

ENERGY VAASA

2023



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EnergyVaasa Communications & Brand manager

#EnergyVaasa
#WeAreEnergyVaasa

GOLD



Cluster Management Excellence

PROVEN FOR CLUSTER EXCELLENCE



#EnergyVaasa
#WeAreEnergyVaasa

ENERGY EDUCATION PATH IN VAASA

In Vaasa, the energy capital of the Nordic countries, students master the skills of working life and energy competence.



STUDENTS GET USEFUL SKILLS AND ABILITIES

We create models which promote learning the working skills of the future

- Identifying dynamic working life skills in the future and integrating these into education
- Education across language, school and educational stage boundaries

COMPETENT TEACHERS

We support and motivate teachers

- Structure
- Network of energy teachers
- Educating teachers
- Learning environments (virtual and physical)



1

EARLY CHILDHOOD EDUCATION

Raising interest and participation

- Energy documentation
- ICT ja basics of technology
- Small group, theme and project work

BASIC EDUCATION

Modern teaching resources
Multiprofessional projects

2

3

UPPER SECONDARY SCHOOL EDUCATION

Central focus

- Physics, Chemistry, Mathematics

Energy as a phenomenon
• In subjects and school activities

VOCATIONAL EDUCATION

Central focus

- Qualifications and further education in the energy branch

Proficient support group - Energy in professions
• Qualifications that support the energy branch
• All qualifications



4

ENERGY COMPETENCE GROWS IN THE SCHOOLS

Energy is a natural part of the educational content on all educational stages

- Energy is integrated into education
- Visits to energy companies
- Expert visits (virtual and live)
- Energy as a subject in education and degrees



5

POLYTECHNIC EDUCATION

Central focus

- Intelligent electricity technology, robotics and 3D
- International trade

Proficient support group - Energy in professions
• Education and research that support the energy branch



6

UNIVERSITY EDUCATION

Central focus

- Degree programmes in Energy

Proficient support group - Energy in professions

- Energy-related themes and know-how in other degrees
- Energy as a minor subject



STUDENTS KNOW THE STUDY AND CAREER POSSIBILITIES WITHIN THE ENERGY CLUSTER

Interaction between schools and working life

- Training for study counsellors
- Excursion path
- Expert bank
- Business village
- Introduction to working life
- Precision days
- Summer jobs



YOUNG PEOPLE AND ADULTS ENTER INTO WORKING LIFE WITH GOOD SKILLS

The energy cluster attracts skilled people

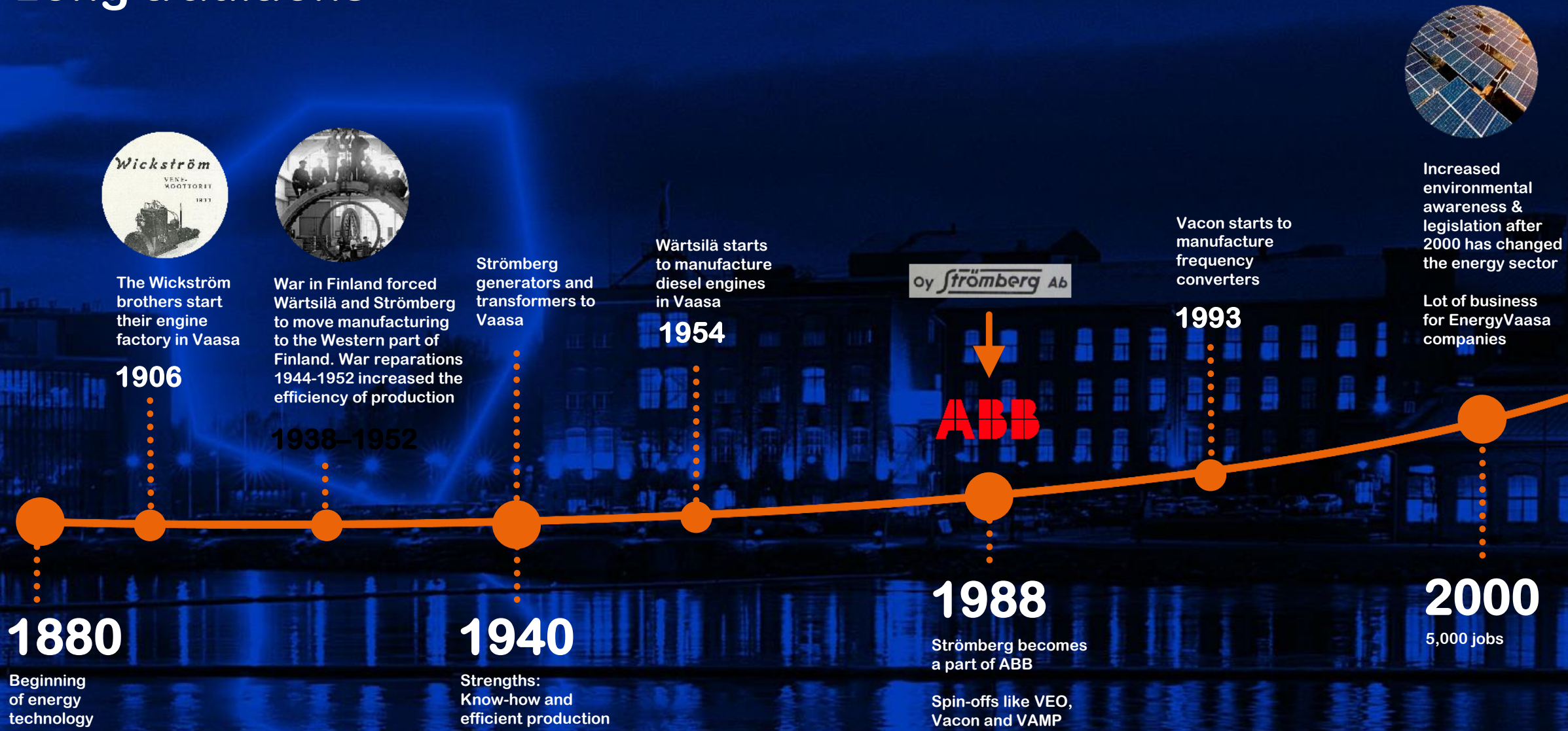
- Work-oriented studies
- Teamwork between working life, students + teachers
- STEM subjects
- Optional subjects
- Club activities
- Educational path in FIN/SWE/ENG
- Further training



ENERGIAPOLKU.FI

V A A S A .

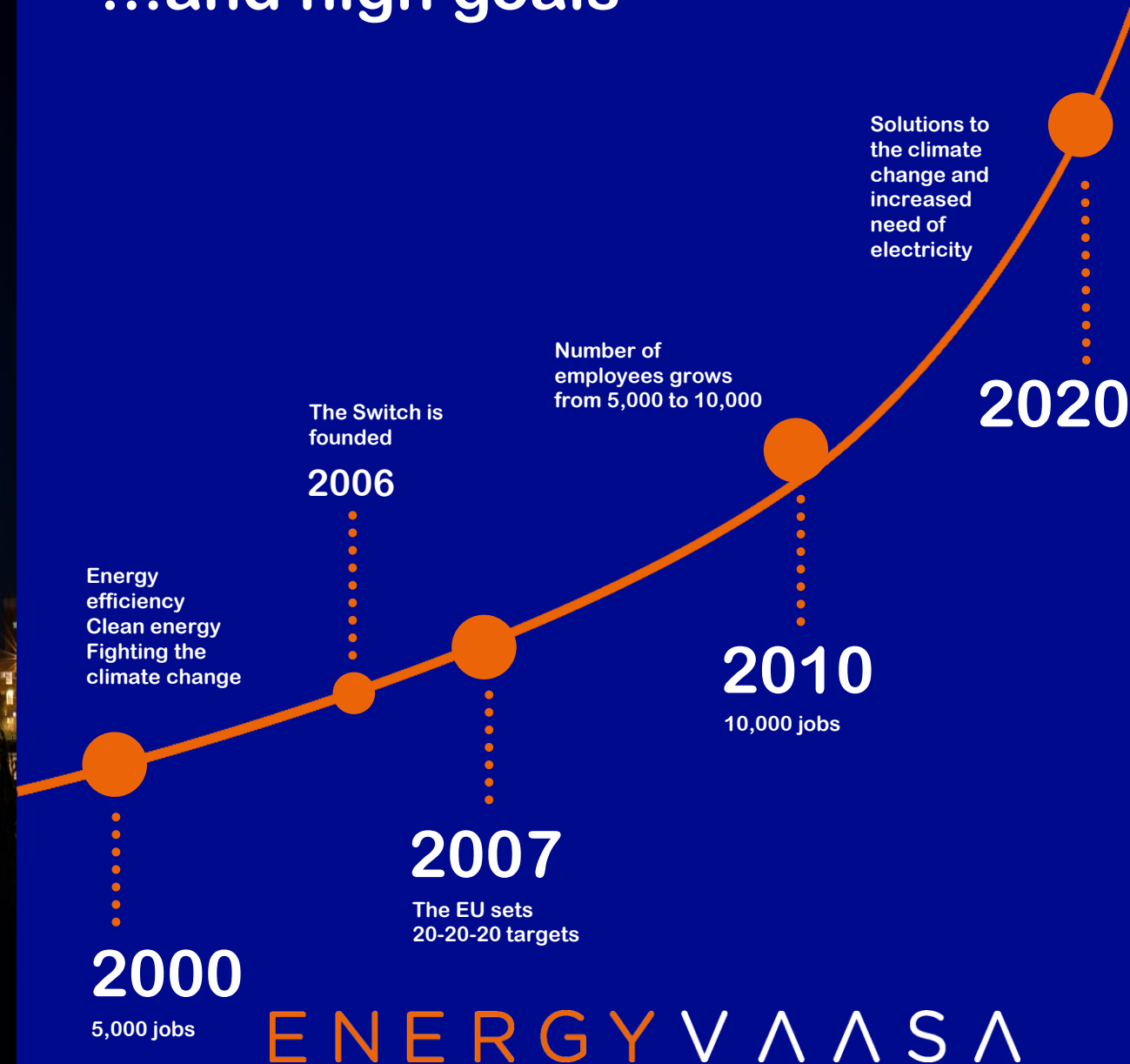
Long traditions



ENERGYVAASA



...and high goals



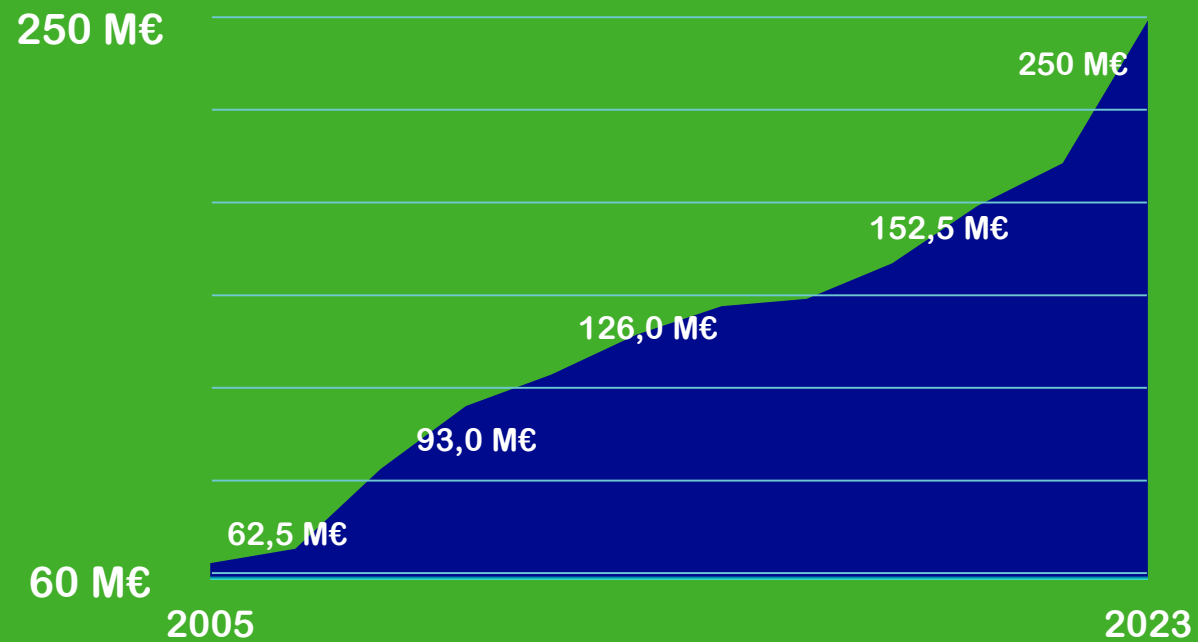
ENERGYVΛΛSA



>60%

Most Green Patents in the Nordics

More than 90% of the Finnish R&D in electrical and automation solutions

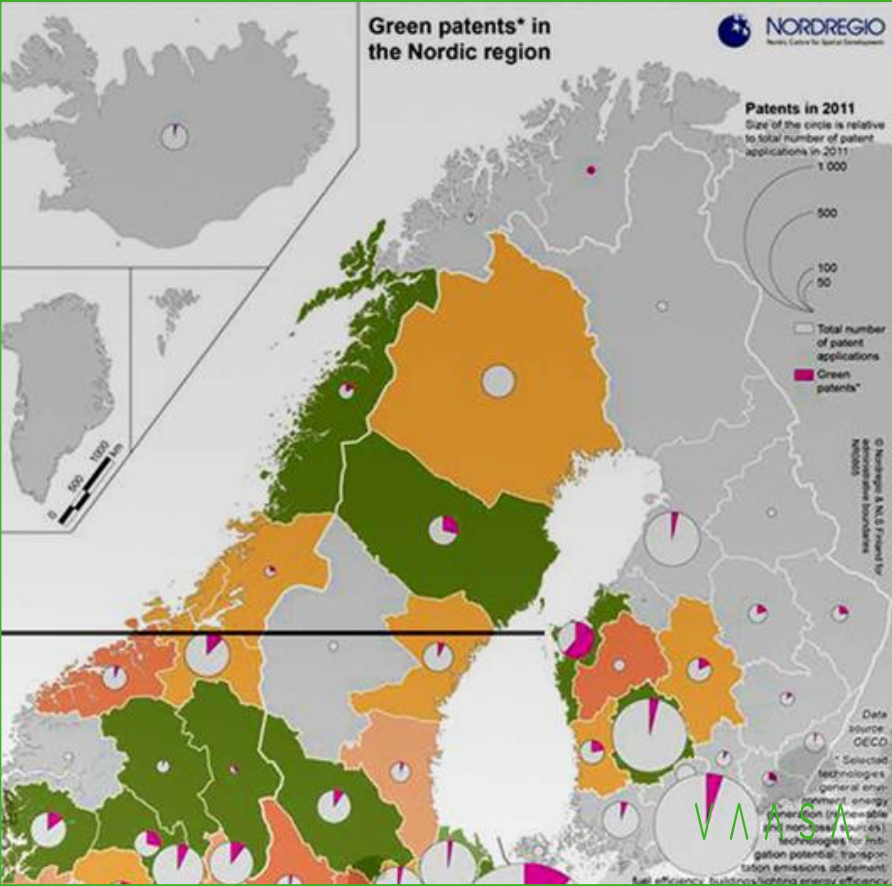


ENERGYVΛΛSA



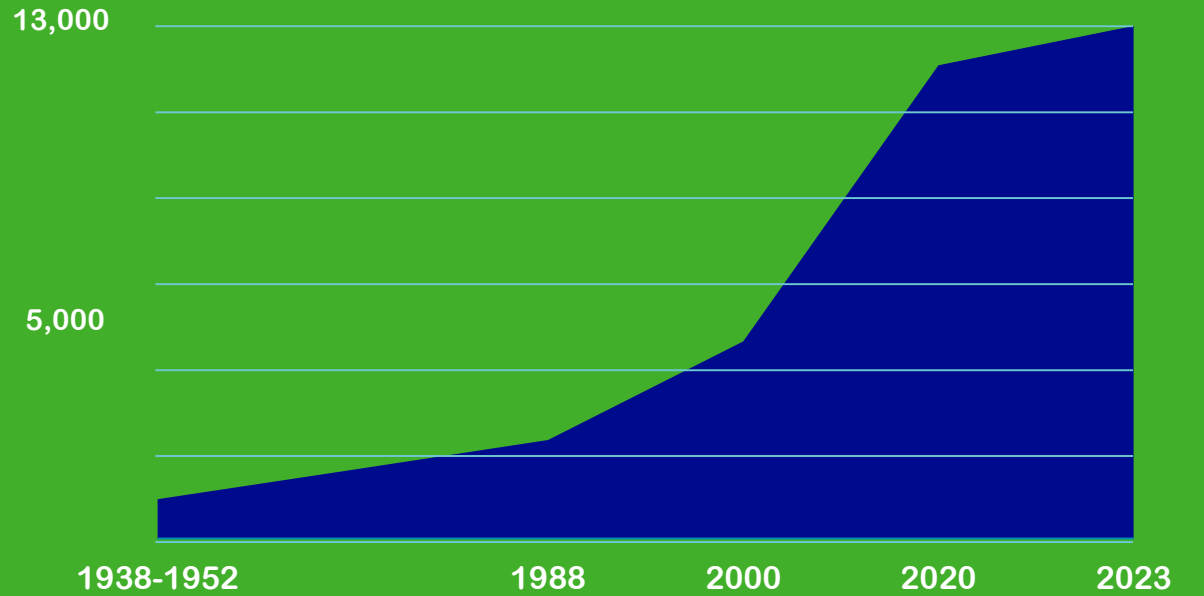
Green Patents

Most green patents in the nordic countries.





Timeline vs. number of jobs



1938-1952
 OF THE FINNISH ENERGY SECTOR WORKFORCE

1/5 EMPLOYS MORE THAN FAMILIES

14,000 UNIVERSITY STUDENTS

>110 NATIONALITIES

45% OF THE PEOPLE IN THE VAASA REGION HAVE A DEGREE IN HIGHER EDUCATION

ENERGYVAASA



MORE THAN **180**



BUSINESSES, SEVERAL OF WHICH ARE GLOBAL MARKET LEADERS IN THEIR FIELD

13,000



NUMBER OF EMPLOYEES

25%

OF TOTAL MANPOWER IN THE FIELD OF ENERGY IN FINLAND

2%

OF FINLAND'S POPULATION GENERATES



EXPORT: 5.5% , TECH EXPORT: 12%

ENERGY TECH EXPORT: 30%

ENERGYVAASA



TOTAL BUSINESS
TURNOVER OVER **6.0** BILLION
EUR ANNUALLY



EXPORT
RATE
OVER

80%

1.9 BILLION
EUR
BY 2030



ENERGY TECHNOLOGY
INFRASTRUCTURE
INVESTMENTS BY LEADING
COMPANIES

R&D



250 MILLION
ANNUALLY

IN ENERGY TECHNOLOGY OF
WHICH 80% IS PRIVATELY
FUNDED

ENERGY V A A S A



World Leader in Electrical and Automation Technology

- 100% of countries have EnergyVaasa technology in their electrical network systems
- More than 90% of Finland's electrical and automation development takes place in the Vaasa region
- The region provides the world's finest technology to all corners of the world

ENERGYVAASA

Our statements

"We are world leaders in several key areas..."

SMART
GRID



MARINE
SOLUTIONS



SUSTAINABLE
ENERGY
PRODUCTION



ENERGY
EFFICIENCY

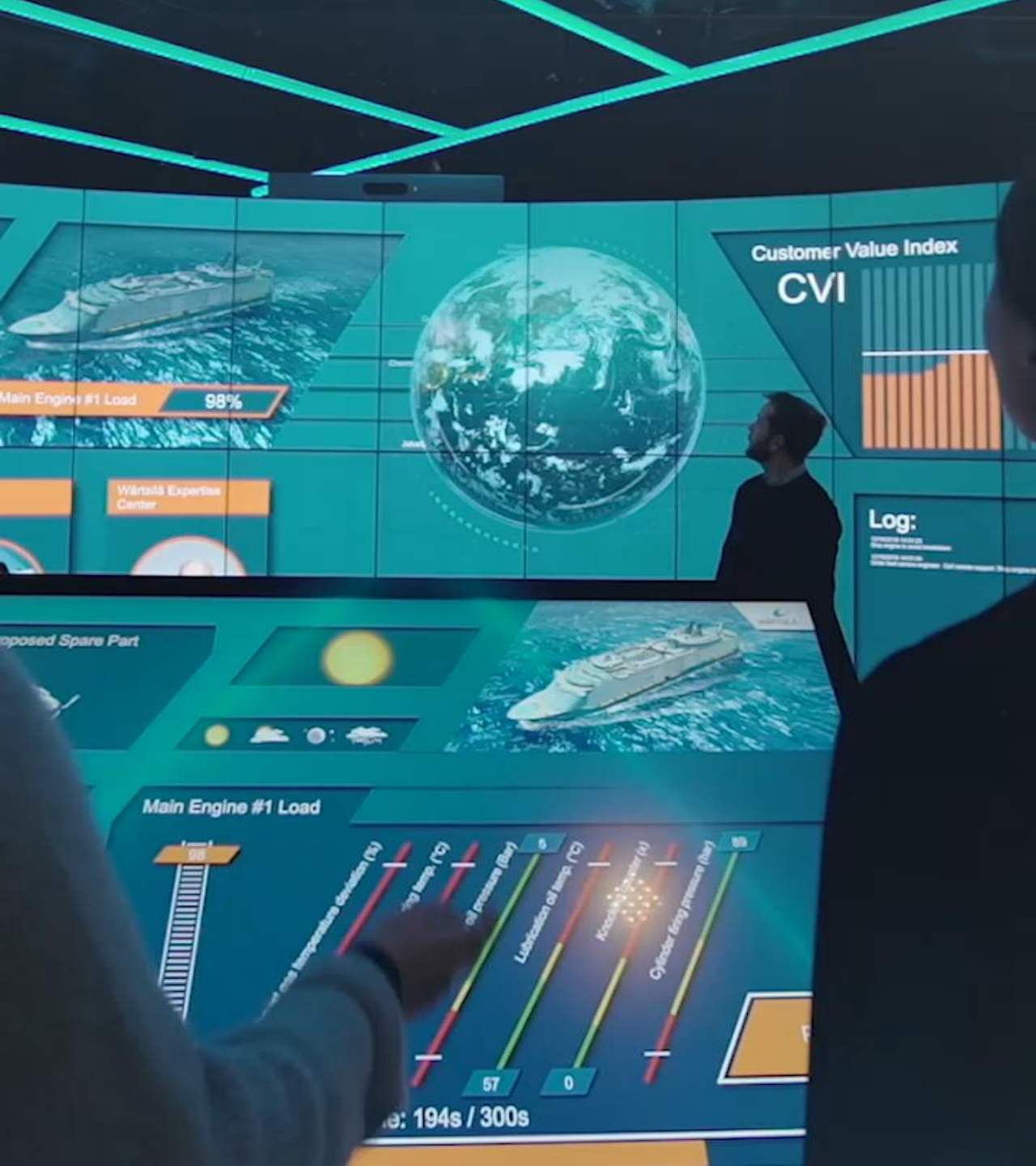


DIGITAL SOLUTIONS

ENERGYVΛΛSA

Energy Technology





Wärtsilä

“By emphasising sustainable innovation, total efficiency and data analytics, we maximise the environmental and economic performance of the vessels and power plants of our customers.”

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Vaasan Sähkö

“We are one of the largest wind power producers in Finland, and all our future investments in primary energy will be renewable.”

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Danfoss

“Our AC drives help save the planet by reducing the global electricity consumption by 8% by 2040.”

ENERGYVΛΛSA



Gambit

“ Working closely with our customers, we have helped reduce their carbon footprint by digitizing their work processes and tools.”

ENERGY V A A S A



Matina Mitsobonou

Stories of
ENERGYVAASA

“... getting to know the energy sector is thrilling. I’m very excited to be part of all of this - the innovative ideas that we see here can hopefully be part of saving the world in the future,”

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Stories of
ENERGYVAASA

Heino Järvelä

As a development engineer, Heino is for example, making sure that Vaasan Sähkö's products and services are as green and customer friendly as possible.

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Paula Gonzalez,

Stories of
ENERGYVAASA

“I’m developing an application that will help the man on the street to become even more environmentally friendly.

*It feels fantastic knowing that my coding can **contribute** to something so **meaningful**”.*

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Mette Karlman

Stories of
ENERGYVAASA

“I can’t say I’m saving the world myself, but I’m making sure that my colleagues who do are fit for fight...

with team-building exercises are important building stones when we support our world savers.”

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Stories of
ENERGYVAASA

Tommy Grannas

Wärtsilä's visions of a Smart Marine Ecosystem and a 100% renewable energy future.

*Wärtsilä's investment in the [#SmartTechnologyHub](#) in Vaasa is an essential part of how to turn these **bold visions into reality.***

ENERGYVAASA

A man with a beard and short dark hair, wearing a light blue button-down shirt and khaki pants, stands in a hallway with his arms crossed. He is smiling slightly. Behind him are several posters on a wall, including a prominent red one with white text. The hallway has white walls and a door with a silver handle.

Khuram Shahzad

Stories of
ENERGYVAASA

*Khuram Shahzad at Danfoss Drives is currently working on marine hybridisation solutions making, for example, Wasaline's new ferry as **climate and customer friendly as possible.***

ENERGYVAASA

WELCOME NEXT YEAR!

Energy Week

March 11th to 14th 2024



ABB

Danfoss

Energiäteollisuus

GREAT
HEAVY ELECTRICITY

Hitachi Energy

V A A S A .
V A S A .

VAAKAN
SÄHKÖ

VAMK
VAASAN AMMATTIOPETTAJAKOULU
UNIVERSITY OF APPLIED SCIENCES

VASEK

VEO

Wapice

WESTENERGY

WÄRTSILÄ

ENERGYWEEK.FI

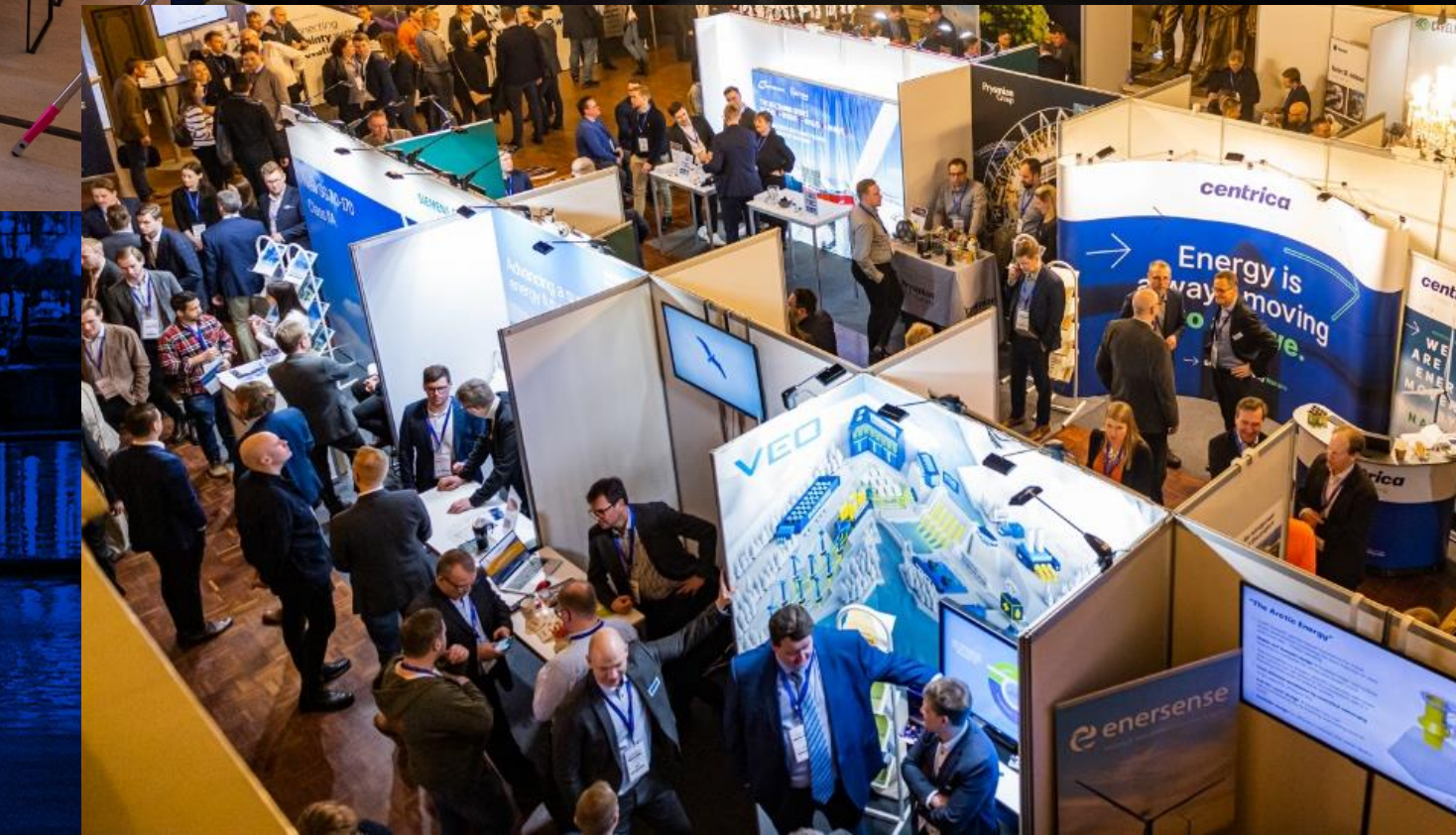
#ENERGYWEEK

EnergyWeek 2023

- Whole week full of events and program
 - New theme each day. Wind, Renewables, Gas, Storage and environment
- In 2023 we had 7100 visitors from over 44 countries, 160 speakers, 23 seminars and over 30 events.
- Next time 18.-22. March 2024



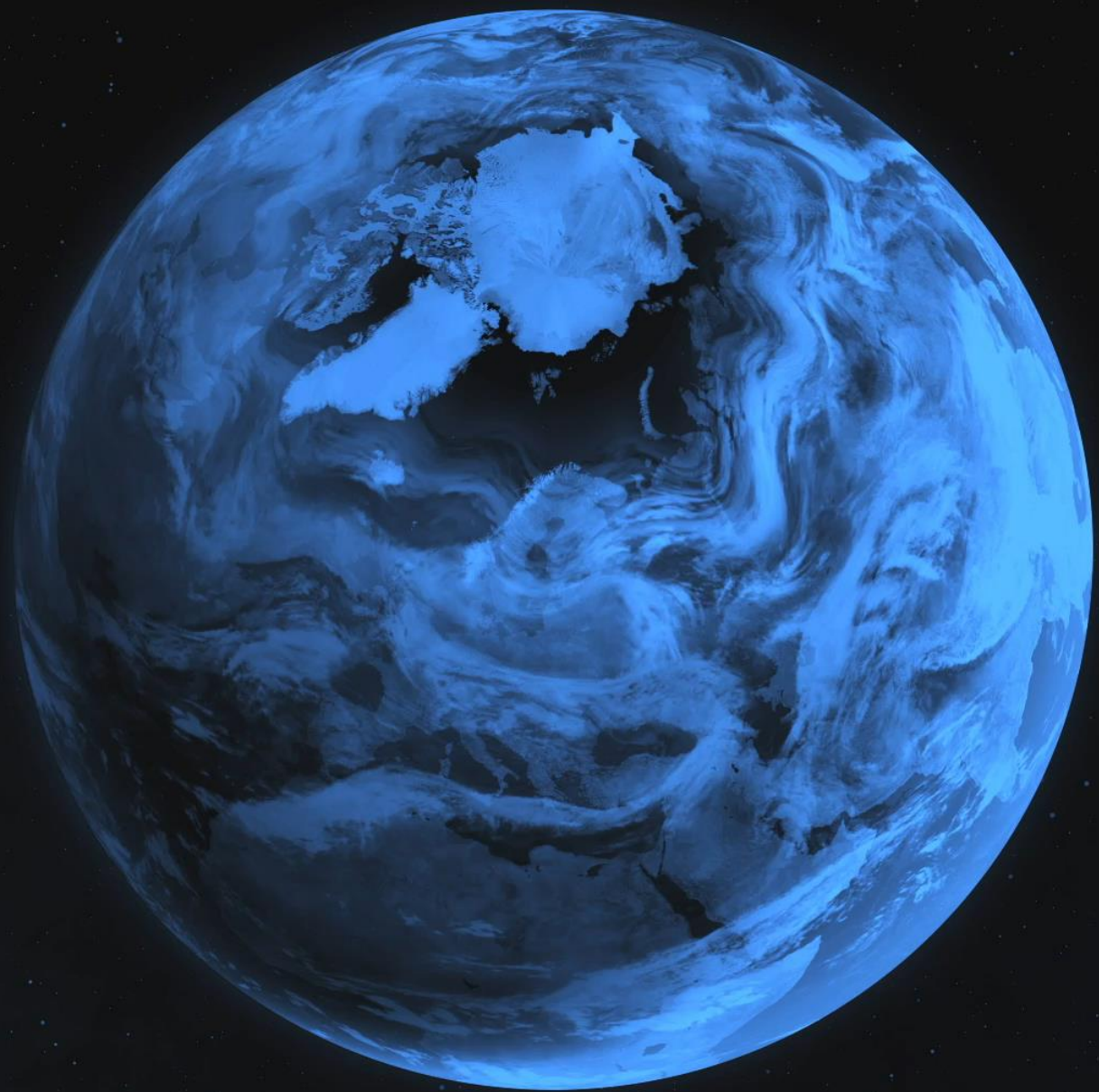






EnergyWeek Visitors Profile





MORE THAN

180



BUSINESSES, SEVERAL OF WHICH ARE **GLOBAL MARKET LEADERS** IN THEIR FIELD

R&D

250

MILLION ANNUALLY



IN ENERGY TECHNOLOGY OF WHICH **80% IS PRIVATELY FUNDED**

TOTAL BUSINESS TURNOVER OVER

6.0

BILLION EUR ANNUALLY



EXPORT RATE OVER

80%

1.9

BILLION EUR BY 2030



ENERGY TECHNOLOGY INFRASTRUCTURE INVESTMENTS BY LEADING COMPANIES

A STUNNING

30%



OF FINLAND'S TOTAL EXPORT IN **ENERGY TECHNOLOGY**

CURRENT NUMBER OF EMPLOYEES:

13,000



25%

OF TOTAL MANPOWER IN THE FIELD OF **ENERGY IN FINLAND**

A photograph of the Aurora Borealis (Northern Lights) in shades of green and purple, dancing across a dark night sky. Below the lights, a long bridge with two prominent white pylons spans across a body of water. The bridge is illuminated with lights, and its reflection is visible on the water's surface. The overall scene is a serene and beautiful night landscape.

Thank You!

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