European
IPR Helpdesk

Maximising the impact of H2020 projects
Exploitation of H2020 project results

Dr. Eugene Sweeney
Iambic Innovation Ltd
es@iambicinnovation.com

13th October 2015

Get your ticket to innovation.

European IPR
Helpdesk

European
IPR Helpdesk

Today's speaker

Dr. Eugene Sweeney

➢ Founder/Director of Iambic Innovation Ltd (UK)
➢ 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 20 years experience with EC as proposal evaluator, project reviewer and consultant
➢ Member of International (ISO) and European (CEN) Standards Committees on Innovation Management
➢ Member of Licensing Executive Society

European
IPR Helpdesk

Horizon 2020

➢ An <u>impact</u> orientated approach

➢ <u>Delivering</u> strategic technologies that can drive competitiveness and growth

➢ IPR, Impact and Innovation must be addressed in <u>all sections</u> of a proposal, not just the impact section

➢ IPR, Impact and Innovation must be managed in <u>all stages</u> of a project, not just during exploitation

European
IPR Helpdesk

Roadmap

➢ Addressing IP, Impact and Innovation in H2020 proposals and projects

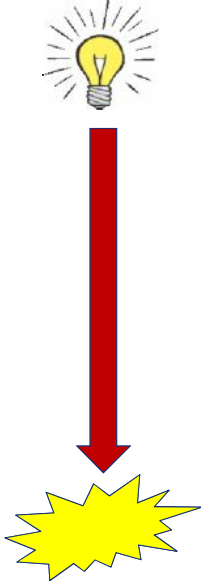➢ IP and Innovation Management

➢ Exploitation to maximise impact

European
IPR
Helpdesk

4

European IPR Helpdesk

Vocabulary/Definitions
IP to Impact

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

European IPR Helpdesk

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!)

European
IPR Helpdesk

Intellectual Property <u>Rights</u> (IPR)

The law provides legal "rights" to protect your Intellectual Property, known as Intellectual Property **Rights** (IPRs)

- Patents (technical inventions)
- Copyright (Software, Written works, Engineering drawings, Semiconductor Topologies, etc)
- Design Rights (appearance)
- Database Rights (creation and arrangement of data)
- Trade marks
- Plant Breeders Rights
- Utility Models/petty patents
- etc

- **NOT ONLY PATENTS**

- Confidentiality Agreements (Know-how)
- Secrets (Trade Secrets)

- National rights
- Regional variations in law
- Time limited rights

European
IPR Helpdesk

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 publishing the invention

➢ 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

European
IPR Helpdesk

Innovation

The successful exploitation of new creations, which when used produce tangible benefits, satisfying needs and wants.

Invention   exploitation   Innovation

Invention IS NOT Innovation

Impact

The extent of the benefits derived from the innovation

European
IPR Helpdesk

Any type of benefit and impact

➢ Benefit (hence impact) does not have to be financial

➢ Innovations can be based on new products, services, organisational or business methods, improved networks or collaborations, advisory reports, etc, etc

➢ The impact of the innovation can be societal, environmental, technical, commercial, educational, or anything that delivers a benefit to someone or addresses a need

10

European
IPR Helpdesk

Innovation Potential

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

Innovation Capacity

➢ 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)?

European
IPR Helpdesk

Dissemination, Communication & Exploitation

➢ Dissemination (telling) stimulates use for further research, commercial development, education, informing policy, etc.

➢ Communication measures (how you tell)

➢ Exploitation (using) can be commercial, research, policy guidance, educational, etc.

European
IPR Helpdesk

Communication?

➢ Internal Communication (e.g. collaboration platforms, etc)

➢ Communication of the project (e.g. web page)

➢ Communication of project results (e.g. dissemination)

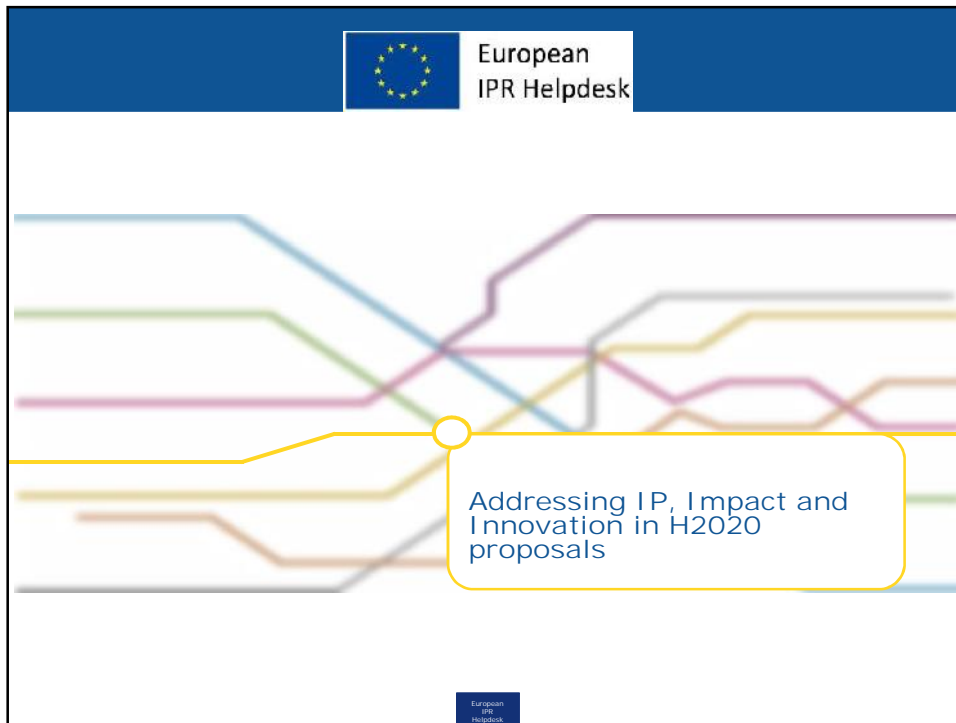➢ Communication measures (e.g. publications, events, etc)

European
IPR Helpdesk

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."

European
IPR Helpdesk

Addressing IP, Impact and Innovation in H2020 proposals

European
IPR
Helpdesk

European
IPR Helpdesk

Understand the (Potential) Impact

➢ Innovation is about satisfying needs & delivering benefits
➢ What needs will be addressed (relevant to the call topic)?
➢ What benefits delivered?
  ▪ to whom?
  ▪ and how much benefit (contribution to the expected impact of the call)?
➢ Select the project objectives to maximise impact (the extent of the innovation) expected by the call topic

Call topic

START
HERE
→

European
IPR Helpdesk

The Work Programme
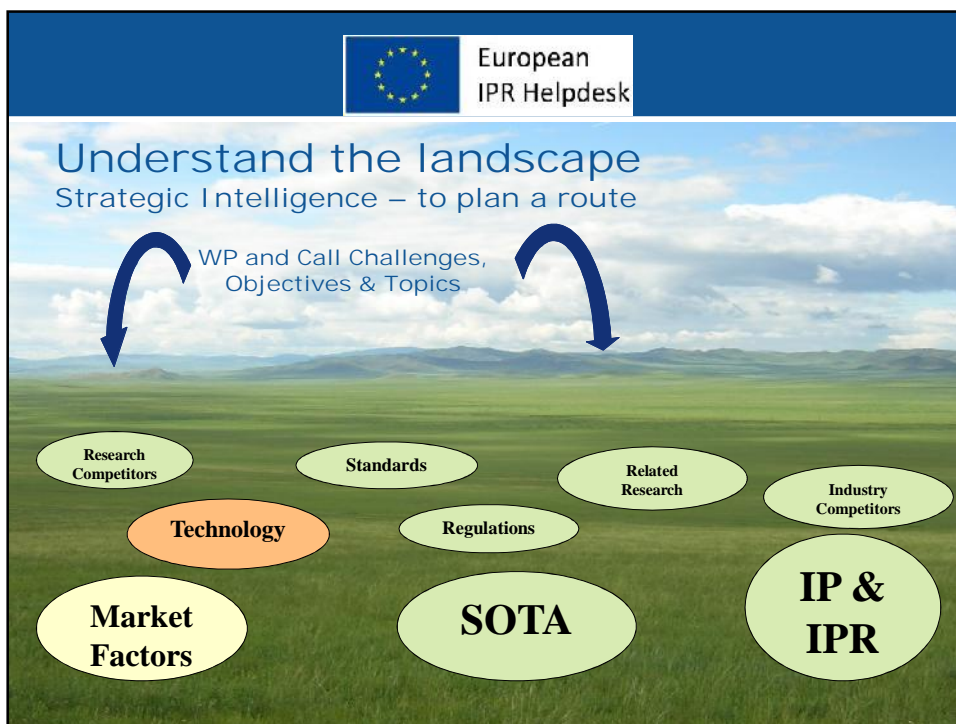Clearly describes the challenges and expected impacts

e.g.PHC3-2015: Understanding common mechanisms of diseases and their relevance in co-morbidities

Specific Challenge: The development of new treatments is greatly facilitated by an improved understanding of the pathophysiology of diseases. There is therefore a need to address the current knowledge gaps in disease aetiology in order to support innovation in the development of evidence-based treatments. …….

Scope: Proposals should focus on the integration of pre-clinical and clinical studies for the identification of mechanisms common to several diseases. Proposals should assess and validate the relevance of these common mechanisms and of their biomarkers (where relevant) on the development of disease-specific pathophysiology, as well as…..

Expected impacts:
➢ A better understanding of disease pathways and / or mechanisms common to a number of diseases
➢ New directions for clinical research for better disease prevention, health promotion, therapy development, and the management of co-morbidities

European
IPR Helpdesk

Understand the landscape
Strategic Intelligence – to plan a route

WP and Call Challenges,
Objectives & Topics

Research Competitors

Standards

Related Research

Industry Competitors

Technology

Regulations

Market Factors

SOTA

IP & IPR

European
IPR Helpdesk

Excellence
Extract from proposal template

➢ Objectives should be consistent with the expected exploitation and impact of the project
➢ Describe the positioning 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
➢ Describe the innovation potential
➢ Refer to the results of any patent search carried out.

.

European
IPR Helpdesk

Impact
Extract from proposal template

➢ Provide a draft 'plan for the dissemination and exploitation of the project's results'   **Now mandatory!**
  ▪ The approach to innovation should be as comprehensive as possible, and must be tailored to the specific technical, market and organisational issues to be addressed.
➢ Include a business plan where relevant.
➢ You will need a consortium agreement to manage the ownership and access to key knowledge (IPR, data etc.).
➢ Outline the strategy for knowledge management and protection.

European
IPR Helpdesk

Dissemination and Exploitation Plan

1) What are the key exploitable (usable) project outputs?
2) Do they benefit from formal protection?
3) Who are the target groups, and why? i.e. what needs will be addressed?
4) What are your objectives and messages for each target group, and how will communicate messages and monitor and act on responders?
5) What are the expected exploitation (use) roadmaps?
6) What barriers or enablers are on these roadmaps?
7) What will be the exploitation vehicle(s)? i.e. How can exploiters/users access the IP?
8) What are the terms for access and use?

If exploitation (use) of the results satisfies
a need and delivers benefits, then there is
INNOVATION WITH IMPACT

European
IPR Helpdesk

Knowledge (IP) management

➢ IP used by the project
  ➢ access and usage rights for key IP before AND after the project (foreground, background and 3rd party – especially OS licences)
➢ IP generated by the project
  ➢ Capture/disclosure, ownership, management of IP, secure evidence of creation, pre-publication reviews for technical inventions
➢ IP assessment
  ➢ prior art, market opportunity, exploitation and protection strategies, etc
➢ IP protection
  ➢ patents, copyright, database rights, trademarks, etc)
➢ IP dissemination and exploitation (use!)
  ➢ Research, education, commercial, policy, etc

IMPACT!

European
IPR Helpdesk

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.

- ▪ "Innovation management is a process which requires an understanding of both market and technical problems, with a goal of successfully implementing appropriate creative ideas."

➢ Describe the industrial/commercial involvement in the project to ensure exploitation of the results

European
IPR Helpdesk

Innovation management

is not

IPR Management

is not

Exploitation Management

is not

Dissemination Management

is not

Communications Management

European
IPR Helpdesk

Innovation Management
EC Definition

"Overall management of all activities related to understanding needs, with the objective of successfully identifying new ideas, and managing them, in order to develop new products and services which satisfy these needs.

Innovation management starts at the point of capturing the creative works and finishes when it a product or service is deployed."

Someone must be responsible for managing all innovation related activities from capturing, assessing, protecting and managing the IP; through dissemination and exploitation (use) of the IP; to market deployment.

European
IPR Helpdesk

Typical Management Structure
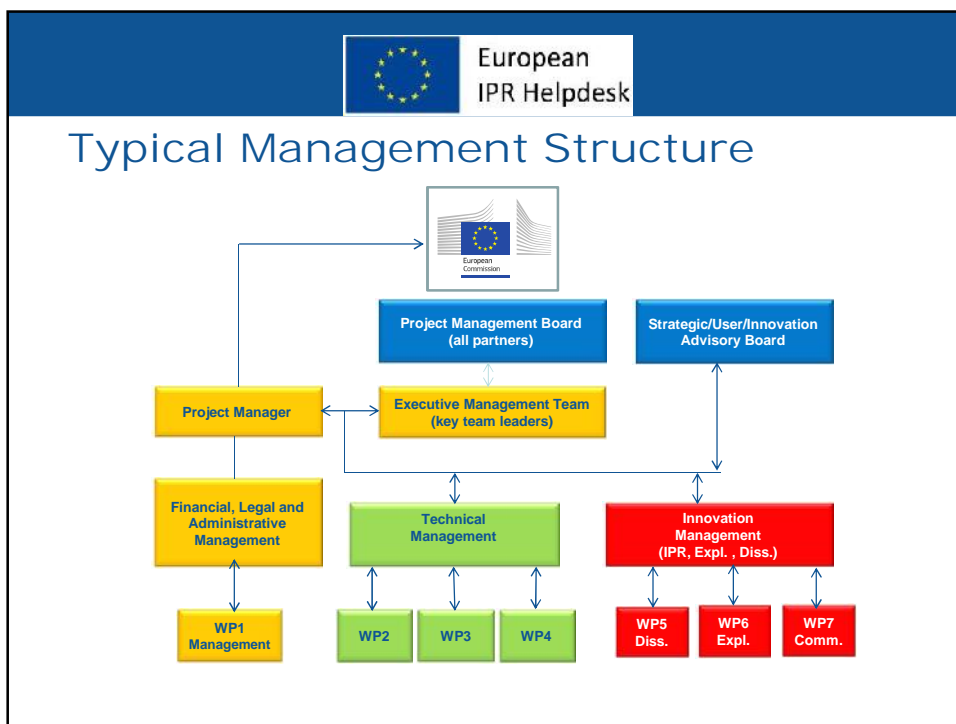
European
IPR Helpdesk

Implementation
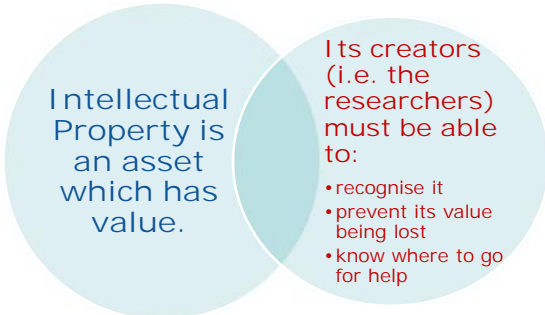
Management structures and procedures to:

1. Create, capture and manage the research results (IP)
   - The management framework (who is responsible)
   - The management procedures (how it will be done)
   - Establish good foundations and guiding principles/policies
   - IP management and protection strategies and procedures

2. Disseminate and Exploit the research results (IP)
   - Assess the opportunties
   - Exploitation strategies and plans
   - Exploit/Extract value from research outputs
   - Dissemination and communcation of research outputs

European
IPR Helpdesk

1. Secure the foundations

➢ Ensuring researchers can recognise and capture IP (IP awareness training for participants)

➢ Ensure good research practice (including record keeping)

Intellectual Property is an asset which has value.

Its creators (i.e. the researchers) must be able to:
- recognise it
- prevent its value being lost
- know where to go for help

European
IPR Helpdesk

2. Recognise and Capture the IP

➢ Proactive monitoring of research outputs - regular reviews

➢ Facilitating IP disclosure (to IPR Manager)/standard "disclosure forms"

➢ Initial Disclosure - Key information needed

- Identify ALL relevant IP (software, papers, know-how, etc)
- Clarify ownership – particularly if 3rd parties involved
- Check for "hidden traps" (publications, posters, etc), which might affect patentability.

➢ Pre-publication reviews to avoid "value leakage" for technical inventions

European
IPR Helpdesk

3. Managing the IP
Assessment and protection

➢ Assessment
- Is there an opportunity for the project output to deliver an impact (be exploited)?
- Does the IP/project output benefit from protection - in line with exploitation strategies?

➢ If so, invest in protecting and securing foreground IP as appropriate (an eligible cost in H2020)
- Patents, copyright, keep secret, etc
- Secure proof of creation

➢ IP protection is an investment NOT a cost!)

Assessment, protection and exploitation
must be considered together

European
IPR Helpdesk

4. Disseminate, Communicate, Exploit

➢ Draft plan for dissemination and exploitation plans, including the project <u>results as a whole</u> at proposal stage

➢ Preparation of interim and final plans during the project

➢ Coordination of dissemination and exploitation plans to avoid conflicts

➢ Appropriate communication measures to tell

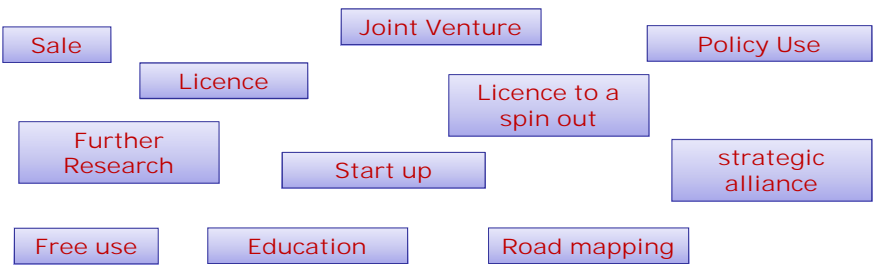➢ Manage the exploitation (use) of the project results

European
IPR Helpdesk

Choosing the best exploitation (use) strategy and business model

European
IPR
Helpdesk

European
IPR Helpdesk

Extracting Value from IP
(i.e. the project outputs)

➢ IP is a valuable asset which, like physical property, can be used and traded – bought, sold or leased, used in JV's, or as collateral

➢ But, unlike physical property there are many more ways of extracting value...

| Sale | Joint Venture | Policy Use |

| Licence | Licence to a spin out |

| Further Research | Start up | strategic alliance |

| Free use | Education | Road mapping |

European
IPR Helpdesk

What exploitation(utilisation) route?

➢ Further research?

➢ Non-commercial use (policy, educational, societal, etc)

➢ Licence to an existing company?

➢ Start a new company (or not-for-profit organisation)?

European
IPR Helpdesk

Licensing?

Granting the right to use your property under certain agreed terms and conditions, such as

➢ Territory
➢ Field of use
➢ For a limited time
➢ For evaluation only
➢ Provided you do a good job with it!
➢ Etc

NB: Can the SME Partner(s) reach all market sectors and territories?

European
IPR Helpdesk

Licence or Start-up?
Same objectives different routes

➢ Licensing - licensee has expertise and resource
  ➢ Takes advantage of the expertise, resources and market know-how of companies already operating in the field.
  ➢ Can address different fields of use and geographical areas

➢ Start-up – must acquire expertise and resource
  ➢ A critical mass of expertise (management, financial, sales, marketing, manufacturing, technical, administrative), and an committed and enthusiastic team
  ➢ Resources for developing, manufacturing and marketing can be very large, particularly if worldwide
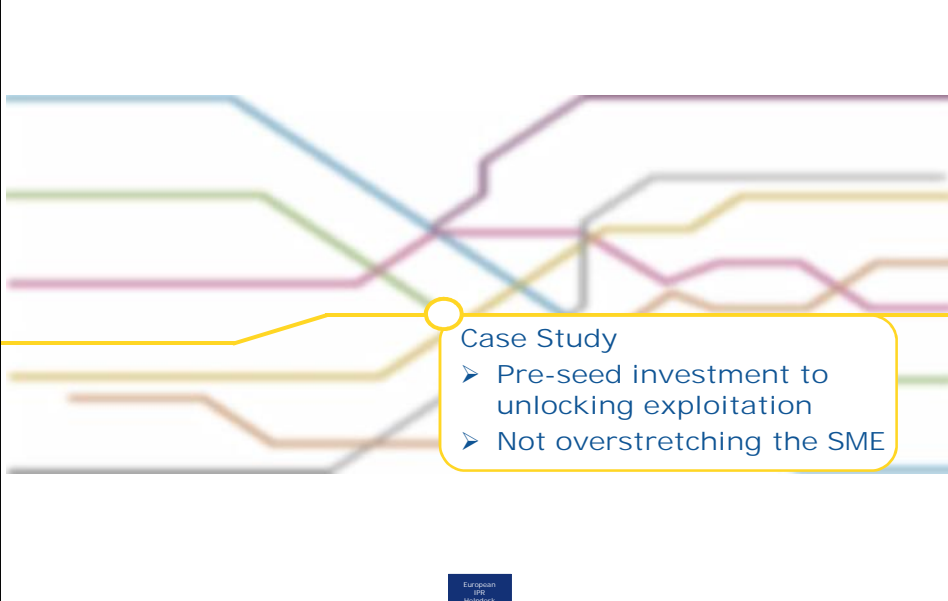
European
IPR Helpdesk

Licence or Start-up?
Same objectives different routes

➢ Who is in the best position to "productise" the project results and to bring it to the people who want to use them?

- ▪ Market (user) knowledge
- ▪ Further development needed?
- ▪ Trials needed?
- ▪ Regulatory approvals/certification needed?
- ▪ etc

European
IPR Helpdesk

Case Study
➢ Pre-seed investment to unlocking exploitation
➢ Not overstretching the SME

European
IPR
Helpdesk

European IPR Helpdesk

Daily Disposable Contact Lenses

➢ Invented in Scotland

➢ Early exploitation efforts failed since the scale-up from lab to factory was unproven

➢ Money invested in building a pilot plant

➢ On success of pilot plant inventors were able to raise money to create a start-up company

➢ IP licensed to the start-up for UK only

➢ Company succeeded in making lenses and distributed them through a major UK outlet.

European IPR Helpdesk

Meanwhile.....
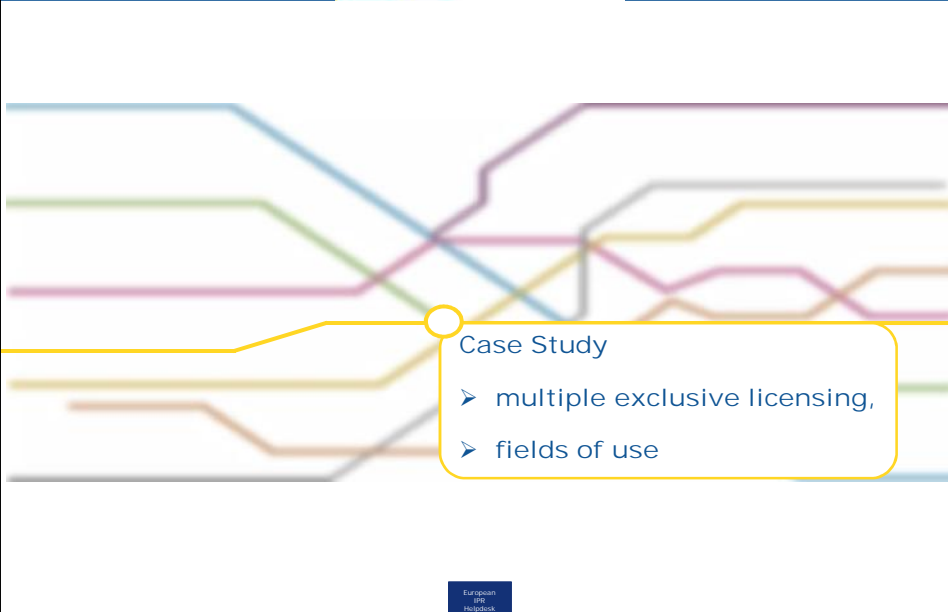
➢ Further licensees were sought in other territories

➢ Bausch & Lomb took a licence for the US market

➢ They liked it so much they bought inventor's company (inventors very happy!)

➢ Bausch & Lomb granted an exclusive worldwide licence

➢ Everyone was very happy!

LESSONS:
➢ Further investment often needed to convince investors
➢ Licensing by geographic area quickly established the market without overstretching the SME

Case Study

- ➤ multiple exclusive licensing,
- ➤ fields of use

European
IPR
Helpdesk

European
IPR Helpdesk

Factor I X

- ➤ For treatment of Haemophilia B.

- ➤ A genetic disorder cause by deficiency or defect in Factor IX gene – an essential blood clotting protein

- ➤ Invention provides for treatment from safe, non-plasma-derived blood clotting agent

- ➤ In 1995, about 50% of the US haemophiliacs were HIV positive and 80% had Hepatitis C, having received contaminated blood products. 60% of those people died from AIDS.

European
IPR Helpdesk

Factor IX

➢ Applications in many different fields of use

  ➢ Transgenic production in Sheep
  ➢ Recombinant production
  ➢ Gene therapy

➢ Strategy: worldwide exclusive field-of-use licencing

New market, don't fragment to give licensee a chance to build a business

Spread the risks

European
IPR Helpdesk

BeneFIX®

➢ GI launched BeneFIX® (coagulation factor IX (recombinant)) in USA in February 1997

➢ GI launched in Europe in January 1999 through Baxter Healthcare distribution

LESSONS:

➢ Field of use licensing spreads the risks and increases potential impact
➢ Exclusive licensing allows new technologies to reach critical mass

European
IPR Helpdesk

Summary

➢ IPR, Impact and Innovation must be addressed in all 3 sections (excellence, impact and implementation) of H2020 proposals, and managed througout the project

➢ Understand the landscape (market, technical, IPR, SOTA, Competitors, etc) to obtain strategic intelligence, to justify the project objectives, and plan for maximum impact

➢ Ensure foundations, structures and procedures are sound; to create, capture, manage, protect, disseminate and exploit the project results (IP)

➢ It's not about technology, it's about satisfying needs and wants, and delivering innovations with impact

European
IPR Helpdesk

© European Union (2011-2015)

Presentation produced by Dr. Eugene Sweeney, Iambic Innovation Ltd. October 2015

Credits
© istockphoto.com/maridav
© istockphoto.com/Bliznetsov
© Iambic Innovation Ltd