PHD WORKSHOP RESULT, CAREER PLANNING & NEXT STEP

KKS ERFA 2026

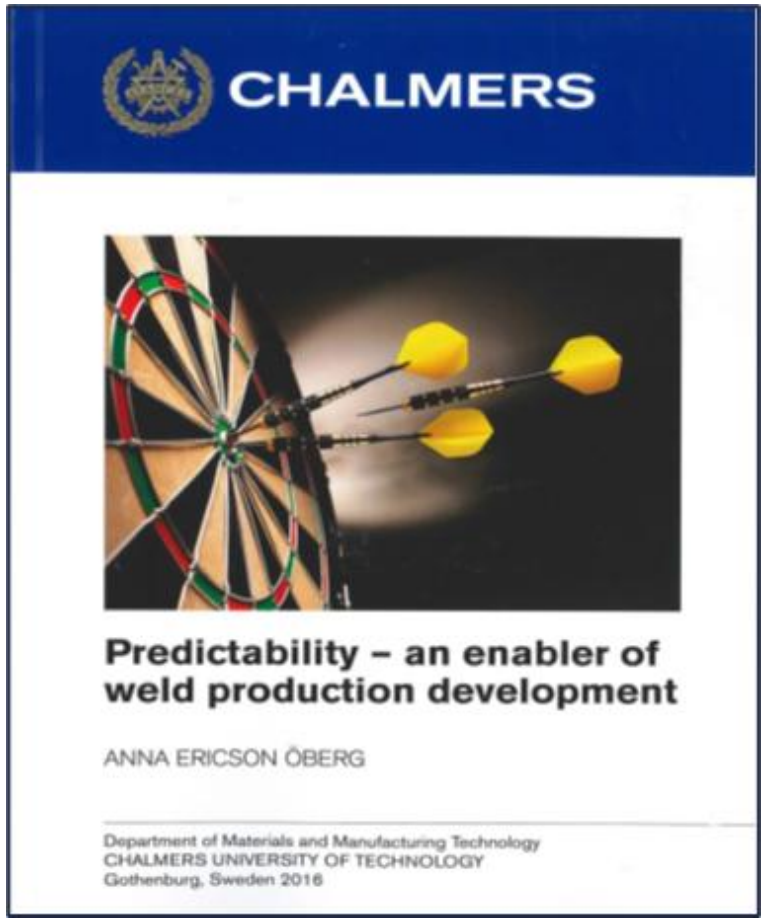
2026-04-29

Who am I? Anna Ericson Öberg

- Global Research Strategy Manager, Volvo CE
- Adj. professor Karlstad University, director of research center DAMI
- Head of Management system, Volvo CE
- Manager manufacturing research Operations
- Industrial PhD student VCE/Chalmers manufacturing technology
- Value stream manager, project manager, engineer, trainee
- MSc Manufacturing management, Loughborough, UK
- BSc Export engineering, Skövde
- Assembler, quality dep., Volvo Cars, Skövde

I am driven to make a difference! I see a huge potential in the intersection academia and industry even though it comes with challenges. I think that collaboration will create more benefits than competition.

My PhD journey....



- Employed at Volvo CE since 2004, started my studies 2010
- At Chalmers, because of my co-supervisor
- Never became “a colleague” at Chalmers
- Different hierarchy
- First PhD at the plant, had one colleague in Operations
- Freedom but loneliness
- Strong connection to the company, very weak in academia
- Involved in research projects – very good
- After some years became part of a research school, Proviking → AMAZING! Research methodology, “colleagues”, inspiration....
- 2016 defended my thesis and became manager of manufacturing research Operations Europe, PhD students in my team

Turn frustration into improvements

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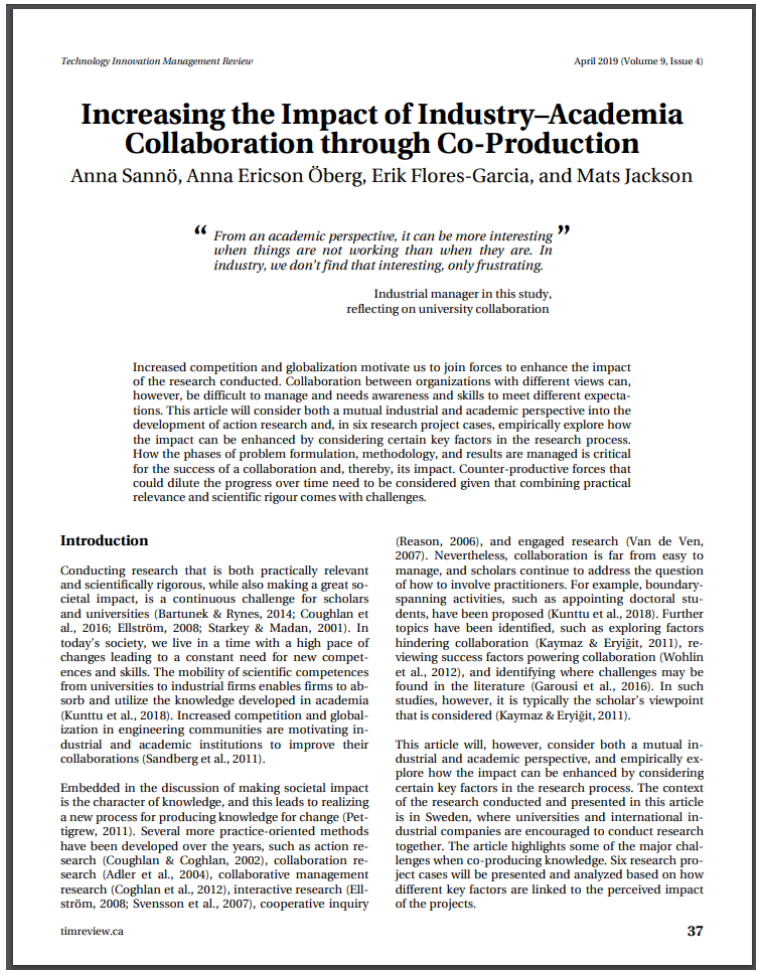

Technology Innovation Management Review April 2019 (Volume 9, Issue 4)

Increasing the Impact of Industry–Academia Collaboration through Co-Production

Anna Sannö, Anna Ericson Öberg, Erik Flores-Garcia, and Mats Jackson

> *"From an academic perspective, it can be more interesting when things are not working than when they are. In industry, we don't find that interesting, only frustrating."*
>
> Industrial manager in this study, reflecting on university collaboration

Increased competition and globalization motivate us to join forces to enhance the impact of the research conducted. Collaboration between organizations with different views can, however, be difficult to manage and needs awareness and skills to meet different expectations. This article will consider both a mutual industrial and academic perspective into the development of action research and, in six research project cases, empirically explore how the impact can be enhanced by considering certain key factors in the research process. How the phases of problem formulation, methodology, and results are managed is critical for the success of a collaboration and, thereby, its impact. Counter-productive forces that could dilute the progress over time need to be considered given that combining practical relevance and scientific rigour comes with challenges.

Introduction

Conducting research that is both practically relevant and scientifically rigorous, while also making a great societal impact, is a continuous challenge for scholars and universities (Bartunek & Rynes, 2014; Coughlan et al., 2016; Ellström, 2008; Starkey & Madan, 2001). In today's society, we live in a time with a high pace of changes leading to a constant need for new competences and skills. The mobility of scientific competences from universities to industrial firms enables firms to absorb and utilize the knowledge developed in academia (Kunttu et al., 2018). Increased competition and globalization in engineering communities are motivating industrial and academic institutions to improve their collaborations (Sandberg et al., 2011).

Embedded in the discussion of making societal impact is the character of knowledge, and this leads to realizing a new process for producing knowledge for change (Pettigrew, 2011). Several more practice-oriented methods have been developed over the years, such as action research (Coughlan & Coghlan, 2002), collaboration research (Adler et al., 2004), collaborative management research (Coghlan et al., 2012), interactive research (Ellström, 2008; Svensson et al., 2007), cooperative inquiry (Reason, 2006), and engaged research (Van de Ven, 2007). Nevertheless, collaboration is far from easy to manage, and scholars continue to address the question of how to involve practitioners. For example, boundary-spanning activities, such as appointing doctoral students, have been proposed (Kunttu et al., 2018). Further topics have been identified, such as exploring factors hindering collaboration (Kaymaz & Eryiğit, 2011), reviewing success factors powering collaboration (Wohlin et al., 2012), and identifying where challenges may be found in the literature (Garousi et al., 2016). In such studies, however, it is typically the scholar's viewpoint that is considered (Kaymaz & Eryiğit, 2011).

This article will, however, consider both a mutual industrial and academic perspective, and empirically explore how the impact can be enhanced by considering certain key factors in the research process. The context of the research conducted and presented in this article is in Sweden, where universities and international industrial companies are encouraged to conduct research together. The article highlights some of the major challenges when co-producing knowledge. Six research project cases will be presented and analyzed based on how different key factors are linked to the perceived impact of the projects.

timreview.ca 37

https://timreview.ca/sites/default/files/article_PDF/Sanno_et_al_TIMReview_April2019.pdf

At Volvo CE, improvements in the PhD process necessary

→ PhDs left the company!

- Issues with our process:
  - Dependent on individuals
  - Differences in expectations
  - Long term career plan missing
  - Lack of understanding on management level
  - …
  - …

Not only for Volvo PhDs, beneficial to improve for the entire collaborative landscape!

Collaborative approach

Partnerships

Co-creation and acceleration

Workshops with industrial PhD students (PADOK, IndTech, Volvo CE, Exact, Reliant)

How can the PhD student, the company and academia act before, during and after the PhD studies to benefit the stakeholders (PhD student, the company, the university and society) the most? and society) the most?

Generated 432 data points

Data Distribution and Key Findings

[Link to the paper: Enhancing Co-Production Impact in Industry - Academia Collaboration: Insights from Five Industrial PhD Workshops - IOPscience]

Original Categories from Sannö et al 2019 based on research projects

Added Categories Connected to PhD Students

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Category	Category description	Before	During	After	TOTAL
C1	Power dynamics	*9*	*10*	*1*	**20**
C2	Reflections of time	*0*	*1*	*0*	**1**
C3	Problem formulation	***26***	*14*	*3*	**43**
C4	Result	*5*	*9*	*3*	**17**
C5	Methodology Structure	*9*	*28*	*14*	**51**
C6	View of knowledge	*8*	*20*	*4*	**32**
C7	Driving forces and rewards	*5*	*14*	*4*	**23**
C8	Communication	*9*	*24*	*8*	**41**
N1	Implementation & Deployment	*0*	*10*	*20*	**30**
N2	Role & Organizational Integration	*19*	*30*	***33***	**82**
N3	Resources & Support Systems	*17*	***32***	*2*	**51**
N4	Monitoring & Evaluation	*14*	*23*	*4*	**41**
		121	**215**	**96**	**432**

Before Phase: Laying the Foundation

Category	Category description	Before	During	After	TOTAL
C1	Power dynamics	9	10	1	20
C2	Reflections of time	0	1	0	1
C3	Problem formulation	26	14	3	43
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Aligning Expectations

Effective co-production begins by aligning expectations between all stakeholders to foster collaboration.

Strategic Needs Identification

Identifying company strategic needs, problem formulation and expected result early ensures relevance and alignment with organizational goals, what role would the PhD have in 5 years and is it a good fit?

Building Trust and Transparency

Trust, transparency, and shared long-term visions are vital to prevent misalignments in collaboration.

Clear Goals and Roles

Establishing clear goals and defined roles provides a solid foundation for successful joint research.

During Phase: Navigating Dual Contexts

Category	Category description	Before	During	After	TOTAL
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Managing Dual Contexts

Success depends on balancing academic research with industrial applications through continuous alignment.

Stakeholder Involvement

Engaging multiple stakeholders ensures alignment between research gaps and industrial problems for relevant outcomes.

Resources and Support Systems

Robust governance and support are critical to sustaining momentum and facilitating joint supervision during the PhD.

Career Planning and Knowledge Sharing

Early career planning and continuous dissemination of knowledge in appropriate formats are essential for long-term success.

After Phase: Sustaining Impact

Category	Category description	Before	During	After	TOTAL
C1	Power dynamics	9	10	1	20
C2	Reflections of time	0	1	0	1
C3	Problem formulation	26	14	3	43
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Sustaining Collaboration

Sustaining collaboration after project completion ensures long-term knowledge exchange and shared innovation.

Career and Role Development

Follow-up on career planning and creation of new organizational roles that capitalize on PhD investments.

Embedding Research Outcomes

Embedding research results into organizational practices fosters ongoing innovation and impact.

Building Long-Term Networks

Creating networks supports continuous collaboration and future follow-up projects beyond the time as PhD student.

Role & Organizational Integration: The Boundary-Spanning Function

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Significance of Organizational Integration

Embedding PhD students in academic and industrial contexts is crucial for accessing resources and stakeholders.

Boundary-Spanning Role

Industrial PhD students bridge academia and industry, facilitating research dissemination and personnel involvement.

Impact of Organizational Support

Visibility and support within the company maximize research impact and the value of co-production.

Take the next step and enable concrete actions!

- What activities/templates/tools can support in the three phases?
- Not limited to industrial PhDs but valid for PhDs collaborating with industry
- Modified Delphi study where you will be able to review the suggestions and provide additional input if you want
- Result in a guideline/toolbox free to use for everyone – aiming for being ready to SPS 2027

- A workshop with PADOK PhD students conducted at SPS and was the starting point for collection of experience and ideas

- Some examples of good practise addressing the different challenges:

Survey to the student, main supervisor and mentor (example from Reliant)

Det är kombinationen av tre perspektiv som gör instrumentet användbart för styrning: student, universitet och företag.

Dimension	Student	HHL	Mentor
Progress mot lic/phd	●	●	
Upplevd kvalitet och resultat	●	●	
Arbetsbelastning och tid	●	●	●
Handledning och samarbete	●	●	●
Industri-akademi-koppling	●	●	●
Programkvalitet och förbättringsbehov	●	●	●

Tre perspektiv

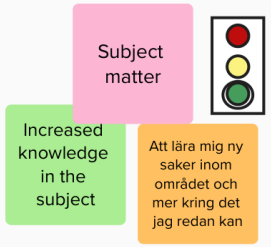
Handledarformuläret fångar dessutom akademisk integration i forskningsmiljön; mentorformuläret fångar företagets interna förankring och kunskapsdelning.

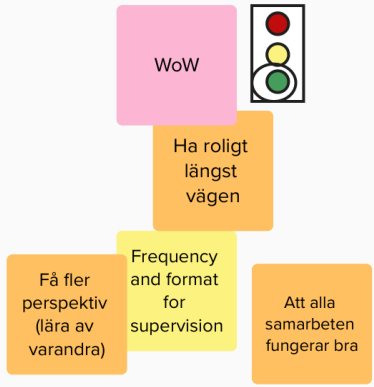
Varför triangulering är viktigt

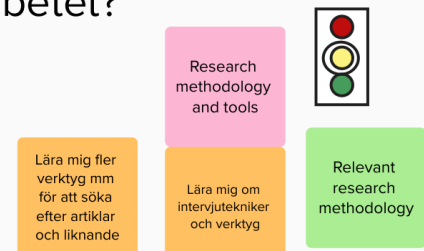
När flera grupper svarar på närliggande frågor kan vi se om bilden delas - eller om det finns gap mellan upplevd och observerad status.

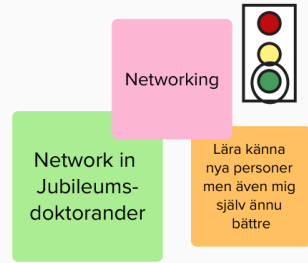
Exempel:
- studenten upplever bra stöd men handledaren ser låg progression
- mentor och student beskriver olika balans mellan forskning och arbete
- alla tre grupper signalerar samma förbättringsbehov

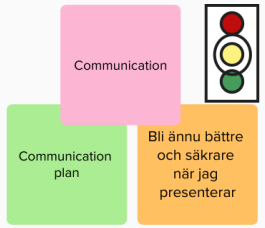
Vad förväntar du dig av doktorandarbetet?

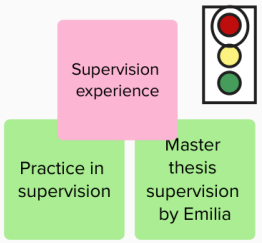


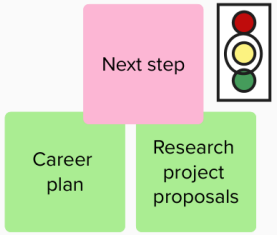


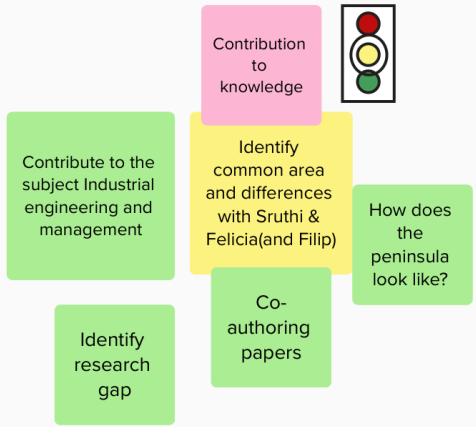


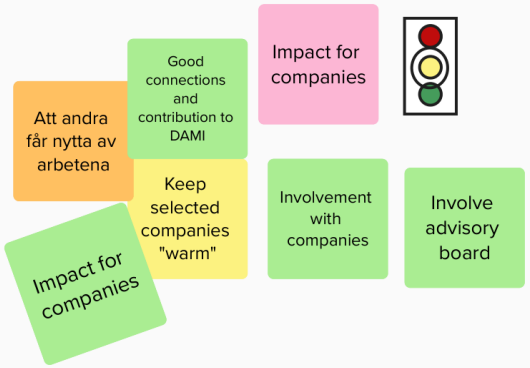




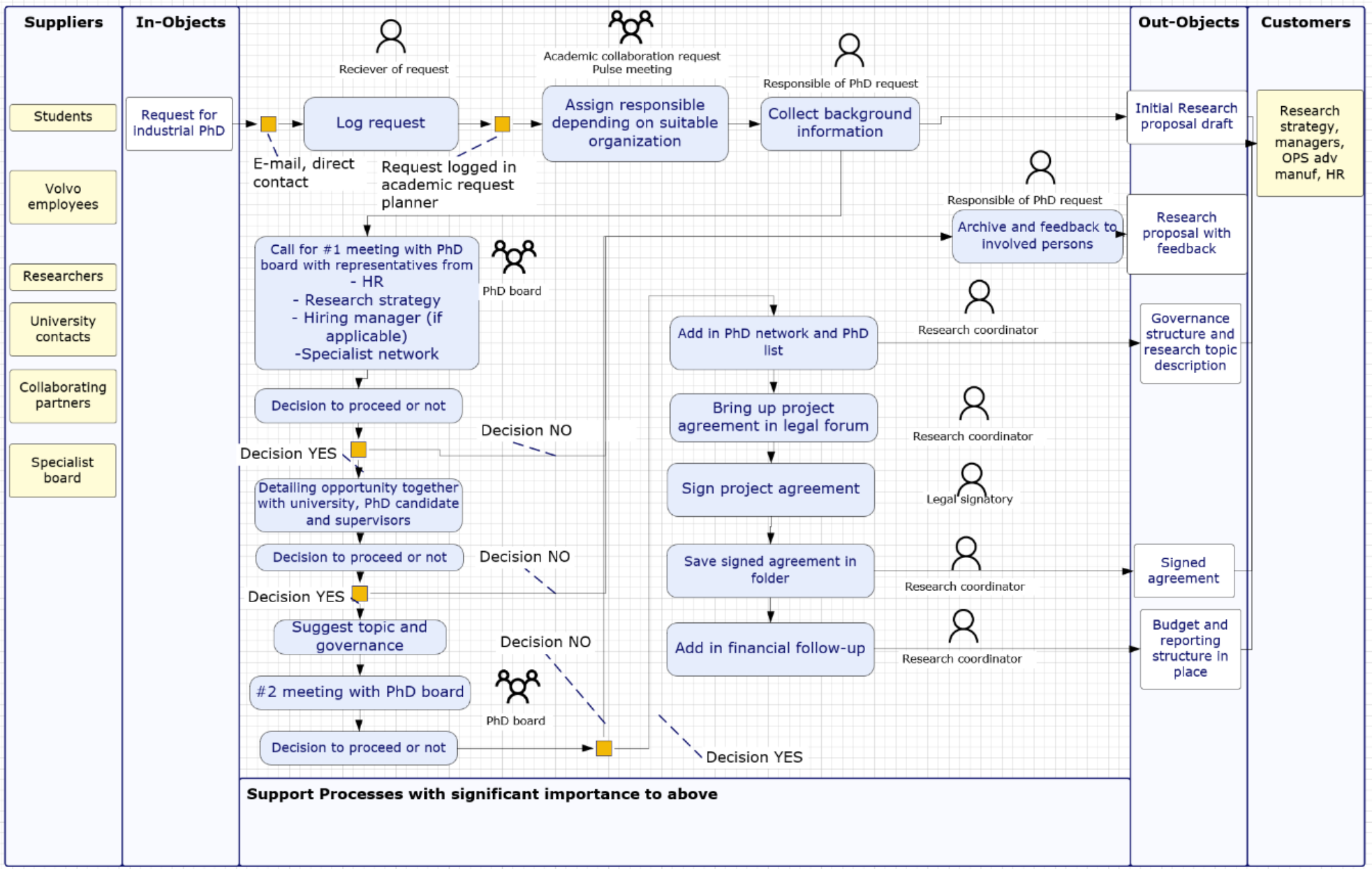








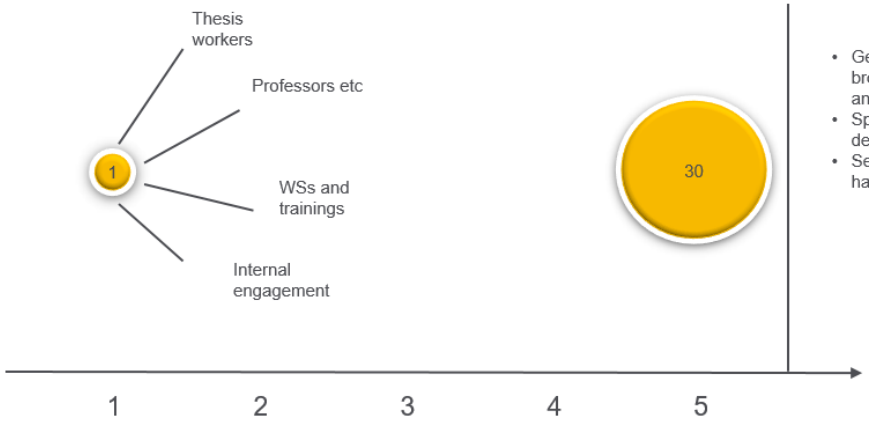
PhD Process



Process Map Name

Governance for _____

Vision: Knowledge transfer 1 to 30



- General knowledge (understand broader aspects of the problem and related subjects)
- Special knowledge and demonstrator (add examples)
- Several peers in the organization have gained knowledge

PhD

Academic Supervisors

....

Industrial Mentor

Reference group

APP VCE – university Steering committee

Volvo Group Network

Dept & Finance –

Regular meetings
Chair:
Co-chairs:

Workshop 1

Category	Category description	Before	During	After	TOTAL
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How can the research schools benefit from this combined experience in the best way?

Role & Organizational Integration: The Boundary-Spanning Function

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Workshop 2

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C3	Problem formulation	26	14	3	43
C4	Result	5	9	3	17
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How can the research schools help prepare for the PhD-student's future career?

- Before?
- During?
- After?
- Acadmic or industrial career?

Role & Organizational Integration: The Boundary-Spanning Function

VOLVO

Workshop 3

Category	Category description	Before	During	After	TOTAL
C1	Power dynamics	9	10	1	20
C2	Reflections of time	0	1	0	1
C3	Problem formulation	26	14	3	43
C4	Result	5	9	3	17
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The majority states that they want to continue their collaboration academia/industry. Could some kind of industrial post doc be created?

- Another name than post doc?
- Financing?
- Percentage? Duration?
- At the same company or at other company?
- At the same university or not?
- Individually or as “post doc school”?
- ....
- ...

VOLVO

BUILDING THE WORLD WE WANT TO LIVE IN – TOGETHER