Master Thesis:

An exploratory study of the determinants for a successful implementation of open innovation in large multinational enterprises

Maturity Model for Asymmetric Open Innovation Collaborations with SMEs

Ludwigshafen am Rhein, 07/18/2018

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Agenda

1. Research Aim
2. Framework: Maturity Model
3. Methodology used
4. AOICMM MODEL : Elements and metrics
5. Findings
6. Recommendations

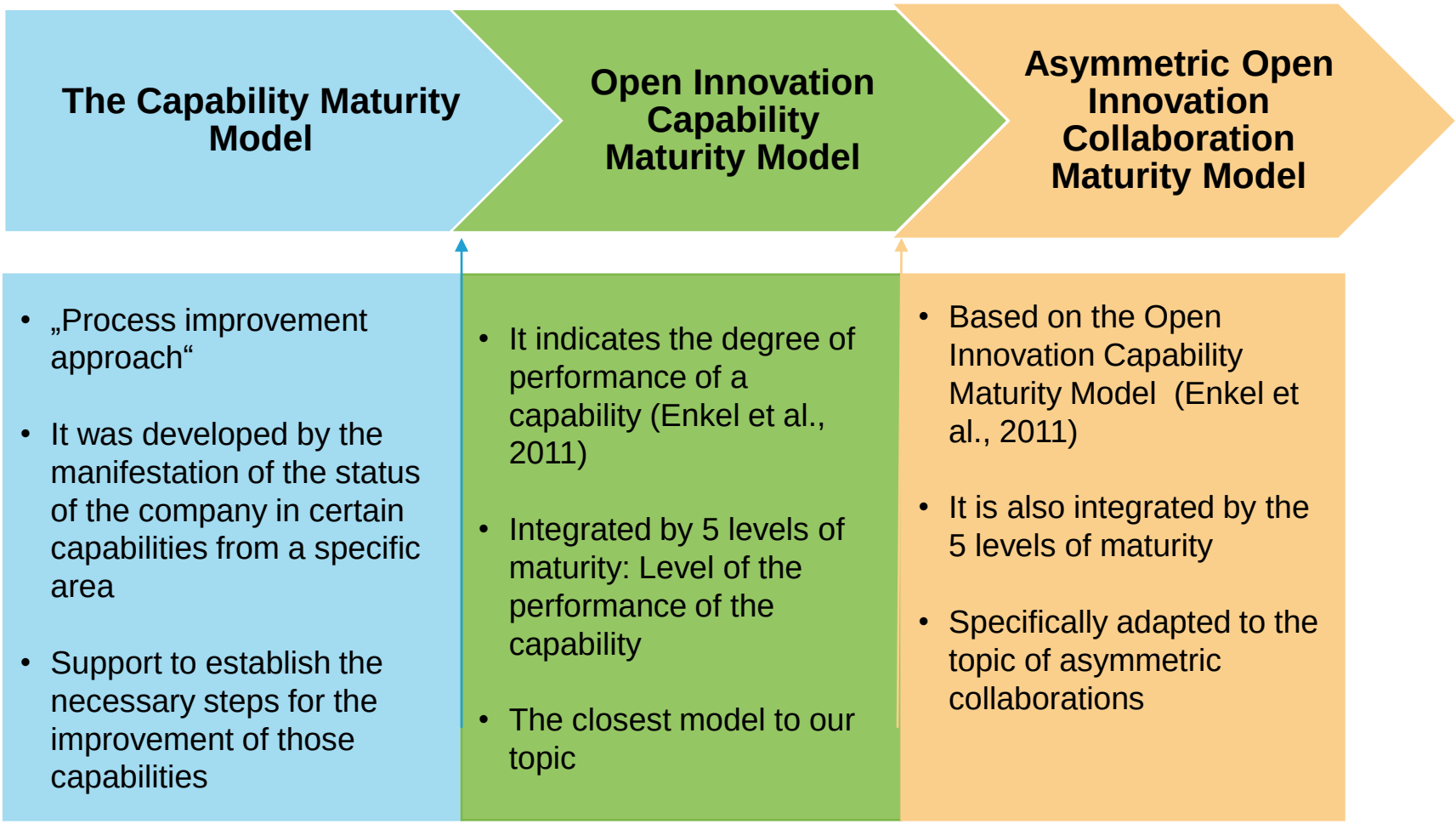
Research Aim

Research Question 1.
What are the elements and metrics to determine the level of maturity of asymmetric collaborations between large enterprises and SMEs for open innovation?

Research Question 2.
What is the current maturity level of the collaborations for open innovation between BASF and SMEs?

Research Question 3.
How can the level of maturity be improved for successful OI collaborations between BASF and SMEs?

Framework: Maturity Model



Methodology

Determination of the dimensions, elements and metrics of the Maturity Model

Extensive literature review

Selection of the most important elements

- Difference in speed
- Point of contact
- Trust
- Communication efficiency

Pilot test

Re-adjustment of the maturity model

Data Collection:

Set of semi-structured interviews within BASF

- **Operational Business**
- **New Business Development and Venture Capital**
- **Procurement (Supply Enabler Innovation)**
- **Research Divisions**
- **Smart Innovation and technologies**

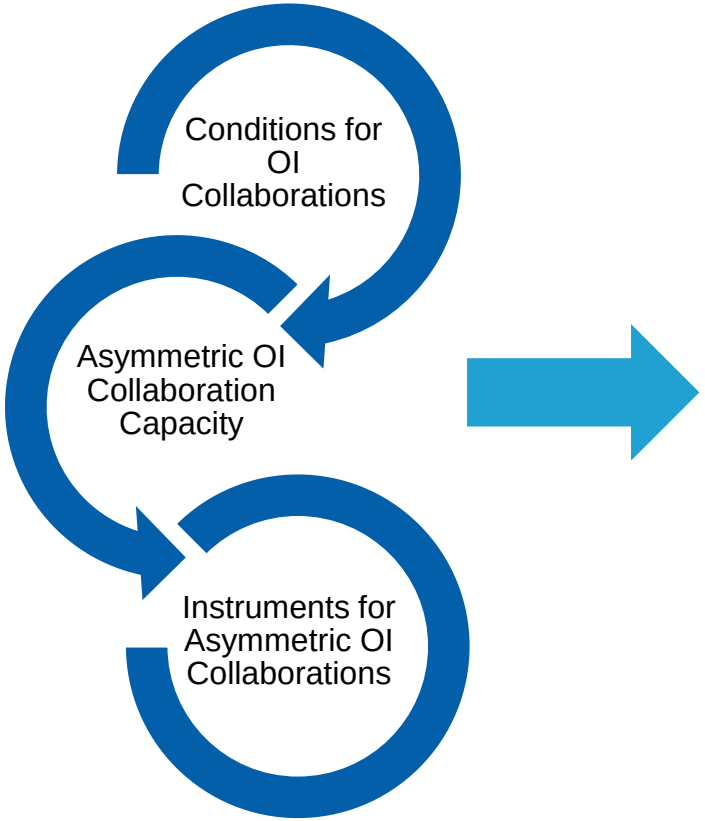
3 interviews with external small companies that collaborated or collaborate with BASF

2 external companies for benchmark

AOICMM MODEL : Elements and Metrics

Proposed Asymmetric OI collaboration Maturity Model (AOICMM)
Based on the OI Maturity Model developed by Enkel, Bell & Hogenkamp (2011)

Dimensions of the AOICMM

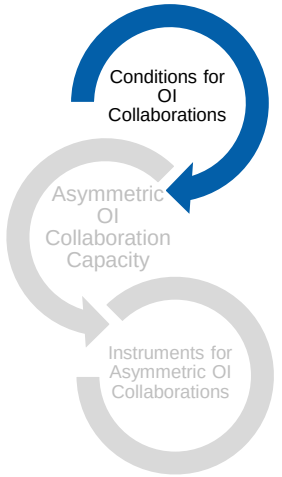


Level 1	• Initial. Process unpredictable, poorly controlled and reactive
Level 2	• Managed: Processes characterized for projects and is often reactive
Level 3	• Defined: Processes characterized for the organization and is proactive
Level 4	• Quantitative Managed: Processes measured and controlled
Level 5	• Optimizing: Focus on process improvement

CMMI Product Team, Capability Maturity Model® Integration (CMMI®), 2002; Knoke, 2010)

Overview of the 3 general elements considered in the proposed AOICMM

1. Conditions for collaboration



- Promotion in the strategy of the company
- Success stories

Leadership
- Clear strategy
- Awareness

Incentives
- Assessment

- Assessment of employees based on these collaborations

Mindset
- Initiative taking
- Trust
- Screening

- Willingness to establish these collaborations
- Degree of trust with the partner
- Screening opportunities

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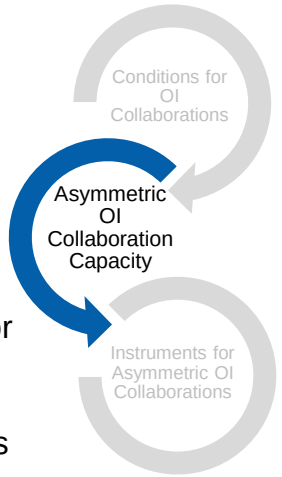
2. Asymmetric OI Collaboration Capacity



- Network of potential small companies
- Specific criteria for identification and selection of potential small companies
- Establishment of mutual goals and expectations with the partner

Partner Selection

- Network building
- Selection process
- Mutual goals and expectations

- Integration and use of knowledge generated
- Standardized process for these collaborations
- Clear delegation of tasks between the partners

Collaboration Management

- Knowledge management
- Standardized Process
- Delegation of tasks

- Management of conlifcts during the collaboration
- Mutual established timeframe
- Efforts to create a good reputation

Conflict Management

- Partner Satisfaction
- Time Management
- Reputation

- Training of employees in these collaborations

Training

- Learning mechanisms

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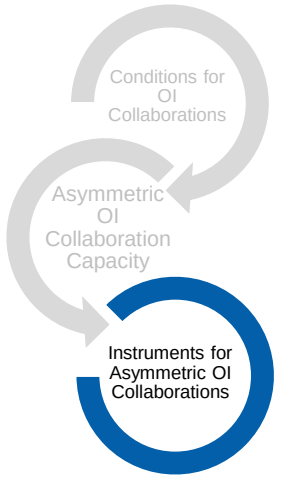
3. Instruments for Asymmetric OI Collaborations



Central coordination

- Communication dynamics
- Communication of the available resources

Resources

- Point of contact
- Mechanisms of control
- Facilities for OI collaborations

Legal protection

- IP Protection

- Communication efficiency between partners
- Communication of all resources within the company that can improve collaborations
- Point of approach to start collaboration
- Evaluation system for collaborations
- Shared facilities for collaborations
- Mechanisms for the effective protection of IP specifically for these collaborations

Results of the AOICMM application in BASF

Results of the AOICMM test in the different units in BASF

CHALLENGES

- Different speed of the small company
- Strict internal processes
- Lack of trust between the partners and even internally
- Unilateral information sharing with the small company
- Attitutde of arrogance
- Some units do not have the time to engage in these collaborations
- Not-invented-here syndrome
- Lack of willingness of the problem owners to implement the solutions found
- Difficult initial support in early technologies

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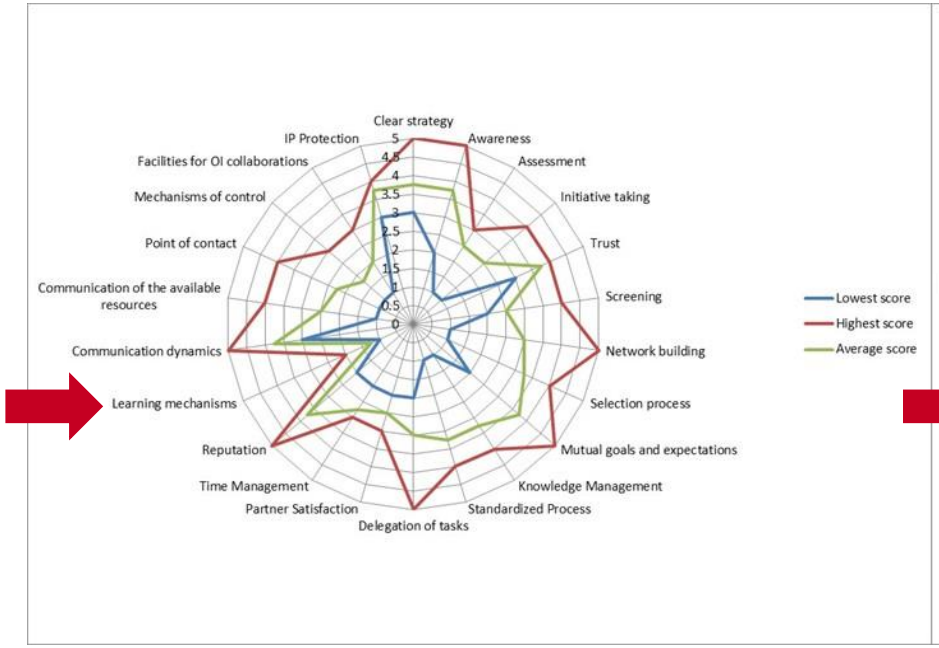
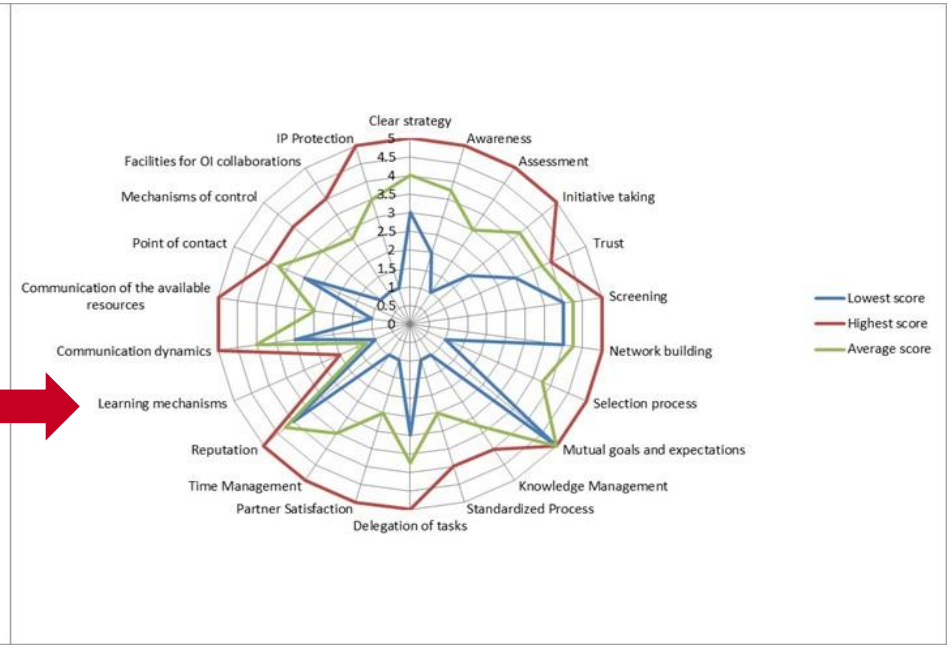
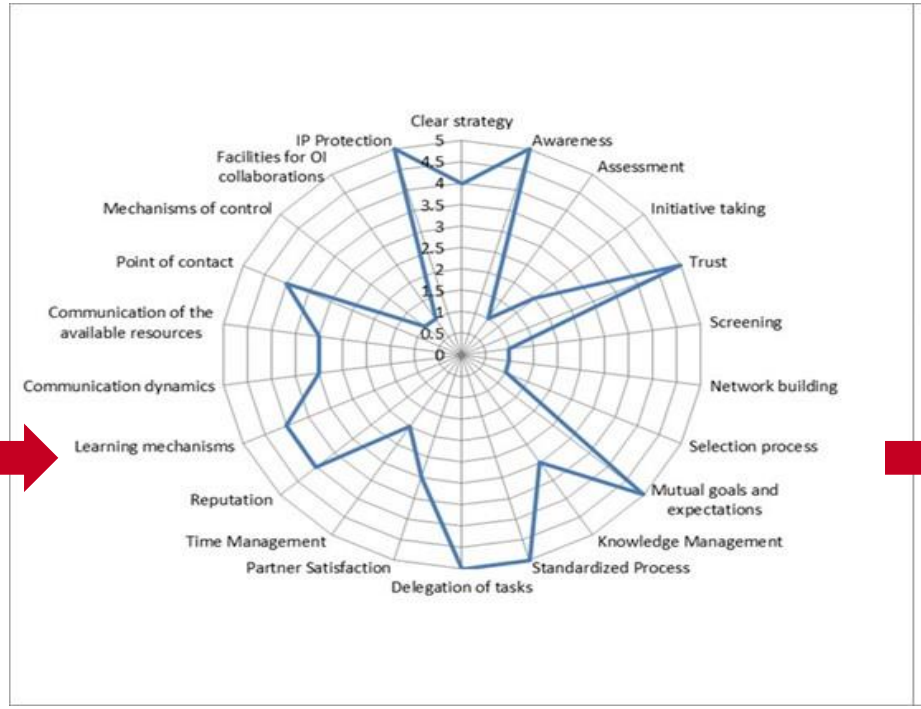
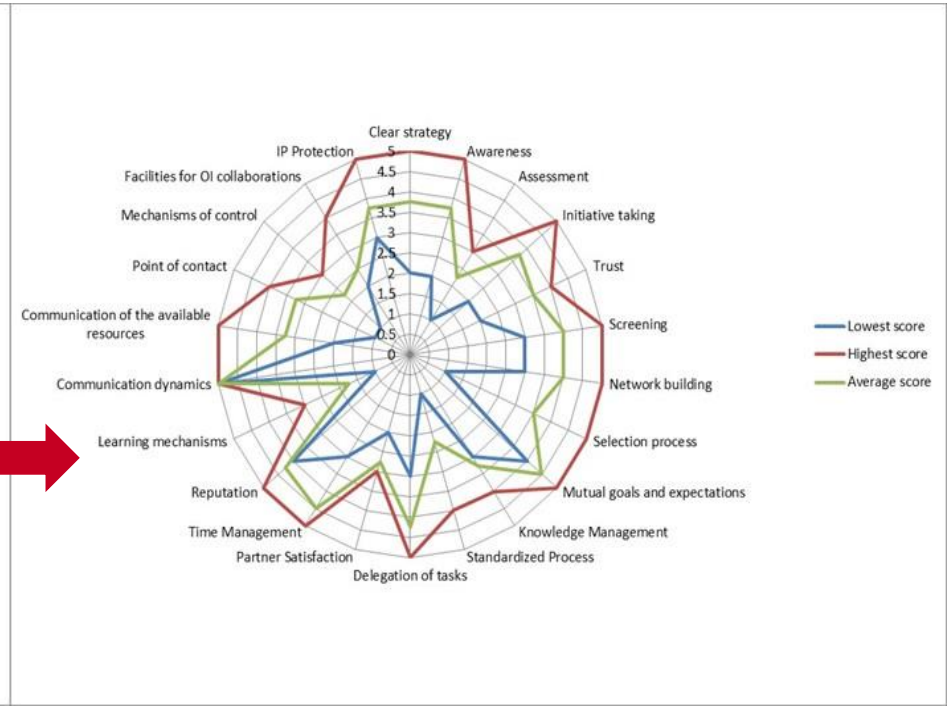








RESULTS PER CLUSTER

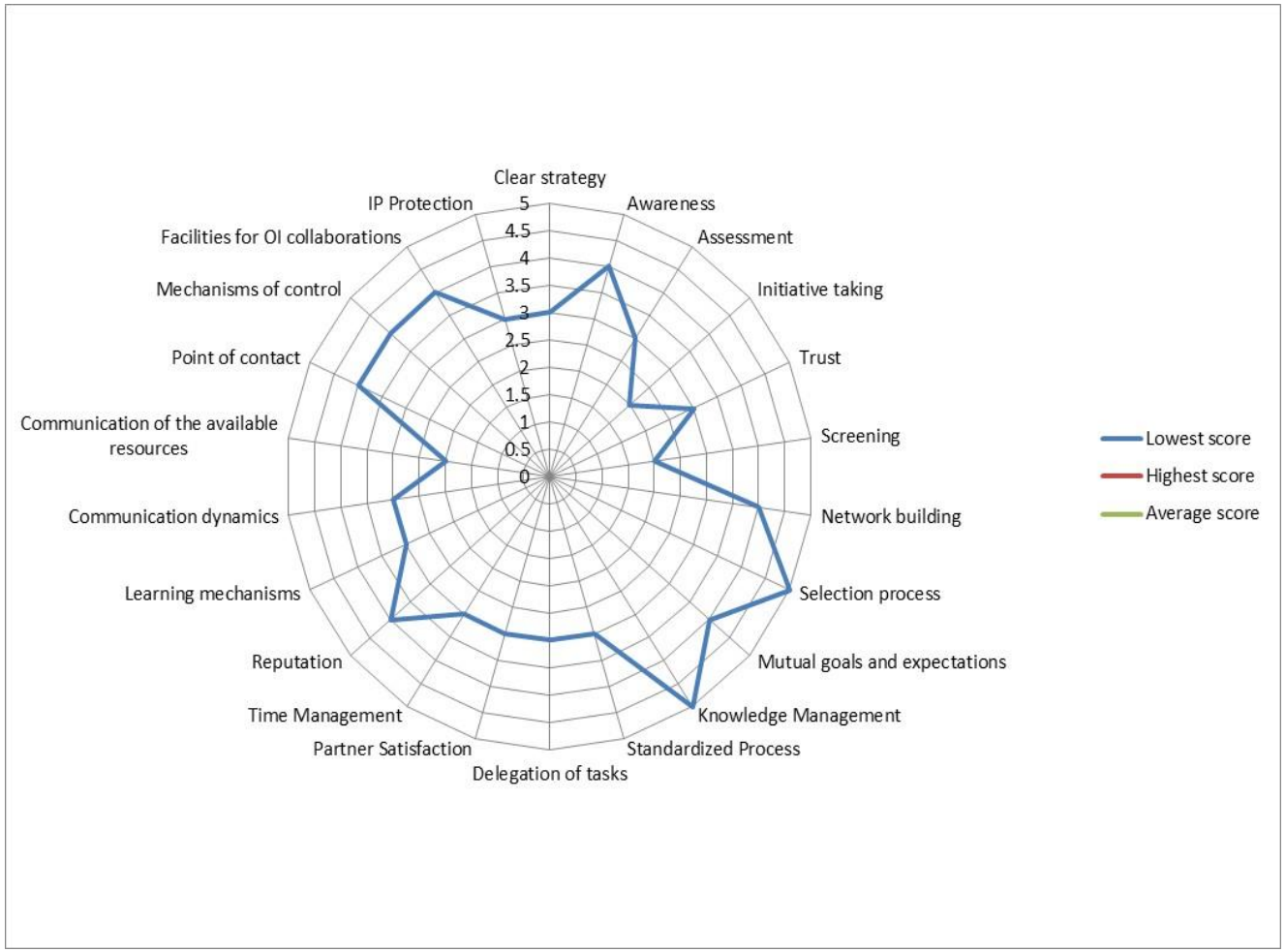
External Startups

Most common challenges that were experienced:

- Difficulty in establishing the collaboration in the first place: Lack of time in BASF and lack of understanding
- constant competition with the internal R&D: **not-invented-here syndrome**
- Attitude of arrogance from the employees within BASF: Difficult communication
- No clear definition of agreements and tasks among the partners and internally
- The information is unilaterally shared: Perceived only concern in BASF is a patent

Benchmark: Swarovski

Results from the AOICMM application to Swarovski



Average of 3,4

Open Innovation Network

Transformational Office

Strategic Innovation Topics

Cluster system for the segregation of first ideas and evaluation of the potential collaboration

Adaptation of a customer relationship management tool

Recommendations given

1

A communication tool where partners can:

- Submit new innovations easier and faster
- Have access to people and information involved
- Information flow through data and/or communication rooms
- Extension to a interactive platform for problems – challenge sharing

2

Establishment of a specific point of contact for external companies through

3

- Exchange of stories through inspirational speakers
- Assignment of a team to create a case
- Seminar with the most important factors and most common pitfalls in these collaborations
- Intelligence system

4

More Teams in New Business and New Market Development to handle these collaborations

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