TOGETHER FOR A DEMOCRATIC AND SUSTAINABLE EUROPE

POSITION ON FP9

ecsite

89/7 AVENUE LOUISE
LOUIZALAAN
B-1050 BRUSSELS
BELGIUM
+32 2 649 7383
WWW.ECSITE.EU

"Science is the only way we can reconnect citizens with the EU project"

Commissioner C. Moedas

Presentation of the Rise Group publication on the future of EU research and innovation policy, 15 May 2017

The next Framework Programme FP9 has to live up to citizens' expectations who are calling for change

A democratic and sustainable Europe needs a society

that welcomes and triggers technological and societal change

and that shapes this change with its own progressive values

This has to include

More researchers and innovators

Mutual trust between society, research and public institutions

An innovation and entrepreneurship culture

Citizens with a strong scientific and technological culture

FP9 should push traditional boundaries and actively involve citizens in the science and innovation process

FP9 should push traditional boundaries and actively involve citizens in the science and innovation process. This is the role of professional science mediators working in science engagement organisations such as science museums/centres. They are necessary for an efficient and relevant research system because: they are trusted by the public; they have enormous reach (Ecsite members alone attract more than 40 million visitors per year); they are highly experienced and innovative; they have demonstrable leadership and convening power.

The young European generation is strongly affected by unemployment, mistrust of established institutions and is permeable to fake news. And they are the next leaders. Current leaders have a responsibility towards this generation; this is why FP9 should send a clear message to young people that science, technology, innovation is for them to shape, to use and that it will provide interesting job opportunities. This concern should be addressed by the research and innovation system as well as by the formal and informal learning systems, with adapted engagement offers to the young.

Science engagement is crucial
to the success of Europe and requires

An increased support to Research and Innovation

A distinctive strand of funding that allows science engagement organisations to develop innovative practices and promote excellence in science engagement

The integration and funding of science engagement as an indispensable part of the research and innovation processes

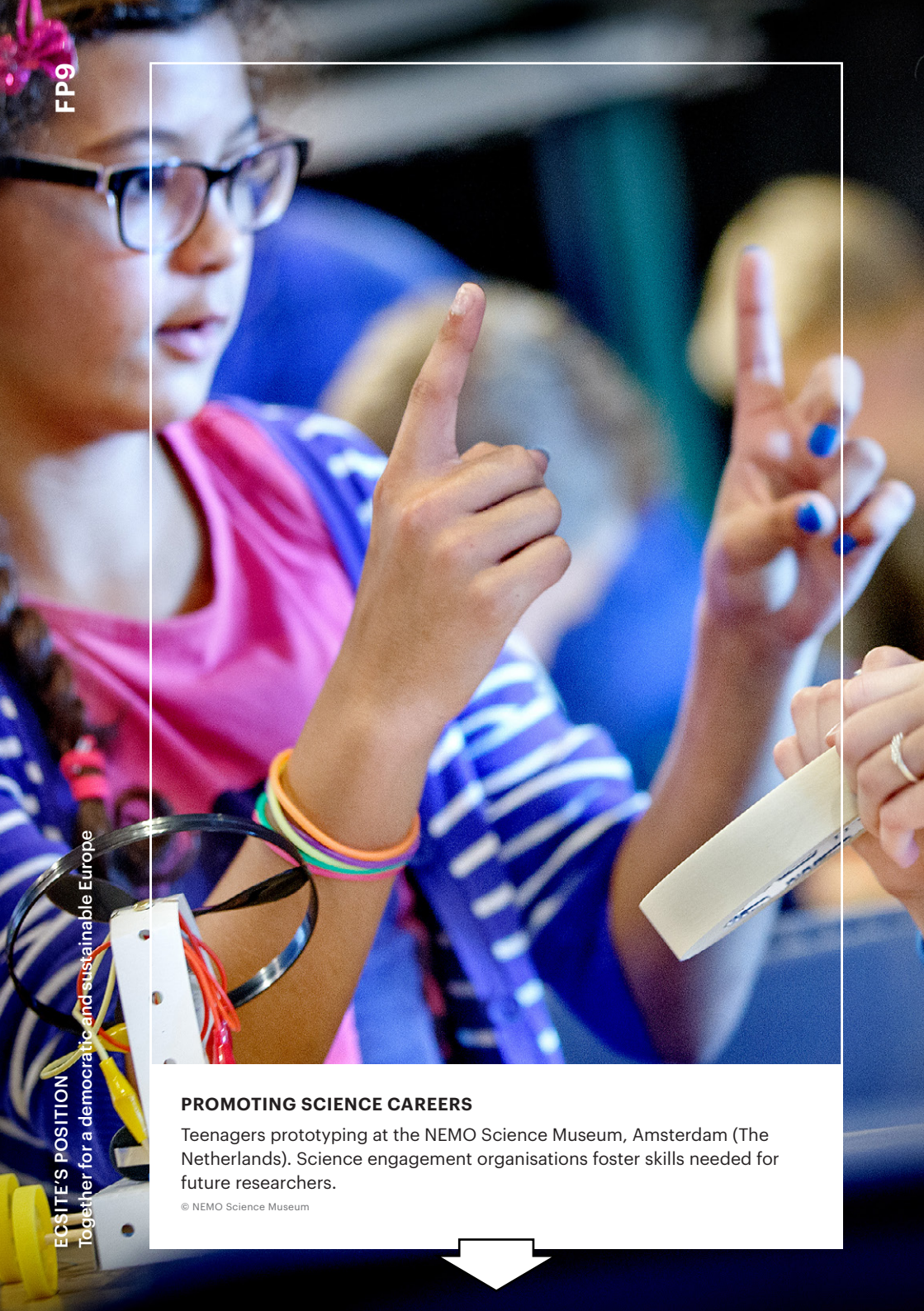
The benefits of science engagement

- Foster an innovation and entrepreneurship culture by engaging young people with science
- Prepare future workforce for research and industry
- Combat fake news by promoting critical thinking and the ability for citizens to search and analyse information
- Enhance innovation uptake by having citizens involved in research and innovation
- Increase citizens' engagement by having a new model of societal participation
- Allow citizens to shape technologies and their uses in order to align them with European values
- Better communicate scientific results by demonstrating and debating the impacts of research and innovation policy

What we ask from FP9

1. **European "Youth and Science and Technology" has to become a European flagship**
2. **A science and society programme is required with a separate strand of funding that includes a focus on combating fake news**
3. **Science engagement must be recognised as an integral part of the research and innovation system**
4. **Innovation in science engagement approaches is needed to tackle new societal challenges**
5. **Funding for engaging citizens with the process and outcomes of science and innovation needs a significant increase**

Scientific careers



PROMOTING SCIENCE CAREERS

Teenagers prototyping at the NEMO Science Museum, Amsterdam (The Netherlands). Science engagement organisations foster skills needed for future researchers.

CHALLENGES

- Research and innovation drives economic growth, boosts competitiveness and tackles societal challenges; Europe needs to recruit its future researchers and engineers
- Formal education alone isn't enough to sustain students' interest for scientific careers
- Young people need to see careers in research and innovation as attractive
- Young people learn and shape their views and attitudes on science from sources outside the formal education system
- The speed of change is such that learners need to be equipped with critical-thinking, creativity, problem-solving and social skills

"R&I make a remarkable contribution to job creation and boosting European economies, as every €1 invested under H2020 is estimated to result in a GDP increase of between €6 to €8.5, projected to benefit Europe by up to €600bn by 2030"

Tallinn Call for Action 2017 – Statement of the Estonian Presidency of the Council of the EU

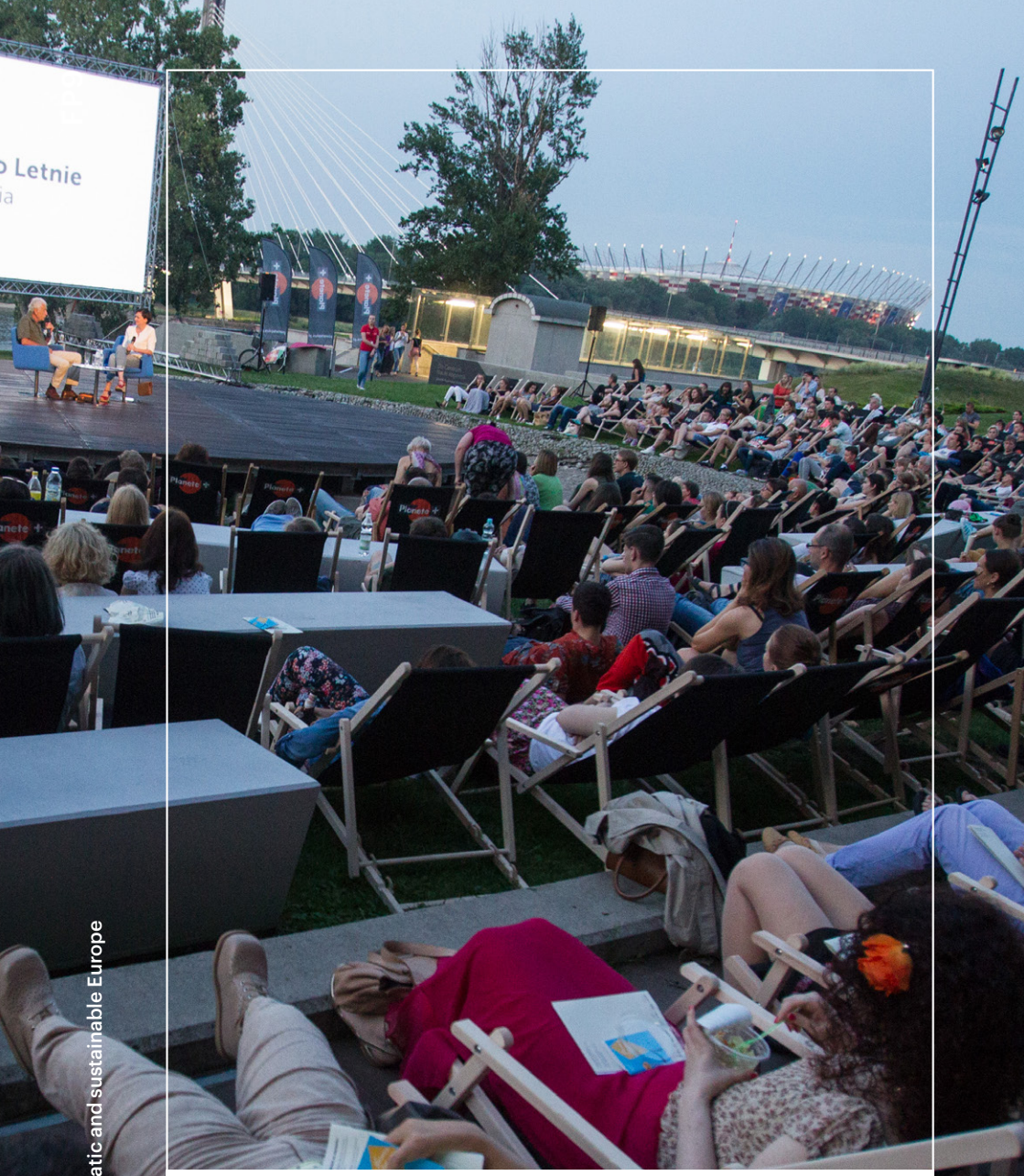
FP9 SHOULD

- Focus on young people as they will be the next generation of researchers and engineers that the R&I and industries need to ensure Europe's competitiveness; however, the roles of other players, including parents and family, teachers, communicators (including media) and role models should be acknowledged
- Create a new narrative that shifts from "education" to "learning"
- Develop more incentives to better integrate the informal and formal components of the learning ecosystem. The informal learning sector offers complementary and effective approaches built on long experience and provided on a large scale
- Continue the development of adapted modes of engagement with young people that promote active participation in the innovation process and encounters with practitioners in research, engineering, science and technology
- Develop a spirit of entrepreneurship among young people to lay the ground for the start-ups of tomorrow

FP9

Trust between Research and Society

ECSITE'S POSITION
Together for a democratic and sustainable Europe



CONVENING POWER

Summer Cinema at the Copernicus science centre, Warsaw (Poland). In 2016, guests attended screenings and discussions with experts on the theme "Art of Survival".

CHALLENGES

- Societal trust in science and scientific institutions is decreasing
- Post-truth and sensationalist reporting are threatening evidence-based decisions and the potential misuse of scientific data can lead to controversy and dangerous consequences (such as reluctance to vaccinate)
- Citizens base their opinions on different sources and research shows that merely providing facts does not change opinions
- Specific formats and jargon make scientific information difficult to understand by civil society
- There is a growing call for accountability
- Science communication is an established, and still growing, specialised field; devolving this function to others risks fragmentation and dissipation of effort

The results of the latest Eurobarometer show that 59% of EU population tend not to trust their national Government, 58% tend not to trust their national parliament and 48% of the respondents tend not to trust the European Union

According to a study, 10% of French people think that the Earth is flat (IFOP/Conspiracy watch – Dec 2017)

FP9 SHOULD

- Recognise that excellent science implies excellent science communication and that professional science mediators working with researchers is the best combination for excellent science communication
- Make it compulsory for research projects to show that public engagement has been considered and the approach articulated. When relevant, involve civil society and citizens in research and innovation programming and execution and do so with the help of professional science mediators
- Fund practice and research on how to effectively counter the post-truth phenomenon
- Stimulate democratic, social, political and media literacies to empower citizens to decode different sources of information and foster critical thinking
- Stimulate platforms for sustained dialogue between civil society and the research community
- Foster continuous innovation in science communication approaches
- Involve citizens in the scientific process from an early age with science engagement activities
- Develop incentives for researchers from an early stage career to work in collaboration with professional science mediators in order to communicate their research

Innovation

TRUSTED PLACES FOR CITIZEN DIALOGUES

Engaging people with health topics through adults workshops at the Wellcome Collection, London (United Kingdom).

CHALLENGES

- To be accepted by citizens/society innovation needs to be understood and even desired
- Innovations such as nanotechnologies, artificial intelligence, robotics, industrial biotechnology, synthetic biology create debate on ethics and potential side effects and misuse
- Innovation and societal support are needed to achieve the UN Sustainable Development Goals and tackle environmental issues
- Europe needs a stronger culture of entrepreneurship, of risk taking and creative thinking

FP9 SHOULD

- Mobilize and engage citizens as contributors and co- designers in R&I, and not only as consumers to create strong links between society and innovation, and to stimulate entrepreneurship
- Create programmes to foster an entrepreneurship culture
- Reinforce learning environments that allow for risk, failures and creativity, and for continuous life-long learning
- Acknowledge and nurture the value of citizen-led innovation and DIY science and technology; encourage innovators' creativity, notably in FabLabs and Makerspaces
- Encourage the development of city interface labs where citizens, researchers and innovators together use scientific data to find solutions at the city level
- Actively involve citizens in the development and applications of new technologies. Foster dialogue platforms where the impacts, risks and benefits and ethics of innovation can be understood and debated by all stakeholders

Democratic Europe

CLIMATE DIPLOMACY

Youth Climate Summit session at Heureka, the Finnish science centre, Vantaa (Finland).

CHALLENGES

- Science and innovation are crucial to Europe's economy
- Science has a critical role in guiding policy choices, notably to address the United Nations SDGs
- A democratic and fairer Europe calls for empowered citizens who support scientific and technological choices, but a lack of transparency in research agenda setting and monitoring fuels mistrust
- There is increased will from citizens to understand R&I in order to take well-informed decisions, yet it is difficult for them to have access to reliable and up-to-date scientific information
- There is an onus on researchers and policy-makers to explain the rationale and methodology behind decision-making and to take citizens' views into account, but this takes skills and resources, and can be uncomfortable

FP9 SHOULD

- Use the expertise of science engagement organisations to solicit and value citizens' input into setting in the research and innovation agendas
- Stimulate engagement opportunities between researchers, innovators, industrials, citizens and policy makers
- Equip science and technology professionals to participate in science engagement and citizen participation through, for example, training and professional development, sharing case studies and demonstrating best practice; build science engagement into the research and innovation culture with science communication experts
- Aim for well-informed European citizens with a strong scientific, social, political and media literacy
- Encourage a new balance of powers between experts and citizens where the knowledge of the latter is seen as a societal asset and a potential for innovation

Future and emerging technologies

LATEST TECHNOLOGY

Testing virtual reality headsets at the Ecsite Annual Conference.

CHALLENGES

- New technologies are merging the physical, digital and biological worlds and profoundly impact all aspects of our lives and how we define ourselves socially
- Quantum computing and synthetic biology and their applications will have profound societal impacts
- Uncertainty related to the effects of these technologies opens for hopes, but also concerns and mistrust
- The increased amount of available data on the internet allows citizens to be informed and to actively participate in the research process, but creates risks of misinterpretation or misuse. There are significant groups of citizens with limited scientific and digital literacy and limited access to resources and information

FP9 SHOULD

- Determine future and emerging technologies as a societal challenge to be specifically addressed
- Start dialogues now; anticipate and not wait until discourses of fears emerge
- Integrate humanities in the scientific process and dialogues with citizens to openly address issues of ethics, security, and economics
- Leave no one aside: call for specific programmes to increase the scientific and technical literacy of defined audiences in ways that recognise their unique needs; for example people who are older or economically disadvantaged
- Involve all parts of society in science and innovation processes through platforms to discuss impacts, risks and benefits and ethics of emerging and future technologies in order to align their use and outcomes with the values of society

Europe is now in the Fourth Industrial Revolution. The potentials, both positive and negative are immense and Europeans need to shape it with their values of democracy, ethics and engagement.

ABOUT THE ECSITE NETWORK

Ecsite's vision is to foster creativity and critical thinking in European society, emboldening citizens to engage with science.

Active in the field of science communication, our 350+ members include science centres, museums, research bodies, festivals, universities, planetariums, foundations and learned societies, companies and local authorities, etc.

Ecsite members' convening power draws more than 40 million citizens each year to science-related debates, exhibitions, workshops, events or platforms.

As a network, Ecsite catalyses its members' collective strengths into a powerful voice and has been shaping the forefront of public engagement with science for three decades.

To service its members, Ecsite organises the largest professional science communication conference in Europe, represents science engagement at European level, shapes and spreads best practice through its publications and awards, takes part in European projects – and more.