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INNOVATING OUT OF THE CRISIS: THE ROLE OF POLITICAL LEADERS IN FOSTERING JOB CREATION

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Content of the presentation

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- Relation R&D and job creation
- Horizon 2020
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GLOBAL CONTEXT

Global context

- Economic complexity and budget austerity in the EU
- Global challenges such as: ageing of population, climate change, food security and energy security.
- EU has 7% of world population,
- 29% of GDP,
- 24% of R&D spending,
- 32% of scientific publications.

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MULTIPOLAR WORLD IN RESEARCH AND INNOVATION

Multipolar world in research and innovation

- **Multipolar world in all sectors and also in science**
- **80% of *researchers* work outside Europe**
- **69% of patent applications are made outside Europe**
- **76% of GERD is executed in other parts of the world (Gross Expenditure on Research and Development)**
- **EU`s world share in GERD has diminished by 7.6% over the previous 6 years**
- **EU`s world share of patent application has declined 14.2% over the previous 6 years**

Multipolar world in research and innovation

- **EU-27 is the largest producer of scientific publications in the world (EU 37% US 31%).**
- **However the EU contributes less than the US to high impact publications (US 1.45% EU 0.97% - contribution to the 10% most cited publications)**

Multipolar world in research and innovation

- New phenomenon: the emerging powers
- China´s share of world scientific publications has more than doubled within six years and is now larger than that of the Japanese
- Indicators of Science and Innovation in China have been growing very rapidly. this trend is stronger in the private sector (in particular the patents and publications in partnership between public and private sector)
- Number of researchers doubled in the last six years.

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RELATION R&D AND ECONOMIC GROWTH

Public and Private investment in R&D

Total investment in R&D:

- **EU: 1,9%**
- **Japan: 3,4%**
- **South Corea: 3,23%**
- **USA: 2,62%**

Private investment in R&D:

- **EU: 1,25%**
- **Japan: 2,7%**
- **South Corea: 2,45%**
- **USA: 2%**

Objectives EU

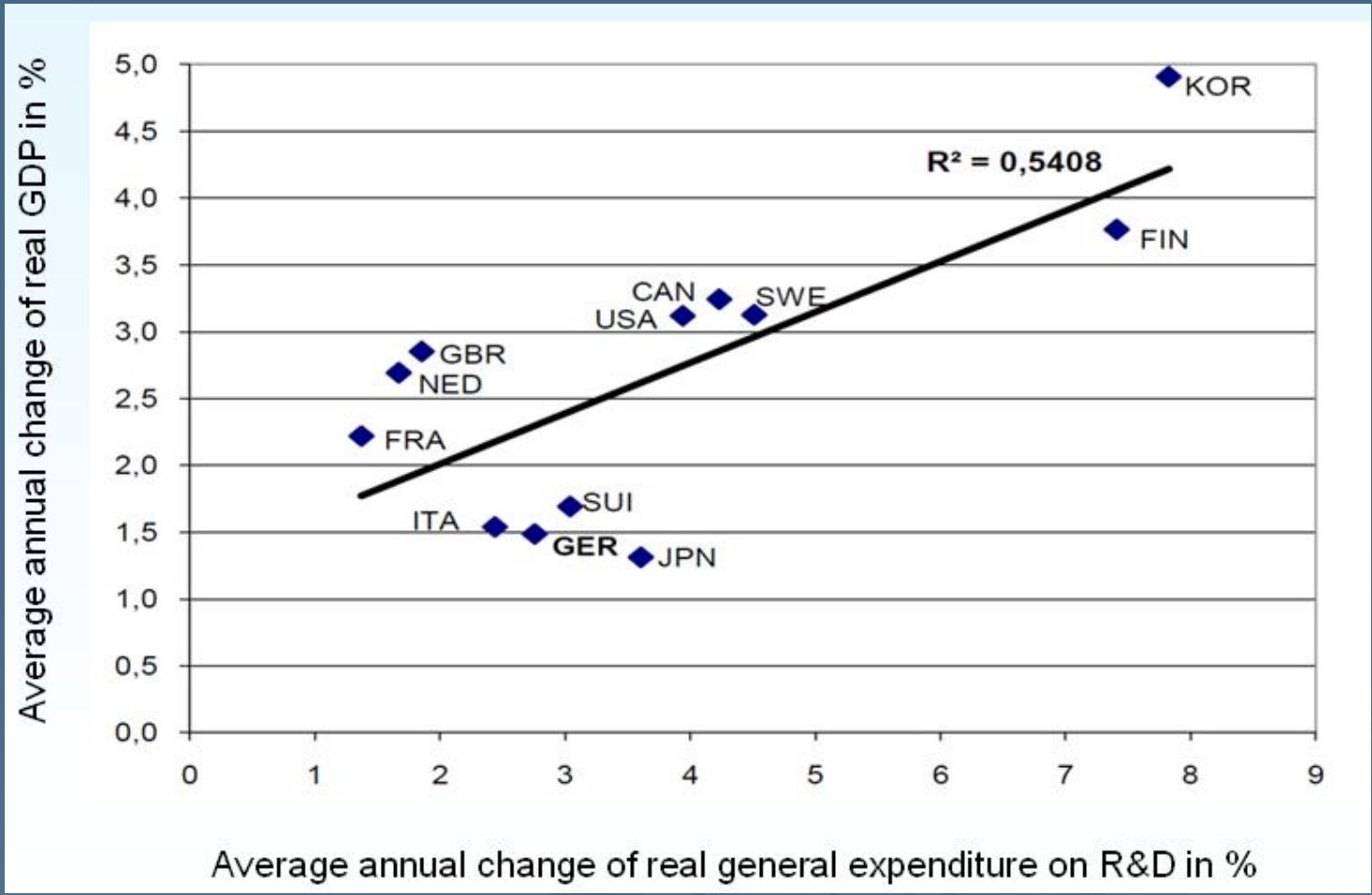
Investment in R&D and innovation today will create growth and jobs for tomorrow!

*"Achieving our **target of spending 3% of EU GDP on R&D by 2020** could create 3.7 million **jobs and increase annual GDP** by close to €800 billion by 2025."*

(European Commission, 2010)

R&D and Growth

- Link between R&D expenditures and economic growth in major industrialized countries (G12) 1994 – 2006



Source: Dehio, Jochen; Engel, Dirk; Graskamp, Rainer (2006)

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R&D and Growth

- Increasing investments in R&D will help to pull the economy out of the crisis and ensure businesses and citizens to take advantage of he next economic expansion.
- Statistics show that the R&D intensity is correlated with economic growth, though there are many factors in the equation.

R&D and Growth

- Sometimes a significant improvement in indicators, such as the investment in R&D, is not directly translated into a return to the economy.
- Investments in R&D is a necessary condition for economic growth but not a sufficient condition. There are many other factors which are also important.

R&D and Growth

- **Innovation requires:**
  - **Investing in education**
  - **investing in training,**
  - **Investing in R&D**

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R&D and Growth

- **For the economic growth, we must ensure:**
  - **Favourable macroeconomic conditions**
  - **Competition rules,**
  - **Properly functioning market,**
  - **Tax policy,**
  - **Efficient public administration,**
  - **Highly skilled services sector,**
  - **Favourable immigration law,**
  - **Strong and dynamic private sector,**
  - **Existence of excellent Universities to act as catalysers of innovative ecosystem.**

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RELATION R&D JOBS

R&D and Jobs

Effects of a small increase in public R&D funding on employment

Source: Christian Ehler, Policy paper: Investmentin RDI – Europe´s Path to Economic Growth (2012)

R&D and Jobs

“Even a small increase in innovation expenditures tends to increase economic growth and employment in the long term.

A small initial increase in public funding leads to increases in private R&D outlays and improvements in labour productivity.

Labour productivity leads to increased wages and, together with increasingly attractive new products, boosts the consumption of goods in the targeted sectors as well as the overall consumer demand in the economy.

Equitable distribution of the economic gains resulting from improvements in productivity help to sustain demand and employment.

The employment effect of increased consumption is always larger than the labour-saving effect of productivity increases.”

Source: Christian Ehler, Policy paper: Investmentin RDI – Europe´s Path to Economic Growth (2012)

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HORIZON 2020

European Framework-Programme for Research, Technological Development, Demonstration and Innovation

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Horizon 2020 Principles

5 key principles:

1. A Trust based funding system leading to a overall simplification on structure and rules
2. Excellence based criteria "*Stairway to Excellence*"
3. A chain from frontier research, to technological development, demonstration, valorisation of results and innovation
4. Synergies with other funding programmes
5. Employment of young scientists

The European Added Value of Horizon 2020

Each billion from Horizon 2020 will mean:

- **4000 innovative SMEs**
- **600 excellent researchers**
- **240 large projects with 2600 participants** from industry and academia **2500 Marie-Sklodowska Curie fellows**
- **€13b of value added** by the business sector

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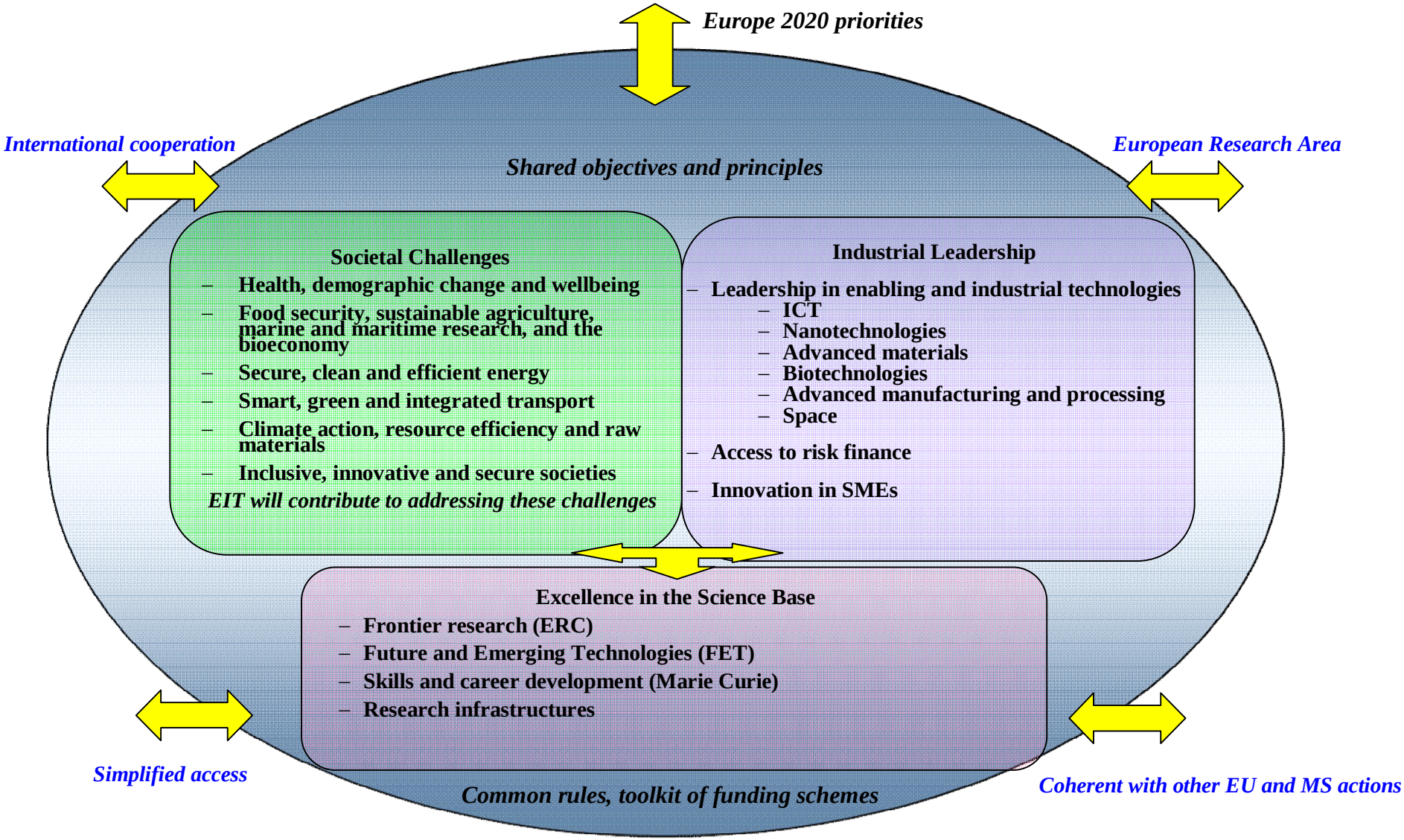
Horizon 2020
Three Pilares



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CONCLUSIONS

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Conclusions

- **Improving the environment for innovation in Europe is vital for growth and jobs;**
- **The solutions must go beyond funding (Internal Market; Strenghening ERA; Structural Reforms at Member States level);**
- **Horizon 2020 is an ambitious programme financing every stage of the innovation process from basic research to market uptake promoting growth and jobs in Europe.**

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Thank you

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