STOA Newsletter

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European Parliament

SCIENCE AND TECHNOLOGY OPTIONS ASSESSMENT

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Compared to the previous 15, now as many as 24 MEPs sit on the STOA Panel

News | STOA membership enlarged

Technology assessment and scientific foresight are becoming ever more relevant politically and are moving to the centre of policy-makers' preoccupations. It is not surprising therefore that the EP's STOA Panel, chaired by Paul Rübig MEP and under the responsibility of EP Vice-President Mairead McGuinness MEP, has recently been enlarged. The STOA Panel, which meets monthly in Strasbourg, now comprises 24 MEPs, compared to the previous 15.

Panel membership involves monitoring techno-scientific developments, discussing with researchers and experts, proposing and deciding upon projects, chairing or taking otherwise actively part in workshops and debates, attending international scientific and science-policy conferences, and ensuring a two-way communication between STOA and Panel members' committees, all with the aim to inform science-based policy-making in the EP.

The Committees on Agriculture & Rural Development (AGRI), Employment & Social Affairs (EMPL), Environment, Public Health & Food Safety (ENVI), Internal Market & Consumer Protection (IMCO), Industry, Research & Energy (ITRE), and Transport & Tourism (TRAN), which have appointed Members to the STOA Panel since 2004, have seen the number of their representatives increase by two (ITRE) or one (the rest), whilst two committees – Culture & Education (CULT) and Legal Affairs (JURI) – are now represented with one Member each.

This means more diversity in the debates about new technology trends and their impacts on society. Moreover, with the increase in membership, the Panel becomes more representative in terms of the number of political groups and committee competences, thus linking STOA closer to committee work.

News | MEPs and scientists getting closer

The 4th round of the 'MEP-Scientist Pairing Scheme' was launched with an invitation for the expression of interest by scientists in May 2015. First STOA Vice-Chair Eva Kaili MEP officially inaugurated the project on 15 September 2015 during the 'Science Meets Parliaments' event in the EP, which STOA coorganised with the European Commission's Joint Research Centre (JRC).

From 326 highly-qualified applicants, STOA established a list of 108 scientists and invited interested MEPs to choose their counterpart in an 'MEP-scientist pair'. 33 such pairs have been established. This is an impressive and encouraging evolution compared to previous editions of the scheme (last in 2011 with 12 pairs). Paired scientists will now come to the EP, for the so-called 'Brussels week' (25-27 January 2016), where they will get acquainted with the workings of the European Parliament's committees and research services, and shadow their MEP counterparts in their daily activities.

Study | How the collaborative internet and 3D printing might change our lives

Internet-related technologies are re-shaping the world, our lives and society as we know them. As an example, 3D printing is changing the manufacturing and healthcare industries, as users become an active part of the process and products are personalised. In the near future, we can expect to have 3D-printed drugs, furniture, food and clothes. It will also become increasingly common for new businesses to be crowdfunded. Crypto-currencies may enable new economic relations and the creation of crypto-contracts. In another development, open data allows people to access, use and distribute information freely, without any legal, economic or socio-cultural restrictions.

All these new concepts and developments were explored at a workshop hosted by STOA in January 2015 and STOA followed up with the recent publication of its study 'Impact and Potential of Collaborative Internet and Additive Manufacturing'.

The study identifies the opportunities and challenges associated with the technologies supporting the collaborative economy. Attention is drawn to a number of social, political, economic, but also moral and ethical issues associated with the migration into this new way of working, as the impacts of the collaborative economy are not restricted to the conventional workplace, but also reflect on the person and society. So, the study asks how we can increase European competitiveness and improve citizens' lives in a collaborative economy.

The study presents a number of options for policy-makers, enabling them to better understand the stakes and put in place, while there is still time, effective policies to nurture the positive impacts of these new powerful technologies and avoid any unwanted negative impacts associated with their expected wide deployment.

Study | ICT in the developing world

ICT could help in reducing inequalities in low- and middle-income countries by strengthening health and education systems

Over recent years, there have been increasing opportunities for inhabitants of low and middle-income countries (LMICs) to use information and communication technologies (ICT) and reap some of the benefits accruing from these technologies. ICT can potentially help LMICs tackle a wide range of social and economic problems by improving access to information and enabling communication.

A recently published STOA study examined the nature and extent of the impact ICT have on poverty reduction in LMICs, with a specific focus on ICT for reducing inequalities and strengthening health systems. The effectiveness and prospects of EU actions in the area of improving ICT diffusion in LMICs were also assessed.

Building on three literature reviews, the study first describes the conditions hampering or facilitating the support of ICT to poverty reduction in LMICs, then focuses on the specific opportunities and obstacles in the use of ICT in the healthcare sector and, finally, looks into the EU policy approach for promoting ICT in LMICs. Evidence from desk analysis is complemented with the opinions of 145 surveyed experts, ten of which were also interviewed.

Experts' opinions confirm the evidence of desk analysis, pointing to health and education as the main areas in which ICT can play a significant role in LMIC development. Building upon the evidence collected, the study provides policy options for future action, which the EU could undertake to help LMICs profit fully from the opportunities offered by ICT. The study calls for balancing top-down and bottom-up initiatives, so as to address access and capacity constraints in parallel, achieving thus better results in terms of economic growth and poverty reduction.

Event | Discovering the world of quantum optics

Quantum physics has given us the keys for controlling the behaviour of matter and light at microscopic level. Most of the devices that we use in our daily lives are light-based and use physics to create and manipulate matter and particles. On the occasion of the UN General Assembly's initiative to declare 2015 the International Year of Light, STOA invited Professor Serge Haroche, winner of the Nobel Prize in Physics 2012, as a keynote speaker at its Annual Lecture on 9 December 2015. He talked about what quantum physics means for the modern technological era: TVs, smartphones, computer screens, navigation systems and fibre-optical devices were developed as applications of quantum science.

Christophe Salomon, professor of quantum optics in Paris, asserted that important discoveries in quantum physics improved navigation, earth monitoring and geodesy, greatly thanks to the new precision tools for time measurements. Atomic clocks afford a more precise definition of time, making the operation of global positioning satellite systems, such as Galileo, possible. Grégoire Ribordy from ID Quantique said that we were witnessing the second quantum revolution: the growth of information transmission and processing is purely based on quantum physics. The quantum computers under development will be different from the state-of-the-art digital computers, which still require data to be encoded into binary digits (bits). Quantum computers use for the same process quantum bits (qubits), which are incomparably faster.

The lecture was chaired and moderated by Paul Rübig, STOA Chair. Mairead McGuinness, EP Vice-President responsible for STOA, and Eva Kaili, First STOA Vice-Chair, made the concluding remarks.

Visit | STOA at the STS *forum*

Paul Rübig, STOA Chair, attended the 12th Annual Meeting of the Science and Technology in Society (STS) *forum* held from 4 to 6 October 2015 in Kyoto. This meeting, devoted to global trends in Science, Technology and Innovation, was attended by some 1000 delegates of 92 nationalities, and was opened by the Prime Ministers of Japan, France and Sri Lanka. Mr Rübig moderated the session on 'Smart Cities - Urban Design and Development' and held bilateral meetings with the heads of the major Japanese Science and Technology (S&T) bodies.

As part of the close relationship they have developed over the years, STOA and the STS *forum* are now preparing a meeting of senior European and Japanese policy-makers in the S&T area to be held on 4 May 2016 in Brussels.

Event | How will technology re-shape healthcare?

eHealth can help to empower and engage citizens for better managing their health

EU Member States and regions are facing a growing demand for healthcare services, partly due to the ageing population and the higher prevalence of chronic diseases. The competent authorities have long realised the potential of eHealth for addressing these problems and are supportive of its deployment. However, eHealth is not as developed and used as expected and needed.

On 1 December 2015 STOA organised a workshop on this topic, chaired by Eva Kaili, First STOA Vice-Chair, and moderated by John Bowis, former UK Health Minister and MEP. The event offered the opportunity to discuss the lessons EU healthcare organisations have learned from different experiences, recognise barriers to improving the use of eHealth in Europe, and identify areas where policy support at regional, national and European level would be welcome.

STOA (Science and Technology Options Assessment), as an integral part of the European Parliament's structure, has the task to carry out expert, independent assessments of the impact of new technologies and identify long-term, strategic policy options useful to the Parliament's committees in their policy-making role.

STOA Panel

The STOA Panel is composed of 24 MEPs, including the EP Vice-President responsible for STOA and 23 MEPs appointed by eight parliamentary committees. With the input of committees and individual Members, the STOA Panel, on the recommendation of its Bureau, decides on projects and other activities in this field. Each STOA project is overseen by one or more Panel members.

STOA Panel

The STOA Panel includes Members from the following committees:
Industry, Research and Energy (ITRE): six Members
Agriculture and Rural Development (AGRI): three Members
Employment and Social Affairs (EMPL): three Members
Environment, Public Health & Food Safety (ENVI): three Members
Internal Market and Consumer Protection (IMCO): three Members
Transport and Tourism (TRAN): three Members
Culture and Education (CULT): one Member
Legal Affairs (JURI): one Member

STOA Bureau

The STOA Bureau is comprised of four Members:
Mairead McGuinness, EP Vice-President responsible for STOA
Paul Rübig, STOA Chair
Eva Kaili, 1st STOA Vice-Chair
Evžen Tošenovský, 2nd STOA Vice-Chair.

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