



## **THE EUROPEAN COUNCIL OF ACADEMIES OF APPLIED SCIENCES, TECHNOLOGIES AND ENGINEERING**



**Presentation to the Academy of Engineering Sciences of Serbia  
Belgrade, March 18, 2015**

**Jacques Lukasik, Euro-CASE Secretary General  
Fellow of the National Academy of Technologies of France**

## About Euro-CASE

- Euro-CASE, the European Council of Academies of Applied Sciences, Technologies and Engineering, is a European non-profit organisation of **national Academies from 22 European countries**, founded in 1992 in Paris.
- The Academy of Engineering Sciences of Serbia joined Euro-CASE on January 1st 2015.
- Euro-CASE acts as a **permanent forum for exchange** and consultation between European Institutions, Industry and Research.
- It is a **hub of collective intelligence**: more than 6,000 academicians coming from academia and business, with multiple competences, are all elected by their peers.
- Euro-CASE is governed by a Board of senior representatives from each member Academy, its Executive Committee is composed of 6 members.
- Secretariat is based in **Paris**.



## Main Mission Statements

- Provide impartial, independent and balanced advice on technology related issues with a clear European dimension.
- Pursue, encourage and maintain excellence in the fields of Engineering for the benefit of the citizens of Europe.
- Contribute to accept societal impacts of technological change.
- Attract young Europeans into careers in applied sciences and engineering to ensure future technological progress in Europe.
- Draw on experience and best practices of national Academies.
- “**Vision 2020**” of Euro-CASE : → [www.euro-case.org](http://www.euro-case.org)
- *“We are convinced that EU needs improved innovative capabilities for solving the grand challenges of the world”.*



# Euro-CASE principal activities

## Annual Conferences

- 2008 London RAEng      How can Europe meet its Renewable Targets in 2020?
- 2009 Stockholm IVA      Increasing Interest in Mathematics, Science & Technology
- 2010 Berlin acatech      Innovation – Best Practices
- 2011 Madrid RAI      Water and Food Security in Europe
- 2012 Paris NATF      Energy Independence for Europe
- 2013 Lisbon PAE      Boosting Innovation in Europe
- 2014 Brussels      Evidence-based Policy Advise and  
acatech / ARB / IVA      Innovation Policy beyond Horizon 2020
- 2015 Den Haag AcTI      Engineering Smart Cities of the Future

## EU/US Frontiers of Engineering Symposia (Euro-CASE/NAE)

- 2010 RAEng      Cambridge (United Kingdom)
- 2011 NAE      Irvine (California)
- 2013 NATF      Chantilly (France)
- 2014 NAE      Seattle (Washington)
- 2016-2017 TAF (Finland) - NAE

## Euro-CASE past and current Platforms

- Transport
- Energy
- Innovation
- Engineering Education

## Relations with the European Institutions and other international activities



# Euro-CASE relations with European Institutions

**Euro-CASE has established relations with the :**

## **European Commission:**

- DG Research and Innovation (DG Robert-Jan Smits, Deputy DG Wolfgang Burtscher)
- DG Energy (DG Dominique Ristori)
- DG Climate Action (DG Jos Delbeke)
- DG Enterprise and Industry (DG Daniel Calleja)
- DG Connect (Deputy DG Zoran Stančič)
- Joint Research Centre (DG Vladimir Šucha)
- Chief Scientific Adviser to the President of the European Commission, M. Barroso (Anne Glover)



## **European Parliament:**

- DG EPRS / STOA (Theodoros Karapiperis, Scientific Foresight)
- STOA (Chairman Paul Rübig, MEP)
- Other various MEPs



## **Others:**

- AE, Academia Europaea (Sierd Cloetingh),
- ALLEA, All European Academies (Günter Stock)
- EASAC, European Academies Science Advisory Council (Jos Van der Meer)
- FEAM, Federation of European Academies of Medicine (Dermot Kelleher)
- EIRMA, European Industrial Research Management Association (Camille Roy)
- EIT, European Institute of Innovation and Technology (Peter Olesen),
- ENGITECH, Science Europe Engineering Scientific Committee (Igor Emri)
- ERC European Research Council (Jean-Pierre Bourguignon)



# Collaborative agreement between JRC and Euro-CASE

**Signed in November 2012; few examples of collaboration :**

- Visit of the JRC Research Center ISPRA by a delegation of Euro-CASE Board members, January 24, 2013
- Presentation of Euro-CASE to the main JRC stakeholders and Board of Governors, June 20-21, 2013
- Jointly hosting a high-level Workshop with the Commission on September 9, 2013; 15 DGs and CSA represented.
- JRC and Euro-CASE Round Table “The dialogue between science, technology and society around two cases: energy and climate change”, 19 September 2013
- “2030 Science & Technology Foresight – what’s in it for the society”, March/April 2014

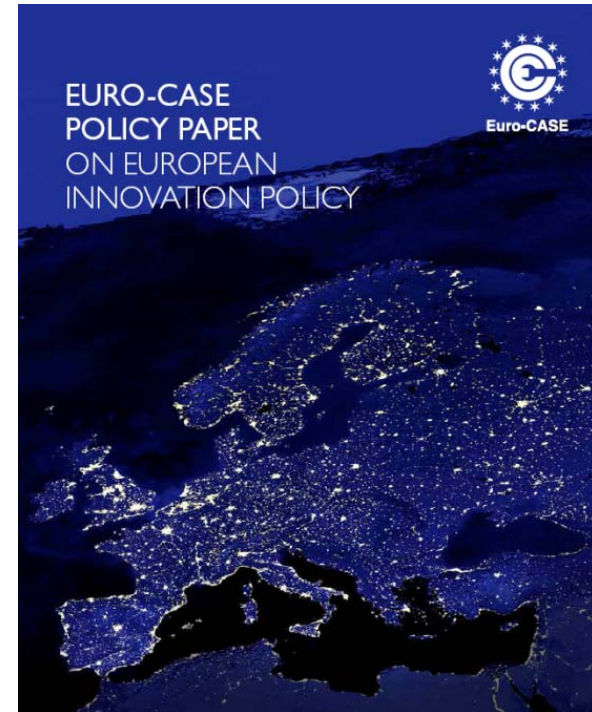


- Joint conference on “Digital Privacy”, January 28, 2015
- “Science meets Parliaments”, September 15, 2015



# Euro-CASE Innovation Platform

- Innovation is a focus area in most Euro- CASE member academies
- Royal Swedish Academy of Engineering Sciences, IVA (Sweden) and *acatech* (Germany) co-chaired this 2-years project, 12 Euro-CASE academies participating.
- Policy proposals through workshops.
- Final report , “*Euro-CASE Position Paper on European Innovation Policy*”, was presented during the 2014 Annual Conference.
- The extension for 2015-2016 of the Innovation Platform has been approved by the Board.



# Euro-CASE Innovation Platform Workshops and resulting Position Papers

- **“Innovation Procurement”**  
Stockholm 2012
- **“Public-Private Partnerships”**  
Brussels 2012
- **“Financing Innovation”**  
London 2012
- **“Changing Industry Structures”**  
Helsinki 2013
- **“Transforming Manufacturing”**  
Madrid 2013
- **US-EU Innovation Gap “Boosting  
Innovation in Europe” (Discussion Paper),  
Lisbon 2013**

**Summary meeting: “Reflecting on Future  
European Innovation Policy Options”**  
Paris, March 17, 2014.



Paris meeting





# Euro-CASE Energy Platform 2014-2016

- Platform launched in October 2013.
- Co-Chairs are: acatech, IVA, NATF



- 16 Euro-CASE academies represented.
- First report: “Euro-CASE Policy Brief on reform options for the European Emissions Trading System (EU ETS)” was presented on the evening preceding the Annual Conference, on December 2, 2014. This report is already on: [www.euro-case.org](http://www.euro-case.org)
- An extension of the Energy Platform has been approved by the Board in December.



Ottmar Edenhofer, Dominique Ristori, Bernard Tardieu



# Euro-CASE Engineering Education Platform 2014-2016



- The platform was launched in November 2013.
- Chair : EA CR (Engineering Academy of the Czech Republic).
- 8 Euro-CASE academies are represented.
- Focus on:
  - Comparison and harmonization of various engineering diplomas in Europe.
  - Increasing interest in technical education, in particular, supporting the interest of the young generation of boys and girls in engineering education.
  - A more precise definition of the term “Engineering Education (EE)”: what EE in Europe could look like 10 years from now and what competences should EE include.
  - Mobility of students and teachers in engineering.
- A Round Table was organized in Prague in November 2014 on “Orientation and status of EE in the next 19 years”
- Next seminar in Prague, May 27-28, 2015.



# EU-US Frontiers of Engineering Symposia

- Since 2010, the NAE and Euro-CASE have held an annual US-EU FOE Symposium
- A 3 days meeting, gathering 60 outstanding scientists / engineers (ages 35-45) from US & European companies, universities, and government labs on leading-edge research and technical work across a range of engineering fields.

**2014 US-EU FOE meeting, November 9-12**  
in Seattle, selected 4 topics :

- Energy Storage Across Scales
- Protein Design for Therapeutic Applications
- Smart Homes
- Atoms to Airplanes: Designer/Engineered Aerospace Materials



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**2016-2017 cycle to be held in Finland,**  
organized by **Technology Academy Finland (TAF)**



## Publications of European interest produced by the Euro-CASE and its member academies 2009-2015

Over the past years, Euro-CASE has produced a few **Position Papers**:

- A Response to the Commission's Consultation on the Future EU Strategy
- A Position Paper on the Common Strategic Framework for Research and Innovation
- A Position Paper on the European Research Area
- A Position Paper on "EU Public-Private Partnerships in Research and Innovation"
- Several Position Papers resulting from the Innovation Platform
- Euro-CASE Policy Brief on reform options for the European Emissions Trading System

Euro-CASE consolidates member-Academies' public reports, limited to titles and their English abstracts. Currently, there are more than 200 publications listed on its website.

This database of publications is classified according to standard themes such as: Energy and Climate Change, Mobility and Transportation, Biotechnologies, Technologies and Health, ICT...

[www.euro-case.org](http://www.euro-case.org)



# Interaction with Euro-CASE's sister organisations

**Under the umbrella of AE, ALLEA, EASAC, Euro-CASE and FEAM, the objective is to:**

- strengthen the collaboration between the five European Academy organisations in order to provide science- and technology-based advice to Policy Makers in the European Commission and Parliament.
- A Memorandum of Understanding is to be signed between the 5 sister organisations on March 26, 2015
- European Commission, within the Horizon 2020 Framework Programme "Europe in a changing world – Inclusive, Innovative and Reflective Societies", is considering a call specifically addressed to the European Academies under the title "Coordinating scientific advice for policy making provided by the European academies"
- This call is expected to be issued in September 2015 and its financial envelop is foreseen between 2 and 3 M€



## **Conclusion : Mutual benefits for the European Institutions and for Euro-CASE**

- **European Institutions benefit from Euro-CASE wide pool of European expertise by:**
  - **Preparing a structured dialogue with DGs of the European Commission**
  - **Inviting Euro-CASE to participate in public European events**
  - **Launching Opinion or Position Papers**
  - **Accessing a large pool of experts from Industry and academia and organizing common informal “brainstorming” sessions**
  
- **Member academies largely benefit from Euro-CASE visibility and recognition in Brussels: its access to political institutions and policy makers in charge of them is greatly facilitated .**
  
- **Members draw valuable profits by learning from other Academies’ actions and experiences**



# Discussions with the Airbus Group in view of involving Euro-CASE in ambitious, prospective technology issues for the 2030 E-Aircraft

Workshop planned June 29 – July 1, 2015 at the Airbus Ludwig Bölkow Campus, near Munich

## Priority topics:

- High temperature superconductivity, including for cables and generators.
- Energy storage density (batteries, fuel cells) on board (in-flight applications) and power management/distribution across large current/voltage scales.
- Materials for power trains, including cables, energy/electricity storage, generators.

Academies have been asked to select and propose their best experts in the above topics. Euro-CASE specialists will be limited to 20.



## Euro-CASE Member Academies



Royal Academy of Belgium (ARB)



Croatian Academy of Engineering (HATZ)



Engineering Academy of the Czech Republic (EA CR)



Danish Academy of Technical Sciences (ATV)



Technology Academy Finland (TAF)



National Academy of Technologies of France (NATF)



German Academy of Science and Engineering (acatech)



Technical Chamber of Greece (TCG)



Hungarian Academy of Engineering (HAE)



Irish Academy of Engineering (IAE)



Italian Council of Applied Sciences (CISAI/FAST)



Netherlands Academy of Technology and Innovation (AcTI)



Norwegian Academy of Technological Sciences (NTVA)



Polish Academy of Sciences (PAN)



Portuguese Academy of Engineering (PAE)



Romanian Academy of Technical Sciences (ASTR)



Academy of Engineering Sciences of Serbia (AESS)



Engineering Academy of Slovenia (IAS)



Real Academia de Ingenieria (RAI)



Royal Swedish Academy of Engineering (IVA)



Swiss Academy of Engineering Sciences (SATW)



Royal Academy of Engineering (RAEng)

