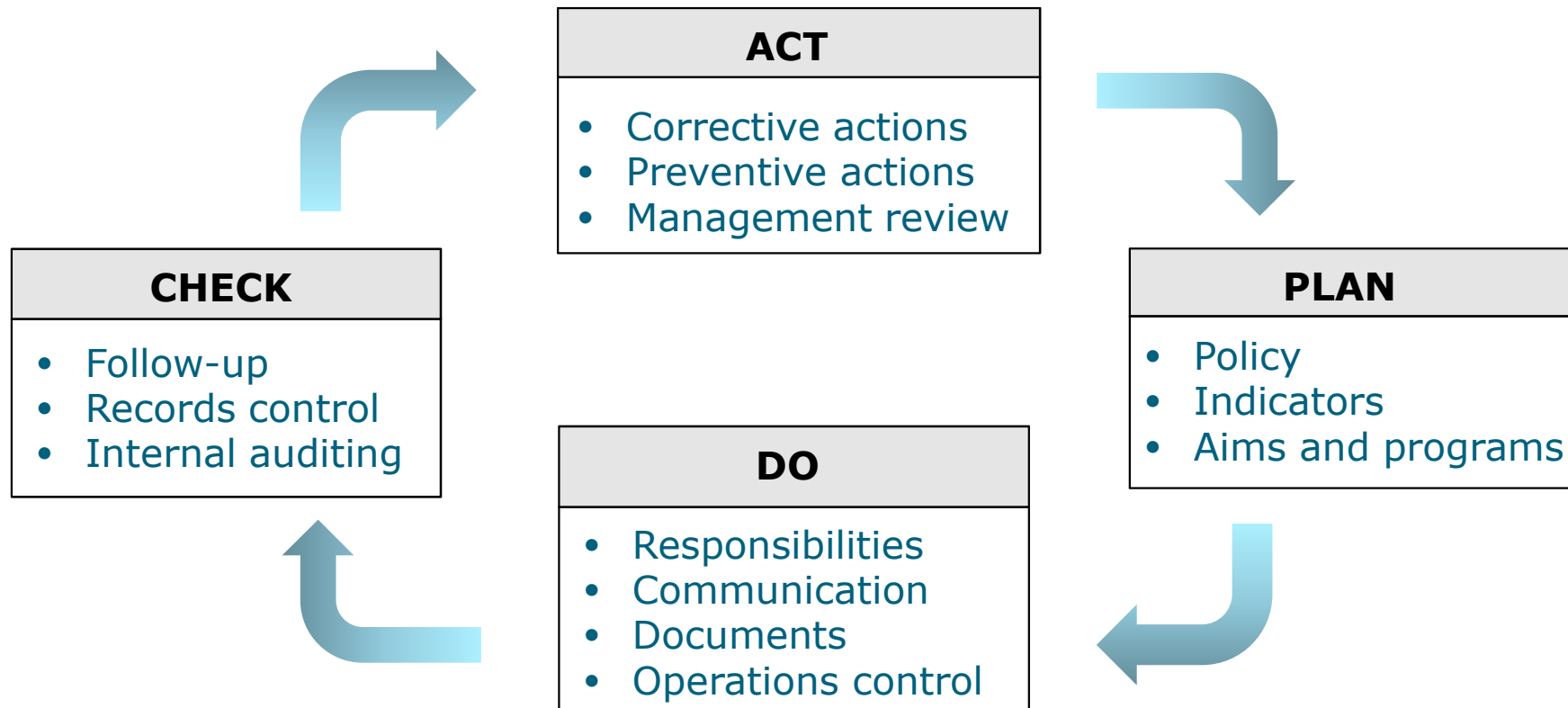


## CRITERIA:

- 1) Safety of supply to meet the demand (short, medium & long term)
- 2) Efficient use of natural resources
- 3) Measures to promote and improve workers' H&S
- 4) Contribution to community economic development
- 5) Contribution to community social development
- 6) Rehabilitation of the natural space
- 7) Best available techniques in:
  - Pollution prevention and control
  - Waste management



## P-D-C-A: CONTINUOUS IMPROVEMENT CYCLE





## 2014 Commitment:

“Proposal for a European Standard for the certification of Sustainable Mining Management Systems”



**But... never started!**

# Standards help with some mining problems in Europe

## **COMPLEXITY OF PERMITTING PROCESS:**

- Multiple and disperse administrative processes
- Very long periods for getting approvals

## **DIFFICULTY ON ACCEDING RESERVES:**

- Conflicts with environmental protected zones
- Mining not considered in land planning policies

## **LOW SOCIAL ACCEPTANCE:**

- Considered as a dangerous and disturbing activity
- Environmental problems
- Low visibility of benefits to society (local and general)



**EXAMPLES:** GRI - Global Reporting Initiative: Supplement on Mining and Metals  
BETTERCOAL: Coal  
AMR - Alliance for Responsible Mining: Gold  
RJC - Responsible Jewelry Council: Diamonds, Gold and Platinum  
KPCS - Kimberley Process Certification Scheme: Diamonds

- Most of them focused to problems of **specific sectors**
- Supported by **large** mining companies and traders
- **Difficult** to implement in small and medium companies
- High certification **costs**



## OBJECTIVES:

Enable a third-party certification of the sustainable management of mining operations at European level:

- Improving the **social image** of mining
- Growing-up **confidence** on stakeholders
- Potentially facilitating **access** to reserves
- Simple, cost effective and suitable for **SMEs**



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# 1. Trust in Standards

- Thousands of standards referenced in legislation (>8600 in Spain and >4600 in Europe)
- Open and transparent process
- Balance of stakeholder's powers
- Consensus
- Clearly regulated, with neutral "referees" (standardization bodies)



## 2. Stand4Mines

- Still possible to generate European Standards and certifications for S.M.
- Open to new parties interested in **leading** and supporting
- **UNE can support** standardization procedures





### **UNE:**

- [www.une.org](http://www.une.org)

### **CEN and CENELEC:**

- [www.cencenelec.eu](http://www.cencenelec.eu)

### **STANDARDIZATION FOR RESEARCH AND INOVATION:**

- [Standardization in H2020 projects](#)

### **STANDARDS FOR SUSTAINABLE MINING:**

- [UNE 22470:2015](#)
- [UNE 22480:2015](#)





**Thanks for your attention!**

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