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ASEAN Intellectual Property Rights

Promoting Intellectual Property Rights in the ASEAN Region

From Technology Transfer to Open Innovation

Vicente Zafrilla Díaz-Marta, LLM | 12th September 2022

EUIPO
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Overview

1. The origins of technological transfer
2. Technological transfer flow
3. The RD+i circle
4. Value of these models
5. Discrete vs. complex technologies
6. Open Innovation

"Technology transfer […] refers to the conveying of results stemming from publicly funded scientific and technological research to the market place and to wider society, along with associated skills and procedures, and is as such an intrinsic part of the technological innovation process."

European Commission, 2018

1. The origins of technological transfer

"Technological transfer" - US Bayh-Dole Act (1980)
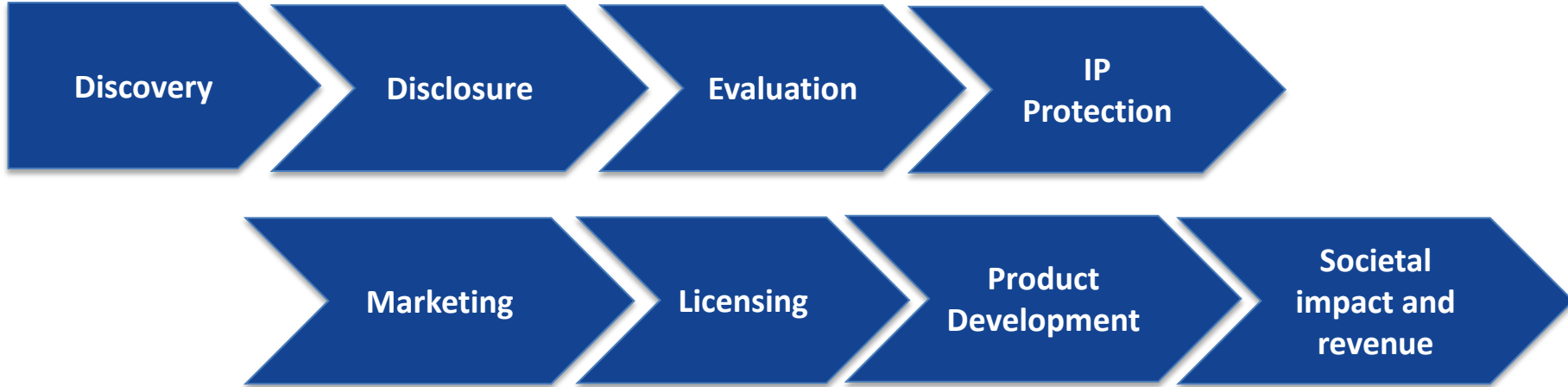
- Bayh-Dole Act – a game changer in university IP exploitation:

    - US universities lacked proper patent management policies.

    - Patent from federal- funded research remained to the US government (low level of licensing).

- The Bayh-Dole Act allowed US universities to retain IP rights

    - Encouraged collaboration and licensing to commercial entities.

    - Significant increase in patenting activities among US universities

    - Exponential growth of technology transfer offices at the universities post-1980.

- The Bayh-Dole Act inspired similar policies in Europe and Asia.

1. The origins of technological transfer

The extrapolation of Bayh-Dole Act "tech transfer" concept created a conceptual problem:

- Assumed the lineal nature of the innovation process
- Attributed limited roles to participants:

    - Universities → research

    - Companies → innovate

    - Tech transfer offices → make the linkage between both
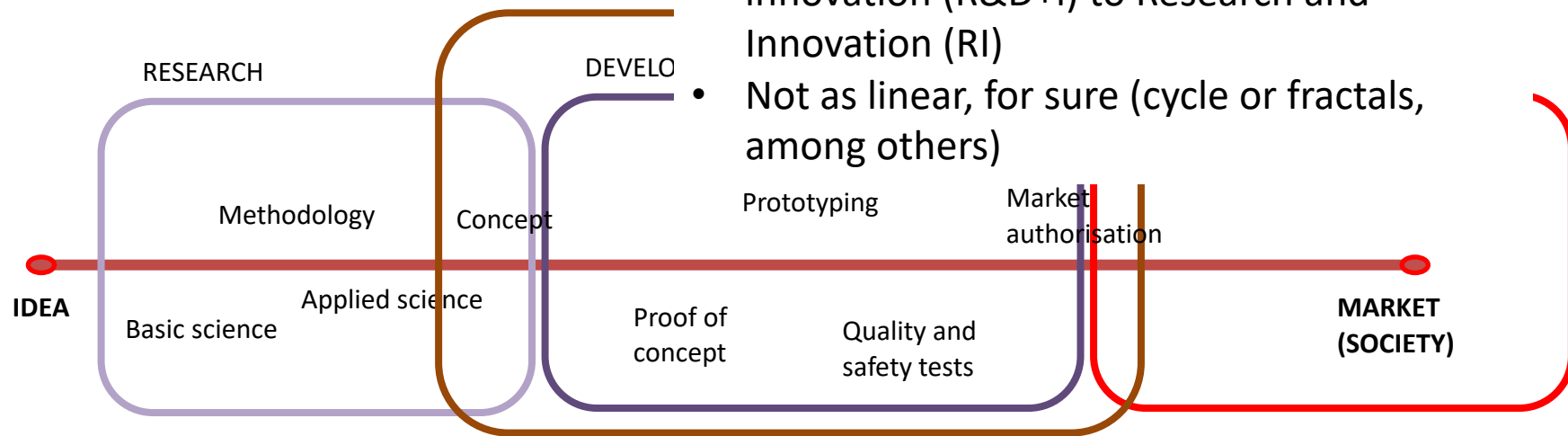
2. Technological transfer flow

Discovery → Disclosure → Evaluation → IP Protection

Marketing → Licensing → Product Development → Societal impact and revenue

Based on Dinnetz (2018)

Each one has its intrinsic value BUT innovation is the most perfect result:

- From R&D, to Research Development & innovation (R&D+i) to Research and Innovation (RI)
- Not as linear, for sure (cycle or fractals, among others)

RESEARCH

DEVELO

Methodology

Concept

Prototyping

Market authorisation

IDEA

Basic science

Applied science

Proof of concept

Quality and safety tests

MARKET (SOCIETY)

Patents

Need of measuring actual innovation

Hence patents ≈ innovation

- Valid for ex-post assessment of the evolution
- Not really useful for real-time analysis, nor for innovation policy making, but for:

  - Traditional discrete sectors
  - Patent intensive technologies

These were the type of sectors in which the Bayh-Dole Act was thinking.

4. Discrete vs complex technologies

	Discrete technologies	Complex technologies
Relationship among technologies	Independent	Interdependent
Nature of the innovation	Disruptive	Incremental
Outcome	Winner takes all	Best take a share
Example	Pharma compounds	Personal computer

`(t)he distribution of knowledge has shifted away from the tall towers of central R&D facilities, toward variegated pools of knowledge distributed across the landscape [...] Companies must structure themselves to leverage these distributed pools, instead of ignoring them in the pursuit of their internal R&D agendas´

Chesbrough, 2003

6. Some further reading…

- Chesbrough H. (2003): The New Imperative for Creating and Profiting from Technology
- Chesbrough H (2012): Where we've been and where we're going
- Dinnetz M. (2018): Technology Transfer – From Research to Impact

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THANK YOU

Contact details:
Vicente Zafrilla Díaz-Marta
vicente.zafrilla@ua.es

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