



Curriculum Vitae

Sophie I. Hallstedt

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Homepages:

- <https://kunskapsformedlingen.se/en/researchers/sophie-hallstedt/>
- <https://scholar.google.com/citations?hl=en&user=5nh3cHYAAAAJ>
- <https://www.scopus.com/authid/detail.uri?authorId=25654901500>

SHORT BIO AND AGENDA

Sophie I. Hallstedt is a Full Professor at Chalmers University of Technology, and is coming from Blekinge Institute of Technology (BTH) where she first initiated the research area Sustainable Product Development. The purpose of her research is to increase the product design teams' capabilities to make strategic choices and contribute to a more proactive company regarding sustainability issues and make business advantages out of that. Several methods, models and approaches have resulted from her research which for example, enhance the capabilities in product development- and management teams to assess the maturity level of sustainability implementation, to identify sustainability consequences of different solutions, and to visualize the progress of sustainability implementation. The purpose of her research is to increase the product design teams' capabilities to make strategic choices and contribute to a more proactive company regarding sustainability issues and make business advantages out of that. During her research she has contributed in some 90-peer-reviewed publications within her research area and has around 3583 citations and a h-index of 26 (according to google scholar, September 2023).

Sophie has initiated and finalized several research projects. She has been the main applicant and project leader for seven external funded research projects during the last 15 years. One example was a KKSHög project of three years, *Strategic, Tactical and Operational implementation of Sustainability into the Innovation Process (STOSIP)*. The research from the STOSIP project was one key reason to a sustainability prize awarded to one of the research partners from their most important customer. In 2020 Sophie's research was nominated and qualified to the Royal Swedish Academy of Engineering Sciences (IVAs) [100-list 2020](#). In 2023 she was again nominated and qualified to the Royal Swedish Academy of Engineering Sciences (IVAs) [100-list 2023](#) with the project called "Digital Sustainability Implementation Package".

Hallstedt has experience in leading academic groups from different roles, such as being the head of department of Strategic Sustainable Development at Blekinge Institute of Technology (BTH); she is the chair for an international Special interest group for Sustainable Design in the Design Society. She is also the chair for the Design Society's Advisory Board Committee for Equality, Diversity and Inclusion. In addition to that, she has been a supervisor for eight PhD students within the area of SPD and have supervised, so far, six students to their licentiate degree and five students to their PhD degree.

Sophie has also initiated and developed courses and programmes at Blekinge Institute of Technology (BTH) such as the Master programme in Sustainable Product-Service System Innovation, and was the Programme Director during several years. Sophie devotes her teaching efforts to sustainable product development and product development courses, and offers a PhD course titled "Sustainability in Product Development" for the [Product Development Academy](#) in Sweden.

ACADEMIC WORK EXPERIENCE

Below is a summary of different positions and roles during my academic career, followed by a detailed description over the years.

Appointed positions:

Employment at Chalmers University of Technology:

- **Full Professor in Product Development, with emphasis on Sustainable Product Development at Chalmers University of Technology:** Since 2023

Employment at Blekinge Institute of Technology

- **Full Professor in Mechanical Engineering, with emphasis on Sustainable Product Development at Blekinge Institute of Technology** (part time since 2023)

Other positions

- Chair of the Design Society's Advisory Board Committee for Equality, Diversity and Inclusion: since 2022
- Main Chair of Design Society's Special Interest Group – Sustainable Design: since 2020
- Advisory Board Member of the International Design Society: since 2019
- Teacher Representative in the Board of Governors for BTH: 2019
- Chairperson of the hearing process for vice chancellor recruitment at BTH: 2018
- Research Area Leader for Sustainable Product Development: 2014-2023
- Vice Head of Department: 2014-2019
- Head of Department of Strategic Sustainable Development, BTH: 2012-2013
- Supervisor of PhD students: since 2009
- Senior Lecturer and Associate professor: 2015-2020
- Senior Lecturer position: 2010-2015
- Programme Director for the Master's Programme in Product Service System Innovation: 2009-2011
- Programme Director for the Master's Programme in Strategic Leadership towards Sustainability: 2008-2009
- Lecturer position: 2007-2010
- Project Leader for several research projects: since 2006
- Course responsible and/or Examiner for several courses: since 2002
- PhD student position: 1997-2007
- Teacher position: 1995-1997

EDUCATION/EXAMS

- **Associate Professor (Docent)** in Mechanical Engineering with emphasis on Sustainable Product Development, Blekinge Institute of Technology, Karlskrona, Sweden, 2015.
- **Ph.D.** in Mechanical Engineering with emphasis on Sustainable Product Innovation, Blekinge Institute of Technology, Karlskrona, Sweden, 2008: *Hallstedt S. (2008) A Foundation for Sustainable Product Development. Blekinge Institute of Technology, Doctoral Dissertation Series, ISSN 1653-2090;6*
- **Licentiate** in Engineering in Environmental Sciences, Chalmers University of Technology, Gothenburg, Sweden, 2001: *Byggeth S. (2001) Integration of Sustainability Aspects in Product Development. Göteborg: Chalmers University of Technology and Göteborg University.*
- **M.Sc.** in Environmental Planning and Design (Civilingenjör), Luleå University of Technology, Luleå, Sweden, 1994.

OTHER EDUCATIONS

- Basic studies in pedagogy during 6 months at Luleå University of Technology, 1991.
- Studies in ecology, biology, environmental engineering and other subjects relevant for sustainability and environmental issues. These studies are additional studies to the formal exams and have taken place during one year at Curtin University of Technology, Perth, Australia, 1993.

PEDAGOGICAL ADVANCEMENT

1. Philosophy of Science with pedagogical application to higher education
 - 7.5 ECTS credit points; Course code: FI2402, 2009, BTH
2. Higher Education Pedagogy - project course,
 - 7.5 ECTS credit points; Course code: PE2403, 2010, BTH
3. Publications:
 - Scientific article in International Journal of Engineering Education
Broman G., Byggeth S. and Robèrt K-H. 2002. Integrating Environmental Aspects in Engineering Education, International Journal of Engineering Education, ISSN 0949-149X, Vol. 18, No. 6.*
 - Proceedings in EMSU- Environmental Management for Sustainable Universities, 2004.
Waldron, D., Byggeth, S., Ny, H., Broman, G., & Robèrt, K. H. 2004. Structured comprehension for systems thinking, learning and leadership towards sustainability. In: Proceedings of EMSU- Environmental Management for Sustainable Universities.
 - Proceedings in Pedagogical conference – ”Lärlärdom”, 2010.
Hallstedt Sophie. 2010. How can Master students be supported and evaluated on their Master thesis for a good learning result? (Extended abstract) Lärlärdom, Karlskrona, 18 August 2010.
 - Proceedings in the International Conference ERSCP & EMSU, 2010.
Hallstedt S., Thompson A. (2010) Integrating sustainability and innovation through a master's program in product-service systems. Conference ERSCP & EMSU, Delft 25-29 October 2010.
4. Teaching material:
 - Co-author of the course book "Sustainability Handbook". This book was used and is still widely used in courses at BTH. An estimated 200-250 students per year from BTH have benefited from the book.
Robèrt K-H., Broman G., Waldron D., Ny H., Byggeth S., Cook D., Johansson L., Oldmark J., Basile G., Haraldsson H., MacDonald J., Moore B., Connell T. and*

Missimer M. Sustainability Handbook, Studentlitteratur, Lund, Sweden, 2012. ISBN 978-91-44-07549-5.

- Co-author of the course book “Strategic Leadership towards Sustainability” In this course book, I contributed to a chapter (Chapter 12) on Sustainable Product Development. *Robèrt K-H., Broman G., Waldron D., Ny H., Hallstedt S., Cook D., Johansson L., Oldmark J., Basile G., Haraldsson H., MacDonald J., Moore B., Connell T., Missimer M., Daly E., Johnson P. (2018) Strategic Leadership towards Sustainability. Blekinge Institute of Technology, Psilanders grafiska, 10th Edition. ISBN: 978-91-7295-964-4.*

5. Programme Development and Program Director at BTH.

- Programme Director of the Master programme in Strategic Leadership towards Sustainability (MSLS) during 2008/2009 (fall semester 08 and spring semester 09).
- Project Leader for the development project of the Master Programme in “Sustainable Product-Service System Innovation” (MSPI), 2009-2010.
- Programme Director of the Master Programme in “Sustainable Product-Service System Innovation” (MSPI), 2009-2011.
- Teacher representative of the BTH's Development and Steering group – Advanced level

6. Experience of teaching and supervision of students:

- My teaching involvement during the last five years includes different courses on both basic and advanced levels. I have had responsibilities in several courses, and uses different teaching forms in the courses.
- Since 2009 I have supervised several student thesis work, licentiate work, doctoral dissertation work.

7. Research pedagogical development

- The completion of the research supervisor development course- “Forskarhandledarutvecklingskurs” (FLUS-2009)
- Completed Associate Professor Promotion Program (2009-2011)

SUPERVISOR & ADVISORS FOR RESEARCH STUDIES

- Supervisor for PhD student **Josefin Lövdahl** since 2023.
- Principal Supervisor for PhD student **Josefin Lövdahl** 2021-2023.
- Principal Supervisor for PhD student **Carolina Villiamil** since 2017. Finalized her Licentiate Degree in 2020: Integration of sustainability aspects in product portfolio.
- Principal Supervisor for PhD student **Matilda Watz** since 2017. Finalized her Licentiate Degree in 2019: Utilizing requirements to support sustainable product development. Introductory approaches for strategic sustainability integration.
- Principal Supervisor for PhD student **Jesko Schulte** since 2016. Finalized his Licentiate Degree in 2019: Sustainability Risk Management in Product Development Companies – motivating change. Finalized his PhD Degree in 2021: Strategic Sustainability Risk Management in Product Development Companies.
- Principal Supervisor for PhD student **Helena Zetterlund**, 2015-2016. Stopped her PhD studies because of family reasons.
- Supervisor for PhD student **Patricia Lagun Mesquita** since 2015. Finalized her Licentiate Degree in 2016: The missing pillar: Exploring social sustainability in product development. Finalized her PhD Degree in 2021: The Social Dimension of Sustainable Product Development.

- Supervisor for PhD student **Rachael Gould**, 2013-2015. Finalized her Licentiate Degree in 2015: Integrating sustainability into concept selection decision-making.
- Supervisor for PhD student **Cecilia Bratt**, 2009-2014. Finalized her Licentiate Degree in 2011: Assessment of Eco-labelling and Green Procurement from a Strategic Sustainability Perspective. Finalized her PhD Degree in 2014: Integrating a Strategic Sustainability Perspective into Eco-Labelling, Procurement and Supply Chain Management.
- In addition:
 - Informal mentor for postdoc Sze Yin Kwok since 2017.
 - Collaborated with Anthony Thompson during his PhD studies, 2008-2012. Finalized his PhD Degree in 2012: Integrating a Strategic Sustainable Development Perspective in Product-Service System Innovation.

EXTERNAL OPPONENT/EXAMINER FOR PHD

- 2014 Examiner for Gunilla Clancy - PhD. Title: Assessing sustainability and guiding development of more sustainable products. Department of Chemical and Biological Engineering, Chalmers University of Technology, Gothenburg, Sweden.
- 2015 Examiner for Romain Allais – PhD. Title: Systematic transition for a sustainable development: between design and territory. University of Technology of Troyes, France
- 2016 Examiner for Sofia Poulidikou – PhD. Title: Assessing design strategies for improved life cycle environmental performance of vehicles. Department of Sustainable Development, Environmental Science and Engineering. KTH Royal Institute of Technology, Sweden
- 2017 Examiner for Narges Asadi – PhD. Title: Flexibility in assembly systems using product design. School of Innovation, Design and Engineering, Mälardalen University, Sweden.
- 2019 Examiner & Opponent for Raphaelle Stewart – PhD. Title: Integration of Sustainability Approaches in Companies: an Exploration of Narratives and Internal Organizational Functioning. Department of Management Engineering, Technical University of Denmark & Department of Design, Norwegian University of Science and Technology.
- 2020 Opponent for Louise Lindkvist Haziri– PhD. Title: Improving design for remanufacturing through feedback from remanufacturing to design. Division of Manufacturing Engineering, Department of Management and Engineering, Linköping University, Sweden.
- 2021 Examiner for Marianna Lena Kambanou – PhD. Title: Life Cycle Costing- Supporting companies towards circular economy. Division of Environmental Technology and Management, Department of Management and Engineering, Linköping University, Sweden.
- 2021 Examiner for Fredrik Henriksson – PhD. Title: On material selection and its consequences in product development. Division of Product Realisation, Department of Management and Engineering, Linköping University, Sweden.
- 2023 Opponent for Harald Henningsson- Lic. Title: Resource Modelling in a Circular Economy Context - Applying and comparing circular economy indicators and dynamic material flow analysis. Division of Environmental Systems Analysis. Department of Technology Management and Economics. Chalmers University of Technology, Sweden.

2024 Examination jury member for Anne-Laure Capomaccio – PhD. Title: CSR and design interaction through a methodology based on capabilities – Case study in the automotive industry. University of Technology of Troyes in Engineering Sciences, France.

DEVELOPMENT & LEADERSHIP SKILLS

- Two full days course in *Conflict management for leadership (2023)* by Confex
- 10 credits course in Product Development and Leadership: "Managing Product Development for Executives" by Chalmers Professionals (2012).
- Two full-day course in working environment and rehabilitation by Previa (2012).
- Leadership coaching and supervision by Previa and consultant Expandio (2012-2013).
- 1-day course in "Leadership and management" by consultant Expandio (2012).
- 2-day course in Art of hosting (2012).
- Literature study in coaching and leadership (2012-2013).
- Five full-days course in Development, Group, Leader (UGL in Sweden) by National Defence University (Försvarshögskolan) (2013)
- 2-day course in "To lead others without being a manager." (2021) by Confex

LEADERSHIP EXPERIENCES AT BTH

- Head of Department for Strategic Sustainable Development in two years (2011-2013).
- Research area leader for Sustainable Product Development at BTH (since 2014).
- Project leader for seven different educational- and research projects with external funding (since 2006).
- Appointed chairman of BTH's Hearing Committee for evaluating Vice Chancellor candidates (2018).

OTHER ENGAGEMENTS, MEMBERSHIPS & AWARDS

Chair and engagements in Societies

- Chair and Steering group member for Sustainable Design a Special Interest Group in the Design Society, <https://www.designsociety.org> (since 2020)
- Advisory Board Member of the International Design Society, <https://www.designsociety.org> (since 2020)
- Chair of the Design Society's Advisory Board Committee for Equality, Diversity and Inclusion (since 2022)
- Course responsible and examiner for a national PhD course in Sustainability in Engineering Product Development (together with 1 other Professor) within the Product Development Academy and Kunskapsförmedlingen/Production 2030, <https://kunskapsformedlingen.se/en/> (2019, 2021, 2022)

Expert and Promotion Assessments

- Promotion Assessment of Full professorship for Tomohiko Sakaos, Linköping University (2021)
- Expert Assessment of Senior Lecturer position at Faculty of Science, Technology and Media, Mid Sweden University (2022)
- Expert Assessment of applicant for Adjunct Professor in defense systems with a focus on innovation management at the Swedish Defense Academy. (2023)

Awards

- In 2020 her research within the research project "Modelldriven utveckling och beslutsstöd"- was awarded a place on the Royal Swedish Academy of Engineering Sciences 100-list 2020 of sustainable innovation research projects. <https://www.iva.se/projekt/research2business/ivas-100-lista-2020/>. A list of research projects focusing on sustainability with significant potential to benefit areas such as business and method development or to have a positive impact on society.
- In 2023 her research within the project "[Digital Sustainability Implementation Package](#)"- was awarded a place on the Royal Swedish Academy of Engineering Sciences 100-list [2023](#).

Awarded publications

- Hallstedt S. How to define a sustainability design space. 2015. In: *Proceedings of the 20th International Conference on Engineering Design (ICED)*. Milan, Italy, July 27-30, 2015.
- Schulte, J. and Hallstedt, S., 2017. Challenges for integrating sustainability in risk management – current state of research. In: *DS 87-2 Proceedings of the 21st International Conference on Engineering Design (ICED 17) Vol 2: Design Processes, Design Organisation and Management*, Vancouver, Canada, 21-25.08. 2017.
- Schulte, J. and Hallstedt, S., 2017. Challenges and preconditions to build capabilities for sustainable product design. In: *DS 87-1 Proceedings of the 21st International Conference on Engineering Design (ICED 17) Vol 1: Resource Sensitive Design, Design Research Applications and Case Studies*, Vancouver, Canada, 21-25.08. 2017.
- Watz, M. and Hallstedt, I. S. 2018. Sustainability in product requirements. In: *Proceedings of International Design Conference - Design 2018 Dubrovnik - Croatia*, May 21-24, 2018.
- Bertoni, A., Dasari, K. S., Hallstedt, S. and Andersson, P. 2018. Model-based decision support for value and sustainability assessment: applying machine learning in aerospace product development. In: *Proceedings of International Design Conference - Design 2018 Dubrovnik - Croatia*, May 21-24, 2018.
- Watz M., Hallstedt I. S. 2020. Group model building with causal loop diagrams to foster capabilities for sustainable design and product development. International Design Conference – Design 2020, Croatia.
- Scurati, G.W, Nylander, W. J., Hallstedt, I. S., Ferrise, F., Bertoni, M. 2020. Raising value and sustainability awareness for critical materials: a serious game for the aerospace sector. International Design Conference – Design 2020, Croatia.

News and Media

- <https://www.bth.se/nyheter/nytt-digitalt-stod-for-hallbar-produktutveckling/>
- <https://www.bth.se/forskningsartiklar/foretagens-hallbarhetsresa/>
- <https://www.bth.se/nyheter/professorn-som-uppmanar-fler-kvinnor-att-valja-teknik/>
- <https://www.chalmers.se/en/current/calendar/ims-sophie-isaksson-hallstedt-inaugural-lecture/>

REVIEW AND OTHER EXTERNAL SCIENTIFIC DUTIES

Review of papers for Journals:

- International Journal of Production Economics
- Journal of Sustainable Engineering
- Journal of Cleaner Production
- Journal of Design Research
- Sustainability Journal
- Journal of Consumption and Production

- Design Science Journal

Review of papers for International Conferences:

- 20th International Conference on Engineering Design (ICED15)
- 21th International Conference on Engineering Design (ICED17)
- 22nd International Conference on Engineering Design (ICED19)
- 23rd International Conference on Engineering Design (ICED21)
- 24rd International Conference on Engineering Design (ICED23)
- 15th Design Conference (Design 18)
- 16th Design Conference (Design 20)
- 17th Design Conference (Design 22)
- DS 118: Proceedings of NordDesign 2022, Copenhagen, Denmark, 16th - 18th August 2022
How product and manufacturing design enable sustainable companies and societies.
- 18th Design Conference (Design 24)

Editor for Journals:

- Special Issue Editor for “Sustainable Product Design and Manufacturing” in Sustainability Journal: https://www.mdpi.com/journal/sustainability/special_issues/ProductDesign
- Special Issue Editor for “ Sustainable Product Design and Development” in Sustainability Journal: https://www.mdpi.com/journal/sustainability/special_issues/sustainable_product_design_development
- Special Issue Editor for “ Design to Drive Behavior Change for Sustainability and Circular Economy” in Sustainability Journal: [https://www.mdpi.com/journal/sustainability/special_issues/Design_to_Drive_Behavior_Change_for Sustainability and Circular Econom](https://www.mdpi.com/journal/sustainability/special_issues/Design_to_Drive_Behavior_Change_for_Sustainability_and_Circular_Econom)

Assessing applications in the role of an expert referee:

- November 2019: for the Research Council of Norway and the scheme Centre for Research-based Innovation (SFI). The project title: SFI Harvest – Technologies for sustainable biomarine value creation.
- August 2023: project application to Jönköping University’s KKS Environment SPARK

Chair at international conferences:

- International Society for Airbreathing Engines, 20th ISABE Conference, 12-16 September, 2011, Gothenburg, Sweden. (*Presentation session*)
- ASME, 18th Design for Manufacturing and the Life Cycle Conference (DFMLC) 2013 in the International Design Engineering Technical Conferences & Computers and Information in Engineering Conference. August 4-7, 2013 in Portland, USA. (*Presentation session*)
- International Design Conference – Design 2016, Dubrovnik, Croatia, May 16-19, 2016. (*Workshop organizer and chair*)
- 21th International Conference on Engineering Design (ICED17) Vancouver, Canada, 21-25.08. 2017. (*Presentation session and Workshop organizer and chair*)
- NordDesign 2018, August 14 – 17, 2018, Linköping, Sweden. (*Presentation session*)
- International Design Conference – Design 2018, Dubrovnik, Croatia, May 21-24, 2018. (*Presentation session and Workshop organizer and chair*)
- 22nd International Conference on Engineering Design (ICED19) Delft, The Netherlands, 5-8 August, 2019. (*Presentation session and Workshop organizer and chair*)
- 16th Design Conference (Design 20), on-line conference in October. (*Presentation session and Chair*)

- 23rd International Conference on Engineering Design (ICED2021), Gothenburg, 16-20 August, Sweden (*Presentation session and Workshop organizer and chair*)
- 17th Design Conference (Design 22), on-line conference in May. (*Presentation session and Workshop organizer and chair*)
- 24nd International Conference on ICED23- 24th International conference on Engineering Design. Bordeaux, France, 24-28 July 2023 (*Presentation session and Workshop organizer and chair*)

Keynote speaker/invited guest speaker:

- 23rd November 2016 in Gothenburg, Swedish Life Cycle Center's 20th anniversary – From thinking to action. Title of keynote speech: Life Cycle Thinking in Sustainable Product Development.
- 6th September 2018 in Gothenburg – The future of engineering design capabilities. Title of keynote speech – How can engineering decisions contribute to a sustainable society- as we move into the unknown?
- 5th December 2019 in Karlshamn – Frukostföreläsning at Netport [Breakfast lecture at Netport]. Title of speech: Sustainable Product Development – methods and tools for sustainable and resource efficient solutions.
- 6th March 2020 at Center for Complex Systems and Enterprises Lab in Stevens Institute of Technology, New Jersey, USA. Title of speech: Sustainable Product Development – A key role in Society's Transition Towards Sustainability.
- 9th December 2020 on-line keynote for Blue Science Park, Karlskrona, Sweden – Time for sustainability transformation – trends and pitfalls
- 14th December 2023 on-line keynote for Svenska Förbundet för Kvalitet – Digitalisering ett medel i hållbarhetstransformationen.

APPLICANT AND ACCEPTED RESEARCH APPLICATIONS IN NATIONAL COMPETITION FROM RESEARCH FOUNDATIONS

- “Prioritisation Support for Sustainable Product Development”; 2006, accepted funding from the Knowledge Foundation (Dr#: 2005/0293). I was **co-applicant** and lead the project in practice.
- “Labelling and procurement support for sustainable product innovation”; 2009, accepted funding from the Knowledge Foundation (Dr#: 20120214) I was a **co-applicant** and lead the project in practice.
- “Märknings- och upphandlingsstöd för hållbar produktinnovation”; 2009, accepted funding from Blekinge forskningsråd. I was the **main applicant and lead the project**.
- “Post-doc for sustainable product innovation”; 2009 accepted funding from the Knowledge Foundation (Dnr 2008/0618) I was the **main applicant and lead the project**.
- ”Master I hållbar produkt-och tjänsteinnovation”; 2010, accepted funding from the Knowledge Foundation (Dnr 20100221) I was the **main applicant and lead the project**.
- ”Sustainability criteria in concept evaluation methodology”; 2011, accepted funding from Vinnova (Dnr 2011-01287) I was the **main applicant and lead the project**.
- Profile project – “Model Driven Development and Decision Support – MD3S”; 2013 accepted funding from the Knowledge Foundation (Dnr 20120278) I was a co-applicant, leading subprojects and the research track.
- “Strategic, Tactical and Operational implementation of Sustainability into the Innovation Process – STOSIP”; 2014, accepted funding from the Knowledge Foundation (Dnr: 20140154) I was the **main applicant and lead the project**.

- Profile project – “Model Driven Development and Decision Support – MD3S+”, 2019 accepted funding from the Knowledge Foundation (Dnr 2018015) I was a co-applicant, leading subprojects and the research track.
- “Sustainability Implementation Package – SIP step 1, 2018, accepted funding from Vinnova. (Dnr2018-0036). I was the **main applicant and lead the project**.
- “Digital Sustainability Implementation Package – DSIP step 2, approved by Vinnova 2021. (Dnr BTH-6.1.1-0114-2019). I was the **main applicant and the main project leader/coordinator of the project**.
- ”Produktutveckla med hänsyn till Digital Product Passport -DIPP” – FFI project approved by Vinnova 2023. (Dnr 2022-01657). I was the **co-applicant** of the project, the main-applicant and project leader was at Chalmers University of Technology.
- “Circular and Data Driven Collaborative Design Framework (CADCOD)- FFI project approved by Vinnova 2023. (Dnr 2023-02637). I was the **main applicant** of the project and lead the project.

RESEARCH PROJECTS

2023-2024

Circular and Data Driven Collaborative Design Framework (CADCOD)

Sophie has been main applicant and is leading the project in this collaboration project between Chalmers and Volvo AB. CADCOD aims to create a circular collaborative framework for early development work, which includes guidelines and methodology, to explore and invest in circular solutions. This meets the need to prepare the automotive industry for co-developed circular solutions that leverage the requirements to provide transparency and traceability of sustainability-related product information throughout the product life cycle and value chain. The project is funded by Vinnova and the project run in 9 months.

2022-2023

Designing the Impact of Digital Product Passport – DIPP

Sophie has been co-applicant and is leading one work-package in this collaboration project together between Chalmers, BTH and Volvo AB. The purpose of DIPP project, as a pre-study project, is to prepare automotive industry to meet the increasing requirements of ensuring transparency and traceability of sustainability-related product information throughout the product life cycle and throughout the value chain. The ideas, objectives and goals of the DIPP pre-study is to clarify both the current gaps and upcoming opportunities with the increased requirements of transparent and traceable sustainability data and formulate an action plan in a specific roadmap. During DIPP, consortia and proposals for how to address critical gaps and realization of identified potential will be formed. The project is funded by Vinnova and the project run in 9 months.

2021-present

Digital Sustainability Implementation Package— DSIP

Sophie initiated, applied and coordinates this project that is derived from SIP step 1. The purpose of DSIP project is to develop a Digital Sustainability Implementation Package to enable a strategic sustainability approach early in the product innovation process. The objective is to demonstrate, validate and generalize DSIP for different industrial applications in collaboration with 16 committed project partners. The project is funded

by Vinnova and the project run in 2 years, <https://www.bth.se/forskning/forskningsomraden/strategisk-hallbar-utveckling/digital-sustainability-implementation-package-dsip/>.

2013—present

Model Driven Development and Decision Support – MD3S+

This research profile aims, in co-production mode develop, disseminate, and integrate relevant, user-friendly and efficient support methods and tools for sustainable product-service system innovation. Within the project, Sophie leads the Sustainable Product Development research area and supervises several PhD-students. She also leads a subproject that aims to integrate sustainability and value in the early innovation phases. The project is funded by Knowledge Foundation. <http://bth-collaboration.se/content/model-driven-development-and-decision-support-md3s>.

2018

Sustainability Implementation Package – SIP step 1

Sophie initiated, applied and lead this project. It was an initiating project with the aim to create a base for developing an implementation package with methodology and interconnected methods and tools to systematically integrate and implement sustainability in product development companies. The project is funded by Vinnova and the project ran in 9 months, (2018). <https://www.bth.se/sip> step 1

2015 –2018

Strategic, Tactical and Operational implementation of Sustainability into the Innovation Process – STOSIP.

Sophie initiated, applied and lead the STOSIP project. The overall project objective was to support manufacturing companies to integrate and implement sustainability on strategic, tactical and operational levels in the company. Within the project, Sophie has investigated how to guide decisions for down-selection and exploration of emerging technologies and materials from a sustainability and value perspective. Sophie supervised several PhD-students and lead work packages in the project. The project was funded by Knowledge Foundation. <https://www.bth.se/eng/stosip/>

2010-2013

Sustainability criteria in concept evaluation methodology

The research aim was to clarify how to define sustainability features in the early product innovation phases and suggest an improved concept design and evaluation methodology, including sustainability aspects during the product life cycle. The project was funded by Vinnova.

2009-2011

Post-doc for Sustainable Product Innovation

Sophie initiated and applied for a post-doc period of two years. During this period, she spent some of her working time in industry and at the same time developed her research profile more towards early phases of the product innovation process with the manufacturing industry as target group. The main purpose for this project was also to further develop research in sustainable product development through application and implementation of support tools for Sustainable Product Development. The project was funded by Knowledge Foundation.

2009-2012

Labelling and Procurement Support for Sustainable Product Innovation

The main question for this project was a framework for strategic sustainable development that could aid development of criteria and guidelines for sustainability-based product labelling and sustainability-based procurement policies. Sophie was the initiator, project leader in practice and supervisor for the PhD student Cecilia Bratt. The project was funded by Knowledge Foundation.

- 2006-2009 **Prioritisation Support for Sustainable Product Development**
 Sophie was one of the researchers initiating and lead the project in practice. Within the project she worked with the main question— how organizational understanding and adoption of a strategic sustainability perspective at senior management level permeate product and process development. The project was funded by Knowledge Foundation.
- 2005-2008 **Effective and Sustainable Waterjet Cutting**
 This project took a multidisciplinary approach that involved fluid dynamics, machine dynamics/virtual prototyping and sustainability assessment as the main and interrelated areas. Within this project Sophie suggested an approach for sustainability-driven design optimization. The project was funded by the Knowledge Foundation.
- 1998-2000 **Tool for Sustainable Product Development and Investment Planning**
 The project which was carried out in collaboration between the Department of Mechanical Engineering, BTH, and the Department of Physical Resource Theory, Chalmers University of Technology and Göteborg University. Within the project Sophie developed a method for sustainable product development. The project was funded by the Swedish National Board for Industrial and Technical Development.

LIST OF PUBLICATIONS

i) Journal articles

1. Broman G., Byggeth S. and Robèrt K.-H. 2002. Integrating Environmental Aspects in Engineering Education, *International Journal of Engineering Education*, ISSN 0949-149X, Vol. 18, No. 6.
2. Byggeth S. H. and Hochschorner E. 2006. Handling trade-offs in Ecodesign tools for sustainable product development and procurement. *Journal of Cleaner Production*, vol. 14, issue 15-16, 1420-1430.
3. Byggeth S. H., Broman G. and Robèrt K.-H. 2007. A method for sustainable product development based on a modular system of guiding questions. *Journal of Cleaner Production*, vol. 15, issue 1, 1-11.
4. Ny H., Hallstedt S., Robèrt K.-H. and Broman G. 2008. Introducing templates for sustainable product development through an evaluation case study of televisions at the Matsushita Electric Group. *Journal of Industrial Ecology*, vol 12, issue 4, 600-623.
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* *This article was in 2019 among the top 1 % most cited in the world within its category— according to an external independent evaluator, Damvad Analytics, who assesses scientific quality and impact of research.*

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* Awarded best paper at the conference. Rated in the top 10% papers based on reviewers' scores.

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iii) Books & Book chapters

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iv) Workshops at international conferences

1. 2016: Understanding the transition from eco-design to Sustainable Design - a workshop prepared by the Ecodesign SIG members: Sophie Hallstedt, Blekinge Tekniska Högskola (BTH) and Daniela Pigosso, Technical University of Denmark (DTU). *At the International Design Conference – Design 16. Dubrovnik, Croatia.*
2. 2017: Dissemination and Implementation of Sustainable Design Tools – a workshop prepared by the Sustainable Design SIG members: Daniela Pigosso (DTU), Sophie Hallstedt (BTH) and Cassandra Telenko (Georgia Tech). *At the 21st International Conference on Engineering Design, (ICED 17), Vancouver, Canada.*
3. 2019: Sustainability systems thinking in design: Group model building method – a workshop prepared by the Sustainable Design SIG members: Matilda Watz and Sophie I. Hallstedt (BTH). *At the 22nd International Conference on Engineering Design. Delft, The Netherlands.*
4. 2021: Collaboratively Pursuing a Research Roadmap for Sustainable Design Tools- a workshop prepared by the Sustainable Design SIG members: Jeremy Faludi, Steven Hoffenson, Sze Yin Kwok, , Sophie Hallstedt, Daniela Pigosso, Yuri Borgianni. *At the 23rd International Conference on Engineering Design. Gothenburg, Sweden.*
5. 2022: Sustainable Design SIG & Design for Additive Manufacturing SIG - a workshop prepared by the Sustainable Design SIG members: Yuri Borgianni, Jeremy Faludi, Sophie Hallstedt, Steven Hoffenson, Serena Graziosi, Nicholas Meisel, Tino Stankovic. *At the the International Design Conference – Design 20. Dubrovnik, Croatia. (On-line)*
6. 2023: Sustainable Design SIG: SUSTAINABLE DESIGN EDUCATION- a workshop prepared by the Sustainable Design SIG members: Yuri Borgianni, Jeremy Faludi, Sophie Hallstedt, Tatiana Reyes, Els Du Bois . *At the 24rd International Conference on Engineering Design. Bordeaux, Sweden.*

v) Examples of popular science publications

86. Combining sustainability with sound business. Pages: 8-9 in: A magazine for Volvo Aero employees #2, May 2011.
87. Innovative environmental research. Page: 8 in: A magazine about the aerospace industry, the environment and GKN Aerospace in Trollhättan, 2015 (In Swedish: En tidning om flygindustrin, miljön och GKN aerospace i Trollhättan.)

Note: Before 2007 my surname was Byggeth