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Impact and Innovation in Horizon 2020 projects


Maximising Impact
at proposal stage



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Get your ticket to innovation.



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Dr. Eugene Sweeney

- Technical and Commercial Background
- Over 35 years experience of commercialising IP/research and new technology
 - 1970's As a researcher in Engineering/CFD (first spin-out in 1978)
 - 1980's In computer industry (bringing new technologies to market)
 - 1990's Early stage technology/IP investment and commercialisation
 - 2000 - Consultant in IPR and research commercialisation
- Over 25 years experience with EC as proposal evaluator, rapporteur, project reviewer and consultant
- Member of International (ISO) and European (CEN) Standards Committees on Innovation Management

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Horizon 2020

- An impact orientated approach
- Delivering strategic technologies that can drive competitiveness and growth
- IPR, Impact and Innovation must be addressed in all sections of a proposal, not just the impact section
- IPR, Impact and Innovation must be managed in all stages of a project, not just during exploitation

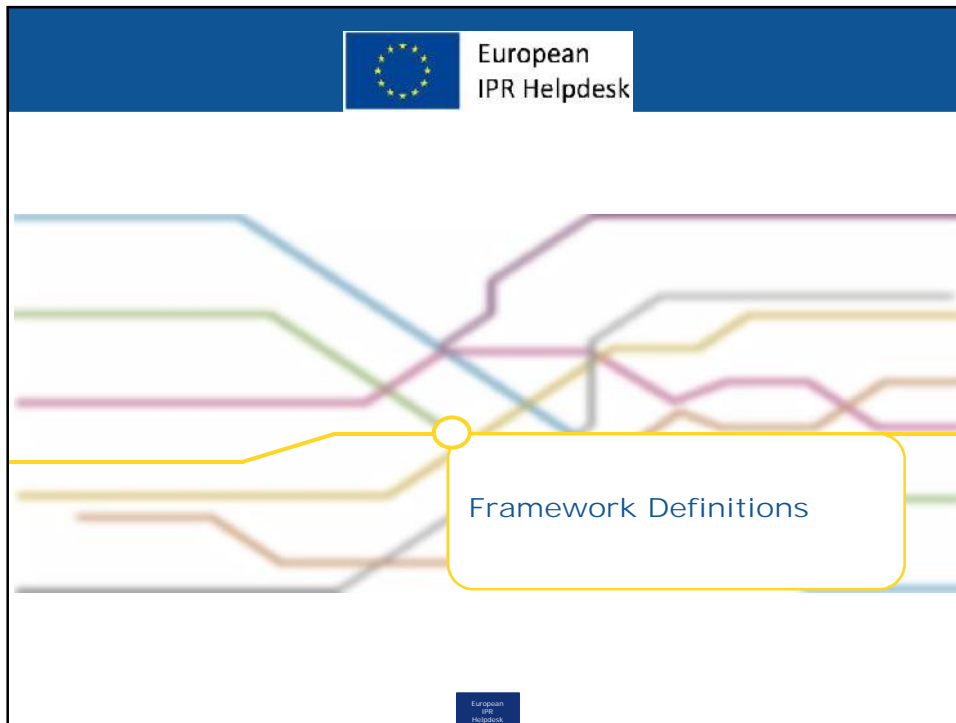
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Roadmap

- Addressing Impact and when preparing H2020 proposals
- Lunch break
- Managing Innovation during H2020 project implementation



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Vocabulary/Definitions

IP to Impact

- Intellectual Property (IP)
- Intellectual Property Right (IPR)
- Innovation
 - Innovation Potential
 - Innovation Capacity
 - Innovation Management
- Exploitation
- Dissemination
- Communication
- Impact


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Intellectual Property (IP)

- Products of the mind
- Products of research & experimentation
- Products of creativity


- Intellectual Property, like Physical Property can be a valuable asset.

- Like physical property, intellectual property is an asset which can be traded (sold, bought, leased, used as collateral, or given away!)

Project Inputs & Outputs

The KEY assets in a project

Inventions
Software
Reports
Designs
Databases
Music
Books
Works of art
Videos
Roadmaps
etc


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Intellectual Property Rights (IPR)


- The law provides legal rights to protect IP
 - Patents (technical inventions)
 - Copyright (Software, Written works, Engineering drawings, Semiconductor Topologies, etc)
 - Design Rights (functional or aesthetic)
 - Database Rights (organising and querying and retrieving data)
 - Trade marks
 - Plant Breeders Rights
 - Utility Models/petty patents
 - etc

NOT ONLY PATENTS

- Some legal rights come into existence automatically
- Some need registration


- Know-how (Confidentiality Agreements)
- Secrets

- National rights
- Regional variations in law

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Intellectual Property Rights (IPR)

- WHY?
 - To promote innovation by encouraging invention and creativity, and thereby benefitting society
- HOW?
 - The state grants a limited monopoly in return for making details of the new creation freely accessible.
- WHO BENEFITS?
 - The state benefits by avoiding secrecy, thus stimulating further innovation, and thus enriching society
 - The creator benefits by preventing unauthorised use by others, unless they come to an agreement
 - **Commercial partners benefit** from the limited monopoly and so invest in further development to take-to-market

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Innovation?

A new entity (creation), which when used produces tangible benefits, satisfying needs and wants.

Invention  Innovation


Invention IS NOT Innovation

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Any type of innovation

- Innovations do not have to be commercial
- Innovations can be based on new or improved:
 - products, services
 - organisational or business methods
 - research tools or methods
 - networks or collaborations
 - advisory reports
 - roadmaps
 - etc


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Innovation Process

- The process to create the innovation

Idea
TRL 0



Market
introduction
TRL 9

**Benefit/
Impact**

Innovation

Innovation Management (Sec 3)

- The management of the process

Impact (Sec 2)

The benefits derived from the innovation. The larger the benefit, the larger the impact

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Any type of impact

- Impacts do not have to be financial
- The impact of the innovation can be:
 - Societal
 - Environmental
 - Technical
 - Commercial
 - Educational
 - Research
 - or anything that delivers a benefit to someone or addresses a need

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Innovation Potential (Sec 1)

- How much benefit (innovation) can the project results potentially deliver?

Innovation Capacity (Sec 2)

- Do the project results have the capacity to stimulate further innovations, and/or increase the amount of benefits delivered?
- Does it have the potential to be used in other areas (beyond the project objectives)?

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The H2020 Work Programme


Clearly describes the challenges and expected impacts

e.g. LCE 10 – 2014: Next generation technologies for energy storage

Specific Challenge: There is a need to develop new or improved storage technologies with higher performance, availability, durability, performance, safety and lower costs. These new and enhanced storage technologies

Expected impacts:

- Enlarging the portfolio of effective storage technologies ...
- Lowering the cost, increasing the efficiency and durability.....
- Contributing to solutions for high penetration rates of distributed energy resources and intermittent renewable energy....
- Integrate storage into the management.....

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REV-I NEQUAL-10-2016

Multi-stakeholder platform for enhancing youth digital opportunities

Expected impacts:

- Stimulate children and young people's civic engagement through online participation;
- Allow for innovative research methods on children's and young people's use of internet and digital technologies through their active participation in the research;
- Empower children and young people by allowing them to take an active role in policy making and societal developments;
- Leverage youth participation and dialogue with stakeholders and decision makers;
- Ensure full and safe participation of children and young people in accessing and creating online content and services.



Dissemination vs Communication?

- **What's the difference??**
- Some common answers:
 - Communication is what we should have been doing all along (“Stop disseminating, start communicating”)
 - Dissemination is one-way, communication is two-way
 - Dissemination is passive, communication uses feedback to influence project progress
 - Dissemination is broad-based “shotgun” approach, communication aims at specific targets
 - Communication refers specifically to convincing the public of the usefulness of EU research

**THERE IS NO DIFFERENCE!!
Read the proposal template!**



Extract from proposal template

2.2 Measures to maximise impact

a) Dissemination and exploitation of results

b) Communication activities

“Describe the proposed **communication measures** for promoting **the project and its findings** during the period of the grant. Measures should be proportionate to the scale of the project, with clear objectives. They should be **tailored to the needs of various audiences**, including groups beyond the project's own community. Where relevant, include measures for public/societal engagement on issues related to the project.”



Types of “Communication”

- Internal (two-way) Communication (e.g. collaboration platforms, etc)
- The strategy and plan for communicating (disseminating) of the project and the project results, to make available and support exploitation (the DEP)
- Communication activities/measures – they way you tell different target groups (e.g. publications, conferences, workshops, events, etc.), the timing, etc.



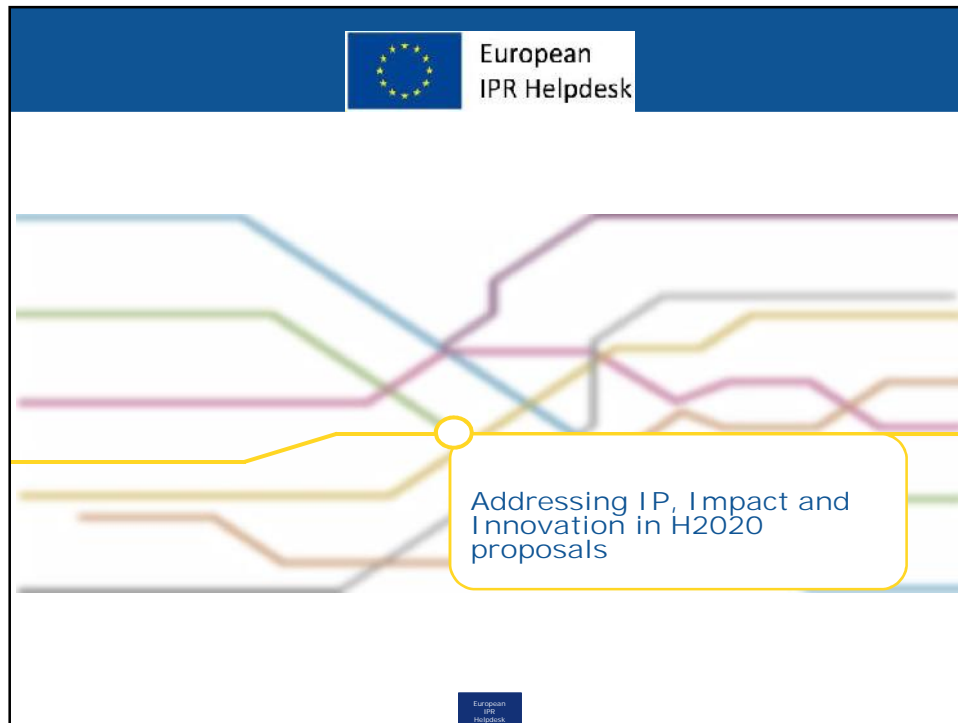
Summary

Dissemination vs Exploitation vs Communication activities

- Dissemination/communication raises awareness and stimulates use.
- Communication activities (or measures) are how the messages will be delivered
- Exploitation gets the results used

Only with use will there be impact

The strategy and plan for achieving this is critical



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Proposals for all Actions (RIA, IA, CSA, SME, FTI, etc)

- Demonstrate an understanding of the technology and market environment, to select and justify the project objectives
- Present a credible and viable methodology to achieve the project objectives...
- Demonstrate that the proposed innovations will make a significant contribution to the expected impacts of the call
- Demonstrate the ability and capability to deliver

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The image shows a blue header with the European Union flag and the text 'European IPR Helpdesk'. Below the header, the text 'Proposals for all Actions (RIA, IA, CSA, SME, FTI, etc)' is displayed in blue and red. A list of four bullet points follows, each starting with a blue arrowhead. A small 'European IPR Helpdesk' logo is visible in the bottom right corner of the slide.



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Innovation, SME Actions, FTI

- Focus on the business opportunity
- Include the concept for commercialisation
- Ensure good level of innovation, i.e. develop something new
- Analyse competing solutions and explain why you will succeed and not your competitor



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Gathering the information to prepare the proposal




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Focus on delivering results which will lead to the expected impacts

- Satisfy needs & delivering benefits
 - What needs (challenges) will be addressed (relevant to the **call topic**)?
 - What benefits (impact) will be delivered (as expected by the **call topic**)?
- Select project objectives to maximise the impacts expected by the **call topic**

Call topic



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The H2020 Work Programme

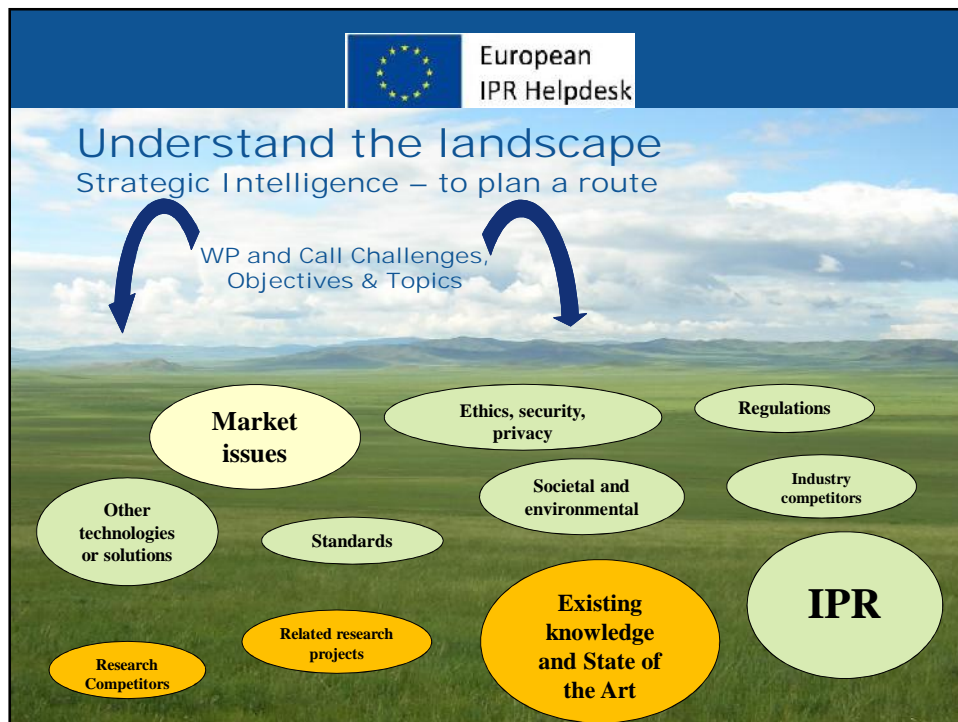
Clearly describes the **challenges** and expected **impacts**
(needs) (benefit)

e.g. LCE 10 – 2014: Next generation technologies for energy storage

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Strategic Intelligence

- State of the Art
 - how will you go beyond it, what new things will be produced?
- Market
 - what needs will you address, what benefits will you deliver, who will you target, what is market structure?
- Competitor Intelligence:
 - what will be your key selling points, why will people use your solutions, rather than your competitors?
- Technologies:
 - Why, and in which areas, will your solution be better than the alternatives by how much?



Strategic Intelligence

- Potential Barriers/Obstacles: IPRs (freedom to use), statutory requirements, industry standards, health & safety requirements
 - Statutes
 - Standards
 - Patents and other registered IP
- Standards: prescriptive, advisory, best practice (barriers or opportunity)
 - www.iso.org
 - www.cen.eu
 - www.etsi.org



Information Sources

- Academic publications, conference proceedings
- Market reports
- Industry partners
- Company websites, annual reports (incl. financial)
- Technical reports
- Industry/sector publications
- Industry events, conferences and exhibitions
- Standards bodies (CEN/CENELEC, ISO, ETSI, National Bodies)
- Patents and other registered IP



Patents

Not just IPR/legal information

- Bibliographic Information (who, where, when – companies and individuals)
- Technical Information (state of the art, background, research areas)
- Legal Status Information (freedom to use, regions protected in)
- Commercial Information (future markets and territories)

The screenshot shows the European IPR Helpdesk website with the following content:

- European IPR Helpdesk** header with the European Union flag.
- Red text: **European Patent Office – www.espacenet.com**
- Maintenance/outages** section: "Espacenet outages - times are O... Mon-Sun 05:00-c 05:30". A note states: "Espacenet is accessed by an ever increasing number of automated processes - please note that this is a breach of our terms of service and may result in rejection messages since such usage can cause overload of our servers. If you need to download large amounts of data, please do so from Open Patent Services (OPS) → [read more](#)".
- News flashes** section: "Espacenet: Intro" (circled in red).
- Latest updates** section: "Espacenet: Intro" (circled in red).
- Related links** section: "Espacenet: Intro" (circled in red).
- Free virtual online classroom sessions: "Introduction to Espacenet"** (circled in red): "Registration is now open for our next virtual classroom session, which will take place on 4 September 2014 at 10:00-11:30 hrs. The topic will be an introduction to patent searches using Espacenet. Register and find out more about our free webinars/virtual classroom sessions."
 - GPI - Global Patent Index**: "You've used Espacenet. Why not enhance your next patent search with a free trial of the EPO's Global Patent Index (GPI)?"
 - Espacenet Assistant updated**: "In order to offer you the best possible learning experience we have launched an updated version of the [Espacenet assistant](#) online tutorial to include recent changes."
- Cooperative Patent Classification: Intro** (circled in red): Includes a video thumbnail with a person and a red exclamation mark, and a link: "Click here to watch".

The slide is titled "Standards" and contains the following content:


- European IPR Helpdesk** header with the European Union flag.
- Standards** section header.
- Bullet points:
 - Standardization is identified in Horizon 2020 as one of the measures that will support market take-up of research results and innovation.
 - Help on addressing standardization in Horizon 2020 projects is available from CEN-CENELEC.
 - For more information see: <http://www.cencenelec.eu/research/tools/horizon2020/>
 - Download guide from: http://www.cencenelec.eu/research/news/publications/Publications/Standards_Horizon2020.pdf
- Poster** on the right:
 - Logo: **CEN CENELEC**
 - Title: **INTEGRATING STANDARDS IN YOUR HORIZON 2020 PROJECT**
 - Image: A collage of scientific and technological images.
 - Text: *Linking innovation and standardisation: a pocket guide for project proposers*
 - Image: Two men in business attire, one on a mobile phone, with a globe in the background.




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Strategic Intelligence to Action Plans

1. Gather information to understand the landscape (market, technical, IPR, SOTA, Competitors, etc) ✓
2. Analyse information to obtain strategic intelligence... to allow you to: -
3. **Justify the project objectives**, which will address the call challenges and maximise the expected impacts
4. Plan to deliver – develop strategies and plans to:
 - **Deliver the project results**
 - **Get the results used to maximise impact**




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Pulling it together to develop the Proposal

1. Excellence
2. Impact
3. Implementation





Excellence

Extract from proposal template

- Objectives should be consistent with the expected exploitation and impact of the project
- Describe research and innovation activities which will be linked with the project
- Describe the advance your proposal would provide beyond the state-of-the-art, and the extent the proposed work is ambitious
- Describe the innovation potential
- Refer to the results of any patent search carried out



Excellence

Evaluation Criteria

- Clarity and pertinence of the objectives
- Soundness of the concept, and credibility of the proposed methodology
- Extent that proposed work is beyond the state of the art and demonstrates innovation potential (e.g. ground-breaking objectives, novel concepts and approaches, new products, services or business and organisational models)
- Appropriate consideration of interdisciplinary approaches and, where relevant, use of stakeholder knowledge

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Impact

Extract from proposal template (1 of 2)

- Describe how your project will contribute to:
 - each of the expected impacts mentioned in the work programme, under the relevant topic;
 - any substantial impacts not mentioned in the work programme, that would enhance innovation capacity; create new market opportunities, strengthen competitiveness and growth of companies, address issues related to climate change or the environment, or bring other important benefits for society
- Describe any barriers/obstacles, and any framework conditions (such as regulation, standards, public acceptance, ...), that may determine whether and to what extent the expected impacts will be achieved.

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Impact

Extract from proposal template (2 of 2)

- Provide a draft 'plan for the dissemination and exploitation of the project's results'
 - Show how the proposed measures will help to achieve the expected impact of the project.
 - The plan, should be proportionate to the scale of the project, and should contain measures to be implemented both during and after the end of the project.
- Outline the strategy for knowledge management and protection.

Now mandatory!



Impact - Evaluation Criteria

- The extent to which the outputs of the project would contribute to each of the **expected impacts mentioned in the work programme** under the relevant topic;
- Any substantial **impacts not mentioned in the work programme**, that would enhance innovation capacity, create new market opportunities, strengthen competitiveness and growth of companies, address issues related to climate change or the environment, or bring other important benefits for society;
- Quality of the proposed measures to:
 - **Exploit and disseminate** the project results (including **management of IPR**), and to manage research data where relevant.
 - **Communicate** the project activities to different target audiences



Implementation

Extract from proposal template

- Give visibility in the work plan to 'dissemination and exploitation'
- Describe how effective innovation management will be addressed in the management structure and work plan.
- If applicable, describe the industrial/commercial involvement in the project to ensure exploitation of the results.



Implementation

Evaluation Criteria

- Quality and effectiveness of the work plan, including extent to which the resources assigned to work packages are in line with their objectives and deliverables
- Appropriateness of the management structures and procedures, including risk and **innovation management**
- Complementarity of the participants and extent to which the consortium as whole brings together the necessary expertise
- Appropriateness of the allocation of tasks, ensuring that all participants have a valid role and adequate resources in the project to fulfil that role.



After the break...

Managing Innovation in projects (to maximise impact)

- Innovation Management
- Knowledge (IP) Management
- Key management tasks
- The draft Dissemination and Exploitation Plan
- Exploitation in practice

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Summary

- Address IPR, Impact and Innovation in all 3 sections of H2020 proposals
- Understand all aspects of the landscape (scientific, technical, market, etc) to obtain strategic intelligence, to **justify** the project objectives, and to plan to deliver the maximum impact
- It's not about technology, it's about satisfying needs and delivering benefit

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