



Euro-CASE

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

ANNUAL REPORT 2012





Euro-CASE

A HUB OF COLLECTIVE INTELLIGENCE

The European Council of Academies of Applied Sciences, Technologies and Engineering is an independent non-profit organization of national academies of applied sciences, technologies and engineering representing 21 European countries.

Euro-CASE acts as a permanent forum for exchange and consultation between European Institutions, industry and research.

Through its affiliated Academies, Euro-CASE has access to top expertise (about 6000 of Europe's most eminent engineers) and provides impartial, independent and balanced advice on technological issues with a clear European dimension to European institutions, national Governments, companies and organizations.

Vision 2020

"Euro-CASE will be the voice of European excellence in Engineering, Applied Sciences and Technology for the world."

The full text of Vision 2020 can be found on the Euro-CASE website

www.euro-case.org



Lena Treschow Torell, Chairman of Euro-CASE

MESSAGE FROM THE CHAIRMAN

Euro-CASE is 20 years old: now it is time for its next phase.

This year we celebrated the 20th anniversary of Euro-CASE. In 1990, the need for an independent body comprised of the best European experts who could give balanced advice to the European Commission was recognized. The idea was passed on to the President of the Netherlands Academy of Technology and Innovation who, along with other European academies in the UK, Sweden, Finland and France, discussed how to organize and establish such an advisory platform. Today, we are 21 member academies and more than 6 000 Fellows, all elected by their peers.

I have had the privilege to act as its Chairman for the last five years and now it is time for me to leave the chair. It has been a fascinating journey, full of activities, and Euro-CASE is now becoming a stronger partner at the European level. We are pooling our resources from all our national academies with the aim to become one voice of engineering and technology in the European Union.

We are active towards the European Institutions and are regularly delivering position papers on technology, research and innovation policies. During the past year we signed an agreement of collaboration with the European Commission's own research centre, the JRC. We also opened up discussions with the European Parliament and are now offering our services to STOA, the Science and Technology Options Assessment office of the European Parliament.

We have presented a report on how to improve EU infrastructure with innovative transport systems, and set up a platform on how to strengthen the innovation climate in Europe. To this, we organized a series of workshops devoted to public-private partnerships (PPP), public procurement and venture capital. We strongly believe in these instruments, and are in the process of delivering several position papers on how the public and private sectors can better work together to promote innovation and thereby increase European competitiveness.

The 20th anniversary of Euro-CASE was celebrated last November at a high level meeting in Paris, at the Grand Palais des Champs-Élysées, organized by NATF, the National Academy of Technologies of France. We had the privilege to receive welcoming words from the French Minister of Higher Education and Research, Ms Genevieve Fioraso. The keynote address was delivered by Mr Günther Oettinger, European Commissioner for Energy. The next day's Annual Conference was devoted to energy resources and policies in Europe. It was the Fifth Annual Conference of Euro-CASE, since we first introduced the concept of a high level annual event dedicated to discussion and debate on an issue of concern on the European Union-level. Energy is certainly one of the Grand Challenges for Europe, and the conference attracted top stakeholders in this field from all over our continent, ensuring a successful and thought provoking meeting.

All in all, we can be proud of our achievements in developing Euro-CASE into a single voice for engineering and technology in Europe. I strongly believe that our organization can serve as a united front in the technology area, not only within the EU, but also when interacting with the rest of the world, including China, India and the emerging economies.

Thank you for entrusting me with the task of Chairmanship of this impressive organization. It has been a great time and I now wish our next Chairman every success in preparing Euro-CASE for its next steps. Thank you all.

Lena Treschow Torell
Chairman of Euro-CASE

Euro-CASE ANNUAL CONFERENCES

Beginning in 2008, Euro-CASE member academies have organised a series of annual conferences:

2008 London: “How Can Europe Meet its 2020 Renewables Targets?” (RAEng);

2009 Stockholm: “Increasing the interest in Mathematics, Science and Technology” (IVA);

2010 Berlin: “Innovation - Best Practices” (acatech);

2011 Madrid: “Water and Food Security in Europe” (RAI);

2012 Paris: “Energy Independence for Europe” (NATF).

2012 ANNUAL CONFERENCE, 12-13 NOVEMBER, PARIS



Context

If we consider two key dates in the history of the European Union - the creation of the European Coal and Steel Community (ECSC) in 1951, and the signing of the Treaty establishing the European Atomic Energy Community (EAEC or Euratom) in 1957 - we can see that the very foundations of Europe rely on energy procurement. In 2007, the Treaty of Lisbon consolidated the emergence of a European Union policy on Energy. Yet, despite the broad ambitions of this policy, there is in reality very little to curb member states' autonomy in energy matters. In fact, one of the articles of this very Treaty stipulates that *“Such measures shall not affect a Member State's right to determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply ... /...”*

This paradox throws light not only on the extraordinary diversity of energy resources in Europe, but also on the degree of energy independence enjoyed by the Member States, in terms of both procurement and supply.

In 2012, only five years after the signing of the Treaty of Lisbon, it can be readily recognized that the 27 Member States display a very large degree of heterogeneity of energy procurement strategies. If Europe wants to be an economically competitive actor, and if Europe wants to preserve the social and environmental quality of life of its populations, it needs to define medium and long term strategies to preserve energy security and to ensure continued energy independence.

It was from this perspective that Euro-CASE decided to organise its Annual 2012 Conference on the theme “Energy Independence for Europe”.

Opening Ceremony and Annual Conference Program

Euro-CASE was founded in 1992, and its 20th Anniversary was celebrated in 2012 on the occasion of the Annual Conference. Hosted by the National Academy of Technologies of France (NATF), under the Honourable Patronage of Mr François Hollande, President of the Republic, the Opening Ceremony on 12 November was held at the Coupole d'Antin of the Grand Palais des Champs-Élysées, in presence of about 180 invited guests. Günther Oettinger, European Commissioner for Energy, delivered a keynote speech and the French Minister for Higher Education and Research, Genevieve Fioraso addressed the audience by video. Other high-level officials, members of the European Parliament, representatives of the European Commission and of the French Government attended this Ceremony, which concluded with a presentation by Bertrand Piccard, Swiss medical doctor and engineer, on his “Solar Impulse” project, which aimed to create a plane that could fly around the globe powered by solar energy alone.

The Conference, “Energy Independence for Europe”, held the next day, was focused on issues related to European energy resources and flows. Speakers from seven different countries highlighted the strategic role of energy distribution grids, discussed social perception of energy issues by European citizens, and examined various industrial approaches to these issues. Presentations were followed by extended discussions with about 100 conference participants; one third of them were representing Euro-CASE member academies. Presentations at the Conference can be found on the website www.euro-case.org.



L. Treschow Torell



G. Oettinger / B. Revellin-Falcoz



B. Piccard



B. Tardieu / D. Ristori / B. Revellin-Falcoz / L. Treschow Torell



B. Revellin-Falcoz / J. Lukasik / F. Guinot / L. Treschow Torell

Conclusions and recommendations

Faced with the complexity of the European energy mix and the uneven geographical distribution of European energy resources, as well as the increase in societal and industrial energy demand across the continent, Euro-CASE observes that there is a need for more coherence in Europe's energy policy. Following its Annual Conference, on behalf of Euro-CASE, François Guinot, member of the Board of Euro-CASE and Honorary President of NATF, jointly with Bernard Tardieu, Chairman of the Energy and Climate Change Committee of NATF, have prepared three main recommendations to national and European political decision-makers:

- ▶ There is a need for an instrument to assess different energy sources in Europe in a comparative, integrated manner. Faced with the intrinsic diversity of the energy mix and the complexity of inter-connections, it is urgent that an in-depth analysis of the European energy system be carried out with the purpose of identifying the comparative advantages of the various energy sources that are/will be exploited in Europe. This audit should examine the European energy system with all its components: costs, GHG emissions, industrial policies... Results should facilitate the prioritisation of the most attractive sources, within the bounds of the European energy mix (intermittent renewable energies, bio-sourced energies, conventional and non-conventional fossil fuel energies...). The audit should cover questions of quantity, required levels of investment, impact on the environment, job creation and impact on industrial competitiveness. Given the degree of incoherence of the current system, it is urgent that the proposed audit be implemented, even more so, as we observe today the development of new national agendas that exacerbate this incoherence. Euro-CASE supports the need for such an audit and, as an independent European body, is willing to play a driving role.
- ▶ Energy efficiency is one of the main levers that can facilitate the energy independence of Europe. Attaining higher efficiency calls for the development of intelligent or "smart" demand. One of the major problems to be solved relates to peak consumption periods and energy over-production. By pursuing action at the level of energy demand, one can, on the one hand, absorb over-production and, on the other hand, smooth out consumption peaks, especially in large cities where energy savings may turn out to be considerable. Euro-CASE recommends that the authorities support development of "smart" demand plans for all "city actors". To achieve this, one must create "intelligent territories" capable of developing technical energy storage systems, deploy "smart metering" systems that can react to increases in demand

and smooth out consumption peaks and, lastly, promote education and provide information for future "smart consumers".

- ▶ Improving energy efficiency offers considerable opportunities for both economic and technological innovation. Some innovations face *a priori* objections on the citizen side, as personal feelings vary to a large extent from country to country, no matter what sort of energy sources are involved: nuclear power, combustion of coal or shale oil, photovoltaics... Euro-CASE recommends that a wide-scale enquiry be launched to map out the energy-related expectations of European citizens. Such a survey would provide useful data which would help structure information and education campaigns to help European citizens to better grasp the energy options available to them. Euro-CASE, in its position as an independent European organisation, would like to fully participate in such a debate.



F. Guinot

These recommendations were sent to the appropriate European authorities, in particular to the DG Energy of the European Commission. They were also presented at the press conference in Paris following the Annual Conference, which brought together senior Euro-CASE and NATF officials: Lena Treschow

Torell, Chairman of Euro-CASE, Bruno Revellin-Falcoz, President of NATF, François Guinot, member of the Board of Euro-CASE and Honorary President of NATF, Bernard Tardieu, Chairman of the Energy and Climate Change Committee of NATF and Jacques Lukasik, Secretary General of Euro-CASE.



2013 ANNUAL CONFERENCE, 10 DECEMBER, LISBON

The next Annual Conference will be organized by the Portuguese Academy of Engineering in Lisbon, on 10 December 2013. Its topic will be "Boosting Innovation in Europe: comparison of European and American approaches". The Conference will be sponsored by the President of Portugal and Honorary President of the Portuguese Academy of Engineering, Mr Anibal Cavaco Silva.

PREPARATION OF THE FRONTIERS OF ENGINEERING 2013/2014 CYCLE

Since 1995, the US National Academy of Engineering has held an annual Frontiers of Engineering (FOE) symposium that brings together outstanding engineers (ages 30-45) from US companies, universities, and government labs, for an intensive 2 1/2 day symposium to discuss leading edge research at the boundaries of traditional engineering disciplines. In recent years, the NAE has adopted this model for bilateral annual symposia with key international partners, including China, India and Japan. In 2009, the NAE approached Euro-CASE to partner it in organising the first set of EU-US Frontiers of Engineering Symposia. It was decided that participation would be by invitation only and that in Europe the invitation would be extended by Euro-CASE member academies.



The first EU-US FOE Symposium was organized by the UK Royal Academy of Engineering and took place on 1-3 September 2010 at Jesus College, Cambridge. 60 promising engineers from 10 EU countries and the US met to discuss opportunities for international and cross-disciplinary research collaboration, to examine the potential for transfer of new techniques and approaches across disparate engineering fields, and to help create a transatlantic network of world-class engineers. The four technology areas debated were: materials ecology, augmented reality, signals processing and bio-inspired engineering.

The 2011 Symposium was held at the US National Academy of Science's Beckmann Centre in Orange County, California, on 3-5 November. The four prospective themes discussed were: networks in biology and personalized medicine, smart grids, sustainable cities and manufacturing... the future.

After a year's break, the 2013 Euro-CASE-NAE meeting will be organized by the National Academy of Technologies of France. It will take place in Chantilly, near Paris, on 20-23 November. It will be followed by a similar 2014 event in the United States.

The two General Co-Chairs for the 2013-2014 cycles have been chosen: Prof. Segio Verdu (Princeton University), on the American side, and Yves Caseau, Director General Technologies, Services and Innovation of Bouygues Telecom, member of NATF, on the European side. The four prospective topics retained for the 2013 Symposium are:

- Big Data
- Wireless Broadband Access
- Nano-sensors/MEMS
- The Future of Transportation: Intelligent Transport Systems,

Corresponding to each theme European session Chairs have been selected respectively from Switzerland, Spain, UK and Italy.

Euro-CASE member Academies will now actively participate in the selection process of participants, according to the established criteria of age and engineering/scientific achievements in each domain.

Euro-CASE PLATFORMS

Euro-CASE Platforms are organised as working groups where various academies' representatives study a specific subject and produce reports which are often transmitted to the appropriate authorities in various European institutions, and may become a basis for further interactions with them.

TRANSPORT AND MOBILITY

The Platform Final Report, after Board's approval last May, is now on the Euro-CASE website. It deals with four topics that have a strong impact on European Union competitiveness: Freight Transport Logistics and Taxation in Europe, Intelligence Systems for Freight Transport, Priority of Passengers vs. Freight Transport, and Green Corridors.

INNOVATION

The EU has intensified its approach to innovation policy as is best seen in the Europe 2020 strategy and its flagship initiative "Innovation Union". In particular, the new research framework program Horizon 2020, starting in 2014, stands for the promotion of the whole chain of the innovation process from fundamental research to product development. Euro-CASE accompanies the EU on its journey and, as it is an organisation built up on the high-level expertise of its members, offers independent, science-based policy advice to the European Institutions.

At the Euro-CASE Board meeting on 11 November 2011, a new Euro-CASE initiative was agreed upon : launching the Innovation Platform with Dietmar Harhoff, acatech, as Chair and Björn O. Nilsson, IVA, as Co-Chair. The duration of the platform was scheduled to be two years: January 2012 - December 2013. The objective was fixed to prepare position and policy strategy papers covering a wide range of topics related to innovation policy, to which would be added an analysis of best practice of national innovation strategies in Europe ("learning from each other"). The long-term purpose of the Platform is to contribute to making Europe the most successful innovation region in the world and, in a proactive way, to provide advice to the EU and European institutions on innovation issues.

Since its launching, eleven Euro-CASE member academies have participated in this Platform. In 2012, three meetings took place:

- 15-16 February 2012, Stockholm (IVA), on "Innovation Procurement"
- 29-30 March 2012, Brussels (acatech), on "Public-Private-Partnerships: successful partnering models for science-industry-research cooperation"
- 11-12 October 2012, London (RAEng), on "Financing Innovation".

It is observed that Marion Dewar, Cabinet member in charge of Innovation within the Cabinet of Commissioner for Research and Innovation, closely follows works of this Platform and participated in the Brussels meeting.

The 4th Innovation Platform Meeting will be held on 23-24 January 2013, in Helsinki (TAF), on the "Innovation Changing Industry Structure".

The first policy position paper on "EU Public Private Partnerships (PPPs) in Research and Innovation" was formally approved by the Board in November 2012. The paper drew the conclusion that PPPs could be highly effective instruments for turning research findings into innovative marketable products, as they provide structures and incentives for collaboration between researchers and industry. Providing appropriate surrounding conditions for this collaborative process should therefore be a central issue of European research politics. Following that, Euro-CASE recommended that the European Union establishes a unified, comprehensive, open and competitive framework for the development of new PPPs at European level, under Horizon 2020, and that this should be complemented with appropriate legal regulation.

With the position paper on PPP in Research and Innovation, Euro-CASE expands into deeper political discussions on the European level. Early informal meetings related to the recommendations in the position paper have been met with great interest by the Commission.

For personal reasons, Dietmar Harhoff had to resign his Chairmanship of the Innovation Platform at the end of 2012. However, Ernst Rietschel, European Affairs Representative of acatech and former President of the Leibniz Association, has accepted the role of Chair in his place.



From left to right: T. Brick, IAE / V. Leskovsek, IAS / I. Ritchie, RAEng / A. Haarla, TAF / J.M. Sanjurjo Jul, RAI / K. Klingsheim, NTVA / I. Gray, RAEng / R. Hielscher, acatech / S. McHugh, RAEng / M. Mazzucato, University of Sussex / H. Sillem, RAEng / H. Wright, RAEng / M. Breidne, IVA / Sir M. Gregory, RAEng.

RELATIONS WITH EUROPEAN INSTITUTIONS AND OTHER INTERNATIONAL ACTIVITIES

EUROPEAN COMMISSION



Memorandum of Understanding between Joint Research Center (JRC) of the European Commission and Euro-CASE

On 12 November 2012, during the Opening Ceremony of the 2012 Annual Conference in Paris, Director General of JRC, Dominique Ristori, and Lena Treschow Torell, Chairman of Euro-CASE, signed a Memorandum of Understanding (MoU) to formalize and reinforce bilateral relations between the two organizations.

Five priority areas were identified in the MoU:

- Energy
- Transport and Mobility
- Innovation
- Education and Training
- Technology and Society

At the end of January 2013, a visit to the JRC Research Centre in Ispra (Italy) was scheduled for Euro-CASE members. In autumn 2013, a common seminar between JRC and Euro-CASE will be organised in Brussels on "Technology and Society" related issues.

JRC is the European Commission's in-house science service. It provides independent scientific advice for policy decisions, with a view to ensuring that the European Union achieves its Europe 2020 goals for a productive economy as well as a safe, secure and sustainable future. The JRC includes 7 institutes in 5 European countries and collaborates extensively with over 1000 public and private organisations, institutions and expert groups.



F. Guinot / G. Oettinger / B. Revellin-Falcoz / J. Lukasik / L. Treschow Torell / D. Ristori

Meeting with Professor Anne Glover, Chief Scientific Advisor to the President of the European Commission, 28 July, Brussels

Jacques Lukasik, Secretary General of Euro-CASE, and Sicco Lehmann-Brauns, Head of Innovation Unit at acatech, representing Euro-CASE Vice-Chairman Reinhard Hüttli, met with Ms Glover and presented to her objectives, structures and current activities of Euro-CASE, along with Euro-CASE's future "2020 Vision".

This meeting was an opportunity to offer Ms Glover the support of Euro-CASE in her role as Chief Scientific Advisor, based on the collective expertise of Euro-CASE's cadre of around 6000 experts with highly recognised profiles and competencies which comprise of the Fellows of its member academies.



European Commission

Meeting with Dr Dimitri Corpakis, Head of Unit, Regional Dimension of Innovation (Regional Innovation Strategies and Links with Cohesion Policy) in DG R&I

On 11 July, Jacques Lukasik and Sir William Wakeham FREng, Executive Committee Member of Euro-CASE and Senior Vice-President and International Secretary at the Royal Academy of Engineering, held a meeting in Brussels with Dimitri Corpakis, Head of Unit, Regional Dimension of Innovation, Directorate for Research and Innovation at the European Commission. The meeting highlighted a need for strengthening capacity in engineering in EU12 countries, and examined potential routes by which Euro-CASE might contribute to achieving that goal.

Mr Corpakis informed his visitors that it would be possible for Euro-CASE member academies in EU12 countries to access funding for capacity building activities through the Structural and Cohesion Fund, but only via their respective governments. This Fund has resources available for a wide variety of purposes, including activities that boost employment, develop skills or support entrepreneurship. Building capacity in EU12 academies of engineering or applied science would contribute to all of these goals but member Academies must first act through their national channels.

“Science-based policy advice to the EU”, an event organized by acatech with Euro-CASE participation, 7 May, Brussels

A total of 230 guests attended the event on 7 May 2012. Euro-CASE Vice-Chairman, Reinhard Hüttl, and Secretary General, Jacques Lukasik, participated in the Panel which included many high level European personalities such as Mr Jürgen Creutzmann, MEP, and Ms Emilia Miller, State Minister of Bavaria for Federal and European Affairs. The discussion about “Science-based policy advice to the EU” was concluded by Robert-Jan Smits, Director General for Research and Innovation in the European Commission, who in his address emphasized the significant value of independent policy advice for European institutions, and explicitly welcomed the strong commitment and dedication of Euro-CASE: the need and expectation for independent science-based policy advice is high.



Participants in “Science-based policy advice to the EU” event, Brussels © acatech / Felix Kindermann

EUROPEAN PARLIAMENT



Science and Technology Options Assessment Office (STOA)

STOA Panel at the European Parliament, Strasbourg, 15 March 2012

The Chairman, Lena Treschow Torell, and the Secretary General, Jacques Lukasik, were invited to present Euro-CASE at the STOA Panel meeting in Strasbourg, 15 March 2012.

The STOA Panel forms an integral part of the structure of the European Parliament. It is composed of 15 Members of the European Parliament. 14 Members of the Panel are nominated by six permanent Committees of the Parliament: ITRE, EMPL, ENVI, IMCO, TRAN and AGRI. The European Parliament Vice-President, responsible for STOA, is a Member of the Panel *ex officio*.

At the Strasbourg meeting, the chairmanship of STOA has been transferred from Paul Rübig (MEP, Austria) to Mr Antonio Fernando Correia de Campos (MEP, Portugal). Mr Rübig now holds the position of Vice-Chairman of the Panel. Both Chairman and Vice-Chairman attended the Annual Euro-CASE Conference in Paris in November 2012.

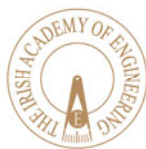
Workshop on “Advanced Materials”, 10 July, Brussels

The immediate follow-up of the Strasbourg presentation was the invitation for Euro-CASE to attend a workshop in Brussels, 10 July 2012, on “Advanced Materials”. Jacques Lukasik participated in this Workshop and met, whilst there, with Mr Antonio Fernando Correia de Campos.

STOA 25th anniversary, 27 November, “Unlocking the mysteries of the Universe at CERN”, Brussels

On the occasion of the 25th anniversary of STOA, the Secretary General was invited to a luncheon given by the Vice President of the European Parliament, responsible for STOA, MEP Oldrich Vlasak. The lunch was followed by the STOA Annual Lecture on “Unlocking the Mysteries of the Universe at CERN”. Recent developments in Elementary Particle Physics were presented by eminent scientists, featuring, among others, Prof. Peter Higgs, who spoke about the recent discovery of the famous boson particle bearing his name. Closing remarks were delivered by Professor Anne Glover, Chief Scientific Advisor to the President of the European Commission, and by the STOA Chairman, Mr Correia de Campos.

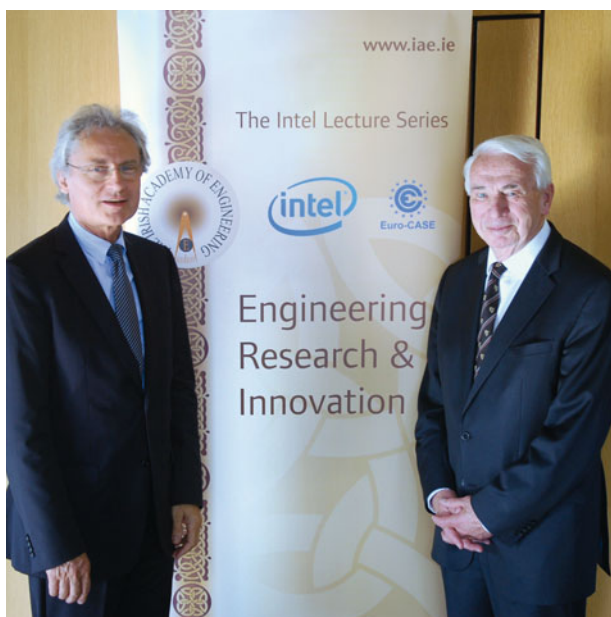
OTHER INTERNATIONAL ACTIVITIES



Intel Lecture Series in 2011-2012 “Engineering Education”

This series of four lectures was a program produced by the Irish Academy of Engineering, in partnership with Euro-CASE and with sponsorship and support from Intel Corporation plc. The lectures were held at University College Dublin and Queens University Belfast. The objective of the programme was to create awareness in Irish universities, in government and in industry, of the immediate need for major changes in the philosophy and practices of engineering education and research, which would result in a new dynamic for the contribution of engineering to innovation in Ireland. The lecture titles were:

- ▶ “Changing the World through Engineering Research and Innovation”, Justin Rattner, Corporate Vice President and CTO of the Intel Corporation
- ▶ “Engineering Research for Economic Growth”, Prof. Michael Kelly, The Prince Philip Professor of Technology, Cambridge University
- ▶ “Research and Innovation - Successful Models for Economic Impact”, Prof. John V. McCanny, Director, Institute of Electronics, Communications and Information
- ▶ “How the German National Academy of Science and Engineering contributes to Sustainable Growth through Research and Innovation”, Prof. Henning Kagermann, President acatech.



H. Kagermann and J. Kelly.

Seminar “Science, Technology, Society: An impossible debate?”



between the National Academy of Technologies of France and the Royal Academy of Belgium, under the auspices of Euro-CASE, Brussels, 19 September

Citizens and organisations exist in a world that is more defined by technology than ever before. Despite this, the relationship of trust between society and technology, a key factor of progress, has largely disappeared.

Upon the initiative of Euro-CASE, the NATF “Society and Technology” Commission (Mr Yves Farge, President) and on behalf of the ARB “Technology and Society” Class (Mr Jean-Louis Migeot), a seminar was organized on the theme “Technology perception by the public and conditions of a serene debate on technologies in our society”. This meeting attracted about 50 people and took place on 19 September 2012 at the Palace of Academies in Brussels.

The seminar successively dealt with three themes: Climate Change, Nuclear Energy and Genetically Modified Organisms. After a short presentation of technical and scientific stakes and their perception by the public, a lively debate included comments from psychologists, sociologists, legal experts, economists, physicians, historians, communication and media experts and engineers.

It was agreed that a similar seminar, on a larger European scale, would be organised in cooperation with the Joint Research Centre of the European Commission on 19 September 2013, in Brussels.



Science and Technology for Society (STS) Forum, Kyoto (Japan), 6-9 October

On behalf of the National Academy of Technologies of France, Jacques Lukasik attended this Forum in which he had an opportunity to present Euro-CASE structure and activities in a session in which various engineering and applied sciences academies from across the world were represented. Besides NATF, Euro-CASE was represented by acatech, IVA, RAEng and SATW. In total, approximately 800 technology and R&D leaders from around the world attended this STS meeting which was held for the 9th time.

MEMBER ACADEMIES MAJOR EVENTS IN 2012

Belgium www.academieroyale.be - www.kvab.be

► A "Technology and Society" seminar was held jointly with NATF on 19 September. It dealt with public perception of Nuclear Energy, Climate change and Genetically Modified Organisms and was attended by about 50 people.

Croatia www.hatz.hr

- On the 300th Anniversary of his birth, the Academy published a special issue of its bilingual bulletin "Tehnicke znanosti / Engineering Power", dedicated entirely to the world-renowned Croatian scientist, humanist, theologian and philosopher Rudjer Boskovic
- In March, the Academy signed an Agreement on Scientific and Technical Cooperation with the Academy of Medical Sciences of Croatia, Academy of Legal Sciences of Croatia and Academy of Forestry Sciences
- A meeting on "Food as a Basis of Health and Longevity" took place on 18 June in Zagreb. It was co-organised with the Scientific Council for Agriculture and Forestry of the Croatian Academy of Sciences and Art and the Biotechnical Center of the Croatian Academy of Engineering
- In September, representatives of the Academy met with a delegation of the Chinese Academy of Engineering (CAE), along with a group of scientists from the Faculty of Electrical Engineering and Computing in Zagreb.

Czech Republic www.eacr.cz

- EA CR was a partner to IVA in organising a Swedish Royal Technology Mission to the Czech Republic in May. His Majesty the King of Sweden, along with representatives of IVA and a group of selected representatives of Swedish business and academia, visited research institutes, the Czech Technical University in Prague, a healthcare institution and industrial companies, and met with representatives of the Czech state administration and economists
- A workshop entitled "Energy strategy for the 21st century in the Czech Republic" was held in September, with the aim of facilitating government-level discussion on number of issues such as the role of nuclear energy, the role of renewable sources of energy, distribution grids, energy savings and other topics
- The 2012 Annual Award of the Academy went to the team of architects and civil engineers led by Dr. Vladimir Tvrznic for the original engineering project and technology for the restoration of the structure of the Charles Bridge, one of the most significant 14th century historical monuments in Prague.

Denmark www.atv.dk

- In October, a Round-Table discussion took place in Copenhagen between members of the Academy, ATV's Finance Council and the European Commissioner for Climate Action, Ms Connie Hedegaard. The meeting focused on how business, climate and environment can go hand-in-hand
- The highlight of the 75th Anniversary of ATV was the conference on "Global Challenges and Technical Sciences - joint efforts to find the solutions for the future".

Finland www.academie-technologies.fi

- The Millennium Technology Prize is Finland's tribute to life-enhancing technological innovations and is awarded every second year. Linus Torvalds and Prof. Shinya Yamanaka were joint Grand Winners of the 2012 Prize in May. Later in the year, Prof. Yamanaka also won the 2012 Nobel Prize in Physiology or Medicine
- The International Millennium Youth Camp is an annual science camp for talented young people between the ages of 16-19. The target of this Camp is to find young people interested in mathematics, science and technology to help them start a career in these fields and to give them the opportunity to network with each other
- Technology Days is a science event held every two years in January for the general public with the aim of encouraging understanding of the role that technology plays in the world.

France www.academie-technologies.fr

- More than 300 participants attended a Conference-Debate on the theme of "Man in his digital environment" in November, organised by NATF in collaboration with the Economic, Social and Environmental Council of France (CESE)
- In October, NATF Fellows were invited to discuss research results on such themes as renewable energies, energy storage, and grids at a joint Seminar organised with the C.N.R.S. (French National Research Council) on "Research at the heart of the energy transition"
- The 2012 Euro-CASE Annual Conference on 13 November in Paris, preceded by an Opening Ceremony the evening before, marked the 20th anniversary of Euro-CASE.

Germany www.acatech.de

- On 26 November, acatech held a meeting in Brussels at which Christoph M. Schmidt, President of the RWI Essen and member of the German Council of Economic Experts, presented acatech's position paper "Towards a financially viable transition to sustainable energy" to experts from the worlds of science, business and politics. The EU Commissioner for Energy, Günther Oettinger, attended this meeting, and Bernard Tardieu, member of NATF and President of its Energy and Climate Change Commission, took part in the discussion Panel
- On 16 October, acatech celebrated its 10th anniversary in the Berlin Philharmonic Hall, along with a few hundred invited guests, including Jacques Lukasik, Secretary General of Euro-CASE
- During November's Falling Walls Conference in Berlin, a highly productive meeting took place between Prof. Anne Glover (Chief Scientific Advisor to the President of the European Commission), Lena Treschow Torell and Reinhard F. Hüttel, acatech's President, with a conclusion that a larger meeting with Euro-CASE representatives should take place in Brussels in 2013.

Greece

http://portal.tee.gr/portal/page/portal/INTER_RELATIONS/english/role

- The Technical Chamber of Greece participates in the "Intelligent Energy Europe for a Sustainable Future" project.
- TCG organised a series of technical conferences:
 - 3rd Pan-Hellenic Road Conference, Athens, 9-10 February
 - International Conference "Energy in Buildings", Athens, 13 October
 - Conference: Environment and Development 12-14 December.

Hungary www.mernokakademia.hu

- ▶ IAE produced a statement for the government about the extension of the Paks Nuclear Plant
- ▶ It also organised a conference on "Innovation for improving the surface public transport".

Ireland www.iae.ie

- ▶ IAE has produced position papers on "Policy Advisory on Energy Policy and Economic Opportunity - The Potential for Large Scale Electricity Exports" and on issues associated with the "Future Development of Broadband in Ireland"
- ▶ A major review and policy advisory study on "Manufacturing and its future development in Ireland" has been initiated by IAE and is due for publication in early 2013.

Italy www.fast.mi.it

Netherlands www.acti-nl.org/

- ▶ On 25 October, ActI held its 2012 Innovation Conference, "Grand Challenges, Innovating with Impact".

Norway www.ntva.no

- ▶ A major event of 2012 was a symposium on "Norwegian Energy Policy in Context of the Global Energy Situation".

Portugal www.ordemengenharios.pt

- ▶ A series of technical events was organised:
 - Innovative solutions in thermal solar electricity, Prof. Manuel Collares Pereira
 - Membrane Engineering, Prof. João Goulão Crespo
 - Geotechnical Risk, Prof. Laura Caldeira
 - Urban rainwater management systems for the future, Eng. Rafaela Matos
 - Engineering challenges associated with deep offshore development, Eng. Manuel Ferreira de Oliveira
 - A factory for the future: microbial polymer production from waste, Prof. Maria da Ascensão Reis.

Romania www.astr.ro

- ▶ At the 7th Annual Academic Days, the theme was "Life and work in major urban areas, such as Bucharest: present and future". The event dealt with development-related issues including power and heat, transport and mobility, removing pollutants, water supply, construction and seismic safety, urban and green spaces, telecommunications, waste and their handling and noise abatement
- ▶ To promote industrial policies, ASTR, together with specialists from industry and business, held a series of meetings that have addressed topics of interest such as:
 - Development of energy and transportation infrastructure in Romania and its European connection
 - Reindustrialisation and the role of scientific research
 - Smart grids and energy efficiency.

Slovenia www.ias.si

- ▶ A Round Table, "Technology Highway: Consensus for Innovative Slovenia", was organised in December 2012. It focused on Public-Private Partnerships, Horizon 2020 and the consequences they will have on research and development in Slovenia
- ▶ Bilateral agreements were signed in autumn 2012 with the Chinese Academy of Engineering, the Russian Academy of Engineering and

the Ukrainian Academy of Engineering

- ▶ An IAS conference in September, at which new members were received into IAS, was attended by the President of the Republic of Slovenia, Dr. Danilo Türk, who had been invited as an honourable speaker.

Spain www.raing.es

- ▶ The RAI held its Annual Awards: "Academiae Dilecta" (Award for engineering companies) and "Young Engineers"
- ▶ The Biennial Tribute to historical Spanish engineers was awarded this year to Agustin Pascual, founder of the Spanish Forest Engineering
- ▶ A major event of 2012 was a symposium on "Water Management in Spain".

Sweden www.iva.se

IVA organised more than 80 major seminars and workshops in 2012, including study visits. Some of the most relevant are listed below:

- ▶ 93rd IVA Annual Meeting, 26 October, Stockholm, with nearly 800 IVA members and invited guests from all over the world
- ▶ Science and Society Forum on "Visualization and Virtualization", 25 October, Stockholm
- ▶ "Technologies for the Future" at the Royal Palace, 22 October, Stockholm, hosted by His Majesty the King of Sweden
- ▶ Symposium on "Managing Technology for Security and Defence", 19 June
- ▶ "Fusion is not a dream, but the real target: Bringing the Sun to Cadarache", 26 April
- ▶ Launch of the project "An Energy Efficient Society", 27 March
- ▶ A study visit to Universities of Technology and Research Institutes in the Republic of Korea, 5-10 November
- ▶ Royal Technology Mission to the Czech Republic, 8-11 May, with His Majesty the King of Sweden.

Switzerland www.satw.ch

- ▶ The electric power system in Switzerland faces large-scale remodelling; the Swiss Academy of Engineering Sciences has contributed to various publications on the question "What should electricity supply in Switzerland look like in the future?"
- ▶ At the end of August, delegates of technical academies from all over the world gathered for the 2012 Annual Meeting of their umbrella organisation CAETS (International Council of Academies of Engineering and Technical Sciences). The event took place in Zurich and was organised by SATW
- ▶ The CAETS/SATW Symposium, which took place on 30 August, was devoted to the topic "Urban Development and Public Transportation - Improved Understanding of the Interdependencies". It also served as the SATW Convention 2012.

United Kingdom www.raeng.org.uk

- ▶ Major activities at the Royal Academy of Engineering in 2012 included the launch of the new £1m global prize, the Queen Elizabeth Prize for Engineering
- ▶ Policy work included the publication jointly with the Royal Society of a major new report, "Shale gas extraction in the UK", which has provided the basis for UK government shale gas policy
- ▶ International activities included two bilateral summits with the Chinese Academy of Engineering on emerging technologies and emerging industries, which have led to several joint UK-China innovation initiatives.

EXECUTIVE COMMITTEE AND BOARD REPRESENTATIVES

MEMBER-ACADEMIES MEMBERSHIP MODIFICATIONS IN 2012

Two major alterations in Euro-CASE structure were registered during the past year.



► After the Board's approval on 14 November 2012, the Polish Academy of Sciences (Polska Akademia Nauk, PAN) officially joined Euro-CASE on 1 January 2013.

The Polish Academy of Sciences is a state scientific institution founded in 1952. Its mission is the development, promotion, integration and dissemination of science, as well as contribution of education and enrichment of national culture. The Academy has also become a major scientific advisory body to Polish authorities, through its scientific committees.

The Academy is composed of 321 national members (including both full and corresponding members) and 203 foreign members. Membership in the Academy is held for life. The number of national members is set at no more than 350. All members (national and foreign) are elected by the General Assembly from among candidates with the highest scientific achievements and of recognised authority. Each member of the Academy is a member of one of the five divisions, according to her or his scientific discipline.

The organizational structure of the Academy is comprised of divisions, territorial branches and scientific and task force committees. The Polish Academy of Sciences will be represented in Euro-CASE by its Division IV, "Engineering Sciences", and by its International Affairs Office. There are 73 national and 37 foreign members in Division IV. This Division comprises 21 scientific committees related to various aspects of engineering, technology and applied sciences.

Austrian Academy of Sciences

► The Austrian Academy of Sciences, faced with considerable financial difficulties, decided to withdraw its membership from Euro-CASE as of December 2011. This decision was approved by the Board at its meeting in May 2012.

EXECUTIVE COMMITTEE 2012



Lena Treschow Torell (IVA), Chairman



Reinhard Hüttli (acatech), Vice Chairman



William Wakeham (RAEng), Treasurer



Jacques Lukasik (NATF), Secretary General



Manuel Marquez Balin (RAI), Member



Borut Mavko (IAS), Member



Petr Zuna (EA CR), Member


As of 31 December, 2012, Lena Treschow Torell stepped down from the Chairmanship of Euro-CASE. Until the election of a new Chairman in the 1st semester 2013, Reinhard Hüttli accepted to serve as Acting Chairman.



BOARD 2012

Members of the Executive Committee are *ex officio* members of the Board. During 2012, members of the Executive Committee met four times, always in Paris except for the meeting hosted by IAS in September in Ljubljana. The Board met twice, in May, hosted in Dublin by the Irish Academy of Engineering, and in November in Paris, hosted by NATF, after the Annual Conference.

2012 BOARD MEMBERS AND THEIR ALTERNATES IN ITALICS:

	Belgium	ARSB / KVAB	Hervé Hasquin, Géry van Outryve d'Ydewalle, <i>Jean-Louis Migeot</i>
	Croatia	HATZ	Stanko Tonkovic, <i>Miljenko Lapaine</i>
	Czech Republic	EA CR	<i>Milos Hayer</i>
	Denmark	ATV	Lia Leffland
	Finland	TAF	Ainomaija Haarla
	France	NATF	François Guinot
	Germany	acatech	<i>Otthein Herzog</i>
	Greece	TCG	Christos Spirtzis, <i>Christos Tsatsanifos</i>
	Hungary	HAE	Janos Ginsztler, <i>János Takács</i>
	Ireland	IAE	Michael Higgins
	Italy	CISAI	Alberto Pieri
	Netherlands	AcTI	Emmo Meijer, <i>Henk Dits</i>
	Norway	NTVA	Roy Gabrielsen, <i>Hein Johnson</i>
	Portugal	PAE	Fernando Santana, <i>João Pereira Bento</i>
	Romania	ASTR	Mihai Mihaita, <i>Florin Tanasescu</i>
	Slovenia	IAS	<i>Igor Emri</i>
	Spain	RAI	<i>Pere Brunet</i>
	Sweden	IVA	Björn O. Nilsson, <i>Magnus Bredne</i>
	Switzerland	SATW	Arthur Ruf, <i>Rolf Hügli</i>
	United Kingdom	RAEng	<i>Shane McHugh</i>

MEMBER ACADEMIES

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des Lettres et des Beaux-Arts de Belgique
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www.technologyacademy.fi

FRANCE

National Academy of Technologies
of France - NATF
Grand Palais des Champs-Élysées - Porte C
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75008 Paris France
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www.academie-technologies.fr

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der Technikwissenschaften - acatech
National Academy of Science
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THE NETHERLANDS

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NORWAY

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PORTUGAL

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SWITZERLAND

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