

Promoting Intellectual Property Rights in the ASEAN Region

# How to exploit research results in open innovation environments?

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### **Overview**

- 1. What we have seen so far...
- 2. How can research institutions or SMEs adapt to this framework?
- 3. Key efforts to improve the ecosystem to promote open innovation
- 4. Changing the incentives
- 5. Creating an open innovation culture
- 6. Removing obstacles



#### What we have seen so far...

- Innovation is not a lineal process in complex sectors
- The importance of complex technologies is growing: the whole ICT sector is built over complex technologies – particularly Internet of the Things (smartphones, autonomous cars...).
- Recent history shows that:
  - Universities were adaptative and made a smart use of IP to promote cooperative innovation
  - Big firms do make use of creative use of their IP to encourage open innovation in their favour



#### 1. How can research institutions or SMEs adapt to this framework?

There is no secret recipe: one of the challenges that complex technologies pose is to be adaptative to a changing environment.

Indeed, the right exploitation of intangible assets by means of IP – including its use in free, **open\*** terms is paramount.

However one of the lessons learnt is that in complex sectors, the ecosystem plays a fundamental role: ranging from decision making-institutions to solo researchers.

#### Let's take a look to what the European Union does

\*or quasi open



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#### 2. Key efforts to improve the ecosystem to promote open innovation

**Open Innovation:** broadly understood, including:

- <u>Collaborative research</u>: exchange of know-how, collective problem solving, University-Industry cooperation, etc
- <u>Open exploitation</u>: Free Software, Open Source, Patent Pledges contributing to quick follow-on innovation
  - knowledge spillovers (Intel)
  - increasing welfare



#### 2. Key efforts to improve the ecosystem to promote open innovation

Three key efforts (views are my own)

- 1. Change the incentives
- 2. Create an open innovation culture
- 3. Remove legal and institutional obstacles



#### 3. Changing the incentives

# **European Comission (Macrolevel)**

**Horizon Europe:** the new and ambitious EU Framework program for research (€95,5 billion)

Innovation= R&D + market or societal impact

Last step of the Commission's path towards a **purely impact-oriented** funding framework:

- Requests for funding with a clear vision and plan to exploit results in the market or make a societal impact likely to obtain a grant
- Once planned is more likely to happen subliminal entrepreneurial/ cooperative mindset



#### 3. Changing the incentives

# **European Commission (Macrolevel)**

#### Some practicalities:

- Some programs require exploitation as a condition to receive funding
- ALL programs require exploitation of results OR offering results in 1 year to third parties via Horizon Results Platform (broad opt-out)
- Research data should be shared in FAIR terms: Findables, Accesibles, Interoperables and Re-usables



#### 3. Changing the incentives

# National, regional decision-makers and universities (Macro to mesolevel)

- Switch to an impact-oriented approach
- Economic incentives to problem-solving cooperation university-industry
- Include economic and career rewards for exploitation/cooperation oriented researchers



# **European Comission (Macrolevel)**

#### **Horizon Europe - Open data (FAIR):**

- We live in a data-driven economy!
- Examples of research data: interview results, raw observations from experiments, gene sequences, software, etc.
- Allows others to verify/challenge research outcomes, build on your research, save time in generating one's own data, fosters collaborations



# **European Commission (Macrolevel)**

#### **Horizon Europe - Open Science**

- Open Science: academic results scientific and societal impact (basic research)
- Encouraging making academic production available in open access terms (as opposed to pay-per-view scientific journals)
- Issues with proof of excellence and journal rankings (addressed in ERC)



# **Universities (Mesolevel)**

#### **Horizon Europe - Open Science**

- Promoting and editing open access journals
- Encourage and reward open science practices
- Raise awareness among researchers and students at least to identify open innovation opportunities
- Capacitate tech transfer offices on open innovation practices



# **European Commission (Macrolevel)**

#### Open exploitation of intellectual property

- Three models for obtaining revenues from IP:
  - **IP as barrier:** IP is used to consolidate and leverage from first mover advantage.
  - Commercialising IP: companies licence or transfer those intangible assets which they are not interested in exploiting directly
  - **Opening IP:** users or companies are granted access to all or part of the intangible asset in favourable terms.
- Horizon Europe: The European Commission accurately, in my view refrains from expressing any preference for any of these models → but positively contemplates all



# **European Commission (Macrolevel)**

Community of practice for the smart use of IP: ambitious initiative to analyse the status of the EU research and innovation ecosystem – with a focus on intellectual property, its use and exploitation and propose ways forward.

Outcome: Knowledge Valorisation and Code of Practice for the smart use of intellectual property



#### 5. Removing obstacles

# **EU member states (Macrolevel)**

- Change national patent laws and European Patent Convention to include a 12month grace period for self-disclosures of patentable information.
  - Favours exchange of know-how and collaborative innovation
  - Reduces transaction costs less Non-Disclosure agreements
  - Allows to better test ideas and solutions before applying for a patent (costly)



#### 5. Removing obstacles

#### 12-month grace period for self-disclosures of patentable information.

- Jurisdictions worldwide have it (Malaysia, Philippines or Singapore, among others)
- Recent (2017) inclusion by Singapore rationale was:

With the amendment, the grace period provision is now broadened to include any disclosure of the invention originating from the inventor.

This amendment follows Parliament's recognition of various business needs, such as the need to attract investors or to publish scientific papers, which motivate inventors to disclose their invention before making a patent application.

https://www.twobirds.com/en/patenthub/shared/insights/2017/singapore/recent-developments-on-singapores-patents-regime



#### 5. Removing obstacles

# EU member states, regional decision-makers and universities (Macro to mesolevel)

Remove barriers to open exploitation:

- Time consuming, complex proceedings to obtain authorisation for open exploitation (in cases of state/university partial ownership)
- Lack of trust towards open models (conservative decisions)



# Some further reading...

- European IP Helpdesk <a href="https://intellectual-property-helpdesk.ec.europa.eu/regional-helpdesks/european-ip-helpdesk">https://intellectual-property-helpdesk.ec.europa.eu/regional-helpdesk</a>sk-european-ip-helpdesk en
- Horizon Europe <a href="https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe en">https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe en</a>
- OECD (2021): Recommendation of the OECD Council concerning Access to Research Data from Public Funding: <a href="https://www.oecd.org/science/inno/recommendation-access-to-research-data-from-public-funding.htm">https://www.oecd.org/science/inno/recommendation-access-to-research-data-from-public-funding.htm</a>
- Banks et al. (2018): Answers to 18 Questions About Open Science Practices: https://link.springer.com/article/10.1007/s10869-018-9547-8
- The EU's Open Science Policy: <a href="https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/our-digital-future/open-science en#ref-8-ambitions-of-the-eus-open-science-policy">https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/our-digital-future/open-science en#ref-8-ambitions-of-the-eus-open-science-policy</a>



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# **THANK YOU**

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