Part I

// Exploring the World of Sustainable Development

HEIs worldwide are embarking on an exciting journey towards a sustainable future. In a 2022 global survey, 38% of HEIs have adopted strategic plans for sustainable development (SD), and an additional 40% are actively developing them. Global conflicts, the COVID-19 pandemic, and environmental challenges have shifted the focus from 'whether' to 'how' HEIs can implement practical measures within their core functions.

Our organisations play a vital role in regional, societal, and global development. We can support the European Union's Green Recovery and address social equality, economic development, and climate change challenges. We are key players in advancing the Sustainable Development Goals (SDGs) and the United Nations' collective framework for peace and prosperity.

At the midpoint of the 2030 Agenda, a UN report highlights a slowdown in SDG progress. Our organisations must adopt a 'whole-institution' approach, emphasising a holistic perspective, transformative readiness, and individual empowerment. We must rethink our roles, promote transformative learning, address human capital needs, engage globally, and embrace diversity. This approach spans research, teaching, outreach, campus operations, entrepreneurial activities and fostering a 'culture of sustainability'.

We encourage you to challenge conventions and support the integration of the SDGs into institutional values, visions, missions, and campus practices. The following sections assist you in gaining a deeper understanding of what SD actually means for HEIs.

1   The Many Trajectories Towards Sustainability

> " Universities are increasingly compelled to strengthen their endeavours in supporting the attainment of sustainable development goals and make significant contributions to sustainable development.

Higher Education Institutions (HEIs) worldwide have begun to embark on the journey towards a more sustainable future. In a worldwide survey from 2022, 38 per cent of HEIs claim to have adopted a strategic plan for SD, while another 40 per cent are working on one (Toman et al., 2023: 44). Multiple crises such as global wars, the Covid-19 pandemic, and environmental challenges, have heightened the need for new skills, professions, and meaningful innovations. The question no longer is whether HEIs engage in SD but rather **'how' practical measures can be implemented in HEIs' core functions to achieve long-term impacts.** Which pathways lead to the successful 'whole-institution' implementation of SD at a specific HEI? What strategies are capable of linking regional development with HEIs' sustainability endeavours? Which immediate and concrete actions lead to long-term change? How can the diverse stakeholders of HEIs be motivated to participate in the process?

While most HEIs do not lack the motivation to start developing SD strategies, the alignment with the SDGs, regional development, long-term implementation, advancements in the 'sustainability culture' and monitoring of success prove to be prevailing needs.

From a human-centred perspective, SDS4HEI recognises the crucial role HEIs play in regional and societal development and the global transformation necessary to secure the quality of life for present and future generations. HEIs can support the European Union (EU) on its journey to Green Recovery, restoring European prosperity while tackling the urgent and interconnected challenges of social equality, economic development, and climate change. HEIs are influential multipliers in advancing the 17 Sustainable Development Goals (SDGs) and their 169 targets. Being at the heart of the United Nations (UN) collective framework for promoting peace, prosperity and balance, the SDG targets are identified as a valuable guide for HEIs.

The SDS4HEI framework assists HEIs across Europe in determining how to implement SD into their existing strategies, contribute to SDG-related challenges through their

core teaching, research, and engagement functions, and meaningfully connect their efforts to their respective regional, political, and cultural context.

Strategic Focus

We assist you by illustrating how to strategically approach the implementation of SDGs at your institution to support quality of life in your region and beyond.

Meaningful Actions

We support you by exemplifying how and where to spot areas for implementing immediate actions that promote the SDGs and lead to long-term SD.

Transdisciplinarity at the Core

We explicate methods assisting you in fostering transdisciplinary collaborations to explore synergies between your curricula, industry and societal/environmental challenges.

The framework, developed under Work Package 2 of the SDS4HEI project, is informed by a literature review conducted from January to June 2023. This review served as a needs analysis and was followed by an online survey on institutional vision, mission, values statements, and strategic plans. Four focus group discussions on organisational culture at HEIs were conducted to gather insights on staff motivation and barriers to engagement in sustainable development. The framework also incorporates good practice examples across Europe, highlighting current initiatives championing sustainable development.

2 Sustainable Development in HEIs

To what extent are the SDGs a suitable framework for HEIs?
What are HEIs core functions?
What distinguishes HEIs from other actors?
How has the role of HEIs changed?

At the midpoint of the 2030 Agenda, the UN's Sustainable Development Report 2023 shows a slowdown of worldwide efforts in achieving the SDGs, all of which are off track (Sachs et al., 2023). Seven years remain to adopt new values and beliefs, implement strategies, and govern change processes towards a more sustainable future to secure a good quality of life for future generations. HEIs are considered key players in this process. To assist them in reaching their sustainable goals, it is crucial to embrace long-term SD routes characterised by tangible and immediate steps while adhering to a comprehensive 'whole-institution' and 'all-dimensions' approach.

2.1 Our Ambitions — What we Strive for!

What is SDS4HEI's understanding of SD?
What are SDS4HEI's objectives?

SD, as the effective use of resources, dates back to the 18th century and has roots in forestry (Wiersum, 1995). Though various definitions of SD exist, the most cited definition originates from the one provided in the so-called Brundtland Report 'Our Common Future' published in 1987 (UN, 1987).

> Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

The 17 SDGs, agreed upon by the United Nations, serve as an internationally shared guideline to support the implementation of SD strategies. The SDGs guide global

actions that help understand the climate crisis's interdisciplinary and cross-cutting nature. While the 17 global goals and their 169 sub-targets provide a general direction for SD, referring to the 'five Ps': People (SDGs 1-5), Planet (SDG 13-15), Prosperity (SDGs 6-12), Peace (SDG 16), and Partnerships (SDG 17) – the terms run the risk of remaining too abstract, overwhelming, imprecise and potentially reduced to being perceived as mere buzzwords.

> SDS4HEI framework links regional needs/challenges and institutional visions to concrete activities for SD, making impact more feasible and visible.

Following an **all-dimensions approach,** the three pillars of (1) economic development, (2) social development, and (3) environmental protection constitute the basis, where SD is understood as the many efforts to establish harmony between these mutually reinforcing dimensions and thus reach sustainability. In addition, the SDS4HEI framework acknowledges 'Culture' as a transversal dimension, influencing our perception, values, beliefs and motivation to take action. The integration of the cultural dimension also assists in ensuring SD is not limited to being a scientific concept; rather, it is viewed as a guiding principle embedded in the moral compass of people, directly linking environmental and economic issues to cultural and social considerations.

The framework will assist HEIs with strategically implementing measures that will lead to the **best quality of life for people** in a specific regional context and worldwide through immediate actions. First, the human is at the centre of our reflections. Efforts towards sustainability will become less abstract and more rooted in people's lived experiences. Second, we will communicate the positive effects of HEIs, providing incentives for stakeholders to engage, for example, by showing that SD leads to more resilience against unexpected events.

Our approach to SD is **holistic and transformative.** While sustainability is result-oriented and "thought of as a long-term goal", SD is path-oriented and "refers to the many processes and pathways to achieve" a goal (Jeronen, 2013: 2371). SD is understood as an ongoing, open, and reflexive process. It describes "complex transformational processes" (Netzwerk Nachhaltigkeit und Hochschule Bayern, 2019: 2), with sustainability being a moving target, "a system state that our society is constantly trying to define and reach" (Kioupi & Voulvoulis, 2019: 2).

Following a **whole-institution approach,** we recognised HEIs' capacity to transform our relationship to sustainability's environmental, economic and social dimensions through their core functions: education, research, third mission and operations. It requires a systemic change through new forms of governance and new working, teaching and learning methods based on the established infrastructure. Hence, SDS4HEI

adopts a human-centred 'all-dimensions' vision of SD at HEIs following a whole-institution approach, as apparent in our understanding of SD.

> Sustainable Development for us means creating concrete and successful steps towards the best quality of life for everyone, both where we live and in the wider world.

Our understanding of SD consists of the following key components:

Holistic Perspective

Following a whole-institution approach requires a systemic change through new forms of governance, working, teaching, and learning methods.

Transformation Readiness

SD is a long-term and open process. We focus on the benefits of SD, building on practical and immediate actions to reach long-term transformative goals.

Harmony as a Goal

We strive for harmony between present, future, and regional needs and sustainability's economic, social, and ecological dimensions (all-dimensions approach). Culture is understood as a transversal dimension, influencing people's motivation to act.

Human at the Centre

Our understanding of SD is human-centred, striving for the best quality of life for everyone. Our actions are rooted in the lives of individuals. We will equip people with knowledge, skills, attitudes, and values to become responsible and active citizens to create a sustainable future.

The following elements have been identified as critical requirements to implement SD at HEIs successfully:

Rethinking Roles

HEIs must be encouraged to rethink their role, especially concerning transformative processes within and outside the institution and their social responsibility.

Transformative Learning

Change relies on developing and adopting new habits, cross-cutting skills and mindsets that help preserve a good quality of life. Transformative learning activities like transdisciplinary collaborations, action-based learning, and multi-actor involvement will create responsible citizens.

Addressing Human Capital Needs

All higher education stakeholders must have the necessary sustainable skills and knowledge to make a positive change and create visible and measurable outcomes in their institutions and communities.

Collaborations across the Globe

Collaborative efforts are the cornerstone for change towards SD. HEIs must strengthen European and international relationships with other HEIs and enable transdisciplinary collaborations.

Valuing Diversity

HEIs, committed to a sustainable future, should draw on and value diverse stakeholders and their interests to improve the community's social, cultural, environmental and economic well-being.

Whole-Institution Approach

HEIs can support today and prepare tomorrow's leaders to contribute to society's transformation significantly. To do so requires adopting a 'whole-institution approach'.

2.2 Taking Responsibility — What is HEIs' Role?

> **"** In response to calls from society as a whole, HEIs could combine transfer and sustainable development more systematically.
>
> Nölting et al. (2020: 1)

Rebuilding European prosperity and securing the quality of life of present and future generations are inevitably linked to the ability of present societies to think, act, and evolve sustainably. SDG 4 (Quality Education) shows that education is understood as the basis for creating a 'culture of sustainability'. With target 4.7 (Education for Sustainability), all learners should acquire the knowledge and skills necessary to promote SD until 2030. That includes education, fostering sustainable lifestyles, promoting human rights and gender equality, cultivating a culture of peace and non-violence, encouraging global citizenship, and appreciating cultural diversity and its contribution to SD.

HEIs are considered a vital actor when it comes to SD for multiple reasons. First, HEIs possess a unique structure and societal power to enable different kinds of innovations, whether social, technological, or cultural and educate future leaders. Although there are various types of HEIs, depending on their specific region and tradition, each determined by different characteristics, some elements remain constituent (i.e. the six core functions). Second, HEIs bring together diverse stakeholders from various academic disciplines, non-academic staff, students, and external partners, such as urban partners and companies. Their core missions or functions include producing and transferring (scientific) knowledge and creating a new generation of future leaders and professionals. Third, HEIs significantly impact regional development and fulfil a social and cultural function by enabling innovation, finding research-based solutions, transferring knowledge and technology into practice, and teaching new practices. Due to their manifold stakeholders and core functions, HEI must, more than other organisations, strive to implement SD as a cross-cutting principle.

The role of HEIs regarding SD is determined by their core missions and connections to power and being themselves agents of power. Depending on the respective strategy an HEI chooses to adopt, the responsibilities might vary in importance.

What is the role of HEIs?

Influential Multiplier

HEIs can manage SD-related discourses and orchestrate stakehold-ers' distinct motivations and (conflicting) interests. They can identify and communicate opportunities for participation and action. They can 'lead by example' by acting as role models by adopting sustainable campus practices.

SD Contributor through Function

By integrating sustainability as a cross-cutting issue in their core functions, HEIs contribute actively to sustainable futures. That is, through education, they open up new perspectives for young people (e.g. new professions). Research on and with SD heightens aware-ness of the interconnectedness of sustainability facets and can lead to improved solutions. Outreach and partnering contribute to aware-ness building and integrating 'new' stakeholders.

Change Maker by SD Culture

By embracing a sustainability-focused culture and implementing in-centives for stakeholders, HEIs can expand the reach of their SD in-itiatives. That not only aids in raising awareness but also inspires others to become actively involved.

A growing number of institutions worldwide already report on their SD activities, fo-cusing on SDG 4 (Quality Education), SDG 13 (Climate Action) and SDG 17 (Partnerships for the Goals; see SDG Accord Report, 2022). Although considered a suitable frame-work for targeting SD, many HEIs have **difficulties turning individual motivation into concrete, strategic actions with long-term effects.** HEIs should build upon pre-existing strategic plans and visions, considering their respective regional and cultural context and strengthening knowledge transfer. The framework will assist HEIs to find context-specific goals, measures and indicators, focusing on civic engagement and entrepre-neurial learning. It will enable the effective diffusion of newly acquired knowledge and skills in the field of SD into the regional ecosystem for the benefit of all.

TAKEAWAYS

HEIs are characterised by …

- a network of different stakeholders.
- core missions, including knowledge production, transfer and finding research-based solutions and sustainable practices.
- the necessity to implement SD as a cross-cutting principle to facilitate transformative change.
- connections to power holders and being agents of power influencing and shaping context through their actions.

2.3 A Whole-Institution Approach —
Everyone has a Role

A holistic and transformational approach to SD within a HEI requires systemic change and embraces new working methods based on the established infra-structure.

Global initiatives, such as UNESCO's Education for Sustainable Development (ESD), have recently increased the number of sustainability-related courses, programmes and extra-curricular activities within European HEIs. Effective implementation of SD, however, must extend beyond educational offerings. It is not only a matter of class-room teaching but also encompasses operational responsibilities, such as reducing carbon footprints, managing campuses sustainably, and positively impacting the communities we serve. An effective whole-institution approach integrates SD in all HEIs' core functions, encompassing research, teaching, outreach, campus operations and a 'culture of sustainability', governance, stakeholder engagement, long-term orientation, and monitoring and evaluation. Different strategies can be used to initiate a whole-institution transformative process (Giesenbauer & Müller-Christ, 2020):

- An institution-wide process is promoted and organised by progressively focusing on co-creative collaboration with various stakeholders (leadership, educators, students, and administration). A vision of sustainability is elaborated collaboratively.
- Technical and financial resources are provided to the institution to support its reorientation.

- Transformation through participation in inter-institutional networks to share inspirational best practices, enable peer-to-peer learning and discuss new trends and challenges.

The idea of SD at HEIs is still to be treated as an innovation, and transformation at the institutional level is more complex than on an individual level. Even though diverse strategies, frameworks, tools, research projects, and alliances exist to assist HEIs on their journey, 'trial-and-error' is still the modus operandi. HEIs can become more skilful during the change process by adopting an additional' learning organisation' approach.

HEIs are a social system in which all members are encouraged to challenge existing worldviews, values and behaviours. A 'whole institution' approach can assist in pinpointing and highlighting advancements in impact domains and identifying pertinent stakeholder groups. It involves educating managers, academic, research, and teaching staff, administrative personnel, campus facility teams, student engagement officers, and student unions about the SDGs and their respective roles in promoting them within their HEI.

SDS4HEI aims to embed the SDGs as a core component in HEI institutional visions, missions, value statements, strategic plans, organisational culture, research, teaching, and campus practices while also encouraging the design of sustainability into the fabric of educational fields, focusing on entrepreneurship but also in STEM and the arts. In line with mission-oriented and transformative research and innovation policies (Mazzucato, 2018; Haddad et al., 2022; Parks, 2022; Wanzenböck et al., 2020), this applies especially to HEI's third mission of generating societal value.

<table>
<tr><td>TOOLS</td><td>**Tools with a 'Whole-Institution' Approach**

• The Sustainability Code for HEIs
(https://www.deutscher-nachhaltigkeitskodex.de/en-gb/)</td></tr>
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Tool 1.
Sustainability Code

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