

LAS TIC EN HORIZONTE2020

LIDERAZGO INDUSTRIAL

PROGRAMA DE TRABAJO 2014-15

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Programa ICT: Líneas temáticas en VII PM



End-to-end systems for socio-economic goals

| | | ICT for Health, Ageing, Inclusion and Governance | ICT for a Low Carbon Economy | ICT for the Enterprise and Manufacturing | ICT for Learning and Cultural Resources |
|-----------------------|-------------------------------------|--|------------------------------|--|---|
| Technology roadblocks | Network and Service Infrastructures | Art. 185 AAL PPP FI | PPP GC | PPP FoF | |
| | Cognitive systems and Robotics | | PPP EeB | | |
| | Components and Systems | JTI ARTEMIS JTI ENIAC | | | |
| | Digital Contents and Languages | | | | |
| | | FET FLAGSHIPS | | | |
| | | Future and Emerging Technologies (FET) | | | |

Resultados VII Programa Marco*

ICT + 4 PPP + 2 JTI

| | Proy (Coord) | Parts (Socios) | Financiación (%*) | Tasa Éxito |
|--------|---------------|----------------|-------------------|------------|
| Total | 2.503 (2.503) | 23.878 (7.174) | 8.452 M€ | 17,1% |
| España | 1.107 (293) | 2.064 (628) | 640,3 M€ (8,3%) | 16,2% |
| CyL | 21 (3) | 23 (9) | 5,8 M€ (0,9% ES) | 8,7% |

Resultados en Castilla y León:

- **Tasa de éxito** notablemente inferior a la media nacional y europea (partimos de 82 entidades en 242 propuestas, coordinando 51).
- **61,4% del retorno en Castilla y León** lo obtienen los **centros tecnológicos**, seguidos por las **universidades** con **26,1%**.
- Sólo el **9,6% de este retorno es empresarial** (la media nacional está en 41,2%).
- Principales participantes en ICT-FP7: Cidaut, Cartif, U. Valladolid, U. Salamanca, Grupo Antolín, CeDeTel, Aquagest, Ayto. Valladolid y Centro Europeo de Empresas e Innovación de Burgos.

Programa ICT: Líneas temáticas en VII PM



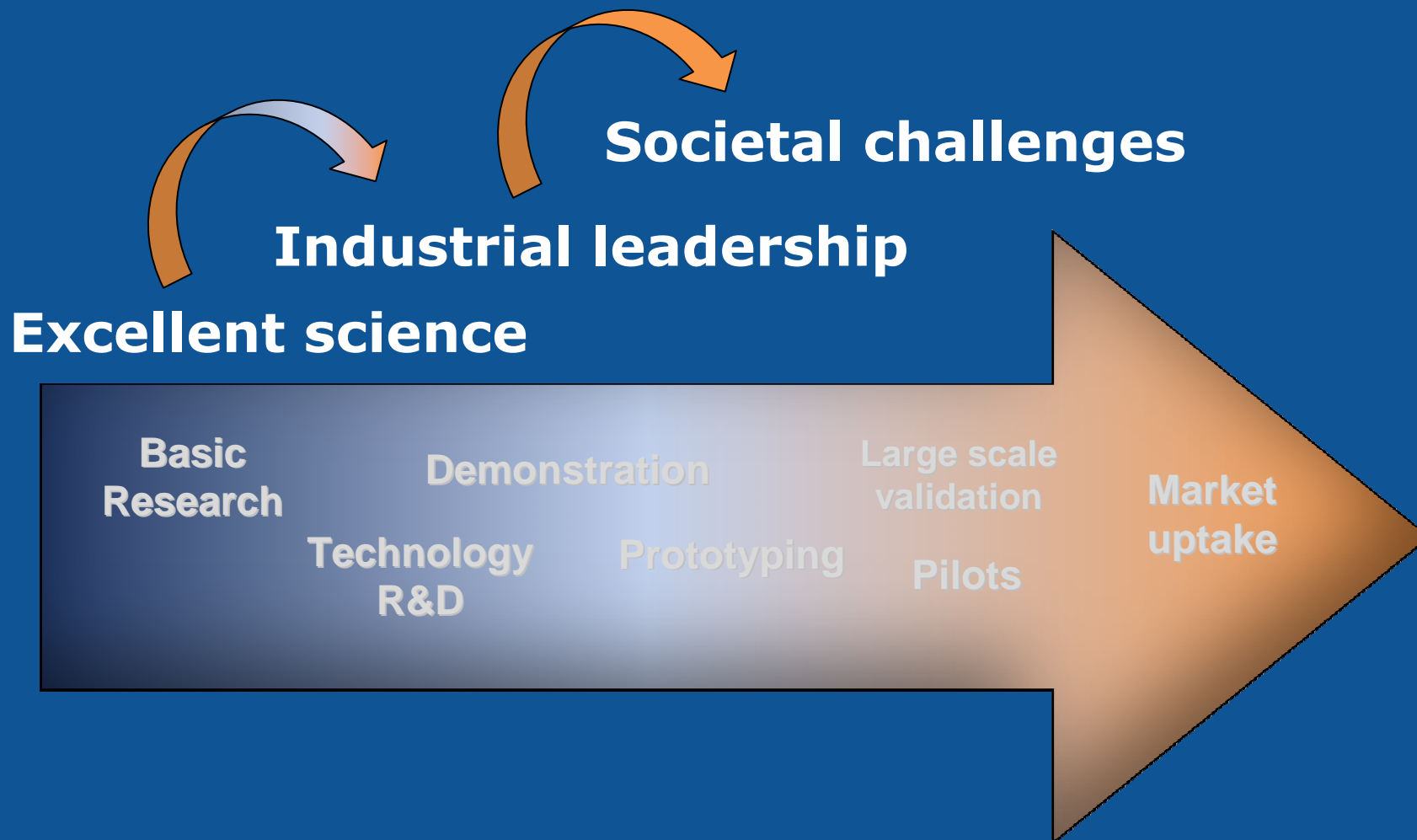
Technology roadblocks



Three priorities



Coverage of the full innovation chain



Qué es lo que financia H2020?

Se financian proyectos en todas las fases del proceso que lleva de la investigación al mercado:

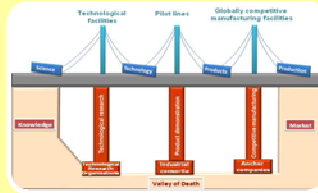
- que aporten **valor añadido a nivel europeo**,
- que sean de **aplicación exclusivamente civil** (no militar)
- que respeten los **principios éticos y la legislación nacional, de la Unión Europea e internacional aplicable**
- que se desarrollen de forma general en **consorcio transnacional**, con la participación de **al menos 3 entidades independientes entre sí de 3 Estados Miembros de la Unión Europea o Estados Asociados**, aunque hay determinados tipos de proyectos en los que se puede participar de **forma individual**.
- que se **ajusten a las líneas específicas de investigación e innovación** detalladas en los programas de trabajo y las convocatorias correspondientes
- con un **presupuesto global** y una **duración** que puede variar dependiendo del alcance de las actividades, pero que se ajuste al objetivo de impacto esperado.

Qué es lo que no financia H2020?

- Acciones que no respondan a actividades de investigación, desarrollo tecnológico, demostración e innovación u otras actividades financiadas dentro de H2020 y los respectivos Programas de Trabajo
- que encajen de manera genérica en los objetivos del Programa de Trabajo (a nivel del título del un topic) pero no de manera específica (que se ajuste a los contenidos reales de ese topic)
- que tengan carácter local, regional o nacional, en los que la dimensión europea no esté justificada
- que no presenten un avance real sobre el conocimiento ya existente a nivel europeo (proyectos de investigación), o una innovación real para el mercado europeo (proyectos de innovación).
- que tengan una dimensión presupuestaria o temporal muy reducida.

Horizonte 2020

Programa Marco de Investigación e Innovación (2014-2020)



Excellent Science

Industrial Leadership

Societal Challenges

European Research Council (ERC)

Future and Emerging Technologies (FET)

Marie Skłodowska-Curie actions on skills, training and career development

European research infrastructures

ICT

Nanotechnology

Biotechnology

Advanced Materials

Advanced Manufacturing & Processing

Space

Access to Risk Finance

Innovation in SMEs

Health, demographic change and wellbeing

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

Secure, clean and efficient energy;

Smart, green and integrated transport;

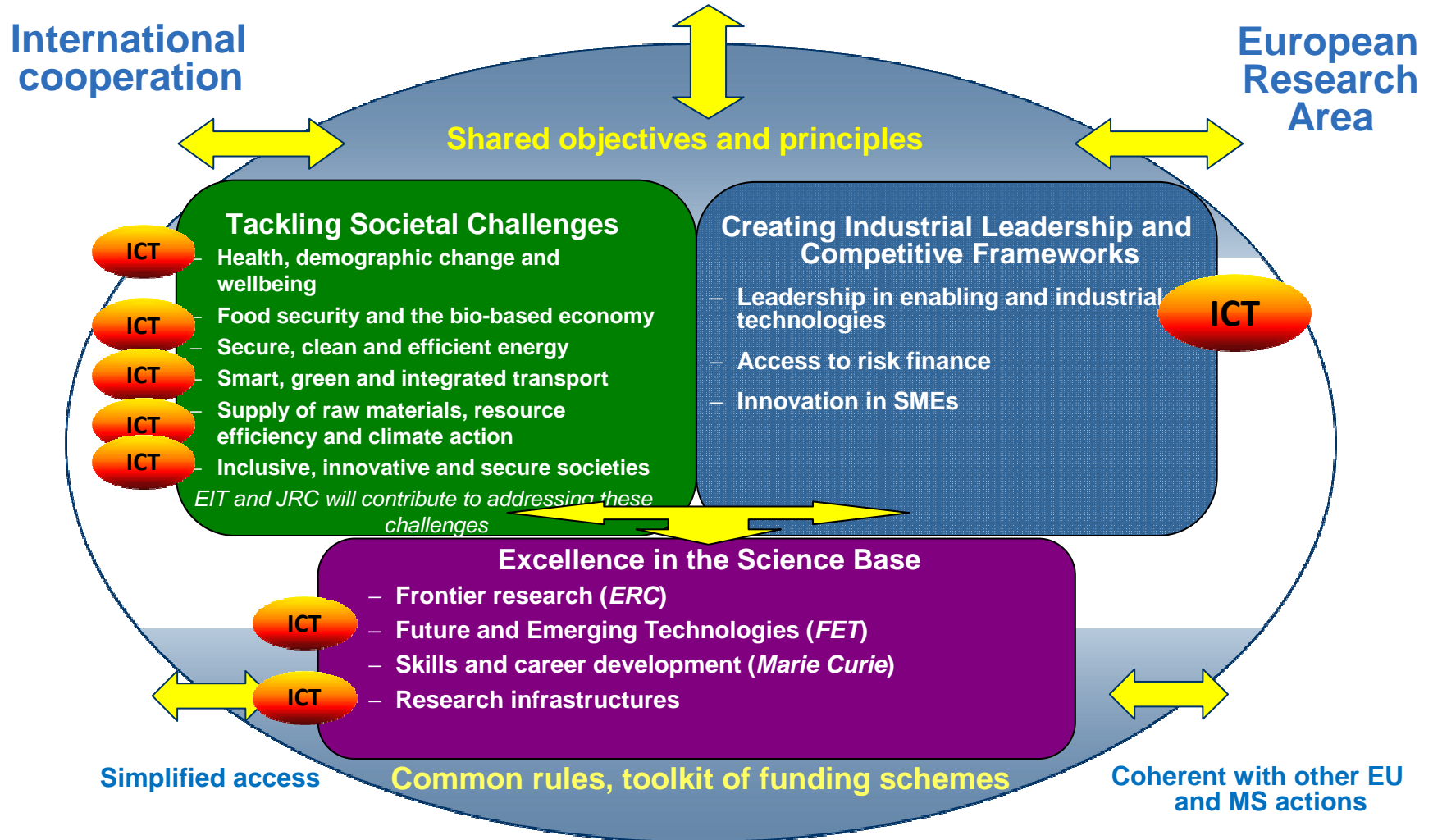
Climate action, environment, resource efficiency and raw materials

Europe in a changing world-Inclusive, innovative and reflexive societies

Secure Societies: Protecting freedom and security of Europe and its citizens

H2020: Objetivos y Estructura

Europe 2020 priorities



Three priorities for ICT

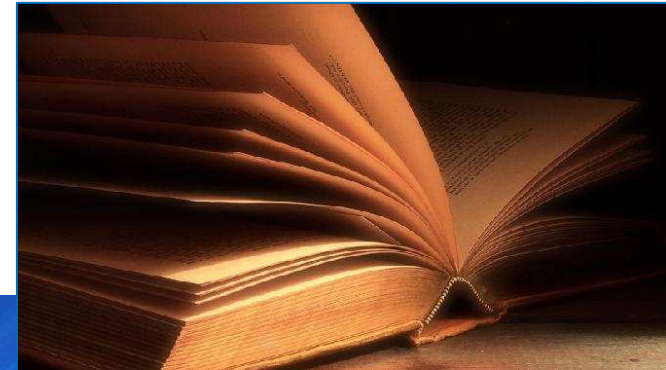


ICT in Industrial leadership



Publicación del WP2014-15 ICT-LEIT:

<https://ec.europa.eu/digital-agenda/sites/digital-agenda/files/H2020%20LEIT-ICT%20WP%202014-15%20-%2031%2010%202013.pdf>



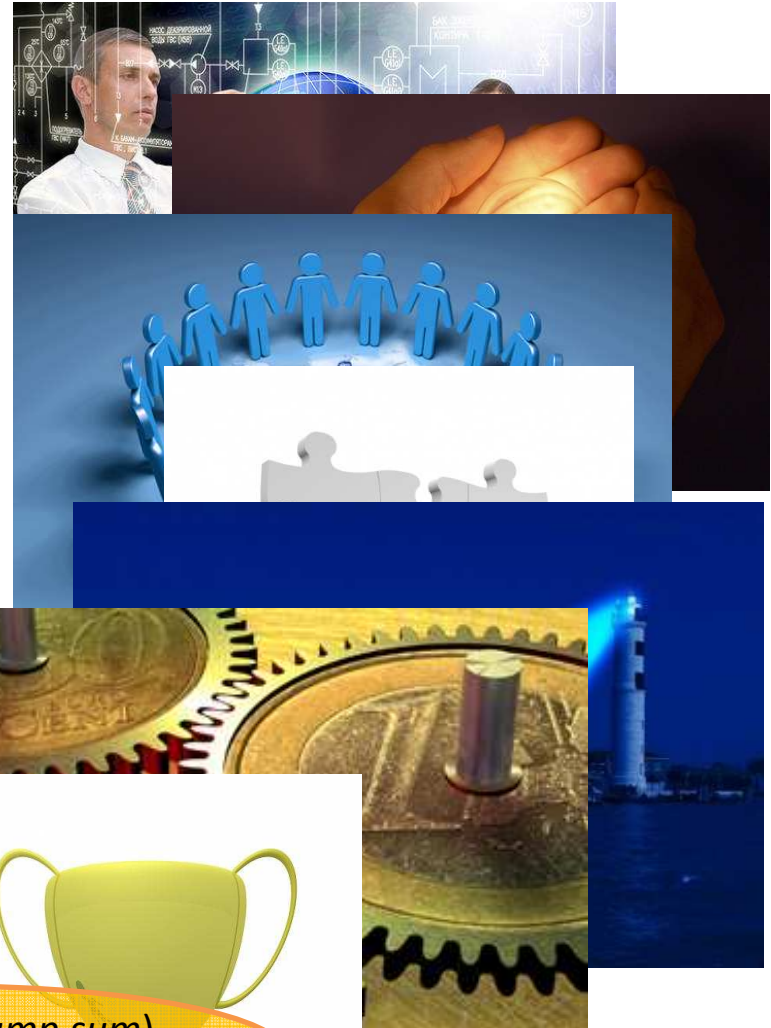
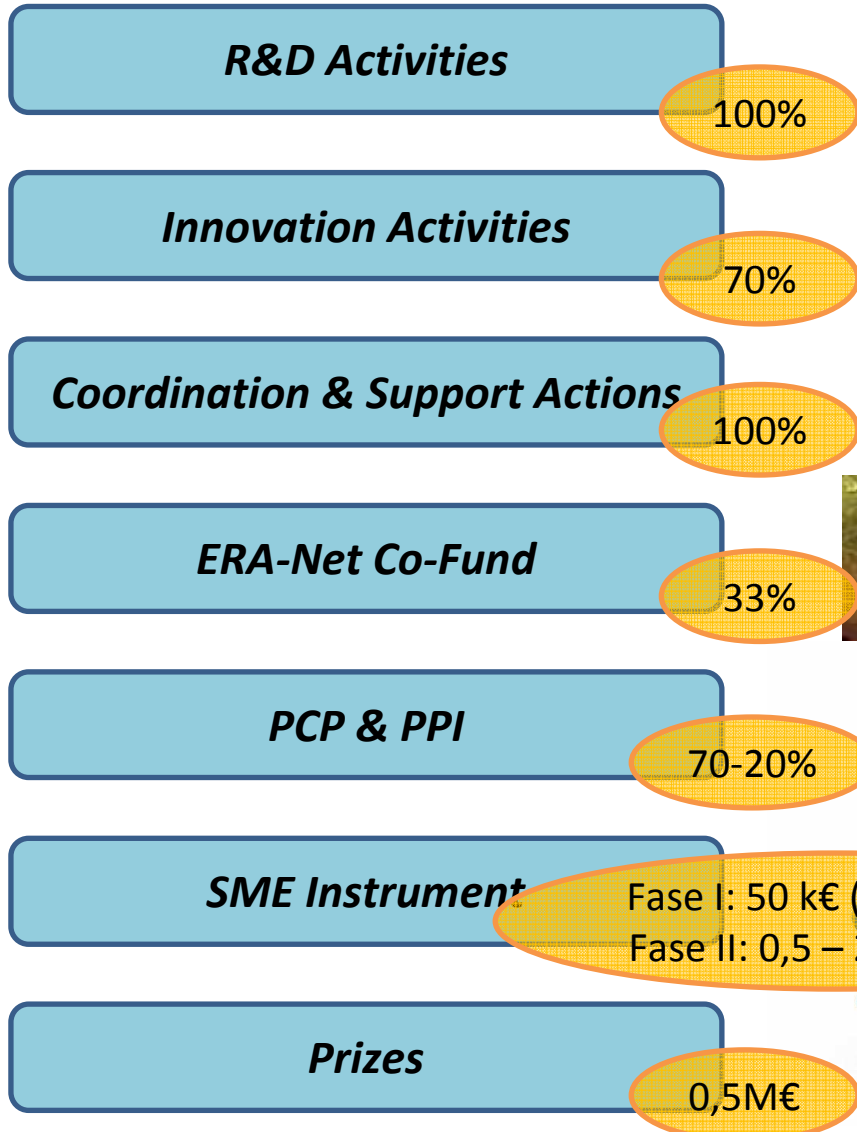
Objetivo:



Superar el Valle de la Muerte

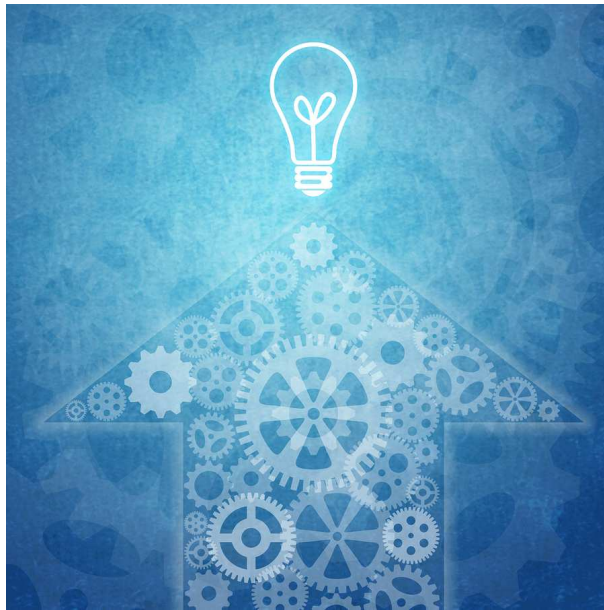
- **More “topic-free”. More “objective-oriented”**
- **Industry-driven. Commitment towards industrialization.**
- **Application/Industry Validation**
 - *Health, Food, Security, Manufacturing, Inclusion...*
- **Bigger focus on innovation**
 - *Business oportunities*
 - *Business cases/plans*
 - *Exploitation plans*
 - *User requirements/validation*
 - *Standardisation*
- **Innovation Management**
 - *Open Calls*
 - *Mini-proposals*
- **Link with many other parts of H2020**

Instrumentos:



En general:
Small contribution: 2 – 4 M€
Large contribution: 5 – 8 M€

Cambios en los contenidos:



What's
IN



Innovation... But How?

- Support Research and Innovation **from lab to market**
- Encourage incremental and **disruptive innovation**
- Promote a closer relationship between research and **entrepreneurship**
- Put **SMEs in the lead** in delivering innovations to the market.
- Use more **evaluators from the business and investor domains** involved in the selection process
- Provide greater **access to risk capital** for innovative SMEs & midcaps
- Ensure a clear **emphasis on innovation** in the selection of projects

Efecto en los criterios de evaluación:

- Different aspects of innovation are embedded in **each** of the 3 evaluation criteria used for selecting projects
- The same criteria will be used to evaluate:
 - 'Research and Innovation' actions (100% funded)
 - 'Innovation' actions (70% funded)
 - SME actions (70% funded)
- Investors (VCs, BAs) and market experts will be secured for panels evaluating proposals.

Criteria will be interpreted by evaluators within the context of the topic addressed by the proposal, taking into account the WP text, the type of action and the nature of the proposed activities.

En concreto...

'Excellence' criterion *(excerpt)*

- *Extent that proposed work is ambitious, **has innovation potential**, and is beyond the state of the art*

'Impact' criterion *(excerpt)*

- *Enhancing **innovation capacity** and integration of new knowledge;*
- *...developing **innovations meeting the needs of European and global markets**; and, where relevant, by **delivering such innovations to the markets***

'Quality & efficiency of the implementation' *(excerpt)*

- *Appropriateness of the management structures and procedures, including risk and **innovation management**.*

Note: For 'Innovation' actions the score for 'impact' will be **weighted by a factor of 1.5**

Cambios en los contenidos:

What's

OUT

ALL?

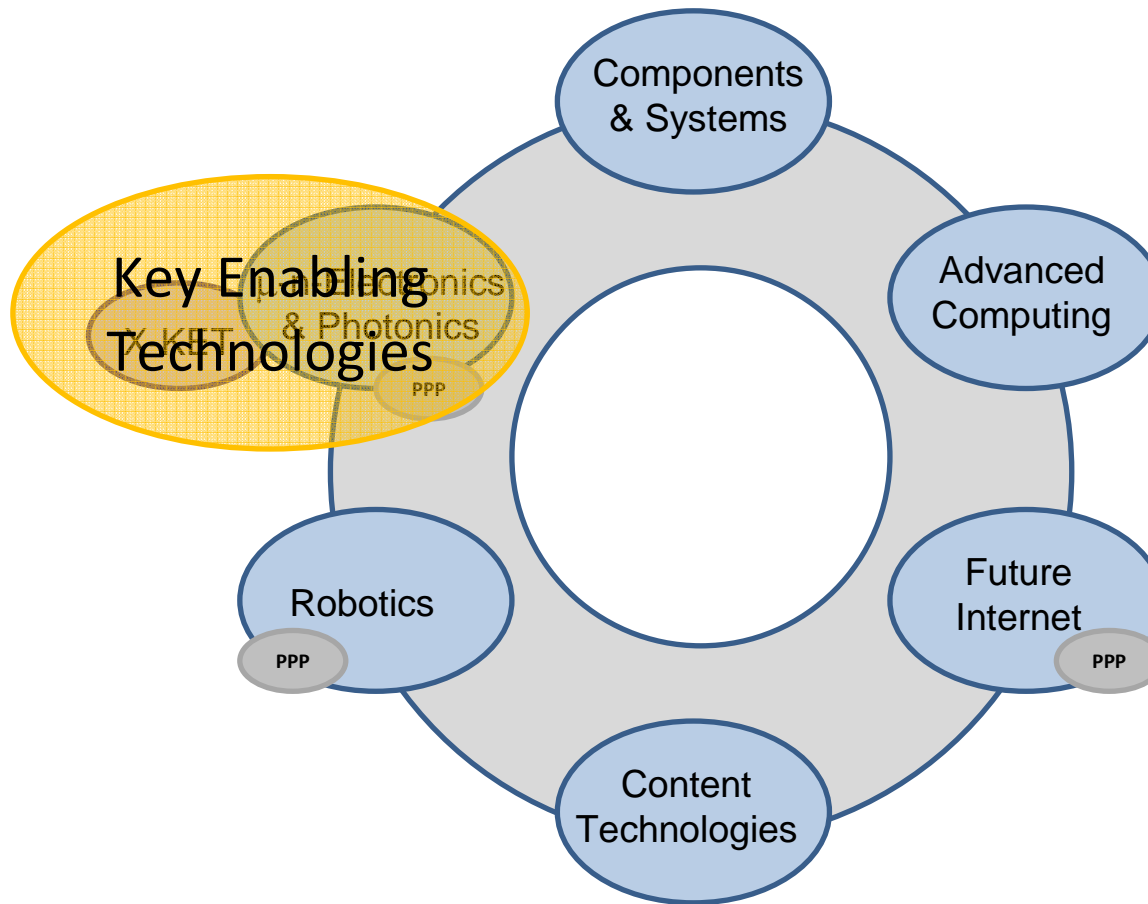
ICT Applications go to the
Societal Challenges

*(EeB and FoF center of gravity in NMBP)

All FET Activities
go to Excellent
Science

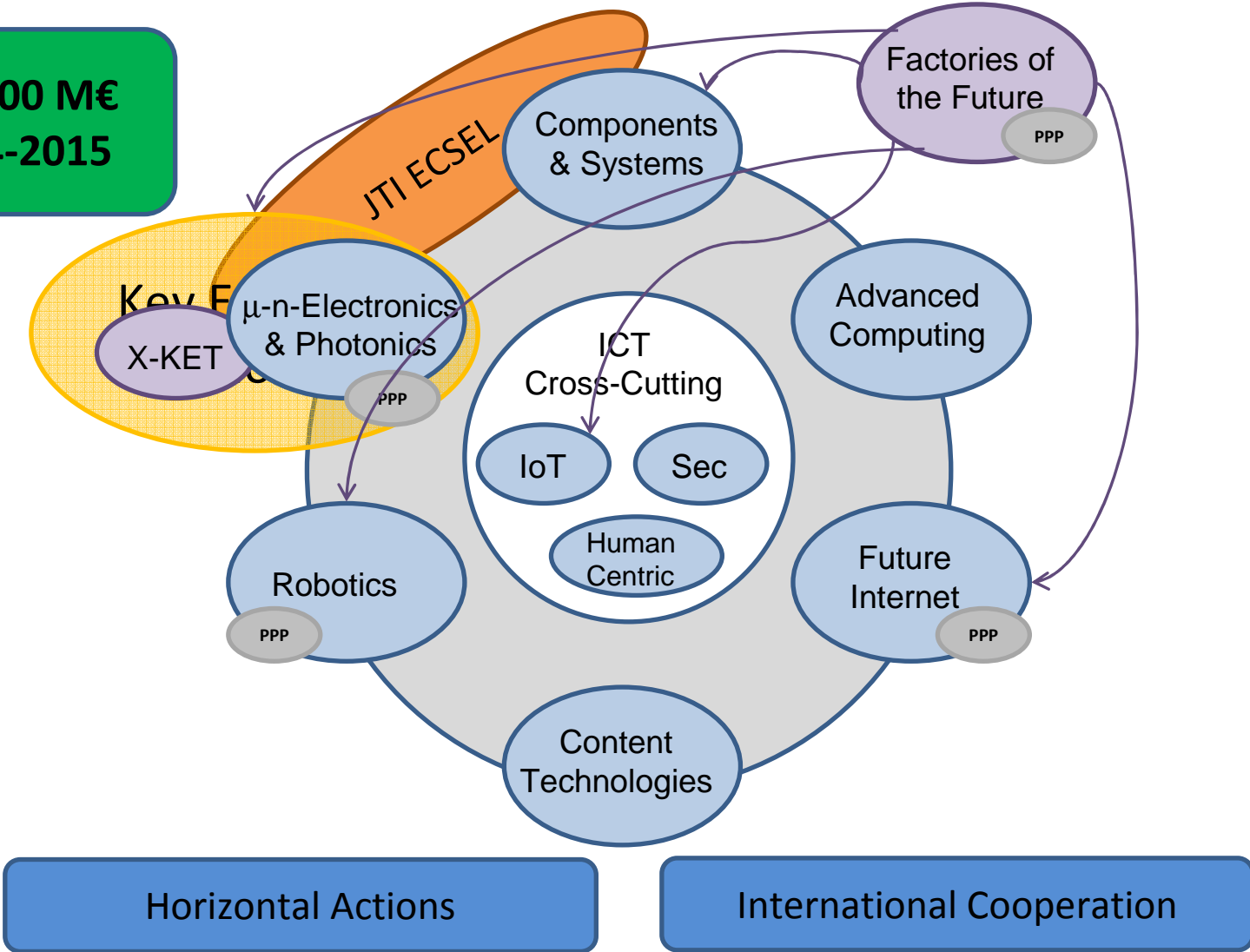
Future & Emerging
Technologies

Seis Grandes Líneas:



Seis Grandes Líneas:

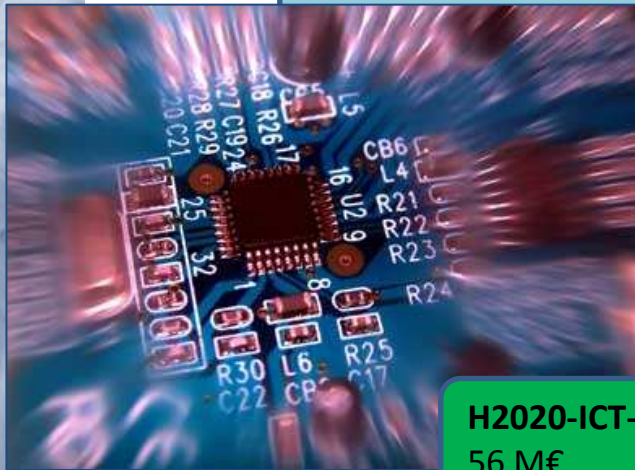
~ 1.600 M€
2014-2015



Programa ICT: Líneas temáticas en H2020 (I)

JTI ECSEL
1.200 M€

A new generation of components and systems: Engineering of advanced, embedded and energy and resource efficient components and systems.



H2020-ICT-2014
56 M€

Smart Cyber-Physical Systems (CPS)

H2020-ICT-2014
52 M€

Smart Systems Integration

H2020-ICT-2014
38 M€

Advanced Thin, Organic and Large Area Electronics

Programa ICT: Líneas temáticas en H2020 (II)

Advanced computing: Next generation and secure computing systems and technologies.

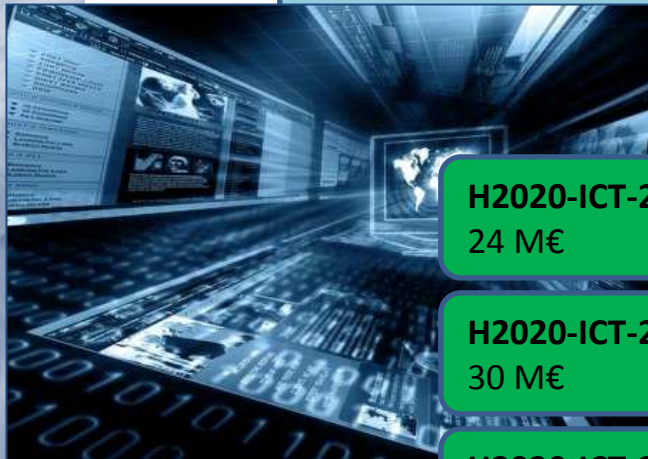


H2020-ICT-2015
57 M€

Customised and Low Power Computing

Programa ICT: Líneas temáticas en H2020 (III)

Future Internet: software, hardware, infrastructures, technologies and services.



H2020-ICT-2014
24 M€

Smart Networks and novel Internet Architectures

H2020-ICT-2014
30 M€

Smart Optical and Wireless Network Technologies

H2020-ICT-2014
73 M€

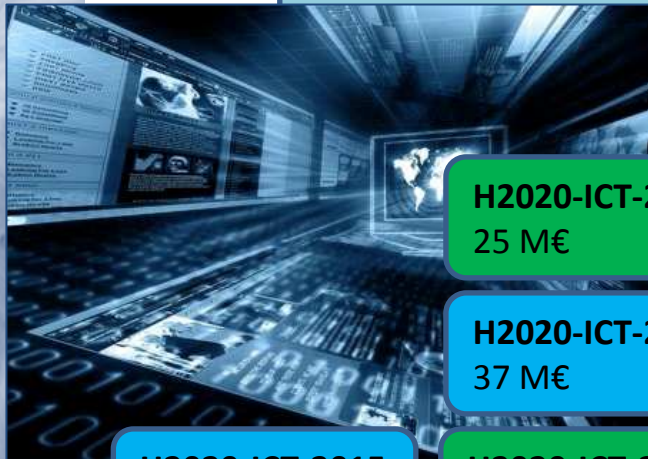
Advanced Cloud Infrastructures and Services

H2020-ICT-2015
22 M€

Public Sector Productivity/Innovation through
Cloud Computing Services

Programa ICT: Líneas temáticas en H2020 (III)

Future Internet: software, hardware, infrastructures, technologies and services.



H2020-ICT-2014
25 M€

Tools and Methods for Software Development

H2020-ICT-2015
37 M€

Collective Awareness Platforms for Sustainability and Social Innovation

H2020-ICT-2015
18 M€

H2020-ICT-2014
31,5 M€

Future Internet Research & Experimentation

H2020-ICT-2014
10 M€

Web Entrepreneurship

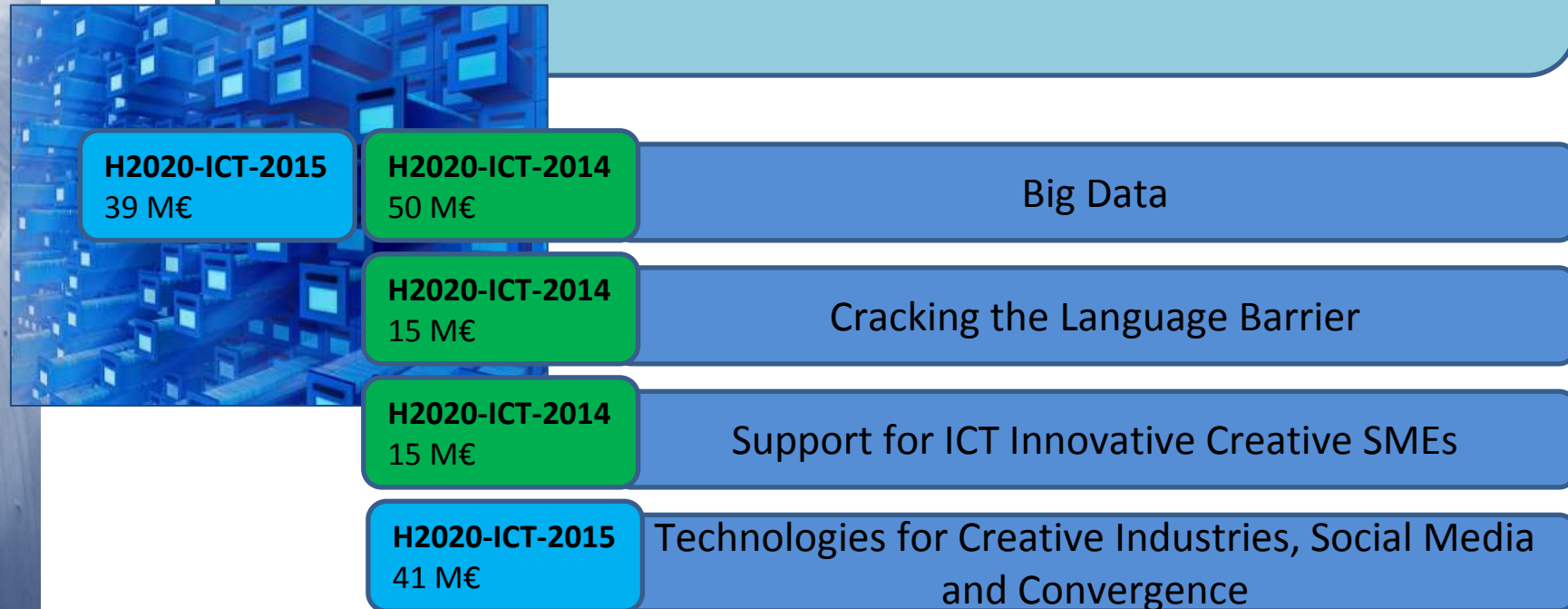
H2020-ICT-2014
125 M€1

Advanced 5G Network Infrastructure for the PPP
Future Internet

5G

Programa ICT: Líneas temáticas en H2020 (IV)

Content technologies and information management: ICT for digital content, cultural and creative industries.



Programa ICT: Líneas temáticas en H2020 (IV)

Content technologies and information management: ICT for digital content, cultural and creative industries.



H2020-ICT-2015
52 M€

Technologies for better Human Learning and Teaching

H2020-ICT-2014
17 M€

Digital Gaming/Gamification Technologies

H2020-ICT-2014
31 M€

Multimodal and Natural Computer Interaction

Programa ICT: Líneas temáticas en H2020 (V)

PPP
Robótica

Robotics: Advanced interfaces, robotics and smart spaces.

<http://www.eurobotics-project.eu/robotics-ppp/>



H2020-ICT-2014
74 M€

Robotics 2014

Markets: Manufacturing, commercial, civil, agriculture

Technology Transfer: Robotics use cases

H2020-ICT-2015
83 M€

Robotics 2015

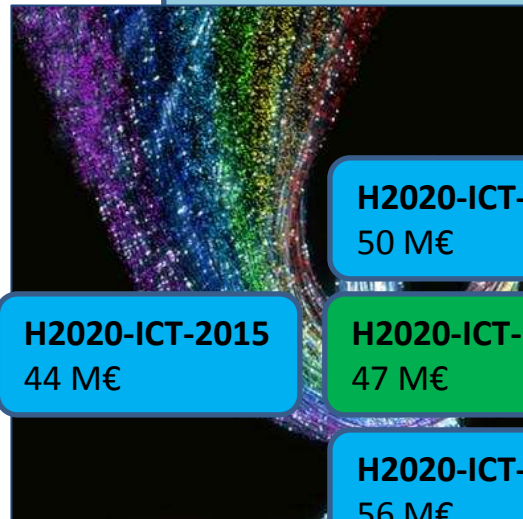
Markets: Healthcare, consumer, transport

Industry-Academia cross-fertilization

Technology Transfer: Robotics use cases

Programa ICT: Líneas temáticas en H2020 (VI)

Micro- and nanoelectronics and photonics: Key Enabling Technologies related to micro- and nanoelectronics and to photonics covering also quantum technologies.



H2020-ICT-2015
50 M€

Generic μ -n-Electronic Technologies

JTI ECSEL
1.200 M€

H2020-ICT-2015
44 M€

H2020-ICT-2014
47 M€

Photonics

PPP
Fotónica

H2020-ICT-2015
56 M€

Cross-Cutting ICT KETs

H2020-ICT-2014
18 M€ (9+9)

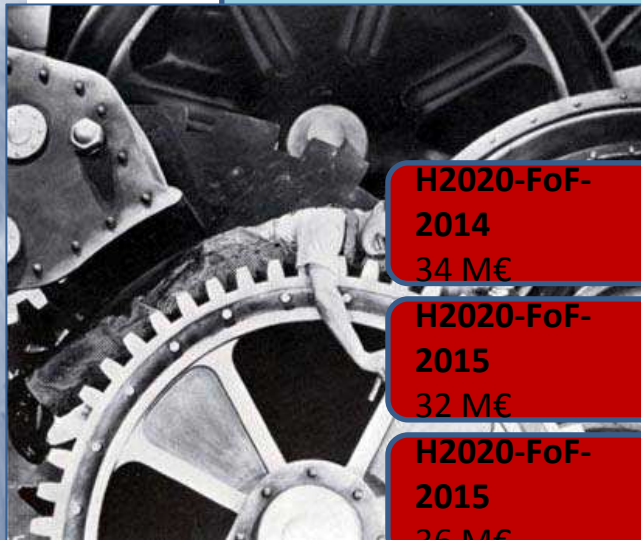
Development of Novel Materials and Systems for
OLED Lighting or Displays

Joint
ICT+NMBP

Programa ICT: Líneas temáticas en H2020 (VII)

PPP
FoF

Factories of the Future: Modernising Europe's Manufacturing Capabilities.



H2020-FoF-
2014
34 M€

Process Optimisation of Manufacturing Assets

H2020-FoF-
2015
32 M€

ICT-enabled Modelling, Simulation, Analytics and Forecasting Technologies

H2020-FoF-
2015
36 M€

ICT Innovation for Manufacturing SMEs (I4MS)

Convocatoria en
NMBP!!

Programa ICT: Líneas temáticas en H2020 (VIII)

ICT Cross-Cutting Activities: Basic and generic ICT technologies of use for the development of products, services and technologies in the six main lines and beyond.

H2020-ICT-2015
51 M€

Internet of Things and Platforms for Connected Smart Objects

H2020-ICT-2014
7 M€

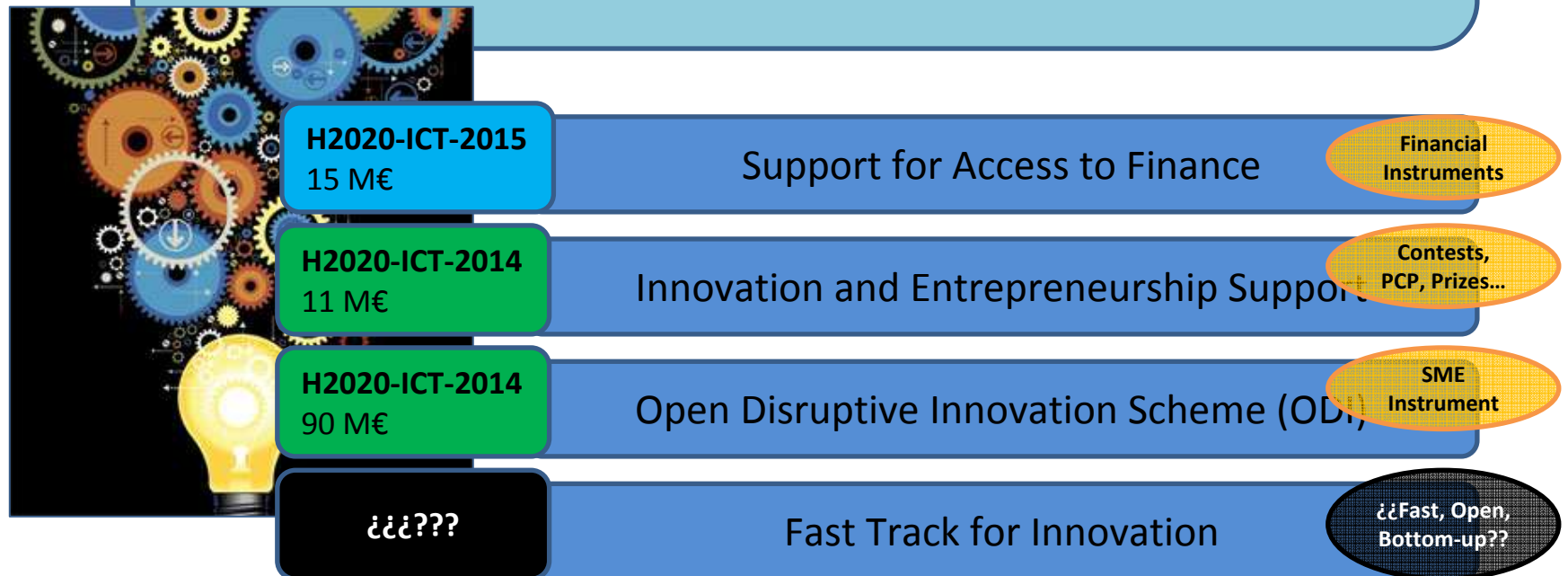
Human-centric Digital Age

H2020-ICT-2014
38 M€

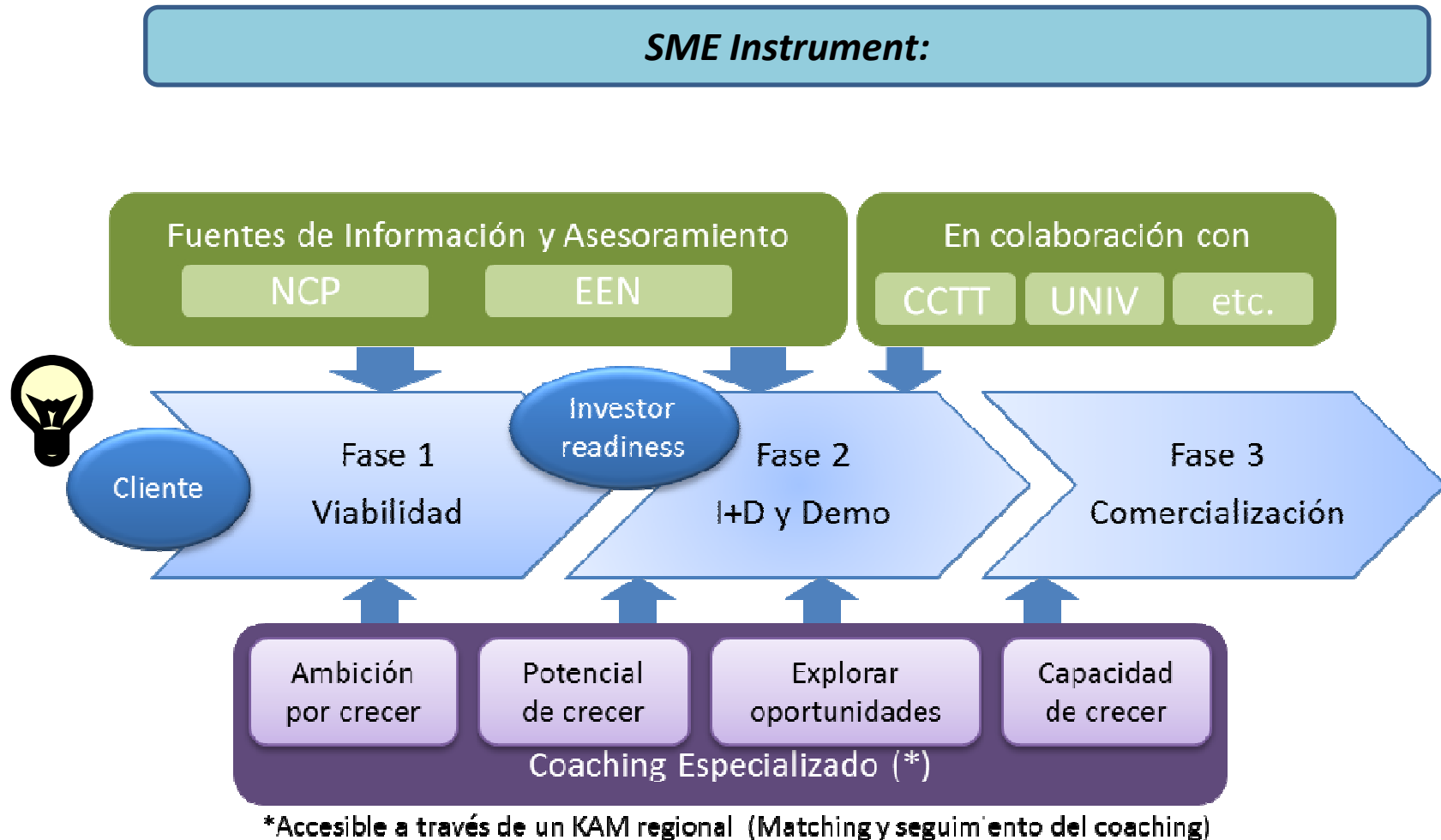
Cybersecurity, Trustworthy ICT

Programa ICT: Líneas temáticas en H2020 (IX)

Horizontal ICT Innovation Actions: Ensure best leverage of innovation actions across the challenges and ICT R&D in H2020 delivers the intended impact on growth and competitiveness.



Programa ICT: Líneas temáticas en H2020 (IX)



Programa ICT: Líneas temáticas en H2020 (IX)

SME Instrument:

Phase 1: Concept and feasibility assessment

Input: Idea/Concept: "Business Plan 1" (~ 10 pages)

Activities:
Feasibility of concept
Risk assessment
IP regime
Partner search
Design study
Pilot application
etc.

Output: elaborated "Business plan 2"

Lump sum: 50.000 €
~ 6 months

Phase 2: R&D, demonstration, market replication

Input: "Business plan 2" plus description of activities under Phase 2 (~ 30 pages)

Activities:
Development, prototyping, testing, piloting, miniaturisation, scaling-up, market replication, research

Output: "investor-ready Business plan 3"

Typically 1-2,5 M€ EC funding (up to 5M€ if justified)
~ 12 to 24 months

Phase 3: Commercialisation

Promote instrument as quality label for successful projects
Facilitate access to private finance

Support via networking, training, information, addressing i.a. IP management, knowledge sharing, dissemination

SME window in the EU financial facilities (debt facility and equity facility)

Possible connection to PPC (and PPI?)

No direct funding

Programa ICT: Líneas temáticas en H2020 (IX)

SME Instrument:



- *Targeted at all types of innovative SMEs showing a strong ambition to develop, grow and internationalise (EU dimension)*
- *Combination of demonstration and market replication encouraging the involvement of end users/potential clients, research as appropriate*
- *Only SMEs allowed to apply for funding. Single company support possible*
- *Simple rules and procedures*
- *Continuous open call*
- *No obligation for applicants to sequentially cover all three phases; Each phase open to all SMEs. However SME encouraged to go in phase1*
- *Bottom-up approach, each SC & LEIT themes defines a broad topic*
- *Central implementation through Executive Agency*

Programa ICT: Líneas temáticas en H2020 (X)

International Cooperation: International partnership building and support to dialogues with potential partners beyond Europe.



H2020-ICT-2015
3 M€

High Income Countries

CSA Actions

North America

East Asia / Oceania



H2020-ICT-2015
11 M€

Low and Middle Income Countries

R&D Actions

Sub-Saharan Africa

Programa ICT: Líneas temáticas en H2020 (X)

International Cooperation: EU-Brazil Research and Development Cooperation in Advanced Cyber Infrastructure.



H2020-EUB-2015
7 M€

Cloud Computing, including Security aspects

High Performance Computing

Experimental Platforms



Programa ICT: Líneas temáticas en H2020 (X)

International Cooperation: EU-Japan Research and Development Cooperation in Net Futures.



H2020-EUJ-2014
6 M€

Technologies combining Big Data, Internet of Things in the Cloud

Access Networks for Densely Located Users

Optical Communications

Experimentation and Development of Federated Japan-EU Testbeds

Próximas Convocatorias:

Las fechas marcadas como () son indicativas y están sujetas a una decisión de financiación específica para 2015.*



H2020-ICT-2014: 11/12/2013 – 23/04/2014
excepto: PPP 5G (cierre 25/11/2014)
excepto: ODI (diversas fechas de corte)

H2020-ICT-2015: 15/10/2014 – 21/04/2015(*)

H2020-FoF-2014/2015: 11/12/2013 – 20/03/2014
9/12/2014
(convocatoria específica en el programa NMBP)

H2020-EUB-2015: 15/10/2014 – 21/04/2015(*)

H2020-EUJ-2014: 7/01/2014 – 10/04/2014

Fast Track for Innovation : TBD

ICT in Societal challenges



Societal Challenges - ICT

636 M€
(2014-15)



- **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 – inclusive, innovative and reflective societies**
- **Secure societies – protecting freedom and security of Europe and its citizens**

Key principles for ICT R&I in the Societal Challenges



- **Interoperability**
- **Re-use and economies of scale**
- **Breakthroughs leveraging the transformative power of ICT**
- **Preparation for market deployment**
- **+**
- **Information for future digital policy**

Societal Challenges - ICT Proposed funding (M€, 2014-2015)

| Challenge | Total | ICT | % |
|---|-------|-----|------|
| Health, demographic change and wellbeing | 1 804 | 269 | 15% |
| Food security, sustainable agriculture, marine and maritime research & the Bioeconomy | 687 | | |
| Secure, clean and efficient energy | 1 447 | 72 | 5% |
| Smart, green and integrated transport | 1 542 | 92 | 6% |
| Climate action, environment, resource efficiency and raw materials | 745 | 26 | 3,5% |
| Innovative, inclusive and reflective societies | 310 | 77 | 25% |
| Secure societies | 393 | 100 | 25% |

Health, demographic change and wellbeing

269 M€



• Advancing active and healthy ageing with ICT

- **Service robotics** within assisted living environments
- ICT solutions for **independent living with cognitive impairments**
- ICT solutions enabling **early risk detection and intervention**

• Integrated, sustainable, citizen-centred care

- ICT-based approaches for **integrated care** (beyond current state-of-art in tele-health and tele-care)
- **Self-management of health and disease**
- Public-procurement of innovative eHealth services

• Improving health information and data exploitation

- Digital representation of **health data** to improve diagnosis and treatment
- **eHealth interoperability**



Secure, clean and efficient energy

72 M€

- **Energy efficiency / buildings and consumers**
 - Public procurement of **green data centres**
 - New ICT-based solutions for **energy efficiency through citizens' behavioural change**
- **Competitive low-carbon energy / modernising the single European electricity grid**
 - Distribution grid and retail market
 - Next generation ICT infrastructure for **smart metering and smart grids**
- **Smart cities and communities**
 - Integration of **energy, transport and ICT** through **lighthouse projects** (large scale demonstration)



Smart, green and integrated transport

92 M€

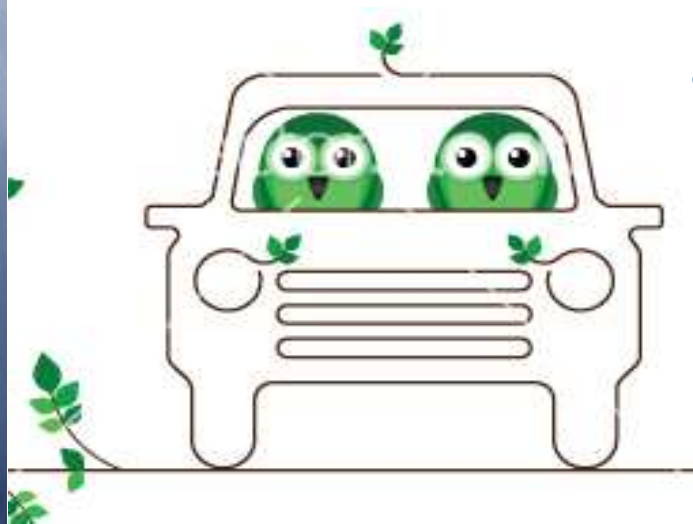
- **Road**

- **Cooperative Intelligent Transport Systems**

- Connecting people, vehicles, infrastructures and businesses
 - Safe and connected **automation in road transport**

- **Green vehicles**

- **Electric vehicles'** enhanced performance and **integration into the transport system and the electricity grid**



- **Smart cities and communities**

- Integration of **energy, transport and ICT** through **lighthouse projects** (large scale demonstration)

Climate action, environment, resource efficiency and raw materials

26 M€

- **Waste management**

- ICT solutions for waste traceability, waste material flow management

- **Water management**

- Development and deployment of advanced ICT solutions for water resources management in agriculture and urban areas



Europe in a changing world – inclusive, innovative and reflective societies

77 M€

- **Reflective societies – Cultural Heritage**
 - **Innovative ecosystems of digital cultural assets**
 - **Advanced 3D modelling for accessing and understanding European cultural assets**
- **New forms of innovation**
 - **Innovation in the public sector** by using emerging ICT technologies
 - ICT-enabled **open government**
 - Personalised public services
 - M-government
 - Open participation
 - Transparency
 - ICT for **learning and inclusion**



Secure societies – protecting freedom and security of Europe and its citizens

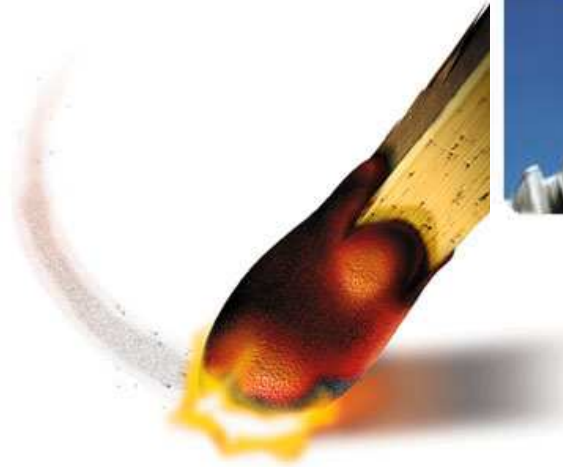
100 M€

- **Digital security: cybersecurity, privacy and trust**
 - Protecting our society by providing sustained **trust in the usage of ICT** and in securing the ICT underlying our digital society
 - **Preventing cyber-attacks** on any component of the digital society
 - **Ensuring freedom and privacy in the digital society**, protecting the fundamental values of our society and democratic rights of our citizens in cyberspace
 - Protect the weak in our society from abuses over the internet and **giving the user control over his private data**
 - Demonstrating the viability and maturity of state-of-the-art security solutions in **large scale demonstrators**, involving end users

Todo cambio implica una fricción:



Pero también una oportunidad:



Aspectos a tener en cuenta:

- **Aspectos de Innovación:**
 - **Impacto (criterio principal en Acciones de Innovación e Instrumento PYME)**
 - **Identificar SIEMPRE primero el impacto descrito en el WP para ese objetivo/topic!**
 - **Compromiso Industrial**
 - **Plan de Explotación**
 - **Gestión de los DPI:** <https://www.iprhelpdesk.eu/>
 - **Contribución a Standards:** <http://ec.europa.eu/digital-agenda/events/cf/ict2013/item-display.cfm?id=11541>
 - **Posibles Patentes (ojo a cuándo se desvela la documentación técnica)**
 - **Aspectos de Open Access y Data Management Plan:** <https://ec.europa.eu/digital-agenda/en/news/open-access-eu-project-results-go-public>
- **Evaluación remota y en una única fase (salvo excepciones). Multi-step?**
- **Plazos previstos de 5+3 meses: Apenas habrá tiempo para negociaciones. Las propuestas seguirán la estructura de la DoW del Grant Agreement.**
- **Comprobar SIEMPRE la viabilidad financiera de los coordinadores y el estatus de PYME; es posible que no haya tiempo para cambios después:**
 - [Financial Viability Check Tool](#)

Aspectos a tener en cuenta:

- ***Ojo a las posibles limitaciones de páginas: warn & watermark:***
 - SME instrument:
 - 10 pages for phase 1
 - 30 pages for phase 2
 - Support actions: 50 pages
 - 'Innovation' / 'Research & Innovation' actions: 70p
 - PCP / PPI proposals: 90 pages
- **Darse de alta en la base de datos de [evaluadores/revisores](http://ec.europa.eu/research/participants/portal/page/experts) de la Comisión para H2020:**
<http://ec.europa.eu/research/participants/portal/page/experts>

Aspectos a tener en cuenta:

- **Consultar siempre con los Puntos de Contacto Nacional el encaje y objetivos de nuestras propuestas.**
- **Atentos a los Infodays CDTI:**
 - 4/02 – Micro-Nano-Electronics, Photonics and Robotics
 - 17/02 – Web Entrepreneurship
- **Infodays oficiales de la Comisión anunciados en la agenda de la web CDTI**
- **Documentación Convocatoria 2014:**
<http://www.cdti.es/index.asp?MP=9&MS=31&MN=2&R=A&IDR=7&xtor=RSS-4&id=584>

Aspectos a tener en cuenta:



Open Access:

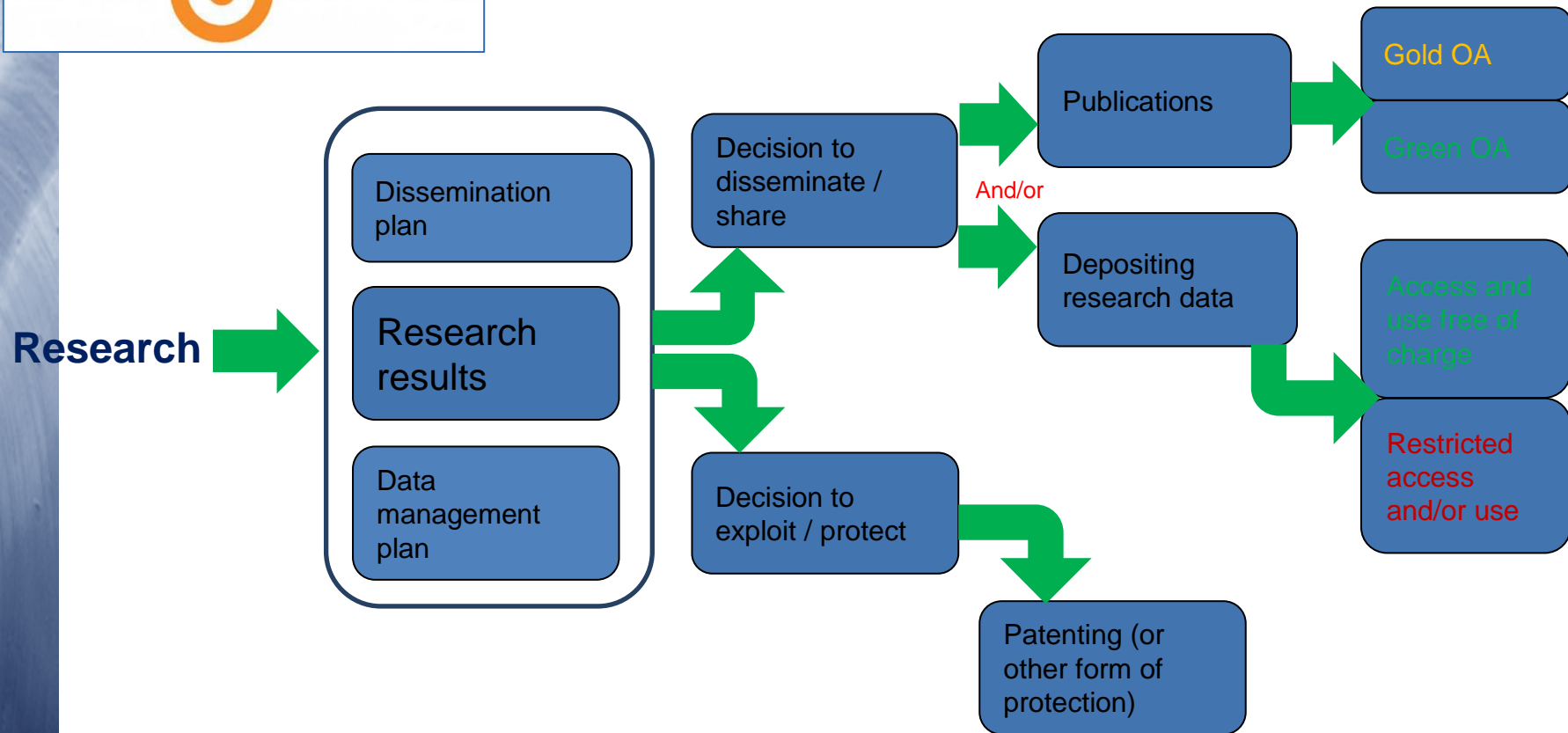
- **Open access *mandate* in H2020**
 - **Obligation** to provide OA to publications
 - **All areas**
 - Peer-reviewed publications
 - Allowed embargos: 6/12 months
 - Green and Gold OA supported
 - **Beneficiaries must aim to deposit the research data needed to validate the results presented in publications ('underlying'/'linked' data)**
- Introduction of **Data Management Plans (DMPs)**: proposals will contain a brief DMP:
 - What data will be collected / generated?
 - What data will be shared / made open?
 - How metadata will be generated?
 - How will data be curated and preserved?

Aspectos a tener en cuenta:



Open Access:

Dissemination and exploitation of research results in H2020



Aspectos a tener en cuenta:



Open Access Infrastructure Support:



www.openaire.eu

- Started as an infrastructure for the EC FP7 Open Access Pilot (covering 20% of FP7 funding)
 - Harvests information of the whole FP7 publication output and generates relevant statistics (currently: 41000+ publications; 16000+ OA publications)
 - Helpdesk & contact points in the EU Member States
 - Repository for 'homeless' publications (Orphan repository)
 - Is prepared to provide same support for H2020 including the Open Data Pilot (+ automatic data exchange with EC)
- Expected to become legal entity

Aspectos a tener en cuenta:



Open Access:

- Open access and Digital science: means improving efficiency, quality and impact of publicly-funded research for society and innovation in Europe.
- Open access to publications: a general principle in H2020. Both **Green** and **Gold** open access models are promoted. Depositing underlying data is encouraged.
- Open access to data : a pilot in H2020 will analyse experiences.
- Open access policy is not a goal in itself, but an element in promoting digital science practices for future research, education and innovation

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Leadership in Enabling and Industrial Technologies: ICT



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Societal Challenges: ICT Applications



Health: eHealth, Ageing, AAL, etc.

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Energy: ICT for Energy Efficiency, Smart Cities, ICT for Smart Grids, Energy Efficient Buildings, etc.

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Transport: Intelligent Transport Systems, Green Cars, Urban Mobility, Logistics, etc.

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Climate: ICT for Environment, Water Management, Waste Management, etc.

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Societal Challenges: ICT Applications **LEIT: Public Private Partnerships**



Security: Privacy, Access Control, Secure Information Sharing, Trust eServices, Critical Infrastructures Protection, etc.

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Food: Food Chain Data Standardisation, etc.

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NMBP: PPP of Factories of the Future and Energy Efficient Buildings.

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MUCHAS GRACIAS

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