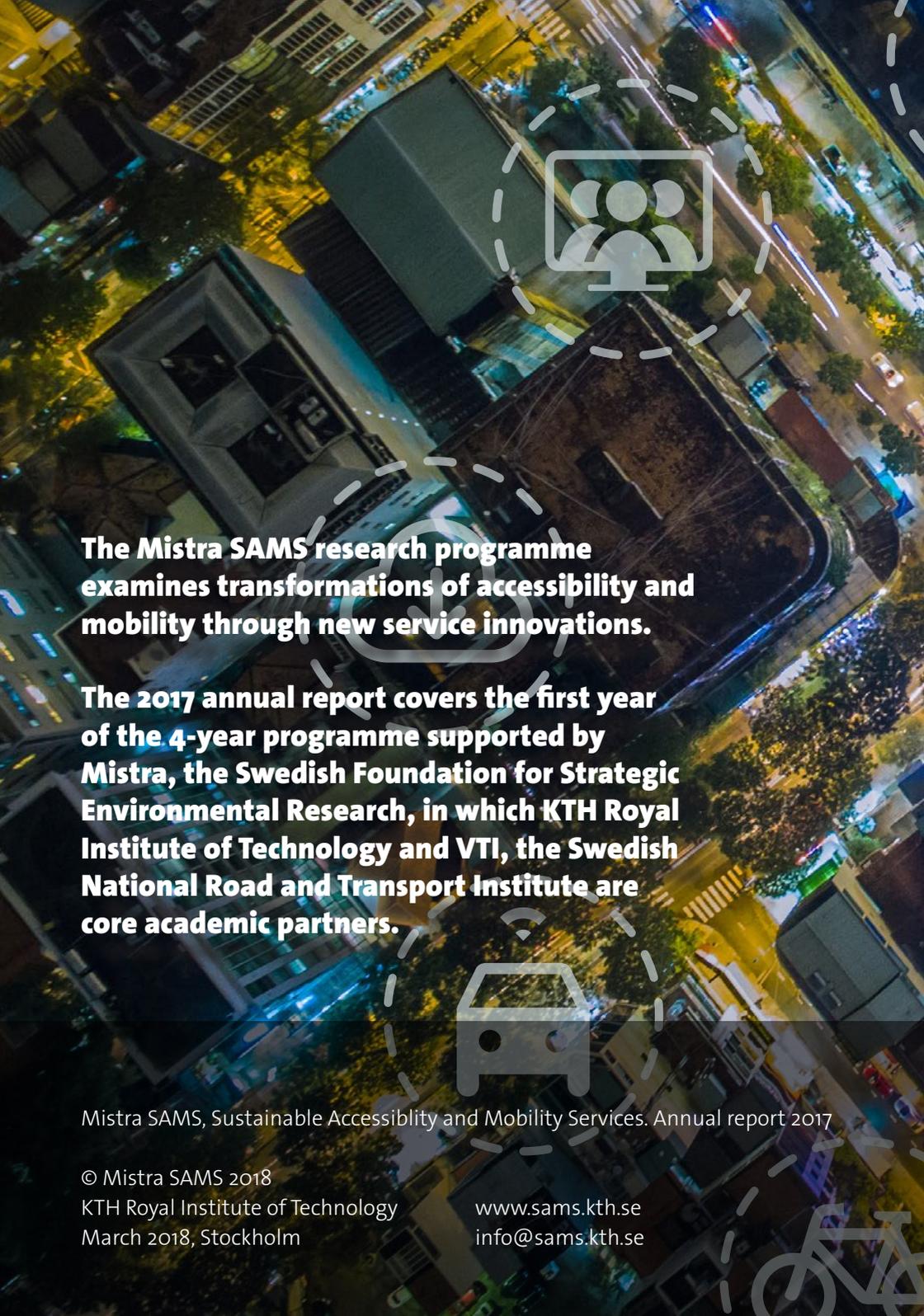


Mistra SAMS

Annual Report 2017





The Mistra SAMS research programme examines transformations of accessibility and mobility through new service innovations.

The 2017 annual report covers the first year of the 4-year programme supported by Mistra, the Swedish Foundation for Strategic Environmental Research, in which KTH Royal Institute of Technology and VTI, the Swedish National Road and Transport Institute are core academic partners.

Mistra SAMS, Sustainable Accessibility and Mobility Services. Annual report 2017

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KTH Royal Institute of Technology
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Chair's page

In order to reach the goals set in the Paris agreement and a sustainable future for humanity, we need an exponential decrease in carbon dioxide emissions. Emissions must be halved every decade. While this exponential decrease poses an enormous challenge, many would hold that the most important technological breakthroughs needed have already been made. It is also clear that a societal focus on the immediate need to reduce carbon dioxide emissions can lead to other valuable outcomes, such as growth in the green economy sector, increased quality of life in our cities, and much more.

Transportation is one of the most important areas to transform in order to achieve our sustainability goals. But how can this transformation come about?

A sustainable transport system in growing cities is a complex matter to address. Transportation is affected by many different factors, ranging from policy, urban planning and infrastructure development, to individual behavior on a regular Tuesday morning.

But which policies will make a real difference and increase the speed of transformation? And which user experience qualities and incentives will lead to real behavior change?

Technology evolves quickly, and the consequences of how we apply the new capabilities that technology grants us depend on choices we make along the way. Therefore, there is great value in addressing these issues in an interdisciplinary way, connecting different scientific disciplines and competences, as well as theory and real life experiments.

Mistra SAMS is a research program that does just that. I firmly believe that the program will generate important insights needed to push us further, help set the agenda for the future, and provide evidence to help decision makers and innovators onward.

Darja Isaksson

Chair of the board, Mistra SAMS



A word from Mistra SAMS programme directors



Although the Paris agreement in 2015 was an important milestone, two and a half years later, time is getting short if we are to avoid disastrous effects of climate change. Building new infrastructure and replacing vehicle fleets will be necessary, but such measures are both time consuming and costly. Much quicker effects may be achieved by new services such as virtual meetings, shared vehicles, light electric vehicles and possibly autonomous vehicles.

Mistra SAMS focuses on how combinations of such services, facilitated by digital platforms, may transform transport and contribute to achieving sustainable urban regions. Not only can such integrated services provide rapid gains towards climate goals, they can also lower transport costs for households and private companies and offer affordable accessibility solutions for poorer citizens.

This can be accomplished not least by using urban space, transport infrastructure, and the vehicle fleet more efficiently.

The field of mobility as a service is rapidly expanding around the world. In Sweden, a couple of initiatives have been started besides Mistra SAMS, such as: the innovation partnership program “KOMPIIS”, by the Swedish government, “Hållbar Mobilitet som Tjänst” by the Swedish Energy Agency and the “Swedish Mobility program” by Samtrafiken. As an interdisciplinary multi-stakeholder programme, and one of the largest research programmes in Sweden in this field, Mistra SAMS is well-positioned to play a key role as a knowledge provider in the transition to sustainable urban transport.

This first year with Mistra SAMS has been both very inspiring and hectic. We have had several program-wide events in order to achieve mutual learning between the 16 partners and around 20 researchers active in the program. The interdisciplinary research approach that Mistra SAMS takes time to get underway, but is potentially very rewarding when successful.

We have been successful in recruiting five doctoral students that now are working within Mistra SAMS in their respective disciplines and workpackages. During the year we have had several workshops and in October, we had our first yearly conference with the whole consortium. We have also had our first meeting with our International Scientific Advisory Panel who gave us important feedback on how to proceed with the program.

During 2017 Mistra SAMS has participated in a large number of conferences and other events in Sweden, such as Almedalen, where Mistra SAMS representatives were active in panel discussions including ministers, regional politicians and industry stakeholders. We have contributed to Swedish public debate on transportation, through TV and radio and in newspapers.

Looking towards 2018, our research efforts have geared up and all work packages are up and running. We will continue investigation of user experiences of services and analysis of institutional dimensions, and launch Mistra SAMS Living labs.



In 2018, we will also focus on increasing our global outreach by establishing international co-operation between Universities and institutions in our field. We will do this by participating in international conferences and also by inviting young researchers to our International Young Research grants program, as well as by sending out Mistra SAMS PhD students to leading research environments. Since a key aim of Mistra SAMS is to provide policy makers with decision support on sustainable communication and transport we will continue to actively contribute to public debate on these issues.

We look forward to an exciting year when Mistra SAMS will be up to full speed! Let's stay in touch!

Anna Kramers & Jonas Åkerman

Programme directors, Mistra SAMS

Mistra SAMS overview

Sweden aims to become one of the first fossil-free welfare states in the world, with a vehicle fleet independent of fossil fuels by 2030. Stockholm strives to decrease car traffic despite a rapidly growing population, a goal which calls for a rapid and radical transformation of accessibility and mobility in the country.

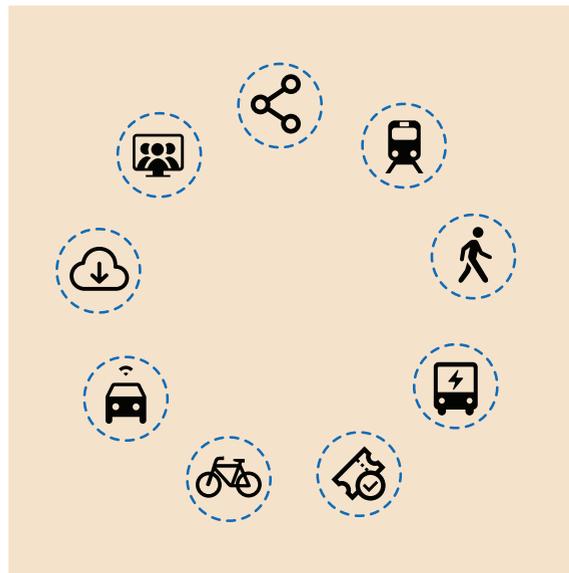
The idea of the Mistra SAMS research programme is to provide in-depth scientific knowledge of the technological, institutional and behavioural factors that are prerequisites for such a transformation.

The aim of the programme is also to formulate guidelines and directions for new policies and institutional strategies that can promote a transition to sustainability. The overarching question addressed by the research programme is how new and disruptive services for accessibility and mobility can contribute to a sustainable Swedish transport system.

Mistra SAMS researchers study emergent accessibility service innovations that have disruptive potential to transform accessibility and mobility among broad groups of users. The programme involves carrying out in-depth analyses of these innovations with regard to technologies, users' perspectives, sustainability

goals and institutional and spatial dimensions in the Swedish context.

New accessibility service innovations will most likely rely on multi-sided



digital platforms to connect users and producers of accessibility and mobility. Over the past year, the knowledge gained by Mistra SAMS research-

ers working together on seminars, workshops and article writing, has shown that a deeper understanding of multi-sided digital platforms and their potential contribution to a disruptive transition in accessibility is highly relevant for Mistra SAMS.

Organisation

Mistra SAMS is an interdisciplinary scientific collaboration between exper-

The iconography shows examples of services that Mistra SAMS investigates. Public transport, autonomous vehicles, telecommuting, bike- and car-sharing initiatives, integrated ticket purchasing, walkable streets, co-offices... all of these can be regarded as services that provide accessibility to different users.

A multisided digital platform can be understood as the space between these services: a space that gives users digital access to them.

rienced researchers from different fields who strive to enable an integrative understanding of the critical technical, behavioural and institutional

factors that shape transition to smart and sustainable accessibility.

Mistra SAMS works through a number of interconnected research projects called work packages. The work packages allow the programme to position transition towards sustainable accessibility within a theoretical framework, to take a strategic outlook on accessibility service innovations and platforms, to understand the needs of the various actors involved, to design and test service systems, to explore the impact of accessibility services on different levels of society, and to provide scientific knowledge to decision-makers.

The work packages are led by researchers from KTH Royal Institute of Technology and VTI Swedish National Road and Transport Research Institute.

The Mistra SAMS team

Programme executive committee

Anna Kramers, programme co-director, KTH

Jonas Åkerman, programme co-director, KTH

Jane Summerton, VTI

Anders Gullberg, UrbanCity

Karolina Isaksson, VTI

Teo Enlund, KTH

Programme board

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Christer Hårrskog, Chief Strategist, Swedish Transport Administration

Gunnar Björkman, Innovation Director, City of Stockholm

Torbjörn Lundahl, Research Director, Ericsson

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Professor Sofia Ritzén, KTH

Professor Anna Anund, VTI

Co-opted member: Christopher Folkesson Welch, Programmes Director, Mistra

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Martin Sjöman, KTH

Mattias Höjer, KTH

Mikael Johannesson, VTI

Peter Arnfalk, LU

Tina Ringenson, KTH

Wilco Burghout, KTH

Read more at sams.kth.se/team



Mistra SAMS members at the programme's first annual conference, 26-27 October

The Consortium

Mistra SAMS engages researchers as well as key public and private actors. Consortium partners participate in the administration of the programme as well as in research.



Progress in Mistra SAMS work packages 2017

Mistra SAMS works through a number of interconnected research projects called work packages. These allow individual researchers and research teams from different disciplines to focus on their particular areas of expertise, while each work package contributes to, and learns from, the total knowledge within the programme.

Work package 1: Management and communication

Work package 1 includes program startup and overall management. This work package is also responsible for external communication. In 2017, this work package provided administrative support for the programme, arranged a visit from the programme's international scientific advisory panel, and arranged a seminar at the Almedalen Political Week. In 2018, the work package continues to provide administration for Mistra SAMS.

Work package 2: Framing transitions to sustainable accessibility

Work package 2 aims to provide theoretical perspectives that can be used to understand transitions to sustainable accessibility. In 2017, this work package initiated two full-day interdisciplinary workshops that gathered researchers and practitioners con-

nected to the programme. The first focused on how one can understand the processes of change within urban transport system, and these processes' implications for SAMS. The second workshop focused on how to bring

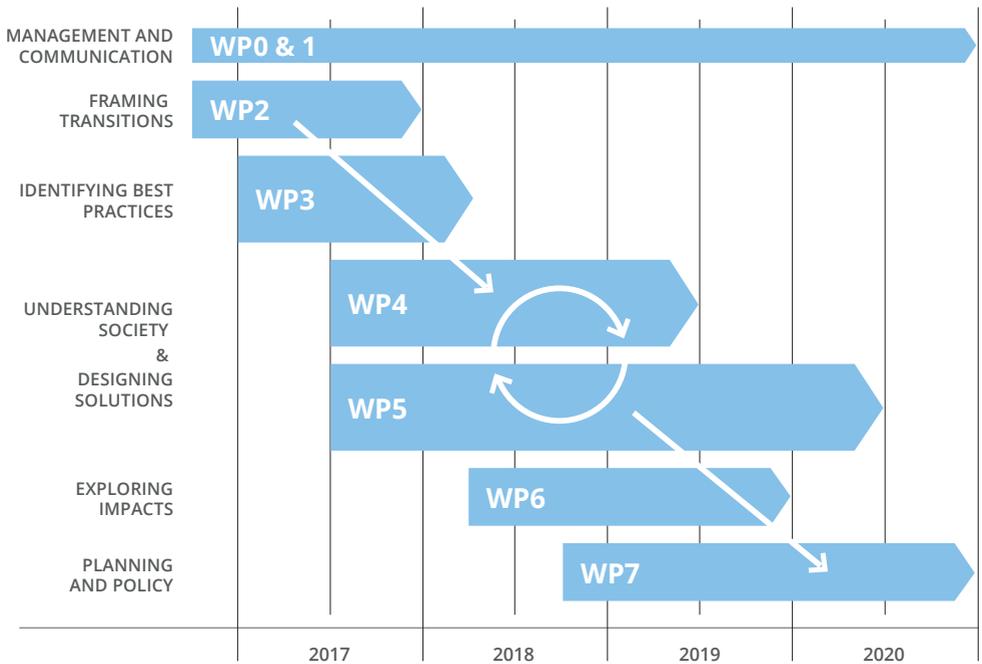
The interdisciplinary workshops arranged by work package 2 also featured presentations from Mistra SAMS researchers.

Anders Gullberg: "Understanding systems transitions over time"

Karolina Isaksson: "Driving change in urban traffic politics; reflections from the implementation of a congestion charge in Stockholm"

Margareta Friman: "Measures for sustainable travel"

Henriette Wallén Warner: "Individual's decision-making"



about changes in traveller behaviour, toward sustainable mobility.

2018 started with participation and presentation of researchers from this work package at Transportforum in Linköping in January. In 2018, two research papers are underway and will be submitted for publication towards the end of the year.

Work package 3: Strategic Outlook

Work package 3 aims to examine accessibility service innovations and multisided digital platforms. In 2017, researchers from the work package described a framework to identify

promising digital service innovations for reduced environmental and climate impact of transport, work which resulted in an article which will be presented at the ICT4S conference in Toronto in May 2018. The framework includes indicators for environmental impact, business value and use/spread of the services. Work package 3 has also compiled a large database of accessibility and mobility services found around the world.

In 2018 the framework will be used to assess the identified services, work which will result in research papers submitted for publication. The database of services will also be made available online so that other research-

chers, and decision-makers, can find examples of accessibility innovations.

Work package 4: Understanding user needs, institutional conditions and sustainability performance

Work package 4 aims to explore users' perspectives and institutional conditions that relate to accessibility innovations. In 2017, the work package was launched, and members have participated in both programme events and external conferences. An article on perceived accessibility (Lättman, Olsson, Friman: "A New Approach to Accessibility") has been accepted

for publication. Researchers from the work package have also involved themselves in several external research projects which have contributed with new perspectives on the work planned within Mistra SAMS. One such project is Accessibility design in planning and modelling of combined mobility services in Swedish metropolitan areas, funded by Vinnova and K2. Another is a study of car-pool user preferences, performed on behalf of Samtrafiken, City of Stockholm, Trafikförvaltningen, Jernhusen, Vattenfall and number of car pool companies

In 2018 the main work package activity will be a survey, distributed



Tina Ringenson, Jesper Näsström, Jonas Åkerman, Anna Kramers and Karolina Isaksson

in selected areas of Botkyrka municipality and the City of Stockholm. The results of the survey will increase understanding of how perceived accessibility, life satisfaction, life quality and health, and disposition to change, affects travel choices. New research papers are planned for Autumn 2018.

Work package 5: Designing and testing accessibility services and platforms

Work package 5 aims to design services and policies to simulate mechanisms that influence travel choices, through Living Labs. In 2017, researchers planned and developed formats for a number of design interventions to help explore mobility practices in the context of people's real lives.



In 2018, two Living Labs will be launched. The first will act as a test and rehearsal of the Living Lab concept, and the second will be full-scale. The

following Living Labs will then build on this knowledge in an iterative process, throughout the programme's length, and provide input for the two last work packages.

Work package 6: Exploring impact on city, regional and national levels, and work package 7: Planning paradigm and policy recommendations

The aim of these work packages is to study how integrated accessibility services may fit in a wider systems perspective, on city, regional and national levels. They also aim to analyse how to turn the development of the accessibility and mobility system in a sustainable direction, by means of planning and policy measures.

In 2018, both of these work packages will begin work in earnest! Seminars, workshops and research plans are underway.

Programme-wide activities, 2017

Almedalen Week Seminar

How can digitalization and new mobility services make Stockholm a world leader in climate transition?

The Mistra SAMS seminar at Almedalen Week, one of the most important forums in Swedish politics, drew a large audience and gave room for interesting discussions between:

Daniel Helldén, Vice Mayor of the Traffic Division in Stockholm (Swedish Green Party),

Gustav Hemming, Environmental, Archipelago and Regional Planning Councilor, Stockholm County Council (Centre Party),

Lena Smidfelt Rosqvist, Head of Research at Trivector Traffic,

and **Charlotte Wäreborn Schultz**, Vice Chair of the Swedish Transport Administration.

While all panelists agreed that new mobility services can have an important role to play in the Stockholm transport system, they were of differing minds about how those services should be implemented. The panelists looked forward to learning from

Mistra SAMS research results, and the programme will continue the dialogue with them moving forward.

Mistra SAMS annual program conference

October 26-27 Mistra SAMS arranged a conference with attendees from the programme consortium to discuss progress and findings, and plan for the year ahead. The transdisciplinary approach in the programme showed clearly as researchers and practitioners from differing fields worked together to give input to the Living Labs planned for 2018.



Mistra SAMS Almedalen Week seminar 2017



*ISAP open seminar, October 2017
Karolina Isaksson, middle*



” MISTRA SAMS research results has the potential to really help cities and countries think about how to be more sustainable!

Government doesn't have a clue about how to deal with the changes that these disruptive technologies bring, or with people pushing back against government regulation.

This raises some real questions about the role of government, the roles of the private sector, and what kinds of data-sharing needs to be agreed to, to make this work for everybody”

– Professor emerita Elizabeth Deakin, MISTRA SAMS International Scientific Advisory Panel



International collaboration 2017

The Mistra SAMS International Scientific Advisory Panel (ISAP) visited Stockholm in October 2018 to review Mistra SAMS' activities and offer insights into how the programme could be strengthened. The programme's executive committee and ISAP met for two days of productive talks about international accessibility and mobility research.

Two main take-aways from ISAP were that the programme would benefit from narrowing its focus, and from putting energy into making sure that the interdisciplinary team involved in Mistra SAMS have plenty of opportunities for collaboration and mutual learning. Throughout 2018, Mistra SAMS will strive to heed this advice.



Jane Summerton at the ISAP seminar

Open ISAP seminars

During their visit, the ISAP members also gave much-appreciated talks at an open seminar held on KTH Campus, on topics within their respective fields of expertise.

The Politics and Economics of Uber

Professor emerita Elizabeth Deakin, University of California, Berkeley, USA

Disruptive Innovation: The Case of Uber in London

Professor David Banister, University of Oxford, UK



Bert Van Wee, ISAP

Urban Operating Systems: A computational logic of urban control?

Professor and Director Simon Marvin, University of Sheffield, UK

A methodology to include equity in accessibility research

Professor Bert Van Wee, Delft University of Technology, the Netherlands

Configuring the child user

Professor Anna Sparrman, Linköping University, Sweden

Other international collaboration

In August, Mistra SAMS had its first research visit as part of the programme's international young researchers initiative. Mohamed Jama Mohamed from the Transport Research Institute, Edinburgh Napier University, visited

Stockholm and conducted interviews with local authorities. His research deals with how transport authorities are responding to the rise of ride-sharing services, and will compare Stockholm with London.

Work on the international young researcher initiative is ongoing and the aim is for Mistra SAMS to have more exchanges with young researchers in 2018 and beyond.



Mohamed Jama Mohamed

Mistra SAMS publication and participation in research conferences 2017

Publications in scientific journals

Lättman, K. (2017). Book review: Planning for Public Transport Accessibility: an international sourcebook. By Curtis, C. and Scheurer, J. (2016). Journal of Transport Geography, vol. 62.

Research conference contributions

Friman, M., Lättman, K. and Olsson, L.E. A new approach to accessibility. Perceived accessibility versus objectively measured accessibility in daily travel. Presented at Thredbo15, Stockholm.

Gullberg, A. Using platform logics in the creative destruction of urban transport – a transitional path to sustainability. Presented at Thredbo15, Stockholm.

Olsson, L.E. 6 years of Research on Daily Travel and Well-Being Among Adults: But What About the Children? Presented at the 15th International Society in Quality of Life Studies Conference, Innsbruck.

Friman, M. and Olsson, L.E. Intention för förändrad arbetspendling. Presented at the Swedish transportation research conference, Stockholm.

Björklund, G and Henriksson G. Teoretiska målgrupper för hållbara tillgänglighetsinnovationer. Presented at the Swedish transportation research conference, Stockholm.

Lättman, K. Tillgänglighet i staden utifrån ett resenärsperspektiv. Presented at Transportforum, Linköping.



Anna Kramers at Smarta Städer 2017



Discussion between seminars at KTH Campus

Mistra SAMS participation in external events, conferences and workshops, 2017

Mistra SAMS researchers are sought-after speakers and have attended various conferences and seminars throughout the year to talk about the programme and the topic of sustainable accessibility and mobility. Through these meetings, researchers have met leading Swedish politicians, business leaders and academics, and ensured that the issues studied by Mistra SAMS remain high on the agenda.

January 20. Margareta Friman. Public transport in Värmland: Opportunities and challenges, conference arranged by Region Värmland, Värmlandstrafik and Karlstadsbuss.

April 21. Jonas Åkerman and Karolina Isaksson. Roundtable discussion on living cities with clean air and efficient transport, arranged by the Ministry of the Environment and Energy.

April 26. Karolina Isaksson. Ekotransport 2030 conference on the

future of transport, arranged by the 2030-secretariat.

April 27. Anders Gullberg. Travelling in the Cloud, conference on digital solutions in mobility, arranged by the Swedish Green Party and the Stockholm County Council.

May 8-9. Anna Kramers. Global Compact Network Meeting, conference on achieving UN Sustainable Development Goals through business activities and partnerships, arranged



All-consortium meeting, October 2017.
Liridona Sopjani, middle

by Volvo Cars and The International Chamber of Commerce.

May 11. Margareta Friman, John Hultén. Kollektivtrafikdagen 2017, conference on public transport arranged by Trafikforum.

May 18. Anna Kramers. Innovation and digitalization in real estate, seminar



*All-consortium meeting, October 2017
Peter Arnfalk, right*

on the possibilities for new business models based on digital technology,

Almedalen week seminars, July 3-7

Besides Mistra SAMS own seminar “How can digitilization and new mobility services make Stockholm a world leader in climate transition?”, researchers from the programme were speakers at several seminars arranged by others.

Jonas Åkerman. “Full speed ahead for fossil-free vehicles”, arranged by the trade organization for Swedish energy companies.

Anna Kramers. “The role of electric cars in a multi-modal transportation system”, arranged by CLEVER Sverige AB.

Anders Gullberg. “The sharing economy, challenges and opportunities”, arranged by ShareSE and Gotland Science Park.

Jonas Åkerman. “Car, fuel, behaviour - a systems-perspective on the transport sector”, arranged by the Swedish 2030-secretariat and the journal Aktuell Hållbarhet.

Anna Kramers. “Individualised public transport, how do we get there?”, arranged by Transdev.

Jonas Åkerman. “Will new technology and services solve transportation’s sustainability problem?”, arranged by Trivector AB.

Karolina Isaksson and John Hultén. “The role of public transport in the next generation of travel and transport”, arranged by K2.

Anna Kramers. “Environmental impacts of digitalisation for sharing”, arranged by the Centre for Sustainable Communications, KTH.

arranged by the City of Stockholm.

August 13-18. Anders Gullberg, Katrin Lättman, Margareta Friman, Lars E Olsson. Thredbo 15, part of the international conference series on Competition and Ownership in Land Passenger Transport.

September 27-30. Lars E Olsson. International Society in Quality of Life Studies Conference.

**KTH Royal Institute of Technology
Centennial Celebration, Campus
100. October 17-19.**

Presentations by Mistra SAMS
researchers:

Teo Enlund: “A car-free future”.

Anna Perneståhl Brenden, Peter Georén: “Where will the self-driving vehicles (and new technology) take us?”

Anna Kramers: “Reach the UN sustainable development goals through innovation”

November 8. Anna Kramers. Digital Transport Days, arranged by the European Commission, Directorate-

General for Mobility and Transport (DG MOVE) and the Estonian Presidency of the Council of the European Union.

November 16. Jonas Åkerman. Sustainable transportation 2017 conference, arranged by IVL Swedish Environmental Research Institute.

November 21. Anders Gullberg and Anna Kramers. Digitalization for sustainability, a seminar arranged by the Centre for Sustainable Communications, KTH.



*Digitilization for sustainability, November 2017
Anders Gullberg, right*

November 23. Anna Kramers. Smarta Städer 2017, conference on solutions for smart cities, arranged by Geoforum Sverige.

Coming from Mistra SAMS in 2018

Living Labs

During 2018, two living labs will be initiated through Mistra SAMS. The living labs research in the programme aims to make interventions in the daily life and practice of individuals, to understand how they adjust to different accessibility scenarios.

Accessibility Service Database

During 2018, Mistra SAMS database of accessibility services in use around the world will be made available online. Mistra SAMS sustainability assessment of the services is also underway.

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