

Inventing in Collaboration: The Allocation of Patent Ownership in R&D Partnerships

Dr. Arina Gorbatyuk
Research Fellow at KU Leuven CiTiP
IP Legal Consultant at Sirius Legal

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Open Innovation

Chesbrough

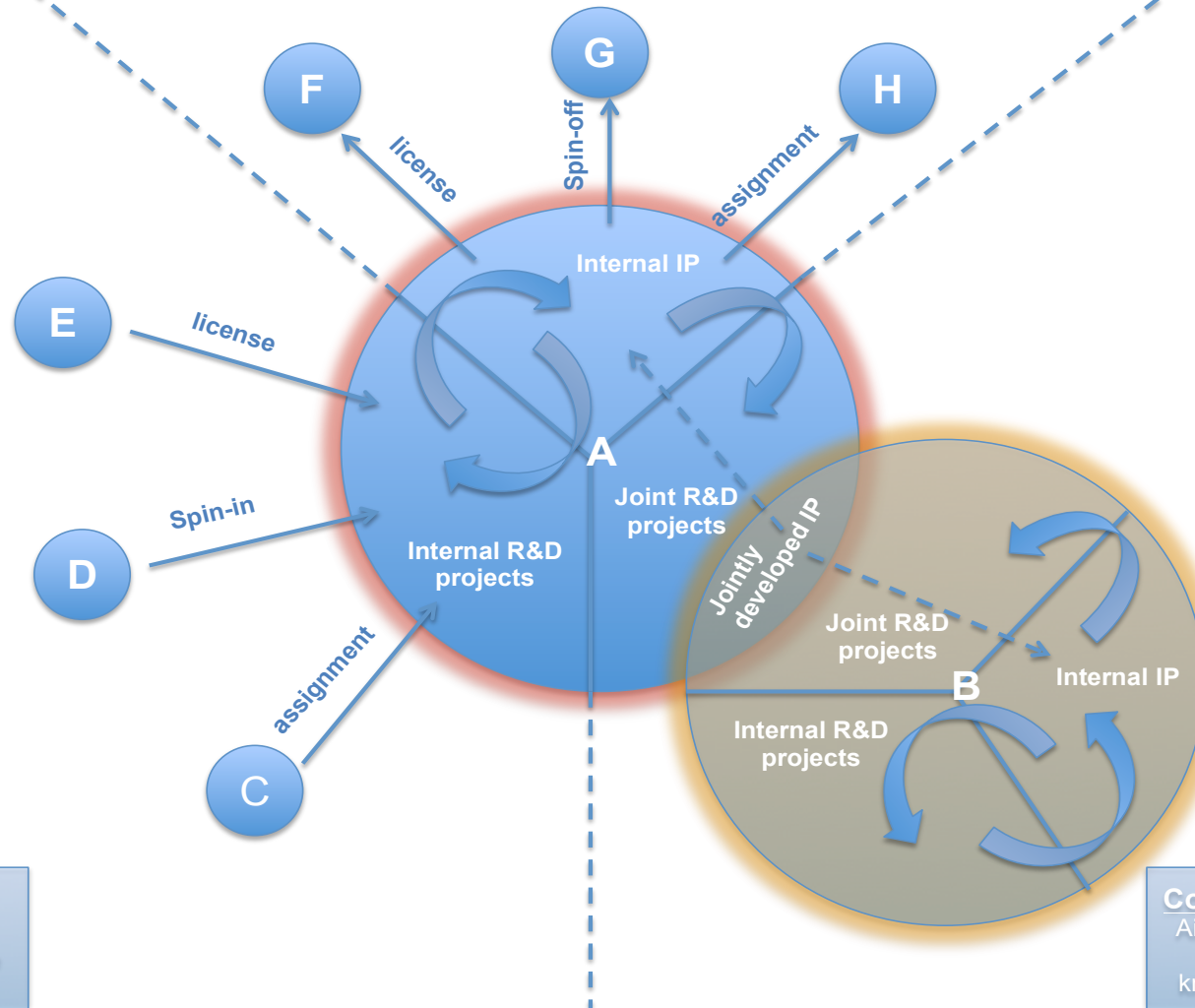
- OI is “a paradigm that assumes that firms can and should use external ideas, and internal ideas, and internal and external paths to the market, as firms look to advance the technology”.

Outside-in & Inside-out
Sharing Existing Knowledge

Agreements:

- Licensing
- Assignment
- Consultancy
- Material Transfer Agreement
- Non-Disclosure Agreement
- Spin-off/ spin-in
- Open Source Software

Inside-out OI Process
Aim: profit generation



Outside-in OI Process
Aim: cost, risk and time reduction

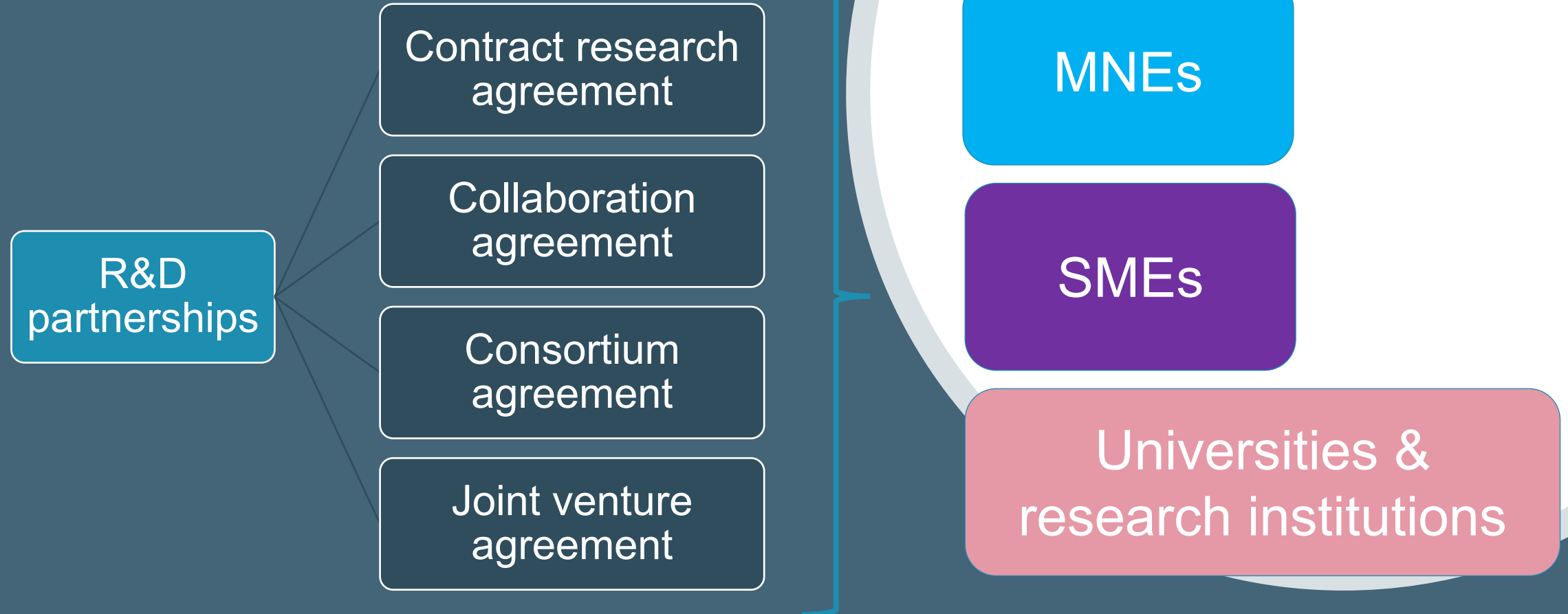
Coupled OI Process
Aim: joint development of new knowledge/technology

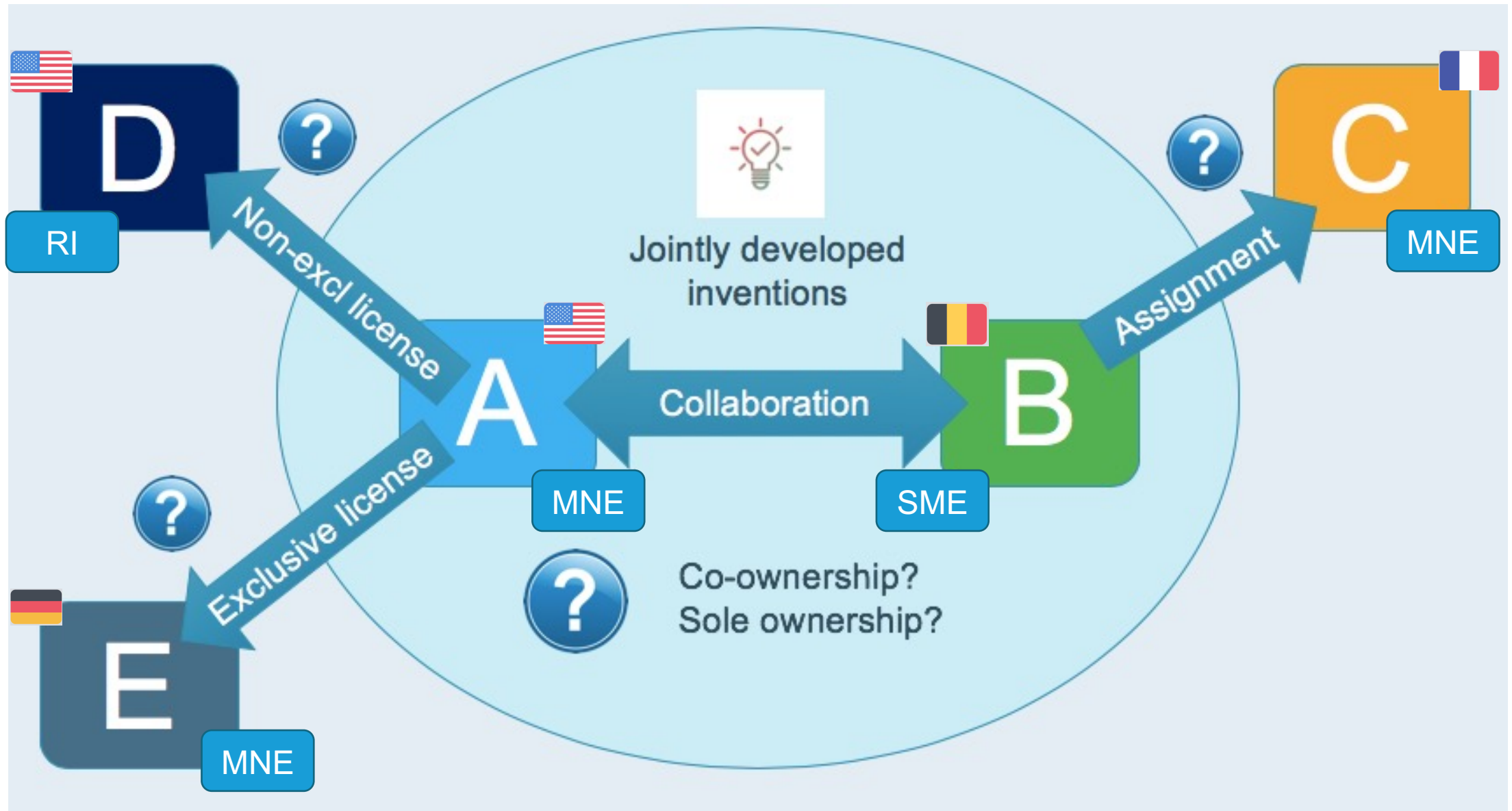
Coupled
Sharing Existing Knowledge & Creating New Knowledge

R&D Partnership Agreements:

- Contract Research
- R&D Collaboration
- R&D Consortium
- R&D Joint Venture

Coupled OI





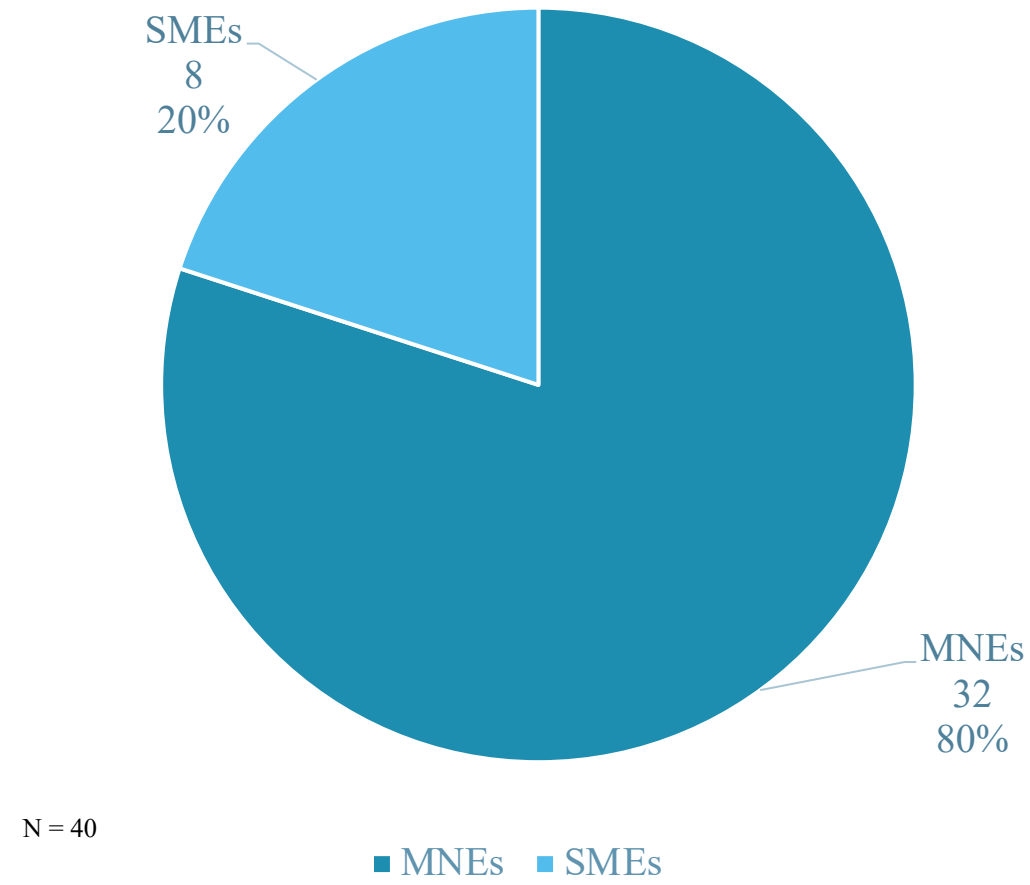
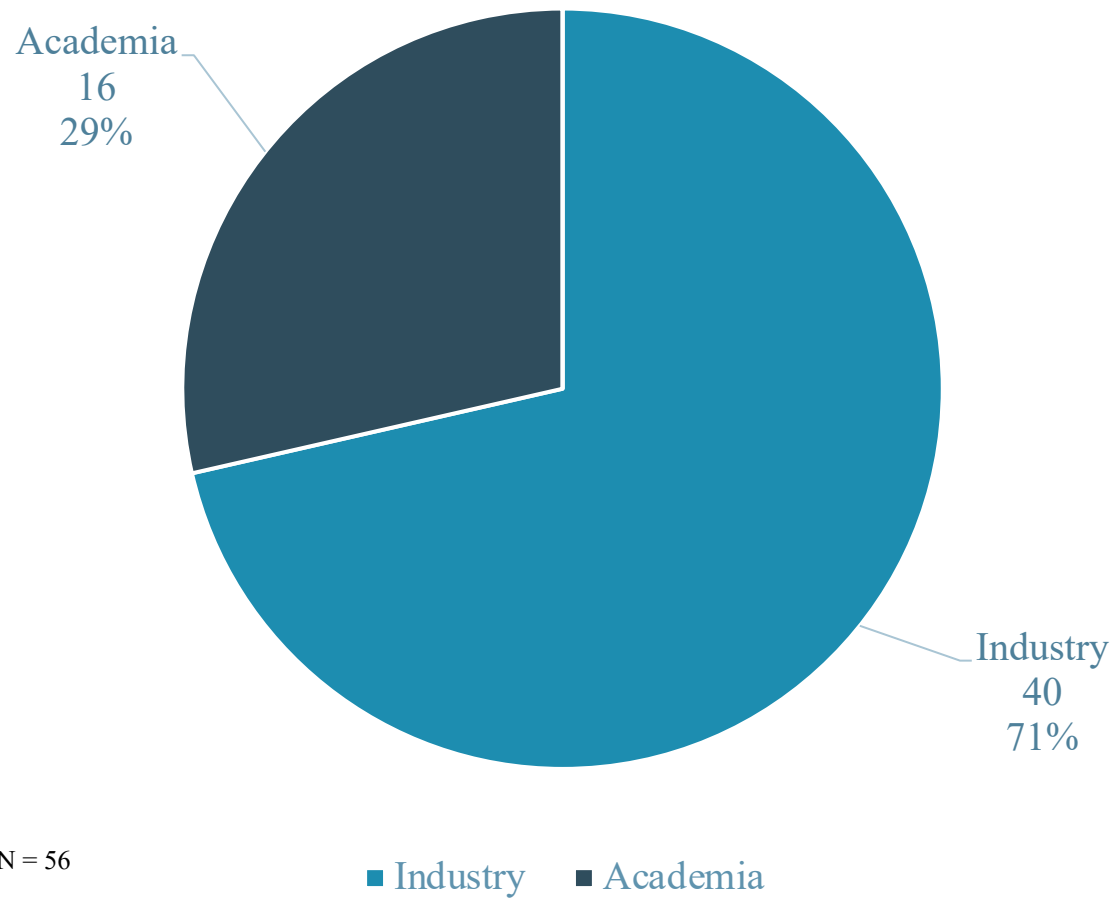
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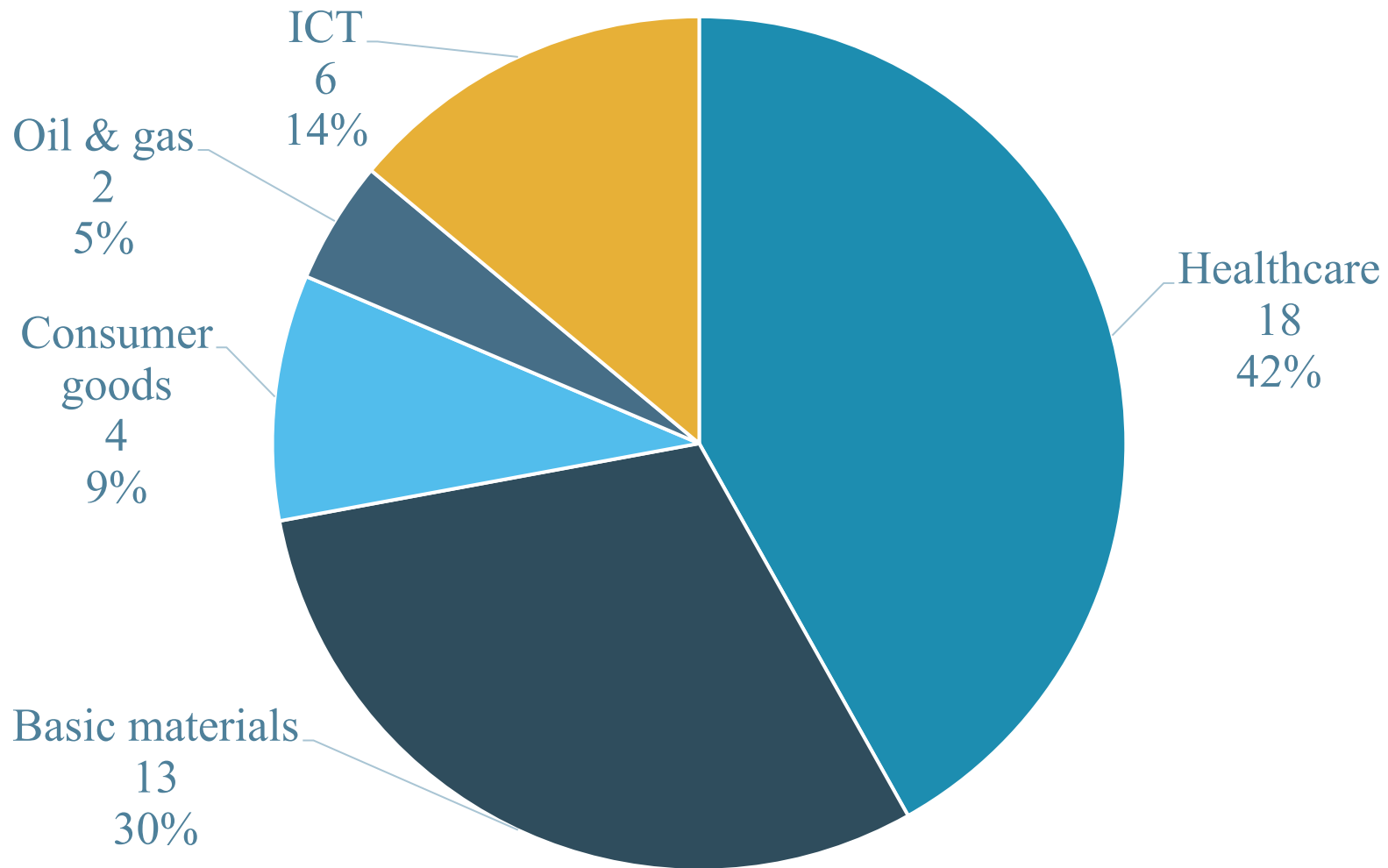
**Scenarios to allocate
foreground IP
ownership in R&D
partnerships**

(2)

**Improvements to
facilitate the allocation
of foreground IP
ownership in R&D
partnerships**

Data





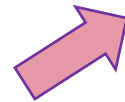
N = 43

■ Healthcare ■ Basic materials ■ Consumer goods ■ Oil & gas ■ ICT

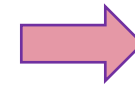
1. Foreground IP Ownership Allocation Scenarios



IP Protection Mechanism

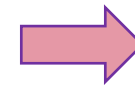


Inventions



**Patent
protection**

**Confidential
information
and know-how**



**Trade secret
protection**

Type of IP Protection

★ Patents



- Patentable
- Product patents
- Easily reverse-engineered
- Fits business strategy

Trade secrets

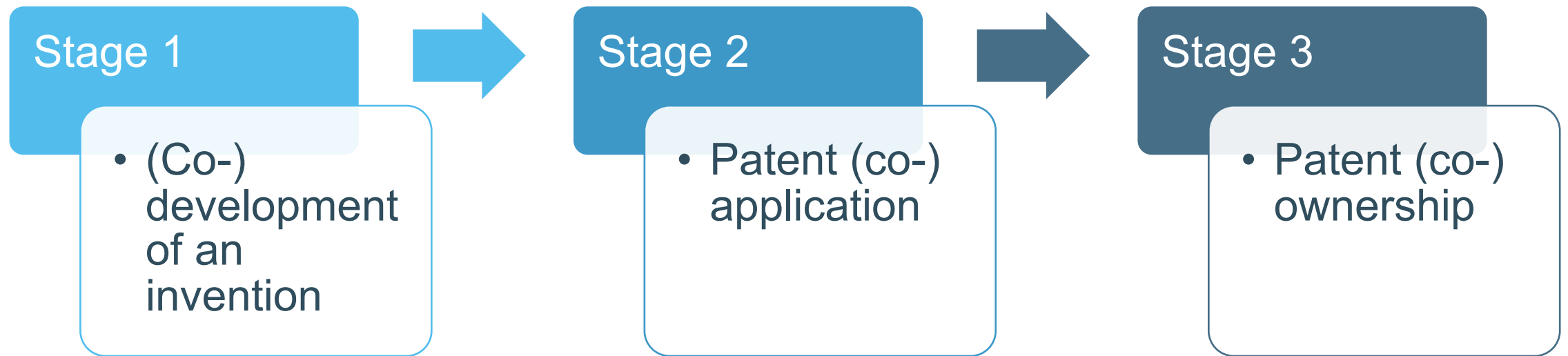


- Not patentable
- Difficult to patent
- Hard/impossible to reverse-engineer
- Process patents; negative or intermediary results

1.1. Foreground Patent Ownership Allocation Scenarios

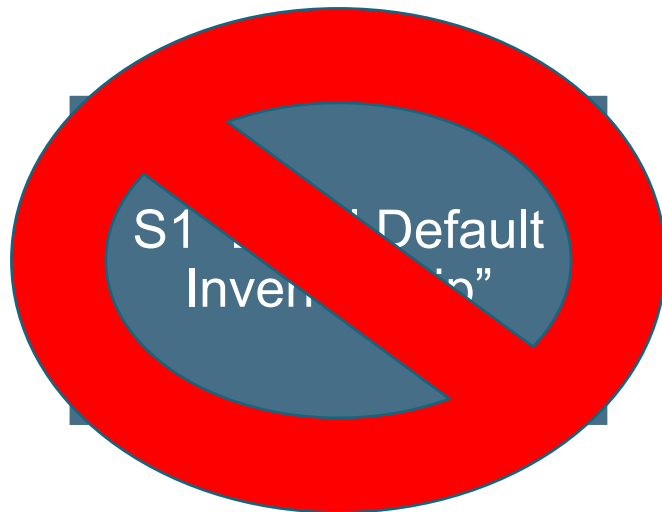


From (co-)inventorship to (co-)ownership



Patent Ownership Allocation Scenarios

Legal Default Rules



Contract-based Rules

S2 “Contractual Inventorship”

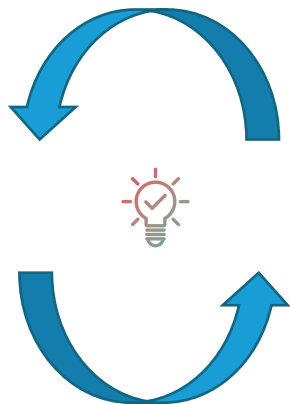
S3 “Contractual Single Sole Ownership”

S4 “Contractual Dual Sole Ownership (+ Co-ownership)”

S5 “Contractual Co-ownership”

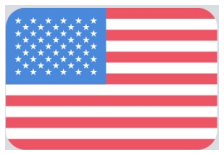
S1 “Legal Default Inventorship”

Ownership	Timing	Exploitation Rights
<ul style="list-style-type: none">Based on inventorship	<ul style="list-style-type: none"><i>After</i> inventions are developed	<ul style="list-style-type: none">Based on national default rules



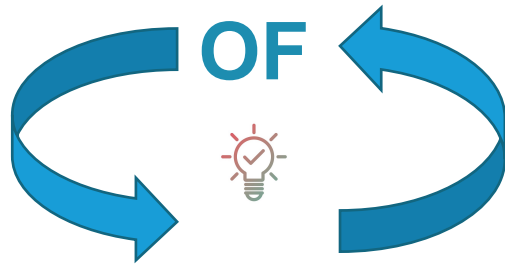
No agreement was signed

An agreement is incomplete



Patent Ownership

EMPLOYEES



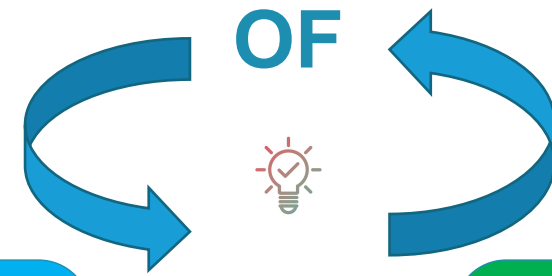
AND



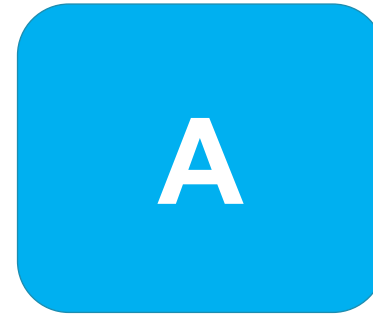
Co-ownership Regime



EMPLOYEES

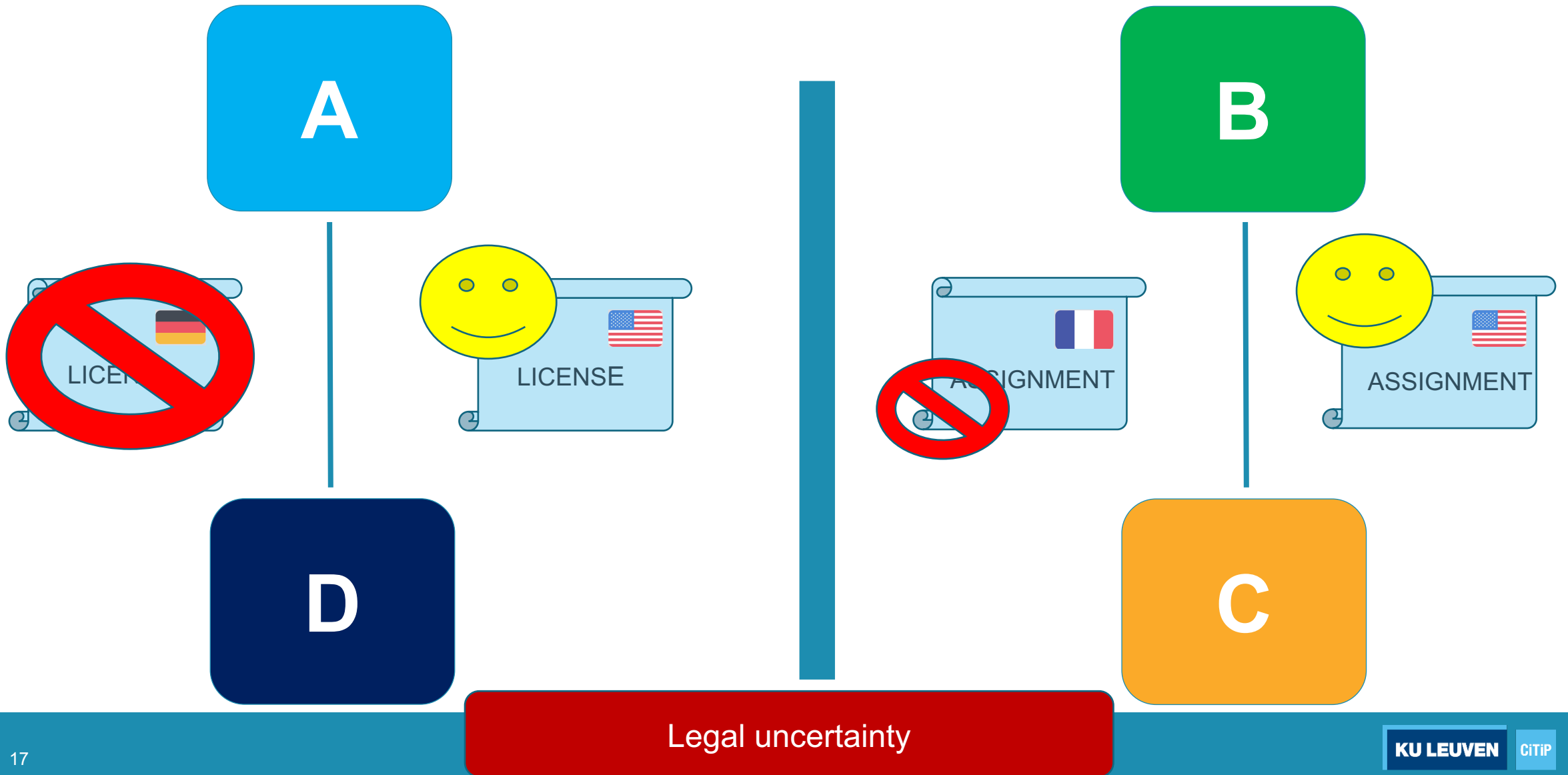


OR



Sole Ownership Regime

Exploitation of Co-owned Patents



Country	Exploitation of a co-owned patent				
	Use	Licensing		Assignment	Income distribution
		Non-exclusive	Exclusive	Personal share	
US	35 U.S.C. 262	35 U.S.C. 262		35 U.S.C. 262	<i>Blackledge v Weir</i>
	Independently	Independently		Independently	Not required
France	L613-29(a) CPI	L613-29(d) CPI	L613-29(d) CPI	L613-29(e) CPI	L613-29(c) CPI
	Independently	Independently, but with notification of a draft	Jointly	Independently, but with notification, pre-emption right	Required
Belgium	XI.49(2) CEL	XI.49(2) CEL		XI.49(2) CEL	-
	Independently	Jointly		Independently, but with notification, pre-emption right	Not required
Germany	743(2) BGB	747 BGB <i>Gummielastische Masse II</i>		747 BGB	743 I BGB
	Independently	Jointly		Independently	Not required

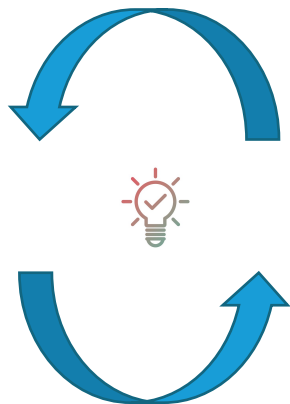
Source: Gorbatyuk, A. (2020) 'The Allocation of Patent Ownership in R&D Partnerships: Default Rules v. Contractual Practices'

17(1) SCRIPTed: A Journal of Law, Technology and Society; Gorbatyuk A. (2019) 'Rethinking IP Ownership in the Context of Open Innovation' PhD Thesis, KU Leuven

“We never follow the default arrangement by law. Simply because it is different country by country. Many people think: you are a Belgian company, so the Belgian patent law applies to that family of patents. But that is not true. If the family of patents contains a US patent, it is the US patent law that provides the default arrangements.”

S2 “Contractual Inventorship”

Ownership	Timing	Exploitation Rights
<ul style="list-style-type: none">• Based on inventorship	<ul style="list-style-type: none">• <i>After</i> inventions are developed	<ul style="list-style-type: none">• Contractually specified



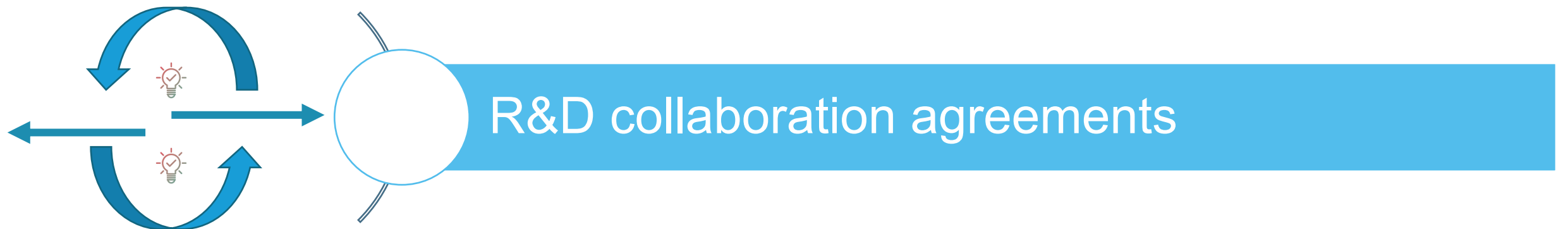
S3 “Contractual Single Sole Ownership”

Ownership	Timing	Exploitation Rights
<ul style="list-style-type: none">Based on financial contribution/ who provided a problem to solve	<ul style="list-style-type: none"><i>Before</i> inventions are developed	<ul style="list-style-type: none">Exploited by a sole ownerPotential license to the other party



S4 “Contractual Dual Sole Ownership (+ Co-ownership)”

Ownership	Timing	Exploitation Rights
<ul style="list-style-type: none">• Based on the field or type of an invention	<ul style="list-style-type: none">• <i>After</i> inventions are developed	<ul style="list-style-type: none">• Exploited by a sole owner• Potential license to the other party



S5 “Contractual Co-ownership”

Ownership

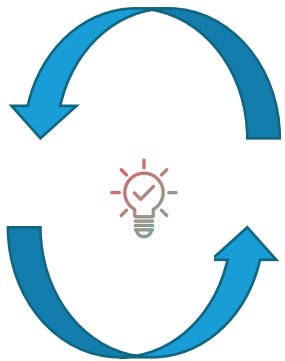
- Based on financial and intellectual contributions

Timing

- *Before* inventions are developed

Exploitation Rights

- Contractually specified

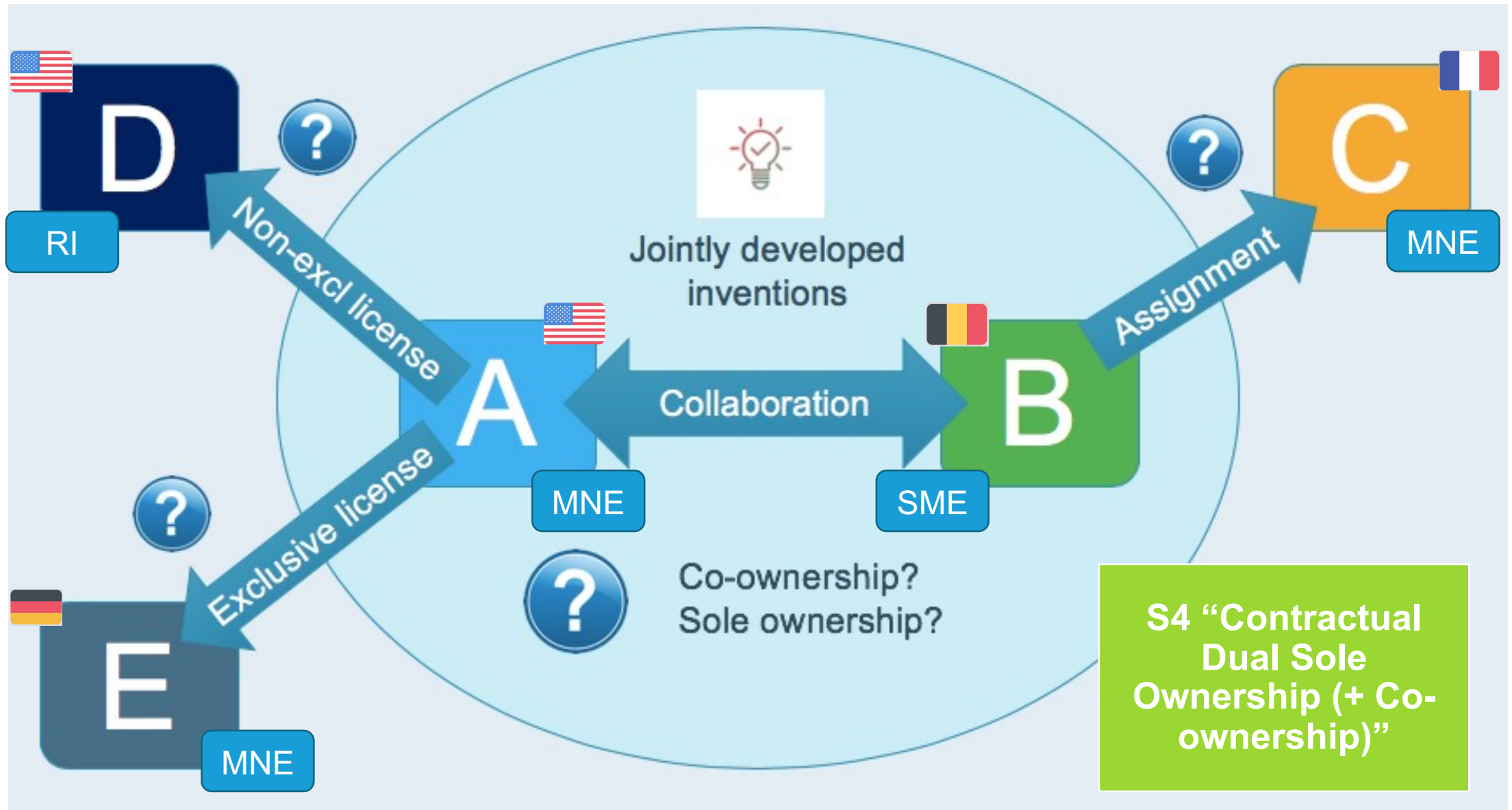


R&D collaboration agreements between universities

R&D collaboration agreements between universities and companies

R&D collaboration agreements between MNEs/SMEs from the same industry sector

“I hate co-ownership applications. As often as I can I will avoid it. Because it is always very complicated. First of all, you have to define who will take care of the prosecution of the application. Who will draft it? Secondly, if you have co-ownership, you really need to define some rules of co-ownership. Who will do what? Who can exploit what? What to do in case one of the partners is no longer interested in obtaining patent protection in a specific country? All these have to be prepared in advance and negotiated. It is very boring to try to negotiate that.”



1.2. Foreground Trade Secret Control Allocation Scenarios



Trade Secret Definitions

EU TS Directive

Article 2(1)

Information that (a) is **secret** in the sense that it is not, as a body or in the precise configuration and assembly of its components, generally known among or readily accessible to persons within the circles that normally deal with the kind of information in question; (b) has **commercial value** because it is secret; (c) has been subject to **reasonable steps** under the circumstances, by the person lawfully in control of the information, **to keep it secret**

= *Article 39 TRIPS*

DTSA

1839, Title 18 USC

Means all forms and types of financial, business, scientific, technical, economic, or engineering information ... if (A) the owner thereof has **taken reasonable measures to keep such information secret**; and (B) the information **derives independent economic value**, actual or potential, from not being generally known to, and not being readily ascertainable through proper means by, another person who can obtain economic value from the disclosure or use of the information

Who is a Trade Secret Holder?

EU TS Directive

Article 2(2)

‘Trade secret holder’ means any natural or legal person lawfully controlling a trade secret

DTSA

1839, Title 18 USC

The term ‘owner’, with respect to a trade secret, means the person or entity in whom or in which rightful legal or equitable title to, or license in, the trade secret is reposed

Trade Secret Control

No default
rules

Only
contractual
arrangements

Agree on confidentiality

Allocate the “control mode”

Allocate exploitation rights

Trade Secret Control Allocation Scenarios

Confidentiality
clause

Trade secret
clause

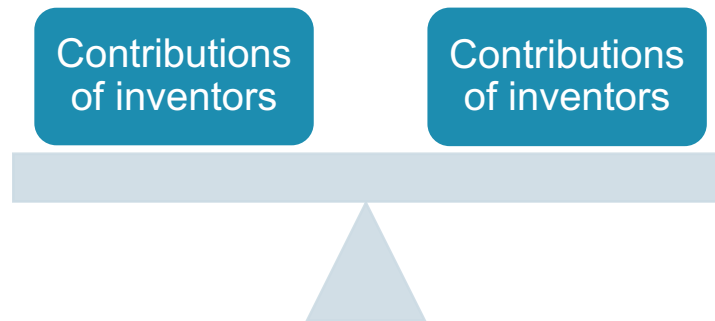
Trade secret
control follows
patent
ownership

2. Improvements to Facilitate Allocation of Foreground IP Ownership

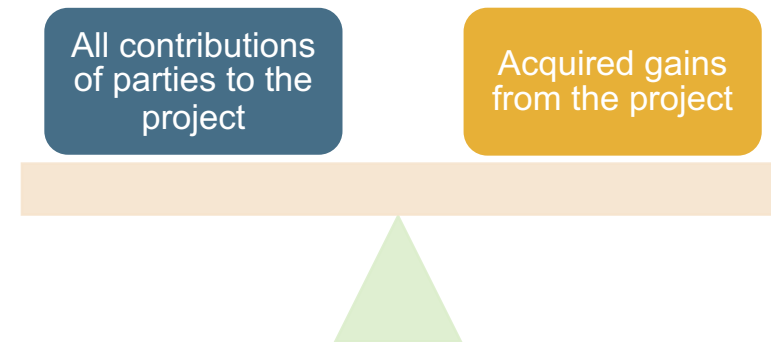


Different Perspectives on “Fairness”

Legislators (S1)



Collaborating parties (S2-5)



Contractual Practices and Third-Party Perspective

Lack of openness

- Confidential nature of contractual arrangements leads to legal uncertainty for third parties and may limit accessibility of developed knowledge

Lack of transparency

- Patent offices fail to provide third parties with accurate and timely information on patent owners and related right holders

Recommendations to Facilitate the Allocation of IP Ownership in R&D Partnerships

Legislators

- Harmonization of national patent default rules on exploitation of co-owned patents

Policymakers

- Implementation of guidelines and model agreements

Recommendations to Increase Openness and Transparency of IP Generated in R&D Partnerships

Patent offices

- *Openness*: Recordation of contractually specified exploitation rights
- *Transparency*: Implement obligatory recordation of assignments and licenses of patents

Legislators/ policymakers

- *Openness*: Increasing the number of patents (co-)owned by universities

Main “Takeaways”

1

Legal framework on **patent ownership**, based on **inventorship**, is not followed

Legal framework on **trade secret control** does not provide any relevant default rules

2

Collaborating organizations heavily **rely on contracting** and often prefer to **solely own** the R&D outcomes

Collaborating organizations often **struggle** to allocate **control over jointly developed trade secrets**

3

The understanding of a “**fair**” allocation of patent ownership significantly differs between legislators and collaborating organizations

Policymakers and legislators **could facilitate** the allocation of IP ownership in R&D partnerships

**Thank you very much for
your attention!**

Email: arina.gorbatyuk@kuleuven.be

