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Realising the **European Research Area** (ERA) Key challenges

European Commission

Research

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European Research Area

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Outline

- The challenges –where are we!
- Where do we need to go:
  The ERA vision 2020 and Ljubljana Process
- The five ERA initiatives and other ERA building blocks

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The challenges: Where are we

- We are facing challenges like climate change and energy & food security, health and aging society, migration and pandemics that may even go beyond the current crisis, if left unattended
- Knowledge can help to understand the social and economic impacts, and find solutions to these challenges but…
- ….Europe must invest more and better in knowledge, and increase its attractiveness and excellence, while more strongly cooperate at EU, if not global level, to stay competitive and address global challenges more effectively
- Europe needs to move from a resource-based to a low carbon, knowledge-based economy

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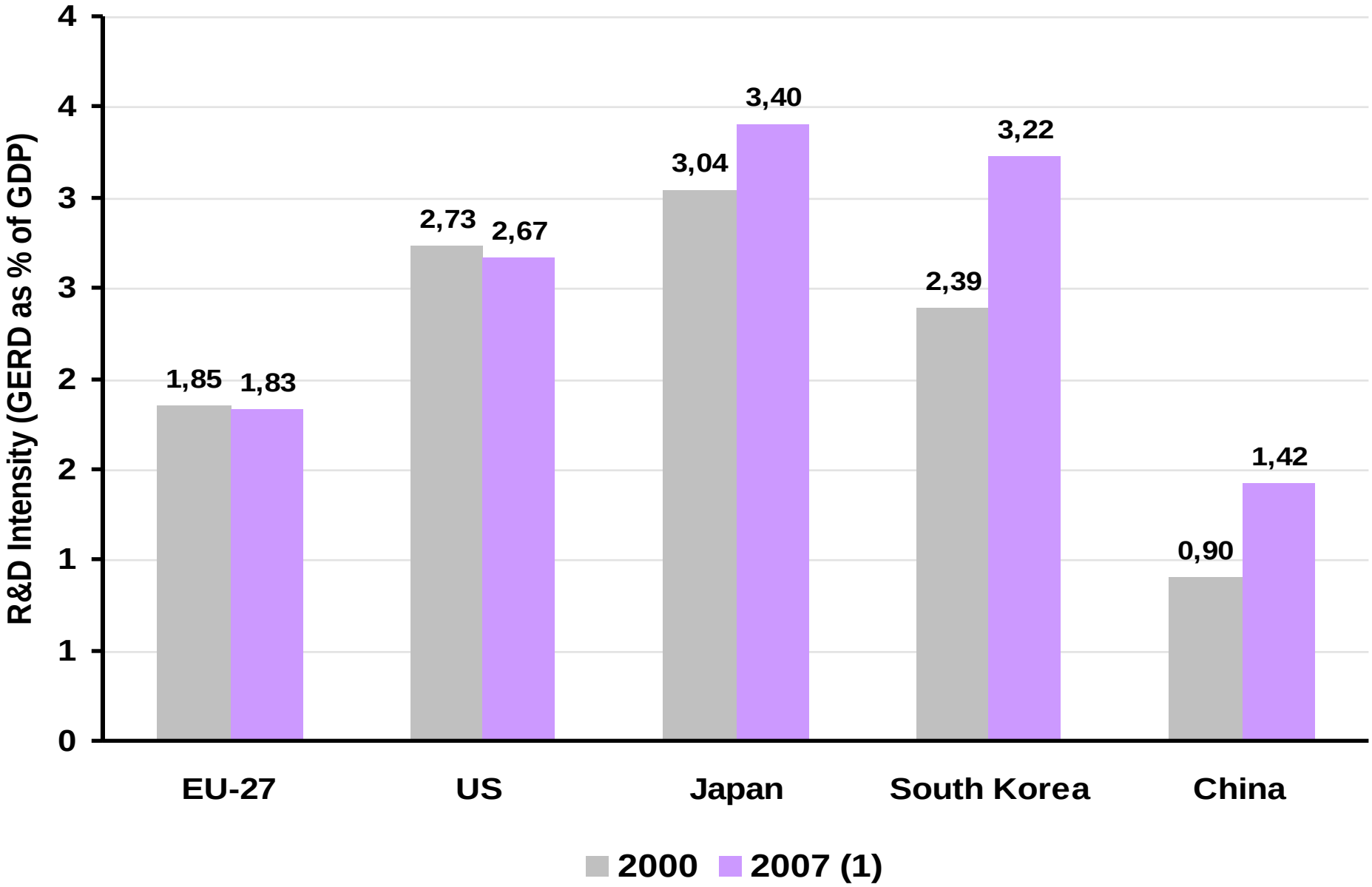
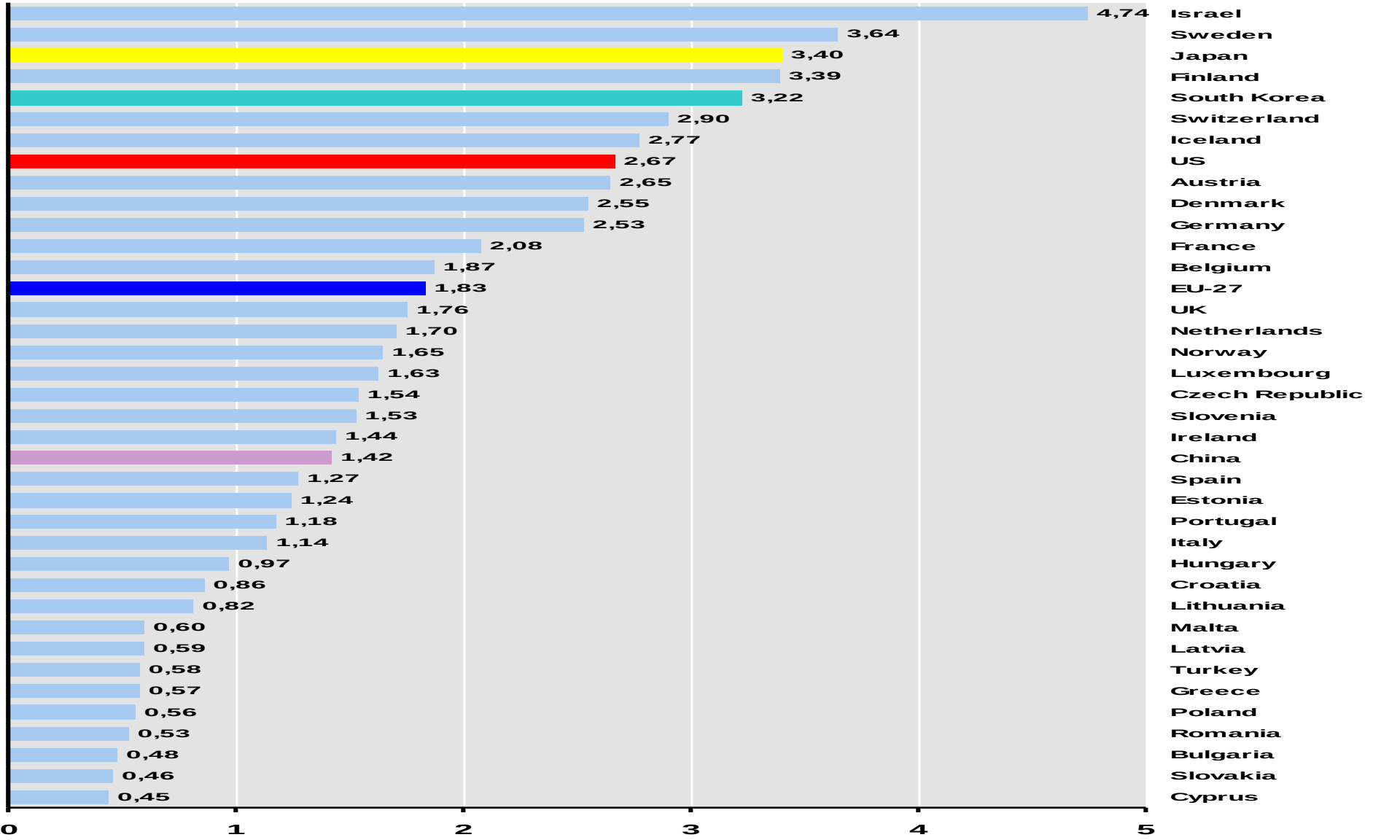
EU investments in R&D: increase in real term but intensity stagnating

- Over 75% of global research investment is made outside the EU – and increasing due to new players in Asia
- Despite all Member States having increased their R&D investments in real terms - and 17 Member States even increasing their R&D intensity since 2000 ….
- … the average EU R&D intensity has stagnated, while Asia's is growing strongly and the USA maintains far higher investments

Evolution of R&D Intensity

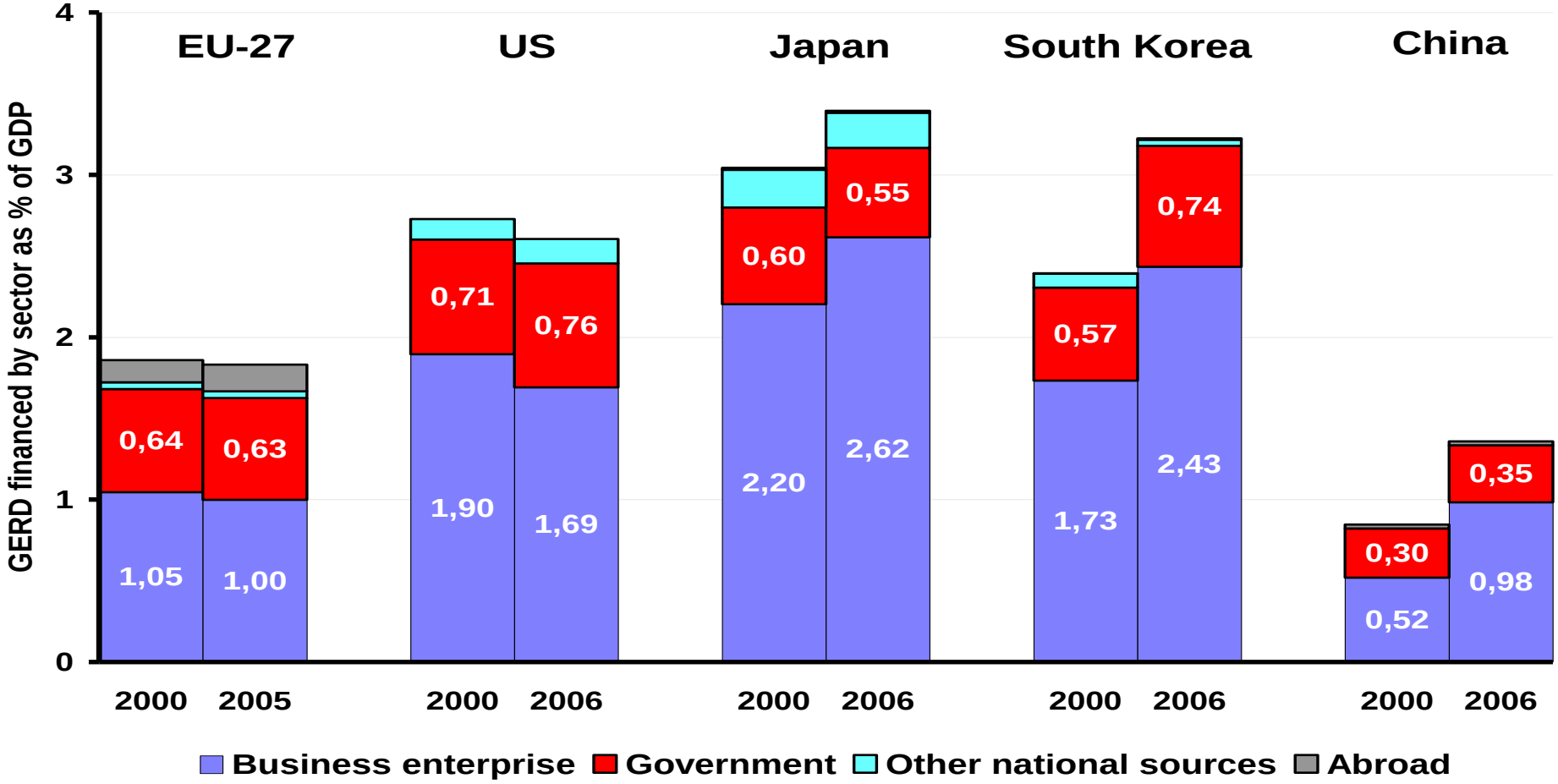


R&D Intensity (GERD as % of GDP), 2007 (1)



A low intensity of private sector R&D investments

Evolution of GERD financed by sector as % of GDP



Source: DG Research

Data: Eurostat, OECD

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EU's assets in research

- The EU is still the largest producer of scientific publications
- The EU has a growing pool of researchers
- The EU is increasingly attractive for foreign research investments

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Effect of the crisis on R&D investment

- Overall **private investment** in R&D likely to be cut, especially in high-tech SMEs
- **Public support** to R&D has an essential counter-cyclical role to play
- **European Council**, 20 March 2009 called for *« **stepping up and improving the quality of investment in research, knowledge and education** »*

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EU's response to the crisis: Recovery Package / R&D aspects

- Call for Member States to **increase investment in R&D** and reduce patent registration and maintenance fees for SMEs

- Three **Public-Private Partnerships** on R&D and innovation:
  - Automotive: Green cars initiative (1B€ for R&D element)
  - Construction: Energy-efficient buildings initiative (1B€)
  - Manufacturing: Factories of the future initiative (1.2B€)

  → 50/50 funding from FP7 and private partners
  → First step: Calls for proposals planned for mid-2009

- **Risk-Sharing Finance Facility** (EIB / FP7): Increased EC resources in 2009 to support access to credit (loans) for R&D and innovation

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Ljubljana Process & ERA vision 2020

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Ljubljana Process

- We need to develop a well-organised partnership between the Member States, Associated States and the Commission to exchange information and to steer all initiatives in a coherent way.
  - A common **long-term vision** for the future of ERA as the basis for our future actions and initiatives
  - Better **governance**, notably with better political steering at the ministerial level, is needed.

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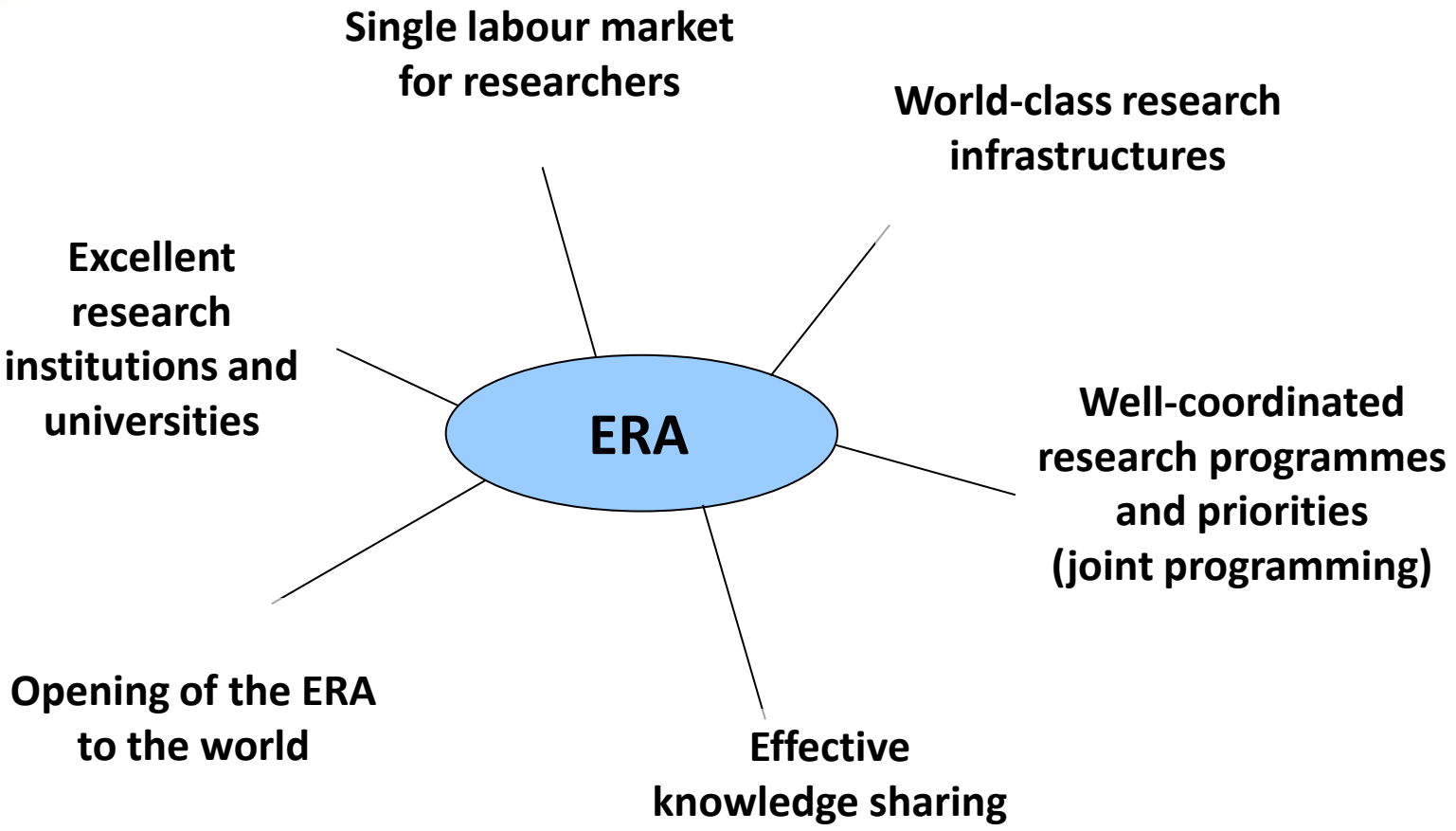
Why do we need an ERA?

ERA Vision 2020 adopted at Competitiveness Council on 2 December 2008

*"By 2020, all actors fully benefit from the **'Fifth Freedom'** across the ERA: free circulation of researchers, knowledge and technology. The ERA provides **attractive conditions** and **effective and efficient governance** for doing research and investing in R&D intensive sectors in Europe. It creates strong **added value** by **fostering** a healthy **Europe-wide scientific competition** whilst **ensuring** the appropriate level of **cooperation and coordination**. It is **responsive to the needs and ambitions of citizens** and effectively **contributes** to the **sustainable development and competitiveness** of Europe."*

ERA initiatives and building blocks



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European Partnership for Researchers

Key Challenges:

- Ensure quality and availability of researchers across Europe and raise the attraction of Europe to the best research talents world-wide
  - Increasing competition, globally and with other economic sectors
  - Demographic developments affecting Europe's research workforce
  - Europe's goal to increase public and private investments in R&D
- Mainstream mobility between institutions, between sectors and across borders, based on the “brain circulation” paradigm

Response to challenges:

- A partnership between Member States, Associated States and the Commission to accelerate progress, building on reforms and actions underway
- A common framework to help focus the efforts on shared objectives and key areas of common interest

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European Partnership for Researchers

Focus actions at national and European level in four key areas:

- Open recruitment and portability of grants
- Meeting social security and supplementary pension needs of mobile researchers
- Attractive employment and working conditions
- Enhancing training, skills and experience of researchers

Next steps:

- Member States to plan/act at national level based on common objectives
- Progress together at European level through the ERA Human Resources and Mobility Steering Group (adapted mandate), chaired by MS (IT)
- Reporting on progress in 2009 and evaluation in 2010

Knowledge transfer and IP management

Key Challenges:

- To enhance the impact of public research on European socio-economic growth by strengthening knowledge transfer between Public Research Organisations (PROs) and the private sector at national, European and international levels.
- PROs (including universities) need to manage and exploit more effectively the knowledge and Intellectual Property resulting from their research

Response to challenges:

- Commission Recommendation and Code of Practice was adopted in April 2008 (adopted by Council). Consists of:
  - Key principles for improving national Intellectual Property (IP) and knowledge transfer policies.
  - Guidance for PROs to set up institutional policies and knowledge transfer systems.

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Knowledge transfer and IP management

Next steps:

- Member States and Commission: **CREST group** to monitor and evaluate the take-up and impact of the Recommendation; exchange best practices; develop guidelines.
- Stakeholders and Commission: **"Knowledge transfer forum"** to discuss implementation of the Code of Practice, exchange best practices, and work on issues of common interest (e.g. international aspects, model contracts).
- Member States and Stakeholder events to discuss **national implementation** of Recommendation and Code of Practice, actions to develop national policies and guidelines.
- Stakeholder events to **disseminate Code of Practice**
- Commission will monitor progress and report in 2010, based on indicators and national reports.

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World-class research infrastructures

- Essential for Europe's researchers to stay at the forefront of research development
- Key component of Europe's competitiveness in both basic and applied research

Key Challenges:

- To overcome fragmentation in Europe in the field of Research Infrastructures
- To improve the efficiency of services and access to European Research Infrastructures
- To cope with their increasing cost and complexity
- To further develop and better exploit the potential of e-infrastructures

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World-class research infrastructures

Response to challenges:

- Stronger integration of existing Research Infrastructures
- ESFRI roadmap for new Infrastructures (updated on December 9, 2008)
- A new Community legal framework, to ease the setting up of new European Research Infrastructures (ERIC, July 2008)

Next steps:

- Implement the ESFRI roadmap (national support)
- Continue developing a Research Infrastructures policy at EU level
- Clear up the issue of the status of ERIC as an international organisation
- ERIC on the agenda of the May Competitiveness Council

Joint Programming in Research

Key Challenges :

- Science and Technology must **contribute** to solving major societal challenges
- Compartmentalisation of public research funding in the EU is inefficient and leads to low impact and benefits

Response to challenges :

- Commission Communication on Joint Programming in research (July 2008), Council Conclusions adopted December 2008
- Member States engaging
  - **Voluntary** and on the basis of **variable geometry**
  - …based on a **common vision** on how to address **major societal challenges**
  - …in the definition, development and implementation of **common strategic research agendas**

Joint Programming in Research

… is a concept and process (not an instrument!) which

- Recognises the importance of existing activities and initiatives;
- Recognises the increasing need for a more strategic and systematic approach;
- Calls for the implementation of a Member States-led process to step up their R&D cooperation;
- Fully recognises the competence of member States and regions over the choice of R&D policies/instruments and the related allocation of resources

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Joint Programming in Research

Criteria to identify Joint Programming themes

- Effective commitment of Member States;
- The theme is focussed and addresses a European/global challenge;
- Clear and realistic objectives can be set;
- Clear added value to existing situation in research financing;
- Relevant stakeholders have been consulted and involved;
- Potential of generating benefits for European citizens/ - competitiveness, and of increasing efficiency and impact of public R&D financing by involving the key public initiatives in the area.

Joint Programming in Research

General Timetable

PHASE 1

- **13/2, 15/4, 23/6/09** — Meetings of Joint Programming Group
- **Throughout 2009** — Consultation of Stakeholders by Member States, proposals to GPC
- **End 2009- 2010** — Identification of Joint Programming themes by the group

Commission prepares proposal for Council Recommendation on the basis of themes identified by the Joint Programming Group

PHASE 2

- **2010** — Council adopts Recommendation, launching the selected Initiatives

Setting up of management structures, development of visions, drafting of the Strategic Research Agendas, pooling the resources, analysis of the potential of existing instruments or the need for new ones. Commission supports as deemed necessary.

- **… by end 2010** — Implementation. Launch of first joint activities, first report to Council

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Opening of ERA to the world

Key Challenges:

- Globalisation and global challenges (e.g. climate change, energy security)
- The need to avoid duplication of activities between the Member States and the European Community with third country partners
- Rise of "non-traditional" research partner countries and research locations ("new global S&T players")
- Facilitation of knowledge transfer at global level
- The need to ensure equitable and fair access to IP generated in international R&D collaborations

Opening of ERA to the world

COM "*A Strategic European Framework for International S&T Cooperation*" (endorsed by Council 2/12/08)

- a long term partnership between the Member States and the European Community
- calls for a more coordinated approach between Member States and the European Community activities

Next steps:

Member States and the European Commission to collaborate within a **Strategic Forum for International Cooperation (SFIC)** to identify common priorities which could lead to coordinated or joint initiatives and positions vis-à-vis third countries and international fora.

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Research institutions

- Excellent research institutions, including universities: key players in the knowledge-based economy development, at the heart of the knowledge triangle
- No separate ERA initiative, but elements firmly incorporated in the initiatives, e.g. on researchers and on knowledge transfer
- Delivery on COM “modernisation agenda for universities: education, research and innovation”: research excellence, governance, funding, partnerships with business, knowledge exchange, networking,…
- Largely in hands of Member States and research instititutions themselves; European level and national actions politically endorsed by the November 2007 Council resolution on the modernisation of universities for Europe’s competitiveness

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Beyond the five initiatives

- ERA goes beyond current initiatives
- Need to ensure that other initiatives, instruments and policies contribute to realising ERA
- Realising ERA through the research framework programme:
  - Strengthens excellence of EU research and attracts talents through the ERC
  - Supports mobility of researchers through Marie-Curie fellowships
  - Supports development and planning of European Infrastructures
  - Encourages “open innovation” and collaboration between academia and industry through collaborative research
  - Supports strategic cooperation to address more effectively technological and societal challenges: Joint Technology Initiatives; SET plan (Joint Programming, Joint research Initiatives ?)
  - Increased international cooperation

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Beyond the five initiatives

- Other current initiatives contributing to advancement of the ERA:
  - European Strategic Energy Technology Plan (SET)
  - Maritime research strategy
  - European Institute of Innovation and Technology (EIT)
  - European Technology Platforms (ETP)
- Need to strengthen synergies between ERA initiatives, FP7, Competitiveness and Innovation Programme (CIP) and Structural Funds
- Coherence and complementarity with education and innovation policies
- ALL stakeholders need to be actively engaged in bringing about and shaping ERA and in identifying challenges and driving new initiatives

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THANK YOU

FOR YOUR ATTENTION

http://ec.europa.eu/research/era