HORIZON 2020

PROSPETTIVE E OPPORTUNITA’
DEI NUOVI PROGRAMMI DI RICERCA UE

RAGIONARE INSIEME SU HORIZON 2020

GENNAIO 2013 – Università’ degli Studi di Genova
CAMBIAMENTI IN EUROPA:

E’ IN PREPARAZIONE UN INTERO NUOVO
CICLO EUROPEO, che partirà il
1° gennaio 2014, DURERA’ > 6 ANNI,
Vorrà coinvolgere i cittadini europei nelle
decisioni “di fondo”, utilizzerà
strumenti come il Programma Quadro
HORIZON 2020 (programma di ricerca e di
innovazione) e come i FESR a livello maxi-
regioni.

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- **Key Challenge:** stabilise the financial and economic system while taking measures to create economic opportunities

- Smart & *inclusive* growth (€491bn)
  - Education, Youth, Sport
  - Connecting Europe B
  - Cohesion
  - Competitive Business SMEs
  - Horizon 2020

- Sustainable growth, natural resources (€383bn)
- Security and citizenship (€18.5bn)
- Global Europe (€70bn)
- Administration (€62.6bn)

**TOTAL:** €1.025bn

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**RAGIONARE INSIEME SU HORIZON 2020**

GENNAIO 2013 – Universita’ degli Studi di Genova
I PQ (Programmi Quadro) o Framework Program (FP)

Sono Programmi generali di Ricerca, con durata Pluriennale: A partire da FP4 furono suddivisi in filoni paralleli e indipendenti (le Priorità): con propri denari, regole, BANDI e panels giudicanti (ad. Es. Esprit, Brite etc). FP5, lo FP6 e il FP7 = stesso sistema (a dicembre 2013 terminerà’ FP7.

Nel 2009 (Dichiarazione di Lund) inizio’ un nuovo modo di pensare alla ricerca e ai problemi che essa dovrebbe risolvere. Si passo’ dalle “priorità” (FP7 = 10 priorità ), alle Sfide (Challenges) alle Key Enabling Tecnologies (KETs)=strumenti-chiave e alle attivita’ di base. Arrivando a unire ricerca e innovazione, e soprattutto a unire (anche dentro singoli progetti) la cultura umanistica e sociale con le culture “scientifico-tecnologiche”

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# H2020 Breakdown of the budget

The indicative breakdown for Horizon 2020 is as follows (in EUR million):

## I Excellent science, *of which:*
1. The European Research Council  
   15008
2. Future and Emerging Technologies  
   3505
3. Marie Curie actions on skills, training and career development  
   6503
4. European research infrastructures (including eInfrastructures)  
   2802

## II Industrial leadership, *of which:*
1. Leadership in enabling and industrial technologies*  
   of which 500 for EIT  
   15580
2. Access to risk finance**  
   4000
3. Innovation in SMEs  
   700

## III Societal challenges, *of which*
1. Health, demographic change and wellbeing;  
   9077 of which 292 for EIT
2. Food security, sustainable agriculture, marine and maritime research and the bio- economy; 4694 of which 150 for EIT
3. Secure, clean and efficient energy 6537 of which 210 for EIT
4. Smart, green and integrated transport 7690 of which 247 for EIT
5. Climate action, resource efficiency and raw materials 3573 of which 115 for EIT
6. Inclusive, innovative and secure societies 4317 of which 138 for EIT
European Institute of Innovation and Technology (EIT) 1542 + 1652***
Non-nuclear direct actions of the Joint Research Centre 2212

**TOTAL 87740**
E' stata sviluppata **PRIMA** una rassegna “storica” degli FP e dello sviluppo di Horizon 2020 => di qui verranno focalizzate alcune opportunità per ricercatori/innovatori del ns Ateneo

**MEMO:** da poco TEMPO gli ATENEI hanno una unica FIGURA GIURIDICA, anche agli occhi della Comm Europea. Se, oggi, io DITEN, volessi avere un apporto “di giuristi” ad un Proposal EU in FP7, NON dovrei esporre DUE partners...bensi’ uno solo: UNIGE. Questo fatto favorisce una “AZIONE DI SQUADRA” all’interno degli ATENEI.
Horizon 2020 e’ il FP 2014-2020 della EU.....
Esso e’ suddiviso: in TRE gruppi di attivita’ (3 “Priorita’”): la ricerca di base, La leadership industriale e per le PMI (le KETs) e i Societal Challenge (Sfide)

Il processo che ha portato ad Horizon 2020 e’ lungo ed interamente EUROPEO: dipende da numerosi stakeholders (attori), fattori e gruppi, e’ Partito prima della Dichiarazione di Lund (luglio 2009), passando per la Decisione base (2010) della Commissione Europea. Focus iniziale: la CRESCITA (dR/dt >>0). Approccio: BOTTOM UP (si parte dalle esigenze delle INDUSTRIE (= “Innovazione”...), collegate ai Challenges), si passa per le iniziative dedicate alle PMIs e si adotta ANCHE un approccio DIRIGISTICO o TOP DOWN [soprattutto nell’ affrontare la ricerca di base].

RAGIONARE INSIEME SU HORIZON 2020

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Topics (argomenti) delle ricerche per cui venivano accettati per l’esame dei panels di esperti le PROPOSTE DI PROGETTI da finanziare. Ogni BANDO conteneva dei Topics. L’aderenza Topics/Proposte era “conditio sine qua non” (lo sara’ ancora?). 

E come vengono determinati i Topics?

• Vi sono dei Comitati di Nazioni per ogni area culturale, verranno sentiti tutti gli attori (stakeholders): governi centrali (vedi sopra), regioni (ove opportuno), consulenti (le “professioni”), industrie (Confindustria (vedi Alleanze Tecnologiche Italiane), associazioni (le Piattaforme Tecnologiche EU o simili, etc)). Da quegli input e’ nato IL DOCUM. CENTRALE, cioe’ il TESTO DISPONIBILE OGGI A TUTTO L’ATENEO, da qui nasceranno i contenuti dei bandi (anno per anno).

• Nota a margine:

• CONFIND (2010) lancia iniziativa ALLEANZE (con presa d’atto del MIUR): definisce, partendo dalle sue aziende, 11 tematiche organizz. per “PORTARE IN EU” (nel testo di Horizon e nel corpo di altre iniziative), delle proposte... Queste tematiche sono dette ALLEANZE TECNOLOGICHE ITALIANE (o anche Piattaforme Tecnologiche Italiane)
Synergies with national programmes and joint programming

Linkages and interfaces shall be implemented across and within the priorities of Horizon 2020. Particular attention shall be paid in this respect:
- to areas relating to bridging from discovery to market application;
- to social and economic sciences and humanities;
- to climate Change and sustainable development;
- to fostering the functioning and achievement of the ERA and of the Innovation Union;
- to framework conditions in support of the Innovation Union;
- to contributing to the Digital Agenda;
- to widening participation across the EU in research and innovation;
- to international networks for excellent researchers and innovators such as COST;
- to cooperation with third countries;
- to responsible research and innovation including gender;
- to SME involvement in research and innovation and
to the broader private sector participation;
- to enhancing the attractiveness of the research profession and
- to facilitating cross-border and cross-sector mobility of researchers.
Particular attention shall also be paid to the cross-sectoral dimension of some research and innovation areas of Horizon 2020, as the development and application of Key Enabling and industrial Technologies (KET) as well as Future and Emerging Technologies (FET). Furthermore, particular attention shall be paid to ensuring the adequate participation of, and innovation impact on, small and medium-sized enterprises (SMEs) as well as private sector in general in Horizon 2020.

*Note: quantitative and qualitative assessments of SME participation shall be undertaken as part of the evaluation and monitoring arrangements.*

The integrated economical approach (concerning the SMEs) should lead to a minimum of 20% of the total combined budget for the specific objective on "Leadership in enabling and industrial technologies" and the priority "Societal challenges" going to SMEs.

**Social sciences and humanities**

Social sciences and humanities research (note about the European politics, driving the European policies) will be fully integrated into each of the pillars of Horizon 2020 and each of the specific objectives. In relation to the Societal Challenges, social sciences and humanities are mainstreamed as an essential element.
**Science and society**
The relationship between science and society as well as the **PROMOTION** of Responsible Research and Innovation and science education and culture shall be deepened and public confidence in science reinforced by activities of Horizon 2020. **Favouring an informed engagement of citizens** and civil society in research and innovation matters.

**Gender**
Promoting **gender equality in science and innovation** is a commitment of the EU.

**Small and medium-sized enterprises (SMEs)**
Horizon 2020 will encourage and support the participation of SMEs in an integrated way across all specific objectives. Within the specific objective 'Leadership in enabling and industrial technologies' and Part III 'Societal challenges' Horizon 2020 will contain the specific tool 'Innovation in SMEs' (a dedicated SME instrument).
Widening the participation
The research and innovation potential of the Member States, despite some recent convergence, remain very different, with large gaps between “innovation leaders” and “modest innovators”. Activities shall help close the research and innovation divide in Europe …..

International Cooperation
In Horizon 2020, international cooperation is essential for frontier and basic research in order to capture the benefits from emerging science and technology opportunities. Cooperation is necessary

Sustainable development and climate change
Horizon 2020 will encourage (omissis) promoting sustainable development, in a broad sense, and combating climate change.

Bridging from discovery to market application
Bridging actions throughout Horizon 2020 are aimed at bringing discovery to market an application, leading to exploitation and commercialisation of ideas whenever appropriate.
Digital Agenda
Successful delivery of the Digital Agenda flagship initiative will spur innovation, economic growth and improvements in daily life for both citizens and business.

PART I. PRIORITY 'EXCELLENT SCIENCE'
It consists of four specific objectives:
(a) The European Research Council (ERC) shall provide attractive and flexible funding to enable talented and creative individual researchers and their teams to pursue the most promising avenues at the frontier of science, on the basis of Union-wide competition.
(b) Future and emerging technologies (FET) shall support collaborative radically new, high-risk research in order to extend Europe’s capacity for advanced and paradigm-changing innovation.
(c) Marie Curie actions shall provide excellent and innovative research training through cross-border and cross-sector mobility of researchers
(d) Research infrastructure shall develop European research infrastructure for 2020 and beyond, foster their innovation potential and human capital, and complement this with the related international cooperation.
Sustainable development and climate change

PART II. PRIORITY 'IndUSTRIAL LEADERSHIP'

This Part aims to speed up development of the technologies and innovations and help innovative European SMEs to grow into world-leading companies. It consists of three specific objectives:

(a) **Leadership in enabling and industrial technologies** shall provide and receive dedicated support for research, development and demonstration on Key Enabling Technologies (KET): ICT, nanotechnology, advanced materials, biotechnology, advanced manufacturing and processing and, last but not least, **space**.

(b) **Access to risk finance** shall aim to **overcome deficits in the availability of debt and equity finance for R&D and Innovation-driven companies and projects at all stages of development**. Together with the equity instrument of the “Programme for the Competitiveness of Enterprises and SMEs”, it shall support the development of Union-level venture capital.

(c) **Innovation in SMEs** shall stimulate all forms of innovation in SMEs, targeting those with the potential to grow and internationalise across the single market and Beyond. The activities shall follow a business-driven agenda. The budgets for the specific objectives. ‘Access to risk finance’ and ‘Innovation in SMEs’ will follow a demand-driven, bottom-up logic, without predetermined priorities. These shall be complemented by the use of financial instruments and a dedicated SME instrument following a policy driven logic within the Part on 'Societal challenges' + the specific objective ‘Leadership in enabling and industrial technologies’.

**Note:** the specific objective ‘Leadership in enabling and industrial technologies’ shall follow a technology-driven approach to develop enabling technologies that can be used in multiple areas, industries and services.
PART III. PRIORITY 'SOCIETAL CHALLENGES'
AIMS: stimulating the critical mass of research and innovation efforts needed to achieve Union's policy goals. Funding shall be focused on the following specific objectives:
(a) Health, demographic change and well-being;
(b) European Bioeconomy Challenges: Food security, sustainable agriculture and forestry, marine and maritime and inland water research;
(c) Secure, clean and efficient energy;
(d) Smart, green and integrated transport;
(e) Climate action, resource efficiency and raw materials;
(f) Europe in a changing world - Inclusive, innovative and reflective societies;
(g) Secure societies - Protecting freedom and security of Europe and its citizens.

All the activities shall take a challenge-based approach, focusing on policy priorities without predetermining the precise choice of technologies or solutions that should be developed. The activities shall cover the full cycle from research to market, with a new focus on innovation-related activities, such as piloting, demonstration activities, test-beds, support for public procurement, design, end-user driven innovation, social innovation and market take-up of innovations.
Una delle novità centrali di H2020 consiste’ (per quanto attiene la **IIa e la IIIa Priorità**, **in uno spinto “bottom up approach”**. Si deve partire dalle necessita’/desideri delle industrie! Questo “sapore” sara’ molto piu’ forte che nello FP7.

Pertanto e’ opportuno che tutte le aree del ns Ateneo si focalizzino per tempo su questo aspetto.

Per aree non-tecnologiche sarà necessario, NEI PROSSIMI 11 MESI profondere un maggiore impegno (in confronto alla situazione in FP7) nel curare i rapporti con le aziende: dobbiamo, tutti collaborare nel costruire **FORTI RAPPORTI CON LE INDUSTRIE**. Questo richiede tempo...dunque occorre “partire” subito.
GRAZIE !!!

PER L’ATTENZIONE