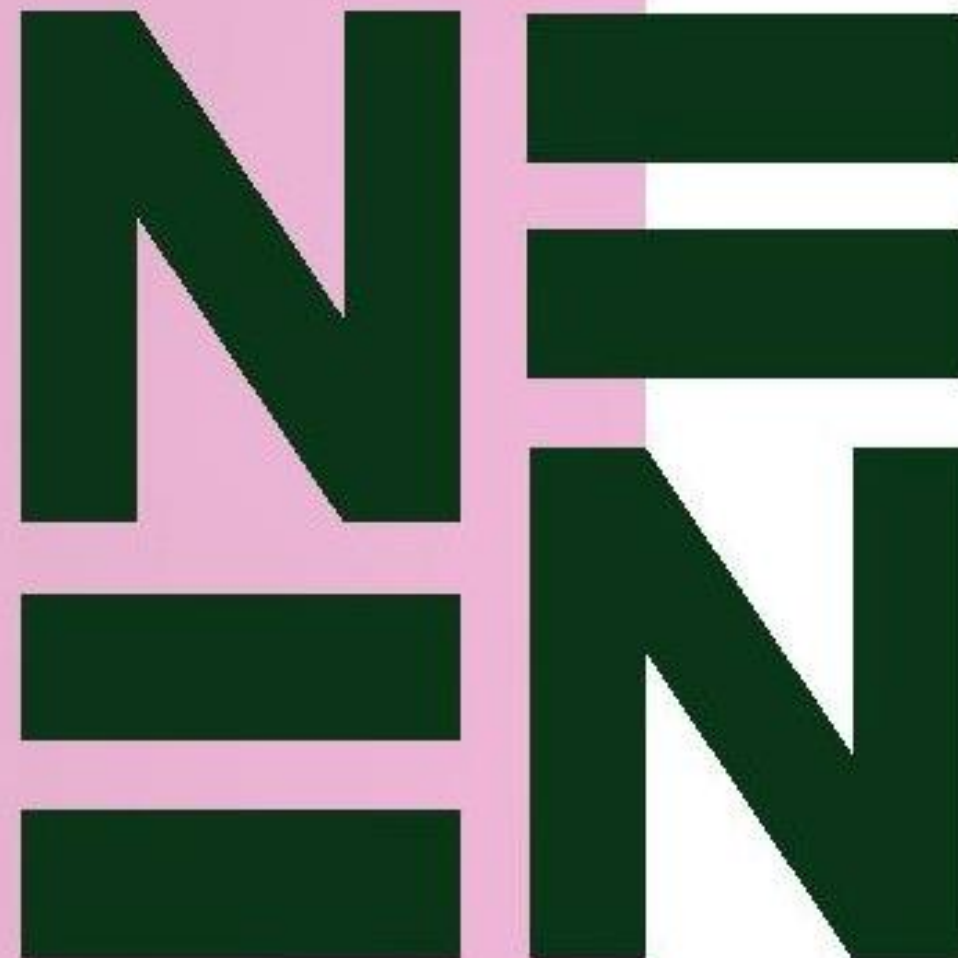




NEEN Conference 2022

<https://neen.network/>



Nordic Energy Equality Network



Day 1

NEEN

Nordic Energy Equality Network

Karina Barnholt Klepper

Chair of NEEN

Senior Researcher at
Norwegian Defence
Research Establishment
(FFI)



Nordic Energy Equality Network

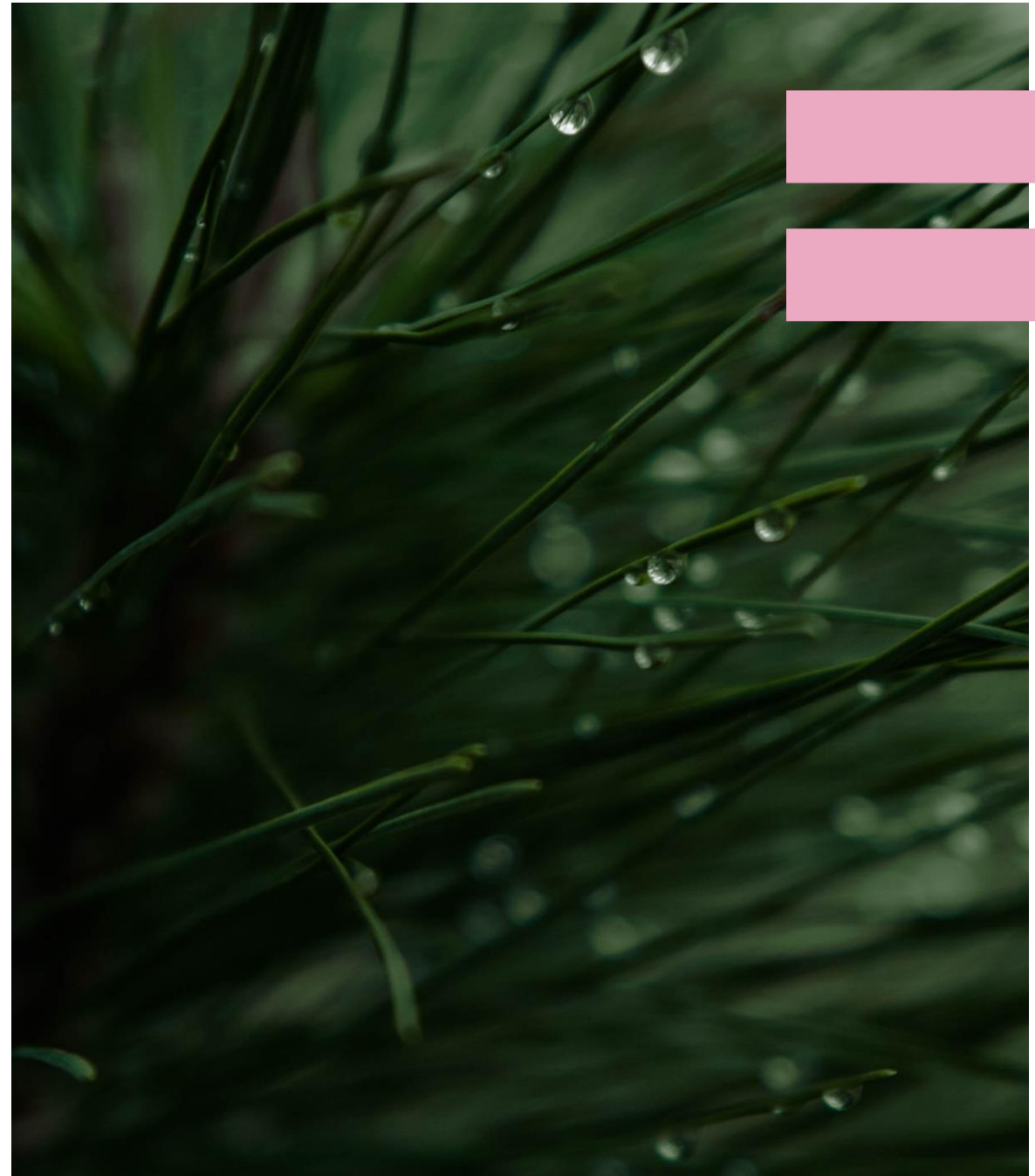
- The Nordic umbrella for the promotion of gender diversity and empowerment of women, forming a Nordic voice for an inclusive sustainable energy transition
- Representatives from the whole Nordic region and all sections of the energy sector
- NEEN will build bridges between education, research, government and industry and promote an inclusive approach through the whole sector
- NEEN will strive to make the energy sector increasingly visible to women and highlighting role models in order to attract more women to this sector



Framework for Nordic Energy Equality Network (NEEN)

The energy issue is a crucial part of the fight against global warming and climate change – carbon emissions and fossil fuels must be reduced and replaced with green innovations and technology

“In business, politics and society as a whole, we can only reach our full potential if we use all of our talent and diversity. There must be the same opportunities for all who share the same aspirations.” - *A European Green Deal* - president of the European Commission, Ursula von der Leyen



Gender equality in the Nordic energy sector

Nordic Energy Equality Conference, 14th June, 2022



Nordic Energy Equality Network



Nordic Energy
Research

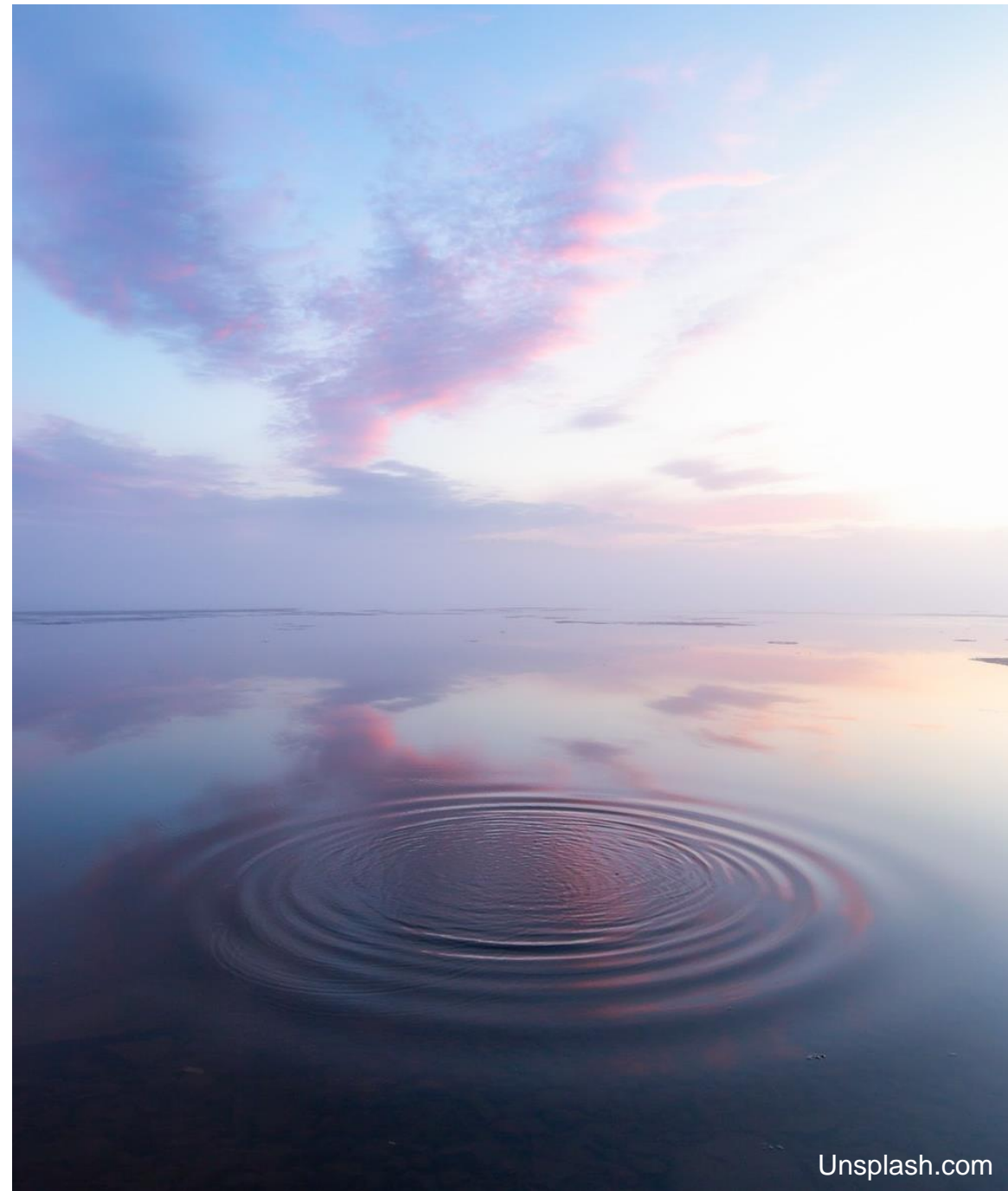


EY

Building a better
working world

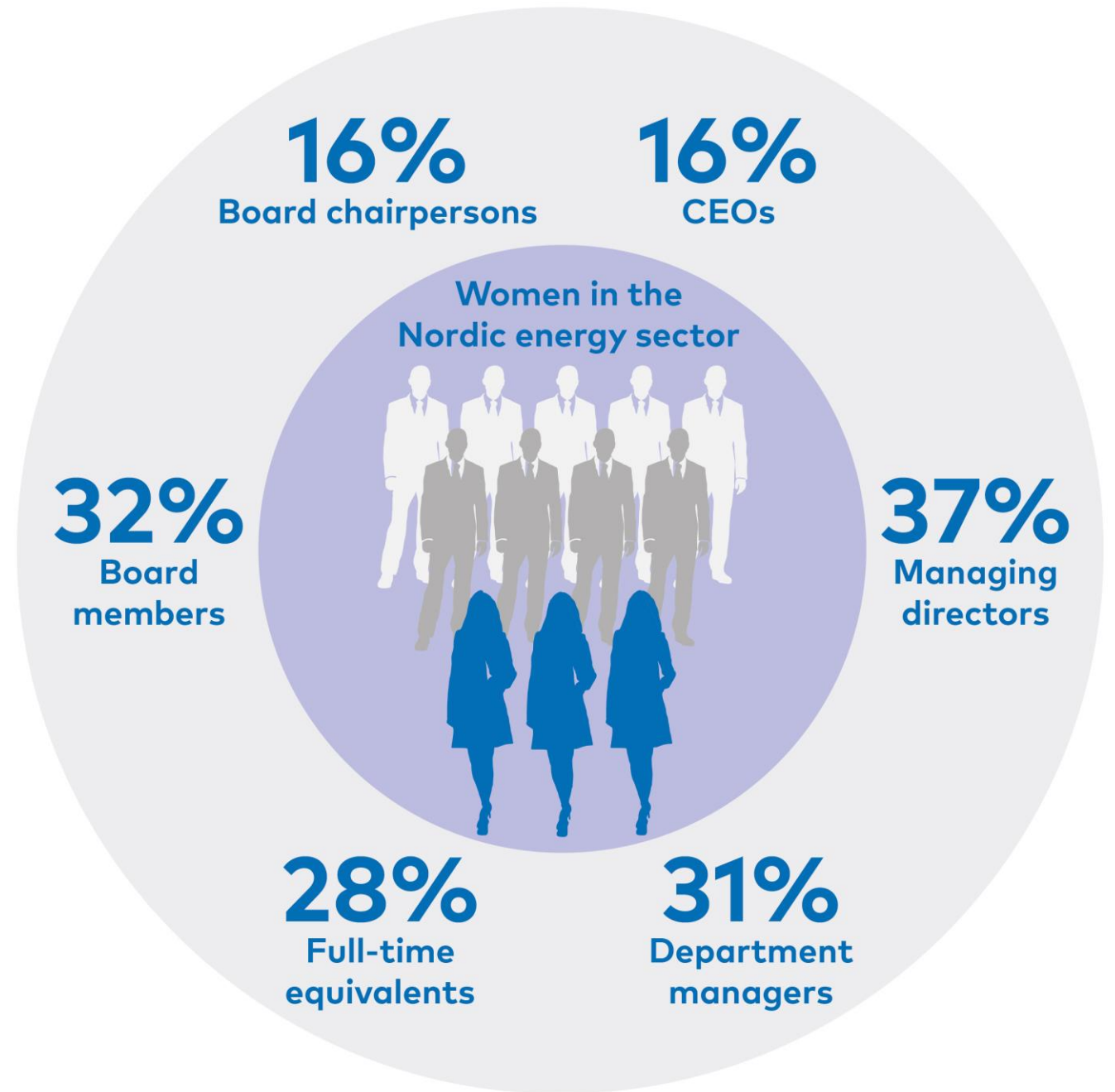
Purpose

- Link between gender equality in the workplace and corporate performance
- Currently, investigation of the link between lack of gender equality in leadership positions and the lack of ambitious commitment of the sector to climate commitments
- The purpose was to gather statistics from the Nordic countries and provide an overall status of gender balance and attitudes within energy companies, universities and energy authorities

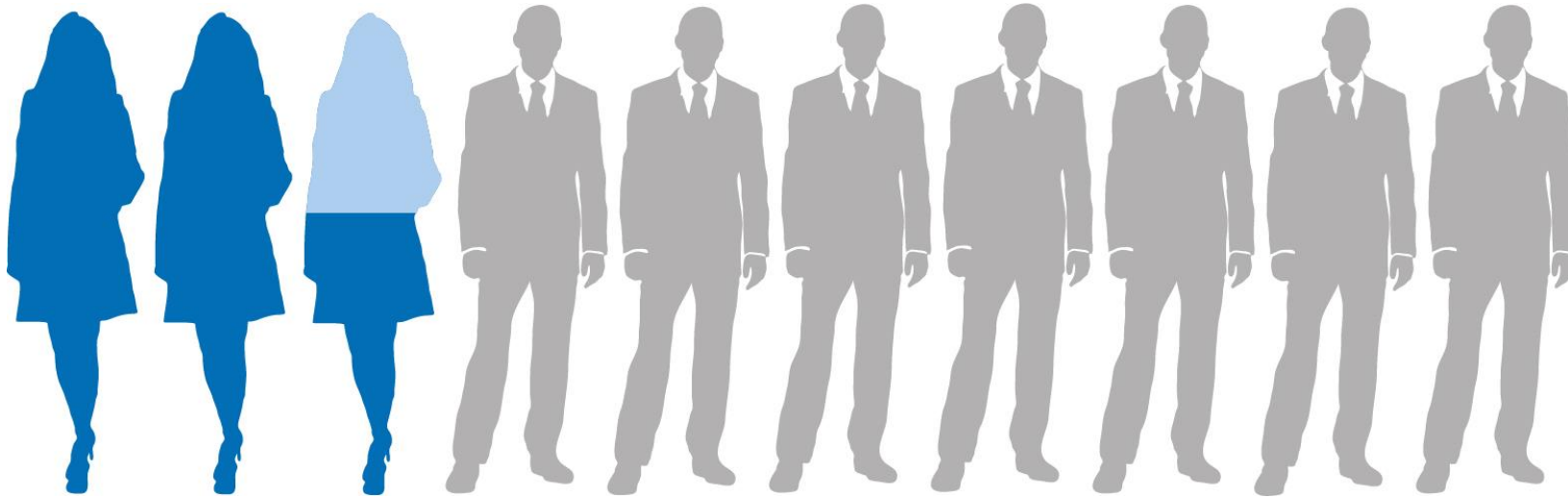


Energy companies

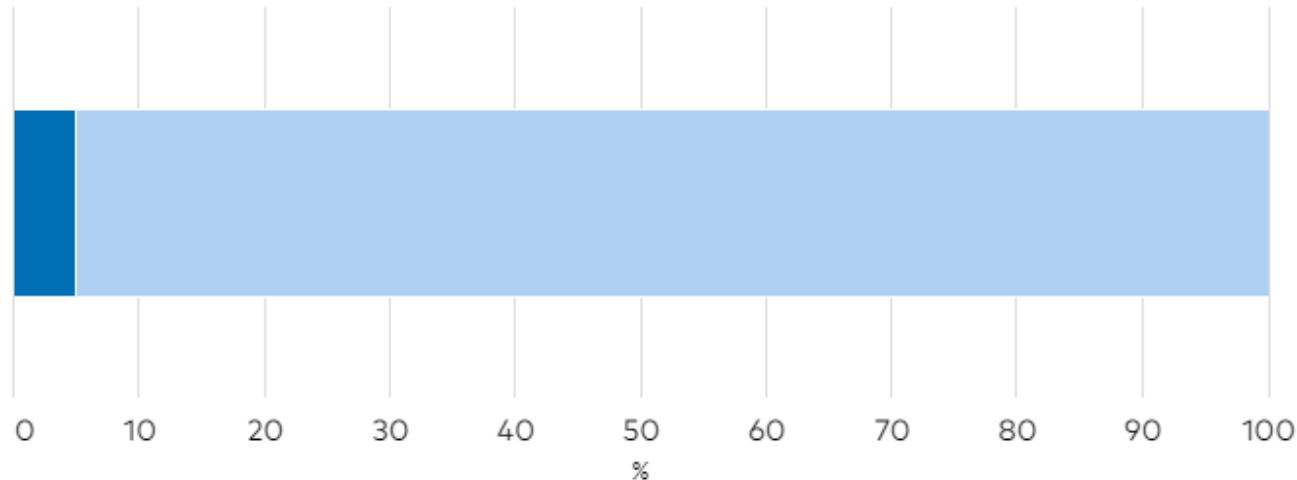
- Women hold 31% of all the decision-making power positions (board members, C-suite executives, department managers)
- Low representation in top positions



Energy companies



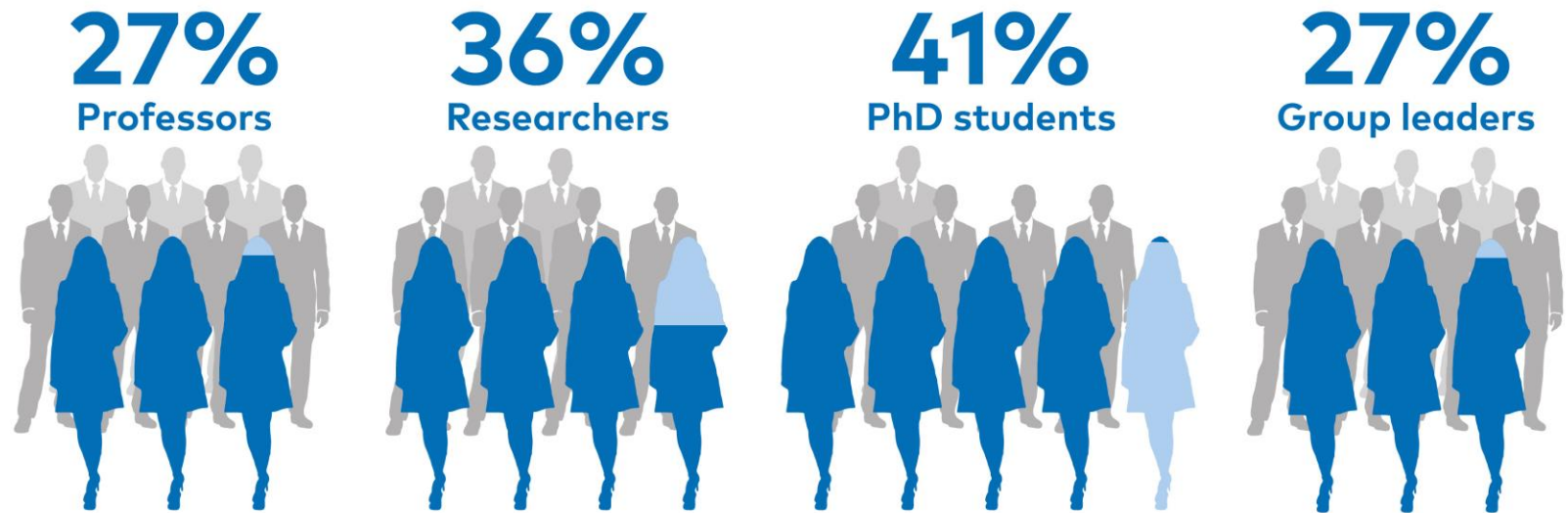
- Women's leadership score: 24%
- Major part of women in manager positions rarely leading to top positions



- Women hold a major role in 5% of Nordic energy companies

Academia

Research groups

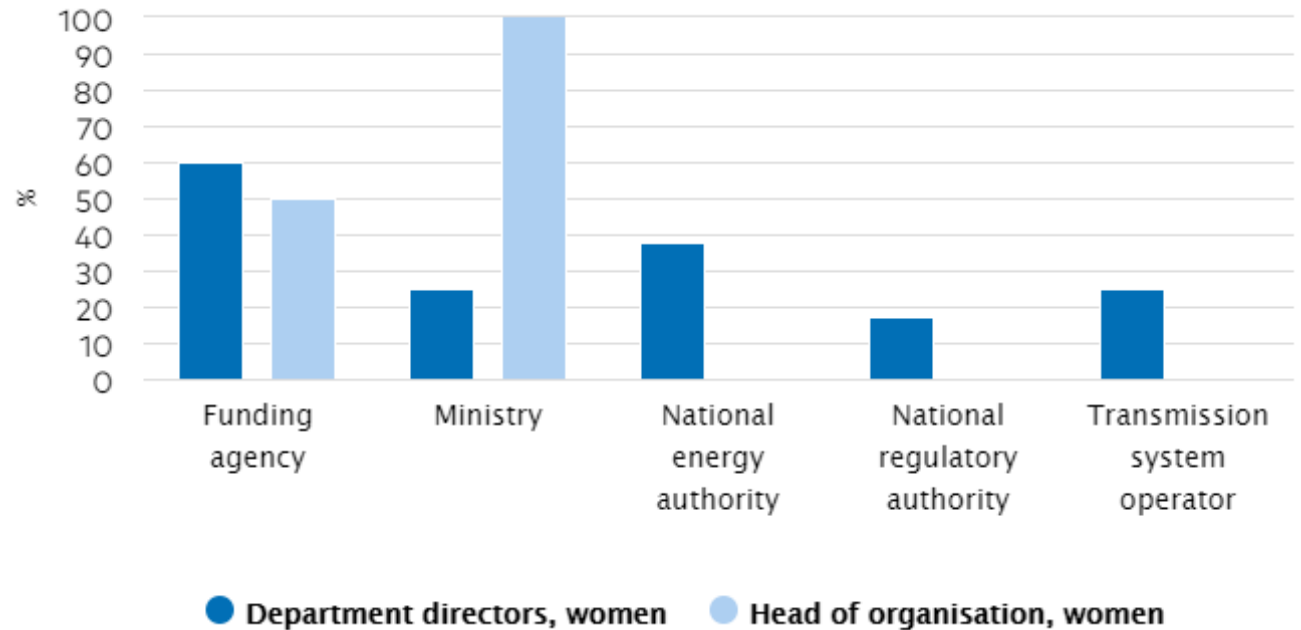
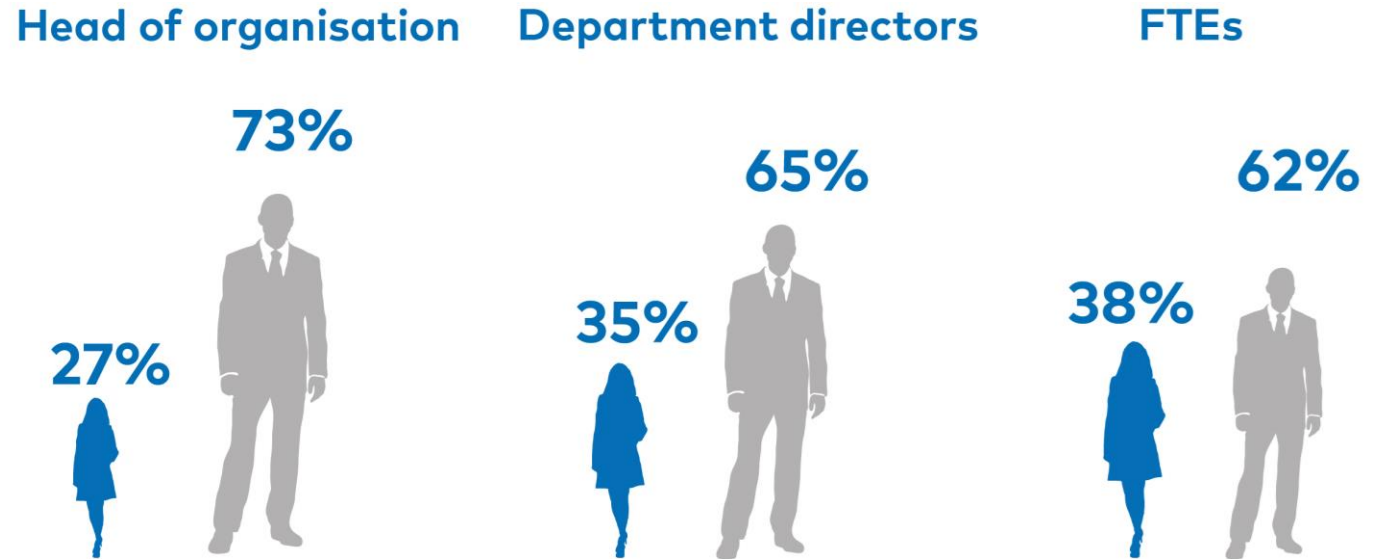


University departments



Authorities

- 2 energy ministers were women (40%) in August 2021, June 2022 100% men
- No change in FTE (2017 – 2019)
- 82% have both gender equality and equal pay policies
- All state that they actively take steps to improve gender equality



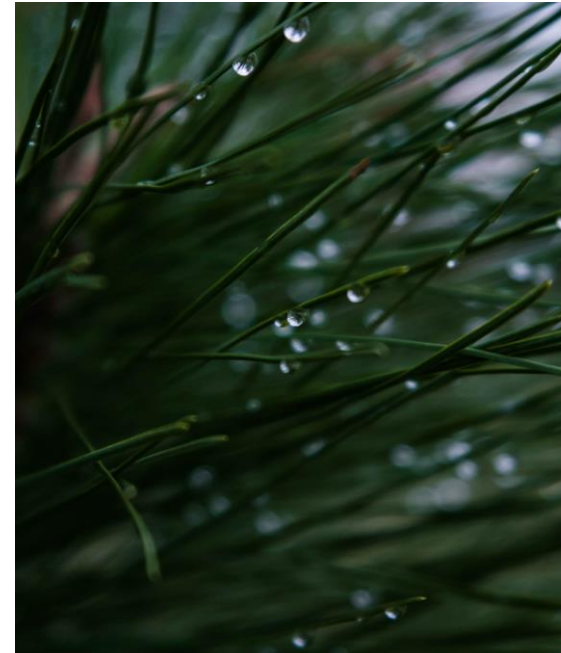
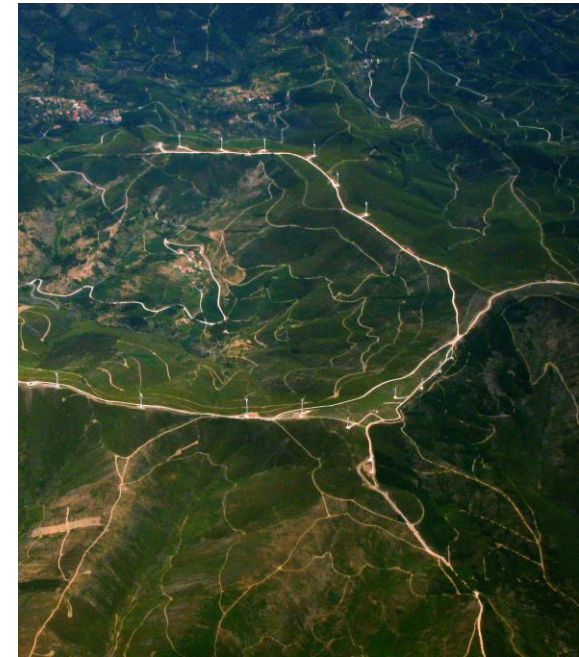
Benefits of gender diversity

- Gender diversity leads to better management and boosts innovation
- Better gender diversity = better performance and higher profitability
- Investing in diversity is an investment in sustainability



Change is possible

- Increase diversity in hiring and promote women into leadership roles
- Showcase role models
- Make gender diversity a priority – set goals, initiate programmes, monitor performance
- Remove the gender pay gap
- Encourage development, educate, ensure information flow across the organisation and create opportunities for women
- Make work-life balance a priority and increase work flexibility
- **Energy companies:** create sponsorships and make demands towards your collaborators and suppliers
- **Academia:** rethink branding and think multidisciplinary
- **Authorities:** start programmes, support networks, make demands towards supported projects



Gender equality is not just a fundamental human right, but also an essential foundation for a sustainable world



**Nordic Energy
Research**

The report is available at: neen.network and nordicenergy.org



**Karina
Barnholt
Klepper**

Chair of NEEN
Senior Researcher at FFI



**Anders
Granum**

Special Adviser R&D at
Statnett SF



Sonja Berlijn

Professor, Head of
School at KTH Royal
Institute of Technology



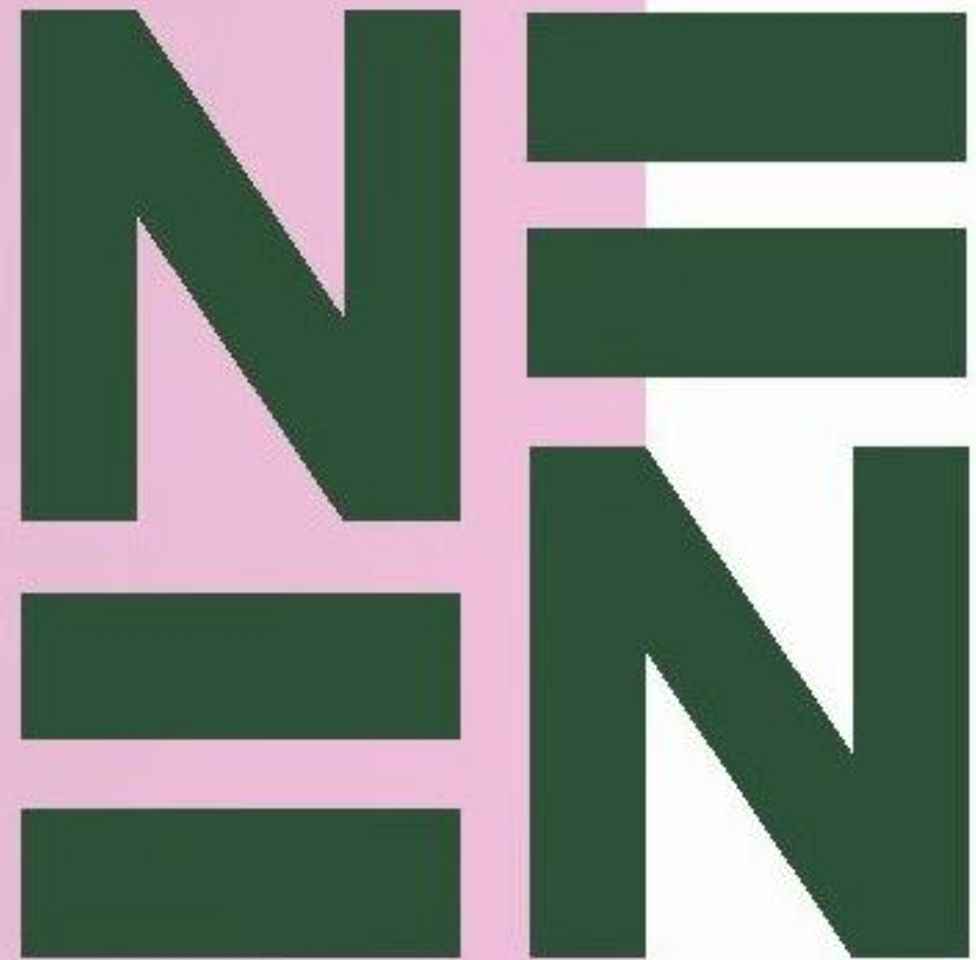
Ivana Suboticki

Researcher at NTNU,
Department of
interdisciplinary studies
of culture



Panel discussion

<https://neen.network/>



Nordic Energy Equality Network





Sonja Berlijn

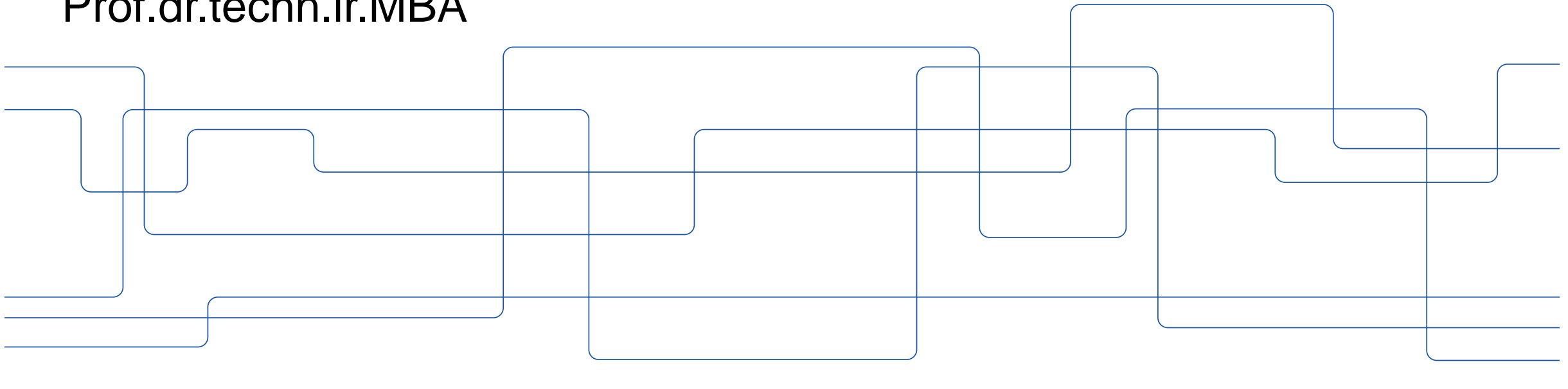
Professor, Head of School
at KTH Royal Institute of
Technology



Increasing the gender balance from goal to action

Sonja Monica Berlijn
Prof.dr.techn.ir.MBA

 prof.Sonja.Berlijn
 sonja-monica-berlijn-144ab1a/
 @sonja_berlijn
 prof. Sonja Berlijn



European Green Deal and RePowerEU

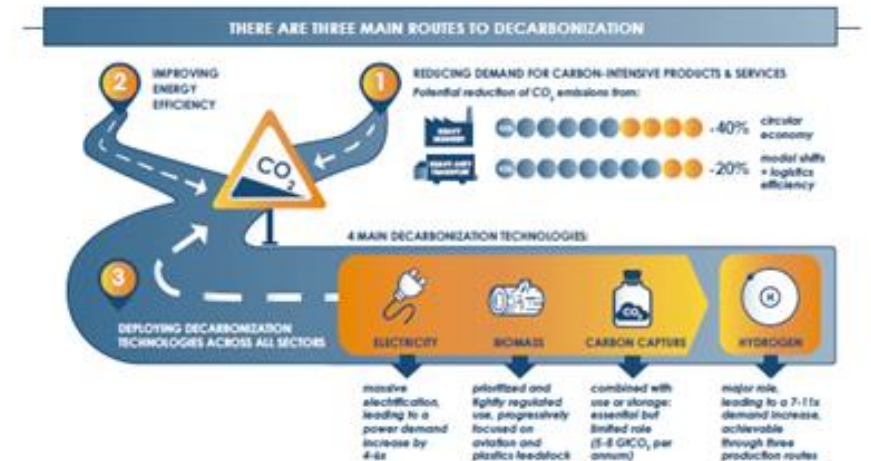
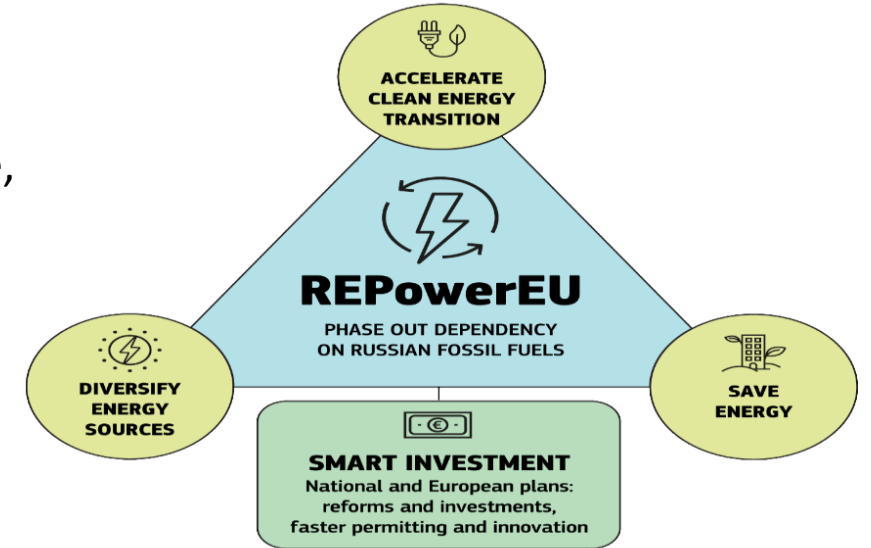
The first climate-neutral continent by 2050

by boosting the economy, improving people's health and quality of life, caring for nature and leaving no one behind

The green transformation of Europe's energy system will strengthen economic growth, reinforce its industrial leadership, and put Europe on a path towards climate neutrality by 2050.

REPowerEU is about rapidly reducing our dependence on Russian fossil fuels by fast forwarding the clean transition and joining forces to achieve a more resilient energy system and a true Energy Union.

Challenges are the need for significant more and other type of production, large and/or many storage facilities, flexibility and more transmission and distribution capacity.



Gender imbalance in the Nordic Energy Sector

- Women have proven to be leading the way towards more equitable and sustainable solutions to climate change*
- Because of the multi-disciplinary dimension, renewable energies and other developments associated with the energy transition seem to exert a greater appeal on women and provide greater opportunities to them, than the more traditional fossil fuel industry*. Still, in renewables, women's participation is much lower in the science, technology, engineering, and mathematics (STEM) jobs than in administration.
- Women's participation in the Nordic Energy Sector seems rather stable over the years

Figure 18: Women FTEs in the Nordic region during 2017-2019

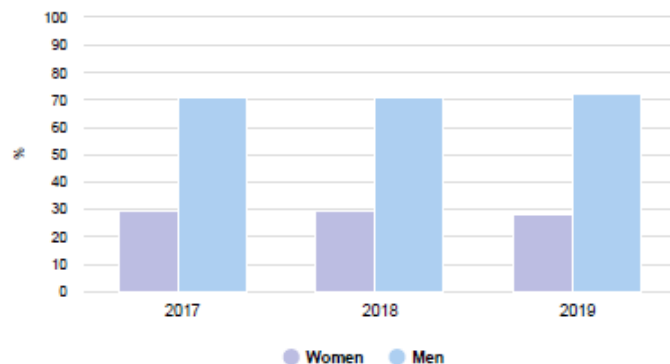
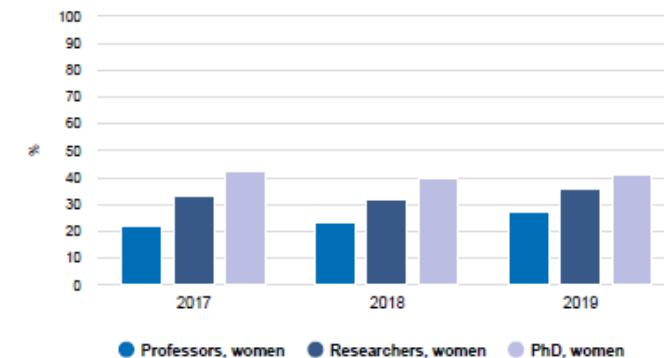


Figure 20: Gender composition of research groups (2017-2019)



Why is this an issue?

- Across societies the impacts of climate change affect women and men differently. Women are disproportionately affected.*
- Women play a crucial role in climate change adaptation and mitigation. Women have the knowledge and understanding of what is needed to adapt to changing environmental conditions and to come up with practical solutions.*
- Evidence shows that women's empowerment and advancing gender equality can deliver results across a variety of sectors, including food and economic security and health. It can also lead to more environmentally friendly decision making at household and national levels.*
- Unleashing the knowledge and capability of women represents an important opportunity to craft effective climate change solutions for the benefit of all.*
- Our future is too important to be left alone to men.



Understanding the causes for gender imbalance

- A lot of research has been done and is still on-going towards the causes for the gender imbalance in STEM and in the energy sector
- Factors identified are:
 - Working conditions
 - > *Working clothes*
 - > *Offices*
 - > *Salary*
 - > *Carreer oppportunities*
 - > *Working hours / work-life balance*
 - Working environment
 - > *Male dominated*
 - > *Language*
 - > *Harassment and bullying*
 - > *Support network*
 - > *Feeling of not being included or listened too*
 - > *Appreciation for looks rather than knowledge*
 - Recruitment process
 - Language used
 - Evaluation criteria
 - Evaluation team
 - Gender difference in application
 - Social acceptance
 - More?



What can we do?

- Make gender diversity a priority
 - Set clear goals and follow them up
- Encourage and support woman
- Encourage development
- Make work-life balance a priority
- Remove the gender pay gap
- Increase diversity in hiring
- Showcase role models
- Improve working conditions
- Improve working environment
- Branding
- More?

If action is needed, what is, in your view, the main obstacle preventing gender equality and diversity in the energy sector?

Male-driven working environment	62%
(Unconscious) bias in selection processes	28%
Lack of interest among women (at least in some segments)	10%

The renewable energy segment seems to be attracting more women than others in the energy sector. To what extent would this trend help in redressing the gender disparity in the energy sector?

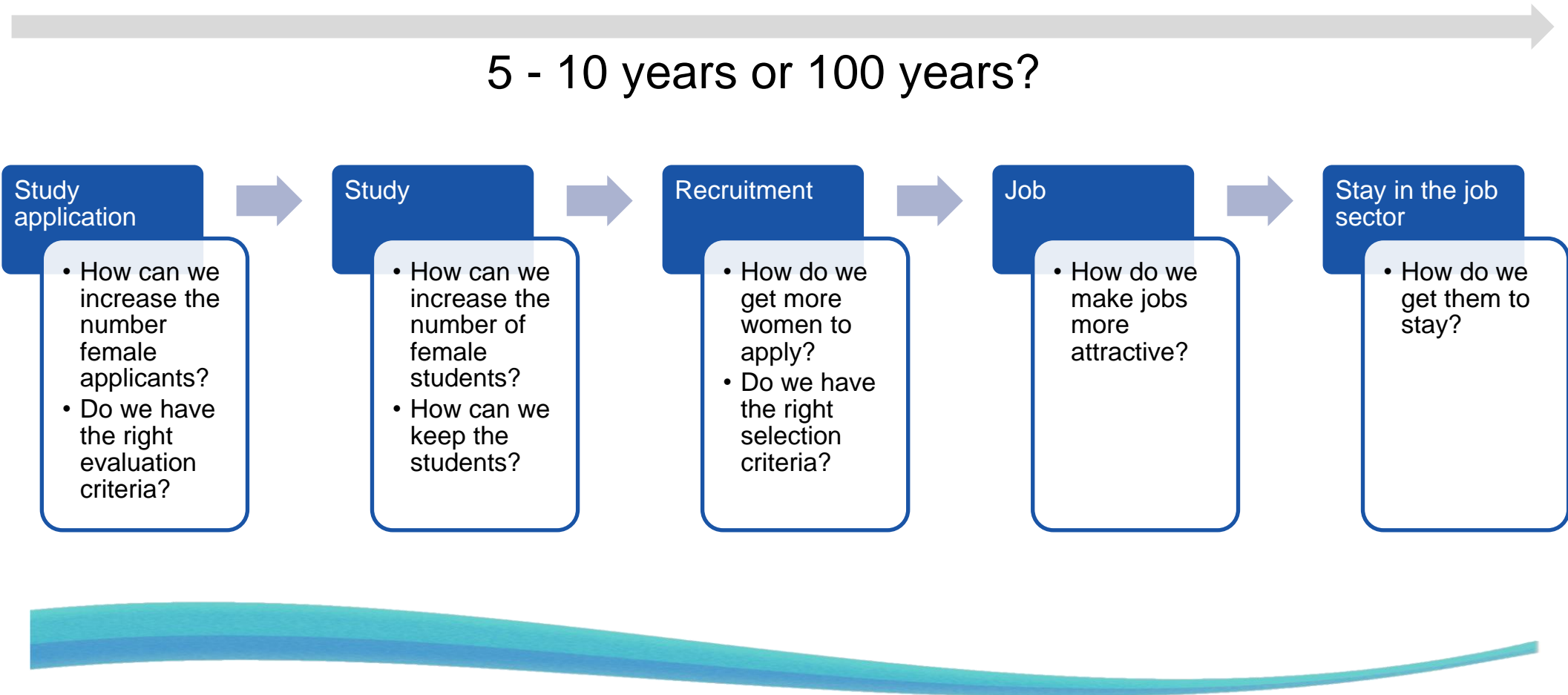
- To a sufficient extent, to the extent that no more action is needed	0%
- It helps somehow, but some further action is needed	59%
- It only marginally helps, affirmative action is definitely needed	41%

Initiatives

- Many networks have been established
 - Women in Power
 - Kraftkvinnorna
 - Kraftkvinne
 - etc
- Branding activities
 - Fill the gap
 - Jaevle flink
- Diversity initiatives in companies
- Policies
- Young girls in Tech



Are there measures with effect on the short term?



Do we need to be more radical?

- Increase the number of study places with a special quota for women?
- Do we need to adapt studies and exams to be more diverse friendly?
- Do we need to have more women than man in the recruitment process?
- Do we need to redefine jobs?
- Do we need to build our organisation and culture from 'scratch'?

If action is needed, what is, in your view, the main obstacle preventing gender equality and diversity in the energy sector?

<i>Male-driven working environment</i>	<i>62%</i>
<i>(Unconscious) bias in selection processes</i>	<i>28%</i>
<i>Lack of interest among women (at least in some segments)</i>	<i>10%</i>



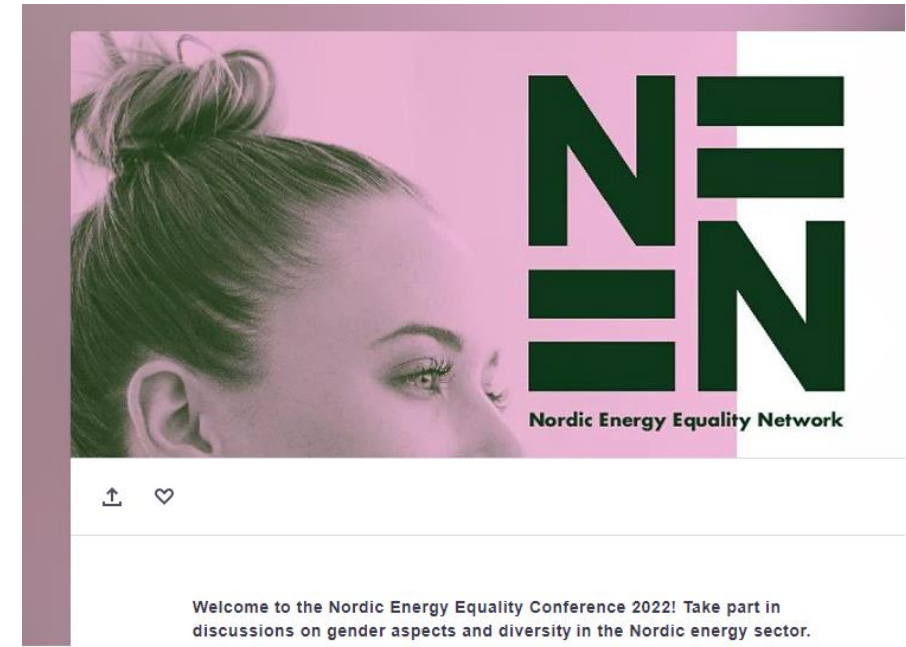
Take away

- To reach the climate goals, new solutions in the energy system are crucial
- Innovation succeeds best with diverse teams
- We need to engage, recruit and keep more diverse teams
- Causes are known, or are they really?
- Possible actions are identified, or are they?
- Most of the actions are long term oriented
- Do we need to be more radical to get the change faster?



NEEN conference 2022

- At the NEEN conference we will find out more
- We hope that we are able to inspire you!
- And that you take with you some ideas for concrete action!



Ivana Suboticki

Researcher at NTNU,
Department of
interdisciplinary studies of
culture





Norwegian University of
Science and Technology

The GENDIM toolbox for improving gender balance in higher education

Ivana Suboticki & Vivian A. Lagesen

Department of Interdisciplinary Studies of Culture (KULT), NTNU

Nordic Energy Equality Conference June 2022

The underrepresentation of women in science is improving unevenly

- Women are historically underrepresented in scientific institutions - «A world without women» (Noble, 1992)
- Women now constitute 48% in PhD positions and 46% in other recruitment positions (EC, 2021)
- Women constitute only 24% in professor positions (EC, 2021)

Why is gender imbalance in science a problem?

- Resource argument: we miss out on talents
- Justice argument: men and women should have equal opportunities, and more balanced representation can contribute to more just outcomes
- Gender balance means better science
- Gender balance makes better work environments among scientists

Projects

- Gender balance from below (NRC Grant 2015-2019)
- Learning from gender balance and equality measures (NRC Grant 2021-2023)
- Evaluating the gender balance measures at NTNU (NTNU grant 2020-2021)
- Understanding gender imbalances among university professors: the shaping and reshaping of epistemic living spaces (GENDIM) (NRC Grant 2019-2023)

More info: <https://www.ntnu.edu/genderbalance>

Data

- Online survey among all department heads at NTNU in 2016
- Qualitative interviews and focus groups with 150 employees at NTNU (PhD students, postdoctoral fellows, associate professors and professors) (2015-2018)
- Interviews with department heads at four universities (2020-2021)
- Interviews with five deans (2020)
- Analysis of policy documents
- Analysis of all employment processes over ten years at one faculty
- Official data: DBH, NTNU management, Christin, Google Scholar
- Online survey with recipients of qualification grants and start-up packages (2021)
- Qualitative interviews of gender equality advisers (3), administrative staff (2), recipients of qualification grants (4), recipients of start-up packages (4) (2021)

GENDIM approach

- Practical and easy to use
- A method more than a recipe
- Research-based
- Adapted and tailor-made strategies and measures
- Anchored in leadership and supported among employees

Local variations

Table: Share of women professors at NTNU in percent

	Share of women professors in 2021	Lowest/highest share of women professors on department level in 2021
NTNU total	27	0 – 100
The Faculty of the Humanities	41	11 – 67
The Medicine Faculty	40	15 – 100
The Faculty of Architecture and Design	36	31 – 54
The Faculty of information technologies and electronics	16	9 – 22
The Engineering Faculty	12	0 – 15
The Faculty of the Natural Sciences	27	18 – 95
The Faculty of Social and Educational Sciences	40	20 – 50
The Faculty of Economy	21	9 – 28

Different scenarios

Scenario 1: Leaky pipeline

Gender balance on PhD and post-doc level, but low share among professors

→ focus on keeping and promoting women

Scenario 2: Underrepresentation overall

Low share of women overall, including study programs

→ focus on recruiting women to study and promoting a career in academia

Scenario 3: Gendered research groups

Some research groups dominated by men, some by women

→ focus on collaboration

Scenario 4: Sustainability problem

Share of women improved through extensive measures, but are dropping after

→ focus on understanding why women leave

Local knowledge-making

- Mapping and developing knowledge about the local gender balance situation
- Obtain a knowledge base - helps gender balance measures and strategies be more accurate and thus increase their chance of having the desired effect
- Knowledge-making can increase motivation and ownership

Adapted measures

- One size fits none
- Measures need to be adapted and translated
- Design and try-out multiple measures
- Measures need to be followed up, evaluated and adapted ('double-loop learning')

Gender-sensitive leadership

- Department heads are potential change agents
- Challenged by competing concerns and lack of knowledge
- Need clear signals from top-leadership
- Local knowledge-making can lead to more action

Gender balance from below

- Need local support to implement measures
- Necessary to avoid 'hidden' leadership
- Collegial and collective leadership more suited to academia
- Need collective ownership of the problem and solutions

GENDIM toolbox

1. Mapping the situation
2. Involving employees in assessment of the situation and developing local understanding of the problem
3. Planning for change: recruitment, career advancement, working environment
4. Making someone responsible for implementation
5. Evaluating, making amendments and adaptations

Available at: <https://www.ntnu.edu/genderbalance/toolbox>

THANK YOU!

More information: <https://www.ntnu.edu/genderbalance>

For questions: ivana.suboticki@ntnu.no

Anne Flagstad

Executive Vice President,
People and Sustainability
at Statnett SF



Diversity in Statnett

Anne Flagstad, Head of People and Sustainability



Objective:



Diversity 2.0

Diversity 1.0

Let's focus first on gender..



Gender: You need to fix the basics.....



F:

- 60%
- 30%
- 27%

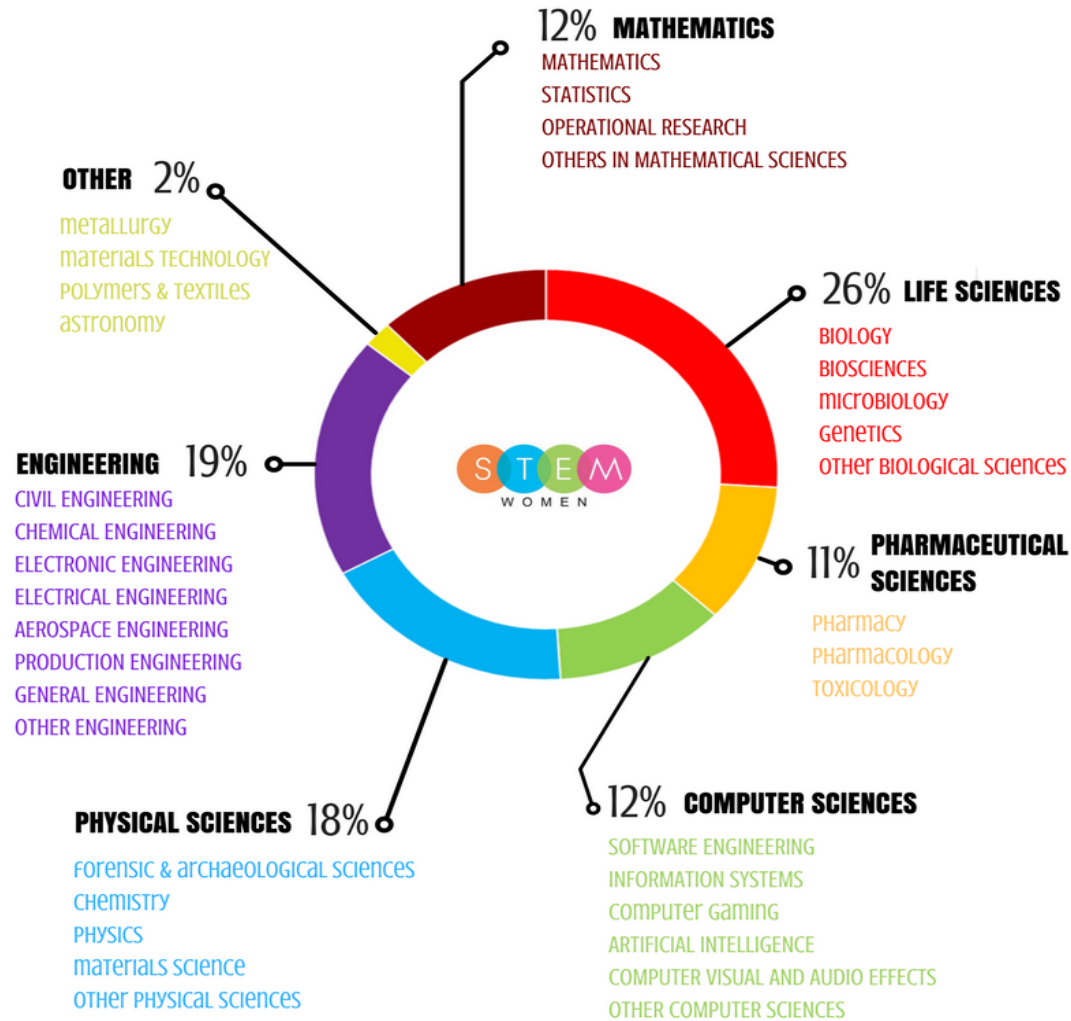
M:

- 40%
- 70%
- 73%



Flexibility

BREAKDOWN OF FEMALE STUDENTS PER STEM SUBJECT*



www.stemwomen.co.uk

* Data from HESA number of full time students studying specific principle subjects 2015/16.

Employer brand to attract females..

Internship

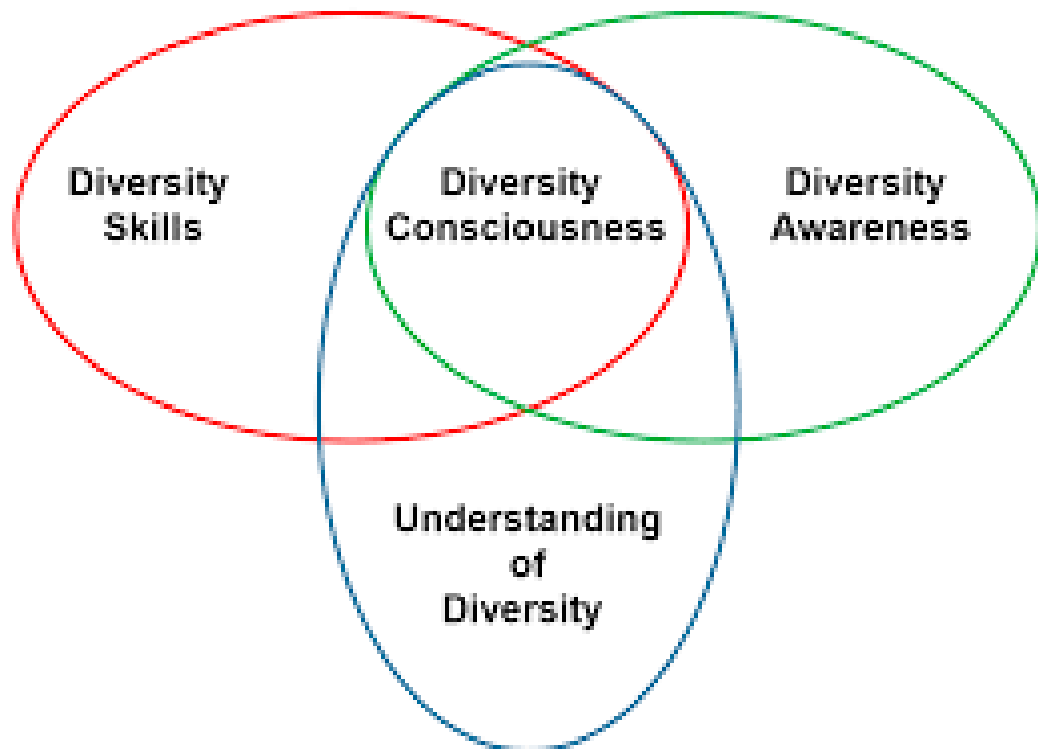
Trainee program

Student part timers

Internal development opportunities to retain females...

A transparent and non-biased
internal job market
Supportive leaders
Active encouragement

Structure is hygiene - "Culture" required to accelerate diversity



Attitude-> Action

Action->Attitude

The ultimate goal is Diversity 2.0
- because it's good for business, society and humanity

I Statnett har vi
plass til hele deg





Trine Moa

Senior Adviser Innovation Strategy and
Governance at Nordic Innovation



Hege Guttormsen

Higher Executive Officer at Nordic Innovation

Nordic Innovation Diversity Task Force

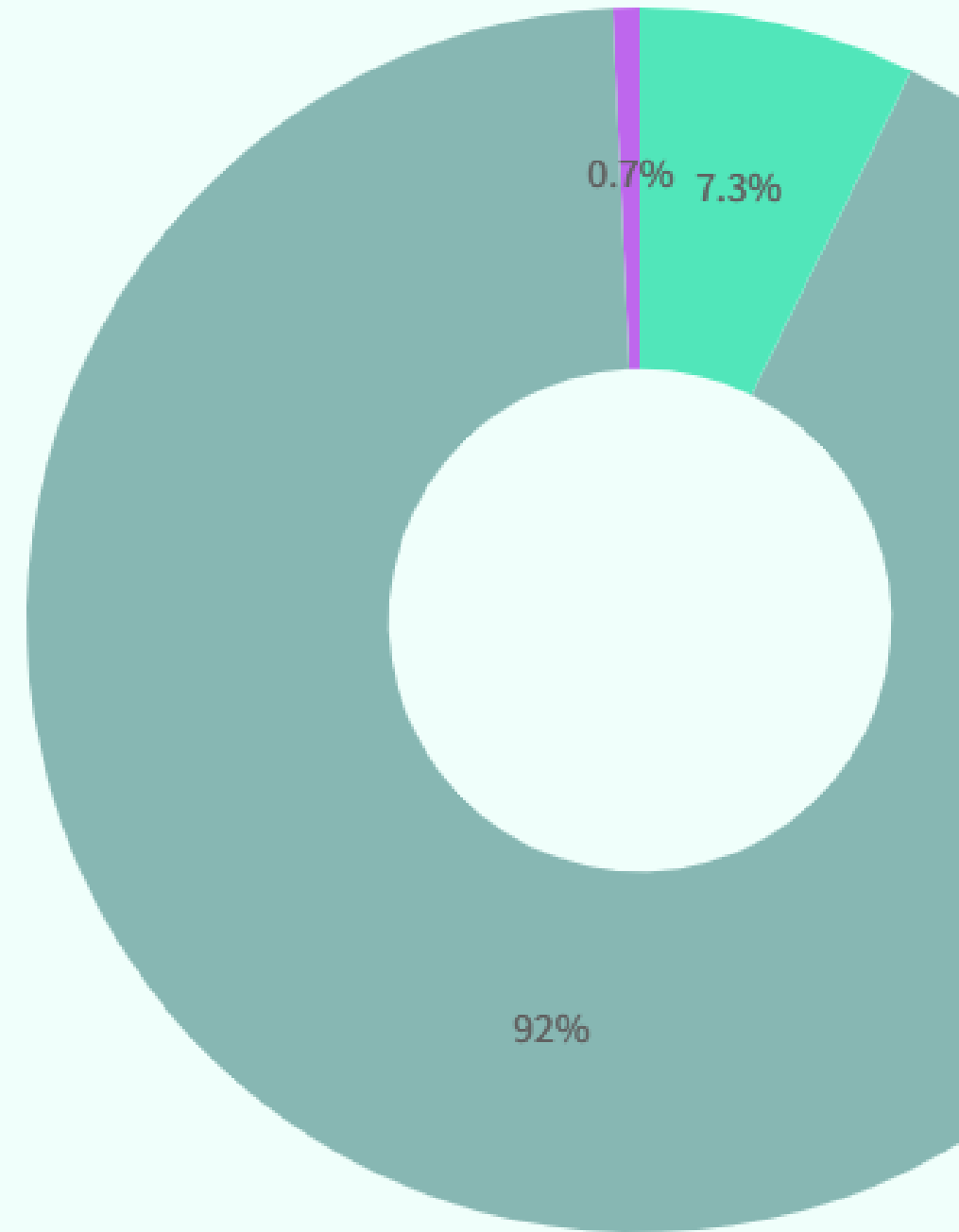


Diversity
Inclusion
Belonging



How equal?

In 2020, all-women-founded startups raised just 0.7% of investment in the Nordics. 7.3% went to mixed-gender founding teams, while all-men founding teams raised 92%.



The Nordic Innovation Diversity Task Force

- The Nordic task force for diversity consist of members from (almost) all the Nordic countries together with Nordic Innovation.
- The aim of the task force is to make the Nordic innovation ecosystem more gender equal.



What we do

- Knowledge transfer
- Analysis
- Policy making
- Engagement



Get in touch!

Annie Lindmark, Program Director, Vinnova

Moa Persdotter, Program Administrator, Vinnova

Maija Kāle, Innovation & Sustainability Adviser at The Council of Ministers' Office in Latvia

Line Christmas Møller, Project Manager Gender Mainstreaming, Nordic Council of Ministers

Rebekka Ravnholt Edemann, Green and Responsible Business Development, Danish Business Authority

Trine Moa, Senior Adviser Strategy and Governance, Nordic Innovation

Marthe Haugland, Senior Innovation Adviser, Nordic Innovation

Hege Guttormsen, Higher Executive Officer, Nordic Innovation

<https://www.nordicinnovation.org/>



Nina Hellum

Senior Scientist at
Norwegian Defence
Research Establishment
(FFI)





FFI Forsvarets
forskningsinstitutt

Influencing Culture, Behaviour, and Mindset - actions speak louder than words

- Identifying organizational properties and biases using
the Norwegian Military Forces as a case

Oslo, June 14 2022

Nina Hellum, senior social scientist FFI

Background

- Social anthropologist, gestalt therapist, Russian studies
- Gender, state security, individual security awareness, influence operations, cyber security, recruitment & retention, insider risk, PSYOPS, military deception, counter intelligence
- Participatory observation
- Interviews
- Emic/ethic perspective



Gender issues in the Norwegian military

- 2006 – Norwegian government and the MOD (Ministry of Defence) presented a bill for increasing female percentage in the military
- 2009/2010 – compulsory selection day for all (theoretical and physical tests, health check, conversation, information about service opportunities)
 - Women were forced to reflect on doing military service
- 2016 – gender neutral conscription
- 2022 – women in uniform not longer an anomaly



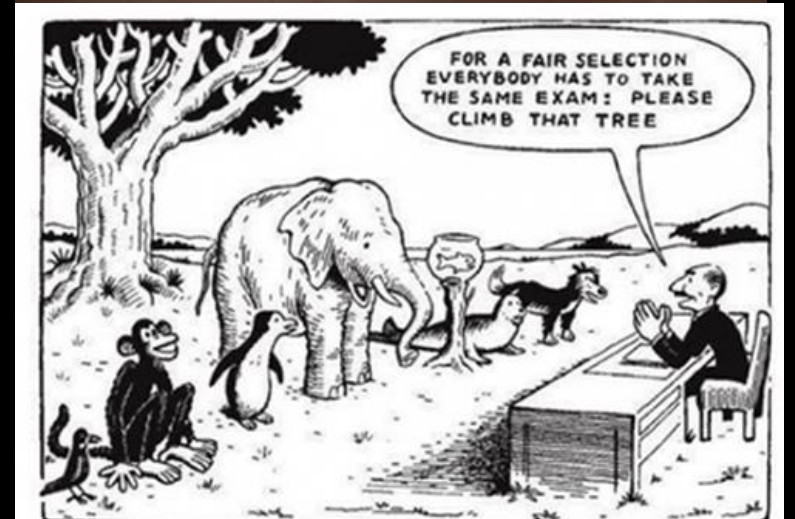
Influencing behaviour



- Military disciplines – PSYOPS and MILDEC (influence operations)
- C-SPI – Cyber Social Propaganda and Influence
- Influencing behaviour easier than changing mindset and attitudes
- Leaders are key – changing and influencing by doing, not just saying
- Exposure between differing groups enhances tolerance and understanding (to a certain degree)
- Different groups are influenced in different ways – one size does NOT fit all

Equality / Equity

- In order to obtain diversity – minorities must be of a certain size to have a voice
- Party toasts and pamphlets can be counterproductive
 - Big words and no action is demotivating
- National culture weighs in – expectations of gender equality and equity
- Recruiting and selecting “the best”
 - Who decides what criteria distinguish the best?
- Positive discrimination – myths and use
 - Radical
 - Moderate
- Tokenism / Queen bee theory



Questions?



Khanya Bouma

Civil Engineer at Equinor

Advisor Hydropower at
Multiconsult

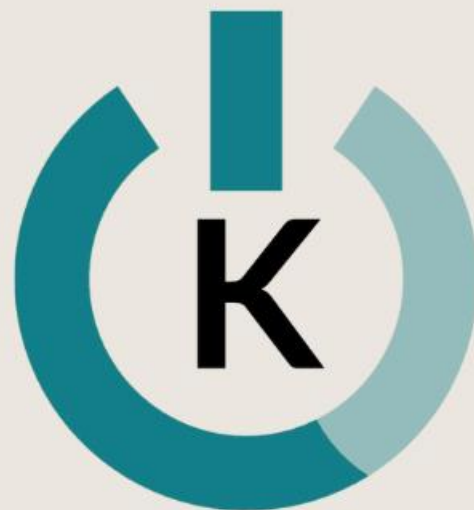
Board Member of
Kraftkvinnene





Khanya Bouma

Kraftkvinnene Board Member





Day 2

<https://neen.network/>



Nordic Energy Equality Network

Charlotte Søndergaard

Strength, Business &
Leadership Coach

Strategic DEI Leadership
Advisor at
FemaleLeadership.dk



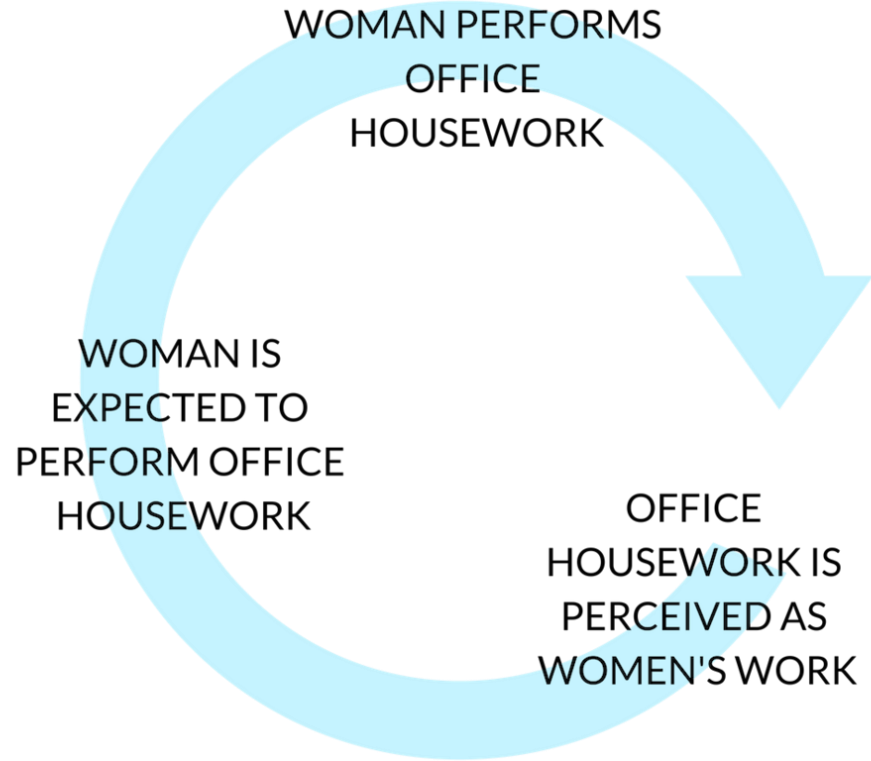
Who is doing the Office Housework?

Charlotte Caroline
Søndergaard
FemaleLeadership.dk





Office Housework: Work predominantly done by women that contributes to the business but isn't formally recognized in performance reviews, typically does not lead to advancement, and isn't usually compensated.



WOMEN EVERYWHERE ARE UNFAIRLY BURDENED WITH "NON-PROMOTABLE WORK." BUT STILL TRAIL BEHIND THEIR MALE PEERS.



*"I DO MORE ADMINISTRATIVE WORK
COMPARED TO MY MALE PEERS."*

*ARE YOU PERFORMING MORE
ADMINISTRATIVE WORK COMPARED TO
YOUR MALE PEERS?*

GENDER STEREOTYPING, ARE STILL PART OF MOST ORGANIZATIONS' CULTURE WHERE WE EXPECT MEN TO BE AMBITIOUS AND RESULT-ORIENTED AND WOMEN TO BE NURTURING AND NOT "TOO AMBITIOUS".

Women are conditioned to be helpers from childhood, and therefore often experience an internal sense of pleasure when they can help others. Men are conditioned to be celebrated when they help and expect praise in return for helping.



BEING "MS. FIXER" CAN BECOME HARMFUL
FOR YOUR CAREER PROGRESSION. ALWAYS
VOLUNTEERING TO HELP OTHERS COMES
WITH A COST OF MISSED OPPORTUNITIES
AND RISK OF BURNOUT.

Women are held to a different standard of likability and experience double standards that act like a glass ceiling. When a woman declines to help a colleague, people like her less and her career suffers. But when a man says no, he faces no backlash. A man who doesn't help is "busy" and a woman is "selfish."



Sheryl Sandberg & Adam Grant, New York Times

MANY MEN BELIEVE THAT THERE IS
A BIAS AGAINST MALE LEADERSHIP
AND MALE PROMOTIONS.

But men still hold the leadership
positions in most organizations.

1 out of 4 women have
**not had the same
access to promotion
opportunities in their job
as their male peers***

* Exclusive results from the opinion survey conducted by Focus 2030
and Women Deliver, covering 17 countries, Summer 2020.



OWN YOUR WORK
AND CLAIM YOUR
SUCCESS.

No one gets the
promotion if they don't
understand their own
results and women are
not promoted just
because they are
women. Don't assume.



DISRUPT
OFFICE HOUSEWORK.
CALL IT OUT!



Don't assume
coworkers find
it enjoyable.

Coach
volunteers to
step back.

Set up
rotations for
ongoing
chores.

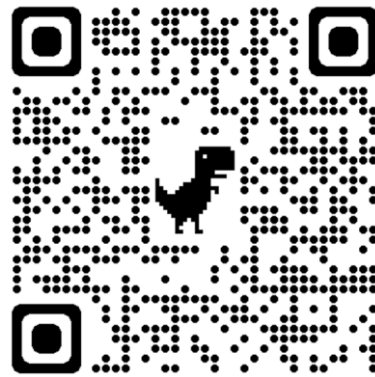
Spread tasks
among the team
with respect for
diversity.

WHAT DO YOU WANT TO BE
KNOWN FOR?



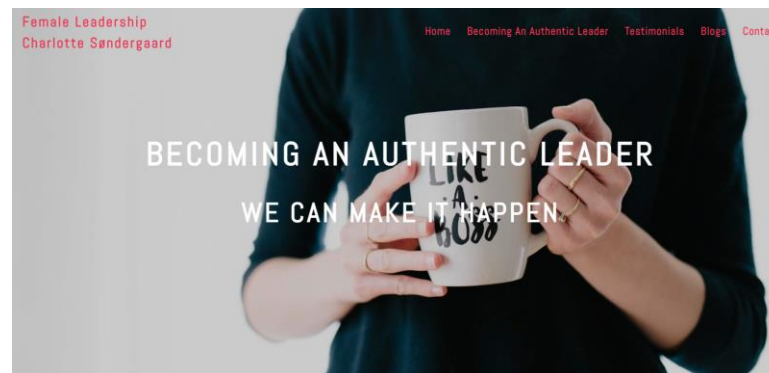
- Compare your amount of admin work with your male peers and set boundaries accordingly.
- Be authentic and know your strengths. Invest in them and apply them. Be known for them.
- Make active decisions about the work you want to take on. Use a coach, mentor or sponsor to help you.
- Say no to requests that pull you away from the work that matter most to your career. If the work doesn't count in performance review or salary negotiations – Say No!
- Be aware that getting coffee, baking cakes and planning office parties and events are more regarded as a personal investment and are not accelerating you anywhere.

femaleleadership.dk ▾



BE THE LEADER OF
YOUR OWN LIFE
AND CAREER!

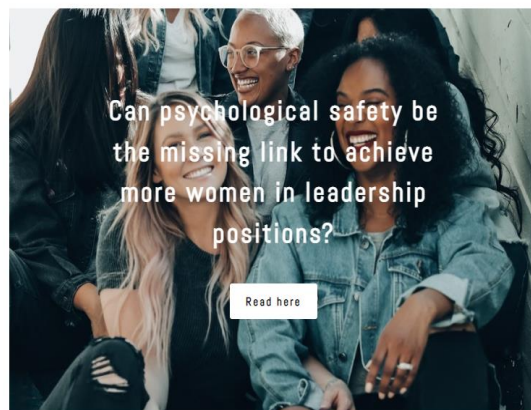
**Act so others will mention
your name in a room full
of opportunities.**



Female Leadership
Charlotte Søndergaard

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GET INSPIRED
FEMALELEADERSHIP.DK



Charlotte Caroline Søndergaard

Strength, Business & Leadership Coach, Strategist
DEI Leadership Advisor & Keynote Speaker

Snakker om #dei, #coaching, #diversity, #inclusion og #leadership

FemaleLeadership.dk

København, Hovedstaden, Danmark

FemaleLeadership.dk



femaleleadership.dk ✓



#Equality



Blogs



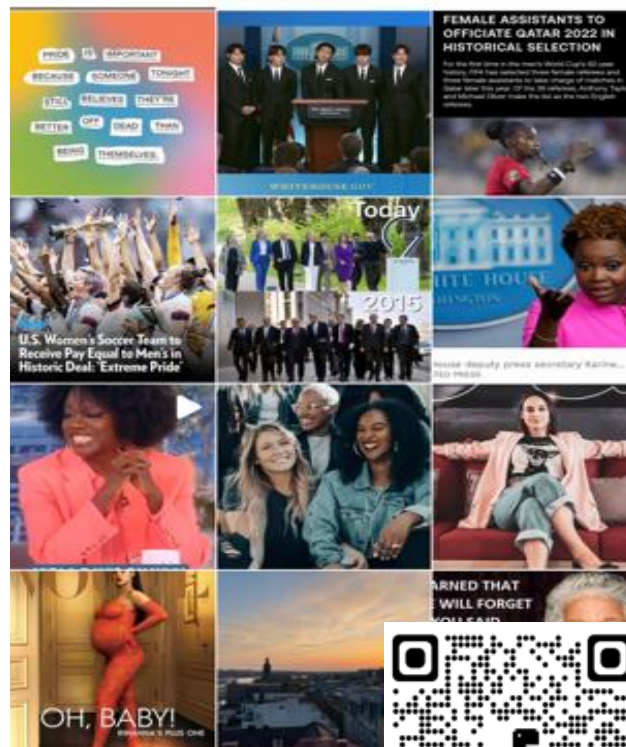
Workshop



Happy clients



Ny



LET'S CONNECT.



THE SUPER HERO POSE

PRODUCES POWER BY
INCREASING TESTOSTERONE
AND DECREASING CORTISOL
LEVELS.

Marvel, Black Widow, Scarlett Johansson

Petra Berg

Assistant Professor at
University of Vaasa, School
of Marketing and
Communication and VEBIC
platform



▲▲▲

Taking the Fools
...socio-cultural
perspective
Sustainable
navigate future
social-cyber-
physical energy
systems – case
REDISET



ards

HELLO!



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It is argued that sustainable behavior is a question of self-control, as it usually means changing a habit. Research suggests that people with a fresh start mindset (the fool archetype) are more inclined to change their behavioral patterns. **The downside to this finding is, that most people don't seem to naturally exhibit this mindset. Still, today's wicked challenges require fresh perspectives and innovative solutions, we need many different minds to work together. REDISSET is a new Nordic project which focuses on cyber security and resilience of social-cyber-physical energy systems, it is also an interdisciplinary research group, where both gender equality and cultural diversity have been taken into account. Will this group manage to follow the style of the fool – what are the tools?**



Doom Doom Boom ...

Global externalities of local actions – we don't live in a vacuum, disaster somewhere else will land into our lives sooner or later

HUMANITY IS ALMOST CERTAINLY DOOMED, SCIENTISTS SAY

"THE PROBLEM IS COMPOUNDED BY IGNORANCE AND SHORT-TERM SELF-INTEREST..."

World War III

The state of the planet is much worse than most people understand and that humans face a grim and "ghastly future" unless extraordinary action is taken soon.

A loss of biodiversity and accelerating climate change in the coming decades coupled with ignorance and inaction is threatening the survival of all species, including our very own, according to the experts from institutions including Stanford University, UCLA, and Flinders University.

How sustainable will our recovery be?

According to new OECD data, OECD countries and key partner economies have so far allocated USD 336 billion to environmentally positive measures within their

national effects needed to address the economy?

% of the total sums so far allocated to ensure that 83% of this funding either does not or worse, reverses progress on some of

in recovery rhetoric with the reality of

If we are serious about transitioning towards a low-carbon economy, we are going to have to do better than this.

CORONAVIRUS [COVID-19]

RESEARCH BACKGROUND: SUSTAINABILITY TRANSITIONS

Energy transitions are driven by the need and availability of energy sources, and **today** they also always aim towards more renewable and sustainable solutions. (Sovacool 2016)

A central aim of sustainability transitions research is to conceptualize and explain how **radical changes** can occur in the way that societal functions are fulfilled. The unit of analysis is thus primarily situated at the 'meso'-level of socio-technical systems. (Köhler et al. 2019)

Differs from long-standing sustainability debates at the 'macro'-level (e.g. changing the nature of capitalism or nature-society interactions) or the 'micro'-level (e.g. changing individual choices, attitudes and motivations). (Köhler et al. 2019)

Transitions involve various **aspects of power**. Broadly speaking, power can be characterized as the (in)capacity of actors to mobilize resources and institutions to achieve a goal. (Avelino 2017)

SOCIO-ECONOMIC AND TECHNICAL PERSPECTIVE ON ENERGY SYSTEM TRANSFORMATION - VISUALIZATION OF TRANSFORMATIVE MISSION PORT COMPANY

(ROEL VAN RAAK, DRIFT, VAASA, 15.11.2017)



RESEARCH BACKGROUND:

MARKETING SYSTEMS & ENERGY BEHAVIOR

Marketing systems theory proposes that markets as systems can describe social evolution of a collective. Their origin lies in the **trade imperative (exchange)**, where individual actors realize that gains are possible through specialization. (Layton 2011)

Marketing systems are "multi-level, path dependent, dynamic systems, embedded within a social matrix, and interacting with institutional and knowledge environment". (Layton 2011)

The embeddedness of established technologies into user practices, business models, value chains, regulations, and institutional as well as political structures creates a situation where changes are rather incremental than radical.

RESEARCH BACKGROUND:

DOMINANT SOCIAL PARADIGM - DSP



The freedom of choice and responsibility for it is said to exist within the context of the DSP, which refers to the collection of norms, beliefs, values, habits, and so on that form the world view most commonly held within a culture.

(Kilbourne et al., 2009)

Consumption regarded as a socially constructed process considers that people are socialized into consumption systems and therefore, it is hard to grasp a holistic and sophisticated understanding of sustainability and make coherent, consistent decisions from an external point of view.



PATH DEPENDENCE AS MENTAL MODELS, MYTHS AND THE ENERGY AGORA

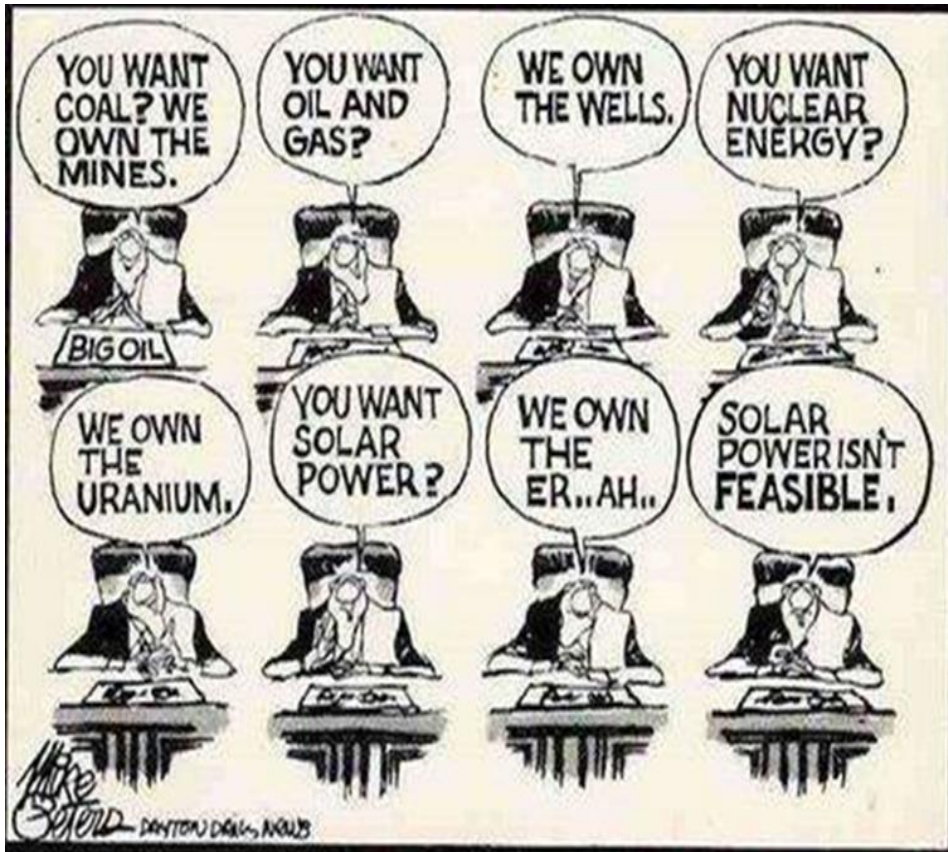
Marketing Systems consists of technological solutions, the business models tied to them, the raw materials needed as well as the actors: users, producers and decision makers and their collective agreements – institutional structures.

Actors in different roles affect the social, ecological and economic sustainability of the system

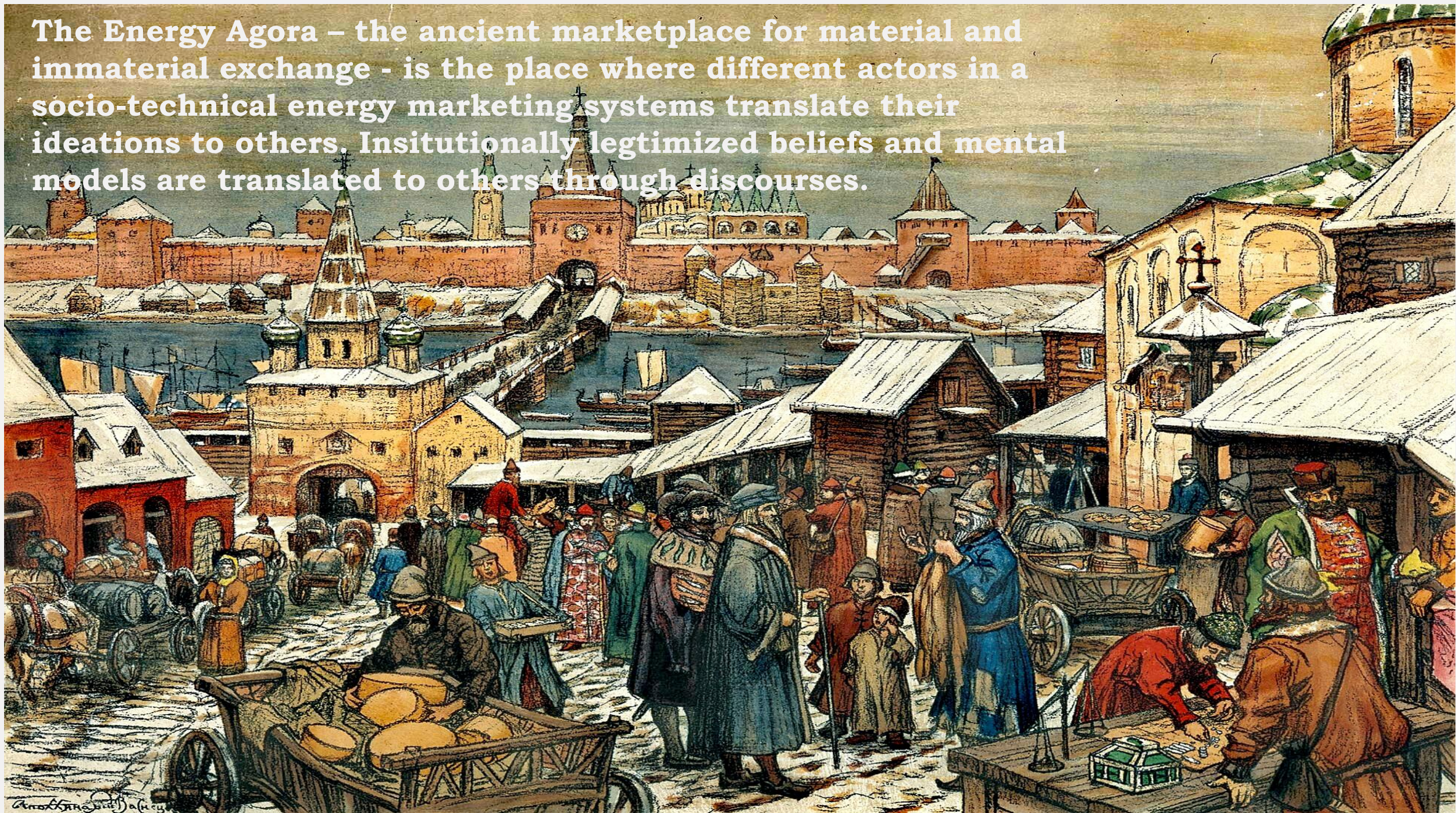
Path dependence and lock-ins are inherent to socio-technical marketing systems

Lock-In of mental models: Thought models that lock us into mindsets and behaviors that create inertia to change e.g. path dependence

Myths are stories about how things are – "the reality" – they maintain a certain belief systems and follow collectively agreed upon paths

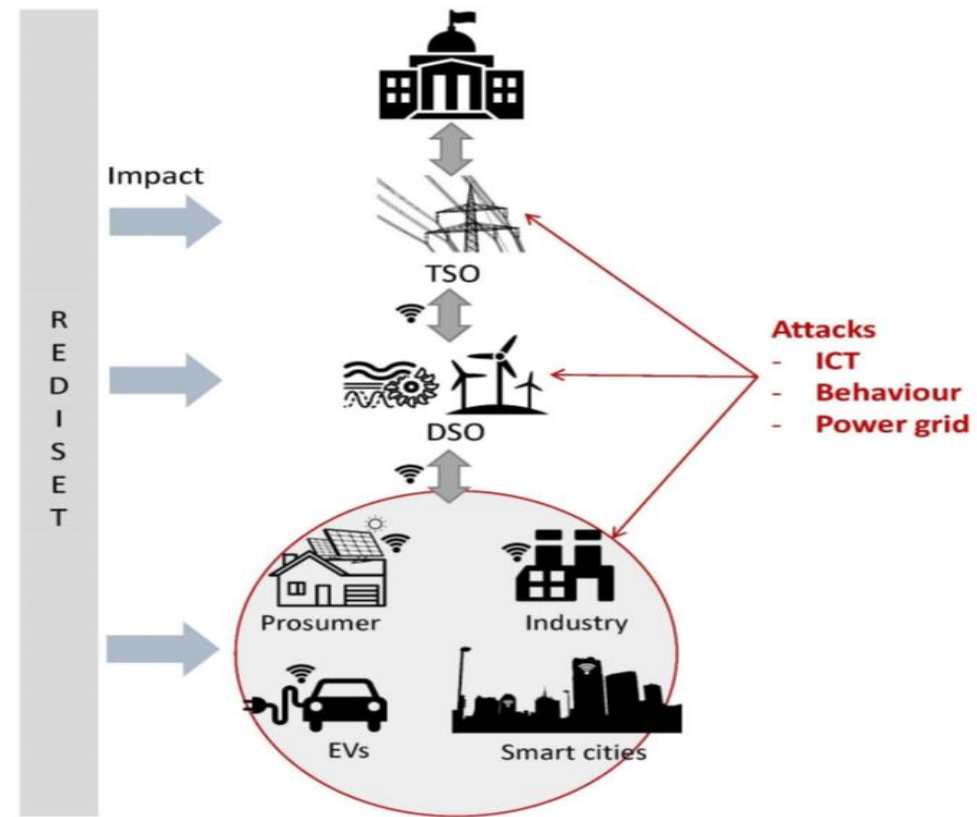


The Energy Agora – the ancient marketplace for material and immaterial exchange - is the place where different actors in a socio-technical energy marketing systems translate their ideations to others. Institutionally legitimized beliefs and mental models are translated to others through discourses.



REDISET - RESILIENT DIGITAL SUSTAINABLE ENERGY TRANSITION

Inter-Nordic collaboration with partners from Finland, Sweden and Norway. Aim to provide social-cyber-technical knowledge to support the sustainable rollout of a future, digital electricity system. Specific focus on providing more understanding of the variables and threats to the Nordic energy system to support the transmission system operators in constructing a secure and resilient future energy system.



GENDER BALANCE AND CULTURAL DIVERSITY IN INTERDISCIPLINARY RESEARCH GROUP(S) - CASE REDISSET



Social-Cyber-
Physical Energy
Systems

So... Who is the Fool

One of the 78 cards in a tarot deck and one of the 22 Major Arcana cards, usually numbered as 0 OR 22.

Beginning a new path

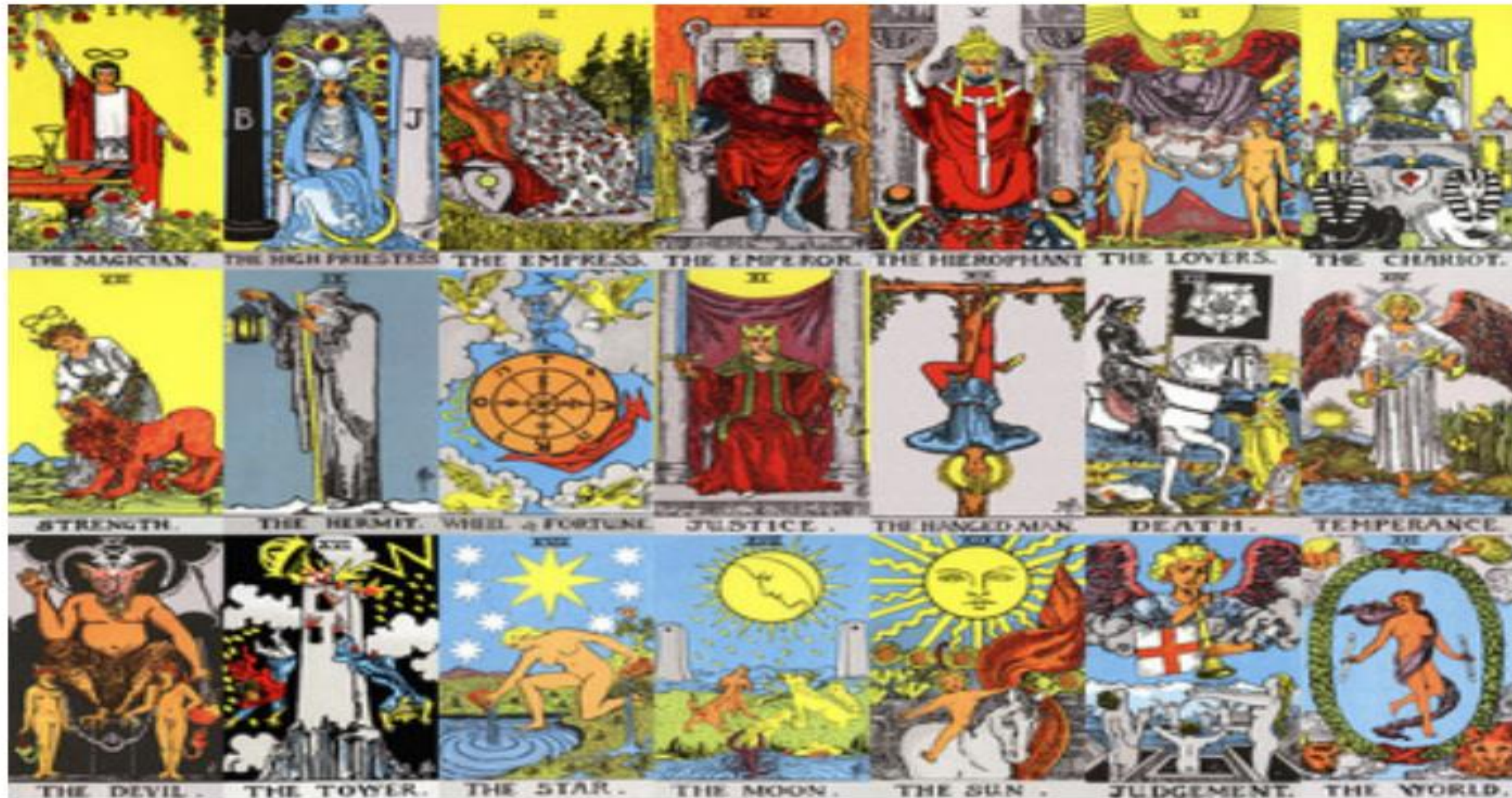
The Fool - The Infinite Possibility of Chaos – the Leap of Faith

Represents new potential, the chaos before actuality, new beginnings, innocence and naivety

Jungian psychology, archetypes, symbology, mythologies and myths... (Raider Wait Deck)



THE REST OF THE MAJOR ARCANA



What can we learn from the Fool?

▲▲▲
"Theoretical considerations of cause and effect often look pale and dusty in comparison to the result of chance" (Carl Jung).

Zero point

What do you take along, what will you leave behind?

Unlocking mental models – am i stuck in a paradigm?

Look at your "roots" – family, education, interests – what are your unquestioned truths about life?

Liminal spaces – the edge - uncomfortable – messy – dynamic!



Living on the Edge... Learning from Nature and Permaculture

"Edges are where things happen – where a forest meets a prairie or a river flows into the sea, or at nearly any other boundary between two ecosystems is a cauldron of biodiversity... the edge is richer than what lies on either side. Any fisherman knows it. He doesn't catch his lure into the center of the lake, but towards the shoreline, where the fish gather to feed on the flourishing life in the swallows" (Hemenway 2009 pp. 45)

So if we want to boost the biodiversity in our yards, we should optimize edge – the intersection of two environments – is the most diverse place in a system and is where energy and materials accumulate or are translated (Hemenway 2009 pp. 7)

THANK YOU!



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Saira Alladin

Director Asset Operation &
Maintenance at Vattenfall



Everyone is needed to reach a fossil-free future

**Nordic Energy Equality
Conference 2022
Oslo, 2022-06-15**

Saira Alladin

Director Operations & Maintenance
BU Distribution
300 employees
3 cities



A bit about me...





A woman with long brown hair stands on a rocky, arid cliff overlooking a calm body of water under a cloudy sky. She is wearing a light blue hoodie and a long grey coat. The text "Fossil-free living within one generation" is overlaid in white.

**Fossil-free living
within one generation**

A photograph of an offshore wind farm. In the foreground, two large white wind turbine towers rise from the sea. Two workers in yellow safety gear are visible on a platform between the towers. In the background, several other wind turbines are scattered across the horizon under a blue sky with light clouds.

Electrification will be the biggest transformation in society since the industrial revolution

Vattenfall commitments toward Net Zero until 2040

VATTENFALL EMISSION INTENSITY

2017-2040 gCO₂e / kWh

-38%

Emission intensity
reduction
since 2017

TODAY

1.5°C

Target for own
emission
reductions

2030

Net Zero

Emissions in our
full value
chain

2040

Climate change and electrification in Sweden – it's happening now!

Regeringen vill skynda på elektrifieringen med 17 löften

2021-06-01 07:19

Av: TT

TT / Ny Teknik

2 kommentarer



Aktivera Talande Webb

Regeringen ökar takten för att elektrifiera transportsektorn i landet. Nu presenteras 17 löften som ska påskynda elektrifieringen av regionala godstransporter med lastbil.

LJUSET I NORR

Elbrist stoppar utländsk etablering – kommunen tvingas säga nej till 2.000 nya jobb

Oron över elförsörjningen är stor i många av landets kommuner, enligt en ny rapport. Ett exempel är Robertfors i Västerbotten, som går miste om uppemot 2.000 nya arbetstillfällen efter att kommunen på grund av elbrist tvingats tacka nej till ett utländskt bolag som ville etablera sig.



Kim Lundin

Publicerad: 26 augusti 2021, 08:39

Elektrifieringslöfte ska skynda på omställningen av tunga transporter

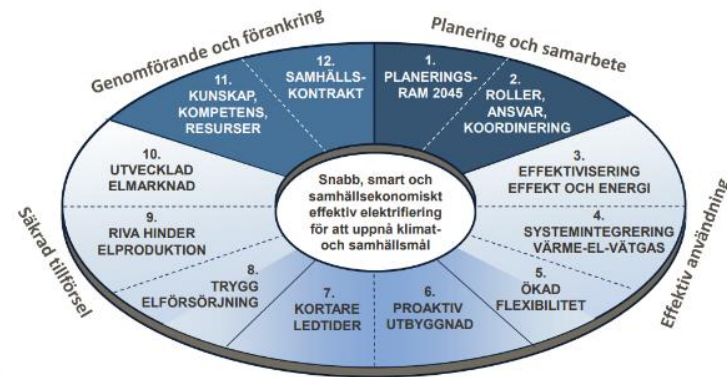


Det krävs expansiva mål för elförsörjningen. Elnäten måste byggas ut och moderniseras. En snabbt utbyggd vindkraft är en fråga om att säkra industriell konkurrenskraft, skriver fyra företrädare för stora svenska skogs-, stål- och gruvbolag.

Öka takten och bygg snabbt ut vindkraften



12 punkter för en framgångsrik elektrifiering



Regeringskansliet

Ny infrastruktur – elnät och eldrivna transporter

Infrastrukturdepartementet

VATTENFALL



Debatt

Inom ramen för Hybrit-samarbetet skapar vi en helt fossilfri värdekedja från gruva till färdigt stål till slutkund. Men för att industrins omställning ska gå snabbt nog måste staten nu säkra sin värdekedja och se över regelverk och långa tillståndprocesser, skriver vd:arna för LKAB, SSAB och Vattenfall.



Fossilfri omställning av industrin kan inte vänta

Under industrinöretagen i Västerås och i Gäddede i Gästrikland ska en helt fossilfri värdekedja för stål byggas upp. Det är ett stort och viktigt uppdrag som kräver en snabb omställning av industrin. Det finns hinder på vägen som måste tas bort för att omställningen ska gå snabbt nog.

Industrin larmar: Bråttom med mer el – grön boom stoppas



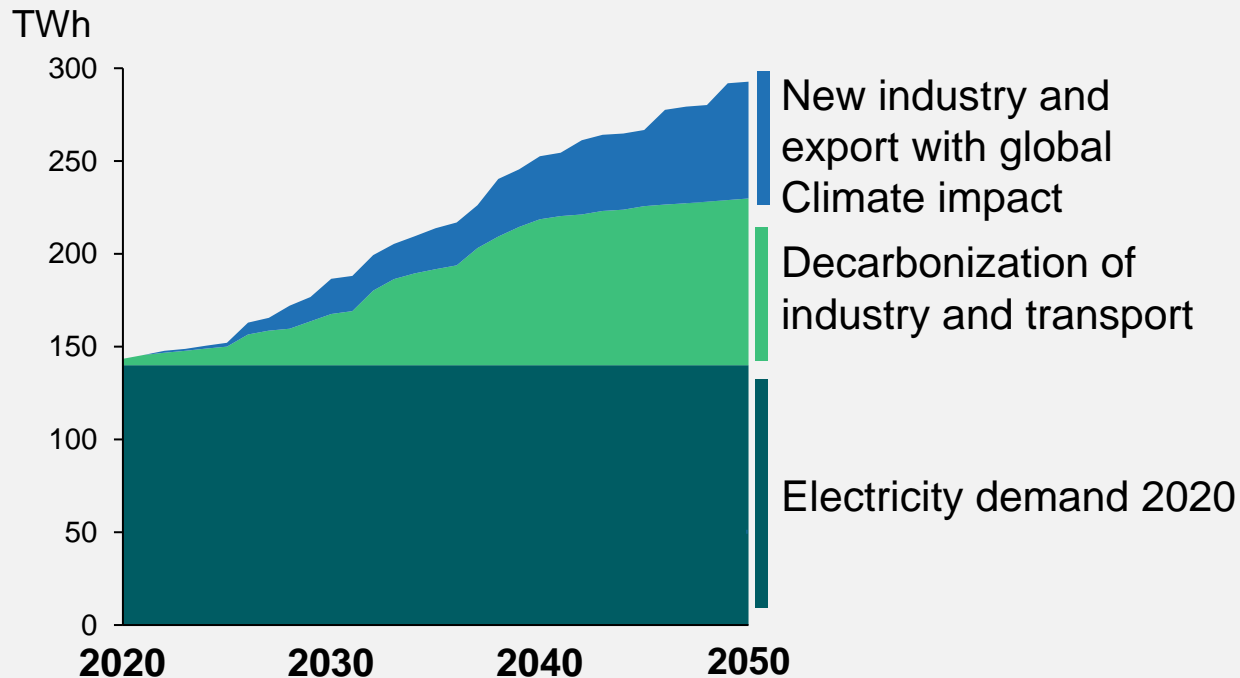
Bild: Adam Rose/TT Magnus Hjalmarson Neideman-TT

H2 Green Steels och Northvolts fabriker avslöjar bristerna i det svenska elsystemet. Andra industrietableringar blockeras för att elen inte räcker. "Det får inte ta så lång tid att få tillstånd att bygga ledningar. Det är bråttom nu – klimatet kan inte vänta", säger Niklas Johansson, klimatdirektör på LKAB, till TN.

Det var jättemålen, skogen och vattenkraften som en gång i tiden gjorde konungariket Sverige rikt. Sedan dess har det romantiska skymret över vår nordligaste landsända bleknat för att snarare handla om nedlagda industrier, arbetslöshet och avfolkning.

Sweden face an electrification revolution

Plan for double electricity demand



Three phases

2020 – 2030	Transport and first movers in industry
2030 – 2040	All industries
2040 – 2050	Continued electrification, global climate impact

In order to succeed, planning and market need to collaborate

It's an enormous challenge – in order to succeed we need

Create tailwind



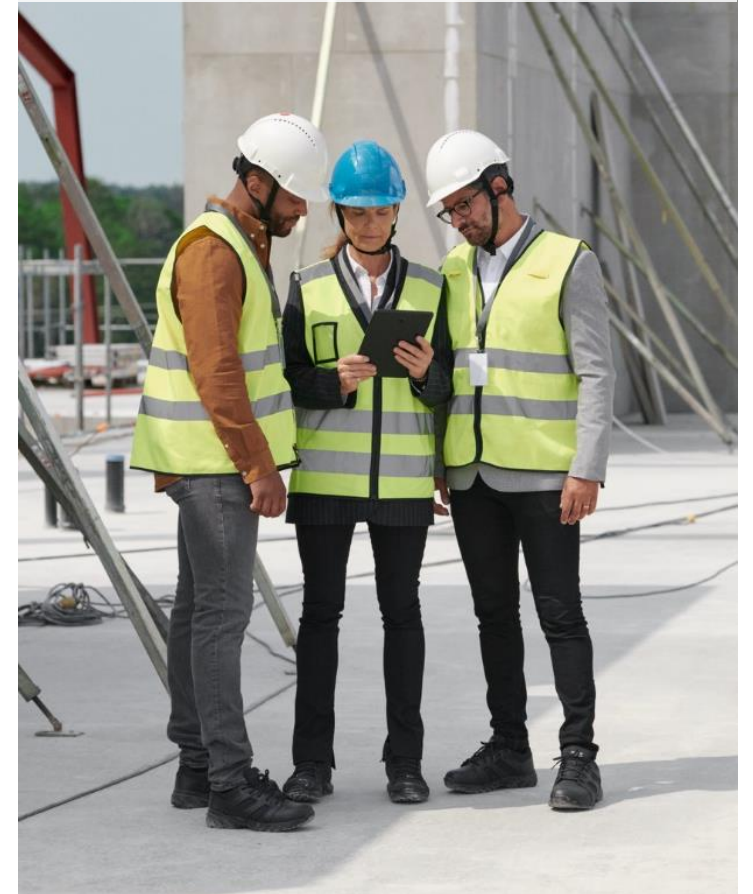
Build what needs to get built



Make it all work



Secure competence



Faster permit processes



Increase social acceptance



**Our history starts
with the heroes who
electrified Sweden**



Messaure 1958



Messaure 2018



Why diversity & inclusion matter



It's good for people

It's good for business

It's good for society

In 2015, we initiated major work for gender equality, diversity and inclusion (D&I) within the Vattenfall Group

- Increase balance between women and men
- Increase diversity within the company
- Increase understanding and knowledge of the benefits of D&I
- Develop our culture to be more inclusive
- D&I Officer in the Group Management team on a rotating basis

Vattenfall's D&I Officer leads the way

2015-06-10 | Vattenfall news

Hall sätter fokus på mångfald och inkludering

Tags: Magnus Hall, Organisation, Kollegor



Mångfalden ska öka ytterligare och Vattenfall ska vara en inkluderande arbetsgivare. Det säger vd Magnus Hall som nu utser en särskild ambassadör – en Diversity and Inclusion Officer – för frågorna.

Vattenfall's current and past Diversity & Inclusion Officers



Start 2015,
2-year
rotating
role, within
EGM

Map current
D&I status

Set strategy
and
business
principles

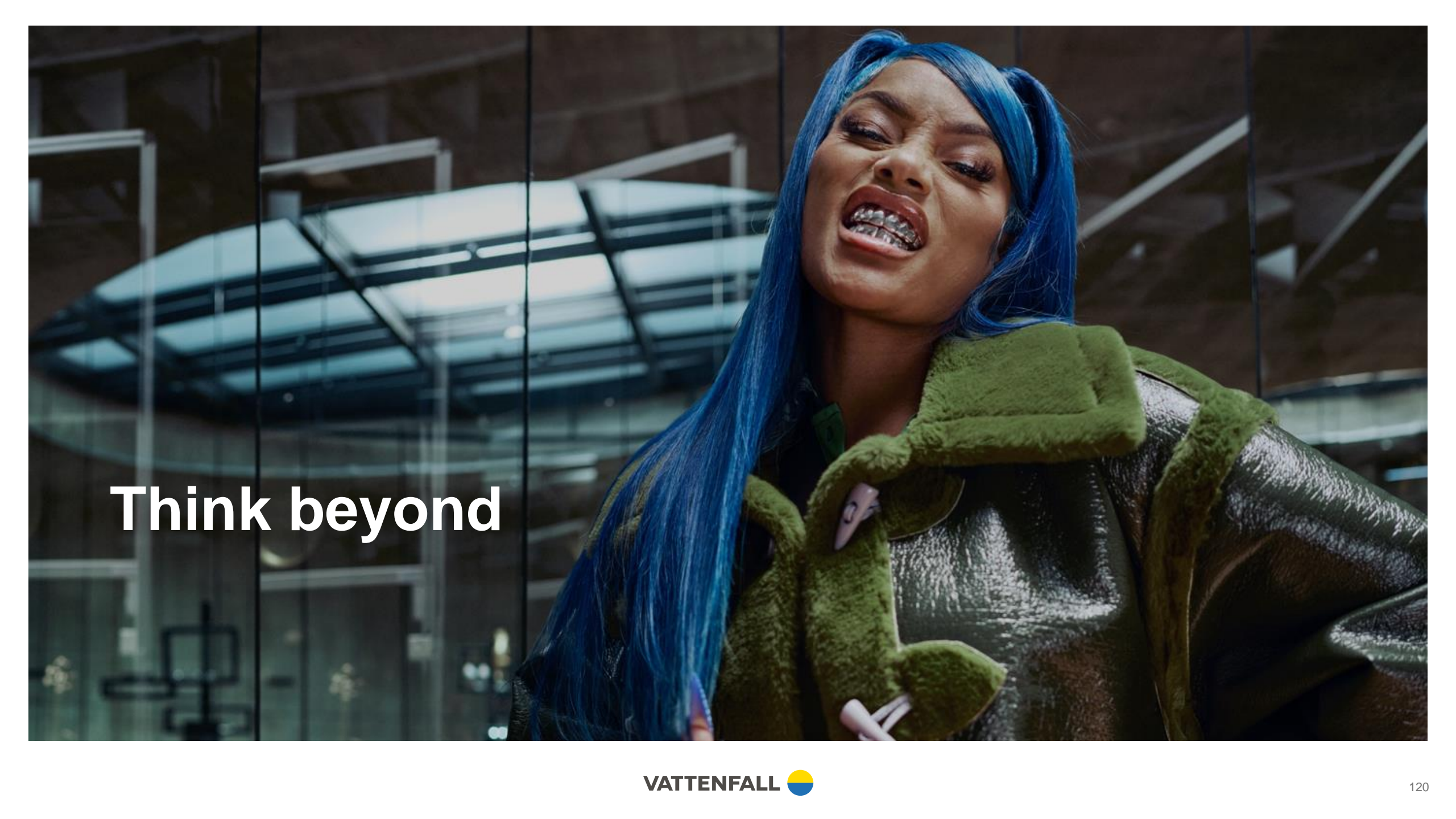
Set goals &
follow up
(35% Female
Manager
hires)

Secure D&I
in all
processes

Develop
engagement
and
knowledge
among top
management

Develop an
inclusive
culture

Road map towards diversity & inclusion



Think beyond

A landscape photograph showing a forest of tall evergreen trees in the foreground and middle ground. The sun is low on the horizon, creating a bright glow and long shadows. Several high-voltage power lines stretch diagonally across the sky from the top left towards the right. The sky is filled with soft, grey clouds.

The energy industry in Sweden employs over 68,000 employees, spread over 1,000 companies

For every additional billion invested, approximately 150 qualified electricians and 150 power engineers are needed

The competence challenge consists of several parts



**We need
to become
many more**



**We need
specialist
competence**



**We need
new type of
competence**

Examples of roles

Project Engineer

Meteorologist

Online Marketing Specialist

Wind Resource Engineer

Business Developer

Geoscientist

Operation Planner

Laboratory assistant

Agile Coach

Forest technician

Project Manager

Customer Relationship Expert

Key Account Manager

Scrum Master

Mechanical Engineer

Sales Agent

IT Architect

Sales Specialist

Strategy Specialist

Accounting Specialist

Safety Engineer

Commerical Manager

Energy Advisor

Business Process Manager

Technical Trainer

Trader

Business Controller

Public Affairs Specialist

HR Business Partner

Project Economist

Processledare

Nuclear Power Plant Design Engineer

School and university collaboration



Create interest among young people



Meetings with future colleagues



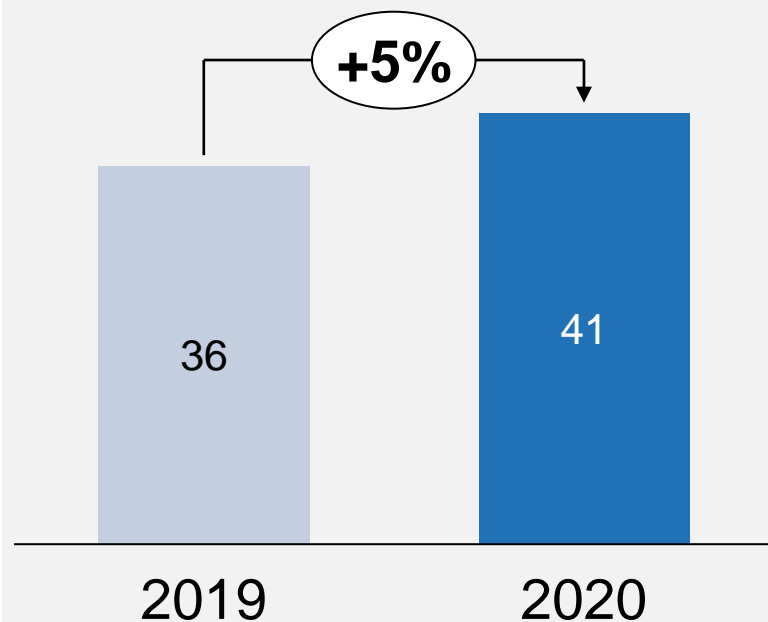
The potential in wide recruitment

A close-up photograph of a person's hand holding a glowing incandescent lightbulb. The hand is positioned in the lower right, with the thumb and index finger gripping the base of the bulb. The bulb is illuminated, casting a warm, yellow glow. The background is a wall of white subway tiles with dark grey grout. A reflection of the hand and the glowing bulb is visible on one of the tiles to the left. The overall lighting is soft and warm, emphasizing the light from the bulb.

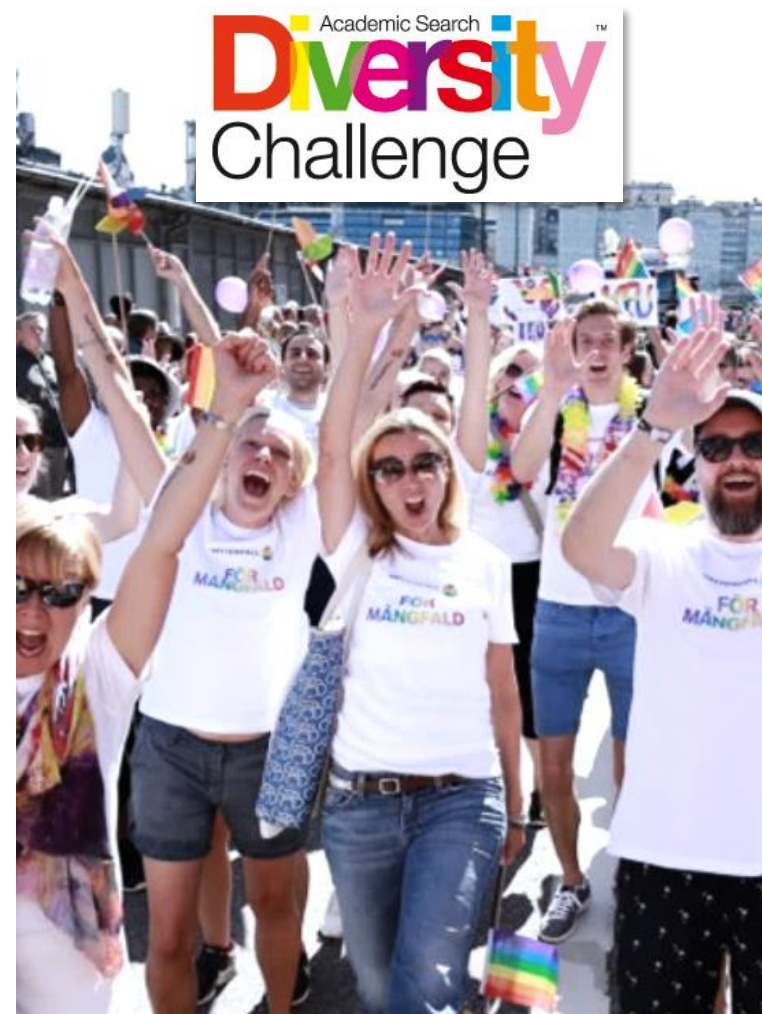
The result so far?

The result is that we have increased gender equality and diversity!

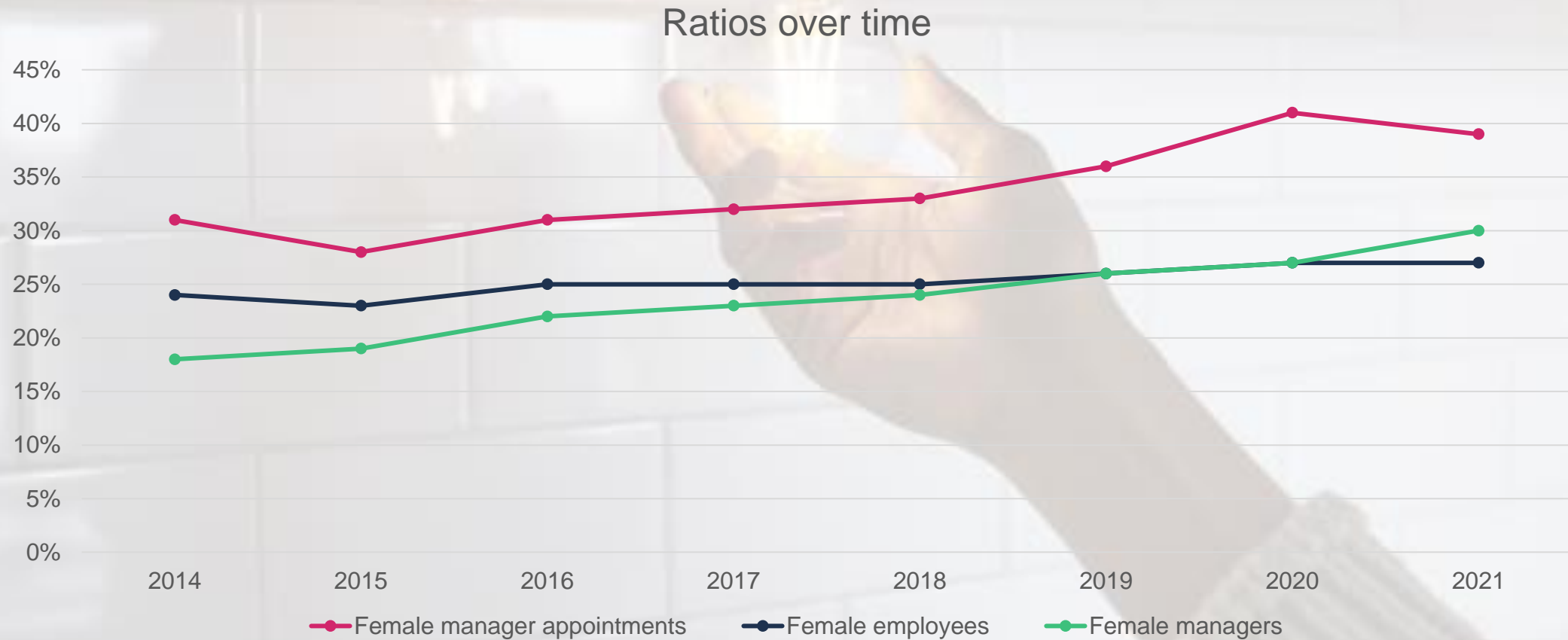
More manager recruitment appointed by women



Vattenfall Group at the top when Swedish association Kraftkvinnorna presents gender equality report for the energy sector



Growth in gender diversity

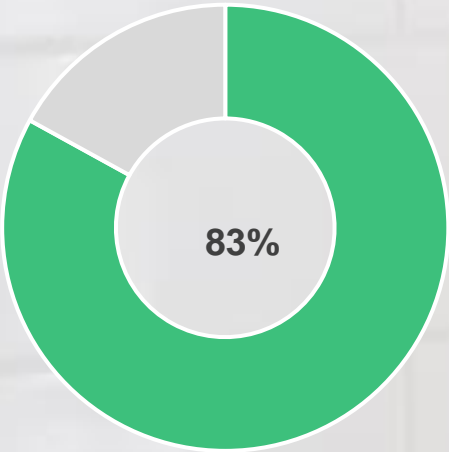


D&I Review Gender Diversity

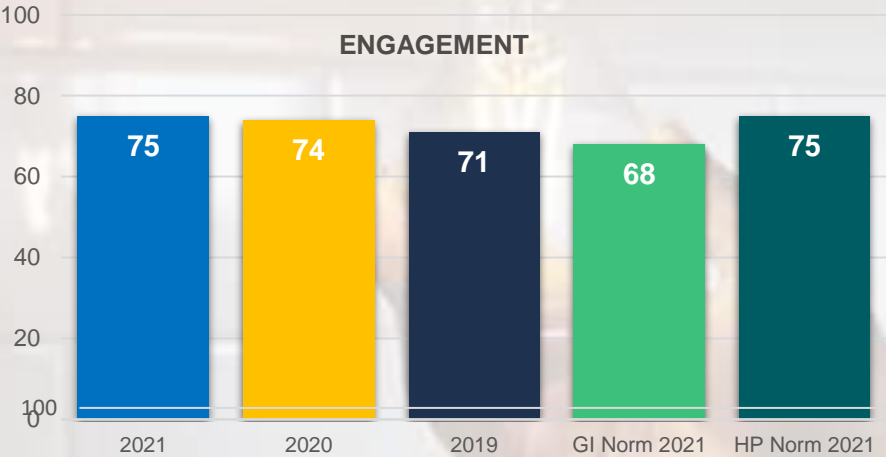
Trend over time		
Aggregated result total	Female employee ratio	Female managers ratio
2021	27%	30%
2020	27%	27%
2019	26%	26%
2018	25%	24%
2017	25%	23%
2016	25%	22%
2015	23%	19%
2014	24%	18%

Engaged & enabled employees in 2021, positive to Vattenfall's D&I initiatives

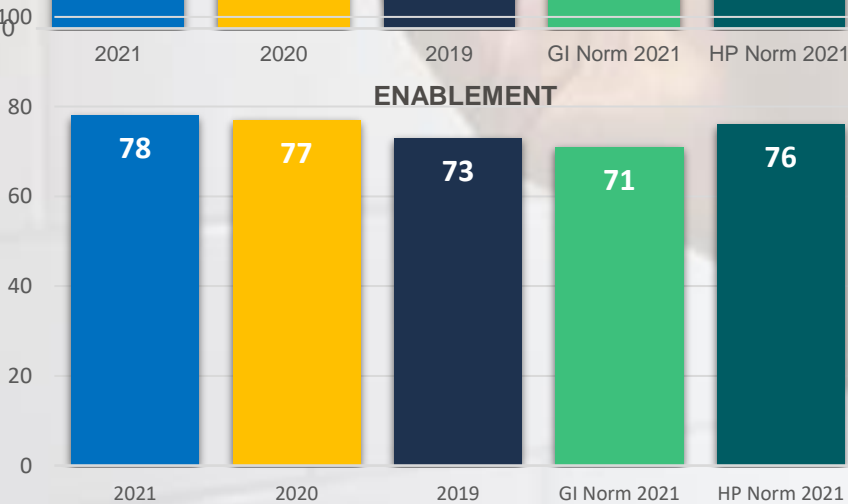
RESPONSE RATE



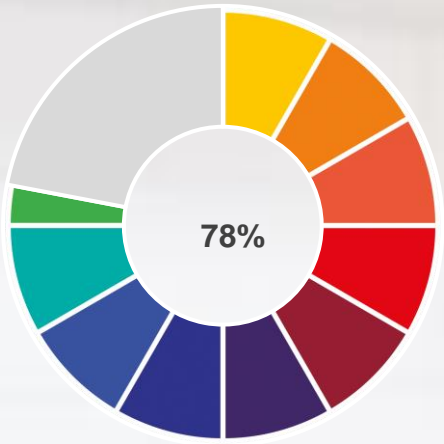
ENGAGEMENT



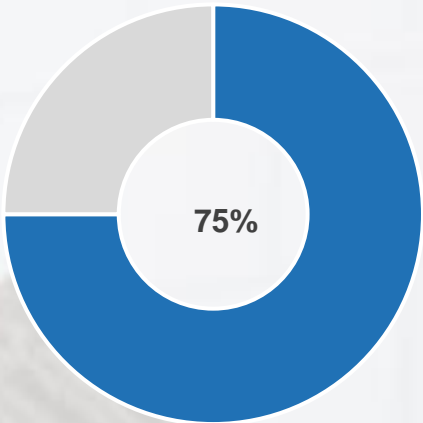
ENABLEMENT



Diversity & Inclusion



Health & Safety Index



[Mångfald och inkludering - YouTube](#)

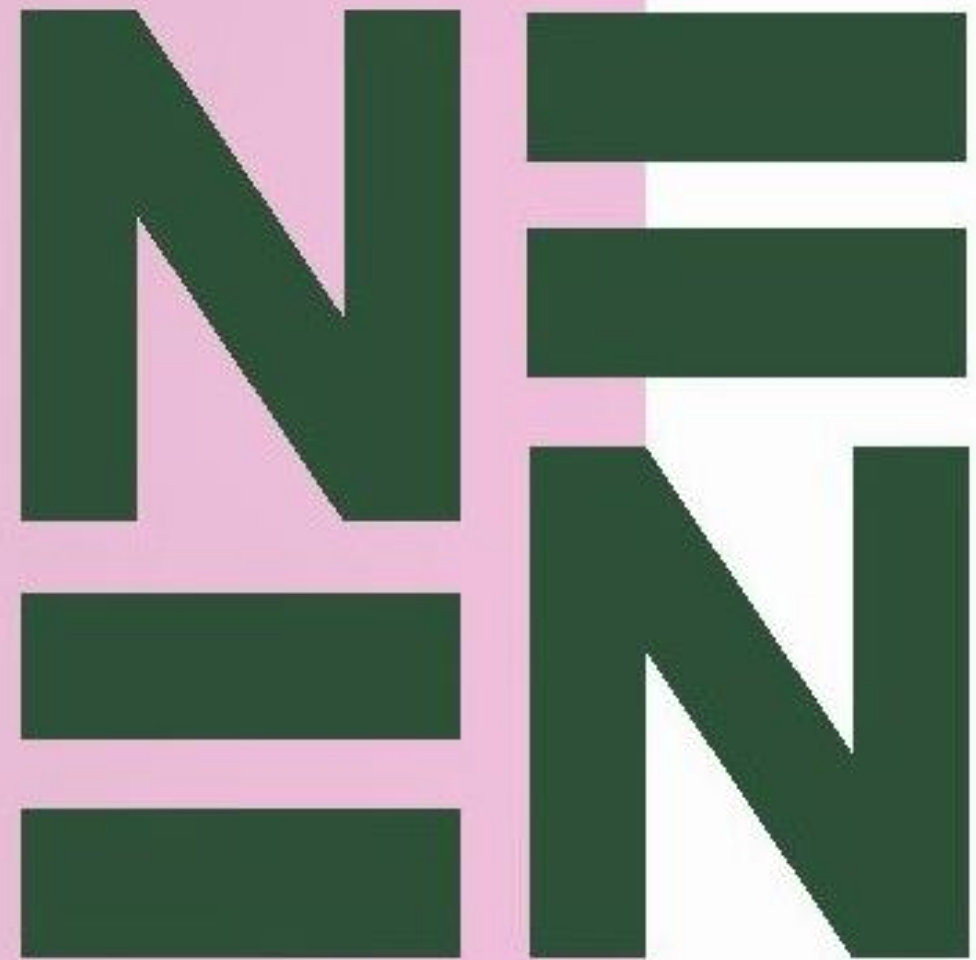
Thank you!





Thank you!

<https://neen.network/>



Nordic Energy Equality Network