Horizon 2020

General introduction, structure, opportunities and positioning in R&D landscape
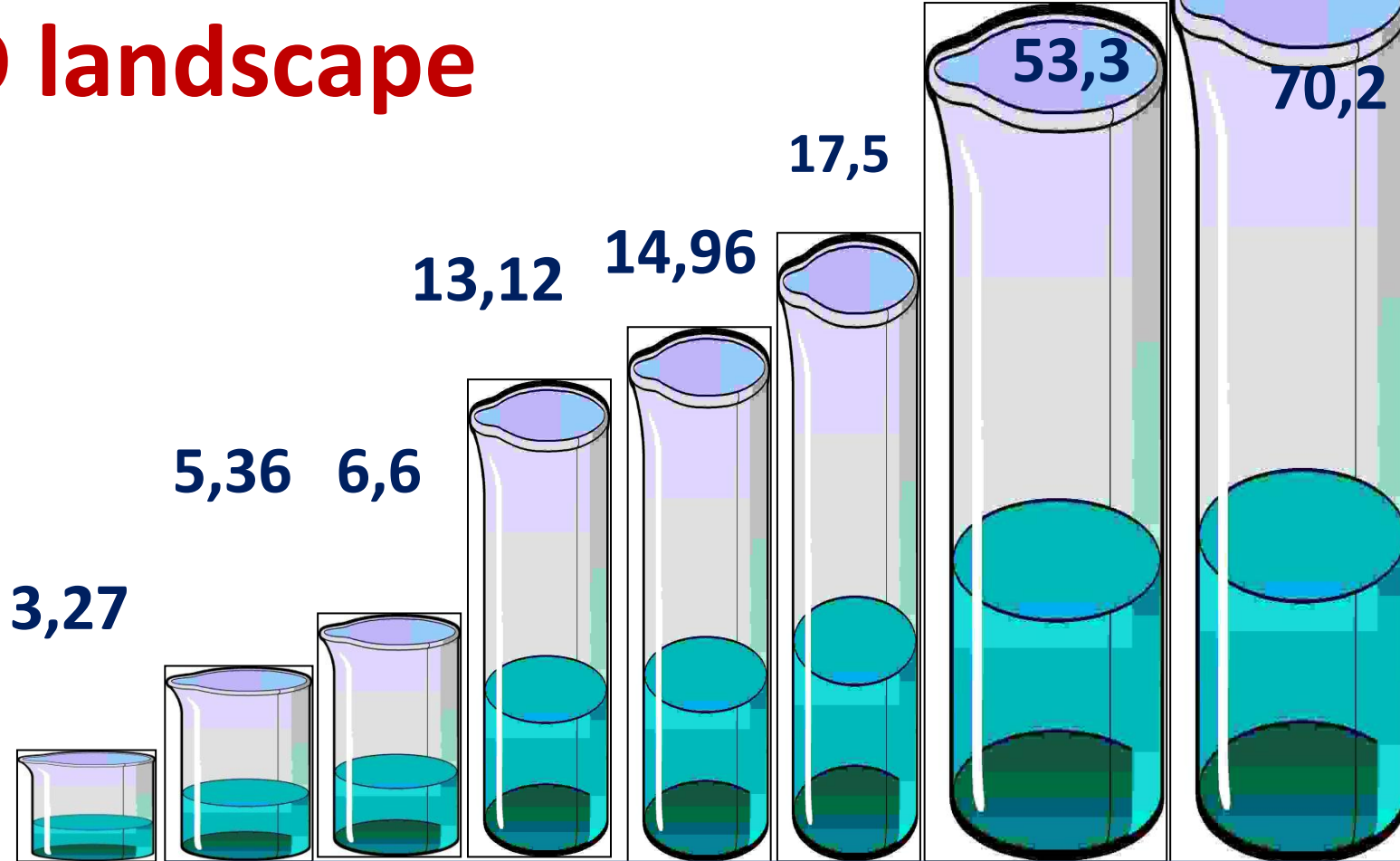
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EU RTD landscape

3,27

5,36 6,6

13,12

14,96

17,5

53,3

70,2

EUREKA

ESF

COST

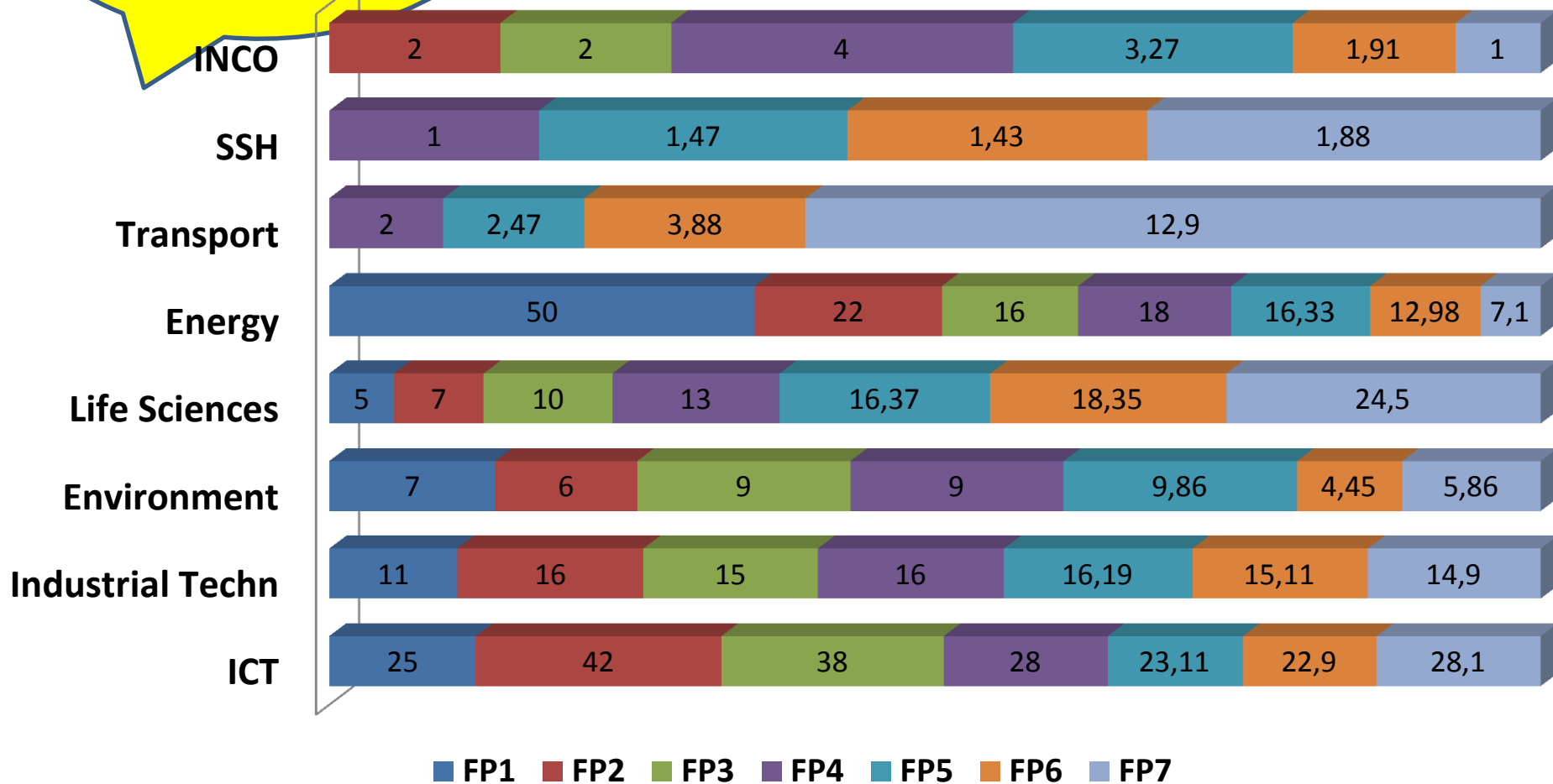1971 1974   1984   1987   1990   1994   1998   2002   2007   2014

FP1   FP2   FP3   FP4   FP5   FP6   FP7   H2020

anging priorities

s.c. Coordination
6FP-2,1%, 7FP -5,4%,
H2020 –ca 25%

	FP1	FP2	FP3	FP4	FP5	FP6	FP7
INCO		2	2	4	3,27	1,91	1
SSH				1	1,47	1,43	1,88
Transport				2	2,47	3,88	12,9
Energy	50	22	16	18	16,33	12,98	7,1
Life Sciences	5	7	10	13	16,37	18,35	24,5
Environment	7	6	9	9	9,86	4,45	5,86
Industrial Techn	11	16	15	16	16,19	15,11	14,9
ICT	25	42	38	28	23,11	22,9	28,1

■ FP1 ■ FP2 ■ FP3 ■ FP4 ■ FP5 ■ FP6 ■ FP7

The environment for Horizon 2020

- Responding to the economic crisis **to invest in future jobs and growth;**

- Addressing peoples' concerns **about their livelihoods, safety and environment;**

- Strengthening the EU's global position **in research, innovation and technology.**

ERA priorities

1. **More effective national research systems**
   - including increased competition within national borders and sustained or greater investment in research

2. **Optimal transnational co-operation and competition**
   - defining and implementing common research agendas on grand challenges, raising quality through Europe-wide open competition, and constructing and running effectively key research infrastructures on a pan-European basis

3. **An open labour market for researchers**
   - to ensure the removal of barriers to researcher mobility, training and attractive careers

4. **Gender equality and gender mainstreaming in research**
   - to end the waste of talent which we cannot afford and to diversify views and approaches in research and foster excellence

5. **Optimal circulation, access to and transfer of scientific knowledge including via digital ERA**
   - to guarantee access to and uptake of knowledge by all

The five targets for the EU in 2020

1. **Employment**
   - 75% of the 20-64 year-olds to be employed

2. **R&D**
   - 3% of the EU's GDP to be invested in R&D

3. **Climate change and energy sustainability**
   - **greenhouse gas emissions 20%** (or even **30%**, if the conditions are right) **lower than 1990**
   - **20% of energy from renewables**
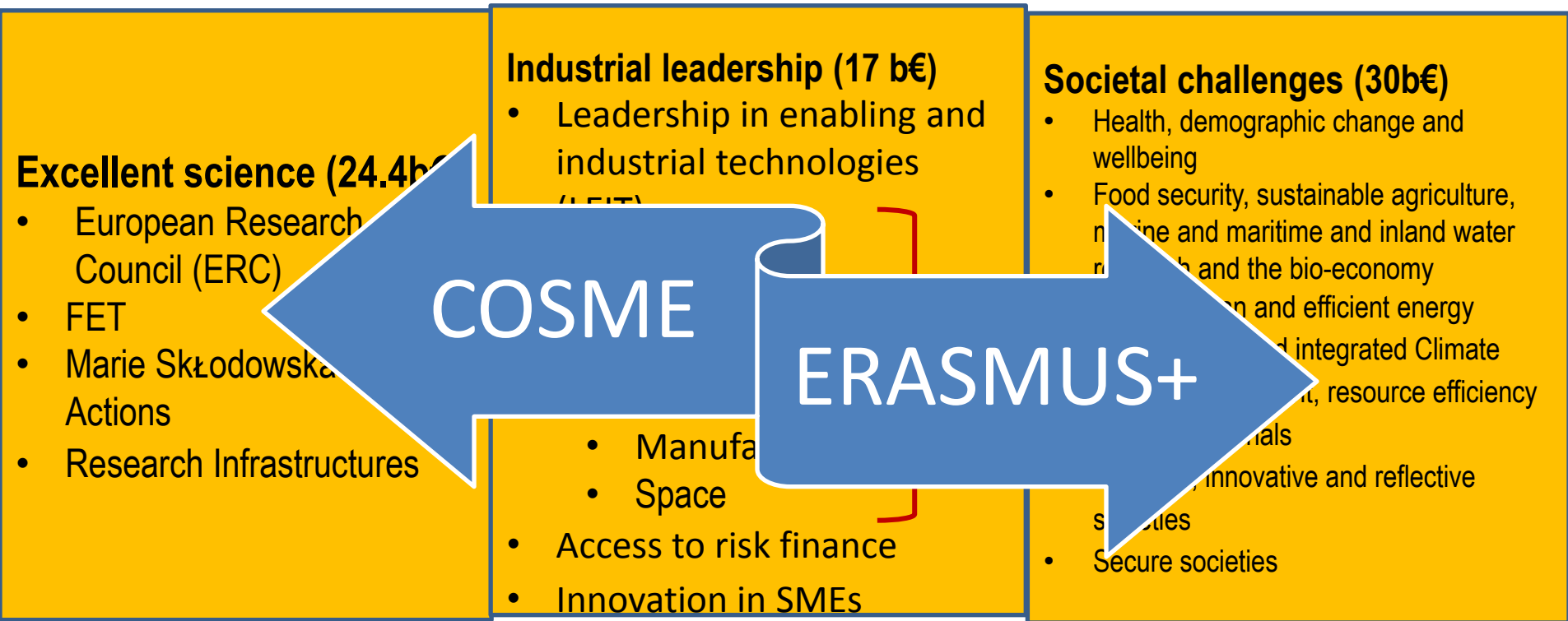   - **20% increase in energy efficiency**

4. **Education**
   - **Reducing the rates of early school leaving below 10%**
   - **at least 40% of 30-34–year-olds completing third level education**

5. **Fighting poverty and social exclusion**
   - at least **20 million fewer people in or at risk of poverty and social exclusion**

Horizon 2020 structure

Excellent science (24.4b€)
- European Research Council (ERC)
- FET
- Marie Skłodowska Actions
- Research Infrastructures

Industrial leadership (17 b€)
- Leadership in enabling and industrial technologies (LEIT)
  - Manufac...
  - Space
- Access to risk finance
- Innovation in SMEs

Societal challenges (30b€)
- Health, demographic change and wellbeing
- Food security, sustainable agriculture, marine and maritime and inland water research and the bio-economy
- ...n and efficient energy
- ...d integrated Climate
- ...t, resource efficiency
- ...als
- ...innovative and reflective societies
- Secure societies

COSME

ERASMUS+

Spreading excellence and widening participation. Science with and for society

European Innovation Institut (EIT)

EURATOM

Joint Research Centre (JRC)

2-year Work Programmes 2014-2015

Focus areas through programmes:

Personalising health and care

Sustainable food security

Water innovation

Smart cities and communities

Competitive low carbon energy

Blue Growth

Waste

Disaster resilience

Digital security

Mobility for growth

Energy sustainability

New ideas for Europe

Cultural Heritage & Global Change; **Food Security, Agriculture & Climate Change**,
More Years - Better Lives; **JPI Climate - Connecting Climate Knowledge for Europe** ,
Water Challenges for a Changing World , **Urban Europe, A Healthy Diet for a Healthy Life**,
Neurodegenerative Diseases , **The Microbial Challenge**, **Healthy and Productive Seas and Oceans**.

Trials Partnership Programme for the second (EDCTP2).

...ps

- Joint ...ng Initiatives **(JPI)**
- **ERA-NET**
- **Article 185**
- **COST**

Public-Private Partnerships

- Joint Technology Initiatives
- Public-private contractual part...ships

Innovative Medicines (IMI), Fuel cells and Hydrogen (FCH)
Clean Sky
Biobased industries (BBI), Electronic
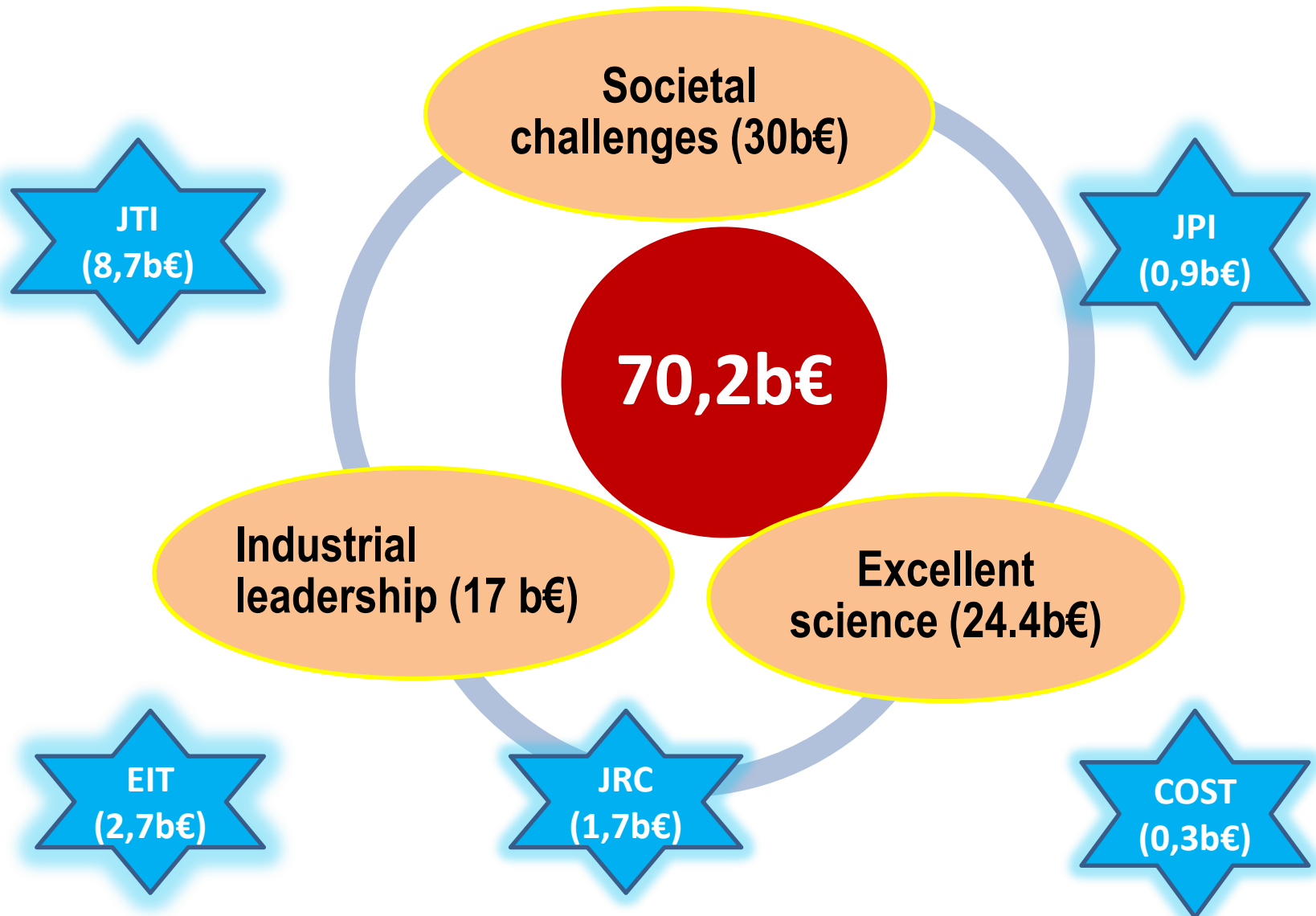
Future Em... echnologies (FET)

- graphene

2009: sustainable energy, climate change, ICT
2014: Healthy lifestyles and active aging, raw materials
2016: manufacturing and Food4Future
2018: Urban Transport

...and Technology **(EIT)**

The factory of the future ; energy-efficient buildings,
energy-efficient cars, the future of the Internet,
Sustainable manufacturing, robotics, phonotics;
high-performance computing

Horizon 2020 budget

Societal challenges (30b€)

JTI (8,7b€)

JPI (0,9b€)

70,2b€

Industrial leadership (17 b€)

Excellent science (24.4b€)

EIT (2,7b€)

JRC (1,7b€)

COST (0,3b€)

For further information

- **Participant Portal**
  - **http://ec.europa.eu/research/participants/portal/desktop/en/home.htm**

- **Helpdesk**
  - **http://ec.europa.eu/research/enquiries**

- **Expert evaluators needed!**
  - **http://ec.europa.eu/research/participants/portal/desktop/en/experts/index.html**

- **Learn more about Horizon 2020**
  - http://ec.europa.eu/horizon2020
- **H2020 Online Manual**
  http://ec.europa.eu/research/participants/portal/desktop/en/funding/guide.html

EXERCISE

MOSAIC