

# 1<sup>st</sup> IEEE IES&PES Finnish Chapter Meeting at Siemens

IEEE@Siemens 2020 – Virtual session

November, the 16<sup>th</sup> – 18<sup>th</sup>, 2020

## About this collaboration

This is the first event organized by Siemens FinBaltic in partnership with the local IEEE and it has the function of bringing together professionals in the energy and industrial sectors to grow knowledge in the scope of digitalization and innovation as well as how these concepts are applied to the several business models that one might work with in the 2020s.

This virtual event focuses on the impact of digitalization and its main technologies thus introducing concepts now emerging in these two sectors, including demand-side flexibility, the internet-of-energy (IoE) and tools to support current challenges.

Although this event is organized by the Finnish branch, Siemens and the IEEE welcome any digitalization/value hacking enthusiast to join this event.

Welcome!

IEEE@Siemens 2020

The background of the image is a dense, intricate network of glowing lines and nodes, resembling a complex circuit board or a data network. The lines are primarily orange and yellow, with some blue and teal accents. The overall effect is a sense of high-tech connectivity and digital complexity.

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**1** **Pitch Day**

**2** Demo Day

**3** Software Day

**4** Moderated Networking

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# Program

**November, the 16<sup>th</sup>, 2020: Pitch Day, 9:00 AM – 12:35 PM (EEST)**

<b>Time</b>	<b>Title</b>	<b>Speaker</b>
09:00 – 09:05	Welcoming words	Jussi Mäntynen
09:05 – 09:10	Agenda	Bruno de Oliveira e Sousa
09:10 – 09:20	IEEE opening	Mahdi Pourakbari
09:20 – 09:45	Siemens – We make real-world technology that works for everyone	Jussi Mäntynen
09:45 – 09:50	BREAK	
09:50 – 10:15	Digitalization at Siemens	Dagmar Bleilebens
10:15 – 10:40	The Accelerator Way – by Siemens Smart Infrastructure in the Nordics	Karin Jarl Månsson
10:40 – 10:45	BREAK	
10:45 – 11:10	Creating value in disruptive times	Annah Dusenlund
11:10 – 11:35	Battery Energy Storage Systems	Adnan Zia
11:35 – 11:40	BREAK	
11:40 – 12:05	Demand-side flexibility in the Nordics	Daniel Iggström
12:05 – 12:30	Flexibility enabling sustainable energy systems	Veikka Pirhonen
12:30 – 12:35	Closing the day / wrap up	Bruno de Oliveira e Sousa

# Siemens Corporation in the Nordic and Baltic region

## Description:

Siemens has been present in Finland and in the region since the second half of the 19<sup>th</sup> Century. Since then Siemens has been participating in key projects, such as connecting Finland to the international telegraph system to the creation of the first virtual power plant, the Sello Shopping Center. Currently Siemens is a trusted partner deploying new technologies and being in the forefront in areas such as use of new business models, flexibility and including co-creation under the Value Hacker brand to its customers.

## Keywords:

Innovation, digitalization, strategy, carbon neutrality, value creation

**Schedule:** November, the 16<sup>th</sup>, 2020: 09:20 AM – 09:45 AM

## Guest Speaker:



## Jussi Mäntynen (FIN)

Head of Digital Grid and  
Distribution Systems Business Units  
Nordic & Baltic at Siemens

[jussi.mantynen@siemens.com](mailto:jussi.mantynen@siemens.com)

# Digitalization at Siemens

## Description:

Electrification, automation and digitalization all have transformed our economies for decades and enabled major productivity increases while using limited resources even more efficiently. Now we are connecting the digital and physical world into the Internet of Things (IoT). Especially in the energy sector the growing volatile renewable energy production requires integration into today's energy grid. We are creating the internet of energy (IoE) by linking all devices along a complex energy value chain via the internet. This new structure results in radical changes of our power infrastructure and services, and how loads are organized, managed, and eventually charged - focusing on people and their requirements.

## Keywords:

IoE, digital transformation, smart infrastructure, smart grid, co-creation

**Schedule:** November, the 16<sup>th</sup>, 2020: 09:50 AM – 10:15 AM

## Guest Speaker:



## Dr. Dagmar Bleilebens (GER)

Head of the Global MAC4IoE  
Accelerator

[dagmar.bleilebens@siemens.com](mailto:dagmar.bleilebens@siemens.com)

# The Accelerator Way – by Siemens Smart Infrastructure in the Nordics

## Description:

Karin will introduce how Siemens Smart Infrastructure Accelerator in Nordic is working to create next generation digital services. She will share some framework on how to evaluate different initiatives and give her view on why it is important to run an accelerator, why co-creation is essential and which topics the accelerator is focusing.

## Keywords:

Accelerator, digitalization, next generation services, proof-of-concept, co-creation

**Schedule:** November, the 16<sup>th</sup>, 2020: 10:15 AM – 10:40 AM

## Guest Speaker:



## Karin Jarl Månsson (SWE)

Head of the Nordic MindSphere  
Application Center

[karin.jarl\\_maansson@siemens.com](mailto:karin.jarl_maansson@siemens.com)

# Creating value in disruptive times

## Description:

In the era of digitalization, it's more important than ever to understand the value proposition that your products and services are built around. Your business model fails if the value created solves a customer job that customers don't care about, or don't care about enough. Yet 72% of new product and service innovations fail to deliver on expectations. This presentation will dive into the concept of value proposition design and why it's important to understand your customer profile and the value map to create value that really counts.

## Keywords:

Co-creation, value propositions, customer centricity, proof-of-concept

**Schedule:** November, the 16<sup>th</sup>, 2020: 10:45 AM – 11:10 AM

## Guest Speaker:



**Annah Dusenlund (SWE)**

Digital Business Developer –  
Value Creation

[annah.dusenlund@siemens.com](mailto:annah.dusenlund@siemens.com)

# Battery Energy Storage Systems

## Description:

Drive for greater power system flexibility & stability, integration of renewable generation, aging transmission and distribution infrastructure are among the key factors that have spur the demand of battery energy storage systems (BESS). Technological developments resulting in the reduction of battery costs has effectively met these demands leading to exponential growth in both, the front as well as behind the meter battery energy storage systems. In this presentation, we will share the current market trends, conventional and emerging applications, as well as our experience of deploying battery energy storage systems for our customers.

## Keywords:

Battery Energy Storage System (BESS), battery storage use cases, ancillary services, microgrids, renewable integration

**Schedule:** November, the 16<sup>th</sup>, 2020: 11:10 AM – 11:35 AM

## Guest Speaker:



## Adnan Zia (FIN)

Head of Sales Future Grids  
Finland and Baltic

[adnan.zia@siemens.com](mailto:adnan.zia@siemens.com)

# Demand-side flexibility in the Nordics

## Description:

The Nordic power systems are facing large challenges both in a short and more distant time perspective. Meeting the demand for flexibility, keeping a good frequency quality, and maintaining sufficient inertia in the power system are problems that we don't have all the answers to today. However, it is clear that there is an unleashed potential in our already existing buildings and industries to be a part of the solution. Even though the Nordic countries are facing the same challenges, some countries have progressed more than others.

## Keywords:

Demand-side flexibility, inertia, frequency quality, balancing markets, capacity constraints

**Schedule:** November, the 16<sup>th</sup>, 2020: 11:40 PM – 12:05 PM

## Guest Speaker:



**Daniel Iggström (SWE)**

Digital Business Developer –  
Flexibility

[daniel.iggstroem@siemens.com](mailto:daniel.iggstroem@siemens.com)

# Flexibility enabling sustainable energy systems

## Description:

Sustainable future needs a new approach. VIBECO provides a totally new approach to balance the grid in the sustainable way. Buildings and industrial sites can automatically increase or reduce their consumption based on the need of the grid, which reduces the need for reserve power. At the same time the owners of buildings or other assets benefit from savings, earnings and new business models provided by implementation of smart technologies. The core of VIBECO's solution is an IoT platform which connects loads from different sources. This platform enables new digital services and these connected loads form the foundation for smart society by enabling the essential interaction and communication between different actors.

## Keywords:

Flexibility, renewables, IoE, connectivity, cybersecurity, ecosystem innovations, co-creation

**Schedule:** November, the 16<sup>th</sup>, 2020: 12:05 AM – 12:30 PM

## Guest Speaker:



**Veikka Pirhonen (FIN)**

CEO at VIBECO

[veikka.pirhonen@siemens.com](mailto:veikka.pirhonen@siemens.com)

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1 Pitch Day

2 **Demo Day**

3 Software Day

4 Moderated Networking

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# Program

**November, the 17<sup>th</sup>, 2020: Demo Day, 9:00 AM – 12:00 PM (EEST)**

<b>Time</b>	<b>Title</b>	<b>Speaker</b>
09:00 – 09:55	Demo 1: Creating value from the Internet-of-Things	Johanna Wendesten
09:55 – 10:00	BREAK	
10:00 – 10:55	Demo 2: Low-code is here to stay – let's make the future!	Tim Herden
10:55 – 11:00	BREAK	
11:00 – 11:55	Demo 3: Internet-of-Energy & GridEdge applications	Bruno Opitsch
11:55 – 12:00	Closing the day / wrap up	Bruno de Oliveira e Sousa

# Creating value from the Internet-of-Things

**Guest Speaker:**

**Description:**

Digitalization is a broad concept and in the energy sector it has found a central role concerning every aspect in the infrastructure and present business models. However, translating this from theory into action is a journey which requires both profound domain knowledge as well as realizing the development efforts necessary. This presentation and demonstration will describe the requirements of utilizing IoT as well as how the MindSphere cloud service can support this journey.

**Keywords:**

Internet-of-Things (IoT), connectivity, cloud service, data management

**Schedule:** November, the 17<sup>th</sup>, 2020: 09:00 AM – 09:55 AM



**Johanna Wendesten (SWE)**

Digital Business Developer – IoT

[johanna.wendesten@siemens.com](mailto:johanna.wendesten@siemens.com)

# Low-code is here to stay – Let's make the future!

**Guest Speaker:**

**Description:**

The Mendix vision is to enable a whole range of people with different backgrounds to be successful in creating software that delivers actual business value in a sustainable way. Our fundamental belief is that software should not be something just for IT. The whole organization needs to be collaborating on the lifeblood of the business, which is technology. The future of each company depends on it. The key to survival is experimentation and innovation by people that know the business domain. Join our demo session to learn how to make it happen – with Mendix!

**Keywords:**

GoMakeIT, BridgeTheGap, LowCode, AppDevelopment, Multiexperience

**Schedule:** November, the 17<sup>th</sup>, 2020: 10:00 AM – 10:55 AM



**Tim Herden (GER)**

Solution Architect at Mendix

[tim.herden@mendix.com](mailto:tim.herden@mendix.com)

# Internet-of-Energy & GridEdge applications

**Guest Speaker:**

**Description:**

Digitalization offers new ways to take advantage of data often already available in power grid applications, but still unused. Nevertheless, these data are the golden nuggets to improve reliability, availability, and economic operation. Just make them available in the new world such as a cloud and use there available powerful tooling to turn raw data into information. The presentation will show how effortless but secure this can be done. Furthermore, as one example it'll present how service technician and asset magnet are getting comprehensive information to enable a more economic power grid operation.

**Keywords:**

Internet-of-Energy (IoE), GridEdge, connectivity, cybersecurity, grid analytics  
effortless configuration

**Schedule:** November, the 17<sup>th</sup>, 2020: 11:00 AM – 11:55 AM



**Bruno Opitsch (GER)**

Principal Key Expert IoT

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4 Moderated Networking

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# Program

**November, the 18<sup>th</sup>, 2020: Software Day, 9:00 AM – 12:00 PM (EEST)**

<b>Time</b>	<b>Title</b>	<b>Speaker</b>
09:00 – 09:55	PSS®SINCAL basics & Python script (part 1)	Petri Koski
09:55 – 10:00	BREAK	
10:00 – 10:55	PSS®SINCAL basics & Python script (part 2)	Petri Koski
10:55 – 11:00	BREAK	
11:00 – 11:55	PSS®SINCAL basics & Python script (part 3)	Petri Koski
11:55 – 12:00	Closing the day / wrap up	Bruno de Oliveira e Sousa

# PSS®SINCAL basics & Python script

## Description:

PSS®SINCAL is a multi-purpose power system simulator that offers many calculation modules for solving various power system design problems. In addition, PSS®SINCAL offers even more flexibility by providing an interface to operate the software suite with custom programs written in Python programming language.

The session provides a quick overview to the user interface of PSS®SINCAL and how to include a Python script to automate the simulations and result handling.

## Keywords:

Power system modelling, power system simulation, simulation scripting

**Schedule:** November, the 18<sup>th</sup>, 2020: 09:00 AM – 11:55 AM

## Guest Speaker:



**Petri Koski (FIN)**

PTI Consultant

[petri.koski@siemens.com](mailto:petri.koski@siemens.com)

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4 **Moderated Networking**

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# Program

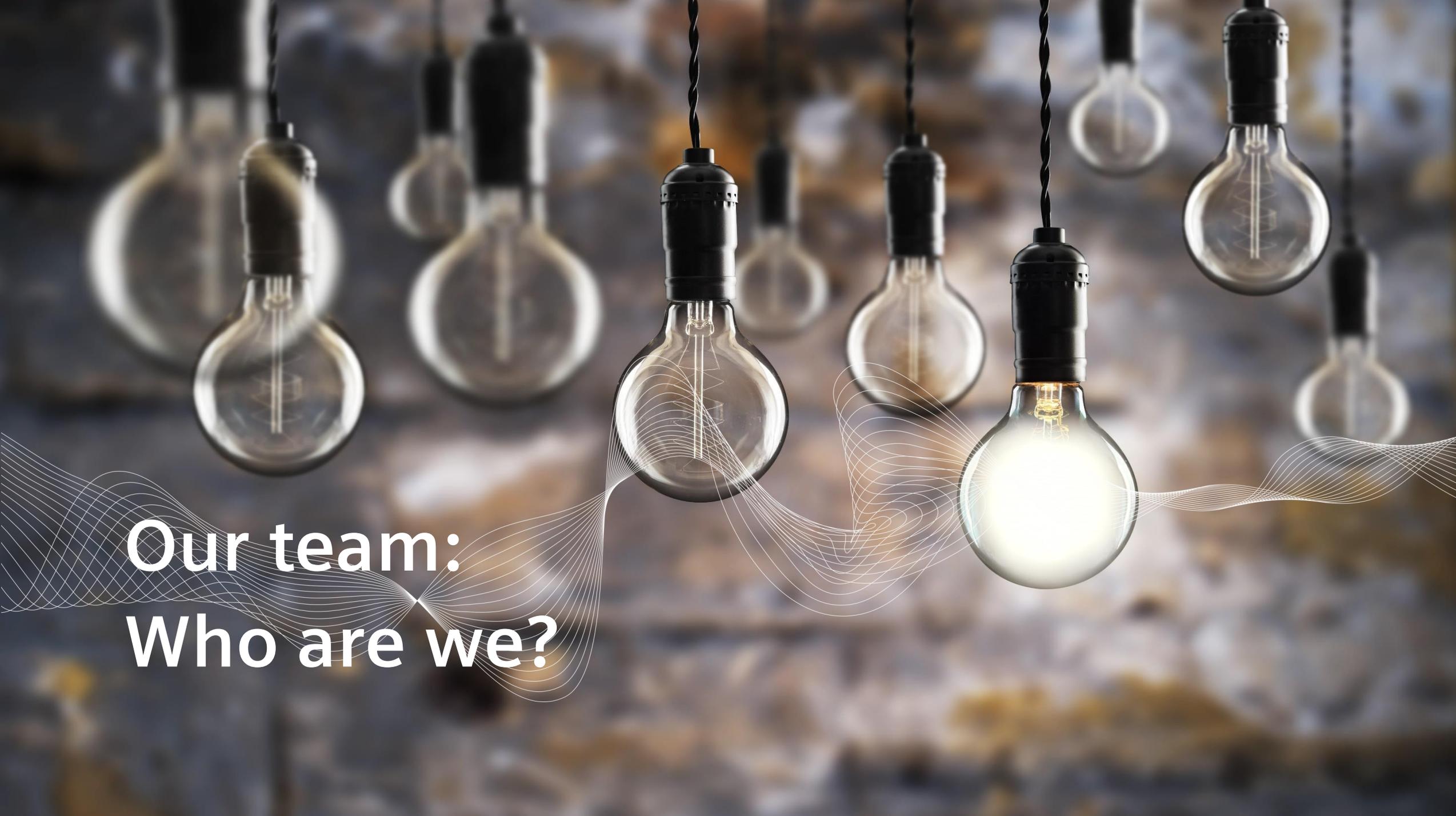
**November, the 18<sup>th</sup>, 2020: Moderated Networking, 02:00 PM – 03:00 PM (EEST)**

<b>Time</b>	<b>Title</b>	<b>Moderator</b>
14:00 – 14:10	Introduction and instructions	Pia Mettälä
14:10 – 14:55	Networking with pre-defined topics	Eight parallel moderated sessions
14:55 – 15:00	Closing the event	Bruno de Oliveira e Sousa

# Moderated Networking

<b>Topic 1:</b> Battery energy storage systems (BESS)	<b>Topic 2:</b> Value creation and co-creation	<b>Topic 3:</b> GridEdge technologies	<b>Topic 4:</b> Digitalization strategy
<b>Topic 5:</b> Flexibility services	<b>Topic 6:</b> The Internet-of-Things (IoT)	<b>Topic 7:</b> Accelerator way of digital services	<b>Topic 8:</b> Lowcode platform

*Notice! Maximum of 20 participants per topic.  
Participation request is done via event registration and places are filled in order of arrival.*



**Our team:  
Who are we?**



**Jussi Mäntynen (FIN)**  
**Head Digital Grid & Distribution Systems Business Units Nordic & Baltic**

*Jussi Mäntynen has been with Siemens since 2001 and his experience includes making sustainable, safe and efficient electrifications to different customer segments, for example, power critical industry, power generation and distribution networks. Also driving digitalization of energy business in the Nordics, where disrupting utilities, power demanding industries and infrastructures business models. Building new opportunities by turning customers traditional business models upside down. There is always a traditional way, but also a digitalized way of planning and building sustainable infrastructures and industries.*



**Dr. Dagmar Bleilebens (GER)**  
**Head of the Global MAC4IoE Accelerator**

*Dr. Dagmar Bleilebens is global head of the MindSphere Application Center for Internet of Energy (#MAC4IoE) at Siemens Smart Infrastructure. Dagmar joined Siemens 2018 with more than 20 years experience in management consulting, sales, business development, in IT and data driven services focused on the energy grid market with international companies. Dagmar is passionate on enhancing products and services with digital technologies and data analytics thereby optimizing processes, increasing efficiency, and enhancing the work environment. She strongly believes that humans – not technology - are shaping digitalization*



**Karin Jarl Månsson (SWE)**

**Head of the Nordic MindSphere Application Center**

*Karin Jarl Månsson (M.Sc.) has more than 30 years' experience from the Energy Business in various management roles in energy distribution, district heating, retail and more. Most of her career has been with E.on, where she was part of the Management Board in Nordic 2011-2017. She Karin joined Siemens 2018 and is now leading the Smart Infrastructure Accelerator in Nordic, focusing in new technologies, in digitalization, creating next generation digital services.*



**Annah Dusenlund (SWE)**

**Digital Business Developer – Value Creation**

*Annah Dusenlund graduated from Lund University (LTH) in 2016, M.Sc. in Environmental engineering and Risk management and Safety engineering. She then enrolled in the Siemens Graduate trainee program and is now a Digital business developer at the Siemens Smart Infrastructure Nordic Accelerator to position Siemens in the Nordic markets. There she works with customer centric innovation topics within the segments Flexibility and Smart grids. Her work includes project management, technical solution evaluation and hand-on development, along with customer co-creation workshops.*



**Adnan Zia (FIN)**

**Head of Sales Future Grids FinBaltic**

*Adnan Zia has over 10-year experience of international sales, business development and marketing of power electronics-based solutions. He is part of Siemens Future Grid organization which is actively contributing to global decarbonization drive by offering solutions such as battery storage systems, solar PV and eMobility. Within Nordic & Baltic region, Adnan support Siemens customer's initiative of integrating the battery energy storage systems within main power system or as part of microgrids. Adnan is alumni of Tampere Technical University.*



**Veikka Pirhonen (FIN)**

**CEO at VIBECO**

*For over 10 years Veikka Pirhonen has developed and promoted solutions for sustainable development, e.g. E-Cars, Mobility as a Service and Flexibility Solutions. At the moment, Veikka is heading an energy spearhead project of the Ministry of Economic Affairs and Employment, coordinated by VIBECO Oy, where together with several stakeholders, a new ecosystem is created for smart infrastructure and energy systems.  
[www.vibeco.fi/en](http://www.vibeco.fi/en)*



**Daniel Iggström (SWE)**

**Digital Business Developer – Flexibility**

*Daniel Iggström graduated from Faculty of Engineering at Lund University in 2019 and holds a M.Sc. in Environmental Engineering with an orientation in Energy Systems. He started out in Siemens writing his master's thesis "Demand-side flexibility in shopping centres" and have continued to work with demand-side flexibility projects as a technical project manager and Digital Business Developer within the MindSphere Application Center accelerator.*



**Johanna Wendesten (SWE)**

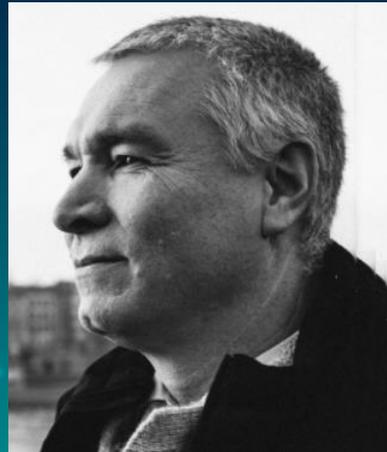
**Digital Business Developer – IoT**

*Johanna Wendesten graduated from Faculty of Engineering at Lund University in 2020 and holds a M.Sc. in Industrial engineering and management with an orientation in software intense systems. She started out in Siemens as a working student, developing a monitoring dashboard for farming, and has continued on to work with Smart grid projects in the role of Digital Business Developer within the Nordic MindSphere Application Center accelerator.*



**Tim Herden (GER)**  
**Solution Architect at Mendix**

*Tim is a Solution Architect at Mendix and advises companies on how to develop applications 10x faster and thus gain competitive advantages. Tim has 15+ years of operational business experience at Siemens in the industrial and energy domains. Not only does he know the IT world, but he also knows how to effectively interconnect it with the "business". Tim holds a degree in computer science and in business administration. He lives with his wife and two kids in southern Germany.*



**Bruno Opitsch (GER)**  
**Principal key Expert IoT**

*Bruno Opitsch is working as Principal Key Expert for IoT in Power Grids at Headquarters of Siemens, Energy Management, Digital Grid. After graduating as Bachelor Electrical Engineering, he directly joins Siemens in 1976. His experience in more than 40 years covers telecontrol, power quality and protection applications. Since 2010 he specialized on Medium-voltage and Low-voltage Distribution Grids and their specific challenges, like avoiding outages and to integrate distributed renewable power production. In his current position he elaborated together with various Utilities and Industrial companies a digitalization journey, including trail projects and organizational fit.*



**Petri Koski (FIN)**

**PTI Consultant**

*Petri Koski studied power systems and high voltage engineering in Helsinki University of Technology, graduating as a Master of Science in 2008. His main fields of expertise are power system modelling and protection; he has participated in numerous substation projects as a configurator, settings calculator, or consultant. Since 2018, Petri has been employed by Siemens, where his activities are focused on power system simulations and consultation in the Nordic countries.*



**Bruno de Oliveira e Sousa (FIN)**

**Technical Moderation**

*Bruno de Oliveira e Sousa graduated from Aalto-University in 2012 (M.Sc.) and in 2015 (D.Sc.). He has started his career in 2006 with experience in project, sales, product management, research and education and has been involved in projects in hydro power plants and substation automation projects and in the development of protection & control products. Bruno joined Siemens in 2018 and he is currently with the MindSphere Application Center accelerator and is responsible for the deployment of new technologies to the FinBaltic region.*



**Pia Mettälä (FIN)**

**Experience expert**

*Pia Mettälä has wide experience in customer service, both external and internal, from different branches. She has been working in travel industry, production company for domestic market and electronics manufacture and embedded solution business in Nordic environment. In Siemens FinBaltic she has been working as Division Coordinator since August 2018. Her role includes people and company culture development tasks as well as assisting division management and line managers in various topics. Pia enjoys gym classes, walking in nature and heavy metal concerts. She has coached as volunteer 8 years boys local football team in Espoo.*