

# Funding sources for piloting in open access pilot facilities and their influence on Intellectual Property Rights

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# Potential Funding Opportunities



# When To Choose What Type Of Funding?

TRL	1	2	3	4	5	6	7	8	9
	Basic principle observed	Technology concept formulated	Experimental POC	Technol validated in lab	Technol validated in rel. enviro	Technol demonstrated in rel. enviro	Prototype demonstrated in operation	System comple & demonstr	Proven in operation

Private funding

Typical regional funding

- Often single company
- Often higher success rates
- Typically your first choice

Typical interregional funding

H2020 Excellent Science

H2020 (100% & 70%) Industrial Leadership

H2020 (100%) Societal Challenges

- Almost always consortia
- Low success rates
- Typically higher TRL levels

# Company Pays (Private/Bilateral Projects)

- Pilot plant acts as a provider
  - Facility
  - Know-how (science and technical)
  - Process optimization
  - Scale up
- Client pays
  - Private company (Small, medium or large businesses)
  - Research and technology organization (sub-contracting)

IPR = Typically Company Pays Company Owns...BUT negotiate if necessary

INNOVATION / CREATIVITY?

Process development

Optimisation

Scale-up

Custom  
manufacturing

# Vouchers = small-ish grants

- Often Regional and/or Sector specific

Food Innovation Network (UK KTN) –  
competition £5000 (€5770)

IPR = “company pays” ?



€ 60,000 (with a co-funding share of max. 25% from the SME)  
via SuperBIO. For project support [ H2020]



•EUR 8.000 pay towards services at RTO  
bioeconomy testbeds

## BioBase4SME

Upto €100,000 (with a co-funding share of max. 50%  
from the SME) via BioBase4SME [Interreg NW Europe]

European Regional Development Fund

Bio-Innovation Support for Entrepreneurs throughout North-West European regions



# H2020 topics of interest for Industrial Biotech

## Excellent Science

- European Research Council
- Future and Emerging technologies
- Marie-Curie actions
- **Research infrastructures**

*more focused on academic researchers. Only some programs might be of interest for specific biotech companies*

Indicative budget:  
€ 23 billion

## Industrial Leadership

- Leadership in enabling and industrial technologies
- Innovation in SMEs
  - Specific SME instrument
  - Fast track innovation
  - Eurostars 2
- Access to risk finance

*focused on SMEs and industry. You determine the topic of interest.*

Indicative budget:  
€ 17 billion

## Societal Challenges

- 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
- Climate action, environment, resource efficiency and raw materials
- Smart, green and integrated mobility
- Europe in a changing world
- Secure societies

*particular calls perfectly fit the needs of industry. EU determines topics of interest.*

Indicative budget:  
€ 30 billion

# Pilot Plants in H2020 Projects

- As **coordinator**
  - Select only calls perfectly in the line with your company strategy
  - Strategic profile raising
- As **partner or linked third party**
  - Your client acts as coordinator or as another partner
  - You perform improvements/innovation
  - Typically costs + 25% overhead are reimbursed
    - **For-profit** pilot plants -> be careful with innovation actions (only 70% costs reimbursed) -> make sure the consortium is organized such that you recover 30% of your costs
- As **subcontractor**
  - Your client acts as coordinator or as another partner
  - You perform routine activities
  - Costs + profit are reimbursed

# H2020 Calls

- Coordinator does not need to be technical lead
- Beneficiaries: all types of legal entities
- Typically 3 EU member states or associated countries
  - Not always
- Project duration: no limit but typically less than 5 years
- Project budget: typically €3m to €6m per project
- Reimbursement:
  - RESEARCH -100% of the eligible costs plus 25% indirect
  - INNOVATION - 70% of the eligible costs plus 25% indirect
- Wide range of call topics in biotech (see next slides)



# Work Programmes 2018-2020

## EC PARTICIPANT PORTAL

<https://ec.europa.eu/research/participants/portal/desktop/en/home.html>

- Nanotechnologies, Advanced Materials, Biotechnology and Advanced Manufacturing and Processing
  - [http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-leit-nmp\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-leit-nmp_en.pdf)
- Food security, sustainable agriculture and forestry, marine, maritime and inland water research and the bioeconomy
  - [http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-food\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-food_en.pdf)
- Climate action, environment, resource efficiency and raw materials
  - [http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-climate\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-climate_en.pdf)
- Smart, green and integrated transport:
  - [http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-transport\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-transport_en.pdf)
- **EpoSS website publishes draft work programmes:**
  - <https://www.smart-systems-integration.org/public/news-events/news/h2020-work-programmes-2018-2020-draft-work-programmes-made-publi>

# Different Types Of H2020 Actions/Calls

- **Research and innovation actions (RIA)**
  - Funding for research projects tackling clearly defined challenges, which can lead to the development of new knowledge or a new technology.
  - **Pilot plants have typically smaller activities (e.g. upscaling till 100L)**
  - **Who?** Consortia of partners from different countries, industry and academia.
  - **Funding rate:** 100% of eligible costs
- **Innovation actions (IA)**
  - Funding is more focused on closer-to-the-market activities. For example, prototyping, testing, demonstrating, piloting, scaling-up etc. if they aim at producing new or improved products or services.
  - **Pilot plants can have significant activities/budgets**
  - **Who?** Consortia of partners from different countries, industry and academia.
  - **Funding rate:** 70% of eligible costs (except for non-profit legal entities, where a rate of 100% applies)
- **Coordination and support actions (CSA)**
  - Funding covers the coordination and networking of research and innovation projects, programmes and policies. Funding for research and innovation per se is covered elsewhere.
  - **Pilot plants could extend their network** (but only join actions relevant for you)
  - **Who?** Single entities or consortia of partners from different countries, industry and academia.
  - **Funding rate:** 100% of eligible costs



# EUROSTARS-2 Close to Market

- Driven by R&D performing SME
- At least two participants from two different Eurostars participating countries.
- At least 50% of the project's core activity should be carried out by SMEs
- Project duration: maximum 3 years
- Product launch expected 2 years after project completion
- Historical success rate in EUROSTARS 1: ~23%
- Available budget per project: depends on countries involved
  - (~ €500k per country)
- Deadlines: 2 times per year (13/09/18)

Webinar 23-May

<https://www.eurostars-eureka.eu/>



# Specific SME Instrument

- Lead by strong SME
- Single company support possible
- Type I project: concept and feasibility assessment
  - Input: Business plan 1 & idea and concept
  - Activities: feasibility of concept, risk assessment, partner search, IP regime, Design study, pilot application
  - Duration: 6 months
  - Lump sum: **€50.000** (70% reimbursement of costs + 25% overhead)
  - Output: Feasibility study and business plan
- Type II project: R&D, demonstration, market replication
  - Input: Business plan 2 & description of activities
  - Activities: development, prototyping, testing, piloting, miniaturisation, scaling up, market replication, research
  - Duration: up to 2 years
  - **€1 - 2.5m** (70% reimbursement of costs + 25% overhead)
  - Output: Prototype for commercialisation and investor ready business plan
- Open calls – 4 cut offs per year



# Fast Track Innovation

- Business Driven Consortia
- Close to market innovation
- Any legal entity may apply (including SME, large industry and academia)
- €200 million budget:  $\approx$  100 proposals of  $\approx$  €2m (upto 3M)
- Focus: innovative actions under “Societal Challenges” or “Leadership enabling and industrial technologies”
- Continuous open call with three cut-off dates per year
- Minimum 3 – maximum 5 partners

START POLL 1

# Other H2020 Innovation Support



PROOF-OF-CONCEPT AND SCALE UP



INNOVATION CAPTURE AND PATENT FILING



TECHNO-ECONOMIC EVALUATION



MARKET RESEARCH



FEEDSTOCK ANALYSIS



SUSTAINABILITY AND REGULATORY APPRAISAL



LIFE CYCLE ASSESSMENT



BUSINESS PLANNING



ACCESS TO INVESTORS



SUBSIDY AND GRANT STRATEGY



Innovation in small and medium-sized enterprises - **INNOSUP** programs

CLUSTERS

SERVICE PROVIDERS

# EuroTransBio (ETB-PRO)

- Coordinator: SME
- Partners: research intensive SMEs, large companies, academic research groups, research organizations, etc. SMEs and their strategic partner
- ERA net
- Minimum two SMEs from two different participating countries and/or regions
  - Austria, Finland, Germany, Flanders, France (Alsace), Russia
- Average budget: not restricted / average ~€1.8m
- Historical success rate: ~36%
- Project duration is not restricted, but 2 to 3 year projects are recommended.



- Joint Undertaking (Public - private partnership)
- Annual workplan (Dec 2018)
- New call open now – closes 6 September 2018
- Information and INFO day @ <https://www.bbi-europe.eu>
- Funding RIA (100%) - IA (70%) + Consortium contribution
- 3 legal entities from 3MS/AC
- Follow H2020 rules see BBI MGA  $\geq$ v5





# IPR a common feature

For collaborative projects H2020 rules provide a good model



# Intellectual property (IP)

EC only wants you to give access and organise background IP in a way all experiments promised in the proposal can be executed

## Background

Pre-existing IP

Define background needed

Specify exclusions

**“Horizon 2020”  
PROJECT**



## Foreground

Knowledge generated by project

Owned by generator of foreground

Default joint ownership (if

no agreement)

Third parties (as agreed)

Used & disseminated

## Sideground

Acquired in parallel to project – outside project

No longer included in background

Owned by individual unless specified (in Grant Ag.)

BUT, can be included in project if relevant



# IP Requirements For EC: Grant Agreement

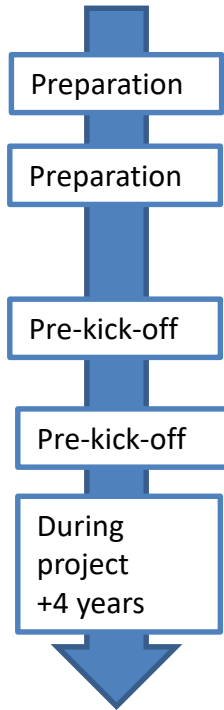
- You are obliged to properly protect and valorize your results.
- You define the details how to do this amongst the consortium partners via the consortium agreement



- In gross neglect, the EC can take actions to valorize results in your place

# Types of agreement

Your best tool to avoid (IP) problems during the project  
-> Adapt project design to avoid problems



- Memorandum of Understanding
- Non-Disclosure/Confidentiality Agreements (NDA/CDA)
- Consortium/Partnering Agreements
- Grant Agreements
- Term sheets
- IP Protection and Licence Agreements

Define IPR  
Protect or Publish

Resources, templates and advice

National IP Offices

EU IPR Helpdesk



# Consortium (collaboration) Agreement



- Between beneficiaries (partners)
- **Normally required**
- Organisation & decision making
- IPR, dissemination, use and access rights
- Finances
- Confidentiality
- Non-exclusive licensing



...whatever else you do **READ THEM**

# Issues with agreements

- Who is responsible for drafting
  - Templates
- Who is responsible for signing
- What is YOUR responsibility
  - Awareness amongst teams
- Be clear what you have signed up to
  - Confidentiality
  - Deliverables
  - Sharing IP



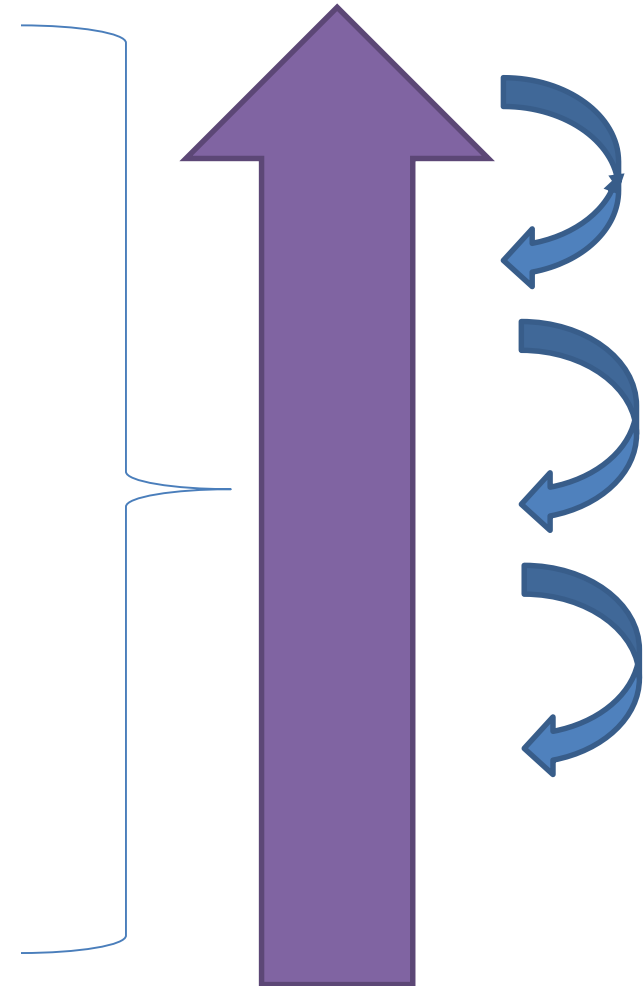
**Public funding:  
Check State Aid Rules?**

# Collaborations

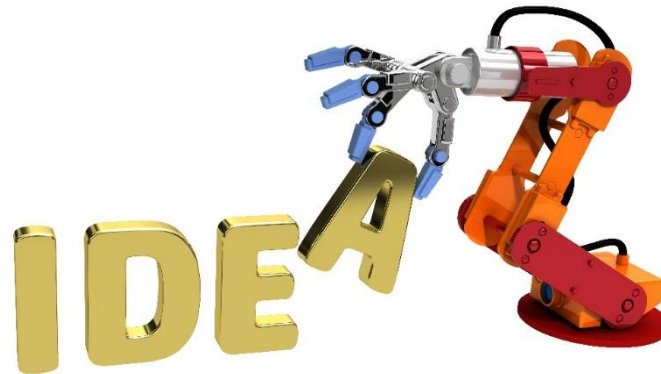


- Companies
  - Research and development outscoring
  - Create value from new knowledge
- **Pilot Plants**
  - Process optimisation and scale-up
- **Research and Technology Organisations**
  - Create, apply and transfer knowledge
- Universities
  - Knowledge generation & transfer
  - Industry /public bodies sponsor & exploit

**SOCIETY  
BENEFITS**



# Results – Ownership – Obligations - INTERESTS



- Ownership of results (ECGA Art 26)
  - The beneficiary that generates them
    - 3<sup>rd</sup> parties / “Professor privilege”
  - “Joint” Ownership
  - Joint Ownership by agreement



Transfer is possible

Best practice:

To avoid or resolve ownership disputes, keep documents such as laboratory notebooks to show how and when they produced the results.



# Obligations & Open Science Agenda

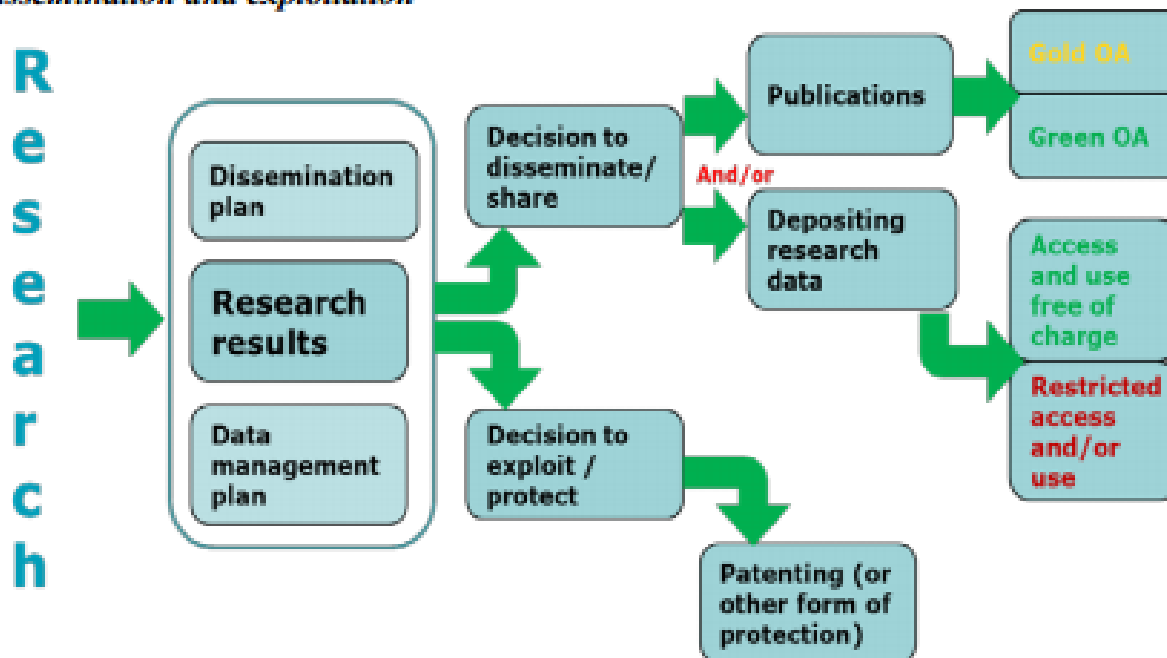
- Exploitation of results (Art.28)
- Dissemination - OPEN ACCESS (Art.29)
- Open Research Data Pilot
  - Results
  - Methods for Validation
- Communication (Art. 38)

Best Efforts  
Obligation



Proactive

*Graph: Open access to scientific publication and research data in the wider context of dissemination and exploitation*



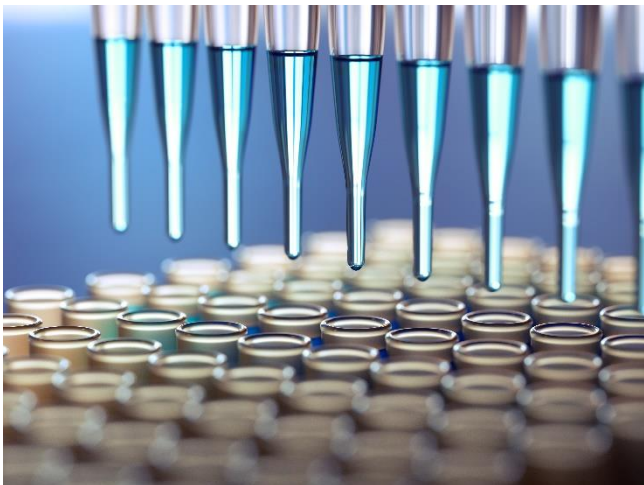
Guidelines on Open Access  
to Scientific Publications and Research Data  
in Horizon 2020

Version 1.0  
11 December 2015

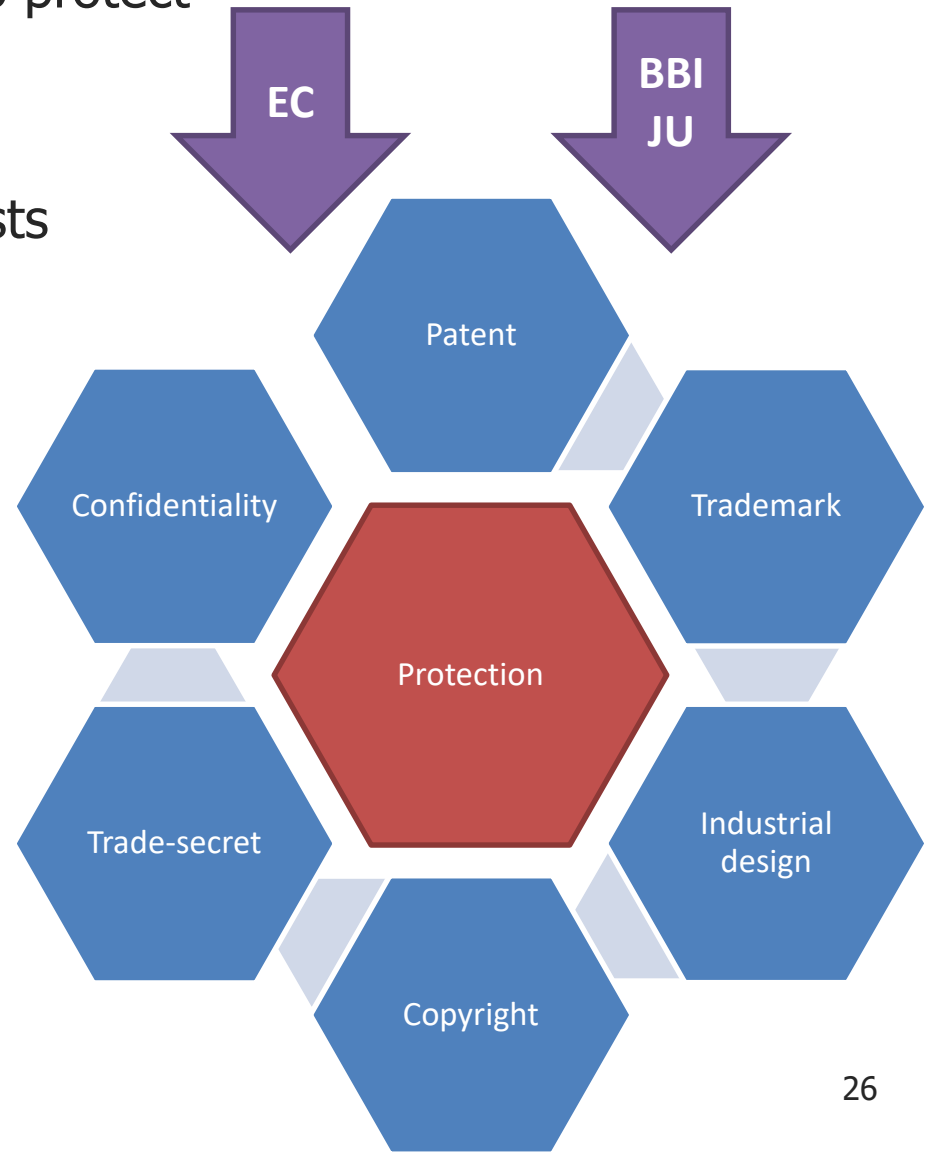
# Your **INTERESTS** & Protection of results (Art: 27)

- Examine possibility and rationale to protect
  - May require further investment
- Not Mandatory
- Consider other Beneficiaries interests

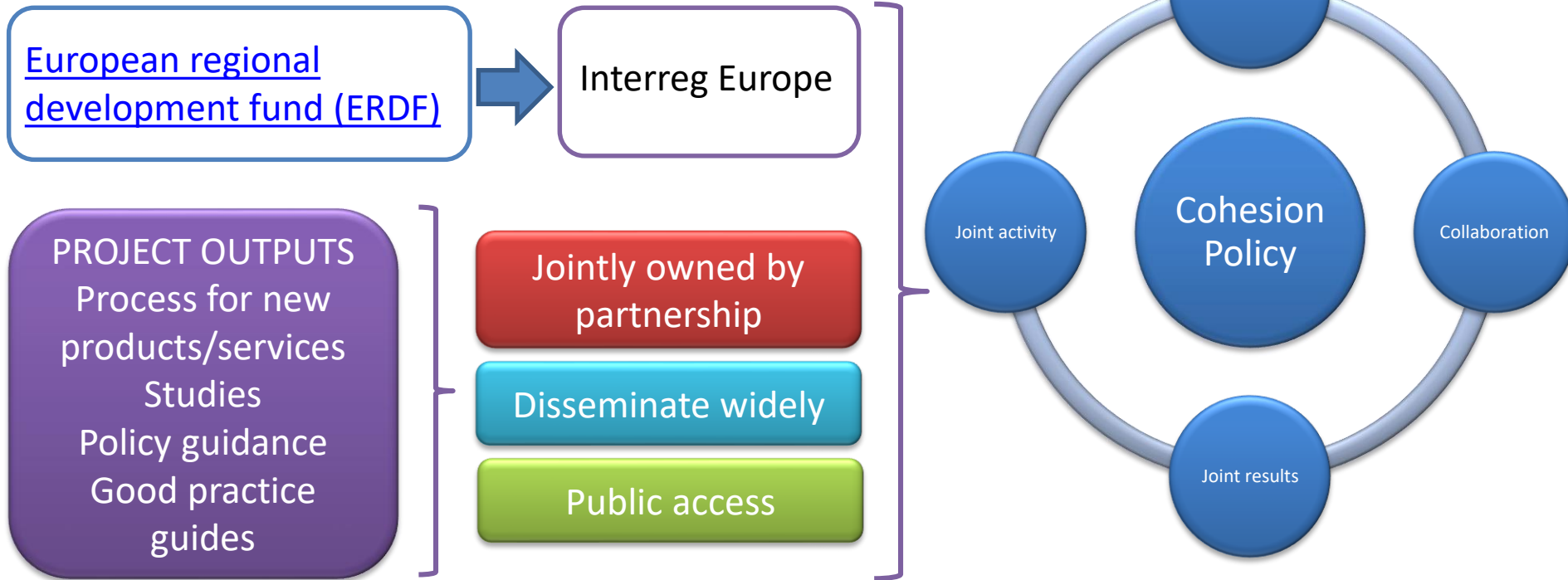
'plan for the exploitation and dissemination of the results'



## FUNDERS CAN INTERVENE



# European Regional Development Funds



## **BUT**

### European regional development fund (ERDF)

- Thematic Objective 1 – Research Technological development and innovation
  - Expects to create new knowledge
  - Protection to support exploitation
- Specific rules set out aligned to funding call
- H2020 Actions provide good practice



European  
IPR Helpdesk

[www.iprhelphdesk.eu/](http://www.iprhelphdesk.eu/)



# Case study 1 – H2020 we want it all!



Single product (NDA)

Transfer Agreement

Additional investment

Flexible on additional results

# Case study 2 – Bilateral grant funding



Company insist on investment plan

Agree non-critical access or research/teaching

Agree to proactive publication of some data

Single product (NDA)

Company own background IP

RTO wants full rights to exploit

RTO work with competitor

Critical timescales

**Unrealistic RTO Tech Transfer Office threatens project**

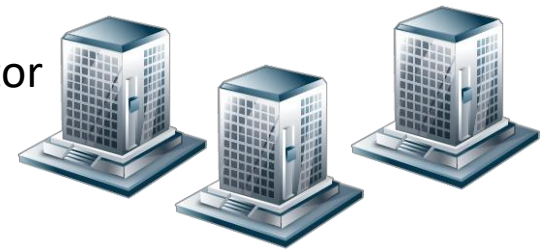
START POLL 2

# Case study 3: During Grant Preparation (>6 months)



3 direct competitors (SME) with similar products for the same market

Coordinator



3 academic groups



- Clear agreement on IP arrangements
- Clear upfront agreement on how the competitive products may be used by consortium
  - Consortium was allowed to use the products in specific experiments that were of no commercial interest but of large public interest.
  - Products may be compared in the academic groups but behind Chinese walls between companies
  - Intra-company product mixes are allowed to be tested
  - Inter-company product mixes are not allowed to be tested

- Project was designed based on these limitations
- Limitations were clearly explained in the proposal

Check by IP lawyer & senior management

Check by IP lawyer & main decision makers

## Case study 4: During Grant Preparation (> 9 months)



Coordinator (SME) wants to develop product but needs a next value chain candidate (large company) in the consortium to ensure the product characteristics fit the end-users

**PROBLEM:** SME does not want to compromise it's chances to sell its product to other next value chain candidates

**SOLUTION:** SME makes Memorandum under which conditions next value chain candidate is allowed to join the consortium + which tasks are expected to be taken up -> presents solution to 2 top candidates

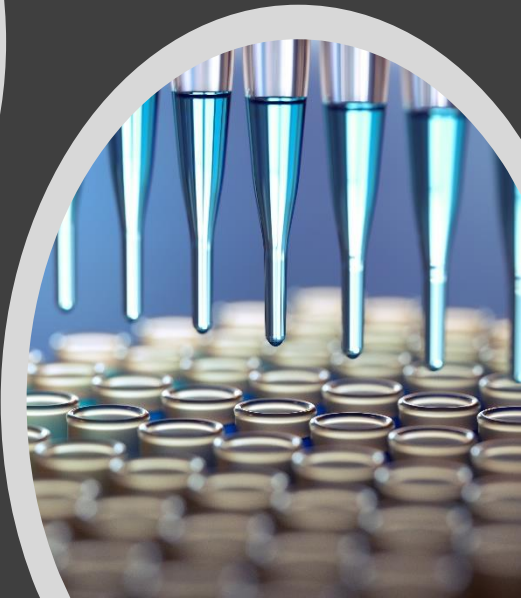


**Senior management** of one candidate agrees with the conditions and joins the consortium

- Project was designed based on the limitations in the Memorandum
- Limitations were clearly explained in the proposal

# Summary

- IPR management from Day 1
- Funding “suggests” options
- Ownership should be clear - but can change
- Evidence base for inventive step
- Transfer of results
- Protect your position
- Do not give IPR away
  - negotiate (win-win)
- Dissemination and timescales
- Use of 3<sup>rd</sup> Parties IP
- Exclusive licences?







**THANK  
YOU.**

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