FLAG-ERA JTC 2016 Networking Event
WELCOME

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FLAG-ERA WP6 Leader
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Supported by the

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Agenda

Time	Dur.	Session	Speaker	Room
09:30	0h30	Opening of on-site Registration		Registration Hall
10:00		Beginning of the Networking Event		
10:00	1h15	**Introduction by the funding organisations** • Presentation of FLAG-ERA • Presentation of the JTC 2016 • Q&A	MIUR, ANR, FCT	Sala della Comunicazione
11:15	0h15	Break		Salone Ovale
11:30	1h30	**Breakout session per topic** • Introduction of the participants • Exchange of views on the topic • Ideas for potential projects	All	• Sala della Comunicazione • Salone dei Ministri • Salone CNPI • Sala Ferro di Cavallo
13:00	1h00	Lunch		Salone Ovale
14:00	1h15	**Breakout session per topic (cont'd)** • Ideas for potential projects (cont'd) • Networking among participants in sub-groups	All	• Sala della Comunicazione • Salone dei Ministri • Salone CNPI • Sala Ferro di Cavallo
14:15	0h15	Break		Salone Ovale
15:30	1h00	**General discussion** • Short report from the 4 breakout groups • Q&A for remaining questions • Summary of next steps	MIUR, FCT	Sala della Comunicazione
16:30		End of networking event		

FLAG-ERA:
The Flagship ERA-NET

JTC 2016 Networking Event
December 9th, 2015
MIUR, Rome, Italy

Edouard Geoffrois, FLAG-ERA Coordinator
French National Research Agency (ANR)
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Outline of the presentation

- What is a FET Flagship? What is FLAG-ERA?
  - Overarching goal: Combining efforts from multiple sources in Europe in a seamless way
- The FLAG-ERA consortium
- FLAG-ERA goals and activities
- National and regional funding for the Flagships
  - Existing calls & Flagship association mechanisms
  - Dedicated calls (with association mechanisms embedded)
    - The FLAG-ERA Joint Transnational Call (JTC) 2015
    - The foreseen Joint Transnational Call (JTC) 2017
- Support to the 4 Pilots: JTC 2016
- Perspectives

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What is a FET Flagship?

- FET Flagships are
  - Visionary, science-driven, large-scale research initiatives addressing grand scientific and technological challenges
  - A new partnering model for long-term co-operative research in the European Research Area, based on the combination of a large Core Project playing a leading role for the whole duration of the initiative and a set of Partnering Projects

`http://ec.europa.eu/digital-agenda/en/fet-flagships`

`http://www.graphene-flagship.eu`   `http://www.humanbrainproject.eu`

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Timeline

SCIENCE WORLD REPORT

Brain Simulation and Graphene Research Receive Billion Euro Each

Operational phase
4/16 – 3/23

Start of:
- HBP,
- GRAPHENE
- FLAG-ERA
10/13

Flagship selection
6 → 2
end 2012

Preparatory Phase
05/11 - 04/12

Stimulating ideas & structuring the scientific community
2009 - 2010

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# What is FLAG-ERA?

- FLAG-ERA is the FET Flagship supporting ERA-NET
  - A network of National and Regional Funding Organisations (NRFOs) in Europe and beyond
  - A coordination and support action supported by the European Commission (EC)

- Main goals
  - Set up, together with the two Flagship Core Projects and the EC, the mechanisms for using the existing national, regional and transnational calls in the framework of the Flagships
  - Launch dedicated calls such as the FLAG-ERA JTC 2015

http://www.flagera.eu

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Combining efforts from multiple sources of funding in a seamless way
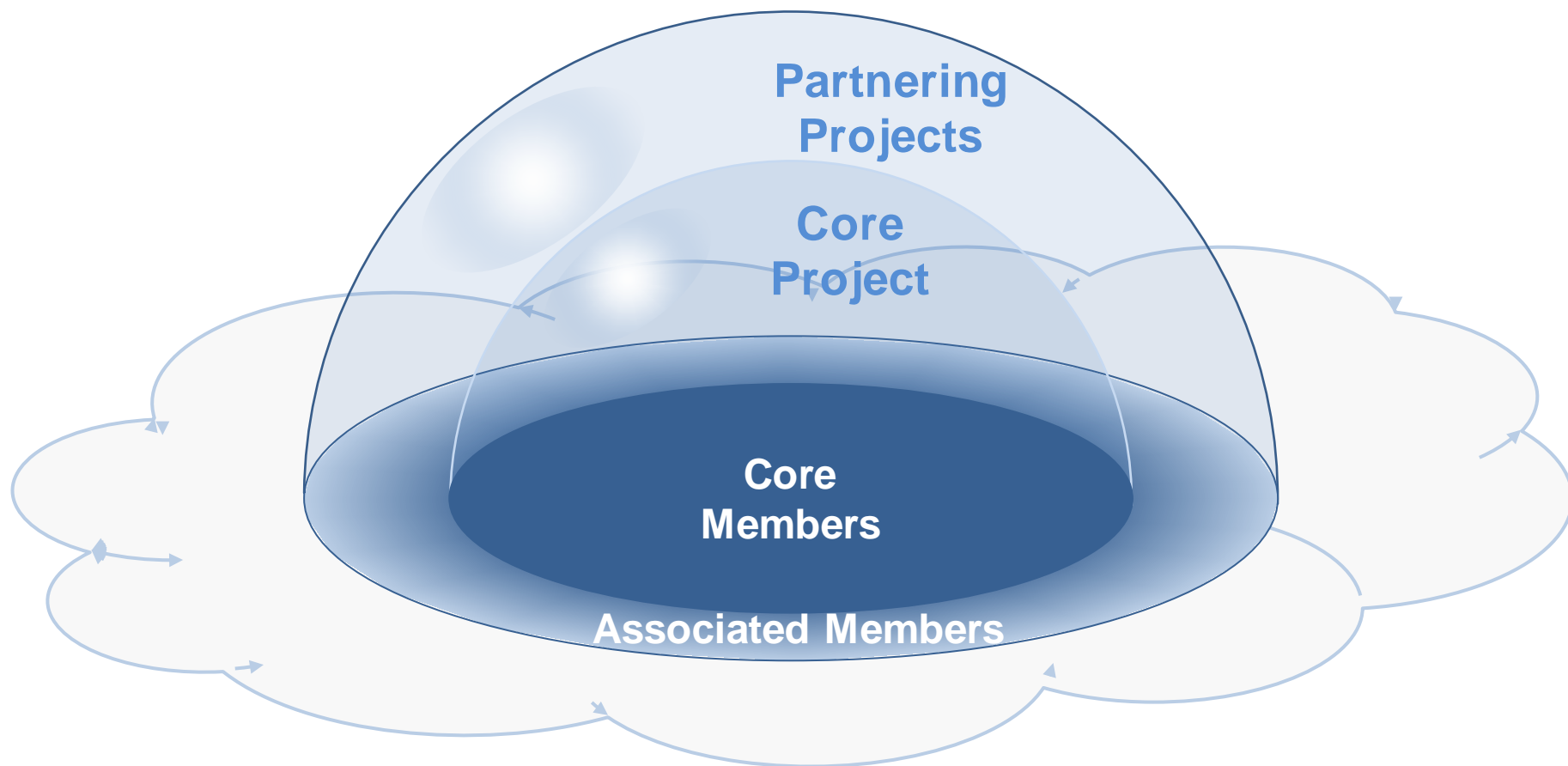
FLAG-ERA consortium

22 founding members from 17 countries

+ associated members

Virtually all European countries involved

| Two levels: | • Strategic (ministries, national policy making) |
| | • Operational (agencies, call implementation) |

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FLAG-ERA goals and activities

- Tightly connect NRFOs with each core project through a small liaison group, and regular workshops involving all stakeholders
- Set up mechanisms for integration of nationally or regionally funded research into the Flagship work plans
- Maintain an inventory of funding and scientific landscapes
- Analyse overlaps & gaps to adapt national/regional research agendas
- Launch dedicated transnational initiatives, for instance joint calls for allowing researchers from several countries to join simultaneously
- Network with potential new participants

For the 2 Flagships, while also offering support to the 4 non selected Pilots

- Foster international cooperation beyond Europe
- Set up mechanisms for the whole Flagship duration (10 years)

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Funding through existing calls & the Flagship association mechanisms

- Total funding available through existing national and regional calls in the domain of the Flagships is estimated to be of about the same size as the Core Project funding
- Flagship members and potential new members can apply to these calls
  - while explaining how the proposed work complements the Flagship current work plan and the added value of integrating the proposed work in the Flagship work plan
- Accepted projects can then be formally associated to the Flagship
  - **www.flagera.eu/flagship-association-mechanisms**
  - **www.graphene-flagship.eu/**
  - **www.humanbrainproject.eu/**

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Dedicated Calls: FLAG-ERA JTC 2015

- **Joint call for transnational research proposals in synergy with the two FET Flagships**
  - **Graphene Flagship**
  - **Human Brain Project**
- Funding both Core Project members and new partners (expected to become Associated Members of the Flagship)
- 14 participating countries
- Indicative budget: 18,5 M€
- Submission deadline: January 27th, 2015
- Publication of results: September 2015

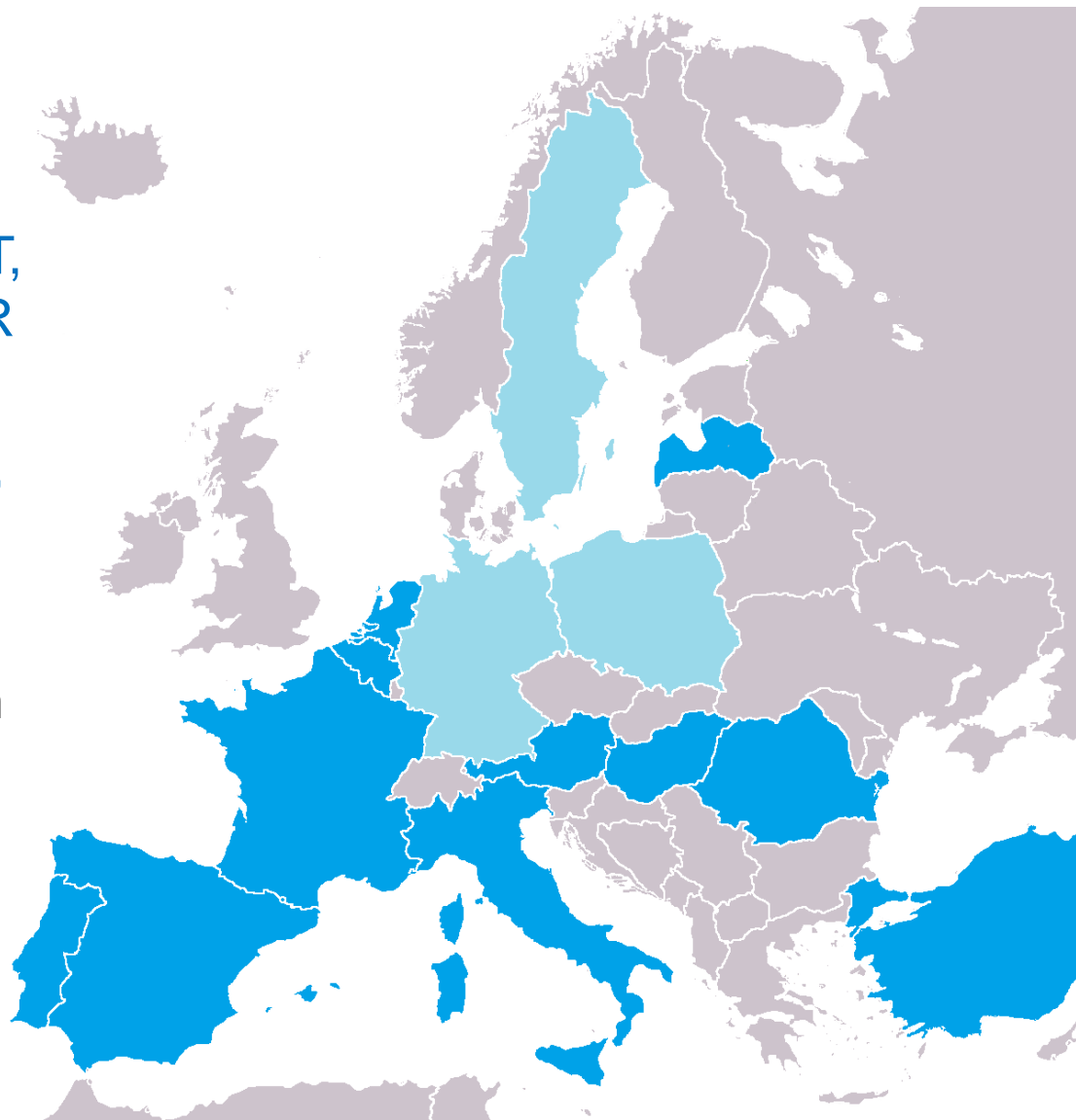FLAG-ERA

JTC 2015 participating countries

Graphene:

AT, BE, DE, ES, FR, HU, IT, LV, NL, PL, PT, RO, SE, TR

HBP:

AT, BE, ES, FR, HU, IT, LV, NL, PT, RO, TR

Researchers from other countries can participate in a project if they secure their own funding

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JTC 2015 outcome main figures

- 19 projects recommended for funding out of 108 submissions (19/108 = 18% selection rate)
  - Graphene: 13/78 = 17%
  - HBP: 6/30=20%
- 13.5 M€ total funding (13.5/18.5 = 73% consumption rate)
  - Graphene: 9.9/11.6 = 86%
  - HBP: 3.6/6.9 = 52%
- 12 countries involved out of 14 participating to the call
  - Graphene: 12/14
  - HBP: 6/11
- 5 other countries involved in project consortia
  - Graphene: 3
  - HBP: 2

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Comparison of national calls & JTC

National and regional calls	JTC 2015
Support both Core Projects members and new (associated) members	
Synergy with the Flagship can be a plus for the evaluation	Strong synergy with the Flagship is favoured (synergy is an evaluation criterion)
No constraint	At most half of partners can be led by Flagship PIs
Funding requested in 1 country	Funding requested in 2+ countries
All countries have calls	Only some countries participate
Larger budgets overall	Smaller budgets
Compete with all proposals in the domain	Compete only with proposals fitting the JTC constraints

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JTC 2017

- In the framework of FLAG-ERA II
  - ERA-NET Cofund
    - 8 M€ in WP2016-2017
    - To be submitted to the EC by March 1st, 2016
- Main expected changes compared to JTC 2015
  - Some simplifications from the lessons learned
    - To be discussed with all stakeholders
  - More countries, larger call
    - Target 20+ M€ (~50% increase)
  - Going toward innovation
    - Two categories for each topic, for research and for innovation projects
    - Two sets of funding organisations and budgets
    - Innovation oriented funding organisations are most welcome

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JTC 2016 on the topics of the 4 Pilots

- To build on the efforts of the 4 non-selected Flagship Pilots
  - Cooperative Robots (building on RoboCom)
  - Digital Medicine for Cancer (building on ITFoM)
  - High-Efficiency Sensor Networks (building on Gardian Angels)
  - ICT for Social Sciences (building on FuturICT)
- Main goal: For each of the 4 topics, support one project
  - Able to federate other efforts (core project model)
  - Highly transformative in the way research in the topic is done
- Most information on the call is published on the call web page (http://www.flagera.eu/?q=FLAG-ERA-call-2016)
  - Final call text expected to be published early January 2016
  - Submission deadline expected to be in March 2016

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Thank you for your attention

more information on

www.flagera.eu

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Joint Transnational Call 2016
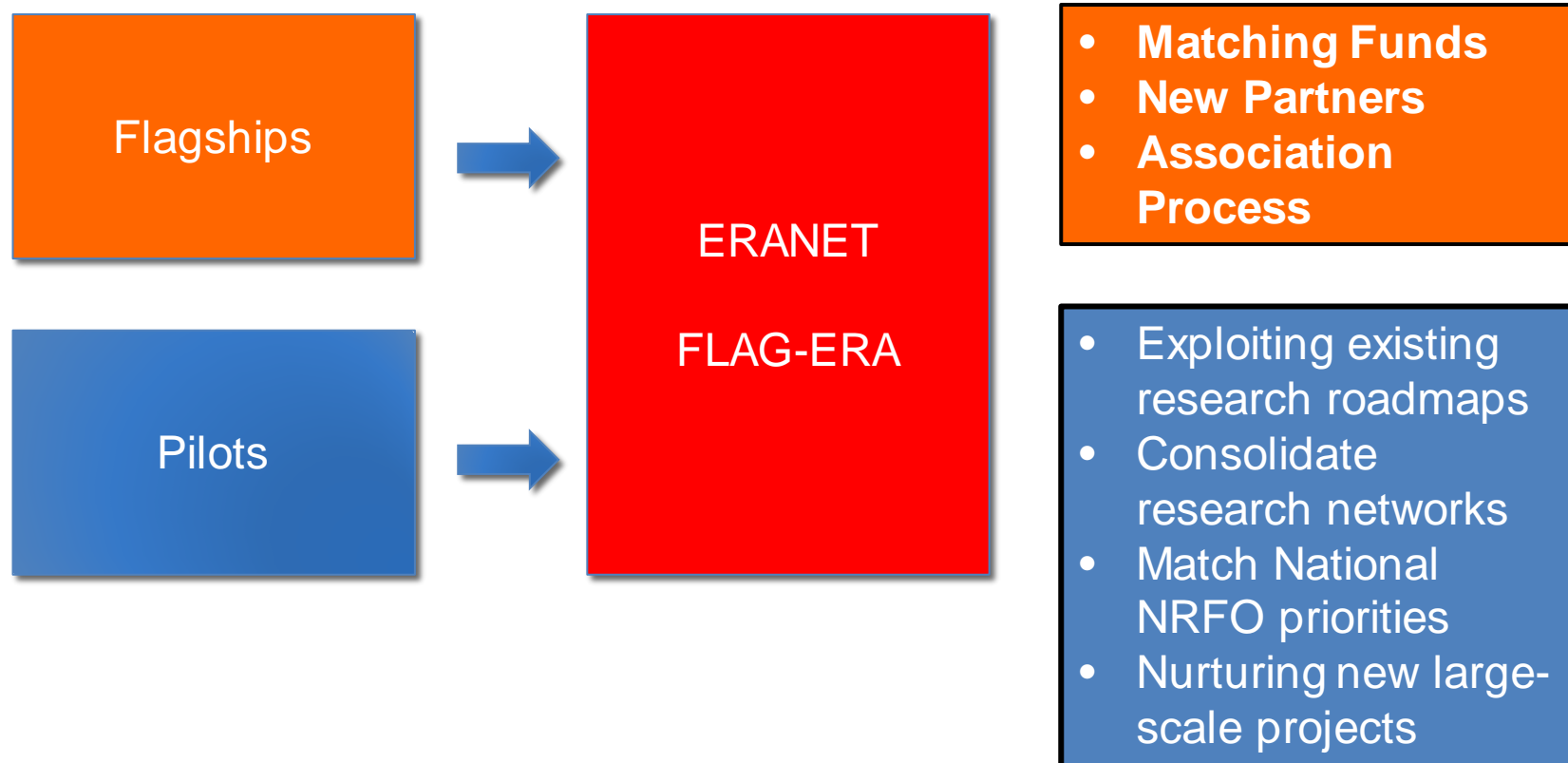
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WP6 Support to non-selected Pilots
Motivation and Strategy

Flagships → **ERANET FLAG-ERA**

Pilots → **ERANET FLAG-ERA**

- **Matching Funds**
- **New Partners**
- **Association Process**

- Exploiting existing research roadmaps
- Consolidate research networks
- Match National NRFO priorities
- Nurturing new large-scale projects

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Background

- Flagships have introduced a new model for long-term, large-scale initiatives in the European Research Area, based on a unifying vision, a core project serving this vision, and mechanisms to align efforts funded from various sources with this core project and toward this unifying vision.

- Flagships thus bring a large-scale integration of efforts while keeping flexibility through agile alignment mechanisms, and offers new possibilities, for example to harness the power of large-scale data integration or to combine vertical integration along the value chain with horizontal integration across disciplines.

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2014 FLAG-ERA Survey on Pilots Results overview

13 NRFOs out of 16 are interested in financing the 4 Pilots

Pilots	Number of NRFOs interested in supporting the pilots
Robocom	11
Guardian Angels	8
FuturICT	11
ITFoM	11

NOTES:

1) Non-respondent NRFOs are not necessarily not interested. Some of them can join JTC or other initiatives before its launch

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Joint Transnational Call 2016

for Flagship Proof-of-Concept Projects on

ICT for Social Sciences,

High-Efficiency Sensor Networks,

Digital Medicine for Cancer,

and **Cooperative Robots**.

MINISTERO DELL'ISTRUZIONE DELL'UNIVERSITA' E DELLA RICERCA

AGENCE NATIONALE DE LA RECHERCHE

FCT

Fundação para a Ciência e a Tecnologia

MINISTÉRIO DA CIÊNCIA, TECNOLOGIA E ENSINO SUPERIOR

Important note

The content of the following slides is intended to support discussions at the networking event only.

The content of the call web pages is subject to change after the event to take into account the outcome of these discussions.

Only the final description in the call announcement will apply.

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Aims of the Call (1/3)

- **Build on the efforts of the Pilots during the Pilot phase and beyond**, and on the experience gained about the Flagship partnership model;

- **Focus on selected transformative activities with a high potential impact**, in particular through changes of organisation and practices (e.g., by bringing together different disciplines or by developing new methodologies, evaluation metrics, benchmarking protocols, data production and sharing protocols, test platforms, and other tools supporting coordination of efforts and reproducibility of experiments);

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Aims of the Call (2/3)

- **Complement and leverage other relevant initiatives at regional, national, European and international level**, and initiate a collaborative partnership with them;

- Develop a long-lasting coordination and encourage federation of a large cluster of European and international research centres sharing the proposed unifying vision;

- Deliver plans and recommendations to further develop activities and collaborations along the previous lines in order to reach maximum impact.

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Aims of the Call (3/3)

- Since the objective is to foster large scale cooperation at the European level, contrarily to more traditional ERA-NET calls, **the goal is to support one (1) inclusive Flagship proof-of-concept project per topic**.

- Proposals are therefore encouraged to involve partners requesting funding from all funding organisations participating in the topic. Additional partners able to secure their own funding are also welcome to participate in proposals.

- While stemming from the Flagship preparatory actions, this new call is **open to research teams independently of whether they were members of the Pilot consortia or not**.

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Eligibility (1/2)

- FLAG-ERA is a hybrid funding instrument. Proposals are submitted by international consortia with partners from multiple countries and the proposal evaluation and selection are international, but grant agreements for the selected projects are established directly between the consortium partners and their respective funding organisations. Each partner should be eligible for the funding organisation to which it requests funding.

- Applicants are encouraged to involve partners requesting funding from all funding organisations participating in the topic. Consortia can include members who participated in a Pilot as well as members who did not. There can be more than one partner per funding organisation in a proposal. A given partner can participate in several proposals.

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Eligibility (2/2)

- Research groups or private partners performing research who are willing to collaborate and contribute to the proposed project without funding may do so, either as part of a consortium if their contribution is needed for the project, in which case they should show that they have secured the necessary funding and will be requested to sign the project consortium agreement, or as an invited member, in which case they can be simply mentioned in the proposal and possibly provide a letter of intent.

- In any case, the coordinator must be a partner funded by an organisation participating in the call.

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Eligibility of partners

- The eligibility criteria for partners are specified by the chosen funding organisation. Be aware that some funding organisations:
  - require that eligibility of partners is checked with them prior to applying;
  - fund only basic research or only applied and/or innovation-related research or coordination\networking activities.
- It is important to check eligibility rules of each funding agency as specified in the National Annexes to the final version of the JTC2016

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Project duration

- Proposals shall plan for a period of **three years** and according to the individual funding organisations' rules and regulations (Annex II)

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Supporting Funding Organisations

Country/ Region	Funding Organisation	Topic 1 ICTSS	Topic 2 HESN	Topic 3 DMC	Topic 4 CR
Belgium (French-speaking community)	FNRS	Confirmed	Confirmed	Confirmed	Confirmed
Belgium (Flanders)	IWT	Considered	Considered	Considered	Considered
France	ANR	Considered	Considered	Not Considered	Considered
	INCa	Not Considered	Not Considered	Confirmed	Not Considered
Hungary	NKFIH	To be announced	To be announced	To be announced	To be announced
Israel	ISERD	To be announced	To be announced	To be announced	To be announced
Italy	MIUR (grants)	Confirmed	Confirmed	Confirmed	Confirmed
	MIUR (loans)	Considered	Considered	Considered	Considered
Latvia	VIAA	Considered	Considered	Considered	Considered
Romania	UEFISCDI	Considered	Considered	Considered	Considered
Switzerland	SNSF	Confirmed	Confirmed	Not Considered	Confirmed
Turkey	TUBITAK	Confirmed	Confirmed	Confirmed	Confirmed

Budget

A total budget of ~2M€ or more per topic is expected

Topics

The Call covers four topics, each corresponding to the domain of a Pilot:

1. ICT for Social Sciences (ICTSS)
2. High-Efficiency Sensor Networks (HESN)
3. Digital Medicine for Cancer (DMC)
4. Cooperative Robots (CR)

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JTC 2016 Topics

- **Annex I describes the four topics of the JTC 2016**. Each proposal should address one of these topics as well as the following **transversal goals**:

  - Describe the **transformative character of the proposed activities and the expected impact** on the organisation and practices in the domain.

  - Describe how the proposed activities can **attract, leverage or federate other initiatives, programmes and projects at the regional, national, European or international level**.

  - Describe **long-term plans** to further develop research and innovation in the domain beyond the proposed project, and how these plans can be updated at the end of the project by taking into account its outcomes.

- Each topic provides the vision and expected long-term user benefits, the targeted new technologies, and some potential key enablers for the development of these technologies.

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Topic 1 - ICT for Social Sciences (ICTSS)

- **Social science theories should be coupled with a big data approach and machine learning methods** in order to enable citizens, companies, public authorities and policy makers to participate in social, economic and political affairs, to test the social and economic effect of policies, and more generally to anticipate, detect and mitigate or even prevent crises**.**

- A fundamental understanding of the society and more generally of techno-socio-economic systems is needed

- The needed data should be collected, annotated and documented in ways which make them **reliable and easy to share and reuse**. New models and tools for social mining and forecasting should be developed, The predictive power of these models should be quantified on real or realistic data in a reproducible way to ensure their reliability

- **Various platforms** should be developed to involve users, collect and share data, experiment models, and disseminate results

- This requires **new approaches for multi-level, complex, global systems**, by bringing the best knowledge of experts on information and communication systems, data management, machine learning, complex systems and the social sciences together.

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Topic 2 - High-Efficiency Sensor Networks (HESN)

- **The goal is to develop extremely energy-efficient and smart electronic personal companions that will assist humans from infancy to old age**.
- These devices should be private and secure systems, feature sensing beyond human capabilities, and embed computation, and communication. Particular applications include:
  - **Monitoring** the physical / physiological status of individuals in health care, rehabilitation, and sports, with an awareness of the context of activity of these individuals. With a strong focus on prevention and early diagnosis, these devices can help keep healthcare affordable and accessible to all.
  - **Observing** ambient conditions for environmental threats and communicate with each other to expand their information base. In combination with the previous functionality, it becomes possible to correlate a person's physical state with the environmental context.
  - **Perceiving** emotional or affective conditions, and both supporting patients and enhancing the performance of healthy people, such as with smart-drive assistants for improved safety.
- **Highly plurisdisciplinary teams** supporting advances ranging from physics to smart modelling, including algorithmics, protocols and data management, and a co-design approach involving the whole spectrum from practical applications to basic science.

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Topic 3 - Digital Medicine for Cancer (DMC)

- The genomic era has provided powerful tools for a personalised understanding of oncogenesis and other diseases; however, 'omics' data alone cannot directly benefit patients and understanding of disease processes. Systems medicine methodologies that are able to translate these technological leaps into pre-clinical and clinical applications are urgently required.

- A system biology approach with a wide sharing of data and arrangements for ensuring reproducibility of results is needed.

- **Detailed patient-specific computer models and simulations of the complex biological processes involved in cancer should be developed**.

- These models should cover multiple levels spanning molecules, cells, tissues, whole body and populations, and take into account the various genetic and environmental factors. They should have **predictive capacity**, and the reliability of the predictions should themselves be quantified.

- This requires a **tight integration of skills from several disciplines** including medicine, biology, statistics, machine learning and computer science, and dedicated efforts for data collection, curation and sharing and for model validation

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Topic 4 - Cooperative Robots (CR)

- A **new generation of robotic technologies is needed** to sustain welfare in an ageing society, to enhance productivity and safety at work, or to cope more effectively with natural disasters

- A radical rethinking of **robot bodyware** and a **tighter integration of software and hardware** are required.

- This involves new, **bio-inspired materials and structures**. Continuous deformable bodyware is expected to provide robots with enhanced motor capabilities in walking, running, grasping, and other functions, and with the capacities to interact safely, dependably and effectively with humans and the physical environment, and to achieve energy efficiency.

- **Unconventional distributed sensing and actuation systems integrated** into the new bodyware also need to be developed. Experimental data should be widely shared among research teams.

- This requires gathering **highly plurisdisciplinary teams** supporting advances ranging from material science and bio-engineering to machine learning, and a co-design approach involving technology developers, technology users, and dedicated skills to provide the needed transversal infrastructures.

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Towards the JTC 2016

- **Partner Search Tool** will be made available to the applicants on the call web page.
- A **one-stage submission process** applies. One joint proposal document (in English, in PDF format) shall be prepared by the partners of a joint transnational proposal and submitted by the coordinator.
- Proposals must be submitted in electronic format no later than *month\day*, **2016 - 17:00 CET via the electronic submission system.**
- **Proposals are assessed by an independent international Scientific Evaluation Panel (SEP).**
- Based on the outcome of the evaluation, the CSC might invite applicants to a negotiation stage according to the remarks and suggestions of the reviewers before preparing the list of projects recommended for funding (up to one per topic).

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Evaluation criteria

The proposals are evaluated and ranked according to the following **four criteria**, each of these being equally weighted:

1. **Relevance** to the call (5 pts \ threshold 3)
2. **S/T Quality:** Scientific and/or technological excellence with respect to the topics of the call (5 pts \ threshold 3)
3. **Implementation:** Quality and efficiency of the implementation and management (5 pts \ threshold 3)
4. **Impact:** Quality of long-term plans and potential impact through the development, dissemination and exploitation of results

(5 pts \ threshold 3)

Overall threshold: 14\20

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Ideal profile of a winning JTC 2016 proposal

- Exploit the potential of the original pilot initiative (vision, research roadmap, network)
- Excellent quality of the scientific content and implementation work plan for Flagship proof-of-concept research activities
- Provide a solid and convincing Flagship-like approach for federating other ongoing research initiatives and foster coordination and networking of the research community
- Aim at making available new methods, infrastructures, evaluation metrics, benchmarking and other tools for joint research
- Include in the consortium qualified partners from each of the countries directly supporting the JTC 2016
- Leverage a critical mass of additional resources and partners from other EU and non-EU countries

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JTC 2016 Tentative Timeline

January 2015

Publication of the Call

March 2016

Proposal submission deadline

June 2016

Publication of results

September 2016 - January 2017

Funded projects start

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Further information

FLAG-ERA web site:

http://www.flag-era.eu/

JTC 2016 web page:

http://www.flag-era.eu/?q=FLAG-ERA-call-2016

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Break-out session - Room Assignments

Topic	Time	Room	Moderator
ICT for Social Sciences	11:15– 15:15	Sala della Comunicazione	Eunice Ribeiro (FCT)
High-Efficiency Sensor Networks		Salone dei Ministri	Patrick Vonlanthen (EAER)
Digital Medicine for Cancer		Salone CNPI	Edouard Geoffrois (ANR)
Cooperative Robots		Sala Ferro di Cavallo	Eugenio Guglielmelli (MIUR)

Logistics (2nd floor MIUR)
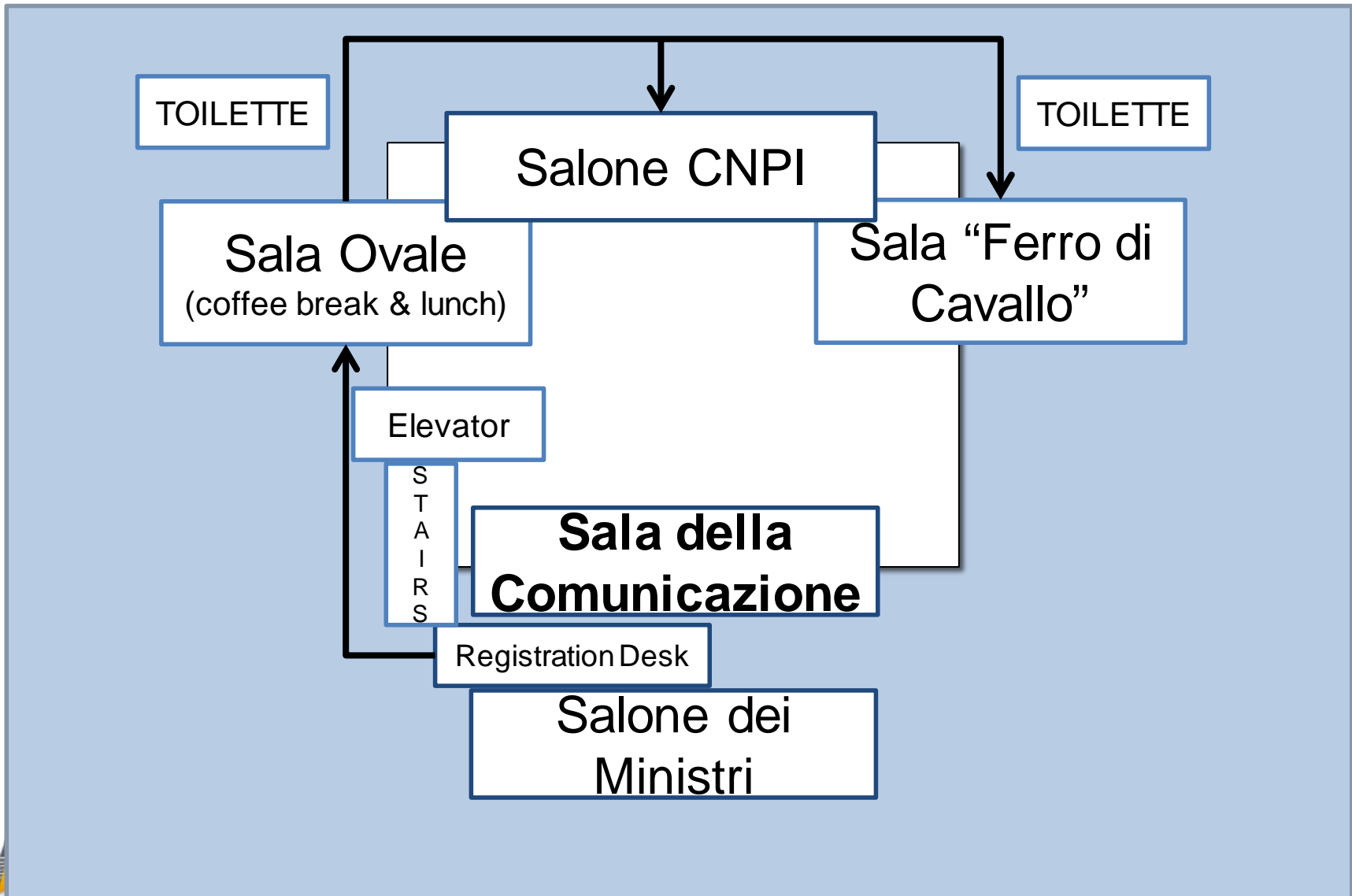
Break-out sessions objectives

- Share the views of researchers on JTC 2016
- Review the topic descriptions and be proactive to propose changes to the Annex I text
- Propose ideas for project proposals
- Start the networking process to build up a network of researchers at European and international level, with a core set of partners located in the countries of the NRFOs supporting JTC 2016

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Break-out Session Agenda – Morning 11:30-13:00

- Introduction of the participants, 20'
  - Presentation of the original vision of the Flagship Pilot

- Exchange of views and review on the topic, 20'

- Ideas for potential project proposals, 10' per idea

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Break-out Session Agenda – Afternoon 14:00-15:15

- Ideas for potential project proposals, 10' per idea (continued, if needed)

- Discussion in subgroups, one per project idea

- Break-out session Wrap-up
  - The moderator will agree with the participants about the outcome of the session to be reported in the plenary session, such as:
    - comments and proposed modifications to the JTC2016 Call objectives, rules, topic descriptions, etc.
    - Number and type of project proposal ideas presented or announced
    - Level of interest raised by project ideas

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Break-out session - Room Assignments

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