IP in EU Legislation

IPR in EU Economy

- IPR-intensive industries generated 29.2% (63 million) of all jobs in the EU during the period 2014-2016.
- 38.9% of all employment in the EU (83.3 million) can be attributed, directly or indirectly, to IPR-intensive industries
- 45% of the total economic activity (GDP) in the EU is attributable to IPR-intensive industries, worth EUR 6.6 trillion
- IPR-intensive industries pay significantly higher wages than other industries, with a wage premium of 47%
- IPR-intensive industries accounted for most of the EU’s trade with the rest of the world and generated a trade surplus, thus helping to keep the EU's external trade broadly balanced

IPR for Business Performance

- Companies that own IPRs have 20% higher revenue per employee than companies that do not.
- Correcting for relevant factors such as sector, company size and country, this revenue premium rises to 55% and even higher for SMEs.
- IPR-owning companies pay wages that are on average 19% higher than firms that do not own IPR.
- About 60% of large companies own IPRs.
- Although less than 9% of small businesses own IPRs, the firms that do have 68% more revenue per employee than firms that do not.

IP in EU

- EUIPO is the European Union Intellectual Property Office responsible for managing the EU trade mark and the registered Community design.

- The European Patent Office (EPO) was set up in 1973. From 16 signatory states of the European Patent Convention in 1973, the Organisation has now 38 member states, including all 27 EU member states plus countries such as Norway, Switzerland and Turkey.

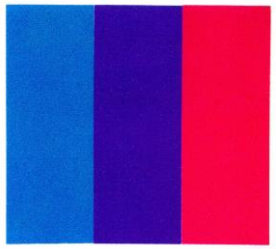
Trademarks and Designs in EU

- In the EU, there is a four-tier system for registering trade marks and designs. What you choose depends on the needs of your business.
    - 1t tier; national protection (e.g. you just want protection in one EU Member State)
    - 2nd tier; regional route; (e.g. you want protection in BeNeLux)
    - 3rd tier; European Route (e.g. you want protection in more Member States of the EU)
    - 4th tier; International Route (e.g. Trademarks Madrid Protocol, designs Hague System)

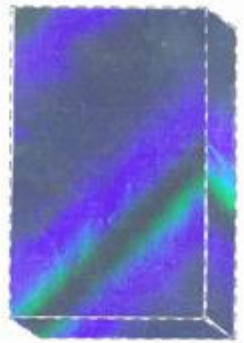
Community Trademarks

- A European Union trade mark is valid in all EU Member States

JUST DO IT



GORE-TEX



Community Designs

- RCD
- A registered Community design is initially valid for five years from the date of filing and can be renewed in blocks of five years up to a maximum of 25 years.

- UCD
- An unregistered Community design is given protection for a period of three years from the date on which the design was first made available to the public within the territory of the European Union. After three years, the protection cannot be extended.

Community Designs

Packaging of products
RCD 002710731-0001

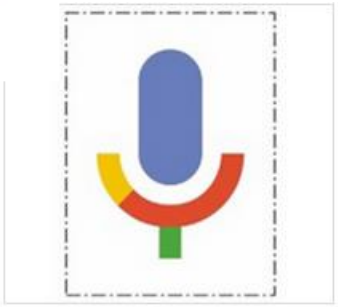
A product / set of products
RCD 002490193-0001

Composite products
RCD 000408166-0001

Parts of products
RCD 229752-0001

iPhone

Logos
RCD 000754098-0001

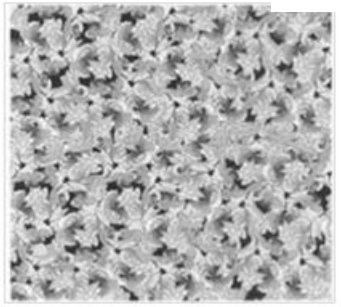


Computer icons
RCD 003001494-0002

Typefaces
RCD 004007441-0016

Graphic designs
RCD 004547370-0002

Get-ups
RCD 002213793-0001



Ornamentation
RCD 001446066-0009

Web design
RCD 003465632-0001

Maps
003567155-0001

Patent in Europe

- The procedure for obtaining a European Patent is regulated under the European Patent Convention (EPC). The granted European Patent is valid as a regular national patent on the territory of each designated country provided that validation procedure has been conducted. The European regional patent application is filed to the European Patent Office (EPO).
- Validation is a process of filing the corresponding request to the designated country, providing the translation into the national language, and payment of the maintenance fees.
- Member states of the EPC; as Austria, Bulgaria, Cyprus, Croatia, Czech Republic, Denmark, Estonia, Spain, Finland, Greece, Hungary, Iceland, Italy, Latvia, Lithuania, North Macedonia, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Sweden, Slovenia, Slovakia, San Marino, Turkey, as well as in Albania, Serbia.

Unitary Patent

- Two EU regulations provide the legal framework for the Unitary Patent system:
  - EU Regulation No 1257/2012 creates a "European patent with unitary effect", commonly referred to as "Unitary Patent";
  - EU Regulation No 1260/2012 lays down the translation arrangements for Unitary Patents.
- The Unitary Patent will be based on a European patent granted by the EPO under the rules and procedures of the EPC.
- *After grant of the European patent*, unitary effect can be requested for the territory of the 25 participating Member States.

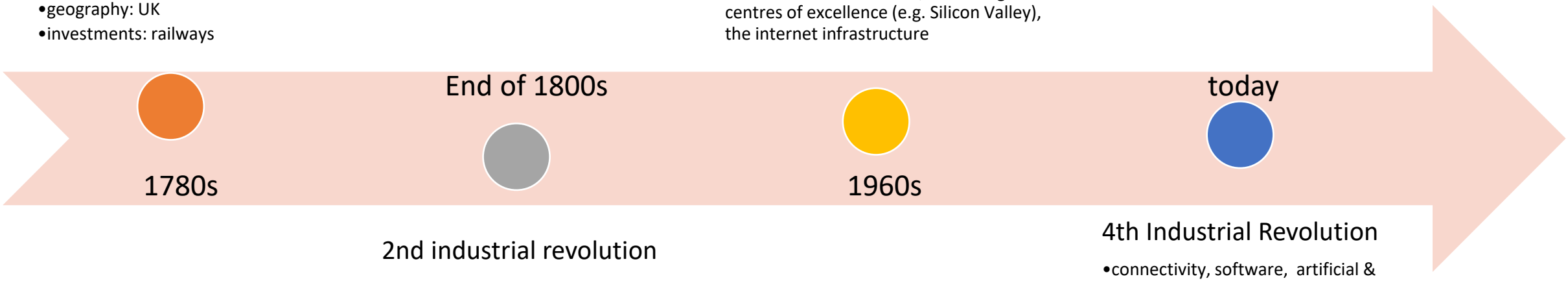
- The start of the new system is currently expected for the second half of 2022.

Other IP in EU

- Geographical indications: There is currently no EU-wide GI protection for non-agricultural goods.
- Plant varieties: The EU has established a system that grants intellectual property rights to new plant varieties called Community plant variety right (CPVR). It is similar to a patent and once given, is valid throughout the EU.
- Trade secrets; Directive (EU) 2016/943on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure

- IP Action Plan
  - Improve the way IP rights are protected
  - Boost the uptake and use of IP especially by SMEs
  - Facilitate licensing and sharing of IP
  - Ensure better enforcement and fight IP infringements
  - Promote fair play at a global level

Change in the Industrial Landscape



IPR in Software

Copyrights in Software

- Original source code and object code are protected by copyright - just as if the program was a work of literature like a poem or novel.

- However, while copyright protects a creator's original **expression** of a concept, it does not protect the underlying technical concept itself.

Copyrights in software

Copyrights protects the **expression** of the method **not the method** itself; for example:

- The code as such (source and binary)
- Design material
- User guides
- Graphical elements such as icons

Once published, copyrights exist automatically

- The creator should keep data on the date of creation

Copyright lasts for creators life +70 years

- In some countries 50 years

Other types of IPR in Software

- In hardware and communications industry, patents are dominating the IPR
- In software, trademarks and copyrights are the most used IP rights.

Patents in Software

What can be patented?

- Almost anything of **technical character** that is not a mere discovery and is:
  - **New/Novel** (not previously disclosed publicly)
  - **Inventive** (not obvious to "one skilled in the art")
  - **Industrially applicable/has a technical effect**
  - **Sufficiently described**

What cannot be patented?

- Computer programs (per se)
- Scientific theories
- Mathematical methods/algorithms
- Aesthetic creations
- Schemes, rules and methods for performing mental acts
- Playing games or doing business
- Presentations of information

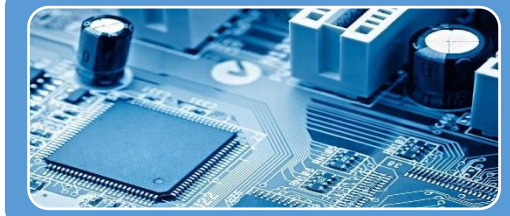
Software Patents in Europe

Computer programs are not patentable

- **Software codes**

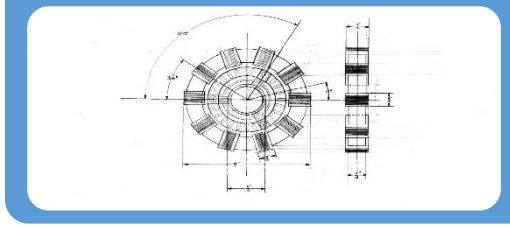
Computer-implemented inventions are patentable

- A technical problem has to be solved in a novel and non-obvious manner.



Needs to have a technical effect

- not **business** or **financial**



In **other** countries like USA, «technical effect are not so rigid

Patents for Software

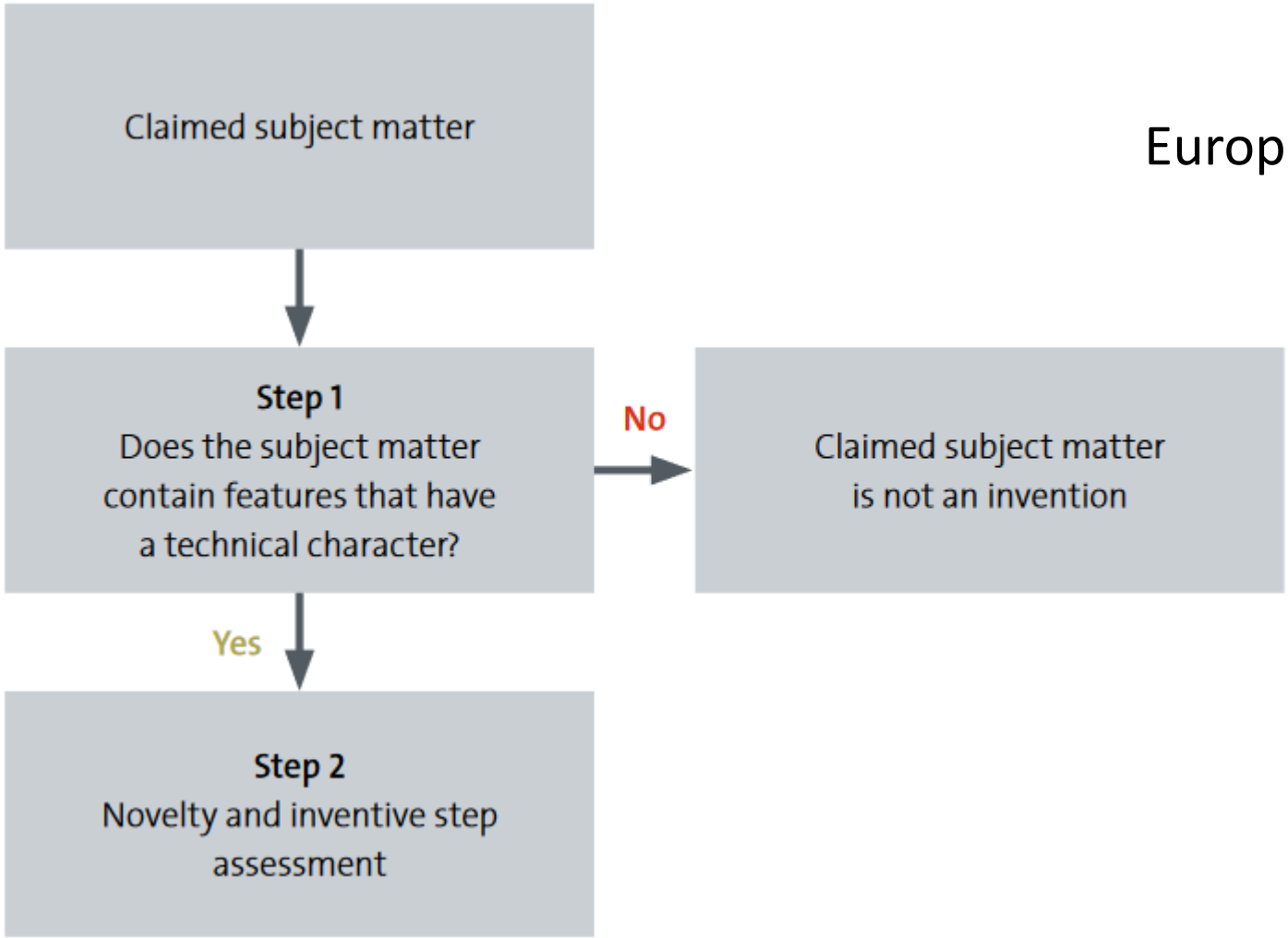
- The EPC as interpreted in the case law enables and obliges the EPO to grant patents for inventions in many fields of technology in which computer programs make a technical contribution.

- Such fields include medical devices, the automotive sector, aerospace, industrial control, communication/media technology such as automated natural language translation, voice recognition and video compression, and also the computer/processor itself.

Computer Implemented Invention (CII)

- Industry 4.0 innovation means dealing with CII's
- Not merely a claim about software, but rather:
  - The implementation of an invention using :
    - a computer;
    - a network of computers;
    - a programmable logic device.
  - The features of the invention are realized wholly or partially by means of a computer program:
    - A program controlled washing machine cycle, car braking system, navigation system

Assessment of CII Applications for Patentability



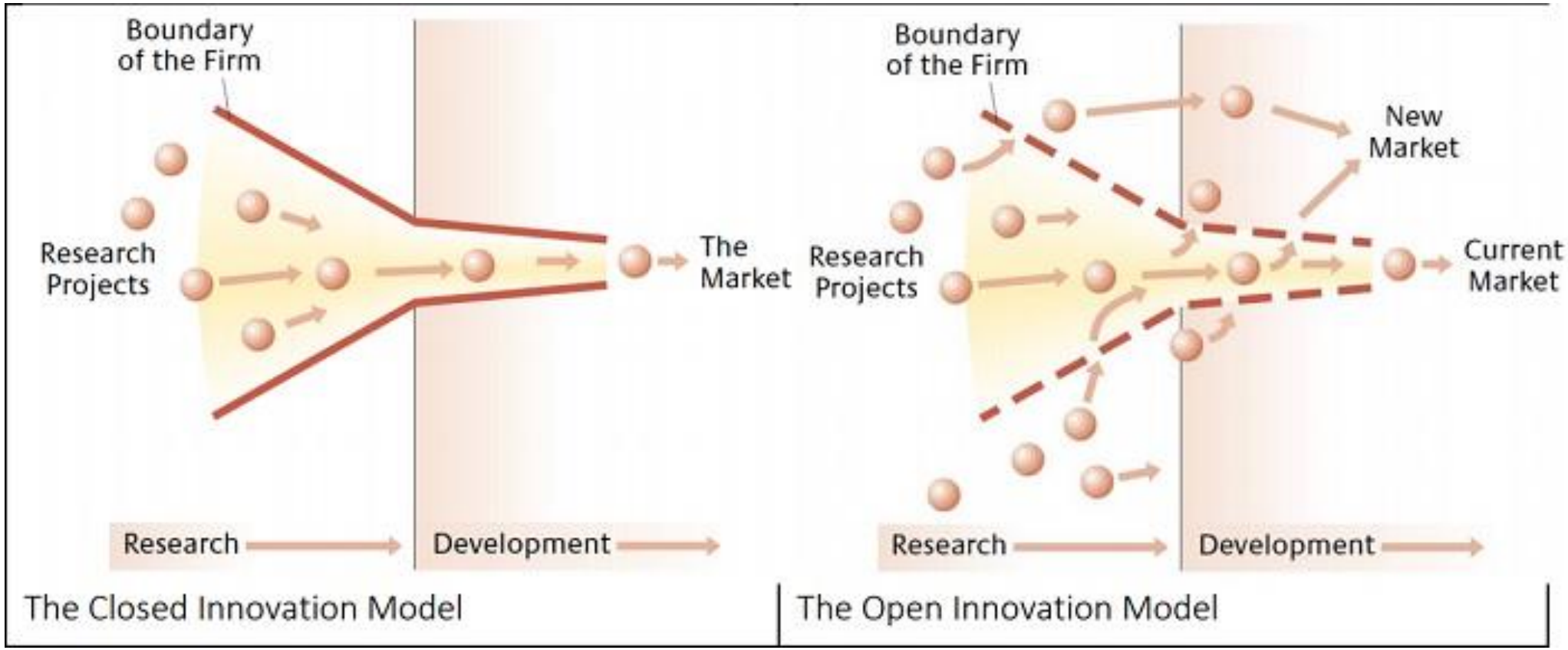
European – EPO – EPC approach

IP and IPR in collaborative partnerships

Open Innovation Paradigm

- Open Innovation refers to the collaboration between companies, individuals, and other types of institutions to develop innovative products and services and, in the process, share the risks and rewards of research, development, and commercialisation (Chesbrough, 2003, 2006).

- Sharing knowledge



source: (H. W. Chesbrough, 2003)

Open Innovation Competencies

- Scoping an innovation project
- Reading publications in scientific libraries
- Researching patent databases
- Finding relevant companies
- Implementing monitoring mechanisms
- Structuring knowledge
- Identifying experts
- Communicating a Question or a Challenge
- Engaging with external partners
- Reporting interactions with experts
- Producing informative reports
- Protecting intellectual property
- Collaborating & sharing knowledge
- Contributing to the public good (knowledge)

Open Innovation and Horizon Europe

European Commission - Speech

Open Innovation, Open Science, Open to the World

22 June 2015

Carlos Moedas – Commissioner for Research, Science and Innovation

Brussels, 'A new start for Europe: Opening up to an ERA of Innovation' Conf

On 25 April this year, an earthquake of magnitude 7.3 hit Nepal. To get real- information, the response teams used an online mapping tool called Open St Map has created an entire online map of the world using local knowledge, GI sources, all provided on a voluntary basis. It is open license for any use.

Open Street Map was created by a 24 year-old computer science student at London in 2004, has today 2 million users and has been used for many digit commercial purposes: From the earthquakes in Haiti and Nepal to the Ebola

This story is one of many that demonstrate that we are moving into a world **user innovation**. A world where the digital and physical are coming togethe knowledge is created through global collaborations involving thousands of pe world and from all walks of life.

This isn't just another Commission conference.

This is your chance to feed your ideas and aspirations into this new strategy. W enough what works and what doesn't and we will build on our successes togeth

When innovators like LEGO start fusing real bricks with digital magic, when citiz own R&D through online community projects, when doctors start printing live ti Policymakers must follow suit.

We owe it to the European Citizens.

We owe it to the future generations.

Let's dare to make Europe open to innovation, open to science and open to the

Key Actors Involved in Colloborative Partnerships

- Public – Private partnerships (PPP)
  - Enterprises – commercial goals, increasing the profits
  - PROs (Public Research Organisations) – educational goals, increasing the knowledge pool, progressing in academic career
  - Different goals and methods to manage research and knowledge acquirement, commercialisation
  - Synchronous management of expectations of different institutions throughout the implementation program

What Motivates to Innovate

SMEs, private sector

- Increase profits
  - Seek for monopoly on the innovation
  - Protect IPR if appropriate
  - Use trade secrets and know-how to keep it confidential
  - Confidentiality is of high importance, use of NDAs

Public researchers, academicians

- Increase knowledge
  - Seeks ways to disseminate knowledge
  - Publish
  - Academic papers, journals
  - Academic advancement

IP in H2020

- IP is a cross cutting issue
- Important criteria for Project evaluation
  - Impact
  - Excellence
- Costs of IPR are among eligible costs
- Critical for better exploitation of the «results»
- Helps to clarify confidentiality issues

- IP provisions can be found in
  - Grant Agreement
  - Consortium Agreement

IP in HE

Proposal Phase	Implementation Phase	End of the Project
• Analysis of background IP brought to the Project by the consortium partners • Analysis of the state of the art in patents and other relevant IP • Proper confidentiality management to ease communication among partners regarding development of the proposal, overcoming risks of information sharing • Analysis of IP Rules for the Call and other requirements	• Ensuring Access to needed background through formal agreements (licensing, waiver etc.) • Managing continuous information flow among partners, identification of knowledge creation and potential IP rights arise • Determination of ownership, joint ownership issues, duration • Analysis of protection options for the IP rights, determination to patent or not to patent • Other protection types for IP	• Exploitation of the results through ownership/joint ownerships to IP rights • Determination of access rights and parties to exploit the results, ensuring the Access rights to background and results

Key IP Issues in Colloboration Projects

- Many Projects depend on the use and development of IP provided by some partners.
- The consortium will be well aware of the potential IPR arrangements and potential conflicts ahead of time, and there will be sufficient time to discuss and agree on any issues if needed.
- In case there are any conflicts, it should be resolved beforehand. Attending to conflicts only when the project is already funded may lead to unwanted IPR-related disputes and may not enable a smooth execution of the project.
- During the evaluation phase – a well prepared IPR strategy leaves a better impression on the reviewers. Not only that, it may also reflect on the overall presentation of the project.
- The IPR strategy presented in the project proposal will serve as the best basis for forming the IPR chapter in the Consortium Agreement.

Key IP Issues in Colloboration Projects

- Confidentiality
- Background selection
- Access rights
- Ownership / joint ownership of results
- Legal protection of results
- Exploitation of results and access right

Confidentiality

- Collaborative projects like H2020 require exchange of information

- Which information is confidential?
- Ensure confidentiality within own organisation / consortium
- Who has access to this information?
- Under which conditions is access granted?
- Time-frame for confidentiality obligations (after end of project)
- Forms: Non-disclosure or confidentiality agreement, memorandum of understanding

- The Project partners (and also the Commission/Agency) must — during the action and for four years afterwards — keep confidential any data, documents or other material (in any form) that is identified as confidential at the time it is disclosed. (minimum requirement)

When to Consider IP Legal Provisions

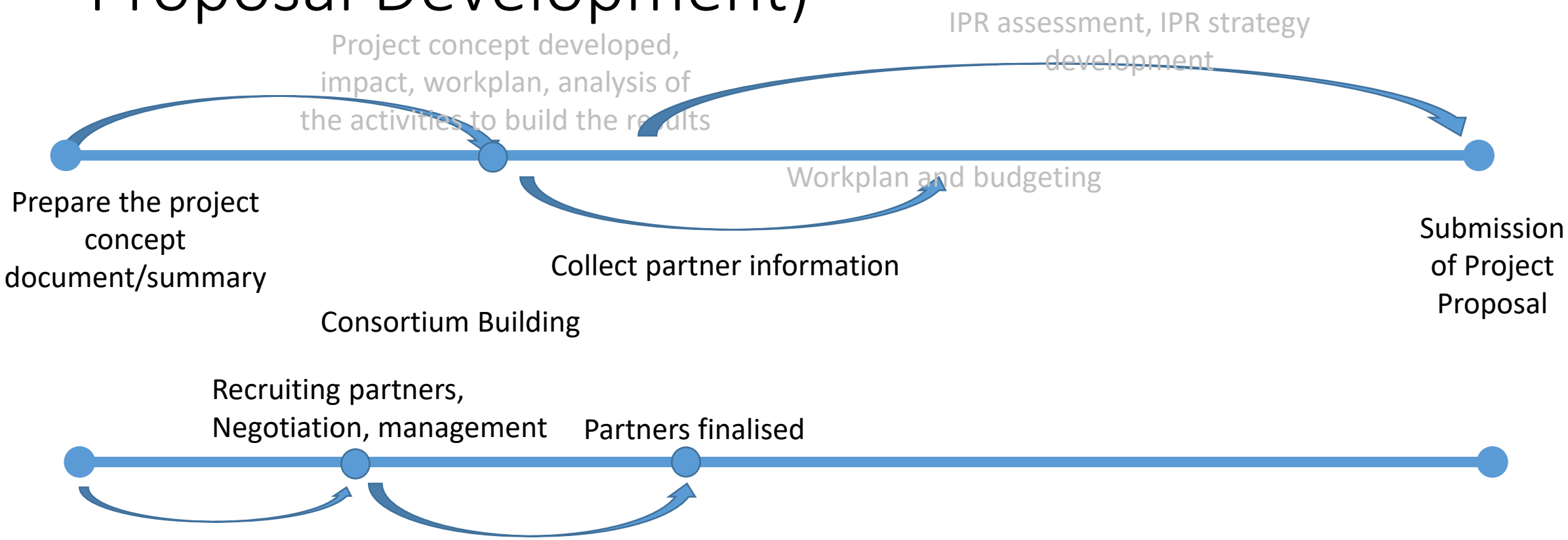
Background

- What is the background IP
- Which IP should be considered as «background»
- How other partners should Access the «Background»

Results

- What are the «results» expected
- Who owns the «results»
- How other partners should Access the «results»

Timeline of Project Proposal (Concept& Proposal Development)



IP in the Concept Stage

- Main concern is Exchange of confidential information among the project partners
- Once the Project concept is developed, confidentiality issues should be regarded, while communication with the partners.
- Memorandum of Understanding can be used to manage partners involvement during the proposal preparation stage

Non Disclosure Agreements (NDA)

- Non Disclosure Agreements are confidentiality agreements among Project partners
- Helps partners to secure themselves for the information they shared with the partners
- Should be introduced in the concept development stage
- Guidance for non experienced partners with confidentiality instructions to follow

Non Disclosure Agreements (NDA)

- The confidential information;
- Who has access to it;
- What they may do with it;
- how it will be kept confidential;
- how long it will be kept confidential;
- (penalties for breaking the agreement)

Memorandum of Understanding (MoU)

- MoUs are agreements in the form of legal documents.
- Same affect as «Letter of Intent», agreement on good faith among the signatories,on the basis that it is a fair and honest representation of their intentions.
- **an MoU should identify:**
  - protocols for communication;
  - information exchange;
  - reporting;
  - confidentiality issues, and
  - modifications and conditions for terminating the agreement.

IP Management in Proposal Preparation

IP Management in Proposal Preparation

- IP should be key part of the proposal, to be awarded;
  - Excellence,
  - Impact,
  - Quality and efficiency of implementation.

- Legal documents with IP provisions should be prepared;
  - So familiarity with IP and development of IPR strategy during the proposal preparation is important

  - Consortium Agreement
  - Grant Agreement

Use IP to Make Your Project Awarded

- Excellence:
  - Assessment of state of the art (check patent databases, scientific literature, existing projects, studies)
  - Freedom-to-operate search (use it to check if the exploitation of results infringe rights of third parties? If so, explain how you plan to get the rights; licensing, costs etc)
  - Describe scientific and technological quality of the consortium and the partners
  - Demonstrate the skills and experience of partners in «managing IP»

  - You can get help from TTO, Patent offices, IP Attorneys

Use IP to Make Your Project Awarded

- Assessment of state of the art
  - Large amount of R&D is carried out by the private sector
  - Private sector prefers patenting the novelties they created, instead of publishing in academic journals.
  - An OECD study reports that, if you neglect patent databases, you neglect 80% of technical information available for your use.
  - To demonstrate that you have a clear understanding of the present state you must be able to present the results of both academic journal and patent database searches and interpret them in a knowledgeable manner.
  - This interpretation should be reflected in the exploitation plan.

Use IP to Make Your Project Awarded

- Freedom-to-operate search (FTO)
  - Freedom to operate is the ability to use your technology without infringing on another's intellectual property. Freedom to operate searches are known as right to use searches, patent clearance searches, or patent infringement risk assessments.
  - Important to asses the risks for exploitation
  - If FTO reveals that one or more patents do limit a consortium freedom to operate, the partners must decide how to proceed; such as purchasing the patent or licensing in, cross-licensing, making changes to the product or process in order to avoid infringing on the patent(s) owned by others, etc

  - Think and determine possible solutions and costs for the consortium, costs can be included in the project budget.

Use IP to Make Your Project Awarded

- Impact
- the concept and goals that the partners intend to achieve within their project
    - Plan for Exploitation and Dissemination of Results
    - Beneficiaries receiving EU funding must – up to four years after the end of the action – use their *best efforts* to exploit their results directly or to have them exploited indirectly by another entity, in particular through licensing or transfer.
    - If, despite a beneficiary's best efforts, the results are not exploited within one year after the end of the action, the beneficiaries must (unless otherwise agreed in writing with the granting authority) use the Horizon Results Platform to find interested parties to exploit the results.

Use IP to Make Your Project Awarded

- Impact
  - What kind of needs does the project respond to?
  - What kind of problem the proposed solution will solve and why this solution will be better than existing ones and in which areas?
  - What new knowledge (results) the project will generate (assessment of the state of the art)?
  - Who will use these results?
  - What benefits will be delivered and how much benefit?
  - How will end users be informed about the generated results?

Use IP to Make Your Project Awarded

- Impact: Convincing outline of exploitation strategies on individual and consortium level should be presented
- Project partners have an obligation to define the expected results and their strategy for exploitation and dissemination. (PEDR)
- PEDR is a strategic document for the Project partners helping them to consider their intellectual property strategy, dissemination and exploitation activities.
- PEDR will be part of Grant Agreement (can be reviewed afterwards)

Use IP to Make Your Project Awarded

- Convincing outline of exploitation strategies on individual and consortium
  - Plan for use and exploitation of results as part of proposal
  - Which results are expected and how are they managed?
  - Which results are of potential commercial or industrial interests and can contribute to European competitiveness?
  - How to share results with the broad public?
  - Which channels for dissemination to use: publications, conferences, Website

Use IP to Make Your Project Awarded

The following information must be included in PEDR:

• A list of results the expected that might be exploited (i.e. with commercial or industrial applicability) including their:
* description
* sector of application, and
* protection measures

• A list of all the means through which they intend to bring the results to the public knowledge

• A potential/expected impact – quantifiable – in terms of marketability and research advancement

Use IP to Make Your Project Awarded

- IPR in PEDR

- Put reference to the Consortium Agreement on how IP issues are planned:
  - How will results be protected?
  - How will background and results be organised and managed?
  - How will joint ownership we treated?
  - How will the results be exploited?
  - Which confidentiality measures have been and will be put in place?
  - How appropriate is the management structure in terms of exploitation and protection of results?

Use IP to Make Your Project Awarded

- Quality and efficiency of implementation
- Demonstrate that partners understand and have planned for the main IPR issues in the Grant Agreement and consortium agreement
  - a clear ownership of results,
  - access to background that is needed to implement the project and
  - access to foreground and background to enable them to exploit and use their own results.

IPR Checklist for GA and CA

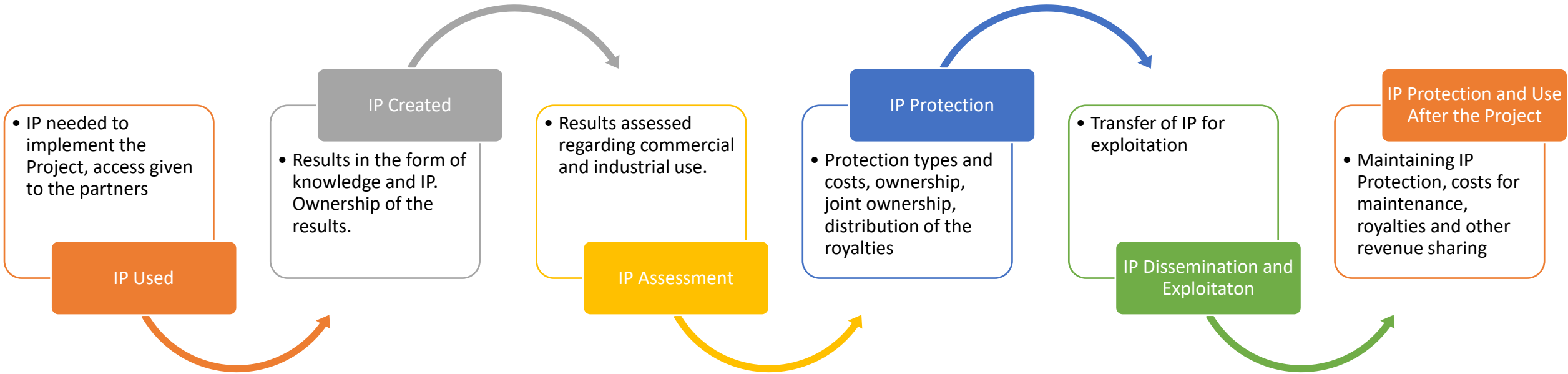
- “Need”
- Background: +VE &/or –VE lists and safeguards
- Royalty for background for project (e.g. for use of commercial software)
- Access to results: yours/ all
- Access to results: royalty or free
- Access request: individual or collective
- Access included/ excluded sub-license
- Affiliates
- Joint ownership: sub licensing, royalty.

IP Management in the Implementation Phase

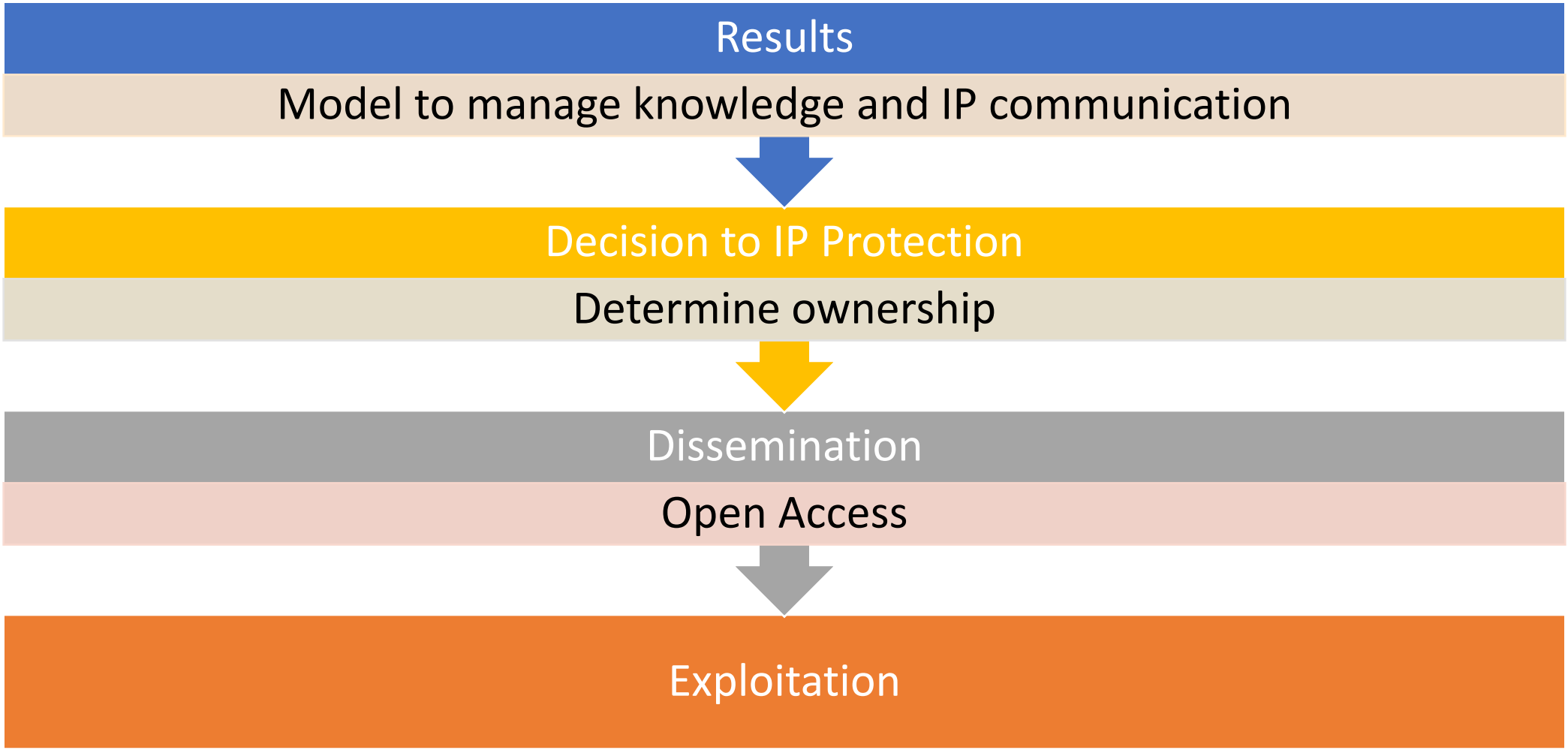
IP Management in the Implementation Phase

- Consortium should arrange:
- **IP auditing** to see if steps need to be taken to protect emerging results through formal registration (drafting and filing a patent) and to correctly **assign ownership** or agree **joint ownership**;
- **dissemination** to ensure that they are in line with the H2020 Grant Agreement (e.g. open Access publication) and are timed so that they do not effect protection (managed disclosure);
- **notifications, requests and waivers** e.g. to pass confidential information to an affiliate to use '**BACKGROUND**' or '**FOREGROUND**' materials;
- Checking the **PEDR** and up-dating as necessary.

IP Management in H2020



IP Assessment



Dissemination

- Unless it goes against their legitimate interests, each beneficiary must '**disseminate**' its results by disclosing them to the public by appropriate means, including in scientific publications.
- This does not change the **obligation to protect results**, the confidentiality obligations, the security obligations or the obligations to protect personal data, all of which still apply.

- NO dissemination at all may take place, if:
  - the results need to be protected as a trade secret (i.e. confidential know-how) or
  - dissemination conflicts with any other obligations under the GA *(e.g. personal data protection, security obligations, etc.)*.

Management Obligations of Beneficiaries in H2020

Grant Management

- Keeping records
- Amendments
- Continuous reporting on milestones & deliverables
- Reports & payment requests
- Dissemination & exploitation of project results
- Acknowledgement of EU funding
- Checks, audits, reviews & investigations
- Communication with the granting authority

Keeping the Records

- Article 18, Keeping Records — Supporting Documentation

- All participants must keep **records and other supporting documentation** in order to prove the proper implementation and the costs claimed.

Amendments

- AMGA, Article 55, AMENDMENTS TO THE AGREEMENT

- If there are any changes to the Grant Agreement or its annexes, they must be done through a formal amendment
- All participants can contribute to the amendment, but it is the Coordinator who will have to launch, finalise, submit and sign the request.
- Can only be implemented after the entry into force of the GA and before the final payment is made.
- An amendment proposed by a consortium **enters into force** on the day the Granting Authority signs it.

- **When amendments are necessary:**
  - **Changes involving beneficiaries & linked third parties (i.e adding a new beneficiary, deletion of a beneficiary etc)**
  - **Change involving the coordinator/principal beneficiary (change in the coordinator etc)**
  - **Changes affecting the project or its implementation (Change in the title of the project or its acronym, starting date, duration or reporting periods etc)**
  - **Changes involving the financial aspects of the grant (Change in the maximum grant amount etc)**

Continuous reporting on milestones & deliverables

- During the project, the Consortium is expected to provide regular updates on the status of the project: the continuous reporting. The continuous reporting includes:
- progress in achieving **milestones**
- **deliverables**
- updates to the **publishable summary**
- response to **critical risks, publications, communications activities, IPRs**
- programme-specific monitoring information (if required).

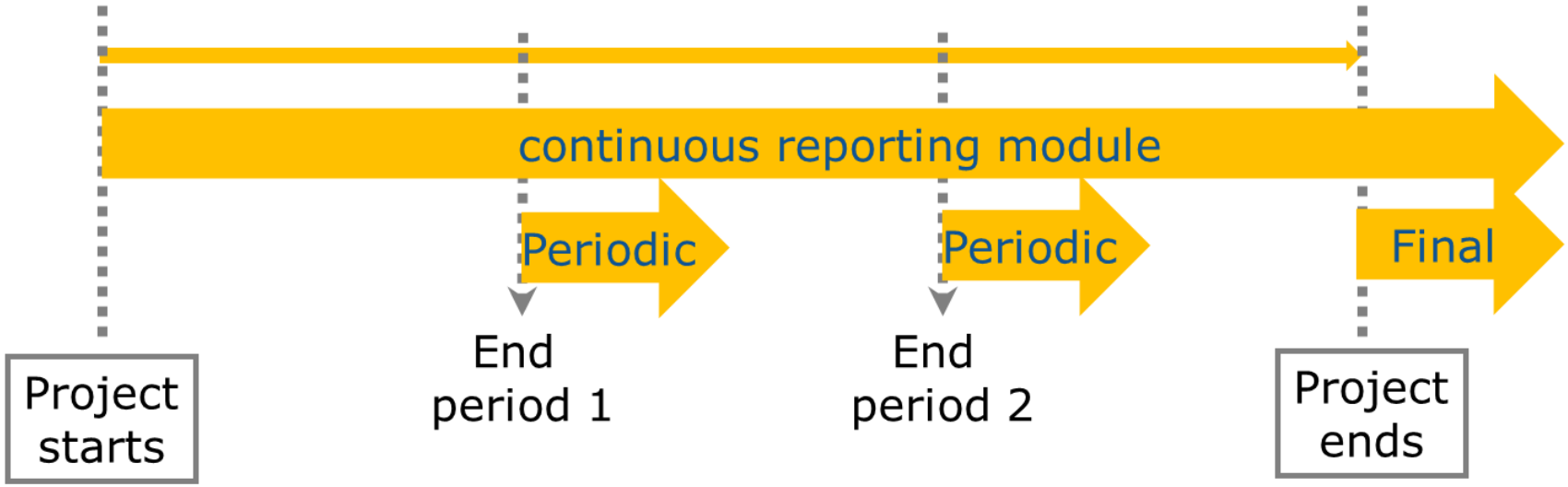
Continuous reporting on milestones & deliverables

- AMGA, ARTICLE 19 — SUBMISSION OF DELIVERABLES
- AMGA, ARTICLE 20 — REPORTING — PAYMENT REQUESTS

- Under Article 19 and Article 20 of the grant agreement (GA), the coordinator must submit to the Commission technical and financial reports, including requests for payment. Such as;
  - deliverables identified in Annex 1 of the GA
  - periodic report (both technical and financial) within 60 days of the end of each reporting period (including the final one), including requests for payment
  - final report at the end of the project ('action'). It consisting in a summary for publication and it is generated automatically by the IT tools.

Continuous reporting on milestones & deliverables

- *Continuous reporting module*
- *Periodic reporting module*



Dissemination & Exploitation of results

- AMGA, Article 29 Dissemination of Results, Article 28 Exploitation of Results
- Dissemination means sharing research results with potential users - peers in the research field, industry, other commercial players and policymakers). By sharing your research results with the rest of the scientific community, you are contributing to the progress of science in general.
- Whereas exploitation is the use of results for commercial purposes or in public policymaking.

Dissemination & Exploitation of results

- Prepare your exploitation and dissemination plan carefully.
  - In what area do you expect to make an impact?
  - What needs might be solved/met thanks to the results of your project?
  - What outputs will be created?
  - Where will the outputs be made available during and after the project?
  - Who are the potential users of your results?
  - How will you contact them?
- Involve potential end-users and stakeholders in your proposal.
- Implement open access and consider how you manage your data
  - Think of use, ownership and access rights.

Dissemination & Exploitation of results

- Plan how you expect the results of your project to be applied and give the main advantages of the new solution(s) you expect to emerge.

  The results could be:

  - direct - like a manual, test, model, new therapy, better product or process, or improved understanding of mechanisms
  - indirect - like reduced material or energy usage, improved safety, or better-trained staff.

- Explain how you expect results like these to be applied. This could also depend on progress elsewhere in an innovation chain, in related projects or in adjacent fields - so outline these dependencies and any progress to be made in these areas.
- Explain you understand the barriers to any application of your results. (such as IPR, change management, regulations etc),
- What are the further steps to apply the results in actual practice?

Acknowledgement of EU funding

- Beneficiaries of the H2020 have the obligation to explicitly acknowledge that their action has received EU funding.

- AMGA Article 27.3; Protection of Results — Visibility of EU Funding, Information on EU funding
- AMGA Article 28.2; Exploitation of Results, Results that could contribute to European or international standards — Information on EU funding
- AMGA Article 29.4; Dissemination Of Results; Information on EU funding — Obligation and right to use the EU emblem
- AMGA Article 38.1.2; Promoting the Action – Visibility of EU Funding; Information on EU funding — Obligation and right to use the EU emblem

Checks, audits, reviews & investigations

- The Commission - during the implementation of the project or afterwards - checks, reviews, investigates and audits the proper implementation of the project and its compliance with the grant agreement.
- AMGA Article 22; Checks, reviews, audits and investigations