



## CALL FOR SCIENCE TO BUSINESS PROPOSALS

### EuroScience Open Forum 2018

Toulouse (France), 9 - 14 July 2018

– SHARING SCIENCE: TOWARDS NEW HORIZONS –

#### What is ESOF?

The EuroScience Open Forum (ESOF) is the largest interdisciplinary meeting on science, innovation and their relation to society in Europe. This biennial event, created in 2004 by EuroScience, offers a unique framework for interaction and debate among scientists, industry, politicians, and society. Its purpose is to:

- Showcase the latest advances in science.
- Promote dialogue on the role of science and technology in society and public policy.
- Stimulate public interest, engagement, excitement, and debate about science and technology.
- Engage the European science community with global partners and perspectives.

ESOF includes *all disciplines* and the word “science” is meant to encompass the arts, social sciences, and humanities as well as physical and natural sciences, engineering and medicine.

ESOF 2018 is built around the motto “Sharing science: towards new horizons”.

#### Context of ESOF 2018

ESOF 2018 (9 - 14 July) will take place in Toulouse, a genuine city of science and innovation. The year 2018 is also designated as the European Year of Cultural Heritage. Toulouse has ancient roots, not only as a historical Roman city but also as a pioneer in academic tradition and innovative practices. Examples include the “Académie des Jeux floraux” which was the first academy in Europe, and many remarkable scientific figures born or established in the region, such as the mathematician Pierre de Fermat and Nobel laureates in chemistry, physiology and medicine, and economics.

The Occitanie Region, whose capital is Toulouse, is ranked first in France for the ratio of R&D per capita and R&D regional investment. Among other fields, Toulouse and its region have a leading position in aeronautics, space industry, health and cancer research, biotechnology and agro-industry. They all constitute models for the promotion of open innovation and knowledge sharing between public research organisations and industry.

#### ESOF WEEK FIGURES

**4 000 +** researchers, educators, business actors and policy makers

**80 +** countries

**150 +** conferences, workshops, scientific sessions

**400 +** journalists and science communicators

**200 +** events for the general public

**35 000 +** participants

A forum on all these aspects, with a European dimension but widely open beyond Europe, is especially important as the successor programme of Horizon 2020 - the current European Union research and innovation framework programme – is currently being discussed.

### **ESOF 2018 will comprise a number of distinct programme tracks:**

- a **Science** programme of seminars, workshops, and debates of various formats on the latest research and related policy issues, structured around a programme of keynote speakers and the latest scientific issues.
- a **Science-to-Business** programme to explore the major issues for research within business and industry and the role of universities for business as well as public-private partnerships endeavours.
- a **Career** programme showcasing career opportunities across Europe and beyond for researchers at all stages of their careers.
- an **Exhibition** that showcases the best of academic, public and private research and innovative approaches in Europe and beyond.
- a **Public engagement** programme, Science in the City.
- a **Forum** to host other meetings, satellite events and networking opportunities (e.g. young researchers' associations, student parliament and science media professional societies).

**This call seeks innovative session proposals for the Science-to-Business programme. We encourage proposals from the science and business communities at large and notably from those with interest in science breakthrough and innovation management.**

## **ESOF 2018 SCIENCE TO BUSINESS MAIN THEMES**

The programme, which will take place **from 9 to 14 July 2018**, will be a unique platform in Europe to exchange ideas and good practices from around the world on research-driven business models and on the economic developments resulting from technological innovation. Proposed sessions must stay within this realm but should also align with one of the themes described below.

All themes will bring elements that contribute to answering the overarching questions: **How can science boost economics? How can issues identified in business trigger research?**

### **1. Business Networks**

With ESOF gathering actors from many countries, it seems important and relevant to discuss business networks, as it is a main asset of the event for participants. Sessions of this theme should address the various complexities of networking to help business develop and above all, innovate.

*Questions that could be addressed in the theme:* How to create innovative production sectors? How can business actors collaborate to help each other innovate? What policies could make business networks expand? How have European business networks contributed to innovating

sectors? What should be the public authority's role in business networks? How to turn a shallow business network into productive collaboration? Are business networks lacking interdisciplinarity?

*Keywords: Interclustering, Cross-fertilisation, Innovative sectors, New modes of collaboration, Coopetition, Large international projects, Data sharing, Mobility of scientists, Diasporas, Innovation support networks, Collaboration between the public and private sector, Brain drain, Science advice, Science diplomacy, Open innovation.*

## 2. Business to Science, Innovator's thinking

By reversing the idea of the programme, instead of discussing how scientific research leads to business innovation, we can think about business actors raising issues and being involved in research from the start so that outcomes can help them optimise their resources and development.

*Questions that could be addressed in the theme:* How can / have business actors participate/d in R&D projects? What strategies can business actors use to get involved in research? How can business actors gain knowledge specific to their operation? What sectors have already benefited from being involved in research? How can business actors cooperate internationally to help each other fill research gaps specific to their activity? What funding schemes are efficient for innovators' activities?

*Keywords: User experience, Corporate R&D, Bottom-up research, Business needs, Research driven approaches, Intellectual property rights (IPRs), Innovation sharing, Open innovation, Makers, Innovators, Entrepreneurs, European collaboration, Research expertise.*

## 3. Climate Change

Humans are driving climate change at an unprecedented level, which is creating many threats to our society and environment, but also several opportunities to drive change. The topic is inevitable when discussing the link between science and society since it is one of our century's greatest global challenges that directly involves scientific research and business activity.

*Questions that could be addressed in the theme:* How does the private sector address climate change? How can respecting the environment create economic activity? How can local and regional actors address climate change? How to change lifestyles to combat climate change? How to improve climate change communication? How is the EU strategy regarding climate change affecting business practices?

*Keywords: Renewable energy, Environment, Geoengineering, Biodiversity, Carbon Emissions, United Nations Climate Change Conference, Marine environment, Environmentally induced migrations, Demographic Growth, Land use, Resource management, Recycling, Agriculture, Vegetarianism and Veganism, Sustaining human societies, Habitat, Clean technologies, Smart mobility, Smart Cities, Fab cities, Waste management, Environmental health issues.*

## 4. Business Trends in Transport Technologies

Our societies are increasingly dependent on technologies of transportation: on land, water, air or in space. Everything moves: people, goods and data. The understanding of our world is dependent on space technologies. This increasing mobility becomes a marker for future years. Transport technology is constantly enhanced in order to make it safe, sustainable, silent, fast and practical. Business linked to such developments involve multiple disciplines and stakeholders internationally.

*Questions that could be addressed in the theme:* Which innovations will there be in the field of transport to face the massive demand, especially in avionics? How can airplanes' carbon footprint be reduced? What impact will smart and automated, so-called "autonomous", vehicles have? How does digitisation, including artificial intelligence, impact transportation? Is travel in space or space tourism a utopia within our timescale? What are current developments related to humans' walking and running abilities? What are the ethical challenges for such business areas? Can collective transport be reinvented to meet the needs of a planet with 9 billion people?

*Keywords:* Transport, Aeronautics, Communication satellites, New vehicles, Moving within territories, AI, Transport of goods, Drones, Space, "Autonomous" surface and aerial vehicles, Navigation (GPS, Galileo, and beyond), Liability issues, Privacy, Enhanced mobility capacities of humans.

## 5. Business in a Digital World

In the past few years, businesses have had to keep up with the intense digital evolution of our world. Today society seems to be dominated by digital infrastructures and modes of communication based on algorithms and data crunching, and impacted by the so-called bio-digital convergence. More generally, Internet of Things (IoT), Embedded Systems and Data Sciences are disrupting many industrial and human activities. The innovative business associated with the scientific scene is new and exciting. It is driven concomitantly by physical sciences, human, social and life sciences, mathematics and informatics, and will have an important social impact and notable consequences on the future job market.

*Questions that could be addressed in the theme:* What are the new digital developments that will have the biggest impact on businesses in the near future? Has the digital agenda triggered new interdisciplinarity? Is "uberisation" going to disrupt labour relations? How do digital modes of interaction impact human agency and decision-making? What is the impact of automation for blue and white collar workers? Will complete sectors of the economy be transformed? How is the digital cloud politically regulated? Who controls data repositories? Is data protection scared by current developments? What are the new business opportunities triggered by "privacy by design"?

*Keywords:* Big data; Data analytics; Smart systems; Post-human societies; Cloud; Open innovation; Robotics; Smart grids; Internet of Things; AI; Machine learning; Embedded Systems; Data protection and data privacy; Social and political impact of social networks ; Digital transformation; Systems liability; Legal aspects; Governance in the digital world; human resources management in a digital world.



## 8. Human Factors and Persons first in Business – the Industry of the Future

The role of human factors and respecting persons in business is often neglected while on the contrary, it should be enhanced. Keeping in mind the importance of leadership, employee engagement and the consideration of customers as persons, this theme can address ways to rethink how business actors manage their employees and operations.

*Questions that could be addressed in the theme:* How can the humanities and social sciences in business be beneficial? How is research, notably Deep Tech startups and human organisations, driving entrepreneurship? What activities can business actors modify to increase their human behaviour? How can business actors improve their understanding of the user experience? How can free time within a business increase productivity?

*Keywords:* User experience, Deep tech, Leadership, Research through citizen science, Circular economy, Transportation and mobility, Well-being, New collaborative model, Social issues and solidarity, FabLab, Makers, Socio-cultural and economic issues, Responsible research and innovation, Corporate social responsibility, New business models.

## 9. Science, Research and Entrepreneurship

Students are often educated in a way that confines them to one field, keeping researchers in their scientific realm and on the other hand, keeping business actors in business. This theme should focus on the relationship between research and entrepreneurship, and how scientists can succeed as entrepreneurs.

*Questions that could be addressed in the theme:* How can students be further encouraged to become entrepreneurs? Should researchers engage in entrepreneurship? What strategies for scientific researchers transitioning to the business sphere? Which skills must researchers and entrepreneurs develop for tomorrow?

*Keywords:* Science education, education to entrepreneurship, Scientific Research, Entrepreneurship, Startup companies, Young people and research, Informal and semi-formal science and innovation education, Transitioning between academic and industrial careers, Research careers, Skills, Science policy in Europe beyond H2020, Lifelong learning.

## 10. Change of the Entrepreneurial Paradigm

The countless businesses and organisations have made it very difficult to innovate and be an entrepreneur without research to build on. This has led to the inevitable need for innovators to cross disciplines, build on different research outcomes and for companies to sell their ideas to build larger projects. The evolution of this complex entrepreneurial system points to the need to rethink our economic model.

*Questions that could be addressed in the theme:* Is it possible to innovate without research? How is the economic model being reshaped? What alternative economic models could increase entrepreneurship? How can entrepreneurs benefit from working in an interdisciplinary way? How are startups bankable? Are startups and spinouts the sole way of change?

*Keywords:* Economic model, Deep tech, Product processing, Interdisciplinarity, Innovation policies, Evolving structuration of research organisations, Science communication, Uberisation of research, Science and innovation policy in Europe beyond H2020.

## CROSSCUTTING THEMES

### 1. Security and Safety

Here, these terms are to be understood in a very broad sense. Topics can explore science, technology and businesses, and the many ways in which they can contribute to the protection of society against any potential threats, ranging from terrorist alerts to pandemic threats. Aside from business contributions, there is also room for discussion on the impact that external security and safety measures have on business and innovation.

*Questions that could be addressed in the theme:* How can businesses grow by working on security and safety issues with governments? What role could artificial intelligence play in upcoming years and what ethics should frame it? Is security a barrier to innovation? How far can we push the limits of innovation while living in a safe and secure world?

*Keywords:* Food security, Artificial intelligence, Terrorism, Product security, Cybersecurity, Energy security, Transportation security, Public Health, Water management, Electromagnetic radiation, Ethics, Big Data, Data sharing.

### 2. Responsible Research and Innovation

Responsible research and innovation (RRI) is an approach that anticipates and assesses potential implications and societal expectations with regard to research and innovation, with the aim to foster the design of inclusive and sustainable research and innovation. RRI shares the arena with other concepts, such as technology assessment, risk assessment, technology management and sustainability management. The biggest and possibly most powerful concept though is often overlooked: Corporate (social) Responsibility (CR). It could be thought that the word 'corporate' limits the application of CR principles and tools of RRI, because RRI deals with private and public investments. However, the three main corporate responsibilities -environmental, social and economic- are the same for publicly funded research and innovation (R&I) actors.

*Questions that could be addressed in the theme:* What are the institutional and governance changes that foster RRI in business? In collaborations between public and private sectors? How is RRI changing practices in everyday science based business? Can responsible research and innovation be globalised? What rising innovations are most threatening to responsible research and innovation? How to encourage businesses to be responsible without regulation? How to share and implement good practices in a fragmented society?

*Keywords:* Industry, Value chain, Corporate social responsibility, Methodology of RRI, Ethical Efficiency, Responsibility and Contingency, Cultural interaction, Sustainability, Nutrition and health, Food and product safety, Responsible sourcing, Environment.

## SELECTION AND SUBMISSION GUIDANCE

### Session duration and format

Sessions last **1 hour and 15 minutes**.

You are encouraged to make your sessions as **interactive and innovative** as possible to maximise opportunities for dialogue and discussion. Examples of formats are:

- Traditional panel discussions: maximum 3-4 speakers (maximum 15 minutes each) followed by an extended discussion with the audience.
- Interactive round table(s): a flexible format with brief presentation and space for questions, answers, and reactions.
- Workshop: a flexible format, led by a speaker experienced in stimulating exchanges of views and using practical exercises.
- Innovative formats will be particularly welcomed (such as hackathons, Ted-type talks, “My Thesis in 180 seconds”).

Please remember that this is not a conventional scientific or innovation conference and that your audience may be diverse (Scientists, Policymakers, Students, Business managers, Entrepreneurs, Science and innovation funders, General public, etc.) and interested, but not necessarily knowledgeable, in your field. We recommend that you pay attention to the communication style and the ability of your suggested speakers to address an ESOF audience.

Please target your proposals at a **scientifically literate but non-specialist audience**.

Be prepared to be flexible and patient, and be sure to leave sufficient time for wide-ranging questions and debate. We encourage co-chaired/co-moderated sessions between senior and junior persons in order to foster various styles of managing sessions and to facilitate the participation of all generations in the audience. However, it is important that moderators should have the required experience for the role.

### Guidelines (please read carefully)

Instructions for submitting your proposal can be found through the ESOF 2018 website ([www.esof.eu](http://www.esof.eu)). The website also contains information about the other program tracks.

The ESOF 2018 International Science to Business Program Committee will consider the following criteria when assessing proposals:

#### 1. Content

- Relevance to conference themes\*.
- Quality, originality, and topicality in order to attract delegates and ensure they benefit from new insights and discussion\*.
- Interdisciplinary approach.
- Potential to attract media interest.

#### 2. Participants

- International perspective (the proposed speakers/participants within sessions should come from multiple countries and overall geographical balance will be sought in the program)\*
- Diversity (panels will be expected to aim for an appropriate balance of gender and maximize inclusivity, sessions organized by senior-junior tandems will be appreciated)
- Participation by companies and NGO's is welcome.

