

# IPOB

## Collaboration, open innovation and intellectual property

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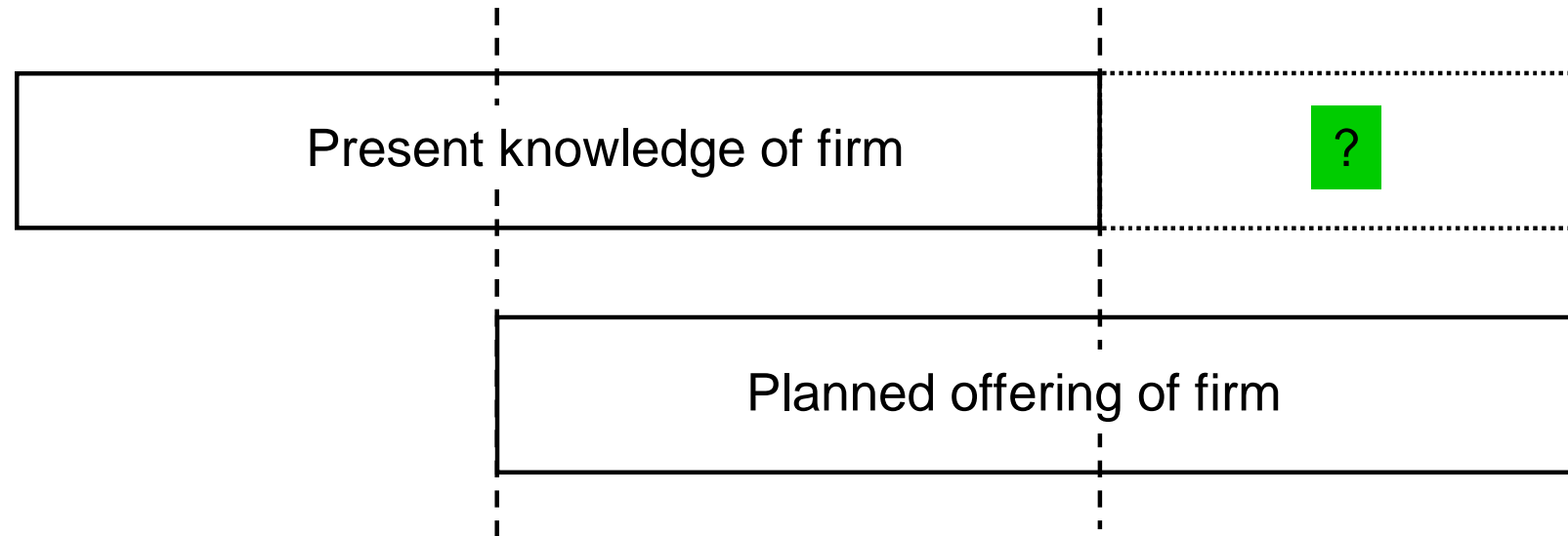
## Content

- Introduction and motivation
- IPOB project
- Results
- Conclusions

**Collaboration  
Open innovation  
Intellectual property**

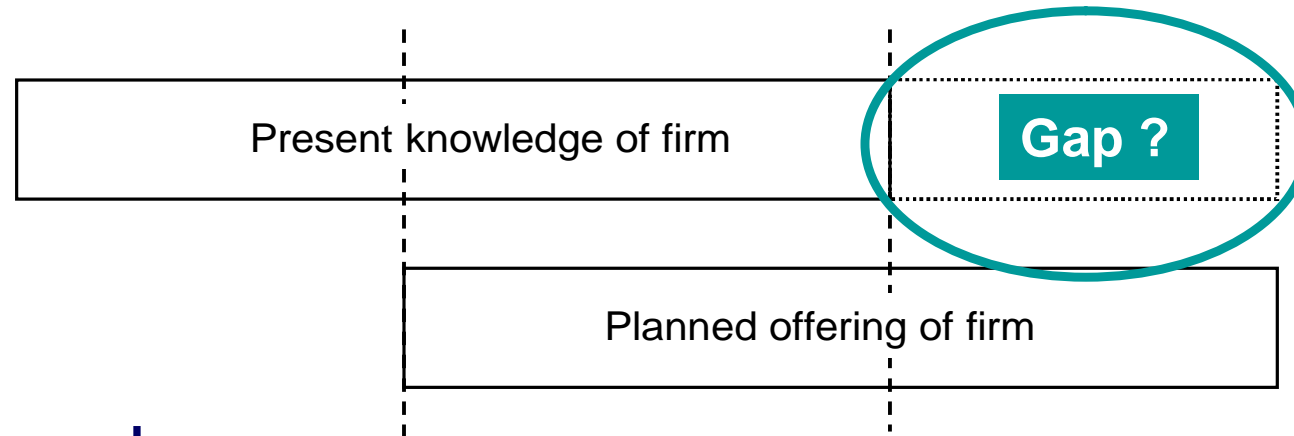
**Why?**

## Collaboration, open innovation and IP: Why?



Modified from: Chesbrough, H. (2006). Open Business Models: How to Thrive in the New Innovation Landscape.

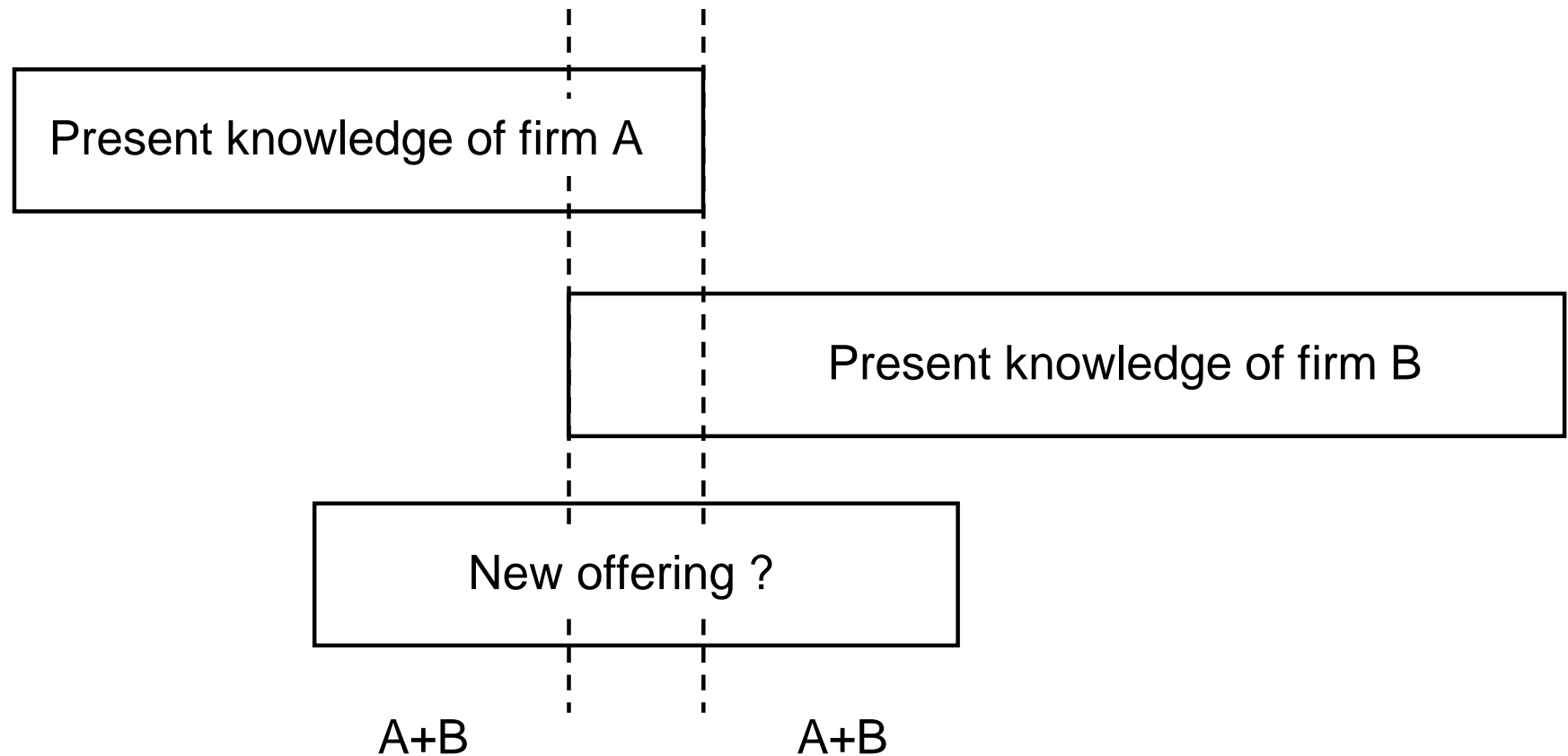
# Collaboration, open innovation and IP: Why?



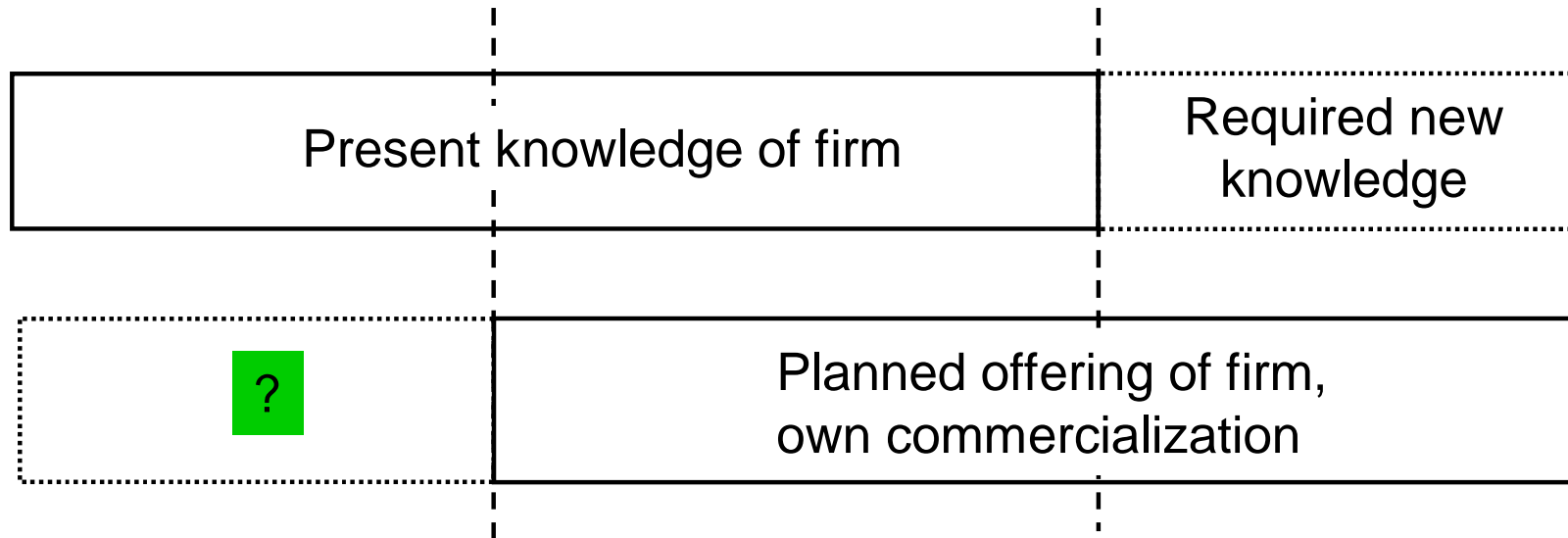
Fill the gap by

- In-house R&D
- Transaction of existing knowledge from another actor
- Co-creation of new knowledge with external actors

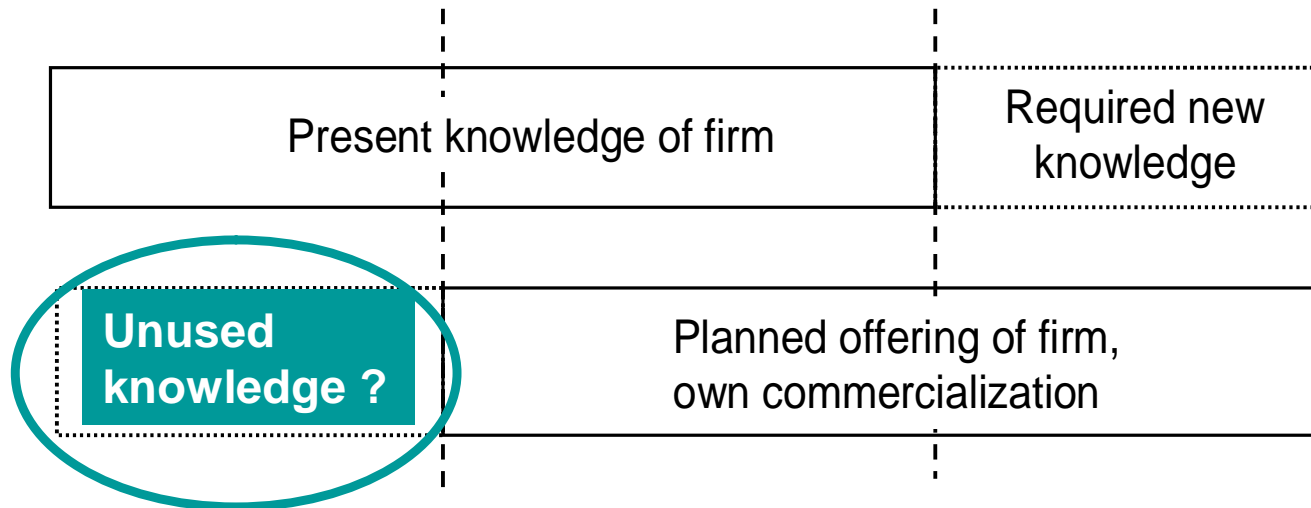
## Another approach for co-creation: Why?



## Collaboration, open innovation and IP: Why?



# Collaboration, open innovation and IP: Why?



## ”Unused” knowledge

- Keep it in-house (but does it create profit?)
- Knowledge (IP) transaction to another actor (and making of profit through it)
- Sharing of knowledge & co-creation of new business with another actor

# What is open innovation?

- “Open Innovation processes combine internal and external ideas into architectures and systems. They utilize business models to define the requirements for these architectures and systems. The business model utilizes both external and internal ideas to create value, while defining internal mechanisms to claim some portion of that value.” (Henri Chesbrough, 2006)

# What is open innovation?

- Open innovation > R&D
- Open innovation = R&D + business model
- Innovation can take place in R&D, business model or in both

## IPOB project

- IPOB = Intellectual Property in Open Business Models
- IPOB Research project:



- IPOB Industry project:



## IPOB Interview study about current practices in inter-organizational innovation: Interviewed organizations in Finland



## IPOB Interview study about current practices in inter-organizational innovation: Interviewed organizations in the Netherlands



DUNAGRO



## IPOB case working

ARCUSYS

 **blancco**

**medisize**  
CREATING SMARTER SOLUTIONS

**Outotec**  
More out of ore

**SANDVIK**

 **TAMLINK**  
INNOVATION · RESEARCH · DEVELOPMENT LTD

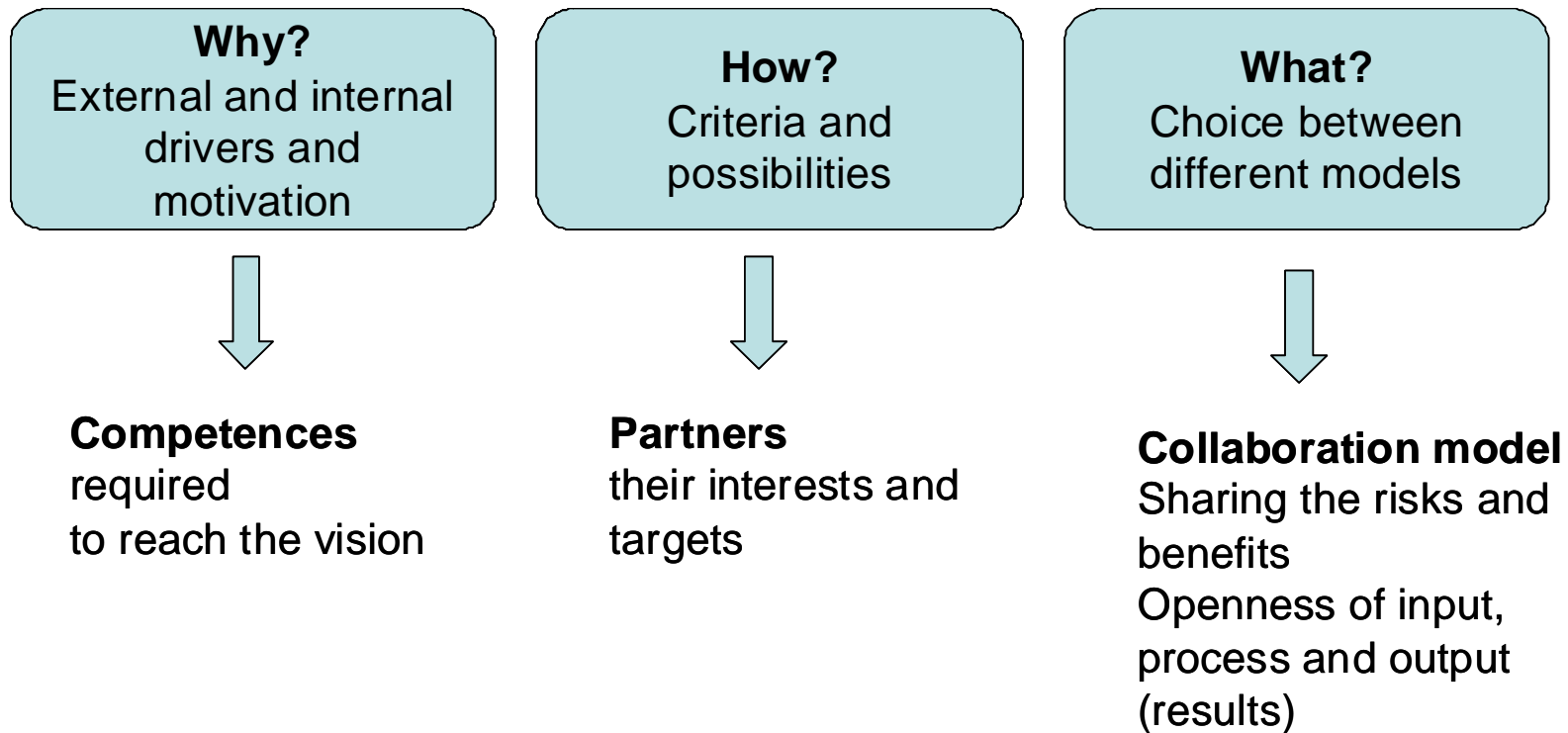
## IPOB Results

# According to the interview study

- 90 % of the interviewed companies is cooperating with other actors in innovation and new business development
- No differences between Finland and the Netherlands
- Forms of the collaboration are variable

# In-house R&D, IP transaction or co-creation?

- Main questions supporting decision whether to utilize in-house R&D, IP transaction or co-creation in innovation

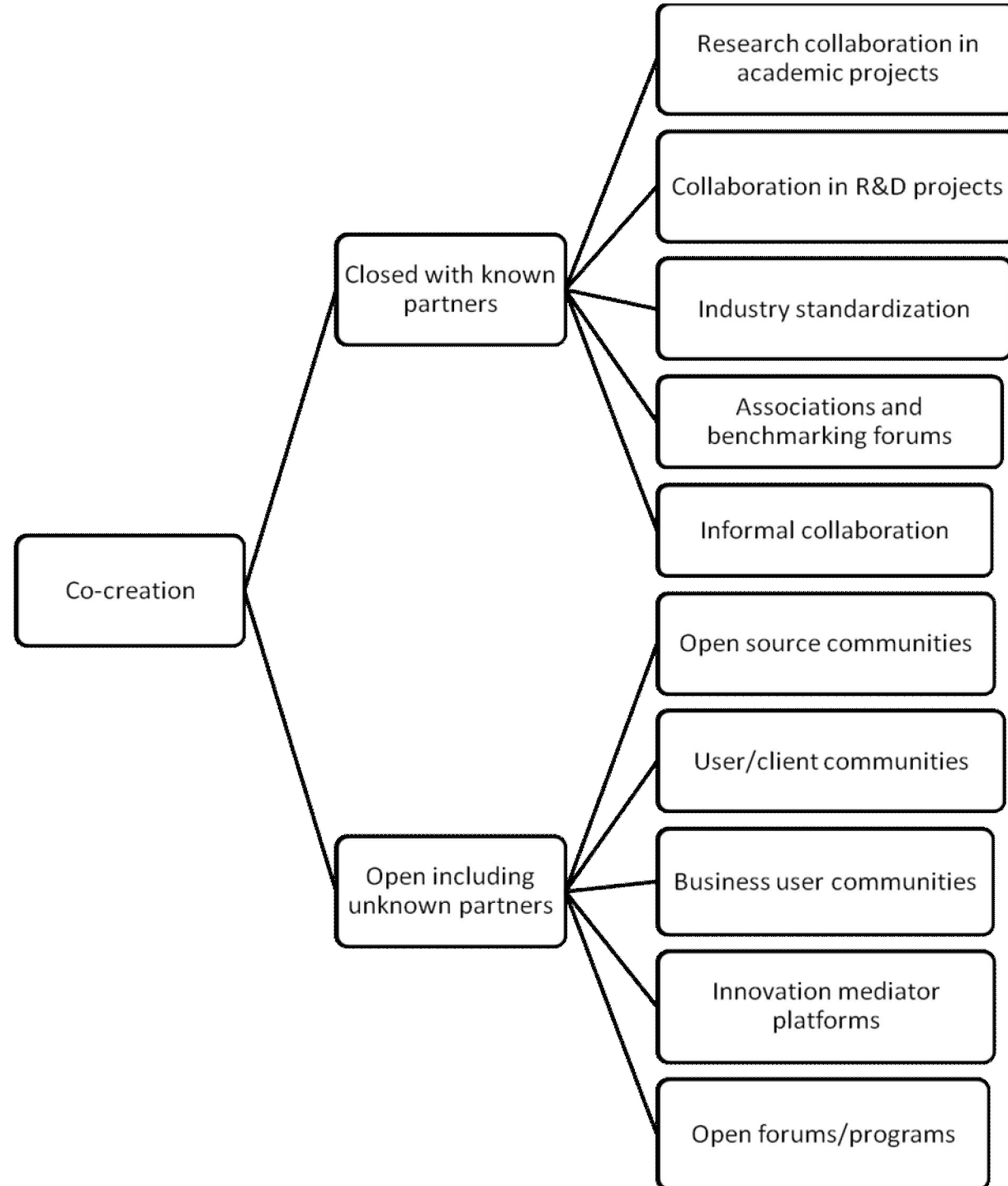


# Knowledge transaction and knowledge co-creation networks / relationships

	<i>Transaction networks</i>	<i>Co-creation networks</i>
Target	Exploitation of existing knowledge	Exploration of new knowledge
Challenge of network orchestration	Participation interests according to appropriate business models	Participation and commitment based on shared interests
Nature of knowledge	Explicit knowledge, IP managed by formal methods (patents etc.)	Tacit knowledge during co-creation, possible explicit background IP, explicit outcome knowledge

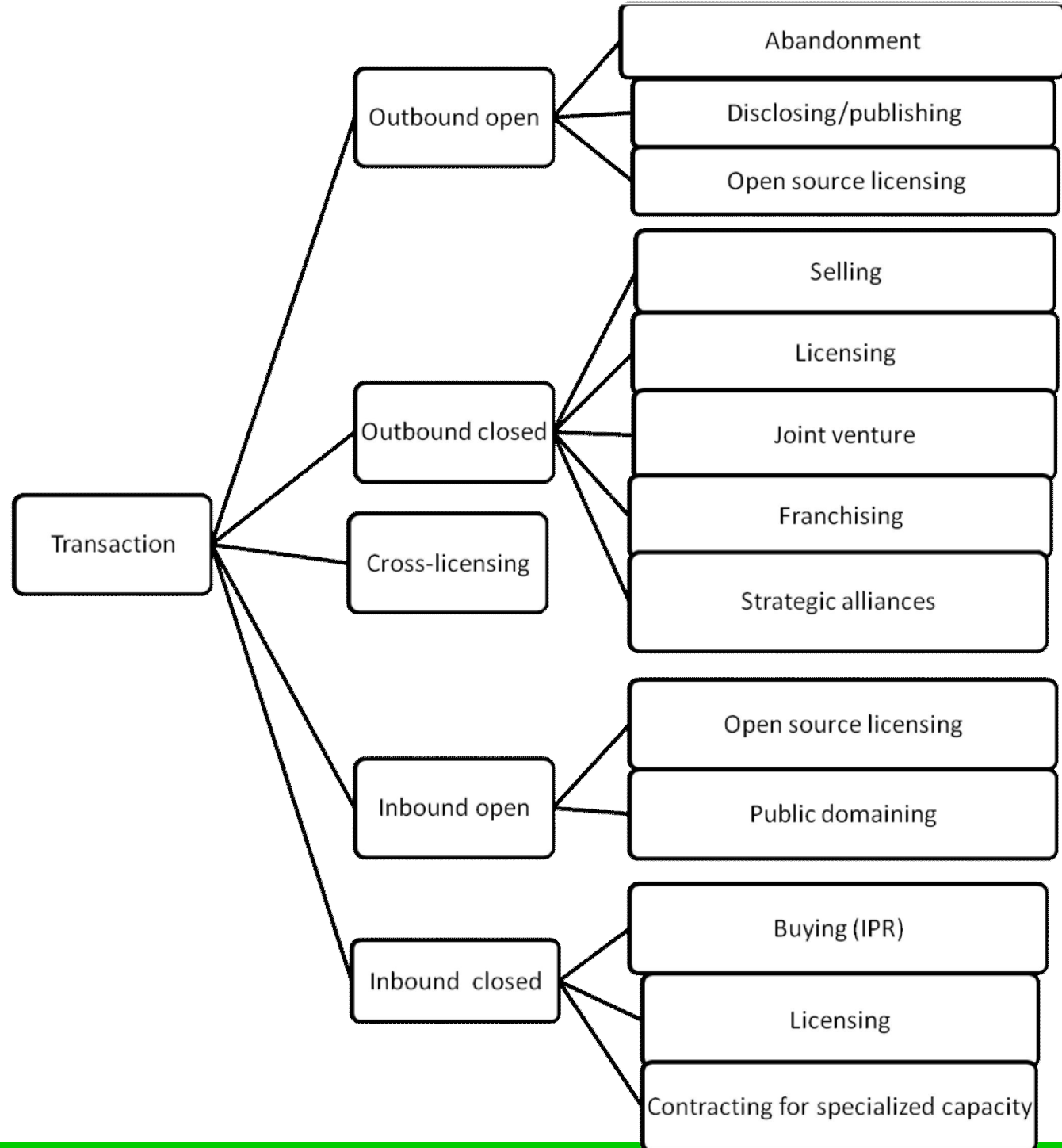
# Co-creation networks

(i.e. joint exploration of new business)



# Transaction networks

(i.e. exploitation of an innovation outcome)



# How open is open innovation?

## Different levels of openness

Increasing openness in collaboration

<i>Name of level</i>	<b>Closed</b>	<b>Available</b>	<b>Usable</b>	<b>Modifiable</b>	<b>Public</b>
<i>Key characteristics</i>	Closed transfer of knowledge under bilateral agreements	Input knowledge is open inside the network, whereas the innovation process and its outcome are closed (proprietary)	Input knowledge as well as the innovation process are open inside the network, whereas the outcome is closed (details defined in consortium agreement)	Input, process as well as outcome are open inside the network (joint IP)	Input, innovation process (formal or informal) and its outcome are public
<i>Linkage to collaboration models</i>	Transaction networks	Co-creation networks			Transaction or co-creation networks

## => Open or networked innovation ?

- Would it be better to speak about **networked innovation** in order to cover
  - all forms of collaboration and
  - all levels of openness?

# Protection of knowledge in open or networked innovation

## Formal protection methods / Intellectual Property Rights

Copyright

### Industrial property rights

- Patent
- Utility model
- Copyright
- Trademark
- Right to a commercial name

## Semi-formal / contractual protection methods

- Prohibition of competition
- Confidentiality
- Recruitment freeze
- Employee invention
- Proprietary and access rights

## Informal protection methods

- Secrecy
- Publishing
- Restricted access to information
- Database and network protection
- Confidentiality
- Client relationship management
- Loyalty building among personnel
- Circulation of staff between tasks
- Division of duties or subcontracting
- Distributed product design
- Fast innovation rhythm
- Documentation
- Complex design
- Membership in professional organisation
- etc.

Modified from PRO INNO Europe 2007

# Protection of knowledge in open or networked innovation

- According to the interviewstudy:
  - Contractual methods are the most important ones in protection of knowledge in inter-organizational collaboration
  - Top 5 methods are

<i>Formal protection methods</i>	<i>Contractual / Semi-formal protection methods</i>	<i>Informal protection methods</i>
<ul style="list-style-type: none"><li>– Patent</li><li>– Trademark</li></ul>	<ul style="list-style-type: none"><li>– Confidentiality</li></ul>	<ul style="list-style-type: none"><li>– Secrecy</li><li>– Publishing</li></ul>

## IP = IPR + know-how ?

- Firms would like to isolate and control the know-how related to inter-organizational innovation
- *“At our firm we understand IP as intellectual property rights plus the know-how that can be covered by an NDA and other agreements.”*
- => a need for a broad definition of IP:

# IP = IPR + know-how ?

- Suggestion for the definition of intellectual property in the context of open and networked innovation:

**IP = knowledge that can be controlled with formal intellectual property laws + knowledge and other intangible resources whose use may be controlled by contracts, policies, organisation and process routines and norms, both physically and technically**

# IP ownership in open/networked innovation

- Traditional model: ownership by customer (in b-to-b)
- *"We have strategic cooperation with a supplier which deliver a vital part of our product. We didn't pay for them for the development. We have the IP but they have the first right for delivery and they amortise their development costs in the goods they supply. The downside is that we could make more profit if we could save a euro on materials, but that would require a new construction and a new development project with them (which is not of direct interest to the supplier in the used model of collaboration)."*

# IP ownership in open/networked innovation

- Alternative model: ownership by supplier (in b-to-b)
- *“We collaborate with a big material supplier. When they are developing new features for their materials, they sometimes provide us with samples for testing. Although we don’t get IP rights to the materials, because we are a small company in comparison to them, the collaboration is very beneficial for us. It promotes our own product development and we gain a competitive advantage by more quickly releasing new products based on these materials on the market.”*

# IP ownership in open/networked innovation

- New business model applied in collaboration
- *"We lacked a good proprietary technology. Instead of developing that ourselves, we decided to team up with another company. Five years earlier, we would have tried to develop it ourselves, but at that point we said no. We might do that, but it would either take much longer or the end product would be inferior to the situation where we would team up with somebody. So what we did was that we signed a deal with them, defined a joint development program, and obtained an exclusive license. Both companies benefit from it, because all the sales and the licensing revenues, we had opted for a licensing model, are shared between us. To me that is a modern example of how you do innovation, because you really derive a lot of strength from your partner, but you also bring very good things to the table."*

# Conclusions

- Innovations are usually created in relationships with two or more actors
- The forms of the innovation relationships are variable:
  - Actors can be known or unknown
  - Collaboration can be formal or informal
  - There are different levels of openness in collaboration
- Open and networked innovation offers many opportunities for firms to create new business, but brings also additional risks that the firm must manage

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## More information

- Project website: <http://www.vtt.fi/proj/ipob/>
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