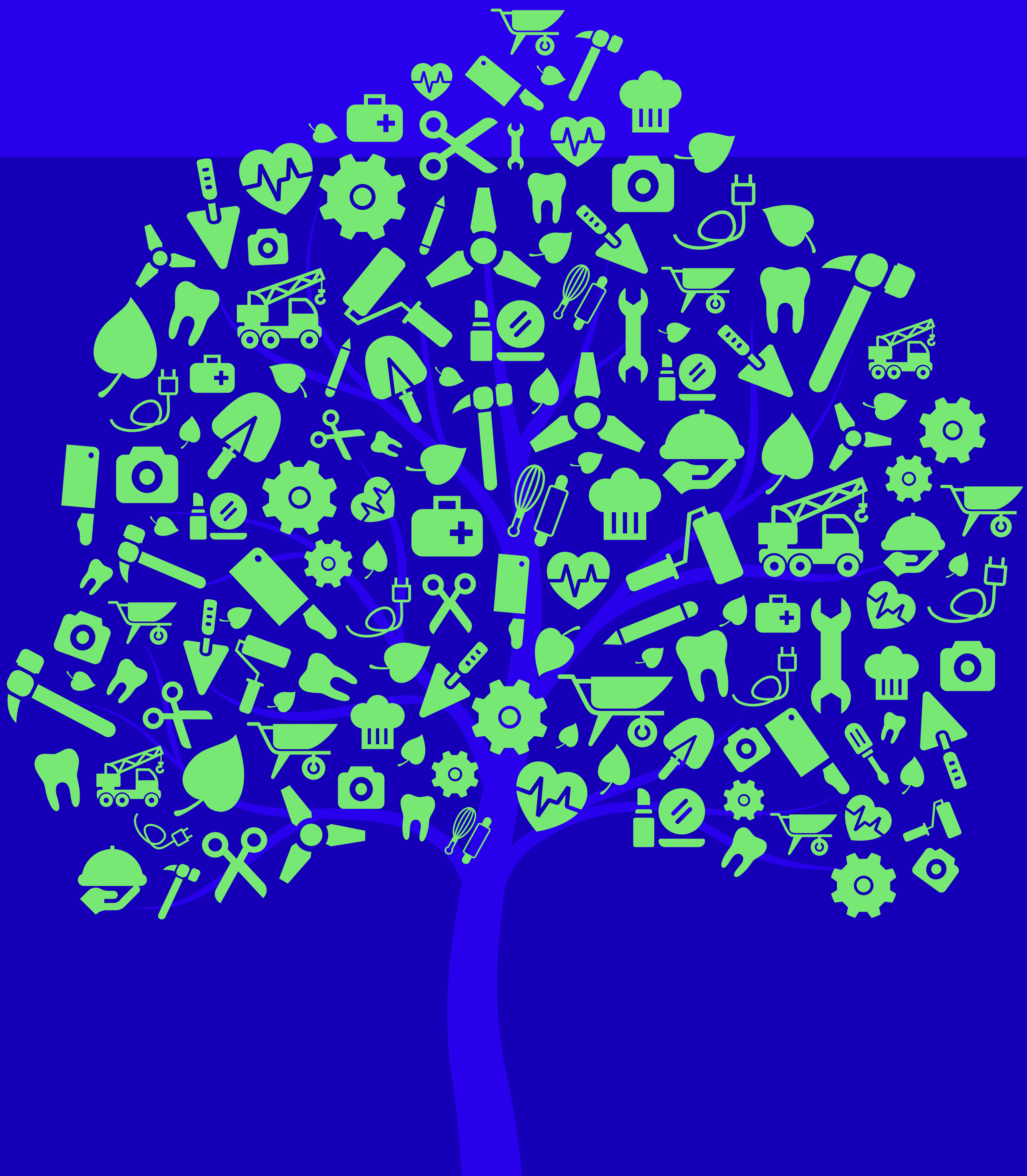
NORDIC POLICY BRIEF
– HOW CAN VET DRIVE THE GREEN TRANSITION IN THE NORDICS?

Six recommendations from 75 Nordic key actors on how vocational education and training (VET) accelerate the green transition in the Nordic



Nordic Policy Brief
– How can VET drivethe green transition in the Nordics?

Six recommendations from 75 Nordic key actors on how Vocational education and training accelerate the green transition in the Nordics

Prepared by Think Tank Mandag Morgen for the Nordic Council of Ministers.

This brief is part of the project 'Futureproofing VET in the Nordics', carried out in collaboration with the National Center for Vocational Pedagogy at Copenhagen University College.

Project Management:
Thomas Nørskov Kjølbye,
Project Manager, Think Tank Monday Morning

Zenia Glans Søjberg,
Analyst Think Tank Monday Morning

Josephine Lenbroch,
Analyst, Think Tank Monday Morning

Graphic Design:
Annemarie Nordlyng Förderer,
Head of Design, Altinget & Mandag Morgen

TABLE OF CONTENTS

FOREWORD

The green transition places new and complex demands on our societies. It requires not only new technologies and methods, but also new ways of thinking and working. That is why it is essential that, across the Nordic region, we both educate young people and upskill the existing workforce with the right green skills, so we can develop and apply green technologies and create sustainable solutions in practice that support a new, green labour market.

The demand for green skills cuts across all sectors, but it is particularly urgent in industries with a high share of skilled workers, such as manufacturing, construction, and services. These are the sectors where green solutions must be brought to life, when skilled workers will operate new technologies, build sustainable infrastructure, and deliver green services.

This is precisely why VET (yrkesutbildningar, yrkesutdanning, erhvervsuddannelser) institutions play a key role. They help equip the skilled workforce of tomorrow with the competencies needed for the green transition. In the Nordic region we have a strong foundation for supporting the green shift in the labour market, because our education systems and labour markets are built on shared values: including a holistic approach to education, where theory and practice go hand in hand, and a labour market characterised by lifelong learning and good working conditions that allow for both family and leisure time. These shared characteristics provide a solid common ground for cross-border cooperation.

Many VET institutions are already working to contribute to the green labour market of the future. But if we are to successfully match skills with future needs, we must scale up our efforts and ensure that key institutions work together. In particular, it requires closer collaboration between public authorities, VET institutions, and businesses and greater sharing of knowledge, experience, and solutions across the Nordic countries.

With this policy brief — based on ideas from 75 Nordic experts, practitioners, and sector specialists from Denmark, Norway, Sweden, and Finland — we are taking an important step in that direction. The brief lays the groundwork for Nordic dialogue and structured cooperation between countries and between institutions shaping the skilled workforce of the future. It shows how we can inspire each other and take joint action to bring green skills into the labour market, and it outlines specific proposals for how each of us can contribute. These include ideas on how VET institutions and businesses can strengthen their collaboration to match skills and needs, for example through new green apprenticeship schemes; how VET institutions can support access to green upskilling through a central shared platform; and how VET schools can become hubs for innovation in green technology — innovations that students and graduates can bring into working life and beyond. //

Anders Adlercreutz
Minister of Education, Government of Finland

SUMMARY

This policy brief presents six Nordic proposals developed through policy labs held in Denmark, Norway, Sweden, and Finland during the winter and spring of 2025. The proposals contain concrete suggestions for how vocational education and training (yrkesutbildningar, yrkesutdanning, erhvervsuddannelser) institutions can deliver the right green skills to the labour market. Below is an overview of the six proposals developed by participants in the Nordic policy labs. Each proposal is elaborated in the following sections.

Proposal 1:
Strengthen cooperation between VET institutions, businesses, and the state

- Establish a green tripartite agreement between schools, companies, and government authorities.
- Green skills must be developed in close collaboration with industry.
- Apprentices should be a central driving force in the green transition.

Proposal 2:
Integrate green skills throughout VET programmes

- Introduce new goals and guidelines into curricula and regulations to support the integration of green transition in VET.
- Include the green transition in final examinations.

Proposal 3:
Upskill the existing workforce

- Establish education and skills centres at VET institutions offering flexible, modular green upskilling courses.
- Develop a strategy for upskilling VET teachers in green skills.

Proposal 4:
Make VET institutions hubs for green innovation

- Invest in up-to-date technology, equipment, and new teaching competencies.
- Position VET institutions as local knowledge centres for green innovation.
- Provide better frameworks and flexibility for VET schools to respond swiftly to labour market and societal developments.

Proposal 5:
Brand VET institutions as central actors in the green transition

- Strengthen the political-level branding of VET.
- Introduce VET early in compulsory school through internships, role models, and ambassador schemes.

Proposal 6:
Enhance Nordic cooperation for shared learning and knowledge

- Authorities should promote awareness of exchange opportunities for teachers and education leaders.
- Establish a cross-Nordic green skills council to produce analyses and forecasts for sectoral councils. //

INTRODUCTION

The world is changing rapidly. Climate change demands innovative solutions and a workforce equipped with green skills. VET institutions play a key role in this, as they are central to developing the skills needed to drive the green transition in sectors such as industry, skilled trades, and care work. The question is: how can vocational education best be structured and developed to equip students with the green skills required to actively contribute to the green transition?

The ambition of this policy brief is to propose new solutions for how VET schools, public authorities, industry associations, businesses, and other key actors across the Nordic region can jointly create the right conditions to achieve this.

The policy brief is part of the three-year project *Futureproofing VET in the Nordics*, a collaboration between the Nordic Council of Ministers, Think Tank Monday Morning, and the National Centre for Vocational Pedagogy. The project's overall aim is to strengthen the potential of VET to take a leading role in driving the green transition of the labour market. Outcomes include an analysis of how VET institutions can attract more young people, and a case magazine highlighting some of the leading Nordic examples of how green skills can be developed and applied through vocational education — and subsequently in the workplace.

The policy brief aims to deliver specific proposals that can be implemented in the near future to ensure that VET institutions are equipped to develop and deliver the green skills demanded by the labour market.

The brief is also targeted at education leaders, industry representatives, and business executives. It encourages institutions involved in education and the labour market to collaborate towards the shared goal of fostering green skills through vocational education. It is hoped that the proposals can serve as inspiration across the Nordic region.

How were the proposals developed?
This policy brief sums up the key insights from four policy labs conducted in Copenhagen (Denmark), Oslo (Norway), Stockholm (Sweden), and Helsinki (Finland) between February and March 2025. Across the four countries, a total of 75 key stakeholders participated, representing sectors such as industry, education, research, youth and non-profit organizations, and public authorities. The purpose was to gather cross-disciplinary and cross-sector knowledge about how VET institutions can play a central role in equipping the workforce with green skills needed for the labour market transition in the Nordic region.

What is a policy lab?
A policy lab is a workshop format that brings together people with interdisciplinary and cross-sector expertise in a collaborative, idea-driven space. The goal is to exchange knowledge and develop concrete proposals. Across the four labs, participants discussed the potential and the barriers facing VET in contributing to the development of green skills, both at a national and Nordic level. Based on these discussions, participants co-developed proposals targeting decision-makers, the education sector, and industry.

Think Tank Monday Morning has processed and analyzed input from the four labs to identify key insights and patterns across the Nordic countries. While some of the proposals may already exist in various forms in certain countries, there is value in highlighting initiatives that require further attention and investment. The brief also serves as a Nordic catalogue of inspiration, enabling countries to learn from one another's experience. It should be noted that while the six proposals focus on different areas of intervention, they are deeply interconnected. For example, integrating green skills in VET programmes cannot happen without also upskilling VET teachers.

How do we define green skills in this policy brief?
This brief relies on the definition used by Cedefop (the European Centre for the Development of Vocational Training):

"The knowledge, abilities, values and attitudes needed to live, work and act in economies and societies seeking to reduce the impact of human activity on the environment" (Cedefop, 2022).

We are also inspired by the concept of "klimakompetencer" (*climate skills*), as used in the National Centre for Vocational Pedagogy's research report *Student-engaging climate education and training in vocational education and training* (Ebsen et al., 2024). In this context, climate skills refer to the capacity to act, initiate, engage, and drive positive change in the green transition. This includes both so-called hard skills (practical, job-specific technical competencies) and soft skills (ways of working, communication, systems thinking, innovation, etc.). //

PROPOSAL 1

Strengthen cooperation between VET institutions, businesses, and the state

The green transition is largely driven by the needs of businesses and the requirements set by public authorities for the workforce. Currently the cooperation between VET institutions and businesses is limited. Participants in the four policy labs pointed out that companies often lack incentives to take on apprentices. This limits students' exposure to the green skill requirements that are increasingly shaping the labour market. Across the Nordic countries, there is broad agreement that there is significant potential in strengthening collaboration between VET and businesses and ensuring mutual commitment between the two sectors. By building close connections with businesses, VET institutions are better positioned to respond flexibly and quickly to emerging skill demands, while companies gain better insight into the upcoming workforce and their competencies.

To strengthen cooperation and ensure mutual commitment between VET institutions and businesses, participants proposed the following initiatives:

Establish a green tripartite agreement between schools, businesses, and government authorities

Across the Nordic countries, there is a need for clear structures to support collaboration between VET schools and companies. One suggested approach is for ministries and labour market stakeholders to establish a green tripartite agreement, where VET institutions, public authorities, and businesses commit to working together on green skills development — each with clearly defined responsibilities. Under such an agreement, authorities would be responsible for creating partnership models, while schools and businesses would be responsible for establishing and maintaining concrete collaborative efforts.

Green skills must be developed in close collaboration with industry

To ensure that the learning objectives in VET reflect the latest green technologies and practices, close cooperation is needed with businesses engaged in the green transition. Participants proposed that companies already working with — or aspiring to work with — green transition should actively contribute to VET teaching. This could include guest lectures by professionals from industry, the development of real-world case assignments for students, or the lending of materials and equipment, giving students hands-on experience with the latest technologies.

Apprentices can be a key driving force in the green transition

Across the Nordic countries, participants identified untapped potential in increasing the number of businesses that take on apprentices, especially those engaged in or interested in contributing to the green transition. A stronger apprenticeship system can function as a vital bridge between companies and VET, fostering knowledge and experience exchange. Apprentices can act as change agents, bringing new green knowledge into the workplace, while companies can offer students hands-on experience with green technologies and solutions.

A prerequisite for this is that companies themselves actively work to hire apprentices, so the burden of securing apprenticeship placements does not fall solely on the schools. This effort can be supported by introducing financial incentives for companies that contribute to the green transition by hiring apprentices and thereby strengthening the educational pathway. One concrete suggestion is to establish green apprenticeship funds, from which companies can apply for support to take on green apprentices. //

PROPOSAL 2

Integrate green skills throughout VET programmes

A key challenge in several Nordic countries is the inconsistent and often arbitrary way in which green skills are currently integrated into vocational education and training. Although political goals have been set, clear guidelines are lacking. To address this issue, participants proposed that green skills should be systematically embedded in all VET programmes and subjects. These skills should be a permanent part of learning objectives and regarded as a "core competence" across all disciplines, including the practical training components.

Given that many VET programmes are highly specialized and often technical, achieving this integration requires a deliberate and cross-disciplinary approach. The green transition is not only about new technologies or processes — it also involves a shift in mindset and work culture. As one participant group expressed:

"Sustainability should be a fundamental skill for everyone — not a niche."

If implemented broadly, this approach could make sustainability a natural and integral part of all VET programmes and create a shared foundation for the labour market of the future. It may also engage and potentially shift the mindset of students who are not initially interested in the green transition.

To ensure a proper integration of green skills in VET, participants proposed the following actions:

Introduce new goals and guidelines in curricula and regulations to support the integration of the green transition in VET

Relevant policymakers should update curricula and educational regulations to ensure that knowledge and skills related to the green transition become a mandatory part of all subjects. This is not only about ensuring students acquire practical, technical skills in green technologies, but also about developing a sustainable mindset grounded in principles like circular economy and responsible resource use. The combination of green skills and a green mindset can enhance students' ability to develop new and more sustainable products and working methods.

Include the green transition in final examinations

A highly effective way to embed green skills is by integrating them into final exams. This ensures that sustainability is not only a theoretical concept, but a practical skill that all students must demonstrate. One concrete suggestion is to develop green journeyman's tests, in which students are required to demonstrate their ability to choose and apply sustainable techniques, materials, and workflows in their final projects. //

PROPOSAL 3

Upskill the existing workforce

The green transition in the labour market requires not only new green skills among students and recent graduates, but also new competencies among the existing workforce — including VET teachers. These professionals must increasingly be upskilled, reskilled, or retrained to keep up with new green technologies, methods, and mindsets.

Participants identified VET institutions as having great and largely untapped potential to become central platforms for continuing education and lifelong learning. These schools already have strong traditions for practice-oriented teaching and close links to industry. This makes them especially well-suited to offer continuing education programmes closely aligned with the needs of the labour market.

Participants proposed the following two initiatives:

Establish dedicated green training and competence centres at VET institutions offering flexible, modular continuing education

Participants proposed that VET institutions in all Nordic countries establish green education and competence centres, embedded within the schools themselves. These centres should offer the current workforce new skills in green technologies, materials, methods, and mindsets through short, flexible, modular courses. Flexibility is essential to allow individuals and business representatives to tailor training to their specific needs — including balancing work and family life.

Courses should be developed in close collaboration with businesses to ensure relevance and alignment with industry demand.

Develop a strategy for upskilling VET teachers in green skills

Participants also recommended that relevant authorities in each Nordic country develop a targeted strategy for upskilling VET teachers. This strategy should include both technical, sector-specific training and didactic skill development. It should also include the opportunity for internships or placements in green businesses, allowing teachers to gain first-hand experience with green technologies and practices. //

PROPOSAL 4

Make VET institutions hubs for green innovation

VET institutions hold a unique potential to drive green technological innovation — a potential that could make them key players in the green transition. The combination of theory and practice in VET makes it possible to implement new technologies rapidly, as VET schools have already demonstrated in areas such as robotics and artificial intelligence. The integration of school-based and workplace training offers a unique opportunity to align student competencies with labour market needs, providing a strong foundation for innovation.

Frequent contact with businesses allows VET institutions to be agile and responsive to emerging competency demands. This positions them to play a central role in promoting innovation and implementing green technology in practice.

To realise this potential, participants proposed the following:

VET institutions must invest in up-to-date technology, equipment and new teaching competencies

In previous project recommendations focused on attracting more young people to VET, students expressed a strong desire for more modern equipment and technology. The same point was echoed across the four policy labs.

Currently, many VET institutions operate with outdated equipment and lack the resources to invest in — or borrow — up-to-date technologies. This hinders innovation and limits students' exposure to current practices. If VET schools are to act as green innovation hubs, it is essential that they invest in contemporary tools and technologies.

In line with Proposal 3, this also requires upskilling teachers to ensure they can effectively teach using new equipment and technologies. It's important to note that up-to-date tools do not always require new purchases. Innovative approaches can include circular material use, such as experimenting with recycling and upcycling of materials.

VET institutions should serve as local knowledge centres for green innovation

To unlock their full innovation potential, VET institutions should function as local green learning and innovation centres — places where students and teachers can experiment with new solutions, and where companies can seek inspiration and knowledge.

As proposed in Proposal 1, strengthened cooperation between VET institutions and businesses can also enable students to become green change agents, carrying knowledge and innovation into the companies they intern with — and later work for.

To ensure ownership and engagement, it is crucial that innovation is driven from the bottom up, initiated and led by the school's students and staff.

One suggested example is the use of culinary VET programmes as local green innovation centres, where local citizens and businesses can gain insight into sustainable food and cooking practices.

Strengthen flexibility and agility at VET institutions

The innovation potential of VET can also be enhanced by granting schools greater flexibility and freedom of action. Participants suggested that national authorities provide more dynamic and adaptable frameworks, such as increased institutional autonomy and dedicated resources, to support those responsible for continuously updating and developing curriculum in line with technological and green developments in the labour market. //

Proposal 5

Brand VET institutions as central actors in the green transition

Across all Nordic countries, participants highlighted a significant barrier to developing more green skills through vocational education: the public's lack of awareness about the role VET institutions play in the green transition and the career opportunities they provide.

To ensure a strong workforce with relevant green skills, it may be necessary to rebrand vocational education by emphasizing its contribution to the green transformation of various sectors. A stronger communication strategy and branding effort can help attract a broader and more diverse group of students across gender, age, and ethnicity.

Participants proposed the following initiatives:

Branding VET at the political level

At the political and/or governmental level, there has long been a focus on emphasising the need for more young people to choose vocational education over general upper secondary programmes. To strengthen recruitment and at the same time highlight the societal value of VET, it is proposed to enhance the public profile of vocational education through targeted communication efforts. These should include concrete examples of how VET contributes to the green transition – for example, by building sustainable infrastructure and delivering green services.

Introduce VET early in primary and lower secondary schools through internships and ambassador schemes

Current information about VET in compulsory schooling is often insufficient. To improve awareness of VET and the career opportunities it offers, participants proposed introducing VET through school internships, role models, and positive case stories. Particular focus should be placed on making visible how VET contributes to the green transition. //

PROPOSAL 6

Enhance Nordic cooperation for shared learning and knowledge

At all policy labs, participants emphasised that the Nordic countries can benefit from learning from each other's strengths and experiences in developing and implementing green skills in VET. This includes promoting mobility across borders through student exchanges and internships. Another key proposal was to establish a joint Nordic skills council to ensure that countries remain up to date with the latest knowledge about green skills.

Participants proposed the following initiatives:

Authorities should promote awareness of exchange opportunities for teachers and education leaders

VET teachers and education leaders often have limited knowledge of the many available opportunities for student exchanges abroad. Participants recommended that relevant education authorities improve and target information about existing exchange schemes — for example, through Erasmus+ or Nordplus, which offer options for school-based and/or workplace training abroad. A stronger communication effort may encourage more students to take part in international exchanges, fostering inspiration and knowledge-sharing between Nordic VET institutions.

Establish a cross-Nordic green skills council to produce analyses and forecasts

For VET institutions to remain flexible and able to develop relevant skills for the green labour market, they need access to updated knowledge about future skills needs. A concrete proposal is to establish a cross-Nordic green skills council tasked with producing forecasts on the types of skills the Nordic labour market will need. The council could include experts in social sciences (e.g. economists and business analysts) as well as professionals with specific expertise in green technology, green development, and practice-based vocational education. //

FUTUREPROOFING VET IN THE NORDICS

mandagmorgen
TÆNKETANKEN

Nordisk Ministerråd

NCE NATIONALT CENTER FOR ERHVERVSPÆDAGOGIK