# ENERGY VAASA

#EnergyVaasa #WeAreEnergyVaasa

## Cluster Management Excellence

GOLD

**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)

#### 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

POLYTECHNIC

Intelligent electricity

International trade

Energy in professions

Proficient support group -

technology, robotics and 3D

Education and research that

support the energy branch

EDUCATION Central focus

ENERGY COMPETENCE



#### 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 -Qualifications that support



### 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



### 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

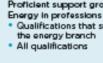
Interaction between schools and working life

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



#### ENERGIAPOLKU.FI C

VAASA.



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

3

#### BASIC EDUCATION Modern teaching resources

EARLY CHILDHOOD

EDUCATION

Raising interest

and participation

project work

Multiprofessional projects









### Long traditions





The Wickström brothers start their engine factory in Vaasa

1906

War in Finland forced Wärtsilä and Strömberg to move manufacturing to the Western part of Finland. War reparations 1944-1952 increased the efficiency of production Strömberg generators and transformers to Vaasa

ers to

Wärtsilä starts to manufacture diesel engines in Vaasa **1954**  Strömberg becomes a part of ABB

oy Stromberg Ab

Vacon starts to manufacture frequency converters

1993



Increased environmental awareness & legislation after 2000 has changed the energy sector

Lot of business for EnergyVaasa companies

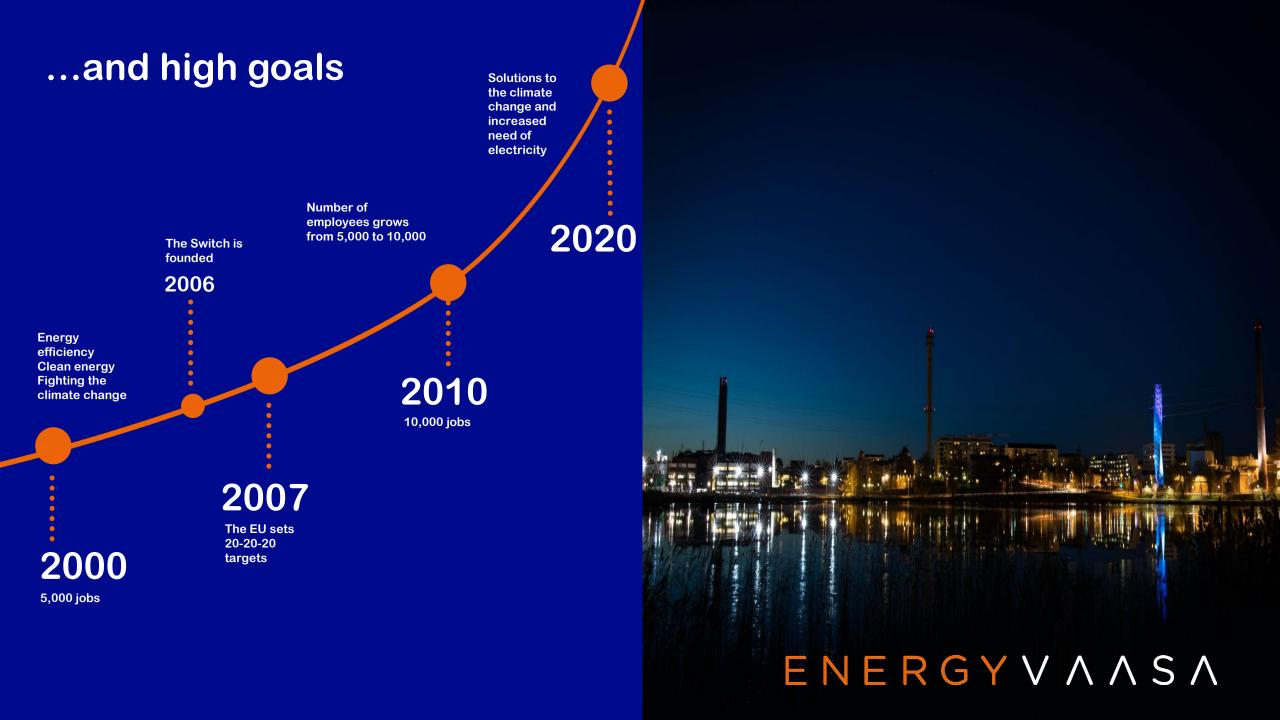
2000

5,000 jobs

**1880** Beginning of energy technology

1940 Strengths: Know-how and efficient production 1988 Spin-offs like VEO, Vacon and VAMP

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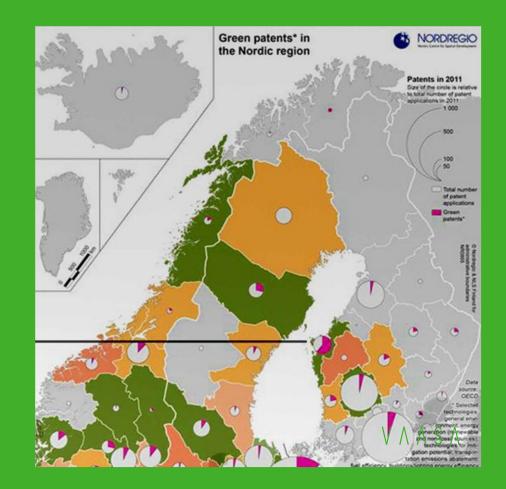


More than 90% of the Finnish R&D in electrical and automation solutions



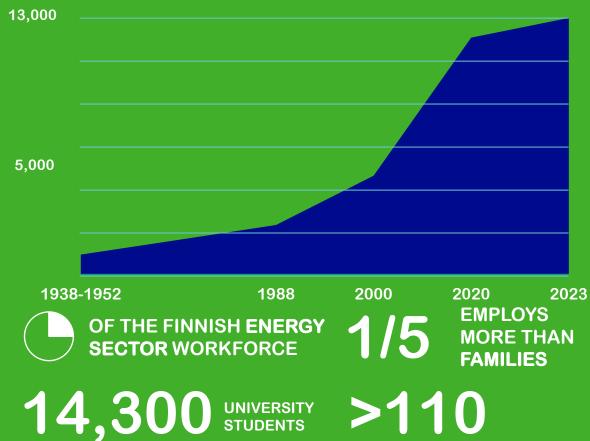


## **Green Patents** Most green patents in the nordic countries.





## **Timeline vs. number of jobs**



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

**NATIONALITIES** 

## WÄRTSLAan Wapice VED 1a V AAS A ARCTEO ELGYABLE POWER Hitac **Energ** $\bigcirc$ Comsel

## MORE 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

### 



TOTAL BUSINESS TURNOVER OVER 6.0 BILLION EUR ANNUALLY EXPORT 80%

> **19BILLION** EUR BY 2030

ENERGY TECHNOLOGY INFRASTRUCTURE INVESTMENTS BY LEADING COMPANIES

R&D

250 MILLION ANNUALY



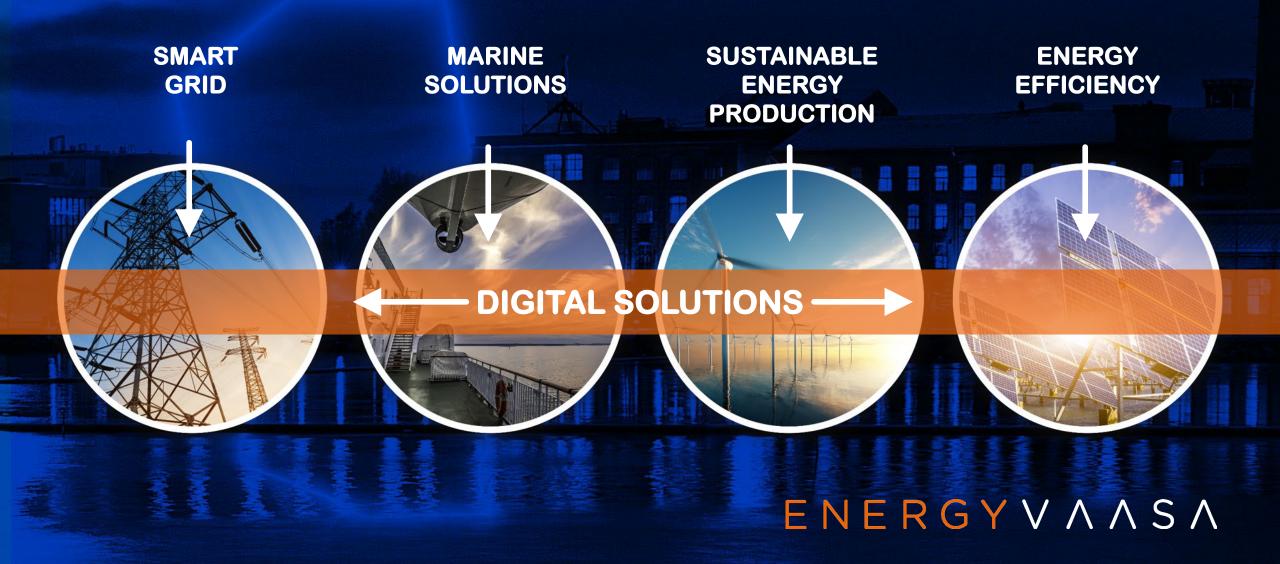
IN ENERGY TECHNOLOGY OF WHICH 80% IS PRIVATELY FUNDED



# World Leader in Electrical and Automation Technology

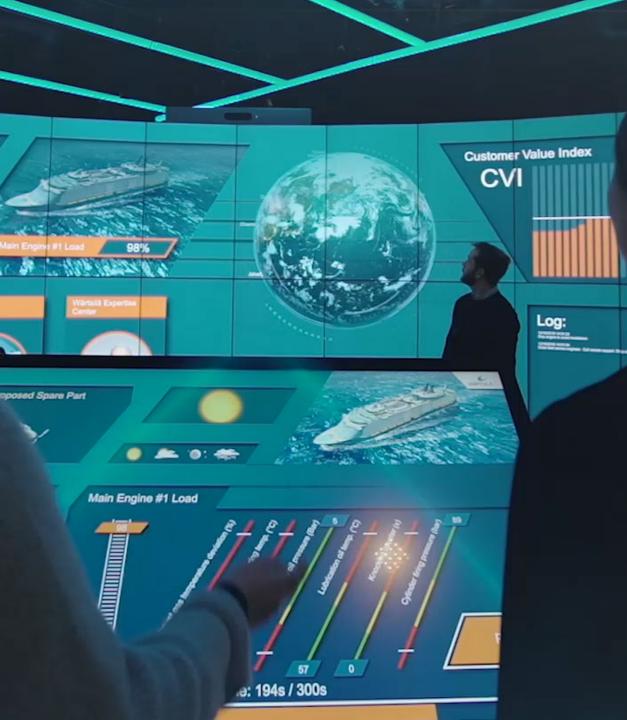
- 100% of countries have EnergyVaasa technology in their electrical network systems
- MicroSCADA developed in Vaasa automates, supervises and monitors 10% of the global electricity distribution.
- More than 90% of Finland's electrical and automation development takes place in the Vaasa region
- The region provides the world's finest technology to all corners of the world

### Our statements "We are world leaders in several key areas..."



### **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."* 

 $E N E R G Y V \land \land S \land$ 



### **Danfoss**

*"Our AC drives help save the planet by reducing the global electricity <i>consumption* **by 8%** *by* **2040**."

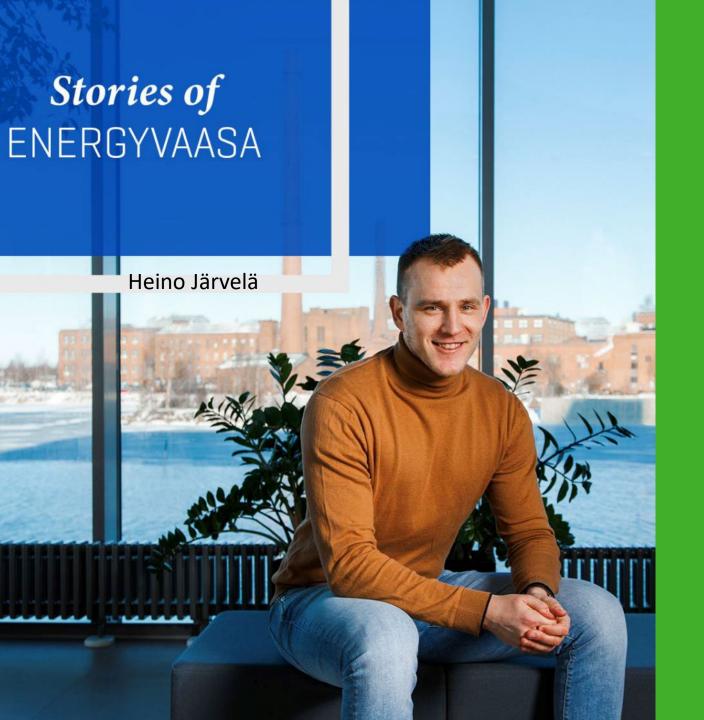
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Matina Mitsobonou

**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,"

ΕΝΕRGYVΛΛSΛ



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.

## $E N E R G Y V \land \land S \land$



*"I'm developing* an application that will help the man on the street to become even more

It feels fantastic knowing that my coding can **Contribute** to something so **meaningful**".

 $E N E R G Y V \land \land S \land$ 



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

Wärtsilä's investment in the MariTechnologyhub in Vaasa is an essential part of how to turn these **bold visions into reality.** 

 $E N E R G Y V \land \land S \land$ 

Khuram Shahzad

### **Stories of** ENERGYVAASA



ENERGYVAASA

# WELCOME NEXT YEAR! PERUVÉEK

## March 17th to 20nd 2025

















## **#ENERGYWEEK**

# EnergyWeek 2024

- Whole week full of events and program
- New theme each day. Wind, Renewables, Gas, Storage and environment
  In 2024 we had over 8000 visitors from over 48countries, 160 speakers, 25 seminars and over 33 events.
  Next time 17.-20. March 2025

ALREADY ON THE HORIZON

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Veek

2025

VAASA, FINLAND









### **EnergyWeek Visitors Profile**

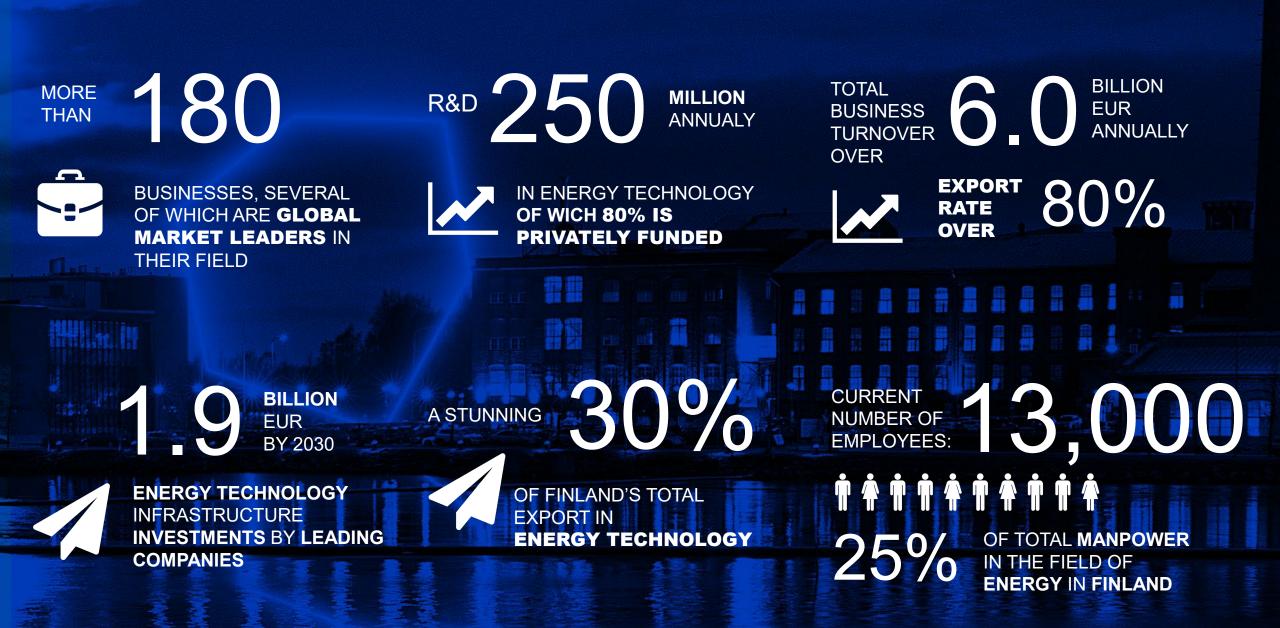


### **EnergyWeek Visitors Title**









# **Thank You!**

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