Fit for Health 2.0

Support to SMEs & Researchers in FP7 and Horizon 2020 health-oriented projects

IP Management in EU-funded collaborative research projects

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SEVENTH FRAMEWORK
PROGRAMME

European Research and Project Office (Eurice) GmbH

- SME founded in 2000; 45 staff members

- Specialised in international research and innovation management

- A wide range of technological focal areas: Health , Biotech, ICT, Material Sciences, Engineering, Environmental Sciences, Humanities, etc.

- Co-ordinator of 35 successful FP7 proposals

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Saarbrücken

Berlin

Budgets of running EU projects (Mio. Euro)

EURICE – H2020 Innovation Support Initiatives

- **European IPR Helpdesk**
  - Information and training on Intellectual Property (IP) and Intellectual Property Rights (IPR)

- **EEN - Enterprise Europe Network**
  - Information and consulting to support SMEs in the field of cooperation, technology transfer and strategic partnership

- **Fit for Health 2.0**
  - Focusing on research-intensive, high technology SMEs, the project offers targeted support measures, covering the entire innovation cycle of research projects.

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EU research funding – Outcome of FP7 impact assessments

- Less than 50% of industrial partners use the publicly funded applied research projects strategically

- Only about 22% of SMEs participating in EU research programs are strategic innovators

- Most academics engage with industry to further their research rather than to commercialise their knowledge

- Results are not exploited because projects were not designed for exploitation

HORIZON 2020

The New EU Framework Programme for Research and Innovation (2014-2020)

What is Horizon 2020?

The new European Union programme for research and innovation for 2014-2020

- **Coupling research to innovation**

- **Challenge based**

- **Strong focus on SMEs**

- **Major simplification**

Impact of Horizon 2020 for R&I

Key Features

Fit 2 H

Societal Impact and Contribution to Europe 2020

Key Features

- Projects financed on the basis of excellence
- Projects selected through intense pan-European competition
- Ambitious collaborative projects with critical mass
- Projects not achievable without EU support (additionality)
- Projects leveraging additional private and public resources
- Seamless support from idea to market
- Easy access for all participants including SMEs

Horizon 2020

Research and innovation outputs of Horizon 2020

- *Improved R&D capabilities*
- *Scientific publications*
- *New tools and techniques*
- *Models and simulations*
- *Prototypes, demonstrators, pilots*
- *Patents*
- *New products, processes, services*
- *Spin-offs*

Economic growth
- €1 invested in Horizon 2020 produces €10 extra GDP per annum

More high-tech Jobs
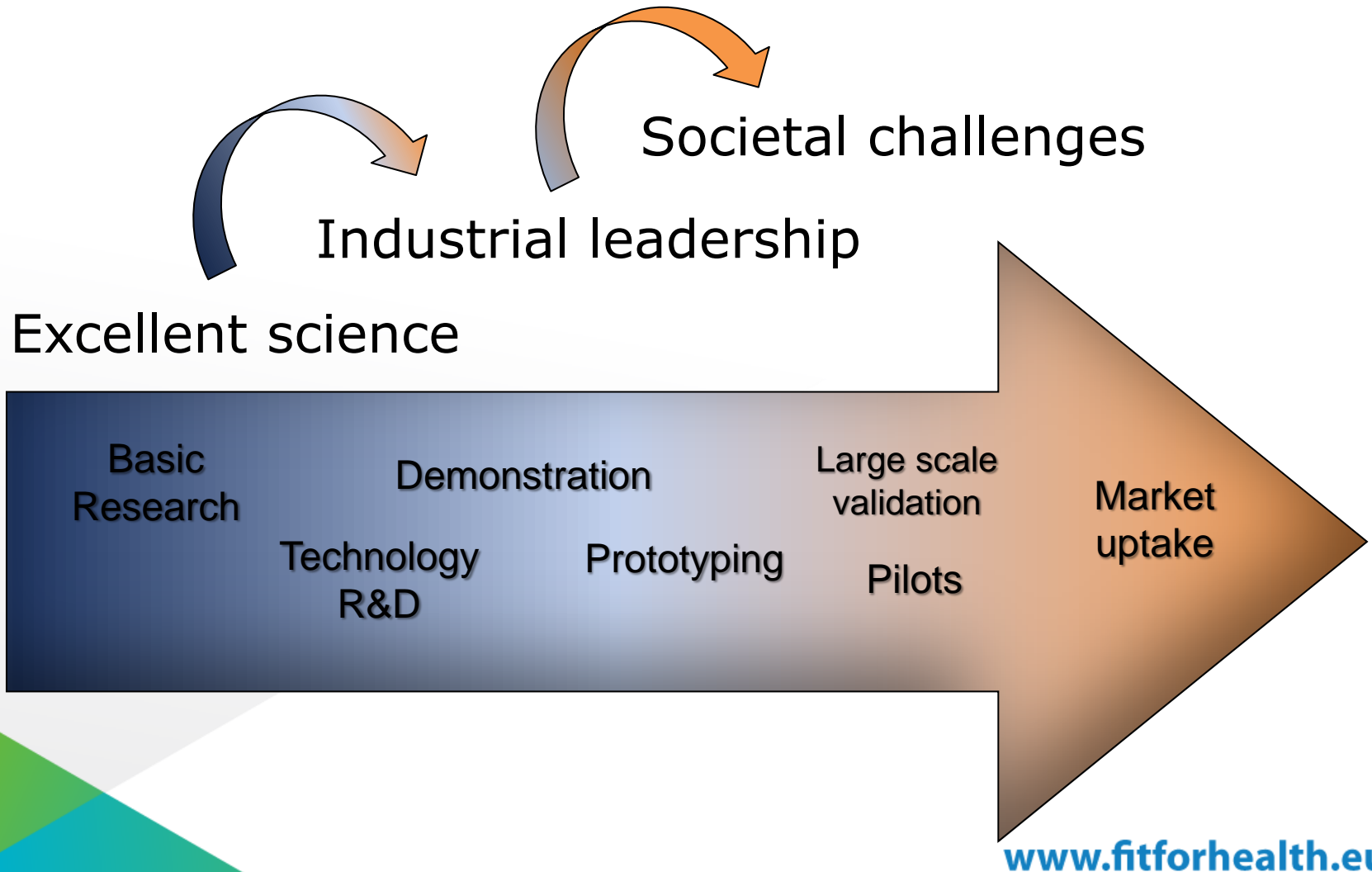- >800,000 in the medium term

Competitiveness
- Exports increase by 1,4% and imports decrease by 0,2% in the medium term

Inclusive & sustainable growth
- Better health & more well-being
- A more secure society
- Sustainable agriculture
- Clean & efficient energy
- Smart, green, integrated transport
- Reduced greenhouse gas emissions
- Efficient use of natural resources

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Coverage of the full innovation chain

Societal challenges

Industrial leadership

Excellent science

Basic Research

Demonstration

Technology R&D

Prototyping

Large scale validation

Pilots

Market uptake

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Technology Readiness Level (TRL)

1. Basic Research – principles observed and reported
2. Technology concept and/or application formulated
3. Analytical and experimental proof of concept
4. Validation in a laboratory environment
5. Validation in the relevant environment
6. Prototype demonstration in relevant environment
7. Prototype demonstration in operational environment
8. System complete and verified though test and demonstration
9. Ready for full deployment

Summary: Expectations on IP and exploitation management

Expectation on sound IP management in H2020/ COSME differs according to:

- Specific Programme (i.e. SME instrument, Joint Undertakings with strong industrial participation)

- Applicability of results/Technology Readiness Level (TRL)

- Participation of SMEs/Industry

- Financing Instrument (i.e. Innovation actions/SME instrument)

- Size of consortium/International partners

- Stage of proposal/maturity of project implementation

- Specific requirements called for in the work programme/topic description

Why is it important to consider IP in H2020?

- The Rules for Participant establish **best efforts** commitment of participants to **exploit their own results**.

- IP and exploitation issues are subject to evaluation regarding **impact and feasibility** of the proposal.

- A **convincing outline of IP management and exploitation strategies** on individual and consortium level within the proposal is a relevant matter.

- Results of research and development activities require further and often substantial investments to take them to market, which is **appealing** if the results are well protected through **intellectual property**.

- Properly managing IP in the projects, helps participants to **avoid future conflicts** among the consortium.

Before Project Start

Every project starts with an idea …

- Define the state of the art

- Search in patent databases & documents (i.e. Espacenet; Assistance: EEN, CoC, PATLIB centres)

- Protect technical drawings (e.g. by copyright)

- Protect all information linked to the idea: Make use of Confidentiality Agreements

- Beware of Third Parties' IPR infringement (checking acronyms against registered Trade Marks)
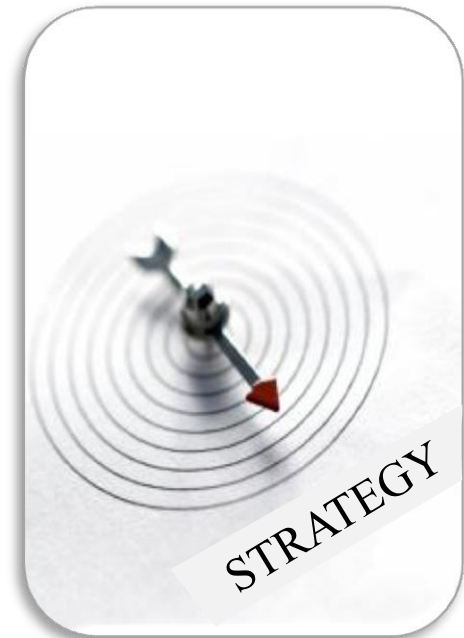
    contact your legal/patent department as early as possible!

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Before project start

Exploitation and dissemination planning

- Convincing outline of exploitation strategies on individual/consortium level

- IP-exploitation issues are subject to evaluation regarding impact and implementation. Relevant bodies/competences within the consortium should demonstrate the potential of addressing IP management properly

- Include relevant activities/deliverables: PEDR, Innovation-related workshops, Market Analysis, Business Plans, Risk-Analysis, Freedom-to-Operate analysis, Specific contracts/agreements

STRATEGY

IP downstream route/Steps

- *Understanding the scene (Terms, Rules, Model Agreements, etc)*
- Setting the scene (Which IP provisions are negotiable?)
- Getting to know the individual interests, motivations and expectations of individual partners regarding IP management and exploitation
- Strategies and Plans to capture, manage and exploit results of H2020 projects on consortium level
- Developing the right innovation management structures
- Definition of appropriate activities and tasks to implement innovation-related activities
- Exploitation pathways, route to market, business models

Protection by subject matters

Subject Matter	Patent	Utility Model	Industrial Design	Copyright	Trade Mark	Confidential Information
Invention (e.g. device, process, method[1])	X	X				X
Software	X^2	X		X		X
Scientific article				X		
Design of a product			X	X	X	
Name of a technology/product					X	
Know How	X	X				X
Website			X	X	X	

[1] Except methods exculded from patentability by virtue of Articles 52(2)(c) and (3) and 53(c) EPC.
[2] Software patentability is still a debated issue given its exculsion as subject matter as by Article 52(2)(c) and (3) EPC.

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Impact and Innovation in H2020

- H2020 is based on:
    - An **impact orientated** approach
    - Delivering strategic technologies that can **drive competitiveness and growth**

- Impact and Innovation must be addressed in **all sections** of proposals, **NOT JUST** in the "Impact" section

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Data > Intelligence > Plans

- **State of the Art** **(how will you go beyond it – <u>what new IP?)</u>**
    - Academic papers
    - Patents and other registered IP

- **Market**: size, segmentation, distribution, growth, "needs and wants"
  (what will you target, and how will you be positioned?)
    - Market reports
    - Industry partners
    - Patents and other registered IP

Data > Intelligence > Plans

- **Competitor Intelligence**: market share, technologies, current and future plans
  (Where will you be positioned; what will your key differentiators/USP's be?)
  - Company websites, annual reports (incl. financial)
  - Market reports
  - Patents and other registered IP

- **Technologies**: other technical solutions which can address the objectives; their status, strengths and weaknesses
  (Why will your technical solution be better, and in which areas?)
  - Technical reports
  - Industry partners
  - Patents and other registered IP

Data > Intelligence > Plans

- **Potential Barriers/Obstacles**: IPR's (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

Standards

- 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 and how project proposers, can integrate standardization in proposals is available from CEN-CENELEC.

- See: http://www.cencenelec.eu/research/Horizon2020

Management Structure & Work Plan
(related to impact and innovation)

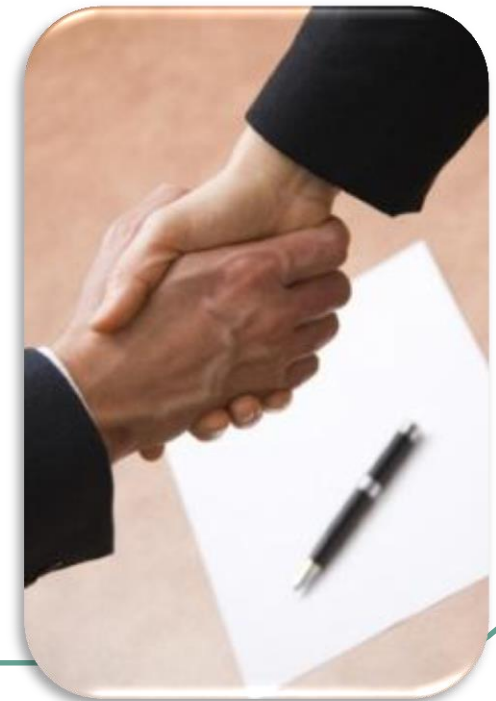| Management	Tasks and Processes
Exploitation Management (e.g. Innovation Manager, Exploitation Manager)	• Commercial exploitation strategy, plan and implementation • Scientific exploitation strategy plans and implementation • Business Plan • Project result dissemination as appropriate to support exploitation objectives
Communication/ Dissemination Management (e.g. Communications Manager)	• Project dissemination strategy, plan and implementation • Support to exploitation communication activities • Community building • Public awareness

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Management Structure & Work Plan
(related to impact and innovation)

Management	Tasks and Processes
Research Management (e.g. Project Manager, WP Manager, Technical Managers)	• Good research practice • Record Keeping • Recognising and capturing IP • IP disclosure to IPR Manager
IPR Management (e.g. IPR Manager, Innovation Manager)	• Assessment and protection of IP • Pre-publication reviews • Access and usage rights (foreground, background and 3rd party), during and after project)

Routes for use/exploitation

- Use for further research

- Developing and selling own products/services

- Spin-Off activities

- Cooperation agreement/Joint Ventures

- Selling IP rights/Selling the (IP based) business

- Licensing IP rights (out-licensing)

- Standardisation activities (new standards/on-going procedures)

- Evaluating technologies will <u>always</u> be difficult!:

- **Risks cannot be avoided – But they can be managed**

- A structured approach, and due diligence allows risks to

  be controlled

Structured due diligence

The systematic assessment of an invention and its commercial potential

- The strength and scope of the IPR

- The nature of the technology

- Technology Transfer Issues

- Support Issues

- Commercial Issues

- Market sector analysis

Many different skill and resources needed for exploitation

- IP management
- Market analysis
- IP analysis and assessment
- Legal
- License negotiation
- Company formation
- Access to finance for further development
- Raising investments for spin outs
- Entrepreneurial management
- Sales and marketing

What exploitation route?

- Sale?

- Start a new company?

- License to an existing company?

- Joint venture?

- Further research?

Summary
Exploitation strategies

1. Understand the landscapes

2. Know where you want to get to (TRL level)

3. Build the most attractive "offer" by:

   ➢ Building a portfolio of IP (i.e. not just patents!)
   ➢ Working with others
   ➢ Adding value through development
   ➢ Changing market perceptions

4. Choose the most appropriate routes (licensing, start-up, JV etc.)

5. Understand what funding will be needed to reach your objectives

Intellectual Property rules

**Guide
to IP in

Horizon 2020**

Thank you!

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