How to Avoid the Gender Data Gap in a Digitized Transportation Infrastructure

27 May 2021
Stockholm

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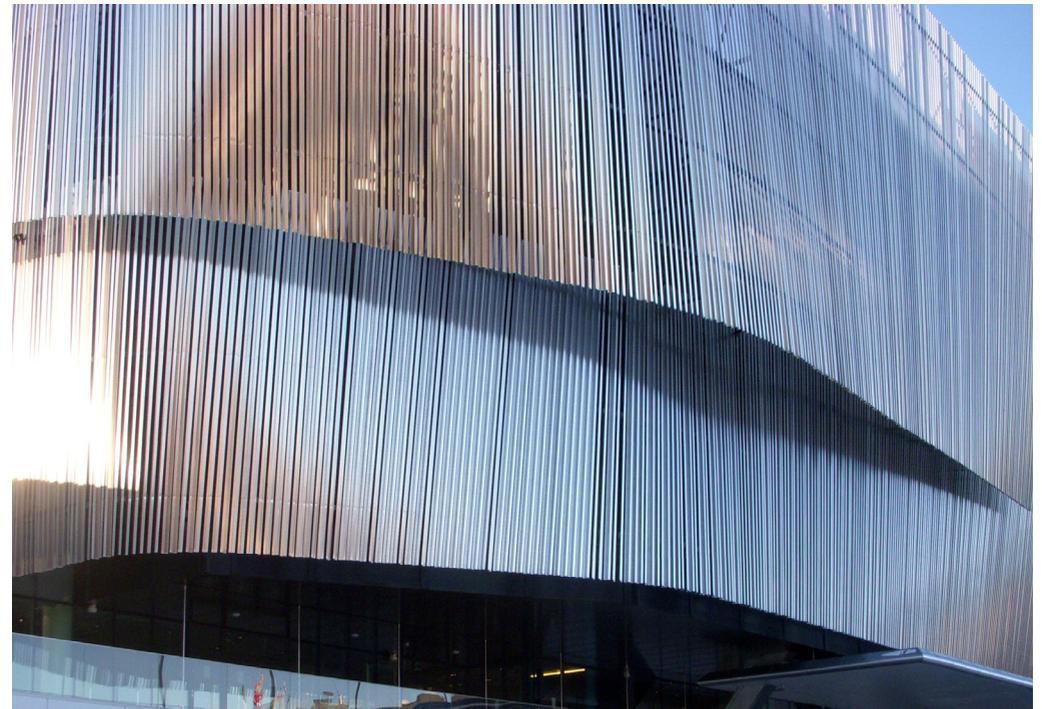
Road 2 Science

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How to avoid the *Gender Data Gap*
in a
Digitized Transportation Infrastructure

27 May 2021

Stockholm Waterfront Congress Centre

Why do we need this conference?

Digitization of our transportation infrastructure is running at full speed today.
Technology and big data is an important tool for ensuring sustainable development and we who run this process have a responsibility to support new technologies that lead to an economically, environmentally and socially inclusive society.

The use of artificial intelligence, computer learning and apps are becoming normal in the design, construction, operation and maintenance phases of our infrastructure. For this reason, it is increasingly important that we make sure our technologies are inclusive and relevant for all its users. Data plays an important role in this. But as it turns out, data is not necessarily neutral and free of bias.

We are taking transportation infrastructure as a specific focus area because it is such an essential part of the built environment. What we see happening is that smart infrastructure is more and

more becoming the cement between societal building blocks: from supporting electrified autonomous vehicles that reduce the environmental impact, to providing accurate information in order to support emergency services into urban areas...and so much more.

We have to make sure that within our digitization efforts our data is inclusive and representative of the entire population.

This means that within our engineering disciplines data bias and the gender data gap needs to be known and we need to actively prevent our society from locking itself into solutions and processes that are not inclusive and thus not safe. The main aim of the conference is to raise the awareness of its urgency to decision-makers and leaders that drive the development of infrastructure in the built environment.

Background

On behalf of Road2Science competence center, Teknikkvinnor Sverige AB conducted a study

The aim of the conference is to raise the awareness of decision-makers about the urgency to deal with gender data bias.

on gender equality in the road engineering sector. The aim was to gain a deeper understanding of the current gender distribution at different hierarchical levels in the road engineering sector in Europe and the United States, in both academia and industry.

Data from the survey clearly shows that the proportion of women decreases higher up in the hierarchy.

Road2Science has identified the gender gap in the data (Gender Data Gap) as an important challenge in social development and will continue working to counter this in the digitization of the transport infrastructure sector.

This conference is one of the first steps in that direction.

Program

09:30 - 10:00 **Registration & coffee**

10:00 - 10:15 **Introduction to the topic, organizers and speakers**
Niki Kringos, Conference Chair
Professor in Highway Engineering and Director KTH
Road2Science Center, KTH Royal Institute of Technology

10:15 - 11:00 **Keynote lecture 'The risks and consequences of data bias in a digitized world'**
Caroline Criado Perez
Royal Society awarded Author of 'Invisible Women:
Data bias in a world designed for men'

11:00 - 11:30 **How to create gender and diversity sensitive smart mobility**
Malin Henriksson
Senior Researcher in Mobility, Actors and Planning ProcessesSwedish National Road and Transport Research Institute

11:30 - 12:00 **How to ensure an inclusive transport sector in a digitized world**
Dag Balkmar
Associate Professor, School of Humanities, Education and Social Sciences Örebro University

12:00 - 13:00 **Lunch**

13:00 - 13:30 **Design in the 21st Century: socio-technical challenges and opportunities**
Maaike Harbers
Professor of applied sciences in Artificial Intelligence and Society, Rotterdam University of Applied Sciences

13:30 - 14:00 **The City of Malmö's approach to gender equal urban design**
Daniel Svanfelt
Head of unit City Planning Office, City of Malmö

14:00 - 14:30 **Coffee**

14:30 - 15:30 **Round table discussion & audience questions**
Malin Henriksson, Maaike Harbers, Dag Balkmar, Daniel Svanfelt & representatives of Region Stockholm, Trafikverket, Scania, Vinnova, Formas, KTH

15:30 - 16:00 **The way forward, 5 min presentations on how we intent to drive the question forward**
by InfraSweden, Viable Cities, Smart Built Environment, Vinnova, Formas, KTH

16:00 - 16:30 **Closure**
Summary of the main conclusions and actions

Speakers

Nicole Kringos is the initiator and chair of the conference. Niki is Professor in Highway Engineering at KTH Royal Institute of Technology, where she also leads the Road2Science Competence Center. With a background in structural and solid mechanics, for many years Niki's research group focus has been on developing computational and multi-scale models to enable long term performance predictions of asphaltic roads. Through her work with Road2Science, in recent years, developing views on how to address the complexity of the transportation infrastructure sector to enable the sustainable integration of technical advances has become an added research line.

Caroline Criado Perez is a best-selling and award-winning writer, broadcaster and award-winning feminist campaigner. Her #3 Sunday Times best-selling second book, INVISIBLE WOMEN: exposing data bias in a world designed for men, was first published in March 2019. It spent 16 weeks in the Sunday Times bestseller lists, is being translated into nineteen languages, and is the winner of the 2019 Royal Society Science Book Prize, and the 2019 Financial Times Business Book of the Year Award. Caroline was the 2013 recipient of the Liberty Human Rights Campaigner of the Year award, and was named OBE in the Queen's Birthday Honours 2015.

Malin Henriksson, Ph.D., is a senior researcher at the Swedish National Road and Transport Research Institute. Her research concerns transport and power and qualitative approaches to mobility research. Recent projects include transport poverty in excluded neighborhoods and the governance of new mobility services.

Dag Balkmar is Associate Professor and Senior Lecturer in Gender Studies at Örebro University. Balkmar's research is foremost qualitative, with emphasis on qualitative interviews, ethnographic fieldwork and policy analysis. His research encompass foremost three areas: 1) Intersectionality, policy and violence, 2) Studies of men, masculinities, motor cultures, risk taking and identity, and 3) gender and gender equality work in organizations.

Maaike Harbers is a research professor in Artificial Intelligence & Society at Knowledge Center Creating 010, and a senior lecturer at the Creative Media and Game Technologies program, both at Rotterdam University of Applied Sciences. Her work focuses on artificial intelligence, ethics and design. She studies how designers can create interactive, intelligent technology in a responsible way by accounting for the ethical implications of their concepts during design time. She received a PhD from Utrecht University in 2011 on the topic of Explainable Artificial Intelligence.

Daniel Svanfelt is head of unit at the City Planning Office at the City of Malmö, and was before this co-ordinating officer for the theme Gender Equality and Equity. He also has a background as strategic transport planner at the office, and as a former traffic consultant. He possesses project management experience from early stages in primarily public transport development projects and more recently within the field of parking and mobility. He holds a MSc degree in Traffic and Spatial planning and Civil Engineering, from Lund University, Sweden.