Transition teams as an innovative tool in a Higher Education Institution on the road to sustainability: A case study.

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Abstract

The integration of the Sustainable Development Goals (SDGs) in the Strategy & Policy Statement 2021-2026 and in the operational policy implementation lines of a Higher Education Institution (HEI) are reported. To accommodate this transition project, the HEI initiated a strategic co-creation with CIFAL Flanders, a United Nations (UNITAR)-affiliated centre of expertise on the SDGs. The rollout of this methodology in both policy and curriculum is reported. Inside the HEI, the Multi-Level Perspective (MLP) approach is implemented. The MLP is a strong tool to gain insight into transition processes. A transition team grows bottom-up via a coalition of the willing towards a coalition for change and acts as a catalyst for adopting sustainability across the organization. It is composed of internal stakeholders from diverse backgrounds and job descriptions. To become SDG proof the HEI started the PCA2030 Trajectory (towards SDG Pioneer, Champion, Ambassador) on the following working fields: learning, organizing, formulating, implementing, evaluating, and communicating. The steppingstones to receive the "SDG Pioneer" learning- and implementation certificate by CIFAL Flanders | UNITAR (CIFAL Flanders) are described. This project proves to be a good benchmark for other HEIs to integrate the SDGs into strategy and policy. In addition, this approach has a multiplier effect in the broader society.

Keywords: *SDG Pioneer*, *Higher Education Institution*, *Transition team*, *Multi-Level Perspective*, *Sustainability*

1 Introduction

Demographic growth and increasing natural resource exploitation are environmental problems that worsen social issues such as health problems, extreme poverty and social inequality [1]. With energy demands rising, and high levels of fossil fuel use, greenhouse gases in the Earth's atmosphere continue to increase. CO_2 is currently at nearly 412 parts per million (ppm) and still rising. This represents a 47% increase since the beginning of the Industrial Age [2]. According to the latest IPCC Inter-governmental Panel on Climate Change [3], "human influence has warmed the climate at a rate that is unprecedented in at least the last 2000 years" (SPM-7). This is a crucial issue for humankind that requires an urgent response in combination

with the decline in biodiversity [4]. With the introduction of the Sustainable Development Goals [5], environmental objectives and social and ethical aspects intertwine with the definition of sustainable development in the Brundtland Report [6]. Organizations and companies increasingly integrate nowadays corporate, societal, and environmental resilience into their strategy. Historically, Higher Education Institutions (HEIs) have played a key role in transforming societies, educating decision-makers, leaders, entrepreneurs, and academics [7]. Many definitions of 'the sustainable university' can be found in the literature [8]. According to Velazquez [9], a sustainable university is ''A higher educational institution, as a whole or as a part, that addresses, involves and promotes, on a regional or a global level, the minimization of negative environmental, economic, societal, and health effects generated in the use of their resources in order to fulfil its functions of teaching, research, outreach and partnership, and stewardship in ways to help society make the transition to sustainable lifestyles". This is an acceptable definition, positioning sustainability as a concern for all functions of the university and inserting a 'three pillars of sustainability' frame (economics, environment, society) [8].

2 Literature review

HEIs play a key role in the transition towards a more sustainable, carbon free society. They are ever more involved in a collaboration with (local) governments, society and industrial partners, the so-called Quintuple Helix [10] and an increasing number of HEIs are adopting a more responsible attitude towards society, seeking a sustainable development agenda for the future [11]. Higher education for sustainable development (HEfSD) [12], is often based on and is continuously adjusted by the current sustainability agenda. Many HEI that has the responsibility to train tomorrow's responsible people, who must be imbued with a sustainable and interdisciplinary innovative, approach proactively and try to action the SDGs in HEfSD policy, curriculum and practice through scattered and isolated initiatives [13]. Indeed traditionally, organizations including HEI, determine the level of ambition and focus of their sustainability policies based on their own strategic choices. This approach can be referred to as the inside-out approach, where objectives are set internally. Nowadays with the adoption of the UN 2030 Agenda for Sustainable Development [5] and the 17 SDGs, a global set of goals offer a holistic framework that organisations can use to align their sustainability policies with global challenges and needs [14-16]. Consequently, in contrast to the past, not only are the internal motives and interests converted into sustainable objectives, but these are also tested against what the external stakeholders expect from the HEI at the specific location. This is reflected in a materiality index [17].

Engaging with the SDGs helps HEIs demonstrate university impact, capture demand for SDG-related education, build new partnerships, access new funding streams, and define a university that is responsible and globally aware [18].

Education and research are explicitly recognized in several SDGs. The attitudes and behavioural intentions of students and other stakeholders towards sustainability are an essential element of the current developments and can act as a catalyst towards new circular and sustainable society [19].

Achieving sustainability in a just way [20],[6],[4], needs trans- and interdisciplinary approaches [21], as we are dealing with 'wicked problems' [22]. But also, the engagement of all stakeholders [19], [24], [25-28]. Innovative solutions/paradigm shifts are emerging through change and transition. Transition management has recently been applied in higher education [29-33] in view of strategy declaration. But also, how a HEI can be transformed into a more dynamic institution adapted to current needs. A twin transition (sustainability and digitalisation) in combination with entrepreneurship is needed.

HEIs have a critical role to play in the achievement of the SDGs as they deliver the new leaders of tomorrow, they employ a lot of staff with very diverse backgrounds (teaching staff in various faculties), but also a lot of administrative and technical staff. In addition, they are also involved

with a lot of external stakeholders through suppliers but also as partners in various networks and collaborations.
There is constant pressure for the HEIs to function as engines for sustainable development. Many HEIs are currently revising their institutional commitments to entrepreneurship and sustainability by adopting new missions, visions, and strategic plans. They are active partners within public-private partnership settings [34]. Education and scientific research are explicitly recognized in SDG # [2, 3, 4, 7, 9, 12, 14, 17] [35-40]. Implementing sustainability in higher education that not only teach new curriculum or focus on new research areas using existing institutional arrangements, but also entail operating in new ways that move against some of the norms and culture of the institution itself [8] [40]. The HEI need spaces and contexts for learning and experimentation dedicated towards innovating in the way they work for sustainable development.
So, there is need of empirical research [41-42] to invest the use of transition management in order to realize the HEI in total.

3 Research methodology

Fresh solutions are emerging through change and transition. Change means an improvement in the structure, culture and working methods within a system and not in individual communities [43-44].

A transition is driven by a combination of actors, including companies, governments, HEI, civil society organizations and citizens [45-47]. Transition is basically the shift from one equilibrium to a new equilibrium. In the past, individual shifts take place in institutions focussed on infrastructure (e.g., sustainable campus) or on curricula and or on others (finance, behaviour, attitudes) [43], [47]. Some researchers [48], [29] have started to conceptualize transformation towards sustainability at HEI which make use of theoretical perspectives from the literature on socio-technical transitions. The MLP [45-46], [31] allows for analysis of key barriers and dynamics for sustainability transition across micro, macro and meso scales.

Inside HEI, the MLP approach can be implemented for this trajectory. The HEI is then considered as the macro-level, whereas the individual staff members and students are seen as the micro-level. That may be productive in locating, and building knowledge about, innovative, alternative, non-mainstream capacities and practices that may have value for efforts in meeting problems of sustainability and implementing sustainable development [19] [49].
Awareness of broader developments in the sector is also important in order not only to present from the inside out, but also to link up with existing opportunities and to connect themes with one and another. A collaboration with sector organisations is therefore obvious [44], [47], [50].

To apply this, PXL UAS set up an educational-oriented collaboration with CIFAL Flanders. In what follows, an interpretive case study [51] classification is presented for the incorporation of sustainability and the SDGs in PXL UAS. Interpretive methods like (multiple) case studies [52] are the preferred method to study holistically complex phenomena within a real-life context. There is a special focus on the transition team as the pivotal point in the bottom up and top-down realization of:

1. the new Strategic & Policy Statement 2021-2026 in which sustainability is included in the mission and vision.
2. the operational policy and so-called learning outcomes of education, research, personnel, and facility management.

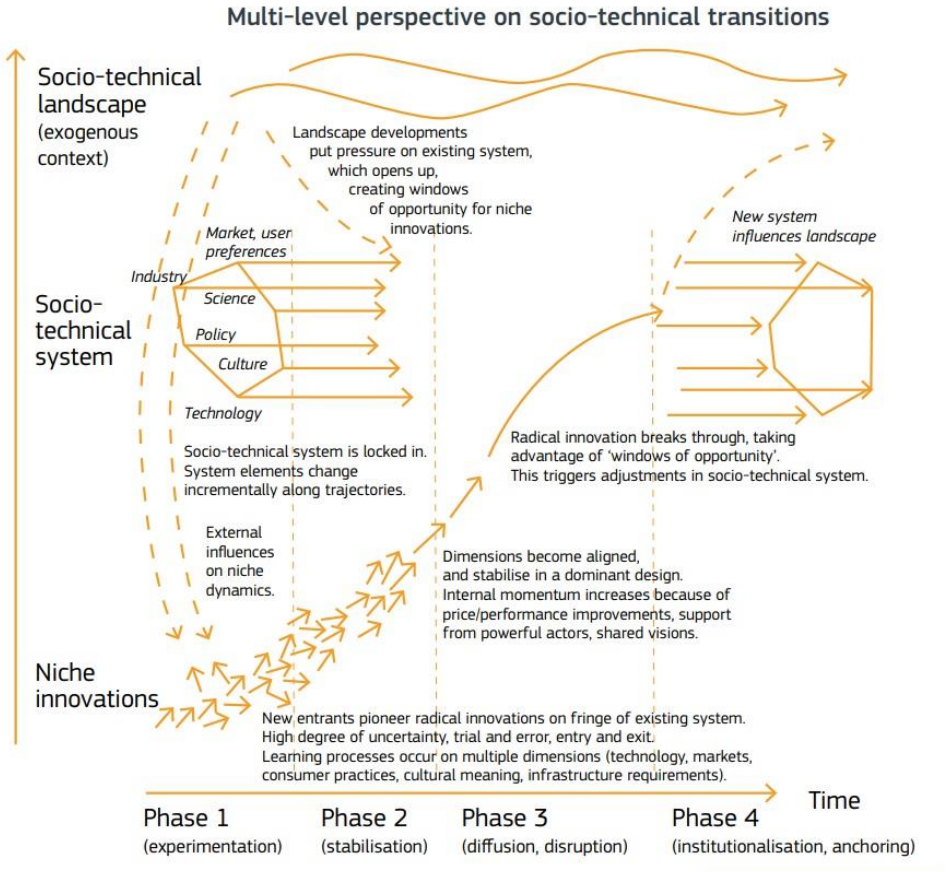

Fig 1. *Multi-Level Perspective [45-46]*

From the above, two research questions emerge:

1) Can a collaboration with sector organizations accelerate the transition of a UAS in view of sustainable strategy and vision? But also, is the transformation into a more dynamic institution adapted to current needs (sustainability and digitalization) linked to entrepreneurial universities? Consequently, this must yield the integration and implementation of sustainable development through numerous activities in the field of research, education, services and, of course, in its own business operations.
2) Can the process be seen as a catalyst for the own institution, but also for the region and the involved stakeholders [10], as well as for higher education in Flanders?

In this paper we provide the educational-oriented approach from the collaboration with CIFAL Flanders. We describe the steppingstones for PXL UAS to get receive the SDG Pioneer learning- and implementation certificate by CIFAL Flanders within the six working fields: learning, organizing, formulating, implementing, evaluating, and communicating.

Partners

CIFAL Flanders is a local training hub affiliated with UNITAR, the United Nations Institute for Training and Research [53]. It is devoted to strengthening a just transition towards a sustainable society. CIFAL Flanders identified the need for a long-term SDG capacity building trajectory approach to align the sustainability policies of organisations with the 2030ASD framework and

to realise the 17 SDGs, i.e. the PCA2030 trajectory: Pioneer – Champion – Ambassador. The mission of CIFAL Flanders can be summarized as promoting multi-actor partnerships for the mobilisation of all actors in society to co-create the 2030ASD.
The internationally benchmarked knowledge and inputs provided by CIFAL Flanders acted as an important lever for the implementation of the SDGs within PXL UAS. Each phase of the CIFAL Flanders' PCA2030 Trajectory requires a higher level of ambition and. the six working fields, learning, organizing, formulating, implementing, evaluating, and communicating, serve as "crossing points" towards becoming 'SDG-proof'. There are always six working fields: learning, organizing, formulating, implementing, evaluating, and communicating. They serve as "crossing points" towards SDG accreditation.

PXL [54] is a young UAS which originated in 2013 after a merger operation between PHL and XIOS. A policy plan, mission and vision were written with the so-called X-factor for employees and students in its core. The initial X-factor included four elements:

(1) "Empassion" (Passion and Empathy).
(2) Internationalization
(3) Entrepreneurship and Innovation
(4) Multidisciplinary

In the new strategic plan 2021-2026 [52], a fifth element is included in the X-factor, to align it with the objectives of the 2030 Agenda:

(5) Sustainability

The employee and/or student/junior colleague are seen as excellent professionals. They gain depth by interweaving personality, professionalism, entrepreneurship, and sustainability required by a super diverse, digitized and sustainable world.

Knowledge-based organizations are "shaped by collective knowledge and the existence of teams and groups of people that are continuously developing their capacity and ability to create results" [55-56] argue that updating and/or upgrading of employee knowledge and skills and dedicated teams are likely to bring behavioural changes and a mind-set change.

Key elements are:

- Adoption of strong sustainability model.
- Use of systems thinking.
- Adoption of a radical approach to innovation.
- Adoption of a long-term period for innovation planning.

Sustainability was already present in the PXL UAS but needed to be more connected.
The corporate social responsibility (CSR) approach is present in the management which must respond to what is going on in society and anticipate by training the future leaders of tomorrow. The HEI must therefore go through a transition of how separate internal initiatives can be connected into a supported policy vision. This will then also lead to a cascade with the external stakeholders. Whereby there is the movement from internal "SDG carried projects" to a change through network. The methodology of MLP lends itself perfectly to this case study.

4 Results and discussion

In the beginning of a transition process, the change coalition (fig. 2) functions as a platform to bundle and strengthen innovation. However, it does not have to stop there. Powerful platforms can be built for inspiration and idea management, knowledge exchange and networking [43]. Those involved in the change projects can include regimes in the learning process, so that the latter can pick up the new way of working and the barriers that these projects must deal with can

be addressed. In the next stage, to increase the pressure on this regime and to become more coherent, a transition team evolves via change projects towards a change network.

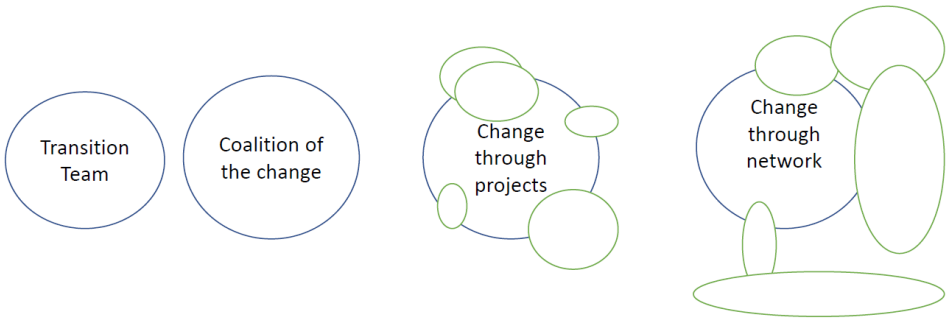

Fig 2. Coalition for change - adapted by the authors from *[43]*

In May 2019, PXL installed a climate committee - SDG@PXL, which evolved into a transition team. Originally, the team consisted of five members (head of department Green & Tech, director of finance and facility management, research and education staff members and the policy advisor). The team quickly expanded to more than thirty internal stakeholders on a volunteer base, with different backgrounds and responsibilities, including students-junior colleagues. This became a *coalition of the willing* and later a *coalition for change* (fig. 2 and 3). In this way, the transition team was strongly supported and anchored within the organization (both in terms of the different disciplines and the various responsibilities in the hierarchical structure). All members of the SDG@PXL (transition team) "change through process"-group took part in several digital (COVID-19 induced) lectures, workshops, webinars, and meetings in a close co-creation between CIFAL Flanders and PXL. The importance of facilitating continuous learning at all levels through empowering people, encouraging collaboration, and promoting open dialogue was a key feature in this process.
CIFAL Flanders has developed the PCA2030 Trajectory for organisations to get started with the SDGs in a company-specific way. The training trajectory consists of six continuous working areas: learning, organizing, formulating, implementing, evaluating, and communicating. The methodology has been inspired by a plurality of sources [57-59], [18].

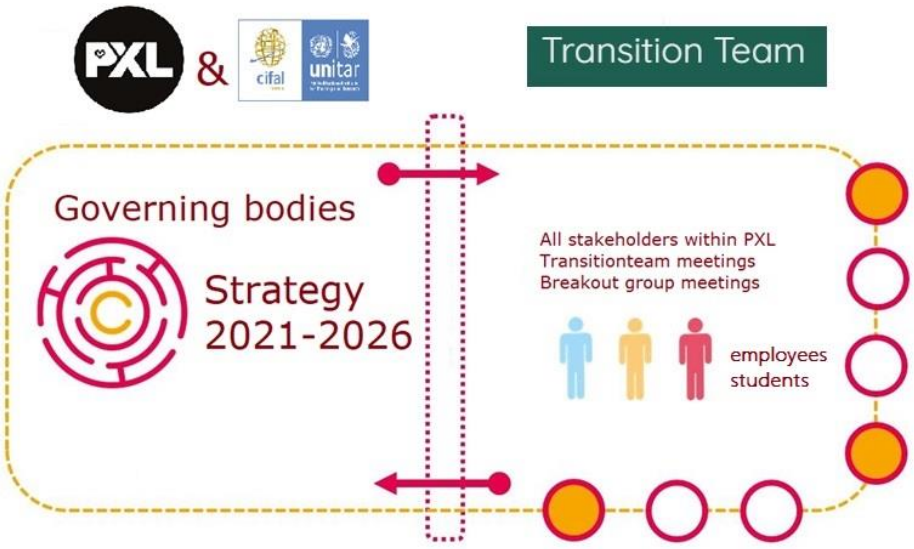

Fig. 3 *The inside outside approach for the PXL transition team*

At the first level (SDG Pioneer) the focus is mainly on *"action within the organisation".*
In the SDG Champion trajectory the aim is "*to direct the activities towards the community and to evaluate the impact and transition of the own institution"*. SDG Ambassador is the last step of the PCA2030 Trajectory to become SDG-proof. This step focuses on *"human rights, due diligence, and the position of the organisation from an international perspective'.*
The start of a transition project is likely to be triggered by the initial "fools" and "believers", who alternatively spread their ambitions to a coalition of the willing. Therefore, it was interesting to detect which SDGs were important for the participants of the transition team. SDGs 3, 4, 8 and 12 seemed to be the most prominent ones. The transition team and the interaction with the policy management team detected and agreed on the following in view of the PXL UAS:

1. Which SDGs are important?
2. What is the know-how?
3. Which SDGs obtained too little attention at this moment?

The consecutive online exercises (webinars, Zoom-meetings) with CIFAL Flanders brought about the following SDGs as the most important for PXL UAS: SDGs 3, 4, 8, 17, (9, 11, 12 ex aequo). It was agreed that the impact of PXL UAS can be most significant for SDGs 4, 8, 9,10 and 17. It was also detected that PXL UAS should pay more attention to SDGs 3, 7, 10, 11, 12 and 13.
PXL UAS will have to focus strongly on strategic approach, financial resources, knowledge and skills, leadership, data management, monitoring and reporting. In addition, special attention should be given to good governance, ethical, democratic and participative issues, transparency ("teach what you preach"), resilience and inclusiveness ("leave no one behind").

The first transition within PXL UAS triggered three structural achievements:

1. Organizational development:
   Sustainability and the SDGs are now an essential feature within the strategy, mission, and vision of PXL UAS (4.2, 4.3 and 4.5)
2. Learning outcomes:
   PXL UAS successfully completed the first SDG Pioneer phase of the CIFAL-UNITAR trajectory (4.1 - 4.6).
3. Student centric approach (see 5.4.2)
   The new PXL UAS Green Office – "for, with and by the students" (4.2, 4.4)

4.1 Capacity/learning building
Capacity building for sustainable development, the 2030ASD, corporate social responsibility (CSR) and providing access to the CIFAL Flanders' training courses helped to create ownership for all internal and external stakeholders involved in the transition process. As a result, PXL UAS gained additional insights, initiatives, and opportunities about the SDGs. Following the CIFAL Flanders' implementation and training process:

1. New sustainability courses were launched e.g., the graduate course 'Renewable Energy' and postgraduate course energy transition [54]
   Renewed existing collaborations e.g., the collaboration between PXL UAS and CleanTechPunt [60]

2. New cooperation agreements were set up e.g., with ECO Smart and Flemish Energy Agency [61], dealing with Maintenance and Energy Performance Contracts. This collaboration is exemplified and illustrated the holistic approach (see 4.4.1)

3. Developing the sustainability competencies of all students (see 4.2)

4.2 Organizational development

For the implementation of the SDGs throughout the organisation. PXL UAS establishes a commitment to the SDGs at strategic level (Board of Directors, Management Committees and Executives). A first step in the integration of the commitment to the SDGs into governance structures and frameworks was to appoint a 'SDG taskforce', i.e., SDG@PXL and a Single Point of Contact for sustainability issues. The inclusion of sustainability as a strategic objective in the new policy plan, resulted in three important objectives to build a sustainable organizational culture:

1. There is increasing agreement on the set of key competencies in sustainability [62], namely, systems-thinking, futures-thinking, values-thinking, strategic-thinking, and interpersonal competencies [63]. PXL UAS focusses on the competencies of its 3000 graduates/year that are necessary for the development of a sustainable world, i.e., strategic-thinking, interpersonal competencies and systems-thinking. Students develop a set of key sustainability competencies: strategic-thinking, interpersonal competencies, and systems-thinking. Sustainability competencies and knowledge of the SDGs consequently become part of the curriculum of every student (Fig. 4).
2. PXL UAS will benchmark its key policy processes and new innovations with several strategic SDGs.
3. Because of the lessons learned from the COVID19 crisis, PXL UAS is building an inclusive sustainable campus for mixed online/on campus education (hybrid teaching and remote work) that is sustainably anchored in the social and physical environment and where campus life, community development and networking are the engines of social interconnectedness.

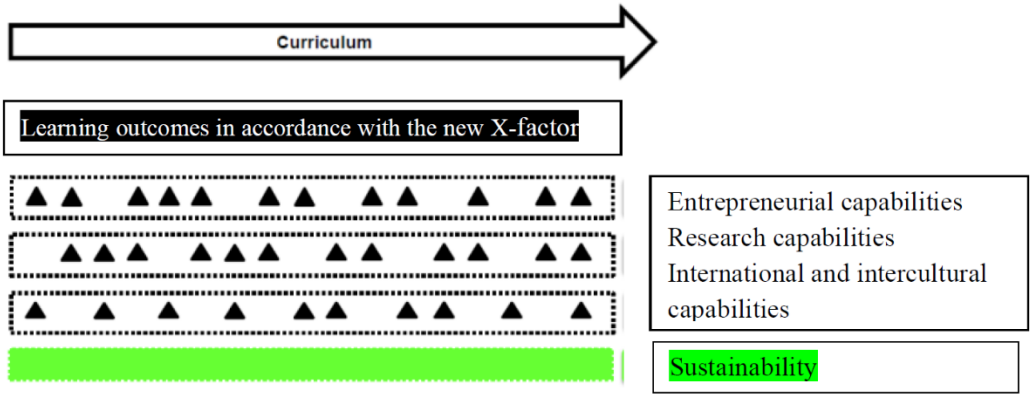

Fig. 4 Mixed learning model at the PXL UAS

4.3 Strategic conceptualization

Under the working field "formulating", the organization sets its compass, by integrating sustainability at the strategic level, by identifying opportunities and priorities and by drawing up an SDG action plan. SMART (Specific, Measurable, Attainable, Relevant, Time-based) objectives were formulated. They formed the basis for formulating the Strategic Goals (see 4.5). It is important to stress that these goals are set by and for top management of the organization. These goals were set by focusing on broad general issues and are usually long-term. A new

mission and vision which reflects commitment to sustainable development and/or the SDGs is developed for the period 2021-2026. The mission is dictated by the institutional specific X factor, additionally coloured by sustainability based on the SDGs [54].

4.4 Implementing: sustainable campus from a holistic vision with internal stakeholders.

4.4.1 Holistic approach

Two recent pilot projects on sustainability in PXL UAS are started. PXL UAS is transforming its campuses into inclusive, green, nZEB campuses (nearly zero energy building) [64]. It set up a tender for an unique type of MEPC (Maintenance Energy Performing Contract [65-67], [19], [68-69], with multiple sustainability criteria such as waste, water use and circularity in addition to energy efficiency [70-71] - in co-creation between the academic staff, the students, the small and medium-sized enterprises and the Flemish Energy Company.

This MEPC focuses also on the:

1. realization of other sustainability aspects, such as water saving, circular renovation, waste reduction, etc.
2. intensive involvement of students and teaching staff throughout the entire trajectory, over several academic years.
3. development of KPIs, measurements and analyses.
4. stakeholder management: involving other stakeholders on the university campus.
5. searching for synergies at the campus level.

This public tender was awarded in 2022 and the additional topics in addition to energy efficiency and co-creation will be carried out in collaboration with a local SME.

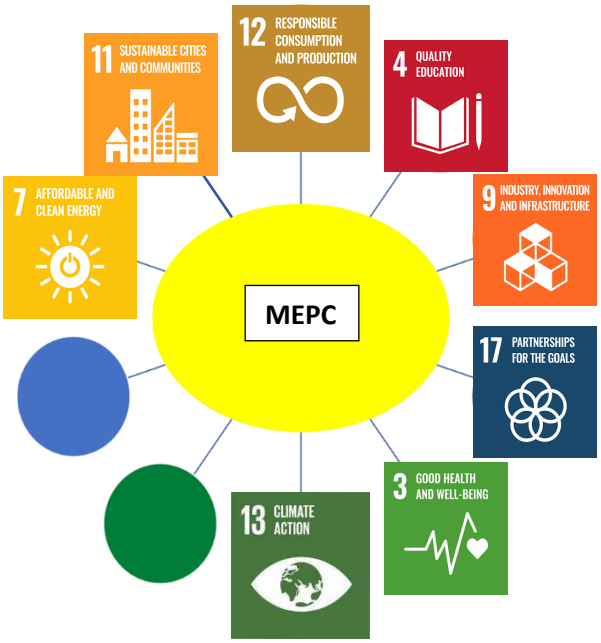

Fig. 5: *Holistic view of the MEPC approach*

4.4.2 Sustainability with and by students

A Green Office has a unique position because it contains characteristics of both a "traditional" sustainability program of a higher education institution and of a student organization. Their aim is to allow sustainability to permeate all facets of a HEI. This means both in the academic role and in the executive role.

The Green Office movement is a platform for sustainability engagement by and from students in higher education [72]. At PXL UAS, the members of the Green Office are part of the SDG@PXL transition team and there is a growing link with the curricula. Green office strives to develop actions that have a major impact: either small actions with a huge number of participants (community) or actions with a huge impact.

The first realizations of the PXL Green Office are visible:

1. Sustainable Water uses on campus.
2. PXL Honors Program 2022 for Green Office.
3. Sustainable market in collaboration with Hasselt University.
4. Sustainable unit for Green Office.
5. Project "Walking with doctors".
6. Mobility project in collaboration with Hasselt University

4.5. Evaluating

In the context of accreditation (institutional review, quality assessments…) sustainability is a central policy feature. Finally, the internal quality assurance mechanism, together with the external assessment by the NVAO (Dutch-Flemish Accreditation Body) accreditation will be used in the Plan Do Check Act (PDCA) cycle.

Sustainability is a central policy feature in the context of accreditation (institutional review, quality assessments…) and from a holistic SDG approach, i.e.

1. sustainability in education, research and the practice of the arts
2. sustainability is included in the policy plans of the other management clusters (facility management, finance, personnel).
3. the SDG Wheel is used to avoid contradictory actions.

4.6. Communication

There is an extensive set of communication channels to create awareness and broad support for the SDGs throughout HEIs to express commitment to the SDGs: website, intranet and internet, internal and external newsletters, social media (Instagram, Facebook, TikTok,), press releases, etc. With respect to different existing models of internal and external sustainable reporting more attention could be given to the previous GRI reporting in some departments, bringing in the points of view and insights of stakeholders. It is still to be decided which SDG reporting framework proves to be most suitable and acceptable for the PXL UAS.

Close inspection of recent studies [73-76] clearly reveals that the MLP approach, that is used in this experiment, advances transitions practically and is particularly valuable in this area. The following elements are indispensable to be successful:

1. bringing into view the transformative challenges.
2. sensitizing participants to potential disruptions and uncertainties explicating underlying assumptions.
3. diversifying existing actor networks.
4. changing its interactions with stakeholders, by inviting actors from other domains.
5. creating space for open discussion.

6. challenging if issues of interdisciplinarity and accessibility are addressed.

Our case study clearly shows that the evolution towards the "change through network" is realistic if the transition is well managed. In this way the potential to contribute to the theoretical foundations of transitions is confirmed. It is very important to experiment and to consolidate the small steps. There are many starting points for a transition team to bring change. It deals with vision of an organization, the language, the numbers, the remuneration system, procedures, social culture of the organization, …
Indeed, look for supporters and turn the transition team/idea into a coalition of the willing. Sometimes however it is important for transition teams to slow down, which can lead to more insight, decisiveness, and efficiency. An open, self-organizing team can easily admit differences and deploy (external) team members based on (external) knowledge and intuition (like CIFAL Flanders). This creates new insights and opportunities to bring about a paradigm shift. Knowledge sharing is a key element of the PXL transition team SDG@PXL, with a prominent coaching role for the CIFAL Flanders officials. At the same time, financial and creative lock ins are avoided. In addition, the internal SDG priorities are also tested in a stakeholder meeting and refined and clarified by means of a materiality index.
This exercise will also have to be done and updated annually.
As a result of the points under 4.2 to 4.6, the PXL UAS was the first HEI in Belgium to receive SDG pioneer recognition from the UN in February 2021.

5 Conclusions and Limitations

Although the current contribution describes in detail the process of becoming SDG Pioneer with all the results obtained, this study of course has limitations. But it is clear that the answers to the two-research question are realised. This study does provide the opportunity to evaluate the MLP concept for HEIs. The case study inspires other external (HEI) initiatives by "change through network". The PXL UAS is often asked in panel debates to illustrate how a HEI can be innovative in introducing the SDGs by means of the MLP approach. In addition, it is a catalyst for the internal and external stakeholders to include the 2030ASD in their policymaking. This project proves to be a good benchmark for other HEIs to integrate the SDGs into strategy and policy. In addition, this approach has a multiplier effect on partners, suppliers, and other stakeholders.
A new policy plan is highlighted in which sustainability is included in the mission and vision and in the policy lines of education, research, personnel, and facility management. This implementation will be monitored in the PDCA cycle (Plan Do Check Act) internal and by the external accreditation of NVAO.
The next step towards acquiring the SDG Champion certificate is already initiated.
As the PXL UAS will focus on competencies that are necessary for the development of a sustainable world for their 3000 graduates/year the social impact is quantified. Students develop a set of key sustainability competencies: strategic-thinking, interpersonal competencies, and systems-thinking. Sustainability competencies and knowledge of the SDGs become part of the curriculum of every student.
This study is the first example of a HEI becoming SDG Pioneer under CIFAL Flanders PCA2030 Trajectory. The ongoing work of the transition team has yield in the meantime a CSR award of Voka and the SDG Champion level. This will be reported by the authors in a next paper (in progress).

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