La ricerca Mission-oriented di Horizon Europe 2021-2027
Quali opportunità per l'Italia?
Incontro con i Mission Board 'Adaptation to Climate Change and Societal Transformation' e 'Climate-Neutral and Smart Cities'
Mercoledì 5 febbraio 2020
Aula Magna, ore 9.00-17.00
Largo A. Gemelli, 1 - Milano

Synthesis Report

Prepared by: Laura Zanfrini and Roberto Zoboli

With the contribution by: Maddalena Baitieri, Ilaria Beretta, Lucia Dal Negro, Marcello D'Amico, Filippo Fraschini, Emma Garavaglia, Francesca Giuliano, Massimiliano Monaci, Carlo Alberto Nucci, Giorgia Spigno, Simone Tagliapietra

Contents

The event

Title: 'The Mission oriented research of Horizon Europe: What opportunities for Italy? Meeting the Mission Boards 'Adaptation to Climate Change and Societal Transformation' and 'Climate-Neutral and Smart Cities'

Venue: Univesità Cattolica del Sacro Cuore, Milan, February 5, 2020

Organising institutions (people):

- **Università Cattolica del Sacro Cuore**, Milan (Laura Zanfrini[1], Roberto Zoboli[2], Maddalena Baitieri[3], Guido Castelli[4], the Research Office, the Events Office, the Communication Office), in co-operation with:
- **MUR – Italian Ministry of University and Research** (Fulvio Esposito, National Representative in the Horizon Europe Program Committee);
- Representation of the **European Commission** in Milan (Massimo Gaudina, Head);
- **APRE** - Agency for the Promotion of European Research in Italy (Marco Falzetti, Director General; Matteo Di Rosa, Senior Project Manager);
- **Fondazione Cariplo** (Carlo Mango, Director Science and Technology Area, and Member of **Mission Assembly 'Climate-Neutral and Smart Cities'**, Valentina Amorese).
- With the contribution of: Jaroslav Mysiak, Director 'Risk assessment and adaptation strategies', Euro-Mediterranean Centre on Climate Change – Member and Rapporteur **Mission Board 'Adaptation to Climate Change and Societal Transformation'**;
- Luca De Biase, journalist, and Member of Mission Assembly 'Climate-Neutral and Smart Cities'

Attendants (on-site): Morning session: 502; Afternoon breakout-group sessions: 167.

Streaming: 199 'connections', 140 'sessions', 105 'users' (standard definitions).

Presentations, videos, media coverage: https://www.unicatt.it/eventi-horizon-europe-2021-2027

Aims and format

Aims: Fist event in Italy aimed at creating a dialogue between the Mission Boards of Horizon Europe and the civil society, including the scientific community. The main aims have been:

Aim 1. To communicate and explain the concept and the role of the Mission Areas, the Mission Boards, and the Mission-oriented research within Horizon Europe 2021-2027, with a joint focus on the two Mission Areas 'Adaptation to Climate Change and Societal Transformation' e 'Climate-Neutral and Smart Cities' (additional link created with the Mission Area 'Cancer' through the speech by Walter Ricciardi, Coordinator of the 'Mission Board on Cancer')

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Aim 2. To gather the perceptions, the expectations, the ideas of the social stakeholders and the civil society actors in Italy, including the scientific community, on the development of Mission-oriented research, and to understand opportunities for Italy (civil society and research system).

Format (see program enclosed, in Italian):

A. *Morning plenary session* (10:00-13:00): responded to the Aim 1. After the welcome speeches (Franco Anelli, Rector of Università Cattolica; Giorgio Rossi (on behalf of Fulvio Esposito), representing MUR; Massimo Gaudina, Representation of the European Commission in Milan), a general picture of the state of play of Horizon Europe and the Mission-oriented research has been provided by Patrizia Toia (Vice-president ITRE, European Parliament, connected by Skype from Brussels), and Marco Falzetti (APRE). A general overview on the work being done by the Mission Board on Cancer has been provided by Walter Ricciardi (recorded speech).
Presentations from the people of the two Mission Boards: (i) Jaroslav Mysiak presented the key concepts and the first preliminary work done by the Mission Board 'Adaptation to Climate Change and Societal Transformation'; (ii) Carlo Mango and Luca De Biase jointly presented the state of play of the Mission Board 'Climate-Neutral and Smart Cities', as seen from the Assembly; (iii) Laura Zanfrini presented the 'first indications from the stakeholders' by exploiting the work done (including breakout groups) for the section 'Societal Transformations-Smart, Secure and Inclusive Communities' of the drafts/proposal of the new Italian National Research Plan.
Main outcome: a very useful clarification on the meaning, the aims, and the state of play of the Mission Areas and the Mission Boards, including uncertainties and expectations from the engagement of the civil society.

B. Afternoon breakout groups in parallel sessions, and second plenary (14:00-17:00): responded to the Aim 2 by stimulating the participants' suggestions from the bottom-up. The breakout groups in the parallel sessions have been 5, identified by topics (or topical angles):

   1. Transitions of production and consumption paradigms

   2. Biodiversity, bioeconomy, natural capital

   3. Governance and anthropological capital

   4. Risks, social innovation, resilient communities

   5. Smart cities and centre-periphery relationships

Participants registered to the breakout groups have pre-allocated to one of the sessions depending on their declared interest/affiliations (from registration form), also to have a balanced participant number (about 30 participants per session) and a balanced distribution of different types of stakeholders.

Each breakout group has been coordinated by a rapporteur and co-rapporteurs, and has been guided by the following common questions:

➢ Priority for Italy: What are the priority topics to which Mission-oriented research can be addressed in Italy, in the two Mission Areas?
➢ Giving value to available knowledge: What is the knowledge base that the Italian System (research and innovation community, and institutional, economic, social, cultural stakeholders) can provide for the development of Mission-oriented research in the two Mission Areas?
➢ Implementation: What implementation instruments can deliver the highest impact of the Mission Oriented research in the two areas?
➢ Engagement: What strategies can favour the engagement of social actors and citizens in the definition, design, and implementation of the Missions?

Participants were free to present their positions, comments, and suggestions keeping the guiding questions as reference (and were free to move to other breakout groups).

At the end of the breakout groups (14:00-16:00), the rapporteur and co-rapporteurs wrapped up the main points and suggestions, which have been presented (5 minutes each) to all the participants during the second plenary session (16:00-17:00). The people from the Mission Boards then gave their first reactions to what emerged from the breakout groups.

The outcomes of the afternoon sessions, after re-processing by rapporteurs and co-rapporteurs, are summarised below.

General Highlights from the breakout groups

Climate change affects the environment and natural resources, but it deeply impacts the social, economic, and cultural development of the European society.

Large part of the society, including researchers and high-qualified professionals, tend to perceive climate change as a purely environmental problem. The social dimension of climate change must receive a higher and specific attention. Equally important is to overcome the reticence of decision makers in perceiving adaptation policies as development policies, as they actually are. At the same time, it is widely recognized that technologies, even 'green technologies', are just a part of the solution and many cannot deliver results without a coherent co-evolution of social and individual behaviors and culture. In this regard, 'Adaptation' and 'Smart cities' are highly interconnected and both have a profound social dimension. This should be recognized through a strong cooperation between the two Mission Boards in defining the missions.

Gaining awareness of the relevance of adapting to climate change in daily life by exploiting the potential of skills and knowledge already available for the design of sustainable solutions.

Both business organizations and civil society actors have a set of knowledge, both codified and contextual, on which to engage relevant processes of technical and social innovation. These repertoires are often underutilized, as there is no clear awareness of their potential and the ability to make "critical mass". At the same time, there is a risk of a vague interpretation of the issue, by including different inadequately connected topics under the hat of climate change. The need to seek a balance between these two tendencies has therefore emerged.

Participants have provided different examples of existing repertories of codified knowledge (such as data generated through both research activity and production processes) and experiential knowledge, not adequately valorized in the decision making process (by both public authorities and companies) and not socialized with citizens (who can gain from them a greater awareness of the changes taking place). Hence the need to develop tools that allow to exploit the already existing knowledge. Furthermore, participants agreed that in addition to pushing frontier research, Horizon-Europe should also focus on technologies already developed at the research level but not yet commercialized and made available to the general public.

Examples can come from small enterprises, the main actor of the Italian production system. Sometimes they are – maybe in an unconscious manner – precursors of forms of social responsibility that could be valorized and have an innovation potential to draw from. They must be sustained so that these practices can be codified and systematized (e.g., the enhancement of voluntary tools to adapt to sustainability standards could favor the emergence of these good practices).

Management of complexity. In the process towards adaptation to climate change and climate-neutral smart cities, complexity arises as an issue to manage, not to avoid. A fundamental aspect of complexity is that it leads to knowledge hybridization, namely to the intended collaboration between different disciplines. Complex urban policies require integrated approaches among field data elaboration's processes and decision-making processes, bot at economic and political level. Adaptation requires a complete revision of the planning and local development policies.

There are rich methodological and conceptual repertoires developed in different disciplinary fields that could be applied in an innovative way in research on climate change as a social transformation engine.

Management of complexity (an issue to manage not to avoid) leads to knowledge hybridization, namely to the programmatic collaboration between different disciplines.

For example, given the need to develop new methodologies to support decision making for risk reduction, there are already experiences of applying portfolio analysis - usually used in finance - to analyze the impacts of climate change and support our decisions.

Furthermore, highly specialist policy-making processes in the field of smart cities development could be shaped according to apparently diverging disciplines.

For example, the management of touristic flows could be encompassed in solutions regarding urban mobility, the latter developed with the contribution of geology and demography.

It is necessary to reflect on how to enhance the potential of "Made in Italy", that is the knowhow that characterizes many Italian sectors of excellence (e.g. food, art, industrial districts) and on how to find a compromise between innovation and tradition, so that the uniqueness of the Italian social and cultural background is not lost in the name of change.

For example, it would be important to support new initiatives in the field of fashion that combine the sustainability of fabrics with the authentic design of Italian sartorial craftsmanship.

The need to systematize existing knowledge and to create connections between disciplinary areas even apparently distant from each other touches the central node of communication and its critical issues. Among these:

- ❖ **despite the cooperation among the academic sector, the business sectors and the public decision-makers have significantly intensified in recent years, there is still some difficulty in communicating among them**. Fluid and transparent communication processes require the development of shared languages and tools. The latter, on their turn, can encourage local development and innovation processes driven by the academic sector. The latter could also catalyze the needs of the territories, especially the most fragile, and act as a link between these territories and the most advanced components of the business sector. In order to exploit this potential, it is recommendable the introduction of reward mechanisms for academic careers that recognize the commitment of researchers in the so-called "third mission"
- ❖ **communication is a key element of citizens' sensitization and involvement on the issues of climate change and for the achievement of the objectives of the Mission Boards, since citizens' engagement supports behavioral changes**; however, the ability of the research sector to communicate its results to

citizens transparently and effectively is not yet optimal. For this reason, the dimension of citizens' engagement deserves an investment of economic and planning resources not secondary to that of research/innovation actions in the strict sense.

For example, there is a local expertise of involvement gained in the territories by both public and civil society actors and which could be recognized and valued even in the awareness that no practice can be mechanically replicated on territories other than those that generated it.

When talking about the key issue of communication that variously connects experts, decision-makers and citizens, we have to be aware that the problems entailed by this kind of communication refer not only to how to make complex knowledge simpler and more understandable, but also to the fact that such knowledge is addressed and "submitted" to stakeholders with intrinsically different, if not contrasting (especially in the short term), interests. In a nutshell, it is a matter of form and adequate translations as well as a matter of substance and possible conflicts. Accordingly, actors engaged in the production and presentation of evidence-based knowledge, or in the proposal for measures and solutions, should proceed - in general and as far as possible - from an updated and reliable information framework regarding the main concerns, priorities and "identities" of the relevant audiences involved, so as to include these elements in their communication and so making it more meaningful, inspiring and motivating for action.

The engagement of teachers and educators is essential in order to raise the awareness of the young generations on issues related to climate change and the associated risks. Teachers should have access to updated and reliable information and they should empower their teaching methods and skills. Specific information and training actions of the teaching staff must be implemented to allow teachers to carry out this strategic role competently. Even researchers and professors from the university should be engaged in the education of young people on issues related to climate change. Currently, this is a voluntary activity and researchers are not rewarded in any way for their commitment in the dissemination of their knowledge in the primary and secondary schools. In more general terms, a stronger cooperation between universities and schools in envisaged.

For example, climate adaptation topics could be introduced in academic and schools' curricula, to harness behavioral change; in particular change in the culture of risk within societies.

Public administrations risks to be a weak actor in the transition processes, due to the lack of specific knowledge and competences. This sector in Italy struggles to keep up with the fast pace of the ongoing changes that would require a simplification of procedures and an improved problem-solving ability. It needs to be equipped – through specific capacity building investments – to promote, implement and accompany technological and social innovation processes, enhancing its fundamental role in support of a competitive and sustainable development. In particular, public procurement can play a decisive role in the consolidation of new skills and in the promotion of new markets for innovation, but it is essential that decisions are made on the basis of the evidence and scenarios generated by research. The extensive turnover processes that are announced in the coming years represent an unrepeatable opportunity for the introduction of new skills. The inclusion of highly qualified personnel in public administrations through collaborations with universities and research centers, but also through measures to attract young people with high potential in terms of skills and motivation, will be strategic.

For example, Italy was one of the first countries to make green public procurement (GPP) binding, but the various application difficulties on the public administration's side could make one think concretely about the risk that the mandatory nature of GPP in our country could result in a missed opportunity.

Reconsidering the legal profile of the community, stakeholders, and planning. There is new need to elicit an in-depth analysis of the legal devices and of the political-institutional interventions. Attention should be paid to the changing models of responsibility, the progressive change of the classic idea of "sovereignty", the nature of the "goods" at stake (e.g. climate), the role of the "subjects" (State, civil society, others), and the space of law (e.g. administrative law and criminal law). The relevance of the communitarian or local horizon must emerge and it can highlight the role played by the stakeholders.

For example, starting from any current Italian experiences the implementation and the enrichment of the continuous discussion with the stakeholders, also beyond the electoral deadlines, could be a good step in order to emphasize and reflect the communitarian-territorial basis of law and of the political experience as well as to build up both better legal devices (sanctions, incentives) and political-institutional solutions (i.e. town-planning schemes).

Imagining the definition of smart city just by relying on quantitative approaches looking at technological smartness leads to prioritizing urban policies of vast cities and densely populated areas. Starting from these territories to design a smart city, excludes remote areas – where to invest in smart solutions is not cost-effective, or poor areas – where it is assumed that there will not be a demand of "urban smartness". Actually, the absence of a single definition of smart city means the impossibility to apply standard projects to scale up from one territory to another, provided similar enabling conditions. On the contrary, it is crucial to recognize the existence of different contexts which require different types of "smartness". Internal areas are different from metropolitan ones, and poor areas are different from those relying on mature economies: all of them, however, need processes of urban optimizations able to link digital solutions to social solutions in order to manage complex urbanization's processes, as well as the incremental number of personal connectedness among citizens. Here is where the consideration on smartness' equity comes to the surface, highlighting the need to ensure accessible solutions to people, being them highly or poorly urbanized.

There is a need for a better integration of climate change in the Civil Protection and disaster management system. Italy is at the forefront of Civil Protection systems, which addresses both anthropic and natural related risks. Nonetheless, climate change needs to be more and better integrated in existing protection and prevention approaches. The system has to move strongly towards the prevention and resilience-creation side from the present priority to post-disaster management. Volunteers are at the core of this system and their role can be crucial for informing citizens and raising their awareness.

For example, climate change will have many effects on the infrastructure and transport sector. It is necessary to increase knowledge on climate-proof infrastructures and integrate these concepts within the criteria of design and maintenance of the works. The insurance coverage of large transport infrastructures against the risk of extreme events must be increased, eventually introducing mandatory insurance and compensation systems.

Mobility solutions have a high capacity to "change" citizens' daily behavior. Potentially, mobility is also a central tool to ensure and facilitate the connection between "center" and "periphery", reducing the risks of

"peripherization". However, the development of mobility, also in terms of sustainability, requires diversified solutions also suitable for different territorial contexts (urban areas, peripheral areas, internal areas).

For example, it is clear that the car-sharing solution is easily applicable in large cities, but cannot be transferred to less urbanized areas.

Environmental Design. As urban studies are focused on the best model of smart cities at a spatial level, seemingly Design is evolving towards a more adaptative, flexible, interdisciplinary approach in project-development. Artificial Intelligence will increasingly support the citizen in everyday life, objects and services will couple social concerns to digital solutions, as they will result from different cultural influences. Highly specialist policy-making processes will be shaped according to apparently diverging disciplines: touristic flows will be encompassed in solutions regarding urban mobility, the latter developed with the contribution of geology and demography. Services and policies will need to align in order to generate a circularity of input and output, steering local government, social innovation and technological innovation towards a single framework of action.

There is a large interest by different types of stakeholders towards the Missions instrument, and a widespread willingness to be involved in achieving their goals. However, there is also a widespread need for greater information and knowledge with respect to the mission mechanisms.

Specific Highlights from the breakout groups

Breakout group 1 - Transition of production and consumption paradigms[5]

Italy is a best practice in the EU in the development of a circular economy. However, this fact is often overlooked by the civil society and by policy-makers. Awareness should be raised, also through a stronger communication strategy able to engage citizens in the transition of production and consumption paradigms. The construction of a narrative of hope that supports self-reinforcing optimism represents a central component of societal resilience. Working on building a sense of community ownership is important and would help to address the transition to more sustainable paradigms.

There is a need for clarity on the available instruments provided by policies and Horizon Europe as well: tools to identify the best options for adaptation actions should be specified, also highlighting the co-benefits. Non-binding instruments could be a valid option especially for SMEs that characterize the Italian production system; through voluntary instruments, SMEs could be encouraged to participate.

In Italy, SMEs are often at the frontier of innovation. However, this innovation often fails to translate into commercially-viable products and services, as SMEs lack the scale and the resources to push them through. To link SMEs to large companies, in view of matching the innovation capacity of the former and the scale of the latter, may be a fruitful approach. Horizon Europe can contribute to bridge this gap, by favouring cooperation of SMEs and large companies in research consortia.

Horizon Europe should look at legal research because regulatory frameworks are often the real brake. There is a need for capacity building in public administration. For example, Italy was one of the first countries to make green public procurement (GPP) binding, but the various application difficulties on the public

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[5] *Rapporteur: Roberto Zoboli, Simone Tragliapietra, Francesca Giuliano.*

administration's side could make this a missed opportunity. Horizon Europe could also look at the public procurement area in the future.

In addition to pushing frontier research, Horizon Europe should also focus on technologies already developed at the research level but not yet commercialized. Pushing these technologies on a large scale can yield short-term results towards the achievement of Horizon Europe' goals.

Horizon Europe should look at the social dimension of policies, and in particular the social acceptability of decarbonization measures, especially in the case they are very selective towards sectors and technologies.

Horizon Europe must push forward systematizing Europe- wide information on research and innovation.

Participants stressed that Horizon Europe should adopt strong ex ante impact assessment methods, with clear indicators. It is also important that all Horizon Europe projects are open and replicable. Finally, it could be considered to introduce binding environmental standards/rules for companies participating in Horizon Europe calls.

Breakout group 2: Biodiversity, bioeconomy, natural capital[6]

Italy has high level competencies on the bioeconomy (agro-food and other bio-based value chains) that rely on both tradition and new technologies.

Marginal territories must receive a higher attention for a proper development of a bioeconomy paradigm. Delocalisation of research infrastructures can support a local Smart Specialization Strategy. Systems of "agro-ecology" and "biodiverse agriculture" must be promoted. Water resources deserve a critical attention as a key resource for the bioeconomy.

A more complete and integrated value-chain approach is needed to have a significant development of innovative bioproducts that can perform better than conventional products in term of climate change and human health

Multi-disciplinarity must receive a high priority and value within the bioeconomy value chains. Multidisciplinary approaches must pass from European research to local knowledge and production systems.

Proper strategies must be adopted to give citizens and consumers the right information on food and bioproducts, as confusion and biased information tend to prevail in public communication.

Better methods for the identification and diagnosis of illness linked to climate change must be developed.

In Italy there are many good examples of the municipal and regional level experiences in knowledge creation/transfer that are not enough know. The exchange of best practices can be relevant. Existing and possible local pilot project must be promoted and their results better communicated.

The Missions can have a potentially important role but they seem to work, at the moment, too much in silo, in spite of their connections. They should be better explained and communicated. A possibility is to translate them into country-level Missions.

Breakout group 3: Governance and anthropological capital[7]

In the Mission areas, Italy has advanced knowledge available, but there is a gap in communication with policy

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[6] *Rapporteurs: Marco Falzetti, Giorgia Spigno.*
[7] *Rapporteurs: Laura Zanfrini, Massimiliano Monaci, Matteo Di Rosa.*

makers. Local administrations do not use enough publicly available scientific knowledge. Researchers are discouraged by burocratic and cultural barriers.

Tangible and intangible cultural capital is a key priority for Italy, which is unable to bring this topic as a priority at the European level. The climate impact on cultural capita is underestimated. In many cases, the cultural assets are interconnected with natural capital, for example water, which has a pivotal role also in production systems (e.g. high quality food and the culture of food in rural areas). The Missions on adaptation and cities should address this issue of multi-attribute assets as a priority.

For years, there has been a huge emphasis on "best practices". This can be misleading in that complexity and specificity make best practices not fully transferrable and possibly a trap. More tailored approaches must be considered that must be based on scientific methods and evidence. Best practices must be intended as laboratories to understand complexity and not as a way to escape complexity.

"Societal transformation" should not be given a minor role in climate–related Missions, and instead it must receive a central place in designing the missions. The level and the modes of integration between the hard-science basis and the social science basis must be profound.

There a strong need of assessing the actual, real-world results of European research. Could it be useful to fund the part "impact" of European research projects as a specific separate item, with compulsory requirement about demonstration and measures of impact?

Breakout group 4. Risks, social innovation, resilient communities[8]

More awareness and weight must be given to the social dimension of climate change. Key dimensions of economic and social development in Italy will be hit by global warming and, thus, adaptation policies are essential for our local communities. Governments and citizens should be made more aware about these needs.

In Italy, there are good examples of society-oriented planning for CC adaptation that show how it is possible to involve stakeholders, starting from the assessment of complex risks and ending-up with appropriate policy making process. We must give value to what we have in order to make it scalable, durable and transferable.

Reliable data about the effects of climate change and about the economic/social impacts are essential for the engagement of the public and the private sector. Two developments are suggested: i) research in climate models and climate predictions more focused on the local effects of climate change; ii) dissemination of new decision-making approaches and tools for informed decisions despite the presence of uncertainty.

Climate change adaptation requires new decision tools but also new decision criteria. Two suggested criteria are: i) flexibility (the capacity of a measure to be easily adjusted over time according to the changing conditions); ii) robustness (the ability to deal and to be effective over a wide range of possible futures and climatic conditions). Following these perspectives, there might be no longer a unique optimal adaptation measure, perfectly tailored on every climate future.

Technology is just a part of the solution. We need engaging various competencies, perspectives and needs. The social needs and the development priorities of the citizens are essential for the identification of the policy solutions and goals. Thus, resilience is not just an issue of technological development, but it requires the engagement of various stakeholders.

There is a part of the civil society which is not represented by the public governments and by the private market mechanisms. The engagement of these citizens in the creation of the research agenda is crucial for reaching the targets of Missions and for increasing communities' resilience.

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[8] *Rapporteurs: Egidio Riva, Emma Garavaglia, Filippo Fraschini.*

Environmental crimes should be a research priority. There is a need to shed light over the different possible categories of environmental crimes, on the economic and social costs and on the available solutions for the punishment of the violations.

We have a plentiful of data, coming from various different sources (research institutions, firms, public institutions), but there is a problem of data reliability. Are there solutions for the education of citizens and researchers to a proper use of the data available?

The job market is rapidly changing and we need to understand this process. New competencies are needed, in the attempt to face the technological progresses, the new communication practices and the needs of the green deal.

In Italy, there is a gap of communication among the world of research, policy makers and citizens. Researchers encounter difficulties in getting research into policy. Both researchers and policy-makers should make more efforts on dissemination using an easy language.

Breakout group 5. Smart cities and centre-periphery relationships[9]

"Smart city" concepts tend to disregard suburbs, peripheral areas, and the countryside. They need the accomplishment of a "smartization" process as well. Infrastructural networks - including transport networks (for sustainable mobility and tourism), ICT networks (e.g. for 5G), public services networks (e.g. district heating) – have a key role. Furthermore, infrastructural and human networks are needed to reduce the gap between the centre and the periphery. In addition, social networks can facilitate behavioural change, to reduce social distances and to increase efficiency at large. Some specific Italian priorities are:

• A well performing 5G, in terms of global coverage
• Transport infrastructure connecting city centres and peripheral areas as well as between cities
• Geothermal exploitation for heating
• Smart building
• Smart working
• Sustainable/smarter tourism
• Digital divide between centres and suburbs
• Behavioural change for sharing cities
• Thoroughly designing the link between technologies and people needs
• Less bureaucracy
• Larger space/time sampling rate of environmental data

Apart from few Italian best practices, it is necessary to reflect on how to give value to the knowhow that characterizes many Italian excellences (e.g. food, art, industrial districts) and on how to find the appropriate co-existence of innovation and tradition, so that the uniqueness of the Italian social and cultural background is not impaired in the name of innovation. In order to enhance existing knowledge/assets very important elements are:

• interdisciplinarity
• use of common language
• usable and shareable information
• targeted education of young generations
• larger use of specific web sites by municipalities

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[9] *Rapporteurs: Carlo Alberto Nucci, Marcello D'Amico, Ilaria Beretta.*

A winning turning point is represented by the major involvement of Universities that must play a central role in the development of the territory. On the one hand, universities need to establish larger collaborative relationships with the business world; on the other, it is essential that they serve as catalytic centres for the needs of the territories, especially the most fragile ones, and act as a link between these territories and the most advanced enterprises (e.g., how to enhance technologies in fragile territories? How to transform a country land in a "smart country land"?). Some implementation tools mentioned:

- Climate cities contract
- Green re-orientation of other urban policies
- Living labs creation
- Multilevel governance in order to manage complexity
- Search for a language suitable for fragile rural areas

UNIVERSITÀ CATTOLICA del Sacro Cuore

APRE — Agenzia per la Promozione della Ricerca Europea

Fondazione CARIPLO

La ricerca Mission-oriented di Horizon Europe 2021-2027
Quali opportunità per l'Italia?

Incontro con i Mission Board
'Adaptation to Climate Change and Societal Transformation'
e 'Climate-Neutral and Smart Cities'

Mercoledì 5 febbraio 2020
Aula Magna, ore 9.00-17.00
Largo A. Gemelli, 1 - Milano

Accreditamento | 9.00-9.45

Sessione mattutina | 9.45-12.45

Saluti istituzionali
Franco ANELLI, Rettore dell'Università Cattolica del Sacro Cuore
Fulvio ESPOSITO, Rappresentante nazionale nel Comitato di Programma di Horizon Europe - Ministero dell'Università e della Ricerca
Massimo GAUDINA, Capo della Rappresentanza a Milano della Commissione Europea

PRIMA SESSIONE PLENARIA
La ricerca europea Mission-oriented e le priorità italiane
Presiede Roberto ZOBOLI, Università Cattolica del Sacro Cuore, Delegato del Rettore per la Ricerca Scientifica e la Sostenibilità

La ricerca Mission-oriented: "istruzioni per l'uso"
Patrizia TOIA, Vice-presidente della Commissione Industria, Ricerca, Energia del Parlamento Europeo
Marco FALZETTI, Direttore dell'Agenzia per la Promozione della Ricerca Europea
Walter RICCIARDI, Università Cattolica del Sacro Cuore - Presidente del 'Mission Board on Cancer'

Mission 'Adaptation to Climate Change and Societal Transformation': obiettivi e priorità
Jaroslav MYSIAK, Direttore 'Risk assessment and adaptation strategies' dell'Euro-Mediterranean Centre on Climate Change - Membro e Rapporteur del Mission Board 'Adaptation to Climate Change and Societal Transformation'

Mission 'Climate-Neutral and Smart Cities': obiettivi e priorità
Carlo MANGO, Direttore dell'Area scientifica e tecnologica di Fondazione Cariplo - Rappresentante nella Mission Assembly 'Climate-Neutral and Smart Cities'
Luca DE BIASE, Giornalista - Rappresentante nella Mission Assembly 'Climate-Neutral and Smart Cities'

Le priorità dell'Italia: prime indicazioni dal confronto con gli stakeholder
Laura ZANFRINI, Università Cattolica del Sacro Cuore - Coordinatore dell'Area 'Societal Transformations-Smart Secure and Inclusive Communities' del gruppo di consulenza per il PNR e Rappresentante italiano nel Mission Board Sub-group 'Adaptation to Climate Change and Societal Transformation'

Sessione pomeridiana | 14.00-17.00

Tavoli di lavoro paralleli

1. Transizione dei paradigmi di produzione e consumo
2. Biodiversità, bioeconomia, capitali naturali
3. Governance dei territori e capitali antropologici
4. Rischi, innovazione sociale, comunità resilienti
5. Smart cities e rapporti centri-periferie

SECONDA SESSIONE PLENARIA | Aula Pio XI
Indicazioni dai Tavoli di lavoro e conclusioni
Presiede Laura ZANFRINI

Rapporteur dei cinque Tavoli

Reazioni da parte dei rappresentanti dei due Mission Board

Informazioni
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