

Science diplomacy in action

Governance for international science cooperation: the example of health research

***Session 2 “Individual stakeholders in global health research
(industry, research institutions, foundations)
How to address the grand challenges***

Prof. André Syrota

CEO & Chairman of Inserm

Chairman of Aviesan, Vice-President of Science Europe

Paris - February 11, 2013



The Grand Challenges defined by Europe

The Research and Innovation Strategy that I envisage will make clear Europe's intention to re-focus research and innovation policies on the Grand Challenges our society faces: climate change, energy security, food security, health, an ageing population.

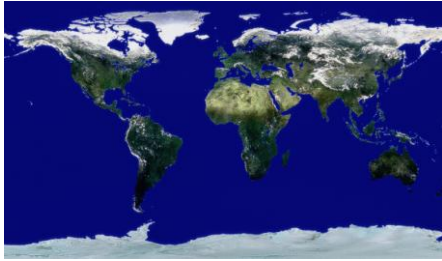
Maire Geoghegan-Quinn, speech of May 6, 2010, Sevilla



The Grand Challenges defined by Europe

To address grand challenges (Ageing, Climate Change...)





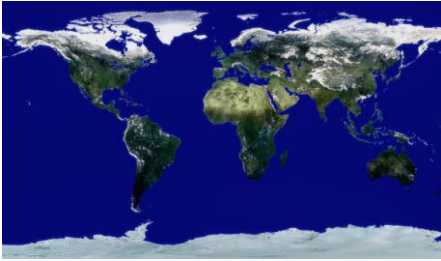
How to address the grand challenges: Example of the Health domain in Horizon 2020

Horizon 2020: several tools offered
To cover interdisciplinarity and the entire chain of innovation:

- Collaborative projects with diverse partners
- Public-Private Partnerships (PPP) like the JTIs
 - Article 185 (EDCTP; AAL...)
 - ERANET (+)
- European Innovation partnerships (EIP Healthy Ageing)

Necessary synergies with:

- Knowledge & Innovation Communities (KIC)
(future KIC Healthy Ageing?)
(European Institute of Innovation and Technology)
 - Key Enabling Technologies (KETs)
- Future and Emerging Technologies (TIC and more)



How to address the grand challenges:

The Joint Programming Initiatives

Health Domain:

JPND (on Neurodegenerative diseases and Alzheimer's disease):

26 EU countries + Canada and USA (in negotiation)

JPI HDHL (Healthy Diet Healthy Life)

JPIAMR (On Antimicrobial resistance)

→ Intergovernmental initiative

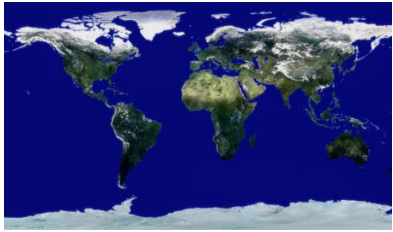
→ EC financial support for secretariat (CSA)

→ A Governing Board / A Scientific Committee

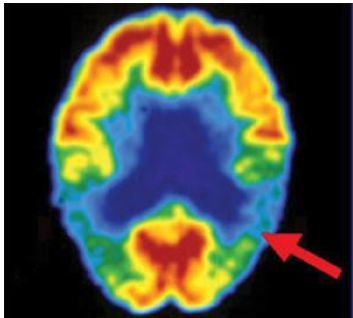
→ A Common Strategic Research Agenda

→ A Virtual common pot (national funding agencies)

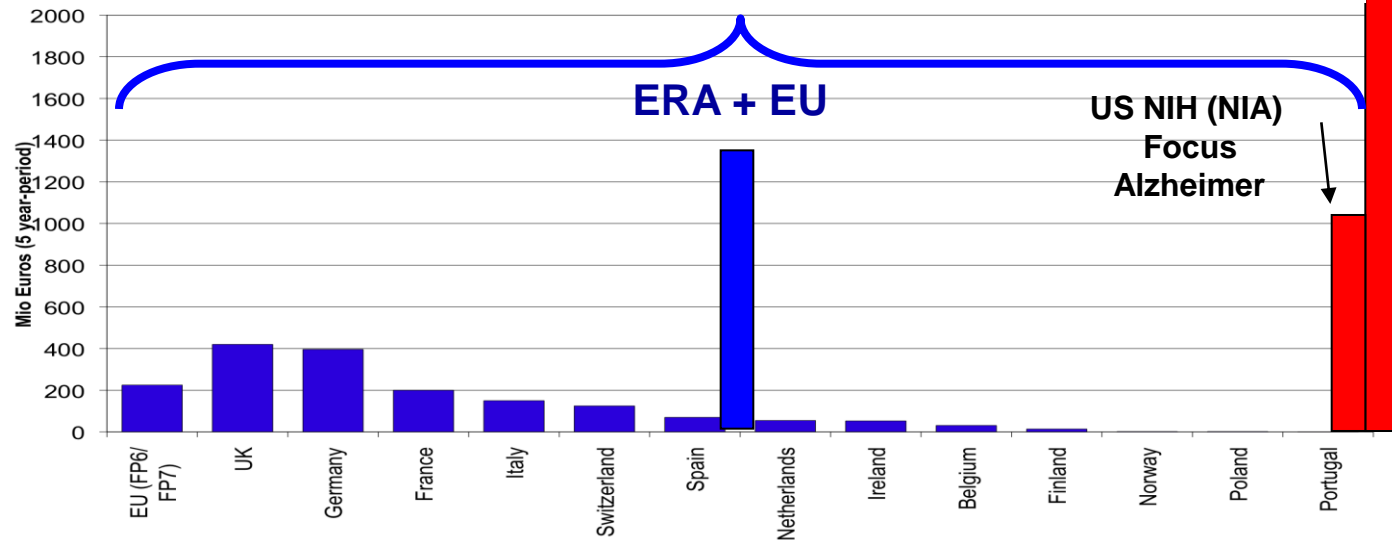
→ Calls for proposals / ERANETs



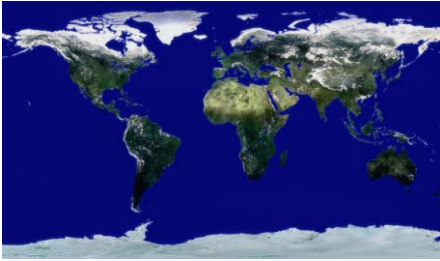
How to address the grand challenges: The Joint Programming Initiatives



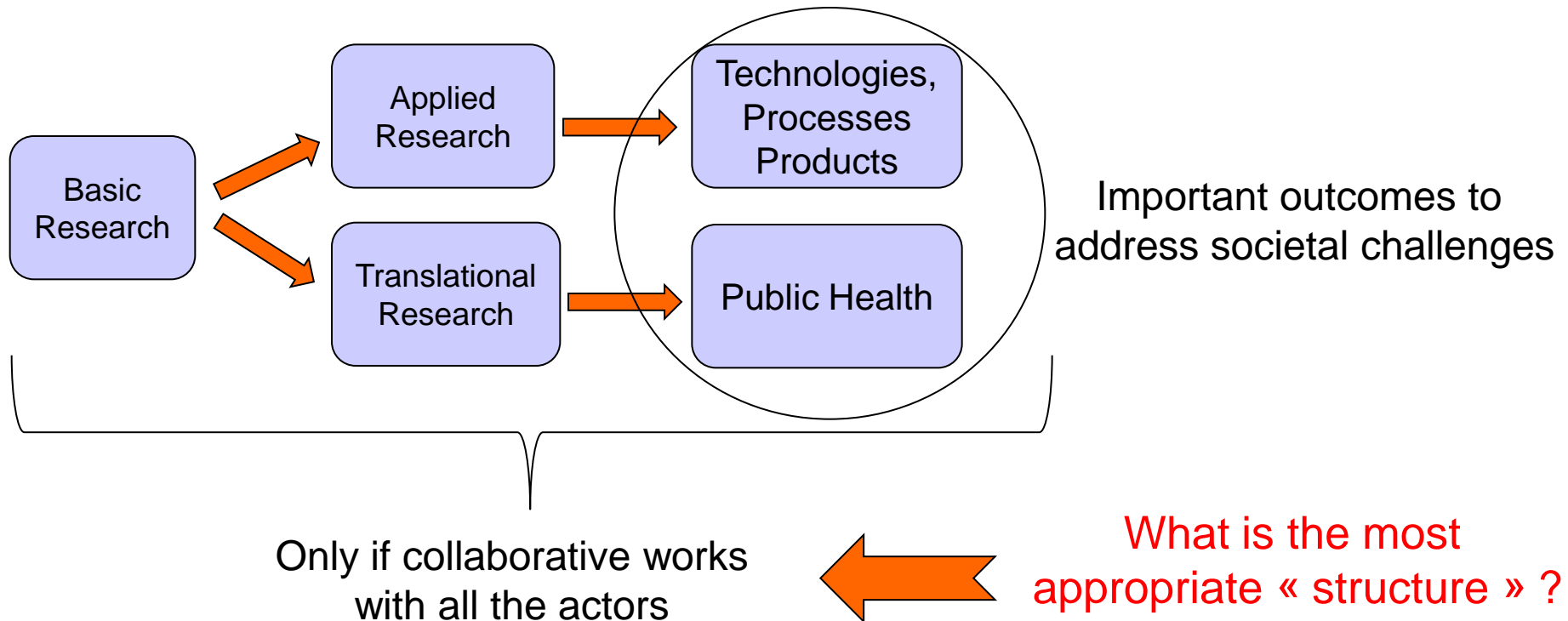
Public funding for Research in neurodegenerative diseases

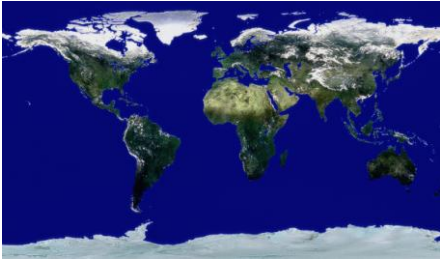


An answer to the fragmented ERA



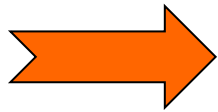
How to address the grand challenges: A transnational governance?





How to address the grand challenges: A transnational governance?

What is the most appropriate « structure » to
address societal challenges?



The « Alliances » are structures bringing all the actors together
(public and private actors...)

- Need « proactive » countries to be well prepared to address the Grand challenges
- Time to give a major role to the « Alliances » as flexible structures to address the Grand challenges

➤ Time for « Alliances » to work together?

The French National Alliance for Life and Health Sciences (**Aviesan**)

10 multi-organization thematic institutes (Itmos)

Molecular and
structural
bases of living
organisms

Cell biology,
development
and evolution

Cancer

INCa

Circulation,
metabolism,
and nutrition

Genetics,
genomics and
bioinformatics

Immunology,
hematology,
and
pneumology

Microbiology
and infectious
diseases

ANRS

Neurosciences,
cognitive
sciences,
neurology and
psychiatry

Alzheimer

Public health

Health
Technologies



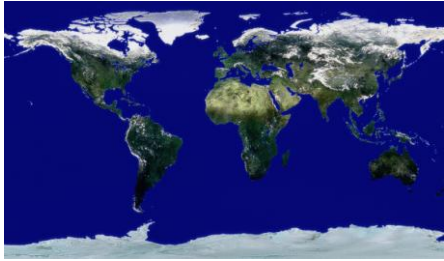
aviesan

CEA CHU CNRS CPU INRA INRIA INSERM INSTITUT PASTEUR IRD

Aviesan main objectives

- **Scientific coordination**
 - Strategic analysis
 - Scientific foresight
- Programming (national, european and international levels)
 - **Operational coordination**
- Partnership with universities (funding, human resources)
 - Transfer of knowledge
 - Simplification

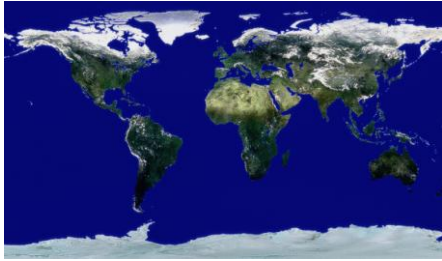
More visibility and reactivity of French research
To share priorities on structuring projects at international level



How to address the grand challenges: An efficient international cooperation

To be a major actor of the international/european cooperation:

- Mutualisation of the foreign offices of the Aviesan institutions
- Mutualised international operations (platforms in SE Asia, Subsaharan Africa, French West Indies-Guiana,... - Aviesan South Group)
- Use of well-structured cooperative tools (International associated labs)
- Short exploratory visit programme (ATIP-Avenir/ERC)



How to address the grand challenges: An efficient international cooperation

To be a major actor of the international/european cooperation:

- Participation in high-level organisations/networks/associations (Science Europe, HIROs, STS Forum, World Health Summit, WHO,...)
- Involvement in International /European multilateral programmes (FP7, Horizon 2020, STCU/ISTC, HFSP...)
- Appropriateness of the collaborative tools with the programmes offered by the French Embassies (Hubert Curien programmes)

Health research in partnerships with the South

An overseas network of French partners



The Aviesan South group

- **Led by the Multi-Organisms Thematic Institute from Aviesan :**
« Microbiology and Infectious diseases »
- **Members:** Pasteur Institute, IRD, AIRD, CIRAD, Inserm, CNRS, Fondation Mérieux
 - **Objectives:**
 - Common strategy of cooperation with the South: geographical, scientific, training and capacity building
 - Partnerships on research and development based on ethical rules
 - Definition of scientific priorities: multidisciplinary approach
 - European integration

AVIESAN South: Activities

- **Scientific roadmap:**

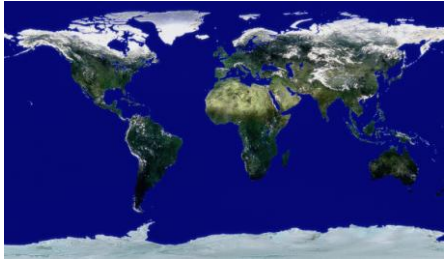
Multi-organisation projects: infectious diseases, cancer, public health, technologies for health

Ex: Encephalitis in South-East Asia

- Preparatory Workshops in January and September 2012
- Starting date: October 2012 (Cambodia, Laos, Vietnam)

- **Reinforcement of capacities: Regional platforms**

- Communicable diseases (Cambodia)
- Projects in the Caribbean, in Sub-Saharan Africa

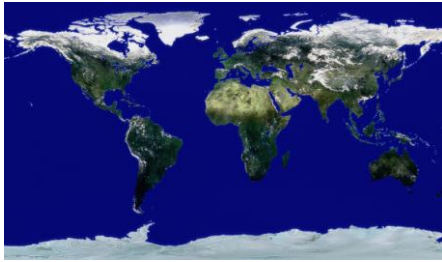


How to address the grand challenges: some major topics to be tackled

Major topics are still to be considered:

- Cross-border cooperation and researcher mobility
- Open Access issues (publications and data)
- Interdisciplinarity
- Globalization of research Infrastructures:
biobanks, clinical trials, large facilities for structural biology,...
-

The end



To address the grand challenges: Through Horizon 2020

- ERC
- Marie Curie
- Infrastructures
- Future and Emerging Technologies (FETs)

Excellent
Science (4)

Horizon 2020
3 pillars

Societal
Challenges (7)

Industrial
Leadership (3)

- Leadership in Enabling and Industrial Technologies (with KETs...)
- Access to Risk Finance
- Innovation in SMEs

- Health, demographic change, well-being
- Food security, sustainable agriculture, marine and maritime research and the bio- economy;
- Secure, clean and efficient energy
- Smart, green and integrated transport
- Climate action, resource efficiency and raw materials
- Understanding Europe in a changing world - inclusive, innovative and reflective society
- Protecting freedom and security in Europe



How to address the grand challenges: in Horizon 2020

Example of IMI: The Health PPP

IMI: Innovative Medicines Initiative



Pre-competitive research (Safety, Security, Training)

Partnerships

Pharma companies / Academic research institutions / SMEs...

International Associated Laboratories & Units abroad



Abbreviations

AAL: Ambient Assisted Living

CSA: Coordination and Support Action

EDCTP: European & Developing Countries Clinical Trials Partnerships

ERA: European Research Area

FET: Future and Emerging Technologies

HFSP: Human Frontier Science Programme

HIROs: Heads of International Research Organizations

IMI: Innovative Medicines Initiative

JPI: Joint Programming Initiative

JTI: Joint Technology Initiative

KET: Key Enabling Technologies

KIC: Knowledge and Innovation Communities

PPP: Public-Private Partnership

STCU/ISTC: Science and Technology Center in Ukraine/International Science and Technology Center

Cross-border cooperation

- A lot of intentions, but difficult implementation

The example of the Lead Agency principle

- Aims
 - Simplification of the evaluation process
 - Reduction of the administrative costs
 - European benchmarking for specific scientific fields
- How and Who
 - Contract between 2 or more agencies
- Application procedure
 - Submission by researcher of proposal to his/her national agency
 - A single agency (the Lead Agency) in charge of the evaluation of the projects
 - All countries (partners) recognize the outcomes of the evaluation
 - The project respects the national regulation for the funding organization in his/her own country

Cross-border cooperation

- A lot of intentions, but difficult implementation

The example of the Lead Agency principle

- Topics
 - Joint definition between countries willing to participate
 - Emerging topics
- Selection criteria
 - Jointly defined
- Advantages
 - European benchmarking (cf added value of the ERC programme)
 - Peer review standard, less bureaucracy
- Difficulties
 - Definition of topics (need of a simpler process than the one used for the JPIs)
 - Prerequisite of a high degree of trust between funding agencies

The second pillar of Horizon 2020: Industrial Leadership

1. Leadership in Enabling and Industrial Technologies (with KETs...)
 - Information and Communication Technologies (ITC)
 - Nanotechnologies
 - Advanced Materials
 - Biotechnology
 - Advanced Manufacturing and Processing
2. Access to Risk Finance
3. Innovation in SMEs

European Institute of Innovation and Technology (EIT)

Missions :

- To increase European sustainable growth and competitiveness by reinforcing the innovation capacity of the EU
- To develop a new generation of innovators and entrepreneurs.
- To facilitate the following transitions:
 - from **idea to product** / from **lab to market** / from **student to entrepreneur**

To do so, the EIT has created integrated structures linking higher education, research and business, the 3 KICs:

- Climate change mitigation (Climate-KIC),
- Information and Communication Technologies (EIT ICT Labs),
- Sustainable Energies (KIC InnoEnergy).

Three new KICs within H2020 (in 2014?) :

- Innovation for healthy living and active ageing
- Food4future
- Raw materials