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International Centre for
Technical and Vocational
Education and Training

Greening TVET for a greener future

UNEVOC-Cedefop Practical Guide

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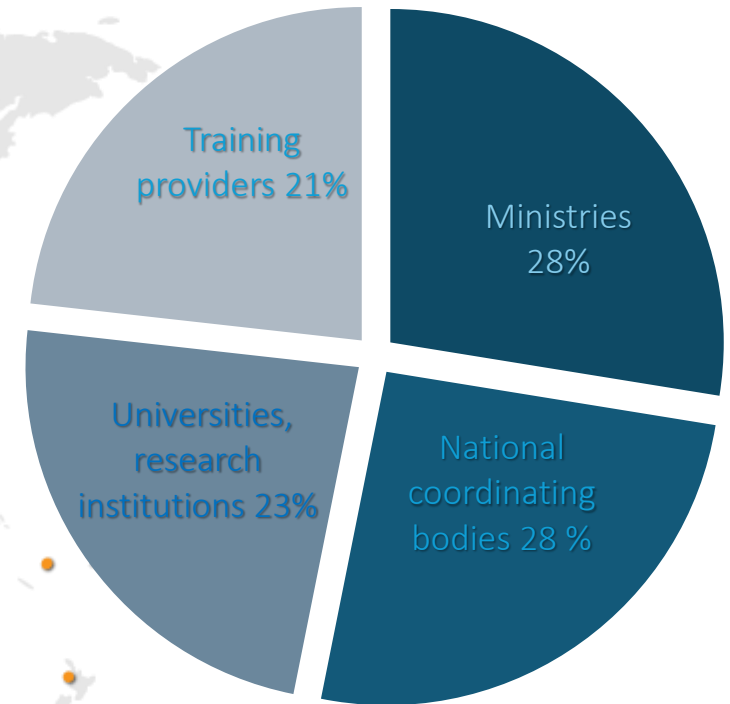


UNEVOC Network: 245 UNEVOC Centres in 152 countries



Regional distribution of UNEVOC Centres

- Africa: 62
- Arab States: 27
- Asia and the Pacific: 62
- Europe and North America: 55
- Latin America and the Caribbean: 39



Global reach of UNEVOC Network

- 66.7 million students
- 2.0 million teachers and trainers



Practical guide

Meeting skill needs for the green transition Greening TVET for a greener future

Online portal [Greening TVET for a greener future](#)

The cover features the UNESCO and Cedefop logos at the top left. Below them is a photograph of a group of people in a meeting room. The title 'Greening TVET for a greener future' is prominently displayed in the center. To the right, a blue box contains the text 'Institutional approaches for a green future'. Below this, there are six circular icons, each corresponding to a section: a leaf for 'Institutional planning and culture', a classroom for 'Curriculum and pedagogy', a person with a gear for 'Teachers' and trainers' professional development', a building for 'Campus and learning environment', a group of people for 'Community, workplace and lifelong learning', and a factory for 'Research, innovation and enterprise'. The 'Overview' section on the left contains a paragraph about the role of TVET in the green economy. The 'Where we are' section on the left contains a paragraph about the changes in TVET. The bottom right corner has a small DOI number: doi: 10.5281/14730040.

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UNESCO-UNEVOC/Cedefop practical guide (Vol. 1) - Brief

Meeting skill needs for the green transition

Greening TVET for a greener future

Institutional approaches for a green future

Overview

Technical Vocational Education and Training (TVET) plays a crucial role in the green economy by equipping individuals with skills for sustainable practices. As industries shift towards eco-friendly operations, TVET adapts its curriculum to focus on eco-friendly technologies and sustainable development. This prepares students for green careers and fosters a deeper understanding of sustainability, promoting environmentally conscious behaviors. By connecting education to the labor market, TVET shapes a capable workforce committed to supporting the green transition.

Where we are

Technical Vocational Education and Training (TVET) has been undergoing significant changes (UNESCO, 2022). Digitalization, accelerated by remote learning during the COVID-19 pandemic and the advent of new tools in data analytics and artificial intelligence (AI), is the most prominent. Additionally, there have been shifts towards competency-based approaches, learner-centered and personalized teaching practices, and greater involvement of TVET institutions in regional development and partnerships.

Institutional planning and culture

Greening principles and values need to be embedded not just in formal plans and learning activities. Greening needs to become part of the everyday culture of TVET institutions.

Curriculum and pedagogy

Curricula need to be attuned to the requirements of society and the changing economy. New pedagogies are needed to support learners of TVET to be equipped with the technical knowledge and skills to work effectively and behaviours to help shape sustainable societies.

Teachers' and trainers' professional development

Teachers and trainers need to be provided with opportunities to upgrade their skills, whether through formal learning or by making available to them opportunities to develop their roles and cultivate skills and practices among learners and peers.

Campus and learning environment

TVET schools and training institutions should not only be places of practice-based instruction but can also turn into green spaces to learn about environmental topics and trends in the professions, exercise sustainability principles, and apply skills for demonstrating green practices.

Community, workplace and lifelong learning

TVET institutions can engage with its wider community of business stakeholders, including in the informal economy, and community leaders, supporting them to tackle environmental challenges whilst developing learners' skills.

Research, innovation and enterprise

TVET institutions can use research or work in collaboration with research-orientated partners to collect and disseminate data linked to skills and employment in green occupations. To support green goals and regional development strategies, the role of TVET in research and innovation development must be strengthened and made more accessible to support enterprise to thrive in the developing green economy.

doi: 10.5281/14730040

What are the needs?

- adaption of SDGs in education and training
- national climate ambition and TVET alignment
- skills in every occupation and sector
- institutional approaches are the foundation for learning

What is the guide about?

- approaches and concept
- skills and competency requirements in sectors
- guidance about the different goals for managers and teachers
- policy enablers
- examples of implementation
- useful reading resources
- indicators for monitoring actions

Key challenges and opportunities

To address...

47%

Green skills in TVET strategy

Member States that have reported an increased emphasis on green skills and sustainable skills

45%

National curricula

Little reference to environmental themes in national education documents

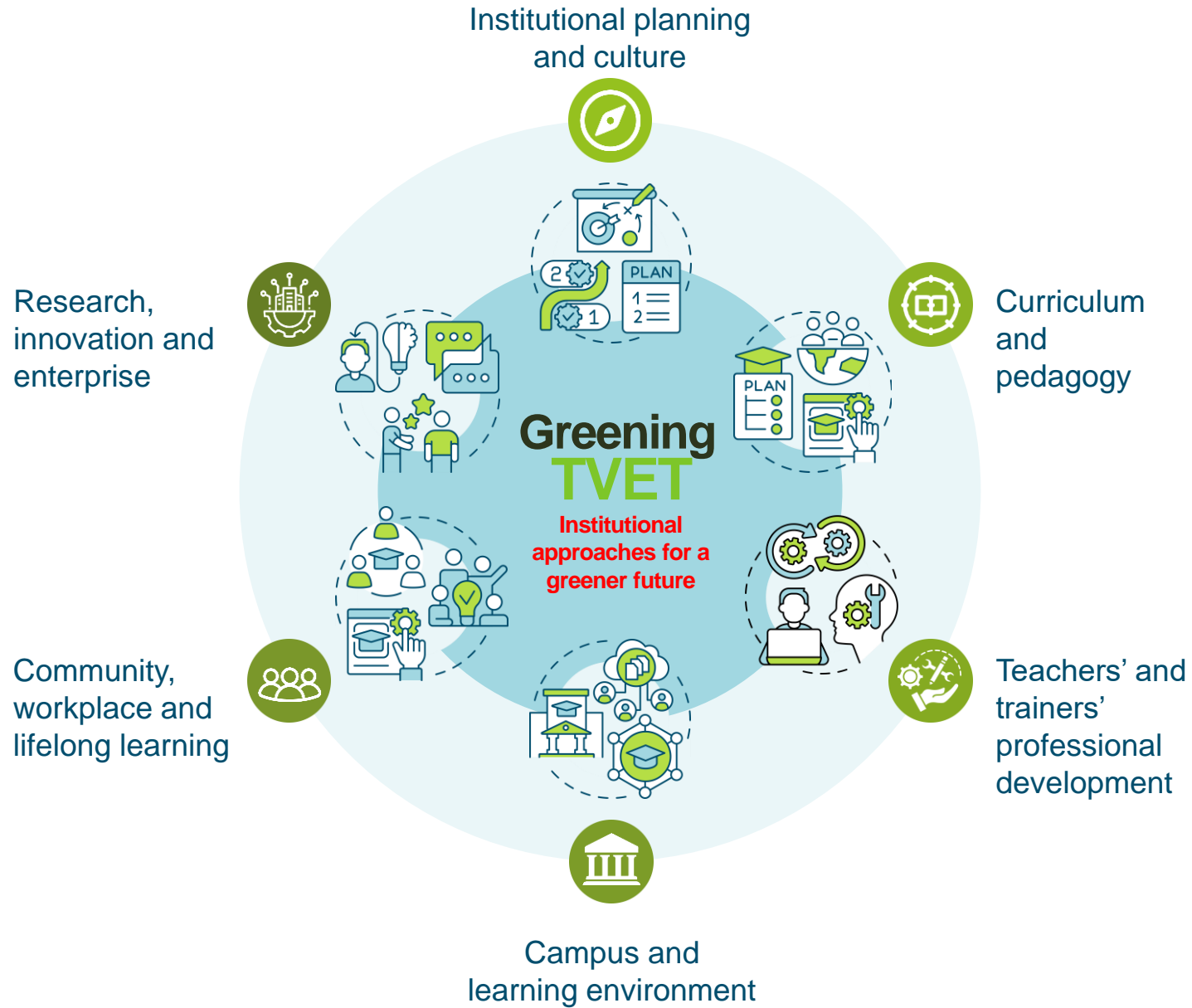
To leverage...

68%

National TVET policies

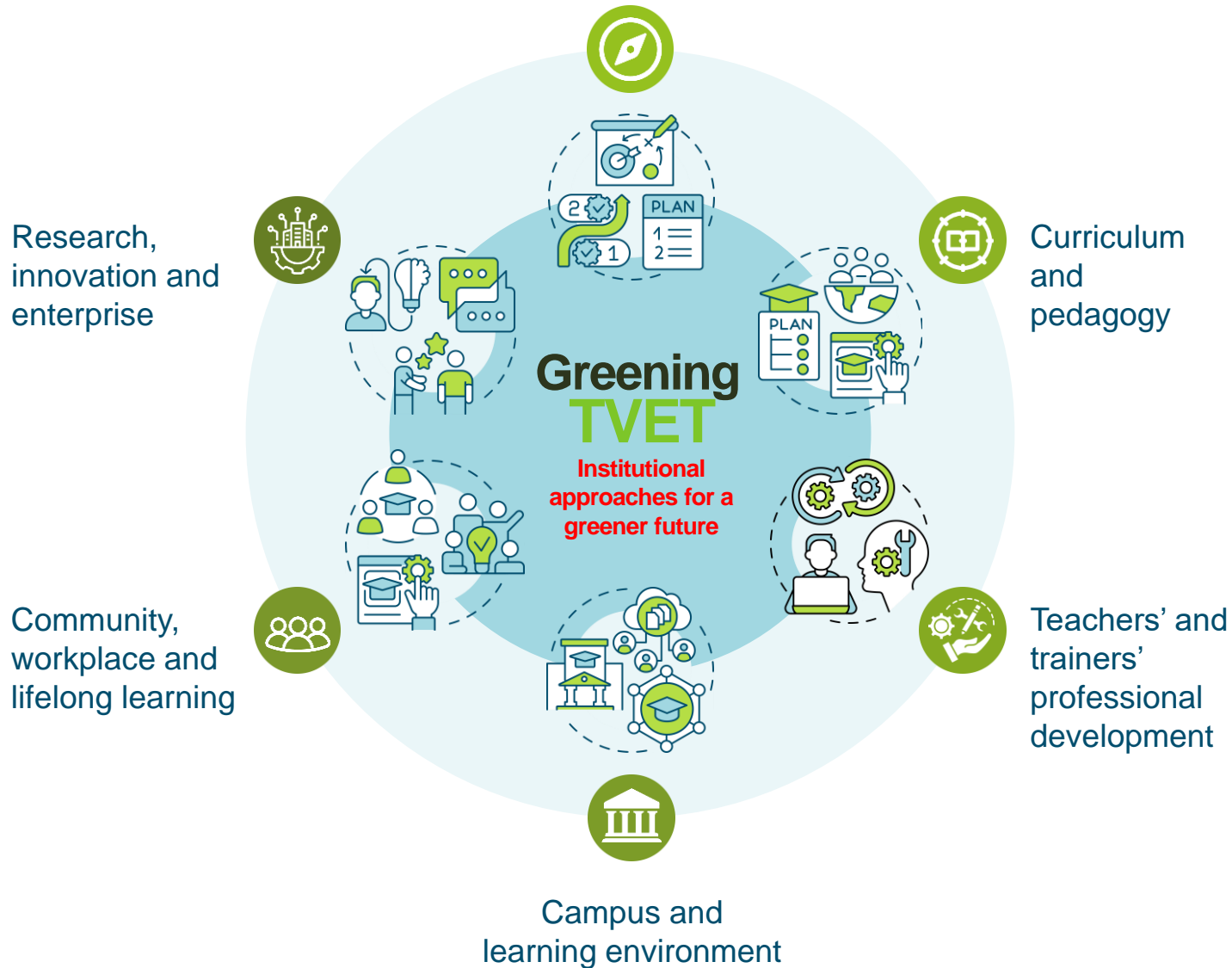
Member States that introduced or adopted policies or practices to facilitate the greening of TVET systems in the last four years.

Engaging in the Greening TVET process



Six institutional approaches

Institutional planning and culture



Approach 1

Institutional planning and culture

1. Policy and governance alignment
2. Curriculum enhancement and relevance
3. Leadership commitment
4. Stakeholder engagement
5. Cultural transformation
6. Monitoring and evaluation

Whole-institution approach to greening the campus (green schools)

UNESCO Green School Standard

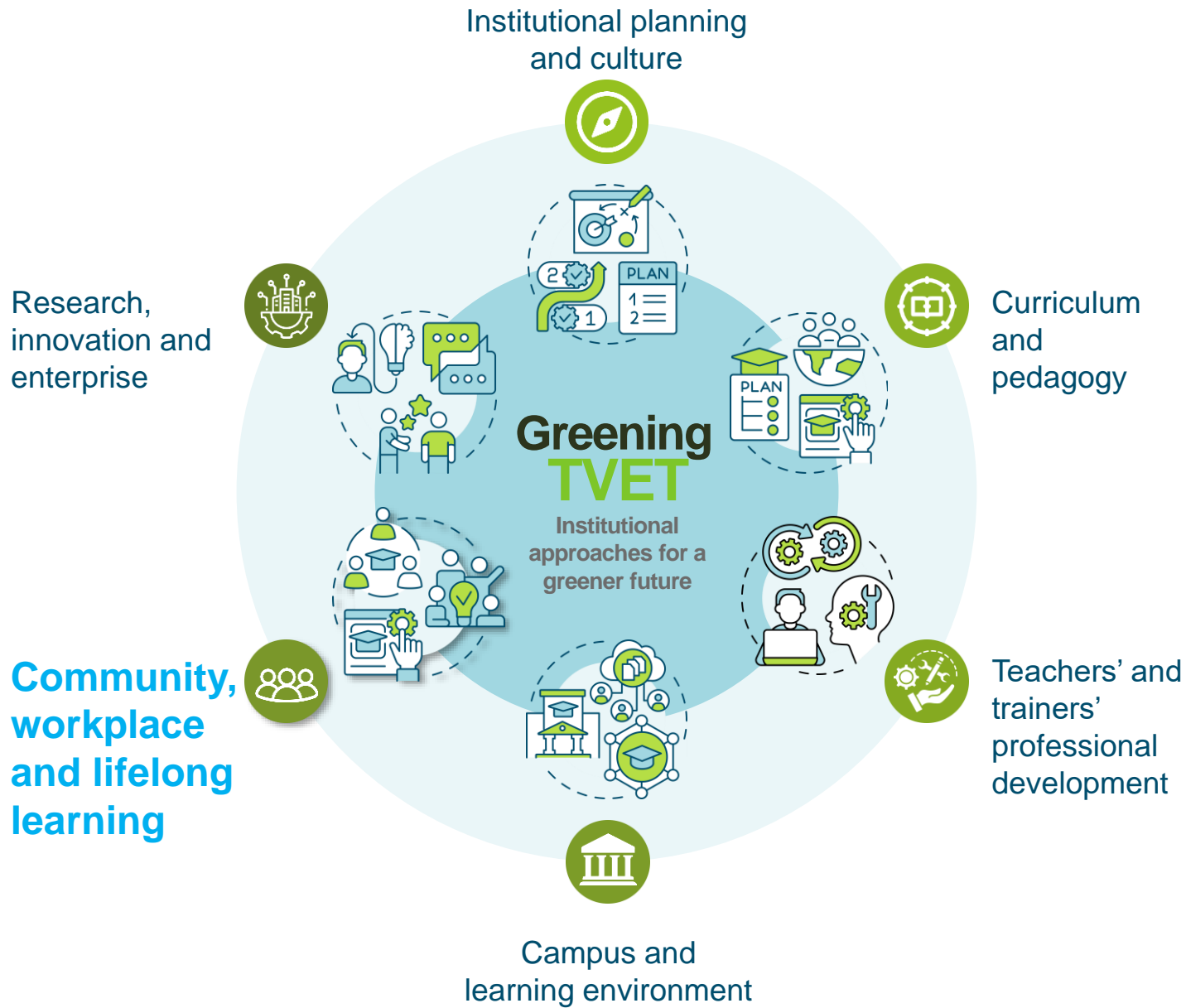
Target: To green at least 50% of schools in all countries

▶ ▶ Green Campus Facilities and operation:

Green Schools implement sustainable practices in areas

- energy,
 - water use,
 - waste management,
 - building and school yard design
- = reducing greenhouse gas emissions and environmental impact,
= ensuring the health and well-being of learners and staff,
= fostering a culture of responsibility
= inspiring the surrounding community

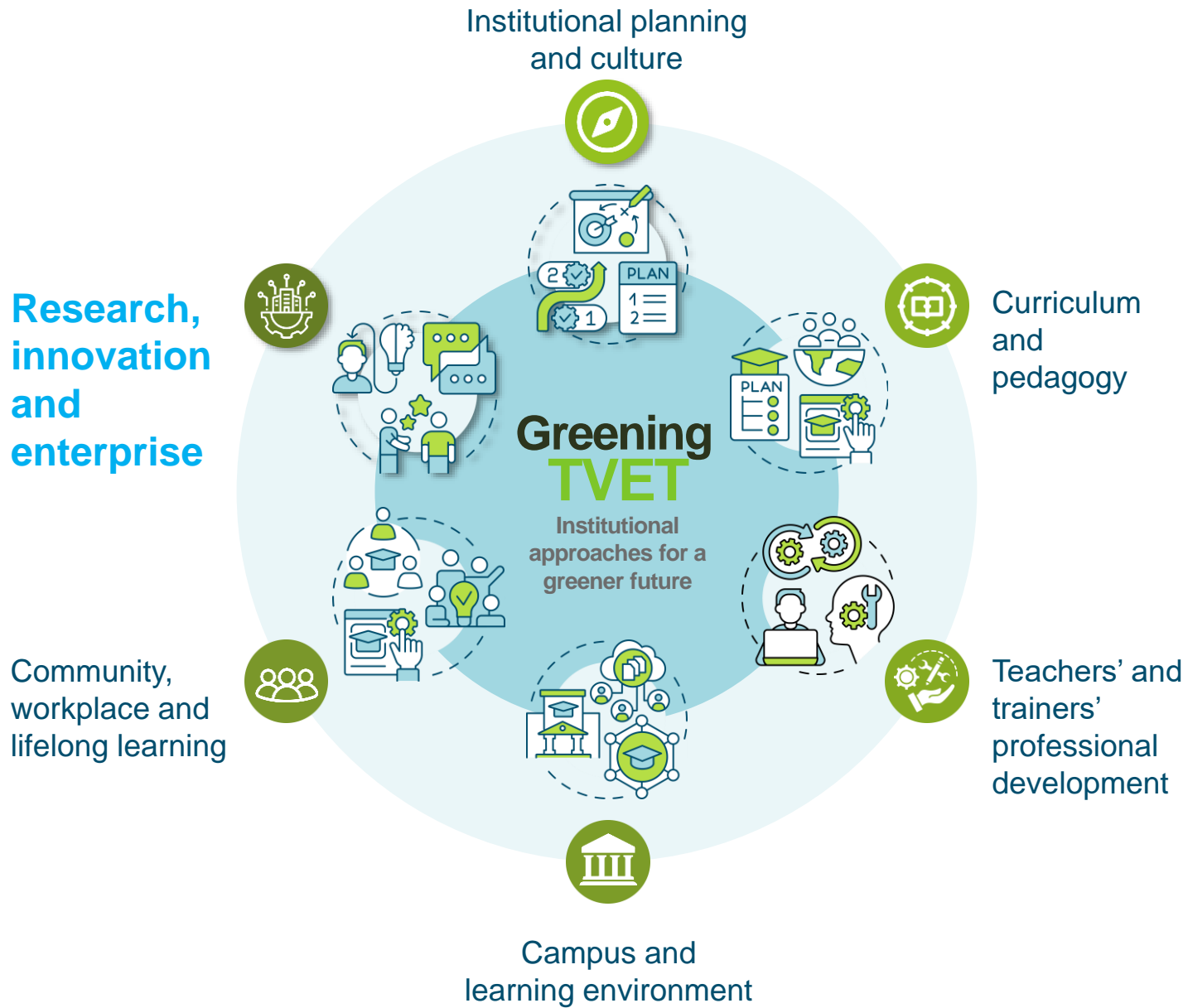




Approach 5

Community, workplace and lifelong learning

- Engaging with TVET institution's wider community of business stakeholders, including in the informal economy, and community leaders (e.g., cities/ local government units) and partnering with them to
 - ✓ Promote green practices
 - ✓ Raise community awareness
 - ✓ Support upskilling of workers, inclusive lifelong learning of citizens
 - ✓ Tackle environmental challenges through TVET-based solutions



Approach 6

Research, innovation and enterprise

- TVET as a driver of green innovation and applied research
 - ✓ Green technologies
 - ✓ Green products
 - ✓ Green services
 - ✓ Locally-relevant research benefitting communities and societies
- TVET as an incubator or accelerator of green business ideas, social business ventures and environmentally- and socially-responsible enterprise

The way forward

- Support the green transition through TVET
- Manage TVET transformation to meet green skills needs
- Collaborate and valorize the work of Green TVET accelerators, incubators, interlocutors
- Green TVET Reference Centres

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Thank you

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