

Joint Programming Initiatives:

an overview of the process toward the coordination of national research programmes

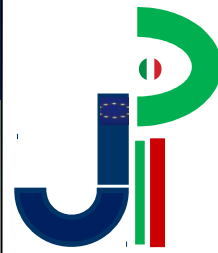


Pier Francesco Moretti

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WHY a JPI?



**Responding to societal and policy needs
(EU 2020/Innovation Union...)
Grand Challenges and Innovation**



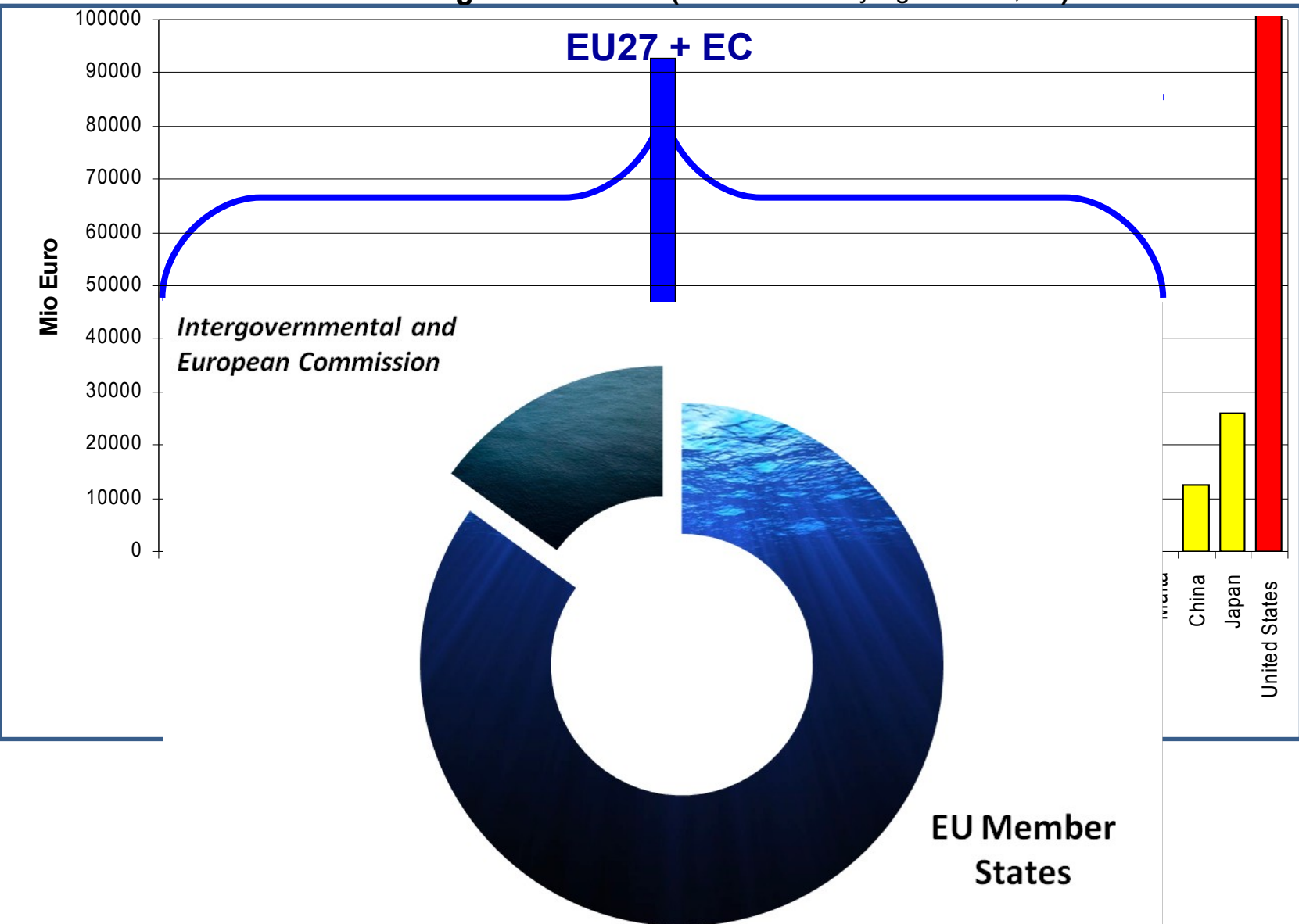
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**JPI is a long process..a leg to build the ERA towards providing
knowledge-based solutions to Grand Challenges**

Most of the funds are in national budgets...mainly in-kind!

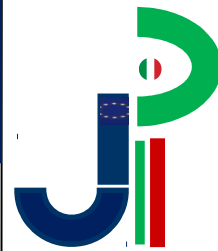
A compartmentalised ERA

Public Funding for Research (Source : ERA Key Figures 2007, EC)



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The first steps forward coordinating national research programmes



Born in 1971, involves 36 countries.

COST does not fund research projects themselves.

A platform for the scientific community to cooperate on particular projects (named COST actions). It is in some sense “glue money” (conferences, short-term mobility, training and dissemination activities) to facilitate the cooperation between already funded researchers

-  **scientifically driven, bottom-up, variable geometry platform**
-  **for coordinating national projects in pre-competitive research.**



Born in 1985, involves 39 members.

An inter-governmental initiative to generate and support R&D market-oriented projects, developing generic technologies of key importance for European competitiveness, that is, the science-to-market aspect.

-  **industry driven, bottom-up, variable geometry platform**
-  **for coordinating national projects in competitive research.**



ERANET

started in FP6, more than 100 consortia from 2002 with approx. > than 350 M€ contribution from EC.

EC “reports” >1.4 G€ “coordinated” funds from Member States, but the suspect is that they could be “labeled” funds. From public info on NET-WATCH website only few consortia seem to have funded multi-millionaire calls. Totally: > 200 calls (requested as obligatory deliverables in the framework conditions of the CSA!).

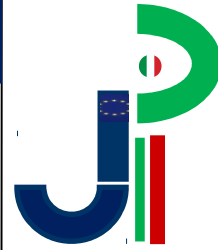
EC reports the positive impact of ERANETs on ERA, national programmes and their collaboration but a limited success in creating multiannual joint programmes with critical mass

In summary:

- **short term projects,**
- **enlarged eligibility,**
- **mainly limited to calls,**
- **difficulties in common/virtual pot with some Member States.**



crucial for networking and mapping



Coordinating national research programmes (2/2)

Art. 185 TFEU (The TREATY on the FUNCTIONING of the EUROPEAN UNION, ex art. 169 TEU): participation of EU in research and development programmes undertaken by several Member States

Interim Evaluation AAL and Eurostars (December 2010)

- Art. 185 creates substantial leverage effect and European added value by integrating national programmes and pooling resources.
- Both initiatives as well as EMRP clearly demonstrate the functioning of a partly virtual common pot.
- Operational arrangements constantly improving, very cost efficient instrument from the Commission point of view.

FP7: 4 initiatives, 441 projects funded at the moment.

AAL-Ambient Assisted Living (ICT solutions for ageing). 20 MS + 3 AC.

Total volume €600 Million with EU contribution

Eurostars-supporting R&D in SMEs: 27 MS + 6 AC.

Total volume €400 Million with **25%** EU contribution

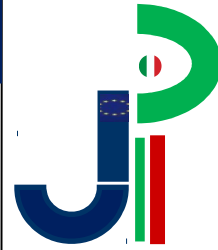
EMRP- European Metrology Research Programme. 19 MS + 3 AC.

Total volume €65 Million with **33%** EU contribution.

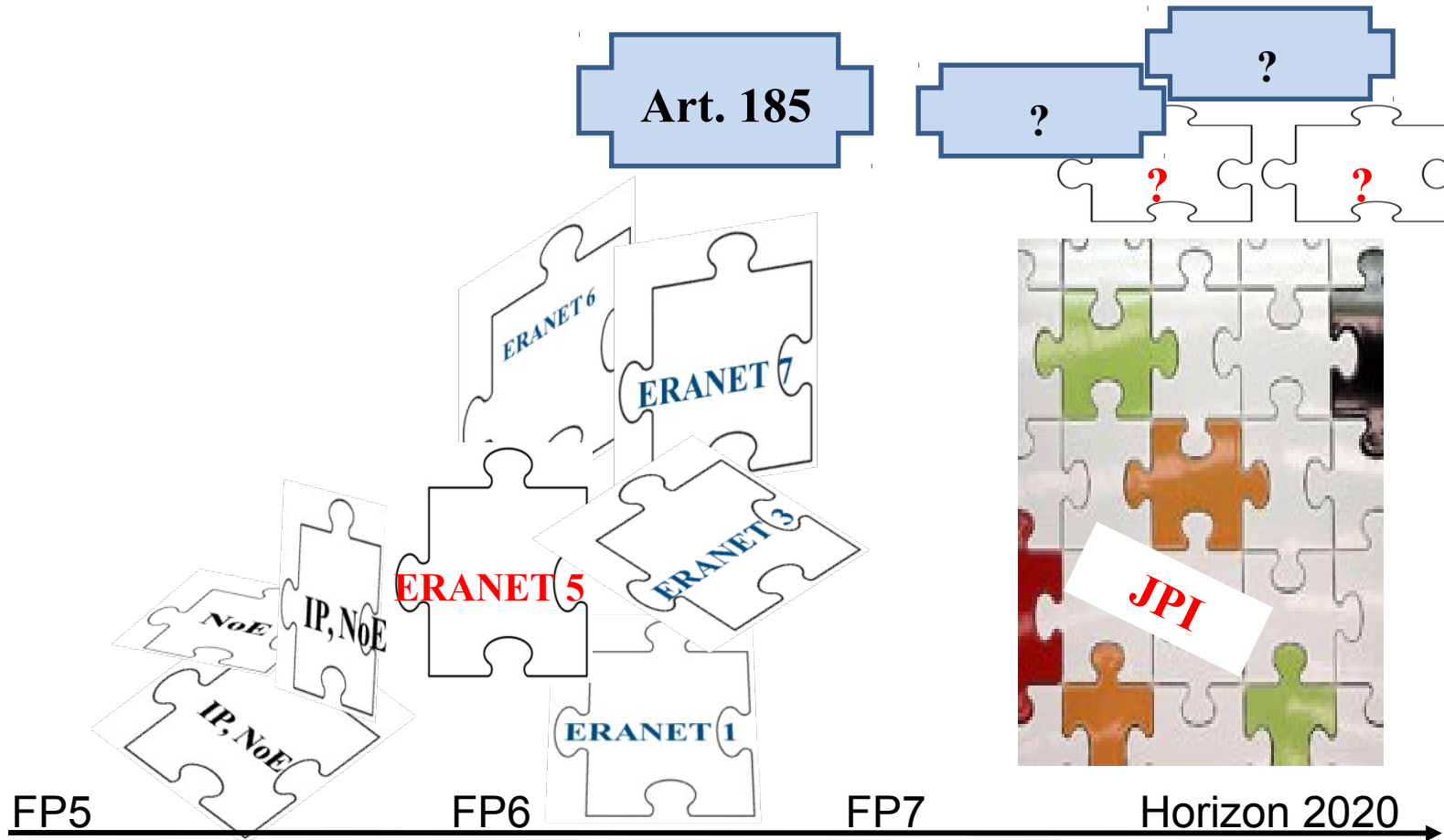
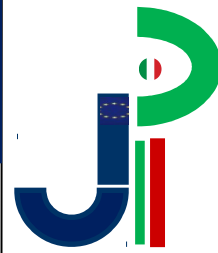
BONUS-Baltic Sea Research. 8 MS + 1 AC.

Total volume €100 Million with **50%** EU contribution.

**Decision of the European Parliament +
Communication of the Commission +
Legal status suggested (flexible)**

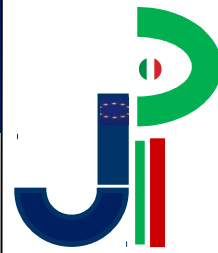


so...step by step, forward coordinating national research programmes



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How a JPI is born



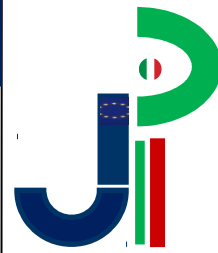
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Identifying Grand Challenges for support demands strict criteria, as resources will confine them to a **small number**. The core criteria are: relevance demonstrated by contribution to **European-added value** through transnationality, subsidiarity and the need for a minimum critical effort; a **research dimension** to ensure the **buy-in** of the research community and the potential to induce improvements in efficiency and effectiveness; **feasibility** as an economic or social investment in terms of research and industrial capability and **a viable implementation path**.

Challenging Europe's Research: Rationales for the European Research Area (ERA) / report of the ERA expert group 2008:
climate change, food, energy, security, ageing society

- **March 2008:** European Council called on the Commission and Member States to explore the potential of Joint Programming.
- **July 2009:** Pilot JPI Neurodegenerative Diseases
- **April 2010:** Launch first wave JPIs on Agriculture, Food security, Cultural Heritage, A healthy diet for a healthy life:
- **May 2010:** Second wave of 6 JPI's
- **November 2010:** Council welcomed guidelines for Framework Conditions on Joint Programming
- **2011:** Council launched second wave of 6 JPIs

What is the added value of a JPI?



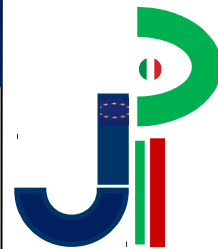
JPI is a process:

with different typologies of actions (fresh money/calls, collaborative projects, personnel mobility, data/infrastructures sharing etc.), different instruments (including ERANET, Art. 185, CSA etc.)....:

ADDED VALUES

- Long term perspective & capacity building
- High-level commitment
- Different typologies of actions
- Variable geometry (*“menu a la carte”*)
- Stakeholders participation (*multi-sectorial*)
- Research to policy mechanism
- Common strategic agenda

IMPORTANT : JPIs are similar but different.

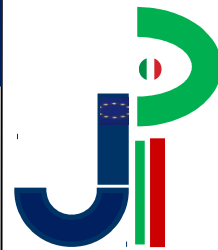


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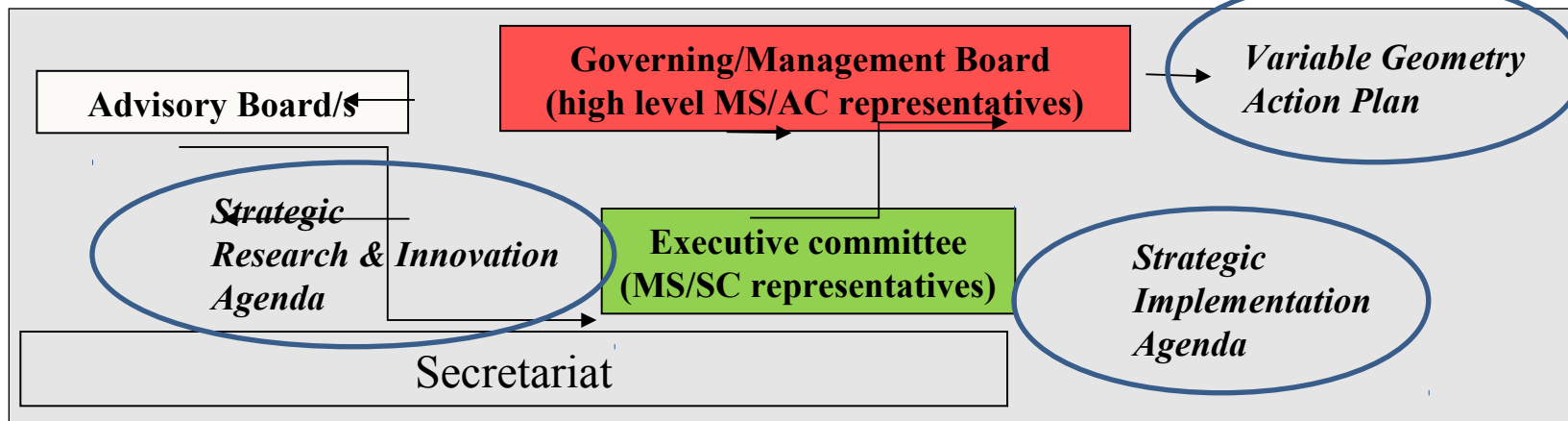
**Experiences/communities,
policies,
investments/dimension,
governance,
complexity,
...**

Name	MS+AC Participants+observers (excluding EC)	
Neurodegenerative Diseases/Alzheimer's (JPND)	26+Canada	From web on march 2013
Food Security, Agriculture & Climate Change (FACCE)	21	
Cultural Heritage & Global Change (CH)	18+8	
A Healthy Diet for a Healthy Life (DIET)	21	
2nd WAVE: assessed as mature in spring 2011		
Urban Europe (URBAN)	13+2	
Connecting Climate Knowledge for Europe (CLIMATE)	13+2	
More Years, Better Lives (AGEING)	13	
Antimicrobial Resistance (ANTIMICRO)	18	
Water Challenges for a Changing World (WATER)	18+5	
Healthy & Productive Seas and Oceans (OCEANS)	18	

JPI : examples of governance



Towards the implementation on a variable geometry



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Involvement of stakeholders vs Strategic Research Agenda:

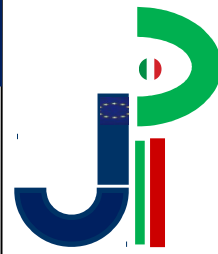
Separate boards for scientific community and stakeholders:

JPND, DIET, CH, ANTIMICRO, URBAN, AGEING, WATER, FACCE

Unique advisory board (scientific community + stakeholders):

CLIMATE, OCEANS

JPI vs H2020: some worries, some confusion...



Can some calls, with some tenths of millions €, solve the Grand Challenges?

Absolutely not. They can **help** in a strategic agenda of streamlined and in-tune actions.

*If “**most** of the Member States” agree on some “not so expensive” projects to be funded? If “**most** of the Member States” agree on some projects to be funded?*

The Framework Programme (real common pot) should take care.

If there is an excellent team in my country but my government did not commit a JPI...? If I develop top-science but I have no national funding capacity?

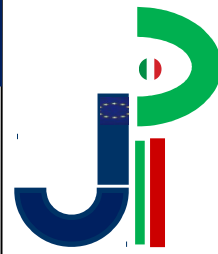
Any EU country should/could sit at the table.

The variable geometry permits to adopt actions of different typologies.

Will/should the Strategic Research Agendas provided by JPIs influence the Work Programmes (calls) of Horizon 2020?

See slide #19

JPI vs market: some worries, some confusion...



JPIs are between MS, most national research programmes are in public research, as a consequence **JPIs are mostly public research driven.**

Innovation is creating (market) value satisfying user needs, i.e. demand driven. However, JPI & Innovation can be connected (stakeholders participation, goals)

Smarter use of public budgets can:

- help find solutions to the grand challenges facing Europe
- stimulate R&D&I activities in both science and business, and
- tap into the creativity and flexibility of innovative SMEs

Pre commercial procurement can be a method to integrate innovation in JP, in those cases that:

- MS have a similar demand, i.e. a common societal challenge
- MS have procurement budget to partly solve this challenge

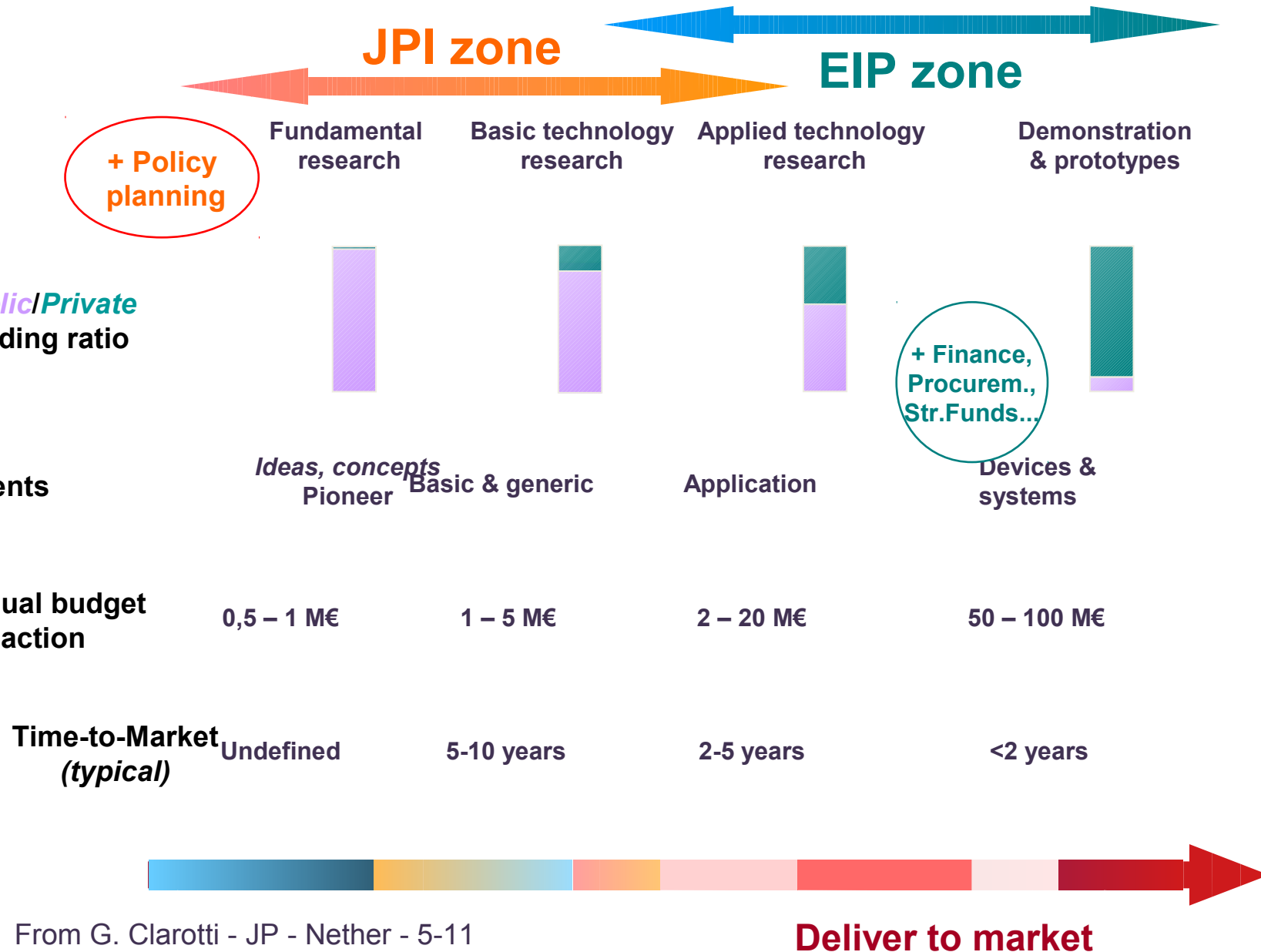
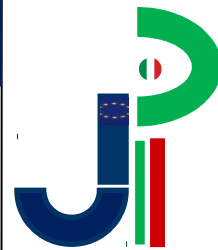
A common European approach will lead to:

- Lower costs
- Less fragmentation

Stimulate **technology transfer**

- Involve private partners in JP, i.e. build public private partnerships
- Stimulate demonstration project and prototyping in JP
- Proof of concept in JP
- Besides excellence, focus more on impact in evaluation criteria
- Involve businesses in peer review

JPI vs market: different roles...common strategy



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From G. Clarotti - JP - Nether - 5-11
Adapted from B. Bigot - CEA

JPI: how?

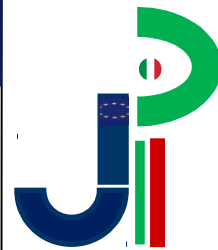
A durable Economy-Science-Governance interface

Drivers and Target Groups + stakeholders



Create trust, sit at the table, read the menu...just take a decision?

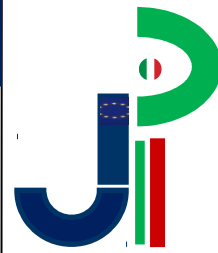
The correct approach at the table



**JPI is a process.
NOT slicing the cake,
BUT cooking!**



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Common Challenges:

- Population
- Food security
- Resources
- Energy
- Producing more with less
- Urban

Cooperation

between member states, multi-sectorial and multi-disciplinary approach

Participation of all the stakeholders, informed choices, flexible actions, “sustainable development”if changed in “sustainability”

(from Edwin Zaccai at RESCUE Stakeholder Conference 16 May 2011, Brussels)...

The **Brundtland Commission**, formally the World Commission on Environment and Development (WCED), known by the name of its Chair Gro Harlem Brundtland, was convened by the United Nations in 1983.

In **1987** the WCED published the Bruntland Report.....



Horizon 2020 (art. 183)
EU actions



Joint Programming
Initiatives
Possible no EU actions



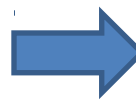
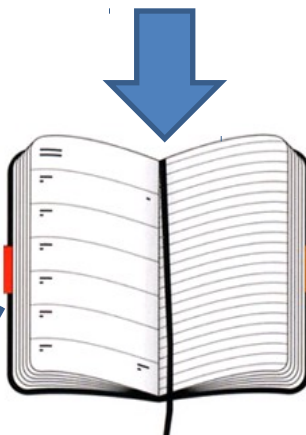
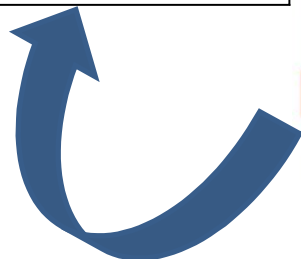
Structural Funds
for R&D and innovation



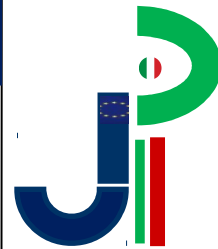
NOT all JPI have 1=1 correspondence...



SOCIETAL
CHALLENGES



Art. 185
(COM:
Partnering in res
& innovation)



Council Regulation n.572/2011

P2P 3.2.4 Where the areas being addressed by JPI fit with FP priorities, their instruments may be used to support JPIs where appropriate. In general, JPI joint actions will be evaluated on a case-by-case basis to assess whether the EU value-added justifies funding via the ERA-NET scheme or co-funding via thematic research calls.

European Commission COM (2011) 808

Where the challenge addressed by a JPI is in line with the priorities of Horizon 2020, ERA-NET or co-funding may be used to provide further support. New Article 185 initiatives will only be considered provided there is a clear commitment from the Member States and when a JPI has demonstrated its capacity for significant collaboration and the scale and scope needed to support full integration of national programmes.

European Commission COM (2011) 809

Art 12: External advice and societal engagement. Full account shall also be taken of relevant aspects of the research and innovation agendas established by European Technology Platforms, Joint Programming Initiatives and European Innovation Partnerships. Art 17: Complementarity with other Union funding programmes. Art 20: Public-public partnerships. Particular attention shall be paid to joint programming initiatives between Member States.

European Commission COM (2011) 810

The work programmes shall take account of the state of science, technology and, innovation at national, Union and international level and of relevant policy, market and societal developments. They shall contain information on coordination with research and innovation activities carried out by Member States, including in areas where there are joint programming initiatives. They shall be updated where appropriate.

2012 Presidency compromise proposal to the Proposal for a Regulation of the European Parliament and the Council establishing Horizon 2020 - The Framework Programme for Research and Innovation (2014-2020).

Article 12a Synergies with national programmes and joint programming.

Horizon 2020 shall be implemented in a way that helps build synergies and complementarities between national and European research and innovation programmes, in particular in areas where coordination efforts are made through the Joint Programming Initiatives.

Union support to Joint Programming Initiatives may be considered through the instruments referred to in Article 20, subject to the conditions and criteria laid down for such instruments.

Art 20 Public-public partnerships

Public-public partnerships may be supported either within, or across, the priorities set out in Article 5(2), in particular through:

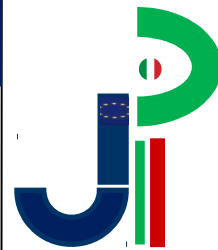
- an ERA-NET instrument using grants to support public-public partnerships in their preparation, establishment of networking structures, design, implementation and coordination of joint activities as well as Union topping up of individual joint calls and of actions of a transnational nature;
- Union participation in programmes undertaken by several Member States in accordance with Article 185 TFEU.

For the purposes of point (a), top-up funding shall be conditional on a prior indicative financial commitments in cash or in kind of the participating entities to the joint calls and actions. The ERA-NET instrument may include, where possible, an objective to harmonise rules and implementation modalities of the joint calls and actions. It may also be used in order to prepare for an initiative pursuant to Article 185 TFEU.

For the purposes of point (b) such initiatives shall only be proposed in cases where there is a need for a dedicated implementation structure and where there is a high level of commitment of the participating countries to integration at scientific, management and financial levels. In addition, proposals for initiatives referred to in point (b) shall be identified on the basis of all of the following criteria:

- a clear definition of the objective to be pursued and its relevance to the objectives of Horizon 2020 and broader Union policy objectives;
- indicative financial commitments of the participating countries, in cash or in kind including prior commitments to align national and/or regional investments for transnational research and innovation and, where appropriate, to pool resources;

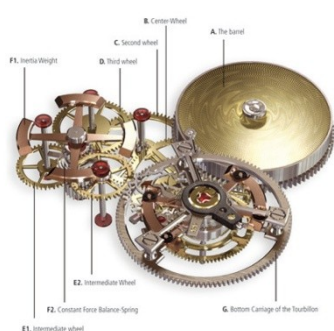
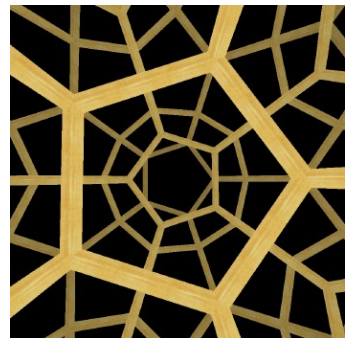
Visible cons/difficulties



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Complex process (delays, management costs):
interdisciplinary, cross-sectorial, inter-departmental collaboration.

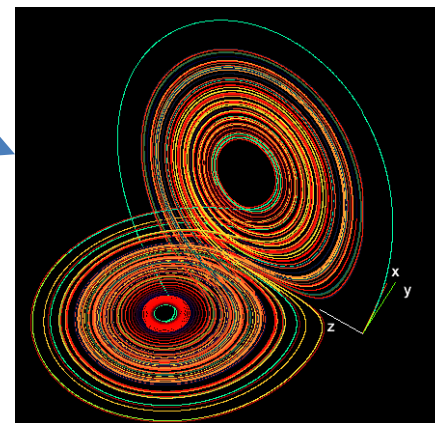
Complex systems: understanding the process is crucial!
(action-impact correlation, flexibility & adaptability)



Dynamic complex systems are inherently chaotic and unstable, but, they usually evolve into one of a number of possible steady states.

These steady states are called "attractor basins".

It is by causing dynamic complex systems to switch between attractor basins that control can be exercised.



Any system is linear at short timescales... how short?

the evolution timescales of the system can be shorter than those of the actions!