



Brokerage for Innovation

Webinar April 6, 2017

Contact information:

Heidi Korhonen (VTT)

☎ +358 405 956 450

✉ heidi.korhonen@vtt.fi

Magnus Simons (VTT)

☎ +358 405 438 586

✉ magnus.simons@vtt.fi

Brokerage explained

Brokerage



*“Brokerage activities are tools dedicated to setting up new **partnerships** and for launching new **collaborative** project proposals. It is a way to **strengthen the cooperation** between European SMEs, industries and research units and to give to European organizations a simple, direct and accessible way to **find partners** all around Europe.”*

I4MS definition of brokerage http://i4ms.eu/i4ms_concepts.php

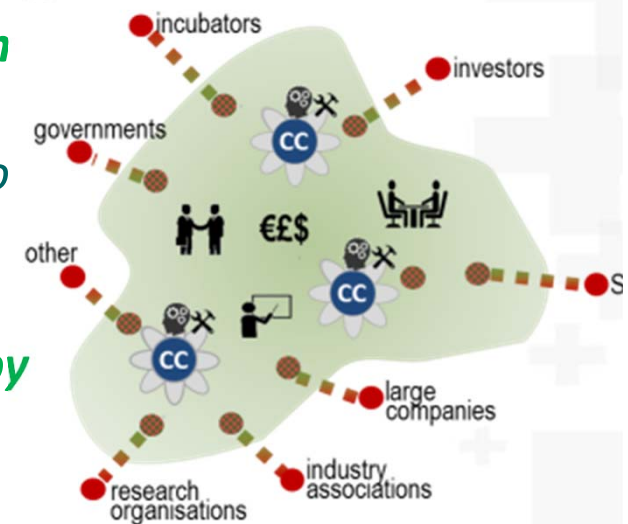
Brokerage is an essential activity of DIHs



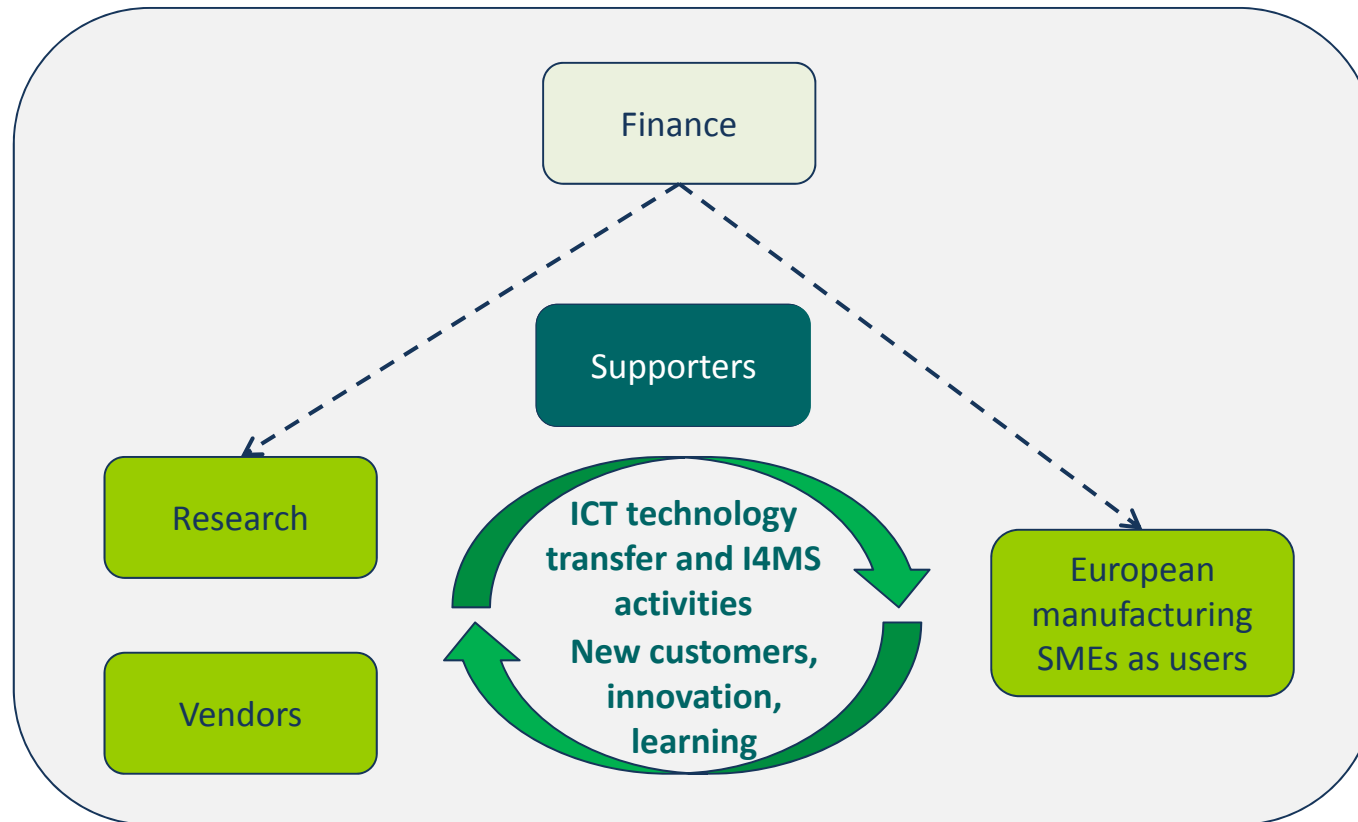
*“The Digital Innovation Hubs are organisations or consortia of organisations that maintain, expand and create the (regional) ecosystem on I4MS related activities. This includes **networking, matchmaking, brokerage and dissemination activities**. They include one or more (transnational) Competences Centres and also offer innovation services to **activate, support and stimulate the valorisation of I4MS technologies** (e.g., awareness creation, dissemination of information, network development, incubator activities) **by SMEs.**”*

I4MS definition of digital innovation hubs

http://i4ms.eu/regional_hubs/rhobservatory.php

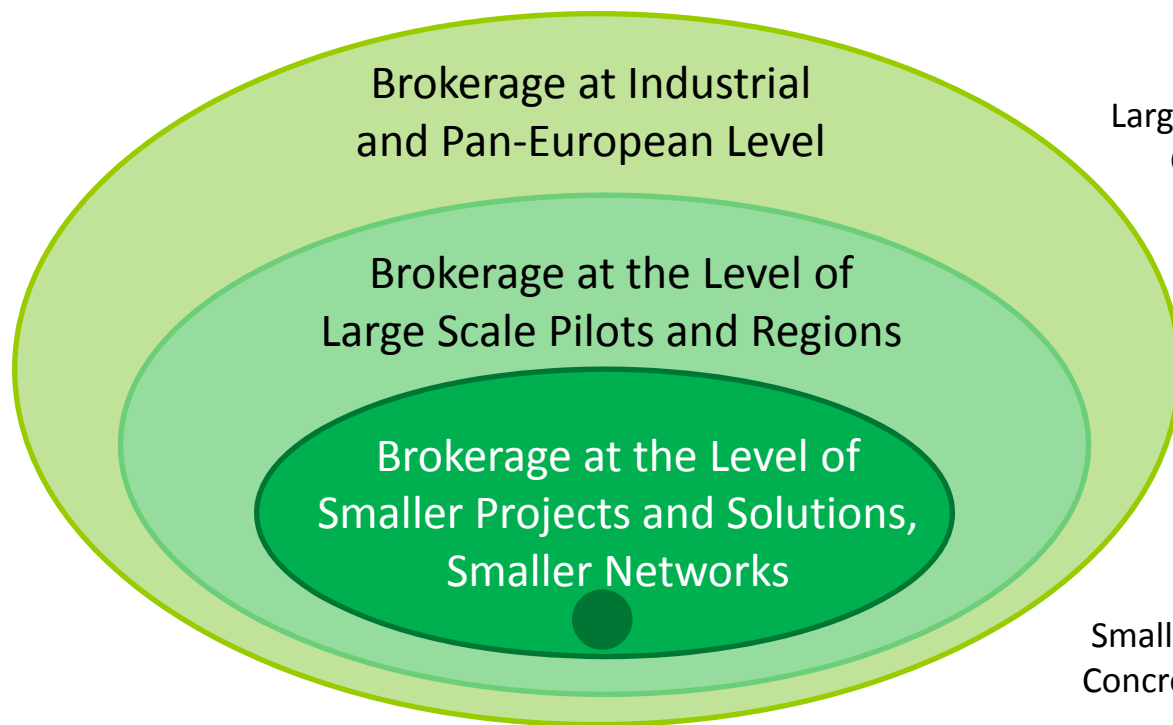


Brokerage



Brokerage matches different levels of view top-down and bottom-up

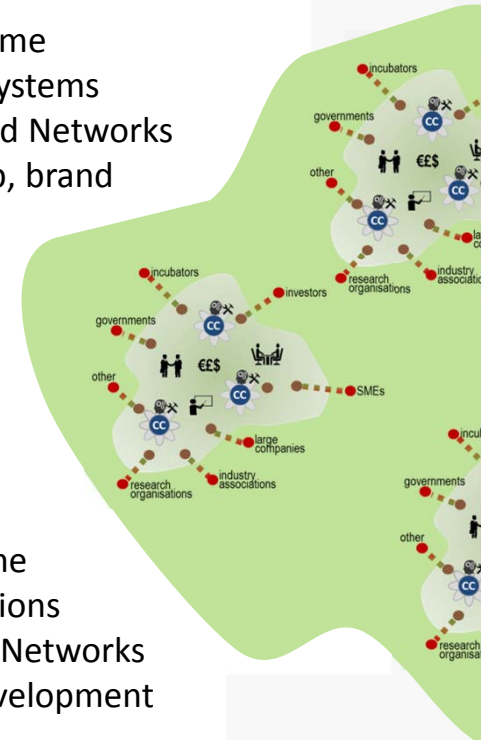
Scope and/or Geographical Coverage



Long Time Frame
Clusters and Ecosystems
Larger and Less Defined Networks
Culture, leadership, brand



Short Time Frame
Projects and Solutions
Small and Well Defined Networks
Concrete technology development



Importance of interaction at ecosystems level

- People
- Open and collaborative innovation
- Serendipity
- Proximity, regions
- No "safe bets"
- System innovations
- Top-down bottom-up approach

Different approaches to innovation support covered by brokerage



- Technology transfer as push
- Services based on business needs, demand pull
- Ecosystems development, facilitation of interaction

Understanding the technology

Understanding the customers

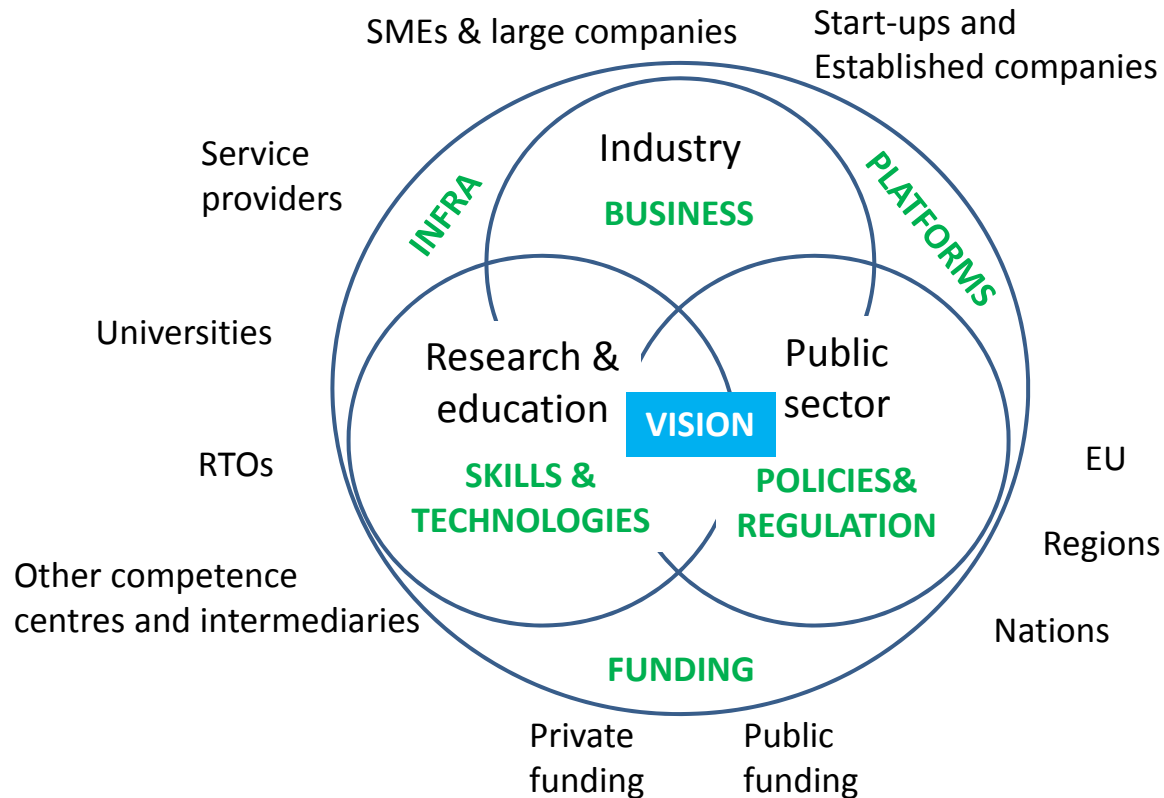
Understanding the different parties and their win-win as well as their conflicting interests

All approaches needed

Skills for ecosystems level sharing and co-creation

- Complementary competencies
- Building relational capital
- Creating trust
- Joint vision
- Foresight
- Dynamics within the ecosystems
- Proximity and places to meet naturally
- Collaboration platforms, living labs etc.
- Mobility of people between research and industry

Complex matchmaking



Other XS2-I4MS webinars provide detailed information on specific topics

- Ecosystem assessment
- Access to finance
- Developing use cases
- Business models
- Business plan

Different ways of bridging and interaction enabling

1. Providing information

- May be based on face-to-face information provision but also databases and AI can be used to support companies' search for information on e.g. technologies, markets, competitors, potential partners

2. Matching parties and technologies and building networks

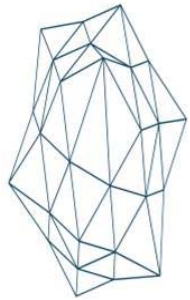
- Parties and technologies can be assessed to ensure win-win matches
- Brokerage aids in the construction of an effective network and may encourage clustering and formation of ecosystems

3. Supporting high quality interaction

- Brokerage supports the development of a collaborative culture

Two Cases

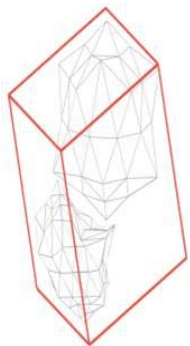
Demola



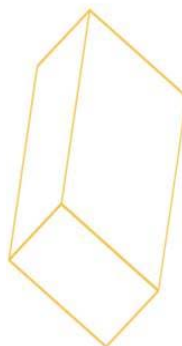
a network that consists of various partners including universities, their faculties, researchers and students, as well as companies, local agencies and a growing number of Demola Centers around the globe. Not only are we international, we are interdisciplinary.



a co-creation concept that is geared to solve real challenges. Every project has an outcome – be it a new concept, a demo, or a prototype. If the partner company finds the outcome useful, the company can license or purchase the outcome, and take it for further development.



a process that is formatted and facilitated. The Demola process ensures that the work is systematic and runs on schedule. This way, the work itself can be as creative as possible, but the process keeps things under control both in terms of time and deliverable.



a framework that makes it easy for partners to come in and cooperate. Each partner has a clear role, and the work is guided by simple procedures. Contracts, intellectual property rights, licencing models, and other legal requirements are in place and meet international business standards and practices.

Demola turns ideas and needs into a working demo, prototype or concept with talented, highly motivated and multidisciplinary student teams, only in 3-4 months. Demola is an agile way to boost your in-house product and service development processes.

SME Project Windows



VTT FOR INDUSTRY

Theme workshops for SMEs at VTT (Espoo, Tampere, Oulu) or at regional premises with help of areal VTT representatives

New SME contacts

- 2015 13 **SME project windows**
- Each **SME project window** reaches 10 to 20 new SME customers



Increasing SME competitiveness through 3 D-printing



The path from a basic product to smart product on the industrial internet



RobotCar – how to get euros?



New automation – flexible robot systems to small series production



From general machine shop to specialised - superior knowledge or own products

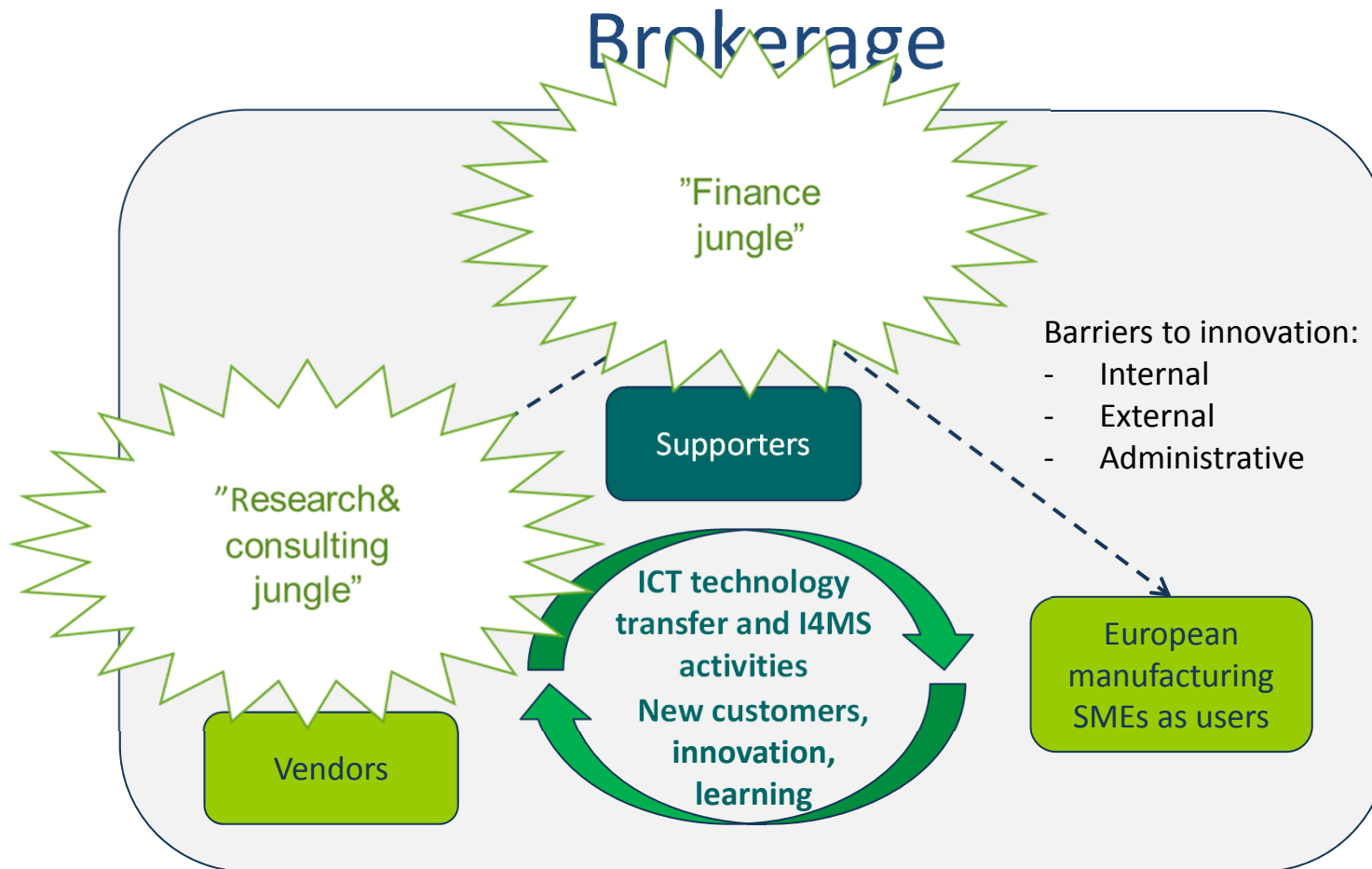


Noiseless machines and equipment – calculated acoustic functionality

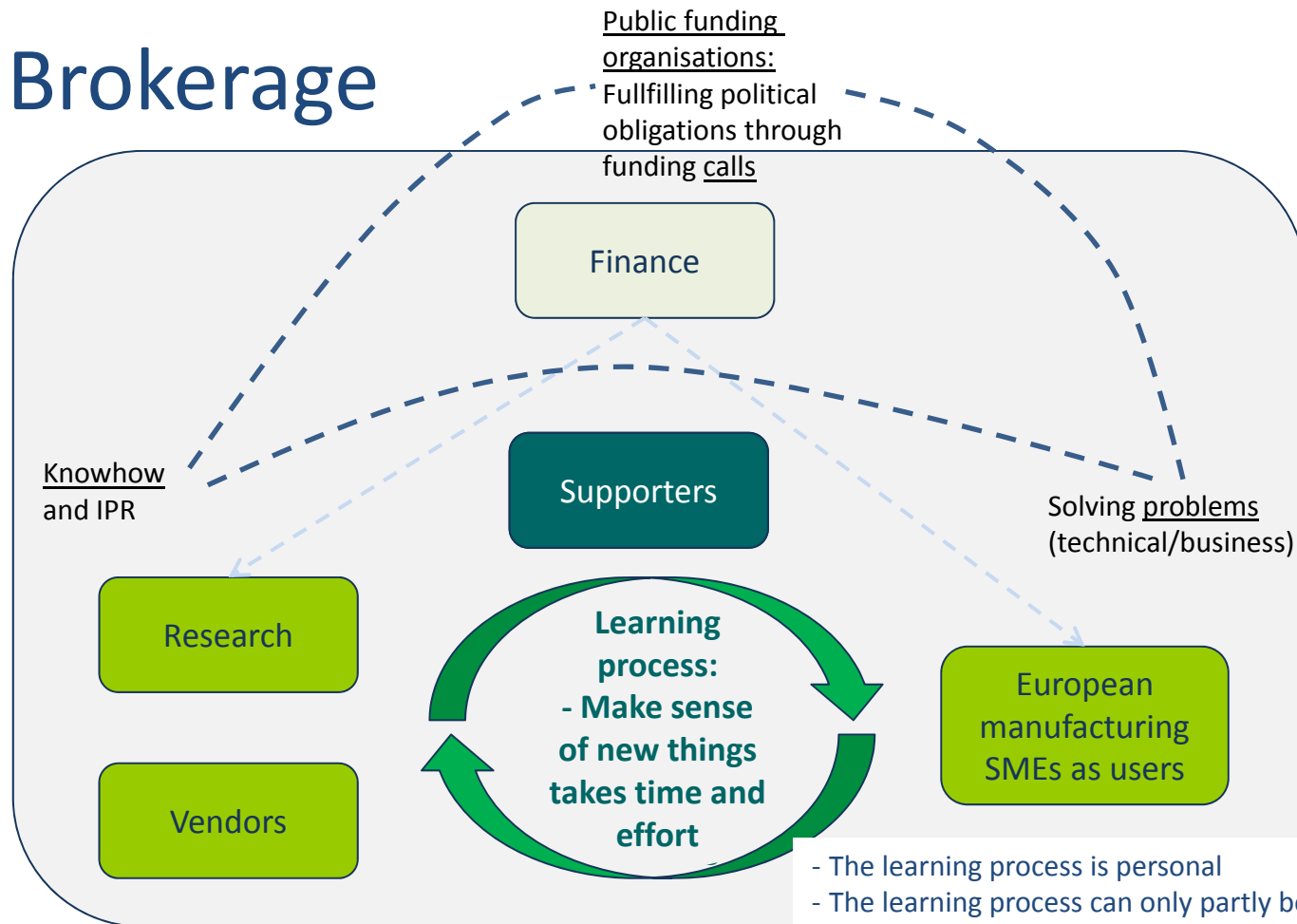
Practices for brokering with SMEs

- The need, the challenge
and some good examples

The need for brokerage from the point of view of the SME



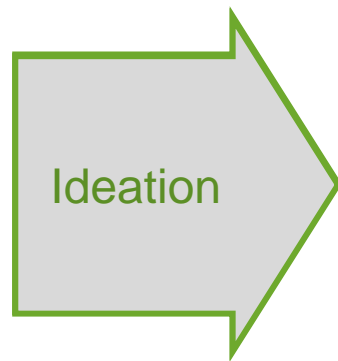
Brokerage



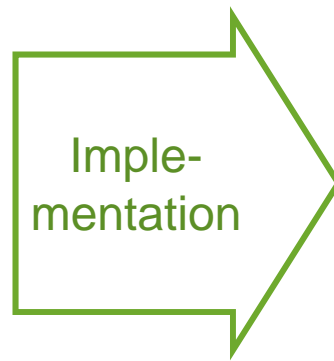
The challenge of brokerage is to combine objectives and experience of a wide range of actors

1. Matching problem and knowhow
2. Matching problems and finance
3. Matching finance with knowhow

Practices for brokerage are needed in three different phases



Matching needs,
knowhow and call
criteria



Learning and sense
making of technology
and partner's knowhow



Sharing opportunities
and responsibilities

Ideation phase: "make people meet and mingle"



"Brokerage Event"

- Seminar/conference to mix company and research representatives



"Pitching"

- Short presentation of idea to expert panel



"Hackathon"

- Student/expert seminar to create solutions to company problem



"Think Tank"

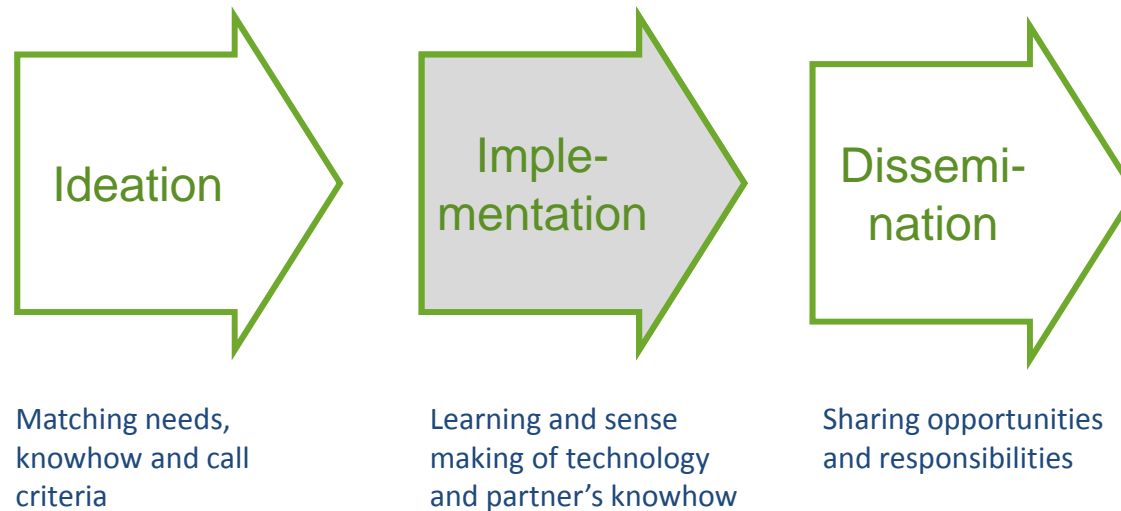
- Workshop of identifying company's key assets and development target

"Pre-Study"

- Researchers analysis of company activities, technology, etc.



Practices for brokerage are needed in three different phases



Implementation phase:

- means for efficient technology transfer



Many of these primarily serve the needs of universities and research organisations

<p>Personal Informal Relationships</p> <ul style="list-style-type: none"> • Academic spin-offs • Individual consultancy (paid for or free) • Information exchange forums • Collegial interchange, conference, and publications • Joint or individual lectures • Personal contact with university academic staff or industrial staff • Co-locational arrangement 	<p>Personal Formal Relationships</p> <ul style="list-style-type: none"> • Student internships and sandwich courses • Students' involvement in industrial projects • Scholarships, Studentships, Fellowships and postgraduate linkages • Joint supervision of PhDs and Masters theses • Exchange programmes (e.g. secondment) • Sabbaticals periods for professors • Hiring of graduate students • Employment of relevant scientists by industry • Use of university or industrial facility (e.g., lab, database, etc.)
<p>Third Party</p> <ul style="list-style-type: none"> • Institutional consultancy (university companies including Faculty Consulting) • Liaison offices (in universities or industry) • General Assistance Units (including technology transfer organizations) • Government Agencies (including regional technology transfer networks) • Industrial associations (functioning as brokers) • Technological Brokerage Companies 	<p>Formal Targeted Agreements</p> <ul style="list-style-type: none"> • Contract research (including technical services contract) • Patenting and Licensing Agreements (licensing of IPR) • Cooperative research projects • Equity holding in companies by universities or faculty members • Exchange of research materials or Joint curriculum development: • Joint research programmes (including Joint venture research project with a university as a research partner or Joint venture research project with a university as a subcontractor) • Training Programmes for employees
<p>Formal Non-Targeted Agreements</p> <ul style="list-style-type: none"> • Broad agreements for U-I collaborations • Endowed Chairs and Advisory Boards • Funding of university posts • Industrially sponsored R&D in university departments • Research grant, gifts, endowment, trusts donations (financial or equipment), general or directed to specific departments or academics 	<p>Focused Structures</p> <ul style="list-style-type: none"> • Association contracts • Innovation/incubation centers • Research, science and technology parks • University–Industry Consortia • University–Industry research cooperative research centers • Subsidiary ownerships • Mergers

6-4-2017

Brokerage for innovation

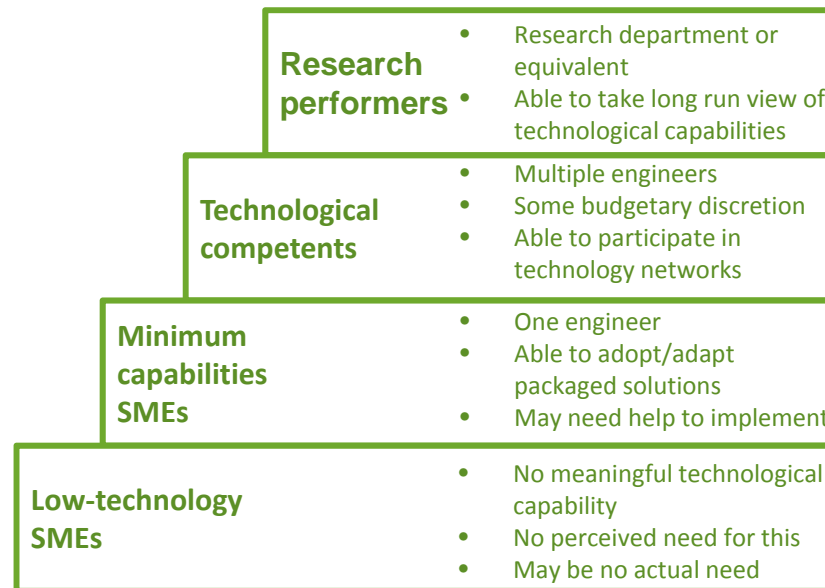
Adapting brokerage to the level of capabilities of SME's



Practices for technology transfer

- Sabbaticals periods for professors
- Hiring of graduate students
- Employment of relevant scientists by industry
- ...
- Contract research (including technical services contract)
- Patenting and Licensing Agreements (licensing of intellectual property rights)
- Cooperative research projects
- ...
- Training Programmes for employees
- Joint or individual lectures
- Individual consultancy (paid for or free)
- ...

Level of technological capabilities*



*Source: OECD

Examples of Themes

- Technological development concerning e.g. eco efficiency, automation, remote diagnostics, ergonomics, information and communication technologies, ...
- Production development and optimization, product data management, information systems, ...
- Service business, customer value chain analysis, new service concepts, ...
- Organization development, RnD process, management practices, ...

Technology

- Eco efficiency
- Automation/ monitoring
- Ergonomics
- ICT
- ...

Production

- Throughput
- Automation
- PDM/PLM/ERP
- Management
- ...

Service business

- Customer valuation
- Service concepts
- Business models
- KP indicators
- ...

Organization development, RnD process, Management

Involving SMEs in research and innovation is a joint challenge. Let's share experiences of good brokering practices in I4MS!

Thank you!