Why and how to participate in the European Research and Innovation Framework Programme *Horizon 2020*?

Manual for civil society organisations

fondation SCIENCES CITOYENNES

We consider it important that NGOs seize the opportunities, which Horizon 2020 is offering. This brochure is aimed at giving a short practical introduction for NGOs on how to participate in projects financially supported by Horizon 2020. It is not aimed at giving a complete overview of the programme. Also, even if we have a rather critical reading of the Horizon 2020 programme as a whole (you will find some words on this in the text), the manual is not targeted at a critical analysis of H2020 but at giving help on how to use it.

The first part of this brochure gives a very short introduction into the functioning of the European context. It also proposes some wider reflections on research policies, NGOs and societal developments. The second part presents Horizon 2020. The third part is quite technical in order to help understanding the procedure of how to submit a project.

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What is the European context in the years to come?

There are several strategies at the European level that give the general political frame for the years to come.

Europe 2020 is the ten-year growth strategy of the European Union. As official documents underline, it is about "*creating the conditions for a different type of growth that is smarter, more sustainable and more inclusive. To render this more tangible, five key targets have been set for the EU to achieve by the end of the decade. These cover employment; education; research and innovation; social inclusion and poverty reduction; and climate/energy*".

http://ec.europa.eu/europe2020/index_en.htm

Based on the dominant policy assumptions of "*smart, sustainable and inclusive growth", Europe has put in place seven so-called flagship initiatives. One of it, the Innovation Union with thirty four action points, mainly aims at supporting 'research-driven innovation' for 'smart economic growth'. This emphasises technological innovation and public-private partnerships as the primary means to fulfil social needs. The "Innovation Union is the European Union strategy to create an innovation-friendly environment that makes it easier for great ideas to be turned into products and services that will bring our economy growth and jobs*".

http://ec.europa.eu/research/innovation-union/index_en.cfm

In 2000, the European Research Area (ERA) was set up to improve "*Europe's research performance to promote growth and job creation*". It has become one of the key objectives of the European Union since the entry into force of the Lisbon Treaty. The ERA is therefore at the heart of the Europe 2020 and the Innovation Union strategies. The European Commission gave the following definition to ERA: "*ERA is a unified research area open to the world based on the Internal market, in which researchers, scientific knowledge and technology circulate freely. Through ERA, the Union and its Member States will strengthen their scientific and technological bases, their competitiveness and their capacity to collectively address grand challenges*". The ERA focuses on five key priorities:

- More effective national research systems
- Optimal transnational co-operation and competition (On common research agendas, grand challenges and infrastructures
- An open labour market for researchers (Facilitating mobility, supporting training and ensuring attractive careers
- Gender equality and gender mainstreaming in research (Encouraging gender diversity to foster science excellence and relevance)
- Optimal circulation and transfer of scientific knowledge (To guarantee access to and uptake of knowledge by all)

http://ec.europa.eu/research/era/pdf/era-communication/era-presentation_en.pdf

How does Europe finance its policies?

In order to finance European policies, Europe disposes of a specific tool, the Multiannual financial framework that "*lays down the spending priorities and maximum annual amounts, which the European Union may spend in different political fields over a fixed period (several years). The ceilings laid down in the MFF regulation are not equivalent to the EU budget. The annual EU budget itself always remains below the MFF expenditure ceilings. The MFF also covers income sources for the EU budget as well as correction mechanisms for the financial period it refers to. Currently the MFF is 7 years long*".

http://europa.eu/rapid/press-release_MEMO-13-79_en.htm

On November 12 2013, the European Parliament and Council of the European Union have reached the agreement on the EU's budget for 2014. "*The total agreed amount for the budget is €142.6bn in commitments and €135.5bn in payments. Overall the amount agreed is markedly lower than 2013's budget. Payments have declined by 9.4%, while commitments have fallen by 9.5% over the previous budget*".

http://horizon2020projects.com/policy-research/parliament-and-council-reach-agreement-on-budget

What are framework programmes for research and development?

Framework Programmes for Research and Technology Development (FPs) are funding programmes created by the European Union in order to support and encourage research and innovation in the European Research Area (ERA). They respond to the obligation fixed in the Amsterdam Treaty (chapter on research and technological development), to conduct European research policies and to implement European research programs. FPs exist since 1984. If the first six programmes had each a duration of five years, from FP7 on they cover a period of seven years.

Even if FPs account only for under 10% of the total public budget spent in the Members States of the European Union for Research and Development, they have a strong incentive character for national research policies and priorities.

Horizon 2020 is the 8th European Framework Programme for Research and Innovation running from 2014 to 2020. It is a financial instrument to fund research and innovation in the European member states and, under certain conditions, associated states. At the website on Horizon 2020 of the European Union one can read: "*Horizon 2020 is the financial instrument implementing the Innovation Union, a Europe 2020 flagship initiative aimed at securing Europe's global competitiveness*".

It will combine all research and innovation funding currently provided through the Framework Programmes for Research and Technical Development (FPRTD), the innovation related activities of the Competitiveness and Innovation Framework Programme (CIP) and the European Institute of Innovation and Technology (EIT).

The European Parliament adopted the legal texts for Horizon 2020 on November 21 2013. The financial envelope for the implementation of Horizon 2020 was finally set at 79 billion € including 2,1 billion € for Euratom.

Budgets of framework programmes

Framework programmes	Period	Budget in bn €
FP1	1984 - 1987	3.7
FP2	1987 - 1990	5.4
FP3	1991 - 1994	6.6
FP4	1994 - 1998	13.1
FP5	1998 - 2002	14.9
FP6	2002 - 2006	17.8
FP7	2007 - 2013	53.2
FP8 = Horizon 2020	2014 - 2020	79

What did CSOs do on Horizon 2020?

The European Commission published the first draft for Horizon 2020 in February 2011. There was no surprise: Since the beginning, tensions between divergent aims underlie the EU's research Framework Programs. Nowadays the vision includes the need to 'democratise decision making, for a Science operating as a service to Society', yet this aim has been marginalised by dominant frameworks promoting capital-intensive techno-scientific development through private-sector interests and public-private partnerships (Lisbon agenda, Europe 2020).

In April 2011, we were numerous NGOs with convergent critical views concerning this framework (CEO, FSC, HAI, Statewatch, Quaker Council, FoEE, Greenpeace, TACD, HEAL, BukoPharma, TestBiotech, etc.). As an informal alliance we intervened regularly during two years on Horizon 2020 by criticising its orientation, editing amendments, organising a NGO event in the European parliament hosted by several EP groups, participating to divers meetings, working with MEPs and towards EC policy officers.

In our ***Open letter*** to the European parliament and the EC we wrote in June 2011:

Public Research should benefit Society, not big business

The research that is prioritized and funded today will have a decisive impact on the future of our societies and our planet. It is imperative that the EU research framework is geared towards the needs of society and the environment rather than those of big business.

Our societies face immense ecological, social and economic challenges. It is certainly no time for «business as usual», and radical change is needed for society to address these challenges. Research and technology have a crucial role to play, but must - especially when publicly funded - benefit all sections of society.

In these rapidly changing times, research and innovation play a double role: they enable the broadening of knowledge and informed decision-making, but they also contribute to the emergence of problems. Research into nuclear energy, pharmaceuticals, agricultural genetic engineering, synthetic biology, nanotechnologies, space and military research – for example – has seen big business secure generous public subsidies despite widespread concern about their environmental and social impacts. This has marginalized and limited the funding available for research in important domains such as environmental protection, preventative health policy, organic and low-input agriculture, energy-saving and renewable energies, toxicology, water supply issues, and environmentally sustainable fisheries as well

as for research in social sciences which contributes to social change and problem solving that are not focused on technological fixes.

Research agendas that prioritize profit and market share are incapable of meeting the social and environmental challenges Europe is facing precisely because these challenges require alternatives to the high-growth, high-profit models of economic development that have been pursued to such devastating excess. European research should promote and focus on innovation that provides solutions rather than investing in end of the pipe technologies, which do not tackle the root causes of the problems that society faces.

We are extremely concerned therefore that the Europe 2020 Strategy and the Innovation Union Flagship Initiative address Research and Innovation almost exclusively from the perspective of competitiveness. It envisages a society driven by technological 'fixes' instead of social-policy based solutions and threatens to impose an unacceptable corporate bias in the upcoming next EU framework research programme (2014-2020).

Many of the undersigned organizations, who work on a broad range of social, environmental and economic justice issues, have expressed their concern about the corporate bias in the EU's current 'FP7' research programme. We have highlighted problems such as industry-domination of European Technology Platforms (ETPs) and 'informal' agenda-setting bodies like the European Security Research and Innovation Forum. These channels create a structural conflict of interest by allowing industry lobbying to set the EU research agenda and then secure the public funds on offer. The more systematic use of public-private research partnerships envisaged by the European Commission will exacerbate these problems and undermine socially-driven innovation.

While the EU has funded research that seeks to explore and promote alternatives at the margins of its current programme (particularly in its Science and Society programme), we are concerned that these already limited opportunities will be further restricted in the coming programme.

Ethical concerns about many of the controversial technologies the EU is already funding have also been sidelined. The EU's ethical guidance and compliance mechanisms must be urgently overhauled to ensure that much needed debates about the impact of new technologies can be considered and addressed as part of the overall research agenda. The role of social sciences, particularly, should not be narrowed to facilitating the "acceptability" of technologies.

Research that will make Europe (and the world) an environmentally sustainable, healthy and peaceful place to live must now be prioritised over and above research that delivers marketable technologies. We, the undersigned civil society and scientific organisations, think that another research and innovation policy is not only possible but urgently necessary in order to respond to the challenges our societies are facing. We call on the EU Institutions to take steps to:

- *Overcome the myth that only highly complex and cost intensive technologies can create sustainability, employment and well-being, and focus on tangible solutions to environmental, economic and societal challenges instead.*
- *Ensure that the concept of innovation includes locally adapted and social forms of innovation as well as technological development, and facilitate cooperation and knowledge exchange between civil society organisations and academia in order to realise the innovative potential of the non-profit sector;*
- *Establish a democratic, participatory and accountable decision-making process*

for research funding allocation, free from conflicts of interest and industry dominance, and enable civil society to play a full part in both setting the EU research agenda and participating in all EU research programmes;

- *Ensure that all experts advising EU research policy-makers are appointed in a transparent manner to provide impartial and independent expertise, free from conflicts of interests; replace industry-dominated advisory groups and technology platforms with bodies that provide a balanced representation of views and stakeholders;*
- *Ensure that publicly funded research benefits wider society by systematically requiring equitable access licensing and encouraging open source access policies in the next Common Strategic Framework.*

More than 100 civil society organisations and research organisations from all over Europe had signed this letter in September 2011.

In June 2012, we have organised the Roundtable on HORIZON 2020 for a more sustainable and fairer knowledge society: what role for the citizen, civil society and the public good?, which was co-hosted by MEPs from different groups of the Parliament. We intervened on six themes: CSO and citizen participation in research, what innovations, resource efficiency, sustainable development, equitable licensing and open access policies and governance issues.

It is difficult to judge what our actions concretely changed, and in general we rather feel few satisfaction (for instance since H2020 did not change (what a surprise!) its overall orientation). We however do think that they helped to raise awareness of certain issues. Also, the Horizon 2020 text now integrates several of the amendments our informal NGO alliance and individual NGOs had proposed. Some concern the general functioning of H2020 as for instance the participation of NGOs, questions of open access, and dissemination of results; others concern the thematic priorities (e.g. research for agriculture now explicitly mentions organic agriculture, and public health and health inequalities got more attention than before). We had also intended to save the science in society program. This program exists now again under the title *Science with and for society*. We had proposed a 1bn € budget for this program. Finally it will receive 462 M€, what is less what we claimed, but still higher than the budget under FP7 (330 M€). Furthermore, 'Science with and for society' issues are now mainstreamed in the parts II and III of H2020, what means that 0,5% of the budget of all thematic priorities have to be spent on science-society issues (what can be gender, ethics, governance, youth, participatory research, etc.). In total around 750 M€ should thus be allocated. Furthermore, activities on Responsible Research and Innovation are mainstreamed across all thematic activities.

Short critical analysis

The drive to put science at the service of competitiveness has accelerated during the last 30 years. Nowadays technological innovation is seen as the key element that will enable Europe to maintain its international competitiveness and its standards of living. Innovation is thus a key issue in the current European research policy. At least since the launch of the Lisbon Agenda in Spring 2000, it is omnipresent in European discourses ("knowledge-based economy"). At latest since then, a key idea is that knowledge and education can be treated as business products or market commodities, like educational and innovative intellectual products, and that such services can be exported for a high value return. This pervasive focus on competitiveness in the narratives that underpin research and the explicit objectives assigned to it can only lead to a "race to the bottom", the logical end point of which is a set of lowest-common-denominator standards not just for science, but also for labour rights, civil liberties and environmental standards. It appears contradictory with the need to adopt the more integrated approach that moving our societies towards sustainability implies.

However, the ERA acknowledges that science and research should help address societal and environmental challenges (rather than merely contribute to the competitiveness of European industry). This is an important development and a welcome move, which responds to the mission given to research in the Treaty of serving all European policies. But participatory approaches to research - that means the involvement of non scientists such as farmers, patients or consumers in research projects - and research for the transition towards a low carbon society are far from being mainstreamed, be it by the Commission, Member States or most research institutions. Research agendas do not sufficiently take into account long term societal concerns. They are still being framed by a narrow technological approach, not taking seriously enough the situation mankind is facing in terms of limited resources, planetary boundaries, and social and environmental injustice (Rockström et al. 2009, Millennium Development Goals, Millenium Ecosystem Assessment Report).

Furthermore, in certain areas, research that raises ethical concerns generates heated public debates (e.g. research on human embryonic stems cells, on animals, on aspects of human security including research on dangerous pathogens etc.), affecting research agendas and political decisions.

"*The Europe 2020 framework assumes that innovation leads to more products and services in the market place, which leads to more consumption, hence to growth and more jobs, which in turn lead to increased well-being. Also implicit within this approach is that environmental, social and economic sustainability will emerge as part of the package, but with few details of how this monumental challenge will be met. Likewise assumed is that techno-scientific innovation enhances resource efficiency and thus reconciles economic growth with environmental sustainability – despite numerous historical examples to the contrary. Despite criticisms from many quarters, these policy assumptions underlie Horizon 2020.*" (Levidow, L. and Neubauer C. Opening Up Societal Futures through EU Research and Innovation Agendas EASST, 2012)

Horizon 2020 is a very much market driven programme. Public research money will largely serve market and private interests.

Arguments why CSOs should get involved in research and research policy

The relationship between science and society has gone through a profound transformation in the last five decades, and this evolution is directly linked to the rise of concerns over the impact of science and technologies on our lives and on our environment.

If we consider long-term history we can claim that each civilization or historical era produces its own modes and institutions on how to create and to pass on their corpus of knowledge. Over the last centuries, science and technology have been among the most important factors changing society. The second half of the 20th century saw, in wide parts of the world, numerous countries aiming at building prosperous societies on the basis of scientific knowledge and technical advances by exploiting seemingly unlimited natural resources, be it petrol, water or land.

However, different scientific and technological choices have different impacts on society and the planet. The implicit assumptions that frame these choices, as for instance growth or competition, and their social implications are nowadays rarely evaluated and discussed. Yet, this is what we urgently have to do.

Techno-scientific innovation is often framed as "one way" progress with a given direction. Reinforced intellectual property rights, the crucial role of knowledge in the production of added economic value, the affirmation of mercantile norms in the production and validation of scientific knowledge have led to a growing commercialisation of science. Political and economic discourses emphasise the importance of The Research, The Innovation, The Knowledge by rarely asking What Research, What Innovation, What and Who's Knowledge and What for?

What we have to question is our model of development. We cannot speak anymore about "externalities" when referring to environmental degradation since the degradation is now global, it is the system Earth that is touched in its totality.

Scientists from the Sussex University in UK formulated it this way: "*A radical shift is needed in how we think about and perform innovation... We need a new politics of innovation. This is not about being 'pro' or 'anti' science or technology, but about addressing real questions of choice: 'which science?', 'what technology?' and, especially, 'whose innovation?' and 'what kinds of change? In other words, we need to foster more diverse and far more fairly distributed forms of – and directions for – innovation, towards greater social justice*". (A New Manifesto, 2011)

Some historical aspects

The first decades after the Second World War saw a strong drive for scientific and technological research in European countries. States strongly supported ambitious national and European R&D programmes and shared the governance of research with academic communities. This period is indeed characterised by a deep belief in science and technology, embedded in a culture of post-war mobilisation and reconstruction of society. Civil society adhered widely to this imperative of modernisation and people had access to a large variety of new technological products. Science and technology penetrated quickly into daily life and collective identities - electricity, telephones, radios and television, antibiotics, cars, medicalised birth, household appliances, scientific teaching in schools, etc. Under an unprecedented economic growth, the citizens benefiting from this technical and material progress did not seem to feel the need to question that research. From the production of new vaccines to the selection of high-yielding plant species for intensive agriculture, from armament technologies to the screening of chemical molecules for pharmaceutical production - technological development was ruled by a largely self-regulated scientific community (representing truth, and instrumental power), by State regulators (representing the public interest), and by industrial actors (representing consumers' needs), sharing the conviction that research would succeed in overcoming all kinds of problem, including social issues1. This trust in progress was part of a larger social contract in which a strong and directing State ensured the improvement of living standards for wide parts of society. Thus, society – be it workers in national enterprises, women, young farmers, young graduates, etc. - lived the scientific and technical modernisation as a factor of social promotion and could identify to it.

The favourable development of social systems – declining unemployment, better salaries, social security systems for pensions and diseases – generated a positive vision of the technical future and of the modernisation as proposed by scientific and technical institutions.

Things started to change in the sixties. The linear vision of the relationship between research and growth, according to which more fundamental research generates more innovation and more growth and well-being, started to be less invested. Several social movements appeared more clearly on the public stage at this moment: the peace movement (between the anti-nuclear fight and the Vietnam war), the feminist movement and women's organisations (e.g. fighting for reproductive rights of women including abortion), the environmental movement (in 1962 was published Rachel Carlson's book Silent spring), the student movement (criticising the linear vision of technology and welfare). Intellectual milieus criticised the power of techniques, the uncritical belief in social progress through scientific and technical progress, and the role of rationality as an instrument of science that would convey a view of the world that would be more valid and universal than other views – because of its supposed truth, neutrality and objectivity.

At the same moment, questions of technology assessment and technology foresight emerged, partly in response to demands from policy makers. In 1972, the American Congress established the first Office of Technology Assessment (OTA). It was mandated to assess the consequences of

technologies by preparing "comprehensive" reports that discussed the pros and cons of policy options about a given issue. It was intended to facilitate congressional access to expertise and to permit legislators to consider objectively information presented by the executive branch, interest groups, and other stakeholders to controversial policy questions. In Europe, the creation of the first office of techno- logy assessment had to wait until 1983, whereas the American OTA was closed in 1995.

In the 1980s, a new regime of intellectual property rights arrived from the United States, based on the systematic patenting of knowledge and life. The deregulation of the economy went together with the strengthening of intellectual property rights and the broadening of their scope, to encompass living beings, genetic resources, the very building blocks of matter and, to a large extent, knowledge itself. The US authorised by law to patent results from the public research sector and supported the development of a high tech financial market. From 1994 on, through the agreements of the World Trade Organisation on intellectual property rights, this system has been imposed to the whole planet. Appropriation has shifted to very early stages of knowledge production, and even fundamental research tends to be increasingly judged by financial markets, and not only by peer review anymore. Research institutions have been encouraged to set up "public-private" partnerships (PPP) with industry and to contribute more directly to the economy. Private research gained a lot of advantages from these new regulations. These new forms of property have led to a new parcelling of knowledge, and to new monopolies. The production of science itself has gone through a significant evolution. Scientific and technological developments have been more and more oriented by market forces, and short term profitable value of potential innovations polarise research more than long-term public values.

"Papers and patents" is a good summary of the trends that have shaped scientific research at least for the last decades, and that explain why research agendas are so much focused on developing new technologies.

This regime of knowledge production has in the late 20th century entered into a crisis. The rise of environmental awareness and the advent of several catastrophes (Seveso, Bhopal, Chernobyl, ESB, asbestos, etc.) have turned our society into a "risk society". While humans have always been subjected to a level of risk (natural disasters produced by non human forces), modern society is exposed to a particular type of risk, which is the result of the modernisation process itself, and which alter social organisation. Human-made risks associated with techno-scientific developments are pervasive in the public sphere and in the construction of identities. In a risk society, society faces risks produced by its own activities. As the negative impacts of chemical pollution, climate change, natural resources depletion or loss of biodiversity are increasingly debated, science and technology came to be seen as both - a source of problems and of solutions. Protests against certain developments and applications of science (nuclear energy, pesticides in agriculture, genetically modified (GM) plants in the environment and the food chain, nanotechnologies, etc.) have multiplied, and the former consensus for simple "progress" has been replaced by a strong societal demand for precaution and for participation in the decision-making on socio-technical issues.

CSOs as actors in research - the third sector of knowledge production

Another major transformation concerns the implication of lay-people, of civil society actors in research and innovation. In parallel to the rise of the mercantile mode of knowledge production and regulation, a "civic" mode has also emerged, especially since the 1990s.

Previously limited to the triangle science – industry – public authorities, the choices of research and innovation are indeed increasingly discussed by other actors. In this process and through diverse crises, civil society organisations are on the one hand still few involved in research projects

and in the governance of research but on the other hand have become important research users and knowledge producers. They have developed capacities to deliver a robust scientific counter-expertise and to mobilise various forms of knowledge (empirical, local, professional, etc.) to support their expertises. These new actors in research can be large international NGOs like Greenpeace, Friends of the Earth or the World Wildlife Fund, patients' associations (e.g. AIDS movement, breast cancer associations, orphan diseases organisations, etc.), users' and consumers' organisations, associations on urban or rural development, farmers' organisations like Via Campesina (dedicated to food safety, food sovereignty, to the conservation of biological diversity, preventing the dissemination of GMOs...), women's associations (e.g. active on a multiplicity of issues like domestic violence, water preservation, the situation of women in rural areas, etc.), organisations of international solidarity (e.g. on biopiracy and patenting) or international health aid (like Doctors without Borders – Médecins Sans Frontières and the Drugs for neglected diseases Initiative), but also small groups of citizens, of young people and last but not least Unions. These civil society organisations have become major players in domains such as environment, health, energy, agriculture, climate, ecology, international solidarity, gender, social exclusion and immigration, disability and poverty, both at local and global levels. They participate to international negotiations, advise governments and governmental bodies, work with the media, and with scientists - supporting thus the emergence of a new paradigm of knowledge creation, based on cooperation instead of competition, on co-production by different actors and on the sharing of knowledge instead of its private appropriation.

Participatory Research

Participatory Research has become a popular new research paradigm, where scientists from public research laboratories and civil society actors work together in a commonly defined research protocol. It is increasingly being recognized as important in yielding concrete knowledge and understanding that can guide changes - in research, in CSOs, in policies. A general aspect is the high productivity of such projects, both in terms of concrete outputs (deliverables), and in terms of less tangible outcomes (e.g. empowerment of communities). By the variety of the outcomes, and their relevance for different partners, Participatory Research is deemed "highly productive", "cost-efficient" and "good value for money".

Participatory Research projects have benefits in terms of knowledge production (including the publication of peer-reviewed articles). The value of projects can often appear at the early stages when community partners and universities co-define and scope the research questions. Such partnerships can even cover fields that would otherwise be closed to researchers. They allow them to work on emerging issues, and give them access to data that would otherwise be unavailable. CSOs are a valuable resource not only in terms of providing data, concrete cases, financial and human resources, but also in terms of practical know-how or even theoretical knowledge, as well as in the formulation of research hypotheses. Their feedback on results at different stages of the research can help researchers adjust and recast the way the results are formulated, reflect aspects that they may have missed, thus enhancing the validity of the results.

The problem-based approach, which lies at the heart of Participatory Research projects, is a drive towards transdisciplinarity, and towards more relevance of research to problems and needs of people. It is particularly adequate to helping communities move towards sustainability.

On the other hand, universities provide CSOs with access to wide-ranging and in-depth knowledge and national and international expertise that informs and addresses community or transversal challenges and opportunities in a meaningful way. Participatory Research projects can contribute to increase CSO or community capacity, to increase their reflexivity and improve their practices. Results can also lead to changes in public authorities programmes, thus accounting

for the improvement of living conditions of communities (e.g. economic, social and ecological conditions).

Policy-making is the outcome of a highly complex process, for which it is notoriously difficult to assess the impact of a given factor on it. The extent to which research actually contributes to policy-making is a controversial issue in itself; let alone a given research project. A number of Community- Based Research endeavours strive to have a direct impact on policy as an outcome. Some Participatory Research models are partly dedicated to answering research needs of policy-makers, or develop innovative models in which research needs and questions are jointly determined by policy-makers and CSOs. Others do involve policy-makers from the start in the definition of research topics, which lead to results more likely to have an impact on policies.

As more and more emphasis is put on concepts like "evidence-based policy-making", research is supposed to become a source for policy-makers even more than before. The improvement of the relevance and of the validity of the research created is a pre-condition for better informed policy-making. Research agendas – and the narratives that underpin them - should reflect the diversity of interests and needs in society. In this respect, the value of such partnerships is that they can make policy alternatives visible and challenge existing norms, broadening perspectives beyond technological approaches. Research partnerships can also help make visible and explore alternative future scenarios (for instance on the use of natural resources). Research partnerships can also contribute to research agenda setting by opening up new research and innovation paths. They encourage diversity in science, which is a key asset. The contribution of research partnerships to research agenda setting is greater with long-term partnerships.

A better evaluation of the benefits of Participatory Research is a condition for its further development, and is now a focus of attention among practitioners and funders. It is difficult to evaluate qualitative benefits through quantitative indicators, which are not adapted to complex processes, and which will always overlook the transformative effect of participatory research experiences on people, be they researchers, practitioners, or CSO workers. Successful partnerships entail, through unavoidable conflicts, the recognition of the other's referential, and the displacement of one's own epistemic referential (be it based on academia or practice). It is an experience that renders people able to move from one referential to the other. Beyond the negotiation of different interests, partnerships open a space for mutualisation and inter-subjectivity. At their best they appear as a process of collective production that goes with an individual and collective learning enabling different actors to acquire knew knowledge, to develop new behaviours and a new understanding of their environment.

What is Horizon 2020?

What was the decision process for Horizon 2020?

The adoption of a EU Research Framework Programme is the outcome of a long and complex co-decision process between the Commission, the European Parliament and the Member States gathered in the Council of Ministers.

In short: the Commission drafts a proposal (for Horizon 2020 the proposal - the Green paper on a Common strategic framework for EU research and innovation funding - was published in February 2011), which is then discussed and amended by stakeholders (research institutions and alliances, industry, civil society organisations, inter-service consultation in the European Commission) and by both the European Parliament and the Council of Ministers. The Framework Programme is organised into several parts: the Specific Programme, the Regulation part, the Rules for participation and the Budget, which have all to be adopted by the Council and the European Parliament. This process involves several back and return between these two institutions, with the input of different institutional actors. The Commission keeps a strong influence all along the process up to the final vote.

Over the whole duration of the framework programme until 2020, the Commission will publish (bi-)annual work programmes with the calls for proposals for the thematic areas.

How is Horizon 2020 organised?

The Horizon 2020 program highlights three new outlines determined as follows:

- To integrate research and innovation by establishing a continuous support throughout the entire process: from the idea to the marketable product;
- To use the funding of research and innovation to respond to major societal challenges;
- To support innovation and activities closer to the market in order to create new business opportunities.

Horizon 2020 has three priorities: I) Excellent science, II) Industrial leadership, III) Societal challenges.

In addition exist two specific objectives that are IV) Spreading excellence and widening participation, V) Science with and for society.

And there are part VI) European Institute for Innovation and Technology (EIT) and part VII) Joint Research Centre (JRC).

Euratom, the research and development programme for nuclear energy (and even if a treaty apart), is also involved in Horizon 2020 with a dedicated budget.

Legal documents: Framework Programme: Regulation 1291/2013 of EP and Council 11/12/2013 on H2020, Specific Programme: Council Decision 3/12/2013 establishing the specific programme implementing H2020

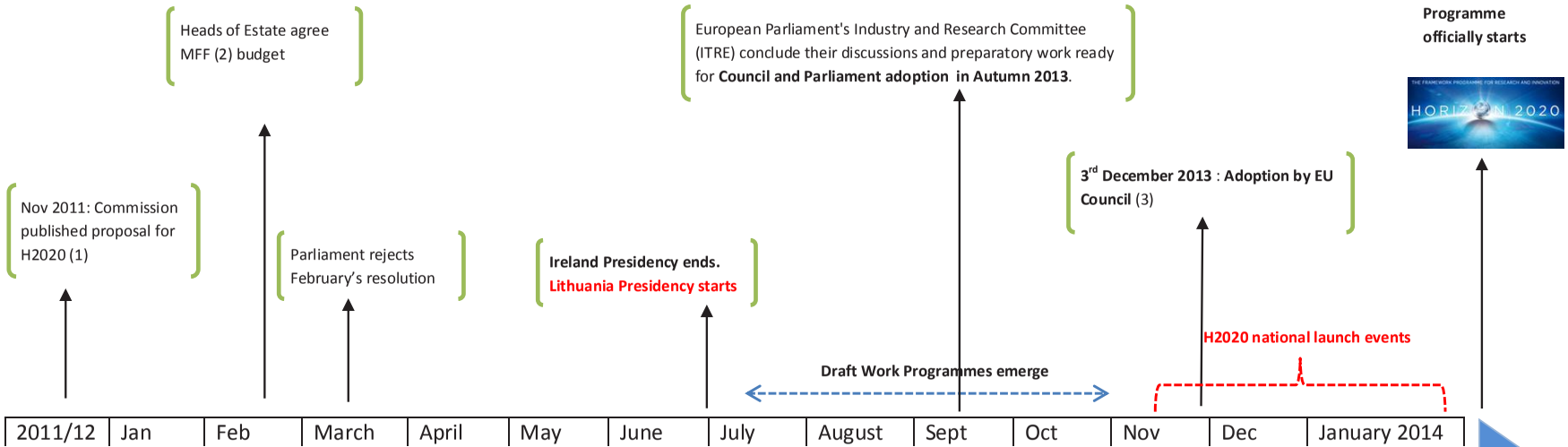
http://ec.europa.eu/research/participants/portal/desktop/en/funding/reference_docs.html

Despite this dominant policy framework promoting capital-intensive technoscientific solutions, EU research offers opportunities to explore alternative and sustainable innovation models and societal futures.

And this is what civil society organisations should use!

Horizon 2020 Timeline – final update

Timeline table from:
https://www.sussex.ac.uk/webteam/gateway/file.php?name=timeline.pdf&site=377



*26/06/2013 - **Agreement reached on Horizon 2020,** based on the following:*

- → ***Flat rates:** Research activities to be reimbursed at 100% direct costs and 25% for indirect costs. For 'Innovation actions' (previously called close-to-market activities) 70%, but 100% for HEs, non-for-profit and ROs.*
- → ***Time-to-grant to be reduced** to 8 months (5 months evaluation + 3 months negotiation)*
- → ***Spreading Excellence and Widening Participation**: will be addressed as separate parts of the programme with 1.66% of budget, instead of being embedded across the programme.*
- → ***Budget distribution**: 85% of the Energy Societal Challenge earmarked for non-fossil energy research; 40% of Future Emerging Technologies (FET) earmarked for FET Open (bottom up early stage joint science and Technology research exploring the foundations of radically new future technologies).*
- → ***Target for SME participation**: set at 20% (indicative)*
- → ***Fast Track To Innovation a pilot** to be launched in 2015, likely to have open calls with several cut-off deadlines per year. There will be fast time to grant, innovation actions with up to 5 partners and a budget of EUR 3mill per project.*

12 Nov 2013: EU institutions reach political agreement on overall EU budget for 2014, which should ensure start of Horizon as planned

19 Nov 2013: Multiannual Financial Framework (MFF) **approved** by EU parliament (3)

Publication of first calls for proposals
11 December 2013

(1) Official documents (Rules for Participation) available here: http://ec.europa.eu/research/horizon2020/index_en.cfm?pg=h2020-documents
(2) MFF: Multiannual Financial Framework, which sets the overall budget for Europe 2020. The MFF must be agreed before Horizon 2020 can be adopted.
(3) Part of the 'Ordinary legislative procedure' (formerly known as "co-decision"): Click here for an explanatory diagram.

Architecture of the programme

Three priorities

Excellent science

- **European Research Council (ERC)**
  Frontier research by the best individual teams
- **Future and emerging technologies**
  Collaborative research to open new fields of innovation
- **Marie Sklodowska-Curie Action (MSCA)**
  Opportunities for training and career development
- **Research infrastructures**
  Ensuring access to world#class facilities

Industrial leadership

- **Leadership in enabling and industrial technologies (LEITs)**
  (ICT, nanotehnologies, materials, biotechnology, manufacturing, space)
- **Access to risk finance**
  Leveraging private finance and venture capital for research and innovation
- **Innovation in SMEs**
  Fostering all forms of innovation in all types of SMEs

Societal challenges

- **Health, demographic change and wellbeing**
- **Food security, sustainable agriculture and forestry, marine, maritime and inland water research, and the bioeconomy**
- **Secure, clean and efficient energy**
- **Smart, green and integrated transport**
- **Climate action, environment, resource efficiency and raw materials**
- **Europe in a changing world**
- **Secure societies**

Spreading excellence and widening participation

Science with and for society

European Institute of Innovation and Technology (EIT)

Joint Research Centre

Euratom

How much money for what?

The global budget will comprise 79 billion €. This includes 77 billion € directly for Horizon 2020 and 2,1 billion € for Euratom, As for the annual distribution of this budget the text states: "*The annual appropriations shall be authorised by the European Parliament and by the Council within the limits of the multiannual financial framework*".

Budget breakdown of Horizon 2020 (from: Regulation part of H2020, annex II)

Priority	Allocated budget in M€
Excellent science	24 441,1
European Research Council	13 094,8
Future and Emerging technologies	2 696,3
Marie Scklodowska-Curie Actions	6 162
Research Infrastructures	2 488
Industrial leadership	17 015,5
Leadership in enabling and industrial technologies	13 557
Acces to risk finance	2 842,3
Innovation in SMEs	616,2
Societal challenges	29 679
Health, demographic change and well-being	7 471,8
Food security, sustainable agriculture and forestry, marine, maritime and inland water research, and the bioeconomy	3 851,4
Secure, clean and efficient energy	5 931,2
Smart, green and integrated transport	6 339,4
Climate action, environment, resource efficiency and raw materials	3 081,1
Europe in a changing world - Inclusive, innovative and reflexive societies	1 309,5
Secure societies	1 694,6
Spreading excellence and widening participation	816,5
Science with and for society	462,2
Non nuclear direct actions of the Joint Research Centre	1 902,6
European Institute of Innovation and Technology	2 711,4
Total	**77 028,3**

Part I - Excellent science

It is specified at the Horizon 2020 webpage that: "*Activities under this Pillar aim to reinforce and extend the excellence of the Union's science base and to consolidate the European Research Area in order to make the Union's research and innovation system more competitive on a global scale. In view of their science-driven nature and largely 'bottom-up', investigator-driven funding arrangements, the European scientific community will play a strong role in determining the avenues of research followed under the programme*".

Since we think that NGOs will have (almost) no possibility to participate to projects under this part, we won't go into its details.

Part II - Industrial leadership

The Horizon 2020 webpage specifies here that: "*This pillar aims to speed up development of the technologies and innovations that will underpin tomorrow's businesses and help innovative European SMEs to grow into world-leading companies. ... The goal is to make Europe a more attractive location to invest in research and innovation (including eco-innovation), by promoting activities where businesses set the agenda. It will provide major investment in key industrial technologies, maximise the growth potential of European companies by providing them with adequate levels of finance and help innovative SMEs to grow into world-leading companies*".

Even if this part is dedicated to agendas set up by business, there might be possibilities to work for instance on nanotechnologies, biotechnologies, and ICT as important societal issues, and to work on eco-innovation projects with SMEs. The Eco-Innovation Action Plan (EcoAP), which was launched by the European Commission in Dezember 2011, defines Eco-Innovation as "*any form of innovation resulting in or aiming at significant and demonstrable progress towards the goal of sustainable development, through reducing impacts on the environment, enhancing resilience to environmental pressures, or achieving a more efficient and responsible use of natural resources*".

You will find the information on the Eco-Innovation Action Plan at:

http://ec.europa.eu/environment/ecoap/index_en.htm

One of the priorities of part II is on *Leadership in Enabling and Industrial Technologies* (LEIT). It is organised into six actions where four are on public-private partnerships and industrial capacities, but two are on *Contributing to solving societal challenges and to focus areas*, and the other on *Cross-cutting aspects, like international cooperation and responsible research and innovation*. One could expect, that some calls under the two latter actions may be interesting for NGOs.

Part III - Societal Challenges

It seems that associations and NGOs will have most chances to participate to research projects under the Part III Societal challenges, and Part V Science with and for society.

There are seven thematic priorities under Societal challenges. **Each thematic priority is described with: 1. Specific objective, 2. Rationale and Union added value, 3. Broad lines of the activities. These descriptions are quite short, mainly around eight pages.**

These priorities will all be treated under Horizon 2020. However, one has to keep in mind that this does not mean that they will be integrated each year in the respective annual programme. The efforts to support these divers issues might differ substantially over the whole period of the programme but also from one year to another. If some calls are open for a priority in one year, there might be no call in the next year.

http://ec.europa.eu/research/participants/portal/desktop/en/funding/reference_docs.html

It is worth to read entirely the few pages of the thematic priority you are interested in in order to understand its global approach.

You will find in the annex of this document the original extracts from the main thematic priorities as published under each of the seven topics of the Societal challenges. You will find listed the sections Broad lines of the activities as they present the most concrete hints of what will be financed throughout the seven years.

Part V - Science with and for society

If the former programs «science and society» under FP6 and «science in society» under FP7 were integrated into larger Specific programs such as the *Capacities* program of FP7, the "science with and for society" program of Horizon 2020 stands as a specific objective of its own. This is as such a (modest) success since it procures an increased visibility of the issue. One can expect that several/ numerous calls of this program will actively be open to the participation of CSOs.

One can find an audio-powerpoint presentation of the program including its rationale and history, a presentation of *Responsible research and innovation* and of current work programs at:

http://ec.europa.eu/research/science-society/index.cfm?fuseaction=public.topic&id=2061

The aim is to build effective cooperation between science and society, to recruit new talent for science and to pair scientific excellence with social awareness and responsibility.

The focus of activities shall be to (original text):

(a) make scientific and technological careers attractive to young students, and foster sustainable interaction between schools, research institutions, industry and civil society organisations;

(b) promote gender equality in particular by supporting structural changes in the organisation of research institutions and in the content and design of research activities;

(c) integrate society in science and innovation issues, policies and activities in order to integrate citizens' interests and values and to increase the quality, relevance, social acceptability and sustainability of research and innovation outcomes in various fields of activity from social innovation to areas such as biotechnology and nanotechnology;

(d) encourage citizens to engage in science through formal and informal science education, and promote the diffusion of science-based activities, namely in science centres and through other appropriate channels;

(e) develop the accessibility and the use of the results of publicly-funded research;

(f) develop the governance for the advancement of responsible research and innovation by all stakeholders (researchers, public authorities, industry and civil society organisations), which is sensitive to society needs and demands, and promote an ethics framework for research and innovation;

(g) take due and proportional precautions in research and innovation activities by anticipating and assessing potential environmental, health and safety impacts;

(h) improve knowledge on science communication in order to improve the quality and effectiveness of interactions between scientists, general media and the public.

(i) promote the highest ethics standards and the structural changes that are necessary at institutional and local levels, including the provision of appropriate support to the project participants in order to comply with ethics related legislation (such as data protection, dual use, etc.).

The sciences with and for society issues are now mainstreamed in all parts of H2020, what means that 0,5% of the budget of all thematic priorities have to be spent on science-society issues (what can be gender, ethics, governance, youth, participatory research, etc.). In total around 900 M€ should thus be allocated.

Cross-cutting issues

There exists a whole range of so-called cross-cutting issues in Horizon 2020. They are described in the text as "*Linkages and interfaces that shall be implemented across and within the priorities of Horizon 2020..They will be promoted between specific objectives of the three priorities as necessary to develop new knowledge, key competences and major technological breakthroughs as well as translating knowledge into economic and societal value*". Cross-cutting issues shall especially integrate interdisciplinary approaches.

Particular attention shall be paid in this respect to:

(a) the development and application of key enabling and industrial technologies as well as future and emerging technologies;

(b) areas relating to bridging from discovery to market application;

(c) interdisciplinary and cross-sectoral research and innovation;

(d) social and economic sciences and humanities;

(e) climate change and sustainable development;

(f) fostering the functioning and achievement of the ERA and of the flagship initiative 'Innovation Union';

(g) framework conditions in support of the flagship initiative "Innovation Union";

(h) contributing to all relevant Europe 2020 flagship initiatives (including the Digital Agenda for Europe);

(i) widening participation across the Union in research and innovation and helping to close the research and innovation divide in Europe;

(j) international networks for excellent researchers and innovators such as European Cooperation in Science and Technology (COST);

(k) cooperation with third countries;

(l) responsible research and innovation including gender;

(m) SME involvement in research and innovation and broader private sector participation;

(n) enhancing the attractiveness of the research profession; and

(o) facilitating cross-border and cross-sector mobility of researchers.

Cross-cutting issue: Responsible Research and Innovation (RRI)

Responsible Research and Innovation is a new concept that «means that societal actors work together during the whole research and innovation process in order to better align both the process and its outcomes, with the values, needs and expectations of European society. RRI is an ambitious challenge for the creation of a Research and Innovation policy driven by the needs of society and engaging all societal actors via inclusive participatory approaches.» (Leaflet on RRI, European Union, 2012)

RRI is a kind of package that includes six key elements: engagement of citizens and civil society, gender equality to unlock the full potential, formal and informal science education, open access, ethics, and governance.

Since RRI is a cross-cutting issue calls including RRI keys might appear all over the divers programmes. However, there is a strong link with the *science with and for society* program.

The EC published an expert group report on *Options for strengthening responsible research and innovation* in 2013:

http://ec.europa.eu/research/science-society/document_library/pdf_06/options-for-strengthening_en.pdf

The Mobilisation and Mutual Learning Action Plans (MML)

MMLs exist since the 2010 work programme of FP7. They are a tool of ensuring the engagement of all relevant groups and aim to tackle research and innovation related challenges by creating partnerships with a variety of perspectives, knowledge and experience. «MMLs are designed to bring together actors from research and the wider community (e.g. civil society organisations, ministries, policymakers, science festivals and the media). They will collaborate on action plans that will connect research activities for a chosen Societal Challenge.»

To know more you can go to:

http://ec.europa.eu/research/science-society/index.cfm?fuseaction=public.topic&id=1226

How to participate in Horizon 2020?

How can civil society organisations participate?

Participating to a European research project is not easy (at least it was quite complicated up to now). Writing a project proposal is a tricky thing, especially for newcomers.

If you intend to participate to a European project and you have no experience, try to connect with people or organisations, which have already experiences. Also it is easier to start as a partner in a project then to be a coordinator. A European project is also a moment to valorise already existing partnerships since it is important to know well the project partners, at least some of them.

A few examples of participatory research projects under FP6 and FP7

CREPE: Cooperative research on agri - environmental problems in Europe

- brought together civil society organisations (CSOs) and academics to investigate agri-environmental issues

http://crepeweb.net/

INRE: Involving NGOs in renewable energy research

- supports the collaboration of NGOs and research institutions from Bulgaria, Romania, Serbia, and FYR Macedonia in the renewable energy field

http://www.bsrec.bg/en/projects/id/17.html

EURADE: European research agendas for disability equality

- seeks to increase and enhance the full participation of disabled people's organisations as equal and active partners in future research initiatives that will support the equality of disabled people in Europe

http://www.eurade.eu/

CEECEC: CSO engagement with ecological economics

- aims to enable Civil Society Organisations (CSOs) to engage in and lead collaborative research with ecological economists

http://www.ceecec.net/

STEPS: Strengthening engagement in public health research

- provides information on public health research in Europe

http://www.steps-ph.eu/

CONSIDER: Civil Society Organisations in Designing Research Governance

- aims to explore how Civil Society Organisations can be involved in research projects

http://www.consider-project.eu/

The CONSIDER project "*explores the existing diversity of CSO involvement mechanisms, analyzing their features and normative frames. A crucial part of the process will be to assess what participation levels are experienced in R&D contexts, including the impact of citizens' participation on research governance, methodologies, and decision-making processes, as well as on the societal groups themselves*".

Rules for participation

This part of Horizon 2020 treats aspects of administrative and financial requirements in regard to the participation in H2020 projects and the exploitation and dissemination of project results. In comparison to earlier FPs, the aim was to simplify measures and thus the implementation of H2020. The rules "*should enable further progress in reducing the administrative burden for participants and the complexity of the financial provisions in order to facilitate participation and reduce the number of financial errors*".

If some things might really become easier (e.g. less financial audits, less time between the submission of a proposal and the contract signature), the practice will show, how far the simplification is real.

Rules for Participation: Regulation 1290/2013 of the EP and Council 11/12/2013 laying down the rules for participation and dissemination in H2020

http://ec.europa.eu/research/participants/portal/desktop/en/funding/reference_docs.html

Who can apply?

All types of actors who are involved or who intend to be involved in research and innovation can apply to receive funding – academia, research, industry, local authorities, NGOs, networks.

Under "Definitions" of the Rules for Participation it is stated:

(13) 'legal entity' means any natural person, or any legal person created and recognised as such under national law, Union law or international law, which has legal personality and which may, acting in its own name, exercise rights and be subject to obligations;

(14) 'non-profit legal entity' means a legal entity which by its legal form is non-profit-making or which has a legal or statutory obligation not to distribute profits to its shareholders or individual members;

Under article 7 is stated:

Legal entities that may participate in actions

1. Any legal entity, regardless of its place of establishment, or international organisaion may participate in an action provided that the conditions laid down in this Regulation have been met, together with any conditions laid down in the relevant work programme or work plan.

Thus, NGOs and associations from European member states and from associated countries can be full partners of a research project funded under Horizon 2020.

How to find the calls?

The calls for proposals will be published under Work programs (WP). Up to now, the EC published these work programs annually.

Under H2020, the Directorates of the EC will set up the priorities on a multiannual basis. These priorities will serve as political narratives for the work programs with a 2 year-duration. WPs under H2020 shall be presented user-friendlier, making it more accessible for newcomers too.

Under Horizon 2020, four work programs are planed:

- WP 2014/2015
- WP 2016/2017
- WP 2018/2019
- WP 2020

The program 2014/2015 appeared at the end of 2013. It is to expect that the next programs will be published respectively end of 2015, 2017 and 2019.

"*In line with the principle of transparency […] the Commission should publish open calls for proposals on the internet pages of Horizon 2020, through specific information channels, and should ensure their wide dissemination, including via national contact points and upon request in accessible formats, where practicable.* "

The EC publishes the annual work programs on the following website:

http://ec.europa.eu/programmes/horizon2020/

The so-called thematic National contact points (see under Who can help you), which exist in all Member States, will also publish the work programmes.

What are the minimum conditions for a project?

The legal text says that:

> **Chapter II GRANTS**
>
> **Section I AWARD PROCEDURE**
> Article 9 Conditions for participation
>
> 1. The following minimum conditions shall apply:
>
> (a) at least three legal entities shall participate in an action;
>
> (b) three legal entities shall each be established in a different Member State or associated country;
>
> (c) the three legal entities referred to in point (b) shall be independent of each other (within the meaning of Article 8).
>
> There might apply derogations from this paragraph. In this case they should be mentioned within the calls.

However, it seems that things are not so simple, and that minimum conditions can vary from one type of action to another (e.g. Coordination and Support Action (see under Types of projects) can be proposed by a single entity). **So you should always verify the General annex of the relevant work programme to be sure what are the concrete conditions.**

How do the partners of a project create the consortium?

Article 24 - Consortium

1. The members of any consortium wishing to participate in an action shall appoint one of them to act as coordinator, which shall be identified in the grant agreement. The coordinator shall be the principal point of contact between the members of the consortium in relations with the Commission or the relevant funding body, unless specified otherwise in the grant agreement, or in the event of non-compliance with its obligations under the grant agreement.

2. The members of a consortium participating in an action shall conclude an internal agreement («the consortium agreement») establishing their rights and obligations with respect to the implementation of the action in compliance with the grant agreement, except in duly justified cases provided for in the work programme or work plan or call for proposals. The Commission shall publish guidelines on the main issues that may be addressed by participants in the consortium agreement.

The most common form for a consortium agreement is probably a written agreement between the partners of a project. Consortium agreements can comprise the description of tasks for each partner, the project schedule, how to treat changes (e.g. partners stepping out, budget adjustment between partners, etc.), financial and administrative responsibilities (e.g. management), intellectual property rights and dissemination of results.

How the proposals are evaluated?

The EC has a database of independent (external to the Commission) experts that covers all fields of H2020. The Commission selects them considering the skills and knowledge appropriate to the assigned tasks. The current procedure consists in a written individual remote evaluation by three experts (or more) per project, and a collective evaluation based on the individual evaluations and on an exchange of several experts, often in groups of five to eight. Their discussion leads to a written consensus evaluation report. The projects are ranked according to the total score they achieve but have in any case to pass the threshold for each individual criteria to be eligible.

The evaluation process is monitored and assessed by independent observers, which report to the Commission. Evaluators remain anonymous and cannot be personally contacted by project coordinators to discuss the result of the evaluation.

Not to forget: All research activities must adhere to the «highest ethical standards» and the related European legislation (i.e. the charter of fundamental rights).

Under H2020, three criteria will be decisive in the evaluation process.

Article 15 Selection and award criteria

1. The proposals submitted shall be evaluated on the basis of the following award criteria:

(a) excellence;

(b) impact;

(c) quality and efficiency of the implementation.

The evaluation criteria and procedure (e.g. the ranking of the proposals) are well described in the *ERC Rules for Submission and Evaluation* document from April 2014.

http://ec.europa.eu/research/participants/data/ref/h2020/sgl/erc/h2020-erc-se-rules_en.pdf

Article 20 - Time to grant

1. In accordance with Article 128(2) of Regulation (EU, Euratom) No 966/2012, calls for proposals shall specify the planned date by which all applicants shall be informed of the outcome of the evaluation of their application and the indicative date for the signature of grant agreements or the notification of grant decisions.

2. The dates referred to in paragraph 1 shall be based on the following periods:

(a) for informing all applicants of the outcome of the scientific evaluation of their application, a maximum period of five months from the final date for submission of complete proposals;

(b) for signing grant agreements with applicants or notifying grant decisions to them, a maximum period of three months from the date of informing applicants they have been successful.

In general a successful proposal should be signed eight months after its submission.

This is a shorter period than under FP7.

By the way: The expert database is open to anybody who has "high-level of expertise in the relevant fields of research and innovation (see call for details on types of expertise) and can be available for occasional, short-term assignments." If these experts are traditionally mainly scientists from universities and research centres, they can also be from other organisations such as companies, science centres or foundations. There is a (modestly) growing number of experts from CSOs who might also be invited.

In the Rules for participation part, H2020 states: "Independent experts shall be identified and selected on the basis of calls for applications from individuals and calls addressed to relevant organisations such as research agencies, research institutions, universities, standardisation organisations, civil society organisations or enterprises with a view to establishing a database of candidates."

http://ec.europa.eu/research/participants/portal/desktop/en/ (and click on "Experts")

This is an opportunity to sign up as a CSO expert!

What are eligible costs?

Article 27 - Direct eligible personnel costs

1. Without prejudice to the conditions laid down in Article 26, direct eligible personnel costs shall be limited to salaries plus social security charges and other costs included in the remuneration of personnel assigned to the action, arising from national law or from the employment contract.

2. Without prejudice to the conditions laid down in Article 26, additional remuneration to personnel of participants that are non-profit legal entities assigned to the action, including payments on the basis of supplementary contracts regardless of their nature, may also be considered as direct eligible personnel costs, up to the amount set out in paragraph 3, if they fulfil the following additional conditions:

(a) it is part of the usual remuneration practices of the participant and is paid in a consistent manner whenever the same kind of work or expertise is required;

(b) the criteria used to calculate the supplementary payments are objective and of general application by the participant, independent of the source of funding used.

Article 28 - Funding of the action

1. The funding of an action shall not exceed the total eligible costs minus the receipts of the action.

2. The following shall be considered as receipts of the action:

(a) resources made available by third parties to the participants by means of financial transfers or contributions in kind free of charge, the value of which has been declared as eligible costs by the participant, provided that they have been contributed by the third party specifically to be used in the action;

(b) income generated by the action, except income generated by the exploitation of the results of the action;

(c) income generated from the sale of assets purchased under the grant agreement up to the value of the cost initially charged to the action by the participant.

3. A single reimbursement rate of the eligible costs shall be applied per action for all activities funded therein. The maximum rate shall be fixed in the work programme or plan. 4. The Horizon 2020 grant may reach a maximum of 100 % of the total eligible costs, without prejudice to the co-financing principle.

Article 29 - Indirect costs

1. Indirect eligible costs shall be determined by applying a flat rate of 25 % of the total direct eligible costs, excluding direct eligible costs for subcontracting and the costs of resources made available by third parties, which are not used on the premises of the beneficiary, as well as financial support to third parties.

2. By way of derogation from paragraph 1, indirect costs may be declared in the form of a lump sum or unit costs when provided for in the work programme or work plan.

Article 34 - Certificate on the financial statements

The certificate on the financial statements shall cover the total amount of the grant claimed by a participant under the form of reimbursement of actual costs and under the form of unit costs referred to in Article 33(2), excluding the amounts declared on the basis of lump sums, flat rates and unit costs other than those determined according to the participant's usual cost accounting practices. The certificate shall be submitted only when that amount is equal to or greater than EUR 325 000 at the time of claiming the payment of the balance of the grant.

Extracts from the EC Factsheet: Rules under Horizon 2020

Receiving EU research and innovation funding is a highly competitive process. Reacting to calls for proposals, consortia of industry, academia and other players submit project ideas that are evaluated by panels of independent experts. The Commission enters into grant preparations with the selected proposals (success rate about one in five). Once all administrative and technical details are fixed, the grant agreements are signed. Consortia receive pre-financing at the project start and further payments following the acceptance of interim and final reports. The projects are co-financed by the EU and the participants. For research and development projects the share of the EU contribution can be up to 100% of the total eligible costs.

For innovation projects up to 70% of the costs, with the exception of non-profit legal entities which can also receive up to 100 % in these actions. In all cases indirect costs will be covered by a flat rate of 25% of the direct costs.

Simpler funding rules that take into account the stakeholders' preference for the reimbursement of actual costs, including:

- *simpler reimbursement of direct costs, with a broader acceptance of the beneficiaries' usual accounting practices;*
- *the possibility of using unit personnel costs (average personnel costs) in accordance to the beneficiaries usual cost accounting practices;*
- *abolition of time-recording obligations for staff working exclusively on an EU project, and simplification of time-recording requirements for other staff by providing a clear and basic set of minimum conditions;*
- *indirect costs covered by a single flat-rate applied to the direct costs; removing a major source of financial errors and complexity;*
- *two funding rates but only one predetermined rate applicable to all activities in the same project: one project – one rate;*
- *lump sums, prizes, output based funding for specific areas where this has proved appropriate;*

The Commission is committed to reduce in Horizon 2020 the time to grant (defined as the administrative period between submission of a proposal and signature of the grant agreement) to a general maximum of 8 months. [...] No complex validations of the legal status of the participants would be necessary and also no financial capacity check – speeding up the time between proposal and project start considerably. Intermediate cost claims could be submitted without any certificate on the financial statements. Only at the end would one certificate be required for each participant if its EU contribution based on actual costs was higher than EUR 325.000.

http://ec.europa.eu/research/horizon2020/pdf/press/fact_sheet_on_rules_under_horizon_2020.pdf

Types of projects and project duration

There are several types of projects, which will be funded under H2020.

The main instruments (as the EC calls them) are:

- Grants for Research and Innovation Actions (RIA)
- Grants for Coordination and Support Actions (CSA)
- Programme Co-funding Actions PCA)
- Pre-Commercial Procurement (PCP)
- Public Procurement of Innovative Solutions (PPI)
- SME-Instrument
- Prize

There is a short sheet that presents in brief the different instruments:

http://www.dit.ie/media/ditresearchenterprise/dredocuments/Finance%20Helpdesk%20h2020.pdf

Multi-actor projects and thematic networks

The types of projects mentioned above can further include two supplementary approaches or concepts, which are interesting for associations and NGO: multi-actor projects and thematic networks. These approaches are specially indicated under the concerned calls ("Proposals should fall under the concept of 'multi-actor approach'").

As foreseen in the H2020 Regulation part: "*The **multi-actor approach** aims at more demand-driven innovation through the genuine and sufficient involvement of various actors (end-users such as farmers/farmers' groups, fishers/fisher's groups, advisors, enterprises, etc.) all along the project: from the participation in the planning of work and experiments, their execution up until the dissemination of results and the possible demonstration phase. The adequate choice of key actors with complementary types of knowledge (scientific and practical) should be reflected in the description of the project proposals and result in a broad implementation of project results. The multi-actor approach is more than a strong dissemination requirement or what a broad stakeholders' board can deliver: it should be illustrated with sufficient quantity and quality of knowledge exchange activities and a clear role for the different actors in the work. This should generate innovative solutions that are more likely to be applied thanks to the cross-fertilisation of ideas between actors, the co-creation and the generation of co-ownership for eventual results. A multi-actor project needs to take into account how the project proposal's objectives and planning are targeted to needs / problems and opportunities of end-users, and the complementarity with existing research. Facilitation between actors and openness to involve additional actors/groups of actors during the project, for instance relevant EIP operational groups, are strongly recommended*".

http://ec.europa.eu/research/horizon2020/pdf/work-programmes/food_draft_work_programme.pdf

The **thematic networks** should again involve a range of actors from science and practice, along the same lines as the multi-actor approach (no pure research networks).

These networks aim to:

- collect existing scientific knowledge and best practices on the chosen theme: what do we have/ what do we need to facilitate the use of the results.
- develop end-user material, such as info sheets in a common format and audio-visual material. The material should be available long-term and easily understandable and accessible to end-users. It may serve as input for education and for a research database.

http://ec.europa.eu/agriculture/eip/pdf/fact-sheet-horizon-2020_en.pdf

Duration of projects

The duration of projects often varies between two or three years (rather small-scale or medium-scale projects) to four or five years (rather large-scale projects). However, in contrast to former FPs, there are almost no formal limits on project duration imposed under Horizon 2020 (even if budgets can give a hint). It is the responsibility of the coordinator and the partners to design a consistent time scale for the project.

Concerning the number of partners in a project, calls often give a minimum but not a maximum requirement. Some calls might not give any indication at all (even if the budget is one). Unfortunately it seems that large-scale projects will be more often demanded (e.g. at least ten partners in ten different member states) than small-scale projects.

Always check carefully the dead-lines! Calls are mainly open for several months. So even if this might seem quite a long time, experience shows: One is always running at the end! It is thus important to start soon after the publication of the calls and to advance as quickly as possible in the setting up of a project.

By the way, if you want to participate in a European project, it is compulsory to register (be you the coordinator or a partner). You will receive a 9-digit participation identification code (PIC) "that is the unique identifier of your organisation and will be used as a reference by the Commission in any interactions."

Where can CSOs find information and support?

There exists the **Participants portal** of the EU, which gives practical hints on where to find a call, how to register and to submit a proposal and so on. It is the most important website for future project partners:

http://ec.europa.eu/research/participants/portal/desktop/en/funding/index.html

The Horizon 2020 website is permanently updated by the service of the EC.

http://ec.europa.eu/programmes/horizon2020/en

There exist so called **National Contact Points**. "NCPs provide information and guidance to anyone wishing to participate in EU research and are able to offer personalised support in the proposer's own language. The NCPs are usually national structures set up and financed by the governments of the 27 EU Member States and the states associated to the Seventh Framework Programme (FP7)."

http://ec.europa.eu/research/horizon2020/index_en.cfm?pg=ncp

The Commission is also giving financial support to NCPs.

- Guidance on choosing thematic priorities and instruments
- Advice on administrative procedures and contractual issues
- Training and assistance on proposal writing
- Distribution of documentation (forms, guidelines, manuals etc.)
- Assistance in partner search

NCPs are providing theme specific help. There exist NCPs on energy, environment, health, science with and for society, mobility, transport, SSH, SMEs, ICT, etc.

The NCPs also publish all the calls of Horizon 2020.

If you want to find national contacts points in your country, you can do this here:

http://ec.europa.eu/research/participants/portal/desktop/en/support/national_contact_points.html

We recommend you to have a look into the **H2020 Online Manual**, what gives much information. You can find the Online Manual on this page:

http://ec.europa.eu/research/participants/portal/desktop/en/funding/guide.html

At the following page you will find the listing of all calls. There is now also a new function « Filter a call », where you can search calls with key words.

http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/index.html

The EC has also set up the **Horizon 2020 helpdesk**, an electronic "Research enquiry service".

http://ec.europa.eu/research/index.cfm?pg=enquiries

Short notice on divers other instruments: EIPs, JTIs, ETPs, JPIs, EIT, KICs, LMI

There are numerous other instruments, initiatives or programmes that are either directly or partly involved in H2020 and which we won't treat here. Just to name them:

Ξ **European Innovation Partnerships** (EIPs): "*EIPs are challenge-driven, focusing on societal benefits and a rapid modernisation of the associated sectors and markets.*" There exist currently EIPs on Active and healthy ageing, Agricultural sustainability and productivity, Smart cities and communities, Water, Raw materials.

http://ec.europa.eu/research/innovation-union/index_en.cfm?pg=eip

Ξ **Joint Technology Initiatives** (JTIs): "*They are long-term Public-Private Partnerships and are managed within dedicated structures based on Article 187 TFEU (ex Article 171 TEC). JTIs support large-scale multinational research activities in areas of major interest to European industrial competitiveness and issues of high societal relevance.*"

http://ec.europa.eu/research/jti/index_en.cfm?pg=home

Ξ **European Technology Platforms** (ETPs): "*ETPs) are industry-led stakeholder fora that develop short to long-term research and innovation agendas and roadmaps for action at EU and national level to be supported by both private and public funding.*"

http://cordis.europa.eu/technology-platforms/

Ξ **Joint Programming Initiatives** (JPIs): "*The overall aim of the Joint Programming process is to pool national research efforts in order to make better use of Europe's precious public R&D resources and to tackle common European challenges more effectively in a few key areas.*"

http://ec.europa.eu/research/era/joint-programming_en.html

Ξ **European Institute for Innovation and Technology** (EIT): "*Its mission is to increase European sustainable growth and competitiveness; reinforce the innovation capacity of the EU Member States; and create the entrepreneurs of tomorrow and prepare for the next innovative breakthroughs.*"

http://eit.europa.eu/

"*The EIT achieves its mission by fully integrating all three sides of the 'knowledge triangle', i.e. higher education, research and business, in* ***Knowledge and Innovation Communities*** *(KICs).*"

http://eit.europa.eu/kics/

Ξ **Lead Markets Initiatives** (LMI): "*The Lead Market Initiative is the European policy for 6 important sectors that are supported by actions to lower barriers to bring new products or services onto the market.*"

http://ec.europa.eu/enterprise/policies/innovation/policy/lead-market-initiative/

Some critical analyses and divers information on following websites:

http://corporateeurope.org/news/corporate-world-has-too-much-power-over-rd-funding

http://corporateeurope.org/sites/default/files/publications/research_report_-_final.pdf

http://sciencescitoyennes.org/wp-content/uploads/2011/09/STACS_HandbookForCSOs.pdf (p. 19-21)

http://tporganics.eu/upload/EIP_briefing_IFOAMEU_TPO_ARC_Oct2013.pdf

http://tporganics.eu/upload/TPOrganics_recognitionPR_16July2013.pdf

Annex: Original text of Part III Societal challenges

Health, demographic change and well-being

The specific objective is to improve the lifelong health and well-being of all.

Effective health promotion, supported by a robust evidence base, prevents disease, contributes to well-being and is cost effective. Promotion of health, active ageing, well-being and disease prevention also depend on an understanding of the determinants of health, on effective preventive tools on effective health and disease surveillance and preparedness, and on effective screening programmes. Effective health promotion is also facilitated by the provision of better information to citizens, which encourages responsible health choices.

Successful efforts to prevent, detect early, manage, treat and cure disease, disability, frailty and reduced functionality are underpinned by the fundamental understanding of their determinants and causes, processes and impacts, as well as factors underlying good health and well-being. Improved understanding of health and disease will demand close linkage between fundamental, clinical, epidemiological and socio-economic research. Effective sharing of data, standardised data processing and the linkage of these data with large-scale cohort studies is also essential, as is the translation of research findings into the clinic, in particular through the conduct of clinical trials, which should address all age groups to ensure that medicines are adapted to their use.

The resurgence of old infectious diseases, including tuberculosis, and the increased prevalence of vaccine-preventable diseases further underlines the need for a comprehensive approach towards poverty-related and neglected diseases. Likewise, the growing problem of anti-microbial resistance demands a similarly comprehensive approach.

Personalised medicine should be developed in order to suit preventive and therapeutic approaches to patient requirements, and must be underpinned by the early detection of disease.

It is a societal challenge to adjust to the further demands on health and care sectors due to the ageing population. If effective health and care is to be maintained for all ages, efforts are required to improve decision making in prevention and in treatment provision, to identify and support the dissemination of best practice in the health and care sectors, and to support integrated care. A better understanding of ageing processes and the prevention of age-related illnesses are the basis for keeping European citizens healthy and active throughout the course of their lives. Similarly important is the wide uptake of technological, organisational and social innovations empowering in particular older persons, persons with chronic diseases as well as disabled persons to remain active and independent. Doing so will contribute to increasing their physical, social, and mental well-being and lengthening the duration thereof.

All of these activities shall be undertaken in such a way as to provide support throughout the research and innovation cycle, strengthening the competitiveness of the European based industries and development of new market opportunities. Emphasis will also be placed on engaging all health stakeholders – including patients and patient organisations, and health and care providers – in order to develop a research and innovation agenda that actively involves citizens and reflects their needs and expectations.

Specific activities shall include:

- understanding the determinants of health (including nutrition, physical activity and gender, and environmental, socio-economic, occupational and climate-related factors);
- improving health promotion and disease prevention; understanding disease and improving diagnosis and prognosis;
- developing effective prevention and screening programmes and improving the assessment of

disease susceptibility;

Ξ improving the surveillance of infectious diseases and preparedness for combating epidemics and emerging diseases;

Ξ developing new and better preventive and therapeutic vaccines and drugs; using in-silico medicine for improving disease management and prediction;

Ξ developing regenerative medicine and adapted treatments, and treating disease, including palliative medicine;

Ξ transferring knowledge to clinical practice and scalable innovation actions;

Ξ improving health information and better collection and use of health cohort and administrative data; standardised data analysis and techniques;

Ξ active ageing, and independent and assisted living; individual awareness and empowerment for self-management of health;

Ξ promotion of integrated care, including psychosocial aspects; improving scientific tools and methods to support policy making and regulatory needs;

Ξ optimising the efficiency and effectiveness of healthcare provision;

Ξ and reducing health disparities and inequalities by evidence-based decision making and dissemination of best practice and by innovative technologies and approaches.

Active involvement of healthcare providers must be encouraged in order to secure rapid take-up and implementation of results.

Food security, sustainable agriculture and forestry, marine, maritime and inland water research, and the bioeconomy

The specific objective is to secure sufficient supplies of safe, healthy and high quality food and other bio-based products, by developing productive, sustainable and resource-efficient primary production systems, fostering related ecosystem services and the recovery of biological diversity, alongside competitive and low-carbon supply, processing and marketing chains. This will accelerate the transition to a sustainable European bioeconomy, bridging the gap between new technologies and their implementation.

(a) Sustainable agriculture and forestry

The aim is to supply sufficient food, feed, biomass and other raw-materials, while safeguarding natural resources, such as water, soil and biodiversity, in a European and world-wide perspective, and enhancing ecosystems services, including coping with and mitigating climate change. The activities shall focus on increasing the quality and value of agricultural products by delivering more sustainable and productive agriculture, including animal husbandry and forestry systems, which are diverse, resilient and resource-efficient (in terms of low-carbon and low external input and water), protect natural resources, produce less waste and can adapt to a changing environment. Furthermore, the activities shall focus on developing services, concepts and policies for thriving rural livelihoods and encouraging sustainable consumption.

In particular for forestry, the aim is to sustainably produce biomass and bio-based products and deliver ecosystem services, with due consideration to economic, ecological and social aspects of forestry. Activities will focus on the further development of production and sustainability of resource-efficient forestry systems, which are instrumental in the strengthening of forest resilience and biodiversity protection, and which can meet increased biomass demand.

The interaction of functional plants with health and well being, as well as the exploitation of horticulture and forestry for the development of urban greening, will also be considered.

(b) Sustainable and competitive agri-food sector for a safe and healthy diet

The aim is to meet the requirements of citizens and the environment for safe, healthy and affordable food, and to make food and feed processing, distribution and consumption more sustainable and the food sector more competitive while also considering the cultural component of food quality. The activities shall focus on healthy and safe food for all, informed consumer choices, dietary solutions and innovations for improved health, and competitive food processing methods that use less resources and additives and produce less by-products, waste and greenhouse gases.

(c) Unlocking the potential of aquatic living resources

The aim is to manage, sustainably exploit and maintain aquatic living resources to maximise social and economic benefits/returns from Europe's oceans, seas and inland waters while protecting biodiversity. The activities shall focus on an optimal contribution to secure food supplies by developing sustainable and environmentally friendly fisheries, on sustainable management of ecosystems providing goods and services, on competitive as well as environmentally friendly European aquaculture in the context of the global economy, and on boosting marine and maritime innovation through biotechnology to fuel smart «blue» growth.

(d) Sustainable and competitive bio-based industries and supporting the development of a European bioeconomy

The aim is the promotion of low-carbon, resource-efficient, sustainable and competitive European bio-based industries. The activities shall focus on fostering the knowledge-based bioeconomy by transforming conventional industrial processes and products into bio-based resource and energy efficient ones, the development of integrated second and subsequent generation biorefineries, optimising the use of biomass from primary production including residues, biowaste and bio-based industry by-products, and opening new markets through supporting standardisation and certification systems as well as regulatory and demonstration/field trial activities, while taking into account the implications of the bioeconomy on land use and land use changes, as well as the views and concerns of civil society.

(e) Cross-cutting marine and maritime research

The aim is to increase the impact of Union seas and oceans on society and economic growth through the sustainable exploitation of marine resources as well as the use of different sources of marine energy and the wide range of different uses that is made of the seas.

Activities shall focus on cross-cutting marine and maritime scientific and technological challenges with a view to unlocking the potential of seas and oceans across the range of marine and maritime industries, while protecting the environment and adapting to climate change. A strategic coordinated approach for marine and maritime research across all challenges and priorities of Horizon 2020 will also support the implementation of relevant Union policies to help deliver key blue growth objectives.

Secure, clean and efficient energy

The specific objective is to make the transition to a reliable, affordable, publicly accepted, sustainable and competitive energy system, aiming at reducing fossil fuel dependency in the face of increasingly scarce resources, increasing energy needs and climate change.

(a) Reducing energy consumption and carbon footprint by smart and sustainable use

Activities shall focus on research and full-scale testing of new concepts, non-technological solutions, more efficient, socially acceptable and affordable technology components and systems with in-built intelligence, to allow real-time energy management for new and existing near-zero-emission, near-zero-energy and positive energy buildings, retrofitted buildings, cities and districts, renewable heating and cooling, highly efficient industries and mass take-up of energy efficiency and energy saving solutions and services by companies, individuals, communities and cities.

(b) Low-cost, low-carbon electricity supply

Activities shall focus on research, development and full scale demonstration of innovative renewables, efficient, flexible and low carbon emission fossil power plants and carbon capture and storage, or CO2 re-use technologies, offering larger scale, lower cost, environmentally safe technologies with higher conversion efficiency and higher availability for different market and operating environments.

(c) Alternative fuels and mobile energy sources

Activities shall focus on research, development and full scale demonstration of technologies and value chains to make bioenergy and other alternative fuels more competitive and sustainable for power and heat and for surface, maritime and air transport, with potential for more efficient energy conversion, to reduce time to market for hydrogen and fuel cells and to bring new options showing long-term potential to maturity.

(d) A single, smart European electricity grid

Activities shall focus on research, development and full scale demonstration of new smart energy grid technologies, back-up and balancing technologies enabling higher flexibility and efficiency, including conventional power plants, flexible energy storage, systems and market designs to plan, monitor, control and safely operate interoperable networks, including standardisation issues, in an open, decarbonised, environmentally sustainable, climate-resilient and competitive market, under normal and emergency conditions.

(e) New knowledge and technologies

Activities shall focus on multi-disciplinary research for clean, safe and sustainable energy technologies (including visionary actions) and joint implementation of pan-European research programmes and world-class facilities.

(f) Robust decision making and public engagement

Activities shall focus on the development of tools, methods, models and forward-looking and perspective scenarios for a robust and transparent policy support, including activities on public engagement, user involvement, environmental impact and sustainability assessment improving the understanding of energy-related socio-economic trends and prospects.

(g) Market uptake of energy innovation - building on Intelligent Energy Europe

Activities shall build upon and further enhance those undertaken within the Intelligent Energy Europe (IEE) programme. They shall focus on applied innovation and promotion of standards to facilitate the market uptake of energy technologies and services, to address non-technological barriers and to accelerate the cost-effective implementation of the Union's energy policies. Attention will also be given to innovation for the smart and sustainable use of existing technologies.

Smart, green and integrated transport

The specific objective is to achieve a European transport system that is resource-efficient, climate- and environmentally-friendly, safe and seamless for the benefit of all citizens, the economy and society.

The activities will be organised in such a way as to allow for an integrated and mode-specific approach as appropriate. Multiannual visibility and continuity will be necessary in order to take into account the specificities of each transport mode and the holistic nature of challenges, as well as the relevant Strategic Research and Innovation Agendas of the transport-related European Technology Platforms.

(a) Resource-efficient transport that respects the environment

The aim is to minimise transport systems' impact on climate and the environment (including noise and air pollution) by improving their quality and efficiency in the use of natural resources and fuel, by reducing greenhouse gas emissions and dependence on fossil fuels.

The focus of activities shall be to reduce resource consumption, particularly fossil fuels, greenhouse gas emissions and noise levels, as well as to improve transport and vehicle efficiency; to accelerate the development, manufacturing and deployment of a new generation of clean (electric, hydrogen and other low or zero emission) vehicles, including through breakthroughs and optimisation in engines, energy storage and infrastructure; to explore and exploit the potential of alternative and sustainable fuels and innovative and more efficient propulsion and operating systems, including fuel infrastructure and charging; to optimise the planning and use of infrastructures, by means of intelligent transport systems, logistics, and smart equipment; and to increase the use of demand management and public and non-motorised transport, and of intermodal mobility chains, particularly in urban areas. Innovation aimed at achieving low or zero emissions in all modes of transport will be encouraged.

(b) Better mobility, less congestion, more safety and security

The aim is to reconcile the growing mobility needs with improved transport fluidity, through innovative solutions for seamless, intermodal, inclusive, accessible, affordable, safe, secure, healthy, and robust transport systems.

The focus of activities shall be to reduce congestion, improve accessibility, interoperability and passenger choices, and to match user needs by developing and promoting integrated door-to-door transport, mobility management and logistics; to enhance intermodality and the deployment of smart planning and management solutions; and to drastically reduce the occurrence of accidents and the impact of security threats.

(c) Global leadership for the European transport industry

The aim is to reinforce the competitiveness and performance of European transport manufacturing industries and related services (including logistic processes, maintenance, repair, retrofitting and recycling) while retaining areas of European leadership (e.g. aeronautics). The focus of activities shall be to develop the next generation of innovative air, waterborne and land transport means, ensure sustainable manufacturing of innovative systems and equipment and to prepare the ground for future transport means, by working on novel technologies, concepts and designs, smart control systems and interoperable standards, efficient production processes, innovative services and certification procedures, shorter development times and reduced lifecycle costs without compromising operational safety and security.

(d) Socio-economic and behavioural research and forward-looking activities for policy making

The aim is to support improved policy making which is necessary to promote innovation and meet

the challenges raised by transport and the societal needs related to it.

The focus of activities shall be to improve the understanding of transport-related socio-economic impacts, trends and prospects, including the evolution of future demand, and provide policy makers with evidence-based data and analyses. Attention will also be paid to the dissemination of results emerging from these activities.

Climate action, environment, resource efficiency and raw materials

The specific objective is to achieve a resource- and water-efficient and climate change resilient economy and society, the protection and sustainable management of natural resources and ecosystems, and a sustainable supply and use of raw materials, in order to meet the needs of a growing global population within the sustainable limits of the planet's natural resources and ecosystems. Activities will contribute to increasing European competitiveness and raw materials security and to improving well being, whilst assuring environmental integrity, resilience and sustainability with the aim of keeping average global warming below 2°C and enabling ecosystems and society to adapt to climate change and other environmental changes.

(a) Fighting and adapting to climate change

The aim is to develop and assess innovative, cost-effective and sustainable adaptation and mitigation measures and strategies, targeting both CO2 and non-CO2 greenhouse gases and aerosols, and underlining both technological and non-technological green solutions, through the generation of evidence for informed, early and effective action and the networking of the required competences. Activities shall focus on improving the understanding of climate change and the risks associated with extreme events and abrupt climate-related changes with a view to providing reliable climate projections; assessing impacts at global, regional and local level, and vulnerabilities; developing innovative cost-effective adaptation and risk prevention and management measures; and supporting mitigation policies and strategies, including studies that focus on impact from other sectoral policies.

(b) Protecting the environment, sustainably managing natural resources, water, biodiversity and ecosystems

The aim is to provide knowledge and tools for the management and protection of natural resources, in order to achieve a sustainable balance between limited resources and the present and future needs of society and the economy. Activities shall focus on furthering our understanding of biodiversity and the functioning of ecosystems, their interactions with social systems and their role in sustaining the economy and human well-being; developing integrated approaches to address water-related challenges and the transition to sustainable management and use of water resources and services; and providing knowledge and tools for effective decision making and public engagement.

(c) Ensuring the sustainable supply of non-energy and non-agricultural raw materials

The aim is to improve the knowledge base on raw materials and develop innovative solutions for the cost-effective, resource-efficient and environmentally friendly exploration, extraction, processing, use and re-use, recycling and recovery of raw materials and for their substitution by economically attractive and environmentally sustainable alternatives with a lower environmental impact, including closed-loop processes and systems. Activities shall focus on improving the knowledge base on the availability of raw materials; promoting the sustainable and efficient supply, use and re-use of raw materials, including mineral resources, from land and sea; finding alternatives for critical raw materials; and improving societal awareness and skills on raw materials.

(d) Enabling the transition towards a green economy and society through eco-innovation

The aim is to foster all forms of eco-innovation that enable the transition to a green economy.

Activities shall, inter alia, build upon and enhance those undertaken in the Eco-Innovation Programme and focus on strengthening eco-innovative technologies, processes, services and products, including exploring ways to reduce the quantities of raw materials in production and consumption, overcoming barriers in this context, and boosting their market uptake and replication, with special attention for SMEs; supporting innovative policies, sustainable economic models and societal changes; measuring and assessing progress towards a green economy; and fostering resource efficiency through digital systems.

(e) Developing comprehensive and sustained global environmental observation and information systems

The aim is to ensure the delivery of the long-term data and information required to address this challenge. Activities shall focus on the capabilities, technologies and data infrastructures for Earth observation and monitoring from both remote sensing and in situ measurements that can continuously provide timely and accurate information and permit forecasts and projections. Free, open and unrestricted access to interoperable data and information will be encouraged. Activities shall help define future operational activities of the Copernicus programme and enhance the use of Copernicus data for research activities.

(f) Cultural heritage

The aim is to research into the strategies, methodologies and tools needed to enable a dynamic and sustainable cultural heritage in Europe in response to climate change. Cultural heritage in its diverse physical forms provides the living context for resilient communities responding to multivariate changes. Research in cultural heritage requires a multidisciplinary approach to improve the understanding of historical material. Activities shall focus on identifying resilience levels through observations, monitoring and modelling as well as provide for a better understanding on how communities perceive and respond to climate change and seismic and volcanic hazards.

Europe in a changing world

The specific objective is to foster a greater understanding of Europe, provide solutions and support inclusive, innovative and reflective European societies in a context of unprecedented transformations and growing global interdependencies.

Inclusive societies

The aim is to gain a greater understanding of the societal changes in Europe and their impact on social cohesion, and to analyse and develop social, economic and political inclusion and positive inter-cultural dynamics in Europe and with international partners, through cutting-edge science and interdisciplinarity, technological advances and organisational innovations. The main challenges to be tackled concerning European models for social cohesion and well-being are, inter alia, migration, integration, demographic change, the ageing society and disability, education and lifelong learning, as well as the reduction of poverty and social exclusion taking into account the different regional and cultural characteristics.

Social sciences and humanities research plays a leading role here as it explores changes over time and space and enables exploration of imagined futures. Europe has a huge shared history of both co-operation and conflict. Its dynamic cultural interactions provide inspiration and opportunities. Research is needed to understand identity and belonging across communities, regions and nations. Research will support policymakers in designing policies that foster employment, combat poverty and prevent the development of various forms of divisions, conflict and political and social exclusion, discrimination and inequalities, such as gender and intergenerational inequalities, discrimination due to disability or ethnic origin, or digital or innovation divides, in European societies and in other regions of the world. It shall in particular feed into the implementation and the adaptation of the Europe 2020 strategy and the broad external action of the Union.

The focus of activities shall be to understand and foster or implement:

(a) the mechanisms to promote smart, sustainable and inclusive growth;
(b) trusted organisations, practices, services and policies that are necessary to build resilient, inclusive, participatory, open and creative societies in Europe, in particular taking into account migration, integration and demographic change;
(c) Europe's role as a global actor, notably regarding human rights and global justice;
(d) the promotion of sustainable and inclusive environments through innovative spatial and urban planning and design.

Innovative societies

The aim is to foster the development of innovative societies and policies in Europe through the engagement of citizens, civil society organisations, enterprises and users in research and innovation and the promotion of coordinated research and innovation policies in the context of globalisation and the need to promote the highest ethical standards. Particular support will be provided for the development of the ERA and the development of framework conditions for innovation.

Cultural and societal knowledge is a major source of creativity and innovation, including business, public sector and social innovation. In many cases social and user-led innovations also precede the development of innovative technologies, services and economic processes. The creative industries are a major resource to tackle societal challenges and for competitiveness. As interrelations between social and technological innovation are complex, and rarely linear, further research, including cross-sectoral and multidisciplinary research, is needed into the development of all types of innovation and activities funded to encourage its effective development into the future.

The focus of activities shall be to:

(a) strengthen the evidence base and support for the flagship initiative 'Innovation Union' and ERA;
(b) explore new forms of innovation, with special emphasis on social innovation and creativity, and understand how all forms of innovation are developed, succeed or fail;
(c) make use of the innovative, creative and productive potential of all generations;
(d) promote coherent and effective cooperation with third countries.

Reflective societies - cultural heritage and European identity

The aim is to contribute to an understanding of Europe's intellectual basis – its history and the many European and non-European influences – as an inspiration for our lives today. Europe is characterized by a variety of different peoples (including minorities and indigenous people), traditions and regional and national identities as well as by different levels of economic and societal development. Migration and mobility, the media, industry and transport contribute to the diversity of views and lifestyles. This diversity and its opportunities should be recognized and considered.

European collections in libraries, including digital ones, archives, museums, galleries and other public institutions have a wealth of rich, untapped documentation and objects for study. These archival resources, together with intangible heritage, represent the history of individual Member States but also the collective heritage of a Union that has emerged through time. Such materials should be made accessible, also through new technologies, to researchers and citizens to enable a look to the future through the archive of the past. Accessibility and preservation of cultural heritage in these forms is needed for the vitality of the living engagements within and across European cultures now and contributes to sustainable economic growth.

The focus of activities shall be to:

(a) study European heritage, memory, identity, integration and cultural interaction and translation, including its representations in cultural and scientific collections, archives and museums, to better inform and understand the present by richer interpretations of the past;
(b) research into European countries' and regions' history, literature, art, philosophy and religions and how these have informed contemporary European diversity;

(c) research on Europe's role in the world, on the mutual influence and ties between the regions of the world, and a view from outside on European cultures.

Secure societies

The specific objective is to foster secure European societies in a context of unprecedented transformations and growing global interdependencies and threats, while strengthening the European culture of freedom and justice.

The aim is to support Union policies for internal and external security and to ensure cyber security, trust and privacy in the Digital Single Market, whilst at the same time improving the competitiveness of the Union's security industry and services, including ICT. The activities will include a focus on the research and development of the next generation of innovative solutions, by working on novel concepts, designs and interoperable standards. This will be done by developing innovative technologies and solutions that address security gaps and lead to a reduction in the risk from security threats.

These mission-oriented actions will integrate the demands of different end-users (citizens, businesses, civil society organisations and administrations, including national and international authorities, civil protection, law enforcement, border guards, etc.) in order to take into account the evolution of security threats and privacy protection and the necessary societal aspects.

The focus of activities shall be to:

(a) fight crime, illegal trafficking and terrorism, including understanding and tackling terrorist ideas and beliefs;

(b) protect and improve the resilience of critical infrastructures, supply chains and transport modes;

(c) strengthen security through border management;

(d) improve cyber security;

(e) increase Europe's resilience to crises and disasters;

(f) ensure privacy and freedom, including in the Internet, and enhance the societal legal and ethical understanding of all areas of security, risk and management;

(g) enhance standardisation and interoperability of systems, including for emergency purposes;

(h) support the Union's external security policies, including conflict prevention and peace-building.

Fondation Sciences Citoyennes (FSC) is a non-for profit organisation based in Paris. It aims at supporting and prolonging the current movement of democratic and civil appropriation of science in order to put it at the service of the common good. Our action is based on an engaged approach combined with in-depth analyses and concrete propositions. Since more than ten years, FSC has been publishing background papers, reports and analyses on the issue of research, science and democracy, organises campaigns (e.g. protection of whistle blowers) and public conferences, intervenes in the topicality of research policies, supports the introduction and recognition of participatory research and has been working on two law proposals (on whistleblowing and citizen conventions). FSC works with and towards numerous other organisations (NGOs, scientific organisations and institutions, policy institutions).

FSC is a NGO dedicated to the redistribution of expertise and research capacities towards citizen movements

We are experiencing a transformation in the nature of risks, inequalities, and hazards created by the prevailing modes of production and consumption. Free-market globalisation exacerbates these threats and entails the subjection of research and technical development to the demands of the balance sheet. In recent years a growing number of crises (Chernobyl, asbestos, contaminated blood, BSE, GMOs…) has shown the need to take account of other interests and risks than those defined by the techno-scientific agenda. They question the existing system of expertise and science and have provoked a revival of social mobilizations and numerous initiatives for the involvement of laypersons in research, and expertise. This process that has led to a certain degree of opening-up of science and its institutions.

Faced with the commercialisation of knowledge and living matter, these mobilizations and initiatives are embarking upon a democratic development and a new social contract for responsible and collective citizen science. Far from amounting to "a rise in irrational beliefs", a lack of information or a question of popularisation of science, they affirm that science for all must be built with all and in dialogue with types of knowledge previously discounted.

An engine of emancipation for several centuries, science, now techno-science, is tremendously powerful today. In order to serve the well being of the whole of humanity on our planet, this power must be driven by other motives than merely the quest for knowledge, the desire for power or the logic of profit. So after the era of the «control of nature» should come that of the «control of science», theb era of citizen science.

Our objectives are, in particular:

Ξ To increase the research and expertise capacities of civil society, NGOs, consumerists, citizen movements and trade unions. We support the establishment of a "scientific third sector" that is better able to meet the growing social and ecological demands, which are often neglected by the major scientific orientations whether they be defined by the state or by private industry.

Ξ To stimulate the freedom of expression and debate in the scientific community, to support whistle blowers and the development of public controversies and « hybrid forums » on key scientific issues. In total contrast with the fear of public intervention and with technocratic thinking, pluralism and controversies are the source not only of a better exploration of possible worlds and, therefore, of better decisions, but also of an active appropriation of scientific knowledge by the public.

Ξ To promote the democratic elaboration of scientific and technical choices. We support the organisation of public debates on public policies regarding research, technology and expertise. We will also be vigilant in analysing the new methods of deliberation that have increased in number during recent years in order to support those that further a genuine technical democracy.

The FSC executive board is led by Jacques Testart, a renown French biologist and a former senior researcher at the Institut National de la Santé et de la Recherche Médicale (INSERM). Jacques Testart is known as the pioneer in France of medical assisted human reproduction but also as an innovative and critical thinker on the subject of science and society and as a prolific writer. The board includes also, among other members, some of the scientific whistleblowers that FSC supported in the recent years.

A permanent team of 5 paid staff, backed occasionally by fixed term contract employees, interns and volunteers, implements the programmes and the decisions of the board. FSC has an average of 200 paying members.

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