

THE DANISH MODEL AND WORKFORCE DEVELOPMENT

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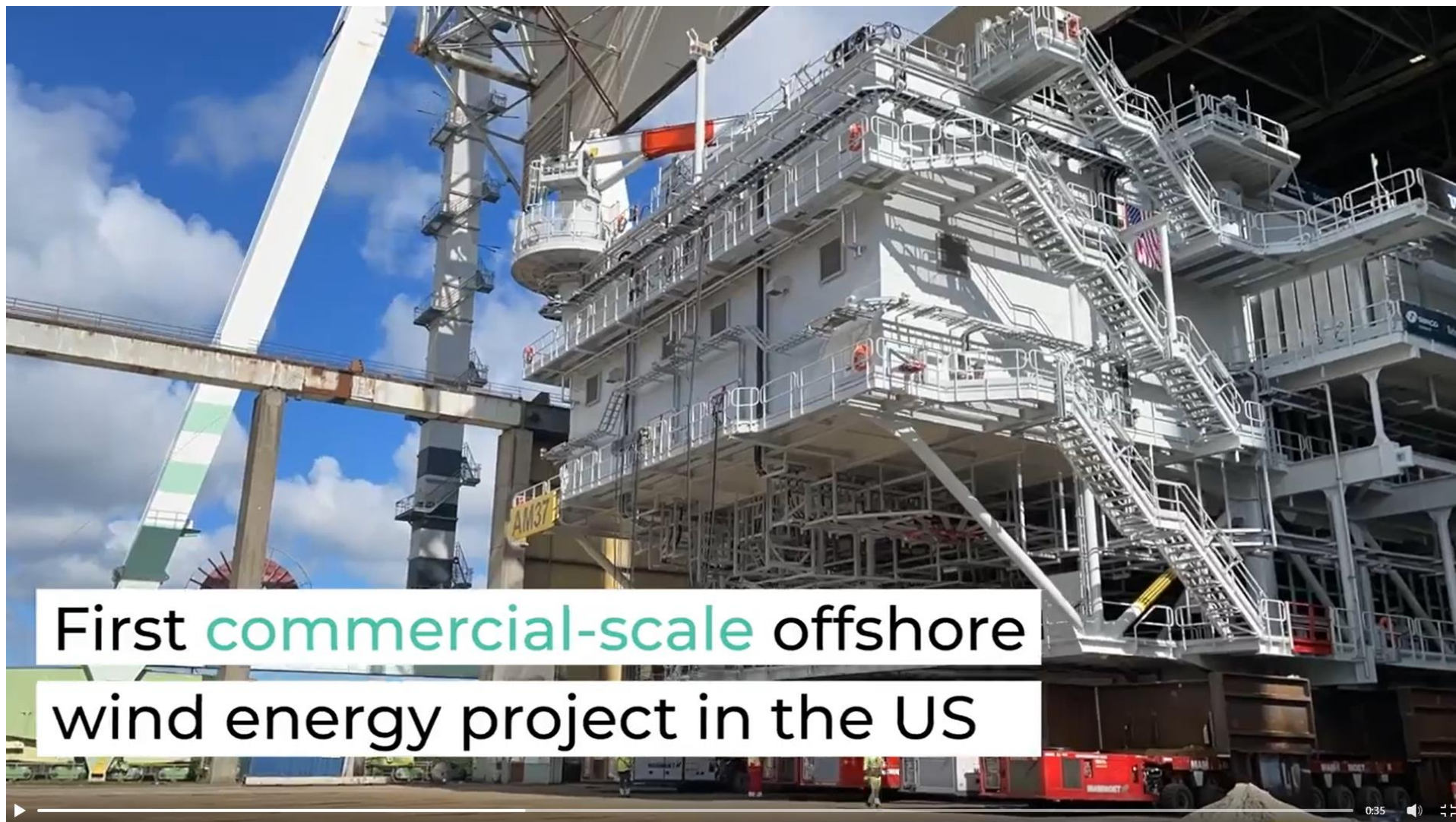
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AGENDA

1. Short presentation of the Danish Metalworkers' Union
2. The Danish Model
3. Vocational education and training in the green transition and
4. Occupational health and safety in green economy
5. Green Transition and new technologies – job creation for skilled workers
6. Questions

ODENSE PORT PROJECT VINEYARD WIND 1



Core messages:

1. Digital and green transformation is ongoing.
2. Nothing moves without us - we are everywhere
3. Faster, smarter, greener
4. Join us to fight climate change - where dreams come true





THE FUTURE IS OURS

DANISH METALWORKERS' UNION

DANISH METALWORKERS' UNION

- ▶ Founded as labor union in 1888
- ▶ Approximately 100.000 members
- ▶ The union of skilled and highly specialized workers

- ▶ Majority of members are skilled workers:
 - ▶ Industrial technicians and craftsmen (metal technicians, car mechanics, fitters), IT-technicians, and IT-supporters
 - ▶ Officers and ratings on board ships and offshore – from bridge over galley to deck (Metal Maritime)
 - ▶ Pilots, cabin crew and flight mechanics (Metal Aviation)

- ▶ Focus on vocational training, life-long learning, creating the best possibilities for the Danish industry, increasing productivity by focusing on new technologies and creating new jobs and growth.



DANISH METALWORKERS' UNION

- ▶ Position as chief negotiator for all private employees in Denmark – (the Central Organization of Industrial Employees in Denmark - CO-industri)
- ▶ Acc. to political scientists Claus Jensen is the most well connected due to board positions and alliances.





THE DANISH MODEL

WHAT IS THE DANISH MODEL?

Collective agreements and labour courts



The Labor Court

Triologue negotiations



No minimum wage by law

Flexicurity



- ▶ Easy to "hire and fire"
- ▶ High level of mobility
- ▶ High level of unemployment benefits
- ▶ Education schemes for unemployed and employed
- ▶ Pay on maternity leave

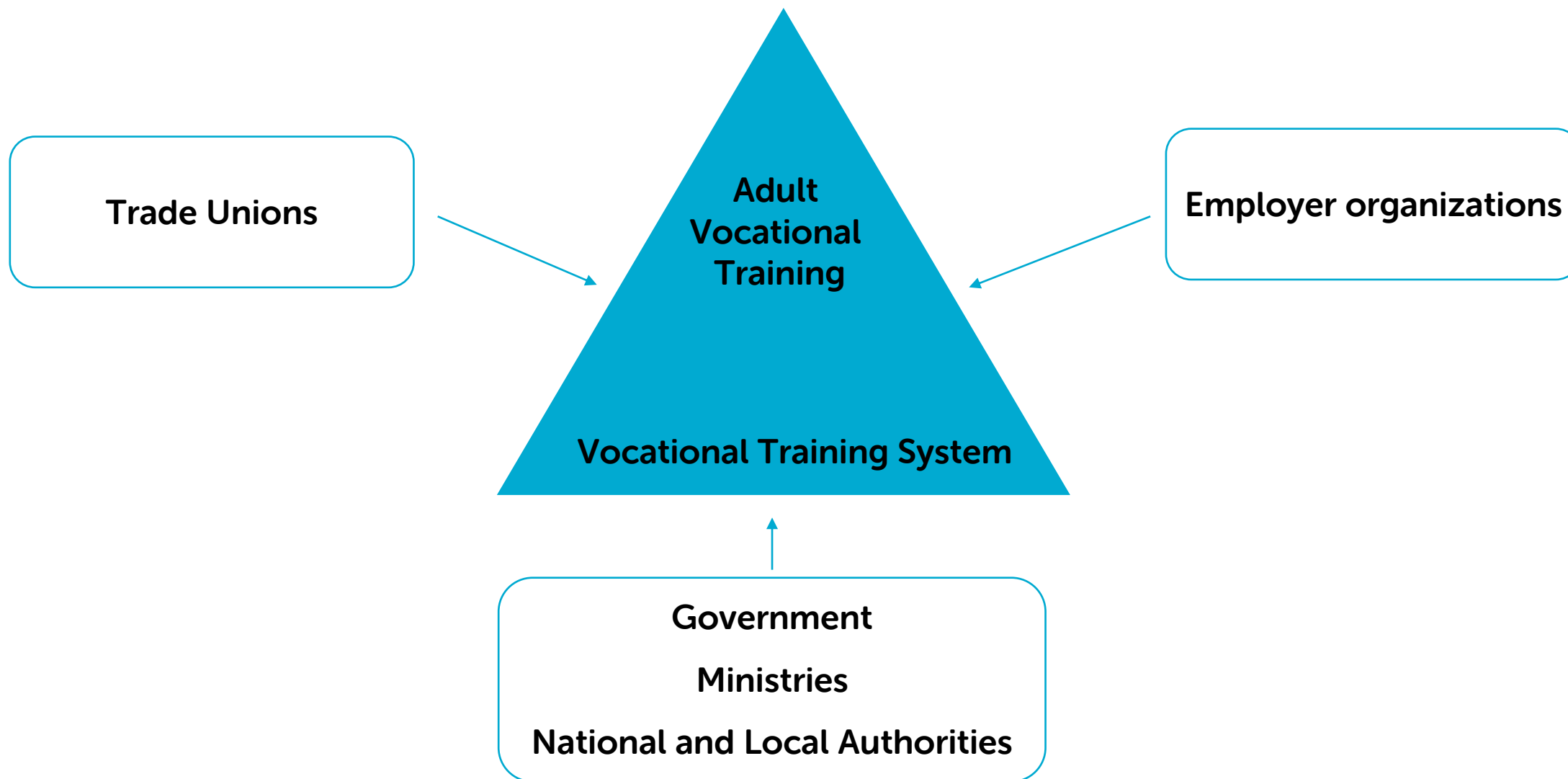
VOCATIONAL EDUCATION AND TRAINING IN GREEN TRANSITION

THE EDUCATION SYSTEM AND THE DANISH MODEL

- ▶ The Danish Model: Social partners (employer associations and labor unions) decide and take responsibility for the practical substance in the vocational educations
- ▶ Companies have an education responsibility
- ▶ The government “only” finances the educations.



HOW ARE WE MAKING NEW EDUCATIONS?

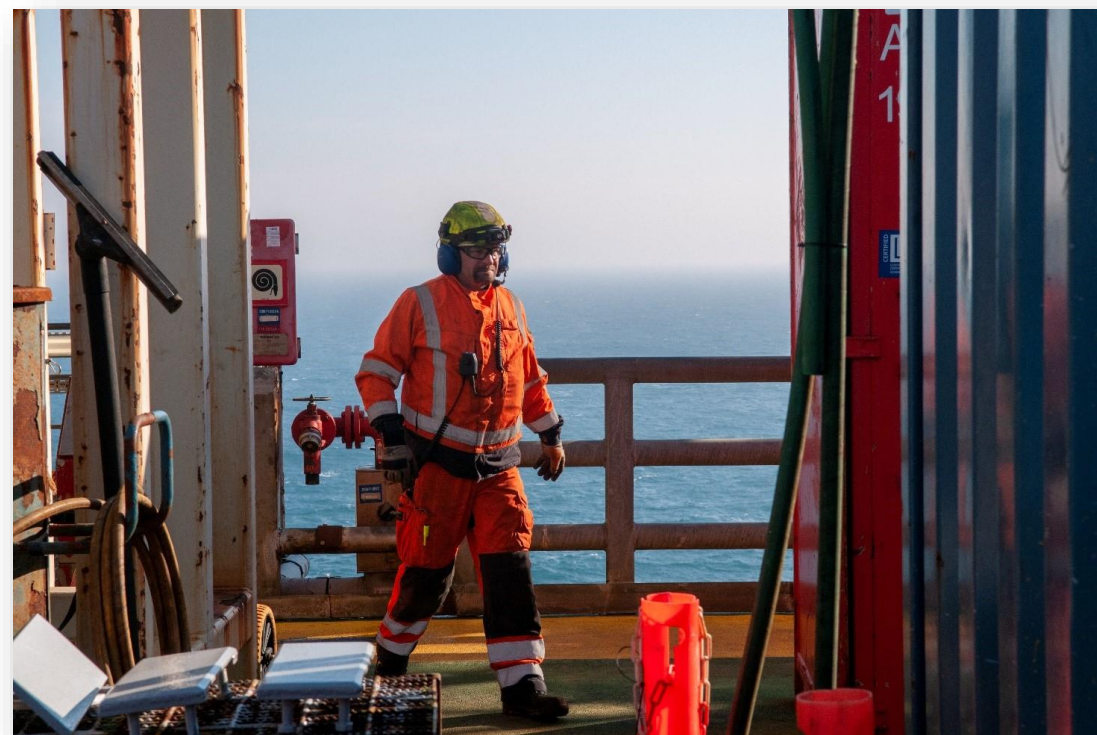


OCCUPATIONAL HEALTH AND SAFETY IN GREEN ECONOMY

Mr. Jan Toft Rasmussen
OHS Secretary

THE RUSSIAN INVASION OF UKRAINE SPEEDING UP ENERGY SUFFICIENT SOLUTIONS

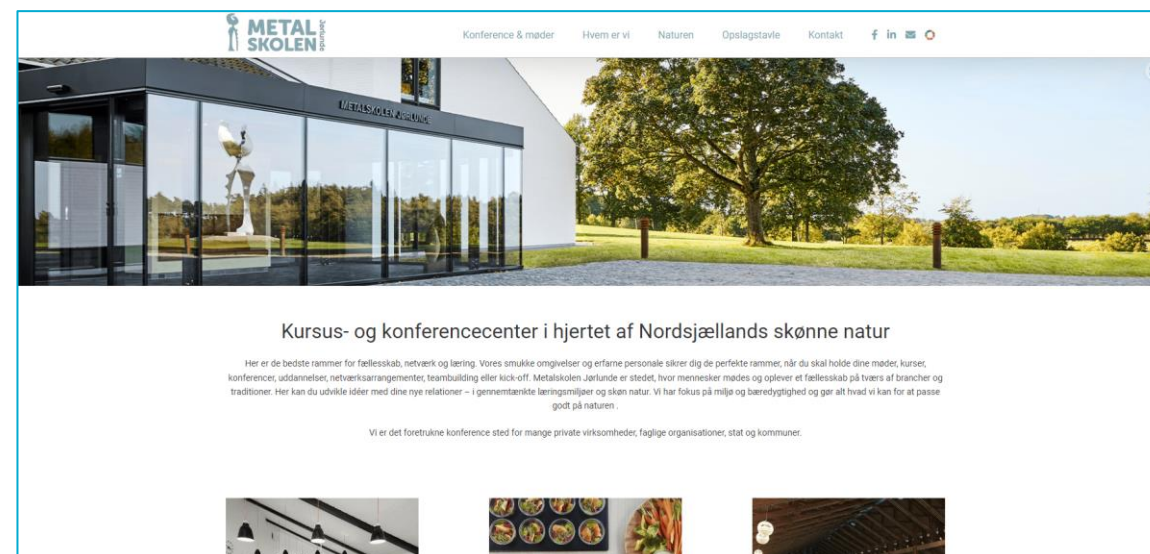
- ▶ District heating
- ▶ Heat pumps
- ▶ More isolation of buildings
- ▶ Electric cars
- ▶ Solar panels
- ▶ Recirculation in factories
- ▶ Wind energy
- ▶ *More energy optimized solutions all over*



EDUCATION ON OHS FOR SAFETYREPS. AND SHOPSTEWARDS

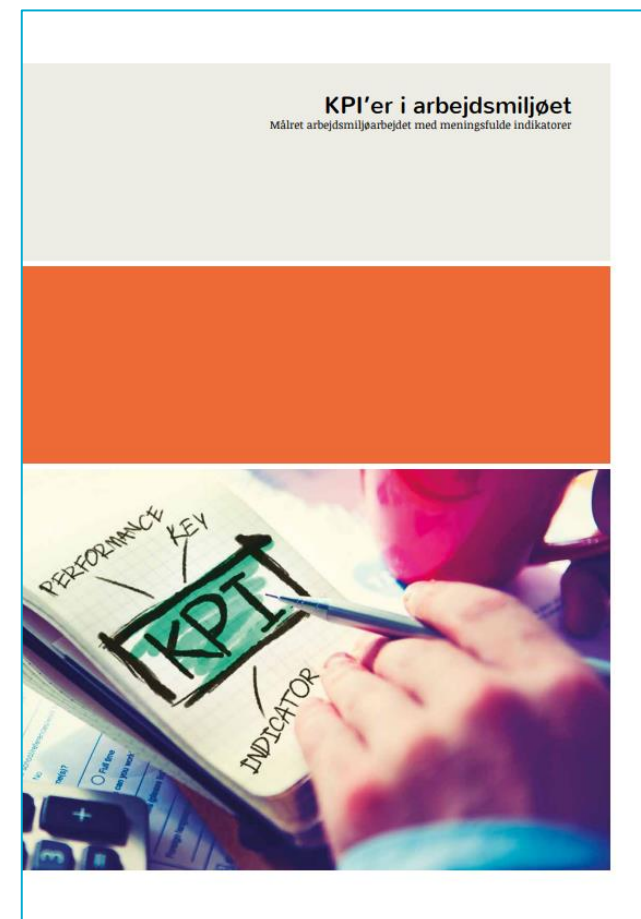
- ▶ Education by law
 - ▶ Onshore
 - ▶ Offshore
 - ▶ Professional OHS advisers

- ▶ Danish Metal – Labor College
 - ▶ Collective agreement on participation



SOCIAL PARTNERS OHS COOPERATION

- ▶ Sector OHS councils (BFA)
 - ▶ Danish Industry and CO-industry
 - ▶ Financed by insurance companies
 - ▶ Annual Roadshow and Top Meeting
- ▶ Offshore Operators
 - ▶ Ineos Energy and Total Energy
 - ▶ Offshore safety Council
 - ▶ Subcontractors
 - ▶ Carbon Capture Storage CCS



A large industrial factory interior with a prominent green steel structure. A massive, rusted metal ring is the central focus, with some handwritten markings on its surface. In the background, there are various industrial machines and workers in orange safety gear.

GREEN TRANSITION AND NEW TECHNOLOGIES: JOB CREATION FOR SKILLED WORKERS

GREEN TECHNOLOGIES – NEW BUSINESS AND JOB OPPORTUNITIES

- ▶ Climate elections in 2019 – both in Denmark and for the European Parliament Election
- ▶ 14 Climate Partnerships with all segments of the Danish business community
- ▶ Since 2019 important political agreements have been settled;
 - ▶ The Climate Act
 - ▶ End of oil and gas
 - ▶ Energy islands
 - ▶ CO2 tax on industry
 - ▶ Circular economy and waste handling
 - ▶ Etc.



NEW GREEN TECHNOLOGIES – NEW BUSINESS AND JOB OPPORTUNITIES

- ▶ **Carbon Capture and Storage** - public investments: 2,3 billion \$
- ▶ **Power-to-X/hydrogen** - public investments: 180 million \$
- ▶ **Energy islands** in the North Sea and in the Baltic Sea
- ▶ Massive expansion of **solar** and **wind energy onshore** in coming years
- ▶ **Electrification** and **energy efficiency** in industry and households.



Staff retention in the North Sea by using CCS



GREEN TECHNOLOGIES – NEW BUSINESS AND JOB OPPORTUNITIES

- ▶ Around **one in eight** industrial workers in Denmark are involved in production of green products and services.
- ▶ **Danish export of clean tech today:** Around 100 billion DKK ~ 14,6 billion \$ ~ 8 % of goods and services export.
- ▶ Biggest problem facing the Danish labour market: **mismatch of skills and jobs.**
- ▶ **Skilled workers are needed:**
 - ▶ In the industrial sector **126.000 full-time jobs in the period 2022-2030** will be needed.

OVERVIEW OF SELECTED GREEN TECHNOLOGIES AND ASSOCIATED PROFESSIONS OF THE DANISH METALWORKERS' UNION ^{19,20}

TECHNOLOGY	TRADE GROUP
Offshore wind turbines	Skilled metalworkers Automation technicians with a specialisation in wind energy Industrial and CNC technicians Ship assistants
Onshore wind turbines	Skilled metalworkers Automation engineers with a background in wind energy
Power-to-X	Skilled metalworkers Industrial technicians Ship fitters Automation technicians Electronics technicians
Carbon capture and storage	Skilled metalworkers (collection, distribution and transport of CO ₂) Industrial technicians and CNC technicians Automation technicians Ship assistants Ship fitters Truck mechanics Electronics technicians
Solar energy systems	Solar installer
Expansion of district heating	Skilled metalworkers Welders
New heat sources into the district heating network	Refrigeration technicians Skilled metalworkers Automation technicians

HOW TO FIX MISMATCH OF SKILLED WORKERS AND FUTURE JOBS?

1. **Upscaling of members skills through the Danish Model**
 - ▶ The offshore industry in Esbjerg: From oil and gas to wind energy and CCS in the North Sea
2. **Education reforms and more funding to vocational schools**
 - ▶ More young people need real skills!
3. **Robotization**





Vestas 236-15 MW

15 MW electricity
to 20.000
households

Wing: 115,5 m

Height: 280 m – 918 ft

Produced in Lindø
(old shipyard)



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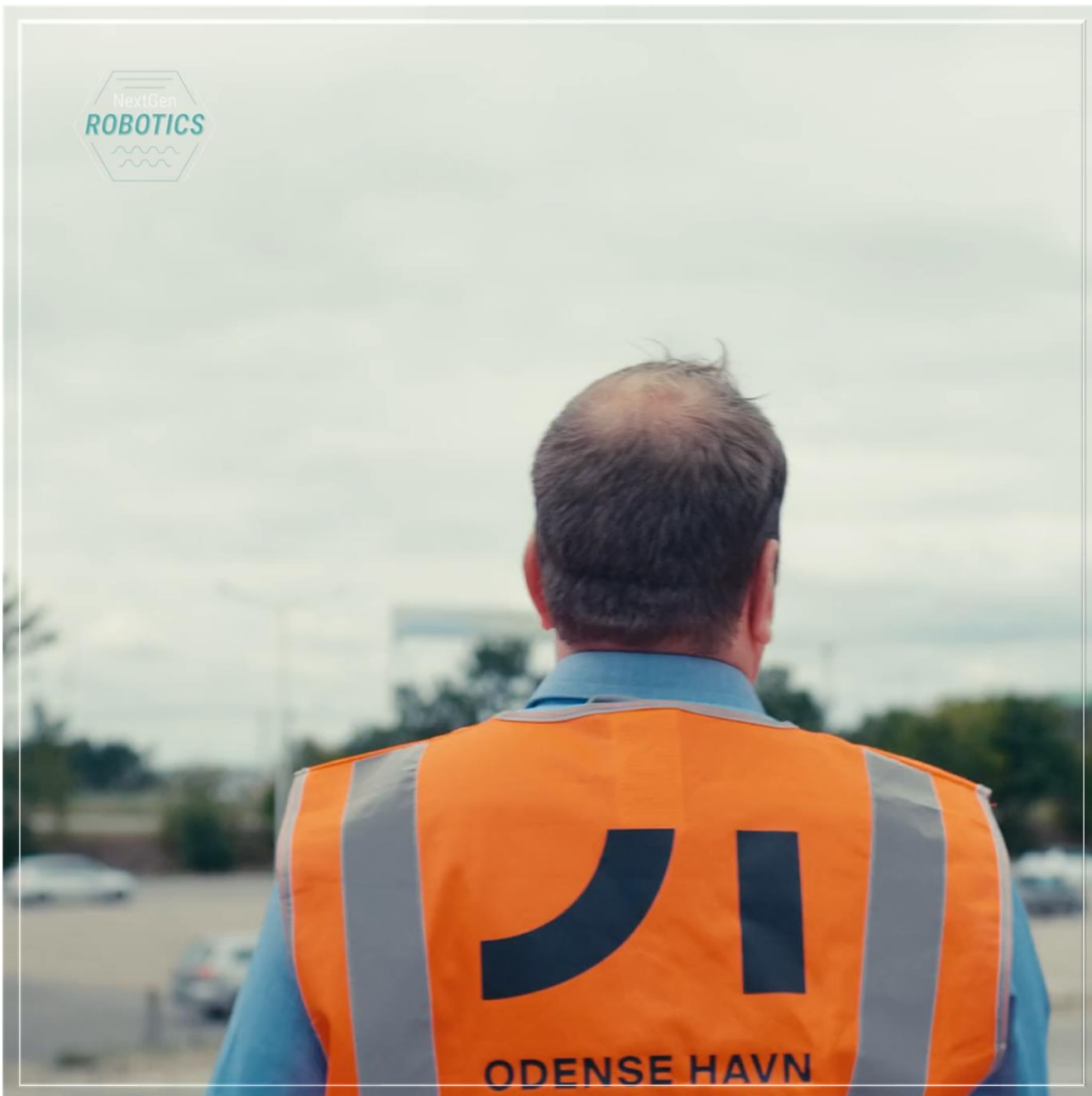
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Welding of a monopile section





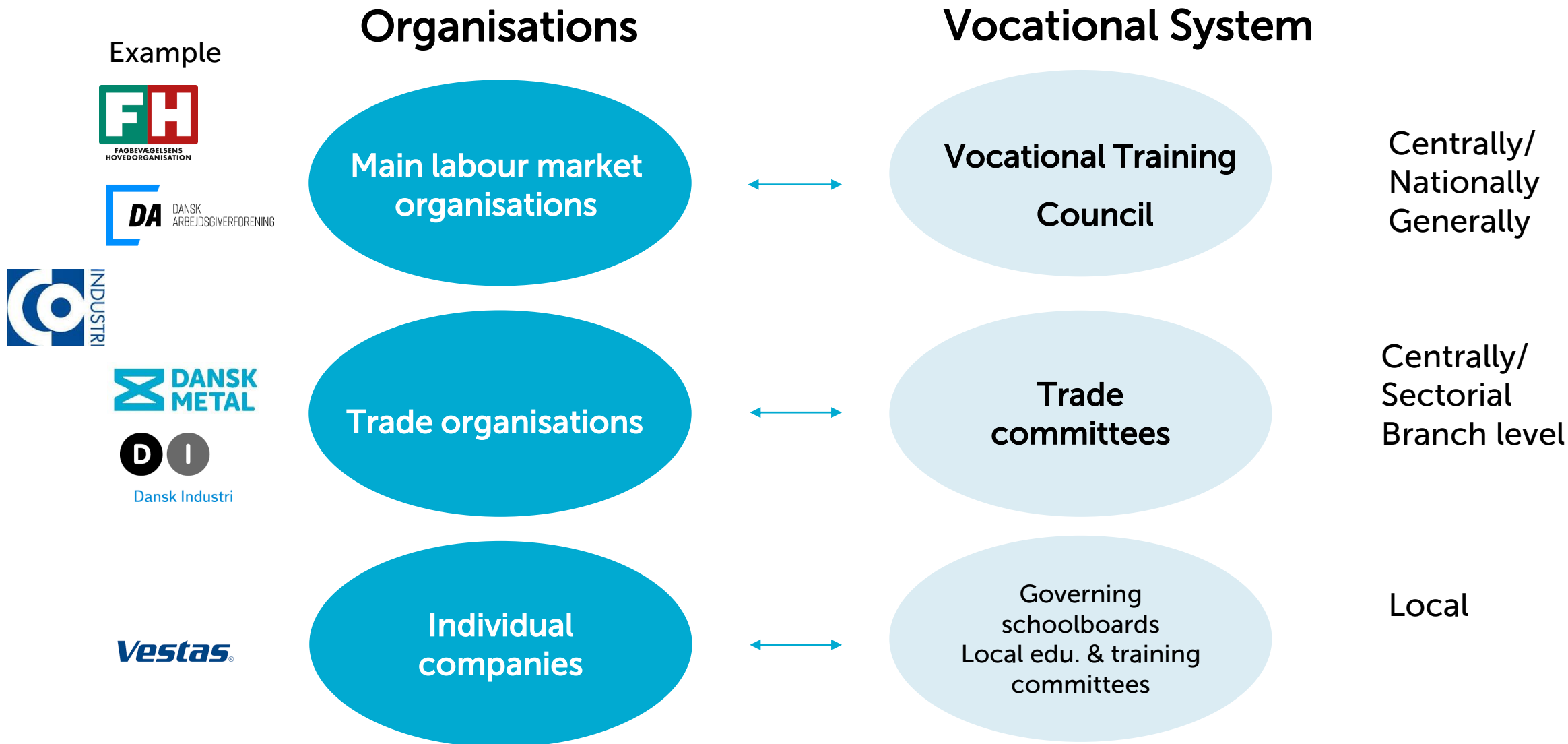
A close-up photograph of a worker wearing a red hard hat and a green work jacket. The worker is using a power drill on a metal surface. The hard hat has "BALANCE AC" written on it. The work jacket has a logo that says "OCEAN".

THANK YOU
FOR YOUR TIME

QUESTIONS?

APPENDIX

THE THREE LEVELS



GREEN TECHNOLOGIES – NEW BUSINESS AND JOB OPPORTUNITIES

- ▶ With green transition comes new business and jobs
- ▶ This requires upscaling of the members skills
 - ▶ Winds shore and offshore industrial technicians, and mechanics
- ▶ **The offshore industry in Esbjerg:** new green technology and adventures requires upscaling of skills
 - ▶ Upscaling of skills from workers in the oil industry to wind energy or CCS in the North Sea



ATTITUDE TOWARDS GREEN TRANSITION

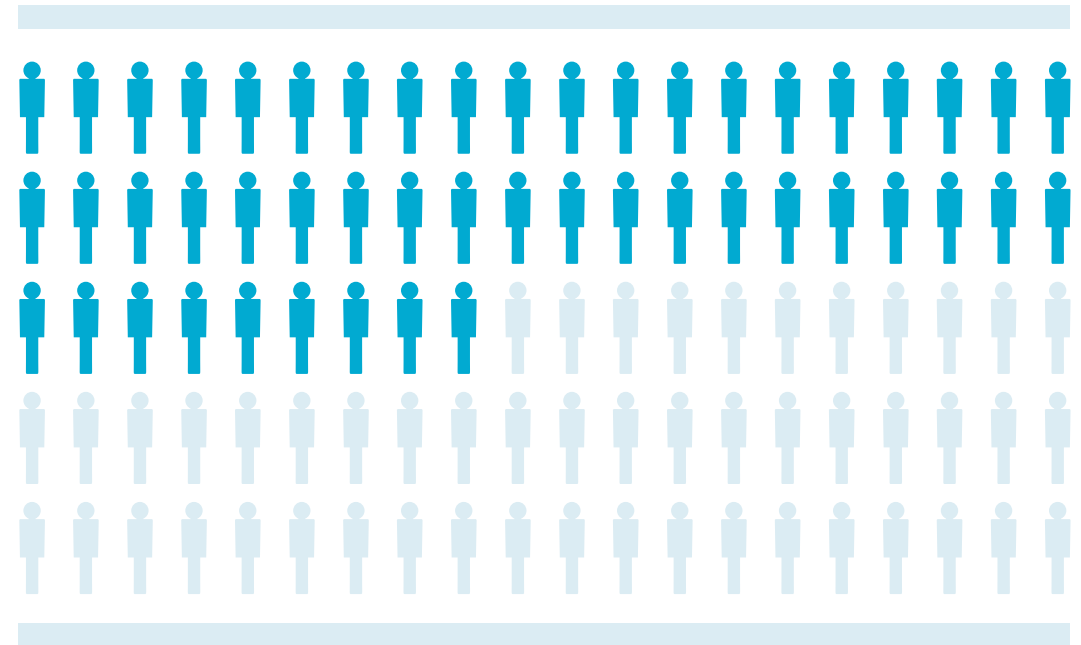
- ▶ Three out of five members are worried about the climate changes (the same as in the general public)
- ▶ 50 % of our members think that we must take climate changes seriously, but at the same time, 50 % of our members believe that there is a certain degree of populism to the agenda
- ▶ Our members have a lower degree of willingness to pay for climate measures than compared to the general public, and green transition should not take place at the expense of business and jobs

HOW DO MEMBERS OF DANSK METAL PERCEIVE GREEN TRANSITION?

31 % of *our members* believe we must give climate a higher priority than growth and competitiveness



49 % of *the population* believe we must give climate a higher priority than growth and competitiveness



TRADE UNION REPRESENTATIVE SURVEY

- ▶ More than 50 % of our trade union representatives estimate that the products of the company contribute to the green transition globally
- ▶ About every 5th representative report that the company within the last 5 years has reorganized from fossil fuel to electricity

Berlingske

Export of green technology has set a record: Shows a way out of the corona crisis. Exports of green technologies such as wind turbines, bioenergy, and district heating grew by 13 percent last year.



Nacelle of the new Vestas 236-15 MW



VET IN A NUTSHELL

- ▶ Based on *the dual training principle*: Alternation between school-based education and workplace training
- ▶ Qualifies students for labour market entry as skilled workers
- ▶ Admission requirement: Completion of compulsory education (primary school)
- ▶ Duration: 2 to 5 years – the most typical being 3.5 to 4 years
- ▶ Different categories: Technical, Business, Social and Health Care, Agricultural, Construction, Services, IT, Food production and -preparation, Maritime oriented programmes etc.

Transportation of a windmill wing for the Vestas 236-15 MW



Monopile

