How to catalyze a mindshift? Designing a leadership development programme for sustainability transformation

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Nature loss is a major threat to the economy and businesses. Biodiversity enables healthy ecosystems without which businesses could not operate. Businesses play a key role in halting biodiversity loss but the vast majority of business leaders do not consider biodiversity loss as a focus area in the coming years.

The purpose of the thesis was to design a transformational learning concept on nature loss for business leaders. The development project was guided by questions addressing the factors influencing young business leaders' commitment to integrate biodiversity loss to the strategies in their respective businesses and the learning needs they had. In the process also the key elements to an appealing and transformational learning concept on ecological sustainability were discovered.

The theoretical framework consists of systems thinking, sustainability transformation and transformational learning. The thesis focuses on worldviews, mindsets and values as strong leverage points for systems change, and seeks ways to catalyze a mindshift through learning. Intrinsic transformation i.e. values, beliefs, and worldviews have been a hitherto neglected aspect of sustainability transformation.

The development project was based on service design methods and followed the Double Diamond Process. In the design process, understanding the primary target users – young business leaders – was key to outlining the elements required for the creation of an appealing programme. Interviews, desktop research and co-creation workshops were the methods used in the process. The interviews were analyzed through content analysis.

For the young business leaders, an ideal learning experience involves understanding the big picture of the ecological crisis (biodiversity loss and climate change as intertwined problems), widening perspectives through multi-stakeholder dialogue and combining leadership skills and personal development to practical tools and case examples.

As a result of the process, the essential elements of a transformational learning concept on sustainability were defined as critical (systemic), holistic and deep (intra-personal) and communicative and collaborative (inter-personal). Based on these elements, a prototype of the Leadership Programme on Planetary Boundaries was created.

The groundwork laid in this thesis helped to clarify and articulate the mission of the commissioning project, Puistokatu 4, as a whole. It provides a framework within which Puistokatu 4 can further develop their activities, events and concepts in a systematic way. The results can be utilized also in other organizations working on sustainability transformation and learning.

Keywords: biodiversity loss, sustainability transformation, leadership, transformational learning, design thinking

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Miten katalysoida ajattelun muutosta? Kestävyysmurroksen johtamisen

kehittämisohjelman muotoilu

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Luonnon monimuotoisuuden köyhtyminen on uhka sekä kansantaloudelle että yritysten toiminnalle. Yrityksillä on myös keskeinen rooli kiihtyvän luontokadon pysäyttämisessä. Valtaosa yritysjohtajista ei kuitenkaan pidä luonnon monimuotoisuutta lähivuosien vastuullisuustyön keskeisenä painopisteenä.

Tämän opinnäytetyön tarkoituksena oli kehittää yritysjohtajille suunnattu uudistavan oppimisen (transformational learning) konsepti luontokadosta ja ekologisesta kriisistä. Kehittämistyötä lähestyttiin kartoittamalla tekijöitä, jotka vaikuttavat nuorten yritysjohtajien haluun ja kykyyn integroida luontokato liiketoimintastrategiaansa. Lisäksi selvitettiin, millaisia oppimistarpeita heillä on luontokatoon liittyen ja määriteltiin, mitkä ovat ekologisen kestävyyden kompetenssien kehittämisen näkökulmasta keskeisiä uudistavan oppimiskonseptin elementtejä.

Työn teoreettinen viitekehys koostuu systeemiajattelusta, kestävyysmurroksesta sekä uudistavasta oppimisesta. Opinnäytetyössä ajattelutavat, maailmankatsomukset sekä arvot nähdään systeemisen murroksen keskeisinä vipuvarsina. Työ tarkastelee, miten oppiminen voi katalysoida tarvittavaa mielenmuutosta. Sisäinen kestävyysmurros – arvoissa, asenteissa ja maailmankatsomuksissa tarvittavat muutokset – on jäänyt tähän mennessä vähäisemmälle huomiolle kestävyysmurroksen tutkimuksessa ja ratkaisuissa.

Kehittämistyö hyödynsi muotoilun menetelmiä, ja prosessi noudatti palvelumuotoilun tuplatimanttimallia. Asiakasymmärrys oli avainasemassa houkuttelevan oppimiskonseptin kehittämisessä. Työssä hyödynnettiin useita laadullisen tutkimuksen menetelmiä, mm. haastatteluja, työpöytätutkimusta sekä yhteiskehittämistyöpajoja. Haastattelut analysoitiin sisällönanalyysilla.

Nuorille yritysjohtajille on tärkeää saada kokonaiskuva ekologisesta kriisistä, laajentaa näkökulmia poikkisektoraalisen dialogin avulla sekä saada tukea johtamisosaamiseen ja henkilökohtaiseen kasvuun ja kehittymiseen. Lisäksi johtajat toivoivat käytännön työkaluja kestävyysmurroksen johtamiseen sekä konkreettisia esimerkkejä. Kehittämistyön tuloksena määriteltiin kestävyysmurroksessa tarvittavan oppimisen peruselementit. Oppimisen tulee olla kriittistä (systeemistä), kokonaisvaltaista ja syvää (yksilöiden sisäistä) sekä dialogista ja yhteistyöhön perustuvaa (henkilöiden välistä). Näiden elementtien pohjalta kehitettiin Planeetan rajojen johtamisohjelman prototyyppi.

Kehittämistyö auttoi selventämään ja artikuloimaan tilaajana toimineen Puistokatu 4:n tarkoitusta ja toimintatapoja. Työ tarjoaa myös kehikon, jonka puitteissa Puistokatu 4 voi vastedes kehittää johdonmukaisesti toimintaansa, tapahtumiaan ja kumppanuuksiaan. Tuloksia voidaan hyödyntää myös muissa organisaatioissa, jotka työskentelevät ekologisen kriisin ratkaisujen ja oppimisen parissa.

Asiasanat: luontokato, kestävyysmurros, johtaminen, uudistava oppiminen, muotoiluajattelu

Contents

1   Introduction

The word 'unprecedented' repeats in recent scientific reports covering the global ecological crisis. Nature is declining at a rate that we have never seen in human history (IPBES 2019). Human action is eroding nature on land and at sea with severe consequences. By causing these rapid and in part irreversible changes, we are nibbling away the foundations of our economies, livelihoods, food security, health and quality of life.

Rockström, Steffen, Noone et al. (2009) have pointed out that we have already crossed the lines of a safe operating space for biodiversity. Several scholars and research reports call for transformational change for the world to adjust to living within the planetary boundaries (for example IPBES 2019, IPCC 2022, O'Brien 2018).

Sustainability transformation has become an increasingly popular concept to describe the changes needed. Key message is that incremental shifts do not suffice to tackle the wicked problems of our time. We need changes in structures of power and resources, in societal practices that reproduce those structures, and in norms, values and beliefs, as well as in their connections with the ecological systems. (O'Brien 2018, O'Brien and Sygma 2013, Geels 2015). The concept of sustainability transformation is based on systems thinking, which focuses on networks and dynamics of change.

Businesses hold a lot of power in our economic system. In relation to the ecological crisis and halting nature loss, they play a key role as they are not only dependent on natural resources and ecosystem services but can also have major impacts on them. Sustainability transformation to "living in harmony with nature" requires transformational changes also from businesses. However, in a recent survey by FIBS (2021), only 13% of the respondents (mostly CEOs) considered biodiversity as a key issue for their company within the coming year whereas with climate change the percentage is 66%. For Finnish businesses, biodiversity is the least relevant sustainability theme, according to the survey.

Recently more and more emphasis has been put on understanding the role of inner transformation as a critical aspect of the sustainability transformation (for example Geels 2015; O'Brien and Sygna 2013; Wamsler 2020; Woiwode, Schäpke, Bina, Veciana, Kunze, Parodi, Schweizer-Ries & Wamsler 2021). How could we tap into that potential to catalyze change? What kind of new ways of learning are needed to address the inner side of transformation? This thesis focuses on business leaders as agents of change and seeks ways to promote transformational learning about nature's role for the economy – and the individual's role in safeguarding nature.

1.1   The development task: Purpose, objective and approach

This thesis is an example of research-oriented development where the aim is not to produce knowledge in the sense of research but to build or modify something tangible and concrete (Ojasalo, Moilanen and Ritalahti 2015, 19).

The purpose of this thesis is to develop a new learning concept that would enhance business leaders' awareness and agency on the risks and the opportunities biodiversity poses for their businesses. Hence, the objective is to describe how business leaders view biodiversity loss vis-à-vis their business and discover the factors related to learning that would help them to engage more actively on the issue. The research questions guiding the work are:

- Which factors influence young leaders' commitment to integrate biodiversity loss to the strategies in their respective businesses?
- What kind of learning needs do they have related to nature loss?
- What are the key elements to an appealing and transformational learning concept on ecological sustainability?

A suitable methodology for answering these questions is provided by design thinking, as the focus of the thesis is to study the views and underlying mindsets of young business leaders and design a service concept for them (Stickdorn, Lawrence, Hormess and Schneider 2018; Tuulaniemi 2011).

Design thinking is a holistic approach that puts humans at the center of the change process, and therefore is well placed to address for the so-called wicked problems (for example Feola 2015). Drawing on systems thinking and transformation approach, the most influential leverage points to impact sustainability transformation are the mindsets, worldviews and values (Meadows 1999, Geels 2015, Feola 2015, O'Brien and Sygma 2013, Woiwode et al 2021). What kind of a mindshift do we need in business leadership in order to put biodiversity on the agenda, and what kind of learning could support that? As Sangiorgi (2009, 417) highlights, the facilitator of these processes plays a key role as she or he can bring together different stakeholders and help them find common values and topics for collaboration.

1.2   Case mission behind the development project: Puistokatu 4

This thesis supports the development of Puistokatu 4 concept, which is a joint effort by the Tiina and Antti Herlin Foundation together with the Maj and Tor Nessling Foundation. Puistokatu 4 wants to bring together different stakeholders working on solving the ecological crisis and – through dialogue – accelerate the changes needed in the society.

Puistokatu 4 is currently in the making and planning. It will be both a virtual and a physical concept. The physical version is an old 19th century villa located in Kaivopuisto, Helsinki. The building is currently being restored and renovated to house a group of foundations and not-for-profit organizations as well as a multidisciplinary community of researchers. The villa's doors will also be open to the people of Helsinki, and it will serve as an eco hub and a platform for different kinds of events around sustainability transformation. The house will open for public in August 2022. The virtual "airspace" has already opened with the Puistokatu 4 website, social media accounts and through different online events, such as the monthly Friendly Demonstrations.

Both foundations behind this project have solutions to the ecological crisis at the core of their strategy. Tiina and Antti Herlin Foundation (established in 2014) supports and promotes social welfare, culture, the environment and science, as well as associated teaching and research activities. In the current strategy period (2020-2025) the fund allocates its support and resources solely to measures designed to rapidly reduce greenhouse gas emissions. Nessling Foundation (established in 1972) supports scientific research and communication solving environmental challenges. Aside from funding, one mode of operandum of the Foundation has been the Nessling Nest, which is a free workspace in the center of Helsinki for solution-oriented researchers focused on environmental challenges.

Puistokatu 4's vision is to normalize a good life within planetary boundaries. It aims to catalyze the cultural transformation needed in the ecological crisis and act as a platform for collaboration and events for that purpose. The tagline for Puistokatu 4 is a "space for science and hope", which highlights the role of scientific knowledge in helping and guiding the process. At the moment of writing this, Puistokatu 4's events and other content is still in the planning, and this thesis forms one part of new service development of Puistokatu 4. It also serves as a pilot for using design thinking methods in the further project and concept development.

1.3   The structure of the thesis

This thesis is divided into six chapters. First, the topic and its background as well as the research questions are introduced. The second chapter gives context by briefly discussing biodiversity loss as a phenomena and as a risk and an opportunity for businesses. Third chapter reviews the literature on sustainability transformation and transformational learning and thus builds the knowledge base and theoretical foundation for the development project. The aim of the literature review is to understand what are the different components of sustainability transformation and how they can be utilized to support societal and individual responses and learning about environmental problems that can be called "wicked" for a good reason. The fourth chapter introduces the development approach and walks the reader

through the stages of the concept development process. The fifth chapter answers the research questions and introduces the key results of the process and the prototype that was created as a result of that process: The Leadership Programme for Planetary Boundaries. The conclusions and reflections on the process as well as needs for further research are presented in the sixth chapter.

2   Biodiversity and business basics

To understand the context of this development work, it is necessary to give a brief introduction of biodiversity loss as a problem and as a key dimension of global ecological crisis, and discuss why and how businesses should care about it.

Biodiversity means the variety of life on Earth in all its forms. It comprises the number of species, their genetic variation and the interaction of these lifeforms within complex ecosystems. (For example CBD 1992, article 2; IPBES 2019).

Well-functioning ecosystems provide us with many essentials we tend to take for granted. Nature is able to produce us food, crop pollination, good quality soil, raw materials such as wood or cotton, fresh water and clean air, carbon sinks, drugs and health. Biodiversity also boosts the resilience of nature. It helps nature to fight climate change as well as adapt to changes and resist diseases. Complex interaction between living organisms and their environment support life also beyond the ecosystem. A good example is the insects that are important in the food chain for other animals, but they also sustain food systems through pollination.

Biodiversity is the cornerstone on which ecosystems function. According to the World Economic Forum (WEF 2020), half of world's GDP is moderately or highly dependent on nature. Currently biodiversity is declining globally faster than ever before. One million species out of estimated eight million in total, are threatened with extinction. The decline is caused by land use, overexploitation of resources such as overfishing, climate change, pollution and alien species. There are also a number of indirect drivers, such as consumption and production habits, population growth, technological innovations and international trade. With biodiversity loss, nature's ability to produce ecosystem services is jeopardized, and could even collapse at places. The disappearance of one species can have far-reaching impacts on the system as a whole. As stated in the introduction, the planetary boundary of biodiversity loss has exceeded the safe limit up to a zone where the future's uncertainty is highly at risk. (Rockström et al. 2009, IPBES 2019.)

Increasingly in the 21tst century with publications such as IPBES global assessment report on biodiversity and ecosystem services (2019), Stockholm Resilience Centre's planetary

boundaries conceptualization and it's updates (Rockström et al 2009, Stockholm Resilience centre 2020) and most recently, the Dasgupta report on the economic value of biodiversity (2021), biodiversity is slowly starting to make it to the desks of both managers and scholars studying corporations strategies and decision-making (see for example Kurth et al. 2021, OECD 2019). In the following, the major interdependencies between business performance and biodiversity as well as the actions taken by businesses so far and the policy framework under which companies currently operate will be briefly covered.

2.1   Risks and opportunities for businesses

Despite the magnitude of the challenge and the increasing public awareness on the issue (for example WWF 2021), biodiversity is still not beeping loudly on the radar of businesses (FIBS 2021, TEEB 2012). The laggardness has been attributed to the lack of understanding of potential implications for business and the slow onset of events less visible to business leaders (TEEB 2012, Chapter 1, 10-11).

Business and biodiversity are interlinked in many ways. Companies depend on biodiversity and the services provided by ecosystems as key inputs to products and production processes. Business operations may also have impacts on biodiversity through their core operations or indirectly through their supply chain. The relationship of course varies between businesses and naturally also between different business sectors. The role of biodiversity in supporting and enabling different businesses is often difficult to quantify and measure. Companies need to examine their entire value chain in order to determine how biodiversity impacts and dependence may affect their business. Almost all businesses have some impacts on biodiversity although often indirect and perhaps visible only further up the supply chain (and often impacting biodiversity in other countries). (de Sousa Dias 2014, xvi–xvii, TEEB 2012.)

The risks for businesses have been widely discussed by for example the Convention of Biological Diversity, TEEB, OECD, International Finance Corporation, the EU, and private consultancies such as PwC, Boston Consulting Group etc. TEEB (2012) categorizes the risks into operational, regulatory, reputational, market or product and financial. OECD (2019) adds liability risks to the list. Ecological risks are similar to climate-related risks and for example linked to increased raw material or resource costs, deteriorated supply chains or disrupted business operations. Regulatory risks include restrictions on land and resources access, clean-up and compensation costs, procurement standards, and licensing and permitting procedures or moratoriums on new permits. There is growing pressure by investors, consumers, shareholders, policy makers to report and manage risks to the environment so managing biodiversity risks is also increasingly a reputational issue. Market risks include changing consumer preferences or purchaser requirements. Financial risks include insurance risks, access to capital (higher cost of capital, or stricter lending requirements based on negative

impacts or dependencies on biodiversity) and loss of investment opportunities as investors increasingly integrate biodiversity in their investment strategies. Liability risks refer to the risk that parties who have suffered biodiversity-related loss or damage seek compensation from those they hold responsible. The risk of legal suits founded in biodiversity could increase as companies' start reporting more on their biodiversity impact assessments. (OECD 2019, TEEB 2012.)

Risk management is still a primary reason for addressing biodiversity issues in corporations, but a number of publications highlight that boosting nature and biodiversity can also be a source of business advantage (Kurth et al. 2021, TEEB 2012, Sitra 2022). According to Sitra (2022), many benefits do however come through avoiding risks. Sitra divides the business advantages into two: tangible and intangible. Tangible benefits include availability of raw materials, more efficient operations, business resilience and sometimes cheaper funding. Intangible benefits include license to operate, brand and reputation (Sitra 2022).

The TEEB report (2012) lists three kinds of opportunities:

- By integrating biodiversity into business decision-making, companies can enhance their performance by reducing risk, increasing revenue streams, reducing costs or improving their products.
- Biodiversity itself presents potentially huge untapped opportunities in the form of new products and services – i.e. 'biodiversity business' opportunities. There are growing markets for sustainably produced goods as well as non-consumptive use of biodiversity such as nature-based tourism, which is the fastest growing segment of the global tourism industry.
- New markets for biodiversity and ecosystem services are emerging – inspired in part by the development of carbon markets. There are already examples of markets for carbon sequestration or maintenance of water quality and supply, but future ideas might include disaster mitigation, pollination or biomass production. (TEEB 2012, chapter 5, 4-24)

2.2 Rapidly evolving operating environment

Both the consumer awareness and the regulatory environment for businesses regarding nature loss are rapidly developing. Two years ago the European Commission presented its Biodiversity Strategy and closely linked Farm to Fork strategy. The national implementation plans should be finished by the end of this year. Currently Finland is drafting its national biodiversity strategy and the action plan for the next decade, and in the coming autumn the countries will come together in Kunming, China, to draw up a new international framework to halt biodiversity loss and turn the tide to recovery and restoration of nature.

In 2021 professor Partha Dasgupta published his review on nature as 'capital' lauded as the "Stern report on biodiversity" – speaking the language that resonates better with businesses and investors and Ministries of Finance in charge of government budgets, taxes and incentives. The EU taxonomy regulation, covering also activities that make a substantial contribution to biodiversity objectives, has been applied from the beginning of the year. Screening criteria for biodiversity is currently being drafted and the new delegated Act is expected to be published in the autumn 2022. Also the EU Commission's proposal for the new Corporate Sustainable Reporting Directive (CSRD) identifies the environmental factors, including biodiversity, that must be addressed by sustainability reporting standards. The directive will require all large companies on the EU markets to report on their environment and social impact activities by January 2024. (European Commission 2022.)

Creating common tools and indicators to measure the nature impacts or the nature footprint of companies is a key area for collaboration among businesses. Widely applied Science Based Targets for climate have already helped businesses align their actions with what is needed to address climate change. Targets are based upon the Planetary Boundaries framework (Rockström et al. 2009). A climate target of 1.5 degrees has been set, and currently the science-based target network is working on establishing targets for nature as well (SBTN 2020). Once finalized, they will help businesses align their own goals with the Planetary Boundary for the biosphere and prioritize their actions. Nationally, Finnish Innovation Fund Sitra and Finnish Business and Society FIBS (the largest CR network in the Nordics) have gathered a group of companies to pilot the science-based targets (FIBS 2022). Out of other initiatives currently underway in Finland worth mentioning is also University of Jyväskylä's project to helping the biggest Finnish grocery store chain S-ryhmä pilot their nature footprint calculation with the goal to finalize it by 2025 (University of Jyväskylä 2022).

New regulation, targets and collaboration to measure impact are necessary because actions to halt biodiversity until today have been insufficient. According to IPBES (2019), out of the 20 global goals for biodiversity set in 2010 (the so called Aichi targets), none has been fully reached and only six partially. Also in Finland the review of the national biodiversity strategy and action plan (Auvinen et al. 2020) states that the goal to halt the decline of biodiversity by 2020 was not met. Both IPBES (2019) as well as the national review (Auvinen et al. 2020) highlight the need for transformative changes for the targets to be met. For transformative change to happen, we must look beyond targets and indicators and address the underlying attitudes and worldviews.

3   The role of individuals and learning in sustainability transformation

As explained in the first chapter, this thesis is part of the Puistokatu 4 project. The mission of Puistokatu 4 is to support sustainability transformation. But what exactly is meant by transformation in the context of the ecological crisis?

There is growing consensus that business as usual is no longer an option, but given the magnitude of global ecological crisis, radical and rapid change toward sustainability is needed. This fundamental shift has been described in many terms, but 'transformation' is gradually becoming institutionalized (Feola 2015, IPCC 2022; IPBES 2019, SYKE 2021).

By sustainability transformation scholars refer to changes not only in the way we behave and in our use of different technologies but also within our systems, politics, structures and ultimately also in our beliefs, ideals and our worldview. According to Hölscher et al. (2018) 'transformation' and 'transition' are often used as synonyms, but while both concepts refer to change in complex systems, transition is used mainly in the analysis of changes in societal subsystems (such as energy or mobility), while transformation is more commonly applied to refer to large-scale changes in whole societies. According to Feola (2015) the term transformation and its application in the context of ecological and sustainability transformation are still in the flux and somewhat lacking unified definition. As she rightfully points out, vagueness of the term may hinder the development of understandings of the social processes and mechanisms in transformational change. In this thesis, clarity is sought from systems thinking, and Diane Meadow's (1999) conceptualization of leverage points are a useful concretization. This thesis also zooms in on the high leverage points and considers how transformational learning could address them. In the following the key theories and concepts will be covered.

3.1   Systems thinking

What is clear is that sustainability transformation cannot happen without understanding and addressing whole systems. Therefore it is necessary to touch upon the relationship between systems thinking and sustainability transformation.

Systems thinking is a paradigm that guides us to examine the interconnected nature of wicked problems – to focus on networks and dynamics of change and through that discover the structures behind these complex phenomena, looking behind the players to the rules of the game (Arnold & Wade 2015; Meadows 2008).

Globalized economy has enabled the cornerstones of our wellbeing society but while doing so, it has also created these very complex problems such as biodiversity loss. A commonly used example is the fossil fuel industry, which has been one of the key pillars of our societies for

years while causing massive greenhouse gas emissions resulting in an overheating planet. Systems change is an intentional process where the root causes of these problems are addressed, and where relationships between different aspects of the system change towards new outcomes and goals. Another key characterization is that systems change is driven by transformational, not incremental change. (Colchester 2019.)

Classic illustration of systems thinking is the iceberg model, where only the tip of the iceberg (events, what just happened) is visible, but patterns, trends, underlying structures and finally mental models that keep the system in place are under the sea surface. As Liu et al (2015, p. 963) point out, systems thinking has led to "fundamental discoveries and sustainability actions that are not possible by using conventional disciplinary, reductionist and compartmentalized approaches". Meadows (1999) further highlights that without the understanding of systems, incentives etc, common-sense reasoning doesn't work. Also Abson, Fischer, Leventon, et al. (2017) state that the value of system-oriented approaches for sustainability science is beyond doubt as witnessed by a number of studies.

O'Brien and Sygna (2013) have modelled the factors in societal transformation with three spheres based on the thinking of Sharma (2007) (see figure 1). The three spheres represent different dimensions of transformation processes, all of which have been described and analyzed in the literature of environmental crisis responses, but seldom integrated (O'Brien 2018).

Personal
Values, worldviews, paradigms

Political
Systems and structures

Practical
Behaviours, tehcnical responses

Adapted from O'Brien & Sygna 2013; Sharma 2007.
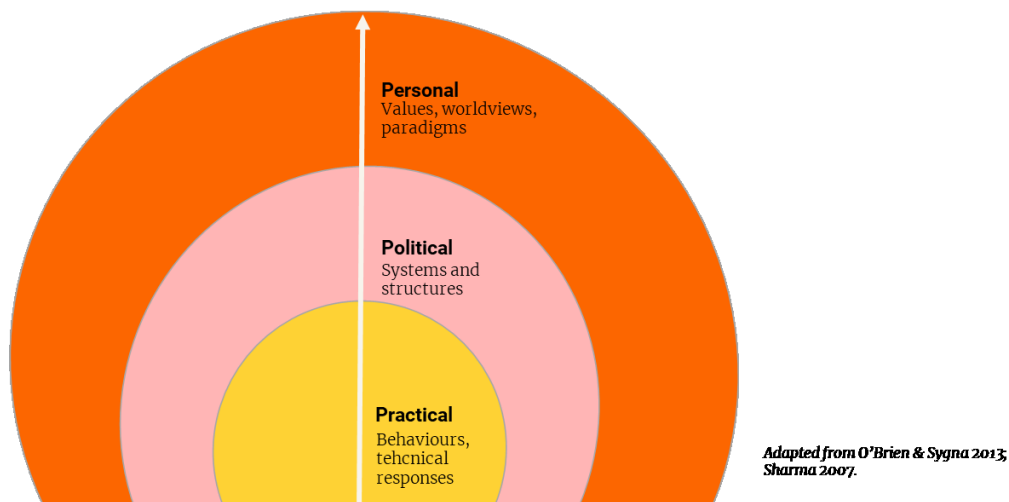
Figure 1: Three spheres of transformation, adapted from O'Brien and Sygma (2013) based on Sharma (2007)

The inner domain is the practical sphere, which contains the transitions in people's behavior, enhancing knowledge and expertise, improving management and adopting new technology and innovations. These are largely technical responses with impacts that are measurable

which makes it the dominant sphere of attention at the moment. Building indicators for nature loss for businesses is a good example of a practical solution. In the iceberg model this would be the visible part that is above the surface. O'Brien and Sygna (2013) point out, however, that the influence to a wider ecological transformation is weakest in this practical level because although changes are easy to measure they are not necessarily resulting in larger transformation.

The political sphere is about systems and structures: it entails financial, political, juridistic, social and cultural systems that define the preconditions, possibilities and rules for the changes in the practical level and thus either facilitate or hinder them. This is the sphere where the problems and solutions are identified, defined and conflicts of interest solved. O'Brien and Sygna (2013) highlight that this is where we often see conflicts such as lack of agreement around appropriate targets. A good example would be the new global framework on biodiversity that has been under negotiation for years with little advancement. In a business setting, this could refer to for example organizational structure and how sustainability professionals are positioned in it. Systems and structures change in time and reflect the beliefs, values and worldviews of any particular era. Therefore we should pay more attention to the personal sphere. (O'Brien and Sygna 2013.)

The personal sphere is about individual and shared beliefs, values, ideals and worldviews. Changes in this sphere can lead to a whole new conceptions and way of being in the world by influencing how we frame issues, what questions we ask and what solutions we see as primary in politics and practice. According to O'Brien & Sygna (2013) the transformations in this sphere can be powerful because they often lead to new perspectives on human-environment relationships: when beliefs, values and worldviews change, they affect the actions viewed possible in other spheres. In a business setting, this could mean for example transforming the whole business model (system) because of a paradigm shift with the values and ideals of the management.

In the context of this thesis and the development of a learning concept on biodiversity or sustainability leadership, the personal sphere is worth considering in more detail.

3.2   Values and worldviews as high leverage points

Studying leverage points for systems change can help understand how change happens. Leverage points mean places in a system where small change can create a bigger shift (Meadows 2008, 145). The most 'shallow' leverage points are often very practical things. As highlighted in the discussion on the three spheres, a lot of attention and resources are focused here, but as O'Brien and Sygma (2013) point out, we are often not moving in the right direction, or not changing rapidly enough. There is higher or deeper leverage in the political sphere, which focuses on how feedbacks, information flows, and the rules of the system

influence the practical outcomes we are trying to achieve. The deepest leverage points include the mindsets or paradigms or mental models at the bottom of the iceberg from which systems arise. Systems thinking offers ways to make our mental models explicit. These are hardest to alter, but they carry the most potential to influence systems change.

Figure 2 below illustrates how three spheres of transformation map onto the list of leverage points for systems change.
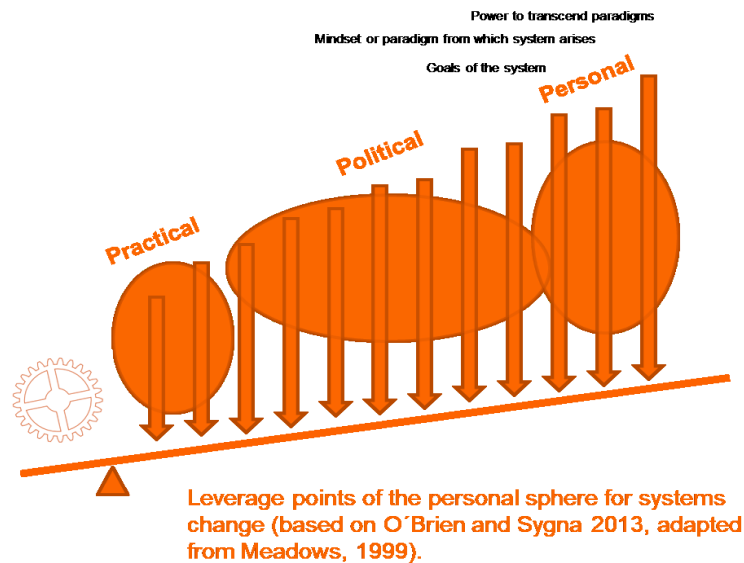

Figure 2: Leverage Points for Systems Change (O'Brien & Sygna 2013, based on Meadows 1999)

Meadows' conceptualization has a lot to contribute to sustainability science, and in recent years, research into high leverage points for sustainability transformation has begun to gain a foothold (Abson et al. 2017, Fischer and Riechers 2018, Leventon, Abson and Lang, 2021). According to Abson et al. (2017), paying closer attention to leverage points could act as a boundary object to genuinely transformational sustainability science.

Many sustainability interventions address highly tangible but essentially weak leverage points such as businesses setting targets for protected areas or increasing the share of funding allocated to CSR projects etc. While these "shallow" interventions are important they have limited potential to lead to transformational change (for example Abson et al 2017).

Mental models are deeply ingrained or held pictures (assumptions, generalizations) that each of us holds in our mind that influence how we understand the world, our possibilities and our restrictions. Because these mental models ingrained in values and worldviews are the root of many sustainability challenges, they are also fundamental to its solutions. Ives et al. (2019) suggest that sustainability crisis is in fact in large part "an emergent property of the state of our inner worlds". A key notion of systems thinking is that we cannot change an intent of a

system without changing the intent of the people that are performing that system (Leventon et al. 2021; Wamsler 2020). Thus we must dig into the mental models – they inform what questions are appropriate to ask and underpin the structures and patterns.

Very often we are not consciously aware of our mental models or the effects they have on our behavior, particularly in limiting us to certain strains of thought. So managing and critically exploring our internal pictures of how the world works, is a powerful way to influence sustainability outcomes (Meadows 1999). In the context of sustainability transformation, particular attention has been given also to how our values towards nature and our nature-connectedness influence attitudes and behaviours (for example Schultz et al. 2005, Singleton 2015).

Göpel (2016) stresses how paradigms or patterns of thought are crucial since mindsets guide policies. For example, what do we consider to be progress? Or what do we perceive as normal? Lately more emphasis has been put also to 'neurological reflexivity', which includes self-awareness, understanding beliefs, assumptions and other factors or drivers associated with an activity or an experience. Such an approach differs from 'nudging' sustainable behaviors, where the environment changes but deeper levels of attitudes, values and motivations do not. (O'Brien and Sygma 2013, 6). There is a growing body of research on values, worldviews, beliefs, self-efficacy and ecological citizenship focusing on the potential of individuals and groups to become agents of change (O'Brien and Wolf 2010; Hedlund-de Witt 2013, Ives et al. 2019, Wamsler 2021, Woiwode et al 2022).

As Meadow's (1999) stresses, the process of paradigm change in a single individual "can happen in a millisecond. All it takes is a click in the mind, a falling of scales from eyes, a new way of seeing". However, one can easily argue that intentional change in *societal* values is unrealistic (for example Manfredo et al 2017). While it is agreed that values are a root of action and they are indeed deep leverage points, recognizing the possibility of leverage does not demonstrate that change is achievable. Manfredo et al. note that there are no actual case studies to support the hopes for a desired outcome, and that values are more backward looking than forward looking. Values do not arise and spawn new behavior but rather new behaviors become advantageous and routine, giving rise to new values (Manfredo et al 2017, 2-3.)

In this development project, there is no fallacy that changing societal mindsets or societal values would be a straightforward exercise – or even possible in the end. But as the inner dimension has been a neglected side of the ecological transformation, it might be worth exploring the dynamics of mindshifting practices further? And as Manfredo et al (2017, 6) also state, "a significant task will anyhow be understanding, reconciling and respecting diverse

values relating to achieving sustainability" – and this also requires focusing on the inner worlds in building global citizenship and (un)learning for sustainability.

3.3   Transformative learning for sustainability

In the context of sustainability transformation, there have been calls for fundamental mindshift and the need to develop a new eco-social worldview as empathetic global citizens (for example Bardy & Salonen 2015, Laininen 2018, Rimanoczy 2021). Transformative or transformational learning has been considered a key enabler for the development of this kind of worldview (Laininen 2018, Hermes & Rimanoczy 2018).

Transformational learning is a theory of (adult) learning that "fundamentally changes our perceptions of being and our relationship to the surrounding reality" (O'Sullivan et al 2003). Climate change and nature loss both require us to critically examine the way we operate and fundamentally change some practices and thus require transformational learning (Sterling 2010).

Jack Mezirow is known as the founder of transformational learning (TL). In his learner-centric theory, learning begins with the shift to conscious and reflective learning experiences, which will result in a change in previously accepted worldviews and perspectives. Mezirow (2010) highlights the role of meaning perspectives and meaning schemes in learning. Meaning perspective is the frame of reference of assumptions adopted already in childhood, where past experiences determine how new issues are experienced or adopted. Meaning schemes are unconscious beliefs, assumptions and thoughts that have an effect on our interpretations. Mezirow's conceptualization of transformation in the meaning process involves 10 phases, and begins with the experience of a "disorienting dilemma" (Mezirow 2000). While studies have confirmed the general model of perspective transformation, several have found the process to be non-linear (Taylor 2007).

Inspired by Habermas' domains of learning, Mezirow has divided learning to instrumental, communicative and transformative. Instrumental learning is about problem-solving where an individual is examining the best way to perform a task. Communicative learning is based on finding a common understanding. Knowledge building is gradual and happens in a dialogue with others. When an individual can freely express their own frames of reference, they become sensitized to those of others, which leads to inner reforms. In TL both dimensions – individual and social – can be seen. In TL we become aware of our frame of reference – what influences the way we accumulate knowledge and what values we base our views on. TL can happen both in instrumental or communicative learning. (Mezirow 2000, 19-20.)

Mezirow's theory has been the dominant learning theory for decades and has been extensively studied and also critizised from numerous viewpoints. One key area of criticism is that the

theory tends to overemphasize the rational and cognitive aspects of learning (for example Mälkki 2010). TL has also been criticized for the missing links between theory and practice (for example Cranton 1996), and it's research for determinism; capturing transformative learning experiences and repeating them in various settings (of higher education); and on a narrow focus on formal educational settings (for example Taylor 2007, Taylor & Cranton 2013).

Based on the research of transformational learning on sustainability, it is clear that overemphasis of rational aspects of learning is a major deficit of the theory. Recently the spiritual or the emotional aspects of learning have gained more foothold in the evolving theory (see for example Hedlund-de Witt 2013, Singleton 2015, Rimanoczy 2021, Wamsler 2020, Woiwode et al 2021). Transformational learning is challenging for the learner as is designing transformational education (see Sterling, 2010, p. 29). Some key elements can, however, be drawn from different studies. In the following focus is particularly on the elements that aim to define transformational learning in the context of the ecological crisis.

Bryant et al (2021) have summarized the different elements or learning conditions identified in the recent studies on transformational learning or best practice methods for sustainability leadership. Two elements common to all studies were *social interaction* among learners as well as *experiential learning* beyond formal classroom. Social interaction and learning from others has been shown to support also leadership development (for example Aaltola et al. 2022).

Salonen and Bardy (2015) state that regenerative learning guides us to critically examine the reality we live in and shake dominant worldviews. It influences us through *emotions* and uses *experience-based creative methods* and *"learning by doing"* approach. We see new solutions and understand that we are in fact part of those solutions. This is also echoed in Singleton's (2015) *Head, hands and heart* model for transformative learning.

O'Brien (2018) emphasizes questioning the assumptions that are explicit and implicit in current development pathways and practices. Ability for critical thinking, new thinking models and active participation are prerequisites for transformative learning. In exploring "what if?" and "why not?" we start to see things differently. According to Laininen (2018), the cornerstones of ecological civilization are adapted through dialogue, critical reflection, exchanging experiences and concrete actions.

Laininen has divided transformational learning to ecosocial civilization to four phases where you first discuss and critically reflect the assumptions of ecosocial civilization, second these skills are put to test and examined and constructed through experiences, third, skills are used for empowering individual and joint action and fourth, the worldview of the learner has been renewed and she or he becomes an agent of change. This requires also different skillsets,

scheems and attitudes: developing a systemic approach, being responsible, moderate and future-oriented. (Laininen 2018, 26-35.)

Rodríguez-Aboytes & Barth (2020) have studied how transformational learning has been conceptualized and operationalized in education for sustainable development. Their extensive literature review highlights how *social learning*, *the role of experience*, and the development of *sustainability competences* are inherent to transformative learning. Interestingly, the leadership skills nor holistic personal development were not highlighted in their literature review (Bryant et al. 2021).

Hermes and Rimanoczy (2018) distinguish two components that based on their study are essential to developing a sustainability mindset, namely the *systemic and innovative thinking* dimension and the *being* dimension. They provide a fruitful zoom-in on the transformational learning theory as well as addressing also experience and feelings-based (not necessarily rational and cognitive) aspects to transformative learning.

Rimanoczy's latest (2021) conceptualization of the key principles of the sustainability mindset is a sophisticated yet practical framework shining light also on the inner capabilities of sustainability leadership. It also captures most of the essential elements presented in other, more narrowly focused studies and is worth looking into in detail. The key principles are illustrated below (figure 3). They include the ecological worldview (understanding the state of the planet and my contribution to it), systems perspective (considering long-term perspective, adopting both-and-logic to help us understand paradoxes and develop inclusive solutions, and considering diversity and interconnectedness), spiritual intelligence (oneness with nature, mindfulness and purpose) and emotional intelligence (creative thinking, right-brain perspective, reflection, self-awareness).
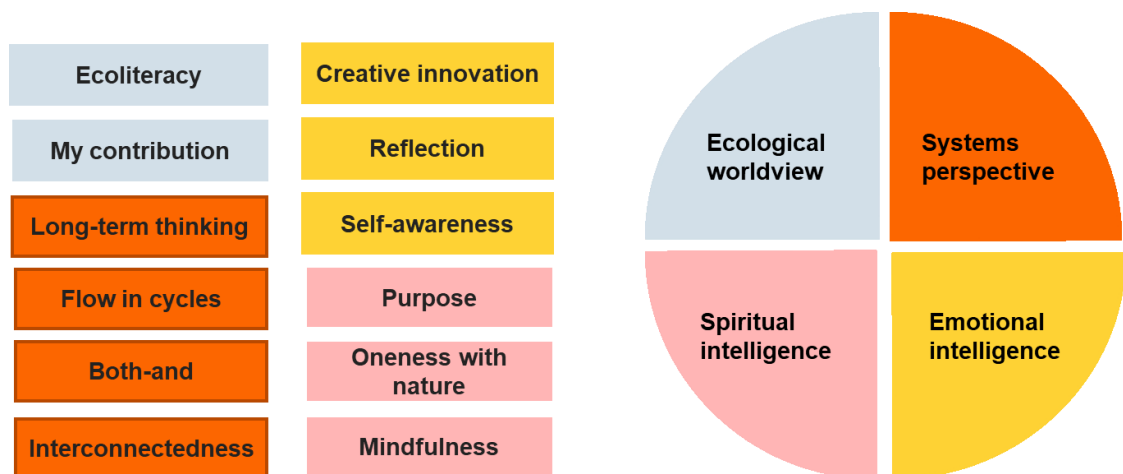

Figure 3: Twelve interconnected principles of the sustainability mindset (adapted from Rimanoczy 2021)

Ecological worldview points to a broad view, connecting the dots, seeing complexity, engaging feelings and making it personal. Systems perspective highlights relationships between things, seeing the whole instead of its parts, and seeking patterns, flows, processes and feedback loops. Emotional intelligence aims at spurring innovation and boosting resilience, reflection and awareness, and spiritual intelligence entails intuitive, holistic and integral thinking, peace of mind and compassion and empathy. Rimanoczy lists teaching goals and meta goals for each of the principles thus guiding the practical development of a course or a programme curricula. An essential point made in the book is that the facilitator of these classes of programmes should also make these principles visible and known when teaching. This, on its part, increases also the reflection and the awareness of the learners. (Rimanoczy 2021.)

All of these components are essential to a transformational learning experience, but Rimamoczy highlights that if all cannot be fitted into one programme, those that should not be left out are My contribution, Reflection, Self-Awareness, Purpose and Mindfulness. This is because of three reasons:

1) If we understand our own contribution better, it can be empowering and lead to action
2) Reflection is connected to all other principles
3) Self-awareness relates to the values that anchor us personally in unsustainable behaviors and becomes a powerful leverage point when discussed and same can be seen with Purpose and Mindfulness practices, which are seldom integrated in teaching practices. (Rimanoczy 2021.)

Considering the constraints of conventional education, it's well-justified to question whether mainstream higher education is able to provide transformative learning experiences or whether it is inevitably associated with innovative learning environments (see for example Sterling 2011). What is clear, however, that there is an urgent – if not unprecedented – need to multiply these kind of learning opportunities in different educational settings.

4   The design process

The main research objective of the thesis is to develop a learning concept to young business leaders to support their agency in the response to the global ecological crisis. This thesis approaches the development task with the help and tools of design thinking.

Design thinking has been widely applied in the context of solving so-called wicked problems as it offers a qualitative, holistic and user centric approach with tools designed to help communicate and test new services and concepts (Ojasalo et al. 2015, Brown 2008).

Many definitions of design thinking or service design (which, indeed, are often used as synonyms) highlight the role of the customer. As design thinking is not only an approach, but a set of methods, it is easy to see why this kind of development task will benefit from this approach.

First, design methods help to put people first and empathize and this is what we needed to do. We needed to understand next generation business leaders' operating environment, their hopes and fears, pains and gains to be able to provide them with added value and somehow fit to their packed up daily agendas.

Secondly, we were developing something completely new. Biodiversity as a problem hasn't received as much attention in the public discussion as for example climate change has, business approach to nature loss is still at its infancy. There's plenty of research on transformational learning for sustainability, but its applications in non-formal education settings haven't been studied extensively. Furthermore, also the case project, Puistokatu 4, is still under renovation and planning at the time of writing this thesis. Each step to develop the concept further is an important building block to the project. Traditional new service development methods derived from process industry didn't seem suitable as we were operating in an unfamiliar territory.

Thirdly, we wanted to embed learning by doing into the DNA of the organization of Puistokatu 4. As none of the core team members were experts in new service development nor design thinking and the project didn't have a traditional strategy nor clearly defined goals, quick experiments (and failing fast, if needed!) were of essence to flesh out the broader goals, strengths and weaknesses of the concept and the project.

Finally the customer promise given by Puistokatu 4 to its core audience in the social media and on their website is that the spirit, the programme and the mission of Puistokatu 4 are built together with them and their contribution is important. Until we embarked on this design project, the opportunities for wider participation had been meager. Thus this project could serve as an experiment and a showcase how to design and develop user centric solutions together with the users.

This chapter focuses on the design process explaining how the development work progressed and what were the different methods utilized. Some of the intermediate results are also presented to demonstrate how the insights gained directed the design process.

The process and the methods are illustrated below in figure 4. Visualization follows the popular process model Double Diamond by the British Design Council (see for example Design Council 2015). The Double Diamond model was selected as a process model in this thesis for

its clarity and usability. It is easily comprehendible also to those that are not so familiar with service design and design thinking.

The model visualizes the need for divergent and convergent thinking in the design process. First diamond focuses on the problem to make sure we are solving the *right problem*. Second diamond focuses on *solving the problem right*, so that the solutions suggested are relevant and useful. Model is always a simplification and so is this one: divergent and convergent thinking happen also within the different phases of the diamond.

In all the phases different service design and co-development methods were utilized. In the first phase (discover) information was sought through desk research and customer interviews. In the define phase key insights from the previous phase were synthesized and visualized. The development phase was about ideating the concept. The final phase, Deliver, was outside the scope of this thesis.
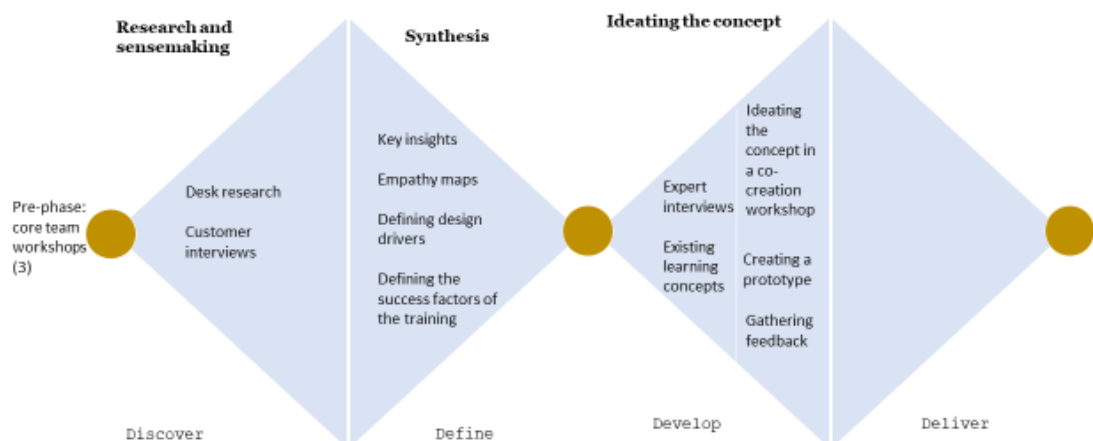

Figure 4: The double diamond process in the thesis.

4.1   Understanding the starting point: the pre-phase of the development project

In the following, I will cover the process of developing Puistokatu 4 before me joining the project and the early steps to define the focus for the development project. This understanding is based on the documentation received from the team as well as background discussions with team members and three online workshops I facilitated for the core team in March 2022.

The process of defining the scope for Puistokatu 4 had started already in 2020 but had progressed at a careful pace because of the Covid-19 situation and also because the renovation of the actual space would not be finished before summer 2022.

Co-creation was at the heart of the project from the beginning. The foundations had discussed with different stakeholders to identify possible needs that Puistokatu 4 could answer. Background interviews included people from the start-up hub Maria 01, think tanks Demos Helsinki and Sitra Fund, city of Helsinki, different NGOs and universities as well as independent sustainability researchers. Expectations from different stakeholders towards the project naturally reflected their own interests and goals. Some hoped that Puistokatu 4 would be an educational space with a special focus on school kids, some were expecting an international science hub, others an exhibition space bringing together art and science on the ecological crisis.

Key insights from those discussions were summarized in the presentation to the boards of the foundations in April 2020. These included the following:

- There are numerous actors in Finland with a very similar mission: building a sustainable future. A space for bringing these groups together under one roof was however missing.
- Reaching out to very different stakeholders is best done in collaboration with different actors.
- Building a dialogue between these different groups should be at the core of Puistokatu 4. This also applies to the researchers planned to be working in the attic of the building.
- Dialogue as an approach would enable the multi-sided learning and the research done in Puistokatu 4 to resonate more widely into the society.
- Local action could and should also have global implications?

Since 2020, along with developing the concept, the core team had focused on defining the mission, vision and purpose for the project. There had been initial discussions on target groups and different experiments on how to communicate the project to different audiences in social media, on their website and through different online events.

Workshops to clarify the objectives

I joined the project in the late autumn 2021. Having examined these documents and insights presented earlier in this chapter as well as the information made publicly available at Puistokatu4.fi, I suggested a few sessions with the core team to better understand where the process was at currently and how I might help them with it. After a delay we set a date for a kick-off workshop for the project in March.

In March 2022 I facilitated altogether three workshops (10.3., 15.3. and 24.3.). Because of the Covid-19 situtation, all workshops were held online using Teams, Google Slides and Google Jamboard.

The first core team workshop, 10th March – creating a shared vision and understanding

The goal of the first workshop was to get the core team to articulate their understanding of the purpose of Puistokatu 4. The workshop lasted for two hours and consisted of a warm-up, a visioning exercise, the identification of the problems that Puistokatu 4 wanted to answer and some ideating for answers with How might we –questions.

In a visioning exercise, potential goals for the mission were identified. These included alleviating eco anxiety of young people, changing attitudes, bringing young people to different decision-making bodies, empowering researchers, influencing business leaders to take the ecological crisis more seriously and influencing school curriculas etc. The goals were still quite heterogeneous and the whole team didn't have a strong common understanding of the most important goal. This could be due to a few members of the team being newly recruited and although the goals could be read between the lines, there was no shared strategy document aside from what was on the website of the project.

We continued looking into the specific problems Puistokatu 4 wanted to solve. Following four problems were identified:

- Public discussion around the ecological crisis is polarized and doesn't promote solutions
- People are left alone with their eco anxiety
- The change in attitudes is not fast enough to match the pace that the ecological crisis is proceeding with
- Knowledge and understanding of the extent of the problems doesn't translate to action

We discussed each problem separately and considered what Puistokatu 4's role in solving them might be.

Before finishing up, we considered the three aspects of the project through the lenses of Simon Sinek's (2009) Golden Circle (see figure 5). The 'what' of the project was identified as providing a platform for discussions and action and gathering a community. The 'how' was highlighted in the discussion. It was of essence that the dialogues held under the umbrella of Puistokatu 4 would be psychologically safe, empathetic, human, understanding, allowing for incompleteness, warm, whole-hearted and bringing sensuous knowledge to be equally important as scientific knowledge. The 'why' was still left somewhat vague, but the team

concluded that the project wants to normalize living within planetary boundaries – a statement also made in the public website of the project.
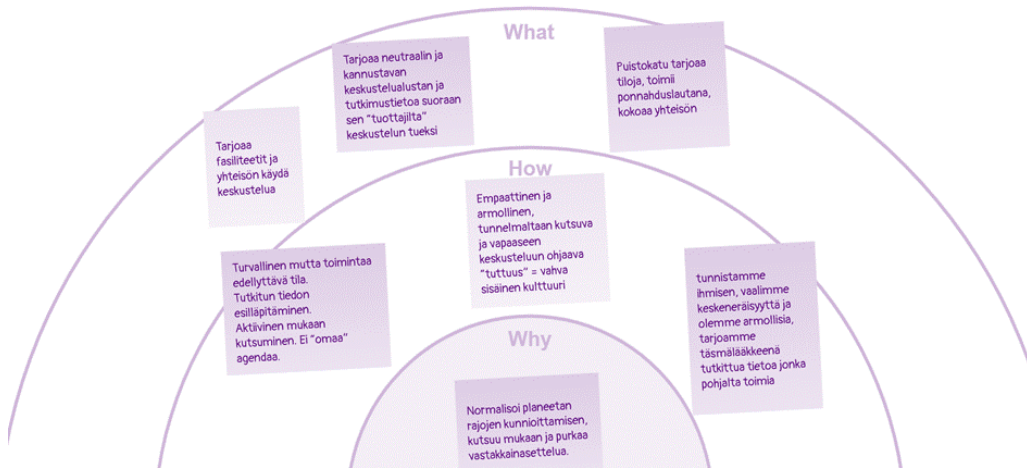

Figure 5: First core team workshop in March 2022. Using Simon Sinek's (2009) Golden Circle to define the mission of Puistokatu 4.

We concluded that the team still had quite different ideas, what the purpose of Puistokatu 4 was and further discussions were needed on where to focus first.

Second core team workshop, 15th March – choosing the focus for the development task

The goal of the second workshop was to narrow down the focus. What would be the most important goal the team wanted to work on? The duration of the workshop was 1.5 hours.

In the beginning of the workshop, each team member was given three votes. Out of the 15 different goals identified in the previous workshop, top 4 was selected. After a joint discussion, two further goals were dropped and the team continued discussing the two remaining goals: influencing business leaders and alleviating eco anxiety. Discussions focused on what were the strengths of Puistokatu 4 as a team and as a project. Based on the dialogue, the team concluded that they wanted to focus on business leaders. We continued from there to consider what could be a measurable goal to define success and what could be the relevant indicators – just to bring enough tangibility to the ideas presented in the discussion.

Third core team workshop, 24th March – basing our assumptions on data

Ecological crisis is a global megatrend whose relation to business leaders can be examined from a number of viewpoints. Where could Puistokatu 4 be of significance? This was the topic of the third workshop. In the workshop we looked into recent data on ecological crisis and businesses in Finland. According to a survey by FIBS describing the strategic and business

importance of sustainability for the largest companies of Finland, climate change is on the radar for most of the companies, but only 13 per cent considered biodiversity loss to be one of the focus areas within the coming year. The same applies for the company's own impact: 69 % of the respondents say that their business has had a positive impact on climate mitigation efforts, whereas for biodiversity the percentage is only 20. (FIBS 2021)

The same insight was reinforced by Business Finland's survey for small and medium sized businesses, also from 2021. According to the respondents, within the next five years, sustainable consumption and climate change are key themes for businesses (68 and 67 percent respectively), and only 19 percent consider biodiversity loss as a key theme. (Business Finland 2021.)

Perhaps this could and should be something in which Puistokatu 4 could play a role as mindshifter? The core team had decided already earlier that one of the key target groups for Puistokatu 4 would be young leaders (20-40-year olds). So before we concluded the third workshop, we did a small exercise to ideate what Puistokatu 4 could offer young business leaders to help them bring biodiversity loss more prominently to their business strategies. Ideas included study circles, communication campaigns and testimonials, co-creation workshops, lectures etc. One key idea that seemed to resonate the most with the team was to build a training or a leadership programme on the ecological crisis.

4.2   Discovering opportunities: business leaders' perspectives on biodiversity loss

Discovery phase is all about creating a space for divergent thinking. In this phase of the project, one seeks new information, studies the users' needs, possible competitors and the market. Possible methods for the research are for example market research, individual or group interviews, probes and diaries (Design Council 2015, Stickdorn et al 2018). In the thesis study the discovery phase focused on what young business leaders think of biodiversity loss and its relevance to their business, and the insights were sought through desk research and interviews.

Before conducting the interviews, the thesis writer wanted to have a better understanding of how biodiversity and business performance are interlinked. The goal for the first part of the desk research was to understand the state of biodiversity management in businesses at the moment as well as the recent developments in the regulatory environment. Recent surveys, newspaper articles and government and EU websites were studied. With the help of this understanding, the thesis writer was able to draft interview questions that were relevant and well grounded.

Interviews are a particularly suitable method in situations where one enters a new and unchartered territory and the researcher doesn't know the directions of the answers

beforehand (Hirsjärvi & Hurme 2008, 35). As the views of CEOs on biodiversity have only been examined via surveys (for example FIBS 2021, PwC 2022), interviews were a relevant method to gain deeper insights, build up a genuine understanding of their contexts, hopes and fears (Stickdorn et al 2018, 97). As a former journalist I was also familiar with different interview techniques and had years of experience in conducting interviews. Through interviews the aim was to gather insights to guide the development process of the concept (Portigal 2013, 3-4).

Altogether seven interviews were conducted in April 2022 (see figure 6). The strategy for choosing participants for the interviews was purposive. Recruitment criteria consisted of the following: aged 20-40, works as a business leader in a manufacturing or service company and in a position where it is possible to influence and drive changes to the company's strategy (CEO, strategy director, industry director, board member etc). Furthermore we narrowed down the focus to sectors where the biodiversity risk is moderate because there the link to strategy is not obvious, but perhaps more dependent on executives driving change.
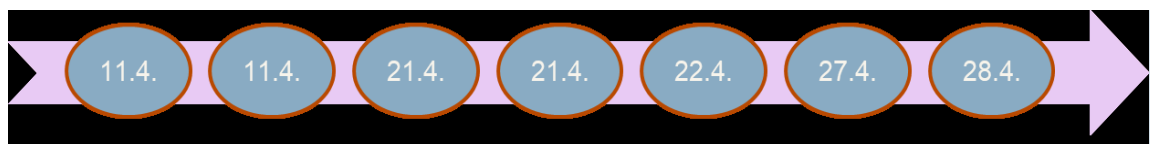

Figure 6: Interviews conducted in April 2022

Since the goal was to understand the potential users of a service concept that combines biodiversity loss and change-making in a business context, it was important that the participants were in a position in which they could possibly be interested in joining the events and consuming the content.

Interviews were open-ended, semi-structured, holistic in-person interviews with the focus on the respondents problem solving, because new service concepts often emerge from a problem that was once unmet (Alan 2006, 18).

The interview questions were directed toward three categories:

1) what the leader thinks about the ecological crisis and it's impact on his/her business and how these issues are currently taken into account
2) what factors are encouraging and inhibiting integrating biodiversity into business strategies and
3) what kind of learning needs do these leaders have that Puistokatu 4 could perhaps meet.

A field guide (appendix 1) was prepared according to Portigal (2013), consisting of questions of specific interest regarding these three topics. The illustration of the three spheres of

sustainability transformation (O'Brien and Sygna 2013) were also used as a boundary object to evoke conversation and encourage thinking of different leverage points.

The interviews lasted from 40 to 70 minutes, and all were conducted via Teams by the thesis writer. The interviewees were told that the interview was anonymous. Permission to record and transcribe the interviews was asked, and the interviewees were told that the recordings would be deleted right after the analysis had been made. The topic and the objective were presented at the beginning of the interview and the interviewees were allowed to reflect openly on the topic and ask questions or raise issues.

The same field guide was not used in all interviews. After the two first interviews, a short explanation of what biodiversity loss is, was added to the beginning of the interview. It was clear that interviewees understood the term quite differently or the term was somewhat unfamiliar altogether. Also a numeric scale question was added after the first two interviews to be able to scope the familiarity of the topic before going deeper into it.

4.3 Defining the brief for the development phase

In the defining phase the information gathered in the discovery phase is being filtered to find key insights for the development phase. What kind of opportunities arise from the information gathered? What is of significance? Customer insight of this phase makes sure that the development of solutions is based on right kind of information and questions. The focus is on convergent thinking since the objective was to use the insights to make decisions and choose the directions before starting the development phase (Design Council 2015).

4.3.1 Analyzing the interviews

The interviews conducted in the discovery phase were analyzed via content analysis. First all the interviews were transcribed to Word. Transcribing an hour-long interview took about 2-3 hours. Not all words were transcribed but the key points made by the interviewee were captured.

In qualitative analysis one always needs to make a decision on what is interesting in the material gathered. After that, these are extracted from the material and classified or sorted into themes. Content analysis can be based on the material or on a theory. In this development project the analysis was content-based although the theoretical framework of sustainability transformation worked as a frame of reference as well as a boundary object in the interviews. The focus was still on identifying themes and topics that arose from the material (Tuomi & Sarajärvi 2018, 108). In practice this was done with affinity mapping, which is a technique to organize ideas or information by common themes or relationships.

Affinity mapping is especially useful in strategic phases of the design processes, here to empathize with the customer.

Interesting points from the transcribed interviews were first written on post-it notes. Each piece of information, hopes, wishes, attitudes or pains were written on a note of their own. After that these post-its covering closely-related issues were grouped and clusters began to form. On the first round there were seven categories: interviewee's attitude towards biodiversity and the ecological crisis, the nature of biodiversity decline as a problem, obstacles and motivations to integrate biodiversity loss to corporate strategies, concrete solutions suggested, great learning examples and concrete hopes and wishes for Puistokatu 4.

Figure 7: Affinity mapping at the home office in process.

On the second round the material was continued to cluster and new connections found. As material was further abstracted, finally six categories were formed.

- Knowledge and know-how
- Networks and references
- Values and attitudes
- Organizational culture
- Change leadership
- Ideas and hopes for Puistokatu 4

The core of the analysis were the first five categories. As the interviewees also raised a number of concrete issues they hoped that Puistokatu 4 would address, these were recorded not only for this project but also for the development of possible concepts in the future and for the use of the Puistokatu 4 team.

Key insights from the analysis were gathered into a power point presentation, and are also presented in chapter 5.

Empathy maps

Based on the analysis, empathy maps were formed to visualize thoughts and attitudes related to biodiversity and business. In practice this was done based on the five categories excluding concrete hopes and wishes for Puistokatu 4. Empathy map is a tool focusing on users feelings, thoughts, ideas and attitudes towards a pre-defined issue. These summarize the thinking of business leaders on the current biodiversity discussion and its integration to business strategies as well as personal attitudes, needs and hopes.

When the notes were divided under the five categories, each category was observed individually. Based on this analysis, two sub-categories were formed: leaders driven with intrinsic motivation and leaders driven with extrinsic motivation. Thus two empathy maps were drafted: A Change Driver and An Opportunity Seizer.

4.3.2   Defining the design drivers and learning objectives

After the analysis of the interviews, I had a better understanding of the context and thinking around biodiversity as an issue in the business context and the problems leaders were facing with integrating it more closely to their strategies. The academic research on ecological transformation and its leverage points as well as elements of transformational learning further informed the development of a potential learning concept on biodiversity for business leaders.

The analysis phase indicated that, yes, there definitely is demand for a training concept or more accurately a leadership programme that combines inner transformation to practical tools for biodiversity considerations in a business context. All the interviewed leaders viewed solving the ecological crisis as important and as part of their future business survival. However, an important distinguishing factor was whether the motivation was intrinsic or extrinsic. This would have implications also to the learning concept development.

Certain characteristics that define both the content and the design of the programme were uncovered. Based on the insights from the interviews and the desk research combined with the theoretical approaches in Chapter 3, six design drivers for the development work were identified. Design drivers are features that guide the design process and tools to communicate the sensemaking from the discovery phase toward the development phase. The drivers describe what is essential to the final concept. In this development phase also the the learning objectives was identified.

4.4   Developing the learning concept

The development phase of the service design process starts the actual development of a product, service or another concept. In this phase the concept is developed, prototyped and tested.

In this phase the design problem also received a more precise form: *What kind of transformational learning concept would best support engaging business leaders on the ecological crisis?* The development phase started with a desktop study on already existing learning concepts on sustainability. Based on the insights from those concepts and the design brief, a co-creation workshop was organized to further ideate a transformational learning concept on ecological sustainability.

4.4.1   Desk research on existing transformative learning concepts

Both from the early core team workshops as well as from the interviews arouse the need to chart what kind of existing learning concepts had already been developed for leaders on sustainability issues addressing all three spheres of transformation but putting particular emphasis on the mindsets, worldviews and intrinsic capacity development of the leaders. To support the development of a leadership programme on the ecological crisis, practical examples of learning concepts focusing on inner development were sought. The goal of this desk research was to find recent innovations and other solutions in the area of the design challenge – whether they are technological, behavioural or cultural. Knowing what has been done and what has worked, and understanding the edge of what is possible, helps later in the ideation phase.

In my desk research I focused on finding out about transformational learning concepts for ecological sustainability. I started my round of research in Google Scholar and Google. The articles led me to understand the practical applications of transformational learning for sustainability have been rather limited and only quite recently implemented. It also helped to understand what elements have worked well and brought forth also student's perceptions of the learnings and benefits.

Based on my research, I was able to identify key researchers and institutions working on the field – these were mainly in the Nordic countries. Identifying the universities and other actors who are developing transformative learning programmes pushed me forwards with the design challenge. Through research and interviews, the National Defence Course was also picked as an example of a successful leadership development course and it's approach and content examined. The knowledge was useful in the next stage of the process, as we further refined the design drivers for the concept development process.

4.4.2   Concept development workshop with the core team and key stakeholders

Concept development workshop was conducted on 4th of May 2022. The core team of Puistokatu 4 as well as representatives from the target group, partner organizations, executive training expert and a sustainability influencer were invited to the 3-hour workshop with the working title "Planetary Defence Course". Altogether 10 people attended.

The goals of the workshop were to

A. introduce the concept of Puistokatu 4 to the outside members invited to the workshop
B. introduce insights from the interviews and desk research, and based on those
C. envision what kind of learning concept would best increase the understanding and engagement of business leaders on biodiversity and on the ecological crisis as a whole.

The workshop was facilitated by the thesis writer together with another service design student. Planning was done by the thesis writer. Selecting suitable methods and designing the structure and flow of the workshop took two full days, as the methods were chosen carefully and a minute schedule for the workshop was planned.

The workshop kicked off with a short icebreaker to introduce participants to each other and focus on the issue at hand. The exercise used was Four Quadrants (Session Lab 2022). In this exercise each participant is given a paper and a pen and asked to divide their paper into four quadrants. Then they were asked to draw responses to four questions (one for each quadrant). The questions were: 1) What made you happy this morning? 2) What do you bring to this workshop? 3) What do you think should be the most important goal for a learning concept on the ecological crisis for leaders? 4) What is the single most important event in your life with regards to the ecological crisis?

The questions worked well as a method of self-introduction making participants more human and a little vulnerable – as well as focusing attention to the goal of the workshop: defining the goal and the contents of the training concept. Drawing instead of writing the answers was also a way to exercise the creativity muscles before the ideation phase. Making things visual allows the complex to be made simple, which in turn helps to communicate thoughts and ideas rapidly (Design Council 2015, Stickdorn et al 2018). The facilitator recorded the answers to the goal of the learning concept on a flip chart so that they would be visible to all.

After the introductions, a short brief on the concept of Puistokatu 4 was given by a core team member. Following that, the author of the thesis briefed the participants of the insights from

the interviews and desk research. After that the goals written down on the flipchart were revisited and refined through a joint discussion.

In the second phase of the workshop the goal was to use the insights from the interviews, desktop research and from the concept and spin-offs from the National Defence Course as design drivers for the development of the learning concept. The participants were divided into two groups where one focused designing a concept for the Change Driver and the other on the Opportunity Seizer to keep the focus on the customer while ideating. As a lead facilitator, the thesis writer tried to shuffle between the two groups, but mostly one group was facilitated by the thesis writer and the other by the student colleague.

First, the participants ideated how the design drivers would translate into the context of a leadership course on the ecological crisis. Ideation was organized as an element board, where the design drivers (see subchapter 5.2.3) – exclusive, personal & deep, systemic, collaborative, topical and relevant, and continuous – acted as pre-defined categories. This method is particularly suitable for issues with a number of sub-categories (Kantojärvi 2012, 142-146). According to Stickdorn et al (2018), analogies can be a very useful method to kick-start an ideation process and make a difficult problem seem more manageable. Analogies are especially valuable when good analogies can be prepared. In this development project, the analogy was created from National Defence Course enriched by the perceptions and needs of the customers and learnings from different examples of studies on transformative learning.

Figure 8: Members of group 1 ideating to the element board

In addition to the empathy maps, different prompts were given to help the ideation: the extended descriptions of the design drivers were taped on the wall so that they were visible in full. Quotes from the business leaders' interviews as well as names and companies they

mentioned when asked about memorable presentations or people who have had an influence on their thinking on the ecological crisis or exemplary, pioneering businesses. After the silent brainwriting phase, the ideas were discussed openly and ideas that were provoked by the already existing ideas were added. Similar ideas were clustered together.

Next participants chose the ideas they wanted to focus on. Each participant was given 5 votes: one for their favorite idea, one for an extreme of particularly creative idea and 1 for a rational idea + 2 extra votes.

Altogether 12 ideas were selected to the next phase, where participants placed them on an impact/ease matrix. Because two variables used, the method is a good way to balance different needs (Stickdorn et al 2018). As with most "decision" tools, the discussion the groups had while using the tool was as important as the tool itself. Especially the question of "easiness" provoked discussion on whether Puistokatu 4 was the actual organizer or acted more as a platform and enabler. This led to the final phase of identifying other stakeholders needed to execute the ideas.

Figure 9: Group 2 discussing the early prototype (invitation letter) in the workshop.

The final last task for the groups was to create an invitation letter to a participant selected to take the course. The groups were guided to think of a preliminary course structure based on the ideas, their pitch based on the design drivers and the customer (The Change Driver or the Opportunity Seizer) and who would the invitation need to come from to be engaging for them. As a final task the groups presented their invitation letters to the other group. After the presentations and final discussions the workshop ended.

4.4.3   Prototype development and feedback

The key ideas and the questions that arouse from the workshop were gathered into a PowerPoint presentation and discussed in a meeting with the core team a week after the workshop. Based on the discussion, the objectives of the learning programme were further clarified and the first concept description including formats and methods drafted.

Next the prototype of the learning programme was developed. Prototyping can be a powerful tool to make abstract concepts tangible and facilitate the exploration of new ideas. We decided to develop a course structure and an invitation letter based on the preliminary letters drafted in the workshop. Invitation letter acted as a service advertisement – as Stickdorn et al (2018) point out, they can help to "quickly explore and capture potential core value propositions that are inherent in a design concept".

The actual prototype development was done in Google docs. First, the thesis writer wrote the invitation letter merging the work of the two groups in the workshop. Second, key ideas or essential elements identified in the workshop to form the basic structure of the course were included. Third, the list of topics created and the structure was reflected with the success factors of the leadership programme. The emphasis of the programme was on the intrinsic transformation and transformational learning to developing sustainability mindset (Rimanoczy 2021).

The prototype was developed further online by the core team and the discussion was through the comments in Google docs. When the team was satisfied with the prototype, the invitation letter and the programme (appendix 2) were sent to the interviewed business leaders with the request to review it and give us feedback, if possible. Questions posed for the interviewee's were: How do you feel about the invitation and the programme? Would you be interested in attending? Any feedback on the programme content and structure? What would you like to see more of or less of?

Unfortunately only two interviewees had the opportunity to provide feedback. The feedback was mainly positive, with some questions raised and improvements suggested. Within the timeframe of this thesis, it was not possible to develop an iterated version based on the feedback. The team did however discuss the feedback, and concluded that particularly the target group must be more clearly defined to continue refining the programme and the methods.

5   Results of the development process

In this chapter the key results of the development process of a transformative learning concept on ecological sustainability are summarized. The stages of the process were 1) Gathering insights with interviews 2) Defining design drivers for the learning concept with the help of desk research 3) Ideating the concept with a creative workshop and 4) Creating a prototype and testing it.

In subchapter 5.1 the results of the customer insight phase are described, discovering the factors influencing the business leaders' decisions to integrate biodiversity considerations more closely to their respective business strategy. Subchapter 5.2 introduces the design drivers for the concept development and subchapter 5.3. the results from the workshop and the prototype version of the Planetary Boundaries Leadership Programme.

5.1   Intrinsic motivation of the leader a key enabler of biodiversity considerations

The methods used in the discovery phase of the Double Diamond shed light both on the internal and external factors enabling or inhibiting the integration of biodiversity considerations to the business strategies.

Based on the desktop research, nature loss is rapidly making its way to the tables of decision-makers. The regulatory environment is evolving fast and currently there are a number of new EU legislation being developed and implemented. For example CSR-reporting requirements and taxonomy regulations have a major impact in businesses in the coming years. Better biodiversity management brings businesses opportunities and reduces the risks posed.

More in-depth understanding of the different factors influencing business leaders motivations were gathered through one-on-one interviewees with seven young business leaders from different industries. The interviewees reflected very openly on their knowledge, know-how and attitudes towards the sustainability crisis and biodiversity loss in particular.

Knowledge and know-how

Based on the interview analysis, nature loss is still a somewhat unfamiliar topic to young business leaders. The term in itself is not self-explanatory such as climate change is. Many respondents admitted that they are not very much aware of the issue and its relevance to their business, but also stated that they expect that to change within the coming years when media and politicians become more vocal about it. The leaders highlighted the need to understand the "big picture" in their role.

Major obstacle for considering nature loss more strategically was the lack of common indicators for businesses to report their impact on nature. One interviewee noted that that

the lack of indicators is also" an easy excuse to not start tracking the nature risk and the impact of their production chain on nature."

Networks and references

The lack of case examples of forerunner businesses was highlighted. "Everyone wants to be a forerunner, but nobody wants to be there alone", one interviewee said. Many mentioned that they couldn't find or didn't know of benchmarks or examples of how others had solved biodiversity-related issues. The few leaders who mentioned examples of biodiversity projects by other businesses, considered them more as greenwash than a genuine part of the company's long-term business strategy.

Notable was also the lack of business networks around the theme – not only on biodiversity but on the ecological sustainability as a whole. Many mentioned FIBS, but according to the interviewees, there would be a need for informal exchange and sharing experiences around these themes. Many interviewees mentioned friends as the most important discussion partners on sustainability issues.

Organizational culture

Organizational culture plays a key role in how the leaders perceived their opportunities to advance the considerations on nature loss or the sustainability agenda more broadly in their businesses. Some considered it as a strong inhibiting factor, others an enabling factor. Those that considered it an inhibiting factor said that much rests on the shoulders of individuals pushing for change, experimenting and willing to step aside from existing "efficient" processes and currently profitable models – although one could see that there was an end of the road visible for the current models.

Change leadership

Also the wider operating environment, the ethos of the industry and the role of the regulation, consumers and the investors was highlighted. As the push from the outside (customers, investors) is not yet very strong on businesses to account for their nature impact, the initiative rests on proactive leadership for change.

Interviewees highlighted the need for a holistic and realistic situational picture as a prerequisite for courageous and intelligent change leadership. When asked about their best learning experiences, many quoted examples of powerful speakers on the different sides of the ecological crisis, and a number of interviewees also raised different leadership development programmes focusing on inner capabilities as influential experiences. The Finnish National Defence Course was mentioned as an example of a holistic approach bringing in different viewpoints to the topic at hand.

Values and attitudes

Interviewee's personal concern and engagement seemed to be very much linked to environmental agency in their professional life as well. Those who mentioned being personally very worried, said that they had also actively raised these issues in management fora. Interviewees made references to their personal commitment and choices in private life such as changing to electric cars, reducing flying, or changing to a plant-based diet. They also made references to their personal relationship with nature and quoted experiences that had come to define their commitment to sustainability efforts both personally and professionally. On the other hand, there were leaders who didn't talk about their personal views, but highlighted customer demands, organizational brand and competitive advantage in the long run as key motivators for biodiversity considerations.

Intrinsic motivation as a key enabler

Based on the analysis, two empathy maps were formed to visualize thoughts and attitudes related to biodiversity and business. The main distinguishing factor for the empathy maps was intrinsic vs. extrinsic motivation of the leader. The empathy maps were named The Change Driver and The Opportunity Seizer.

The Opportunity Seizer sees nature loss as part of a broader sustainability agenda of the company. They take pride in their company as having "sustainability in their DNA." They see that the operating environment and the consumer demands are rapidly shifting and see business advantage in proactively responding to those needs. They want to lead responsibly, but as no commonly established indicators to business impact on biodiversity exist yet, they don't see sense in proceeding until they are tested and validated and standardized.

Nature loss as a theme is not that familiar, but they feel that in a few years it will be mainstream in a way climate change is now. They stress that the ecological crisis should be discussed more holistically – giving the big picture and illustrating the linkages between biodiversity loss and climate change, which is already established on the business agenda.
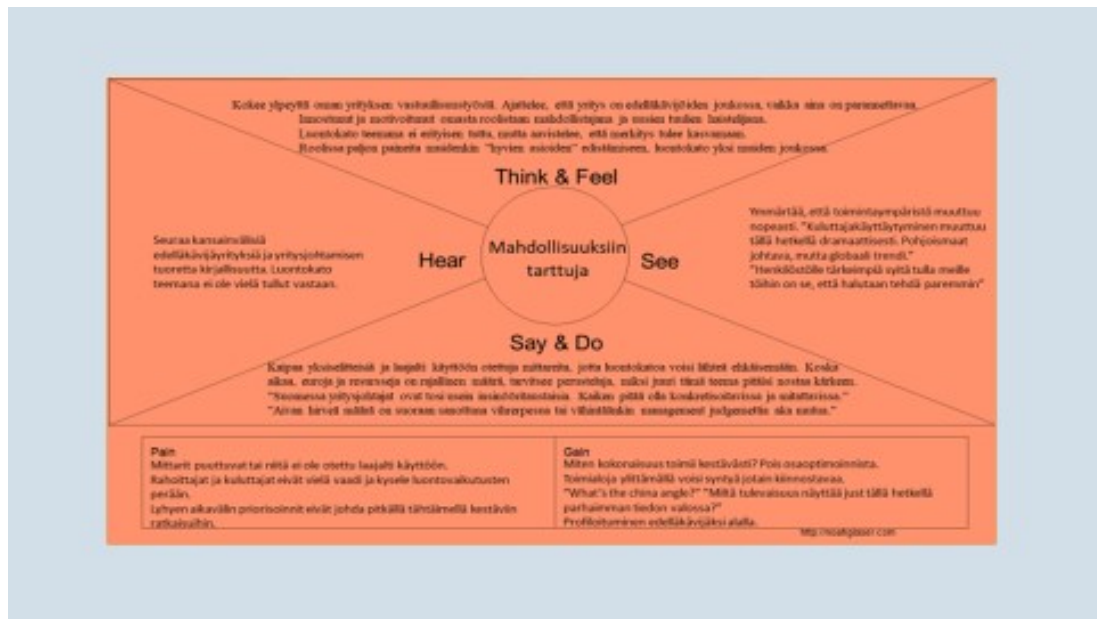
Figure 10: Empathy map: The Opportunity Seizer

The other empathy map is the *Change Driver*. They are passionate about solving the ecological crisis and see it also as a key component of their work. They make references to sustainable choices in their personal life when explaining how important the topic is for them professionally. They are more knowledgeable about nature loss than the average business leader, but would like to learn more. They feel that activists and business leaders are actually "on the same side" – just the means for solving the ecological crisis are different.

The Change Drivers want to champion initiatives in their businesses to help reduce their negative impact – or to make a positive impact. They are constantly looking for ways to do more to push the ecological agenda, but need practical tools and reference cases to drive change in their work context. They also see problems with continuous pursuit for growth on a finite planet, but try to push this cognitive dissonance aside and do what is possible within the current system. They would benefit from a network of passioned leaders to not to feel alone in their endeavor.
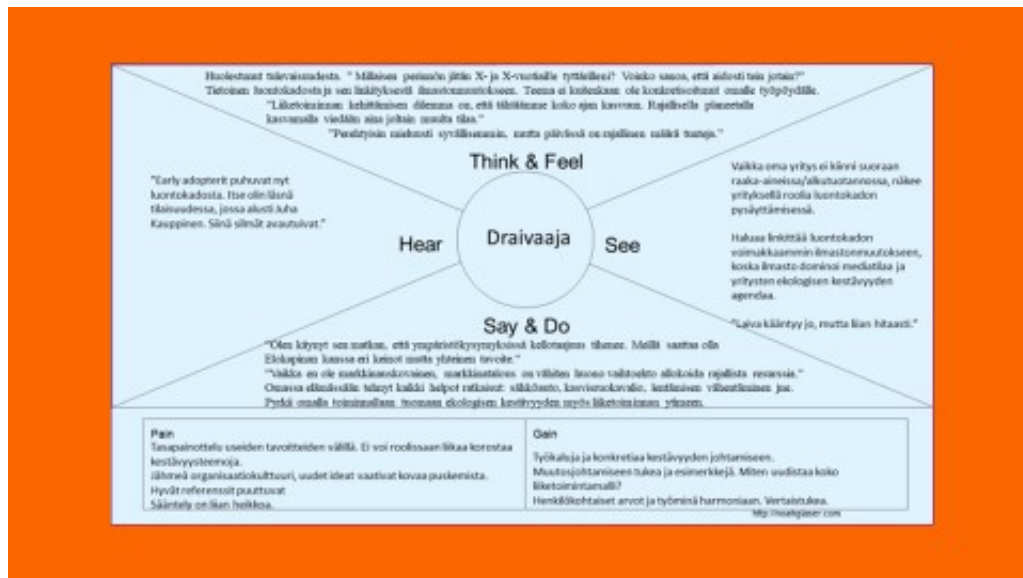
Figure 11: Empathy map: The Change Driver

5.2 Defining design drivers for the learning concept

The main goal of this thesis was to find out the cornerstones or essential elements needed for a transformational learning experience on ecological sustainability. This subchapter summarizes the learnings accumulated from the theoretical framework and through desktop research in the develop phase. First the examples found are introduced and then the learnings are summarized to six design drivers.

5.2.1 Reflection and mindfulness emerging themes in sustainability education

Transformational learning in all its applications and aspects provides a useful framework for the design of a learning concept, which aims to address also the "inner transformation" for sustainability, link it to systems thinking and change leadership.

Although developing intrinsic qualities of leaders are often an essential part of generic leadership programmes and lately more emphasis has been put to neuroscience, emotional intelligence and attention-training through mindfulness, the inner side of transformation is not often taken into account in sustainability and environmental training (for example Bryant et al 2021, Hermes & Rimanoczy 2018, Wamsler 2020).

In Finland, initiatives focusing on adult education on ecosocial civilization in general are rather limited. The academic discussion around the topic has grown in the past 5 years and the principles of ecosocial civilization are now a part of the curricula for basic education, but its practical applications and particularly in the field of adult education or leadership development are rare (for example Manninen & Nokelainen 2021).

Internationally there are emerging initiatives and programmes to address the value-action gap and the role of personal sphere in sustainability leadership. Oft-cited example of a holistic, transformational approach is The United Nations Executive Leadership Programme for Sustainable Development, which is a virtual learning journey that features one weekly three-hour virtual synchronous class. Only 50 people globally are selected to take the course annually. The weekly sessions follow a structure that focuses on three aspects: the What, the Me and the We. Sessions consist of lectures, workshops, practical exercises, peer exchanges and group coaching. Programme also builds on the knowledge and experience the participants bring to the table. Programme is targeted to global level leaders with proven track record in sustainable development and is free of charge to those selected. (UNSSC 2022)

CChange in Norway has imitated the structure of the UN Programme and offers a transformational sustainability leadership course that lasts for 3 months with three physical three-day sessions in Oslo and online sessions in between. The programme is clustered under the themes Being Change, Designing Change and Leading Change. The registration fee for businesses is 50 000 NOK, which is about 5 000 euros. One of the co-facilitators is the former UN Programme Lead Monica Sharma. (Transformational leadership 2022.)

Lund University has partnered with the German company Awaris to create an Inner Green Deal –programme to support leadership capacities for implementing the European Green Deal. Inner Green Deal training programme focuses on inner qualities such as compassion, mindfulness and resilience to drive change. It is a fully online 10-week programme with seven modules of 2.5 hours each, as well as self-study and group work. Currently the programme is offered on an ongoing basis to all managers in all EU institutions, including the Commission and the Parliament. (Awaris 2022.)

Different universities are also offering Master's level courses on sustainability leadership and they are increasingly focusing on transformational learning and considering the inner development of the students. The examples found are mainly from the Nordic countries.

The University of Oslo has used the Three spheres of Transformation also as heuristics for integrative learning process for climate change. In their experiment Leichenko et al. included a personal, climate-related project (such as reducing eating meat) as a part of a university course on climate change and the students reflected on those projects through the three spheres heuristics on an open platform. A pilot assessment conducted via student surveys and focus groups indicated that the learning process increased the students' understanding of transformation and enhanced their own sense of agency. (Leichenko et al, 2022.)

Stockholm University has integrated inner transformation into a course curriculum for university students and examined their perceptions of learning (Wamsler 2020). The course included a series of lectures and seminars to explore the role of inner dimensions and their

transformation to support sustainability (for instance, regarding environmental leadership, activism, social transformation and its salience in sustainability science and education). Contemplative teaching and learning practices were integrated into mandatory course activities. This included the encouragement of mindful interactions during listening (deep listening), debating, reflecting and working together, and the integration of weekly councils and a voluntary practice lab. In both Wamsler (2020) and Leichenko (2022) studies the value-action-gap was reduced with the learning process.

Bryant et al. (2021) have studied the transformational elements of the Strategic Leadership towards Sustainability (MSLS) Programme in Karlskrona and distinguished five key components: The experience of community, place, pedagogy, disorientation and hope and agency. But above these five key elements, students of the programme referred to the "integrated whole" as a defining factor for the transformational role of the Master's Programme. (Bryant et al 2021.)

Hermes and Rimanoczy (2018) have brought the principles of the sustainability mindset to a pilot course in Fairleigh Dickinson University, New Jersey. This design became the foundation of a conceptual model to develop a sustainability mindset, which has been used in different insitutitions, including Oulu business school in Oulu University. Essential to deep learning was the use of systems thinking, a shift in students' prevailing paradigms and the integration of students whole being in the learning through relevance in their own experience and involving their emotions. (Hermes and Rimaoczy 2018.)

5.2.2   The Concept of Finnish National Defence Course (Maanpuolustuskurssi)

Need for a comprehensive understanding of the ecological crisis arose from the interviews of the business leaders (see subchapter 5.1). A couple of the interviewees spontaneously quoted the Finnish National Defence Course as a good example of a holistic approach, giving the big picture of defence structures, collaboration and solutions. Although the National Defence Course doesn't focus on sustainability, the key elements and the learning concept behind it informed the concept development by providing an analogy. Here the concept is introduced in a nutshell.

The Finnish National Defence Course (Maanpuolustuskurssi) is an oft-cited example of an impactful leadership course. The course has also inspired for example the Finnish Church, the Finnish Innovation Fund Sitra as well as the Finnish Forest Association to develop courses following similar approaches. What is unique about the National Defence Course and is there something that learning for sustainability leadership could make use of?

The goal of the National Defence Courses is to give participants a total overview of Finland's foreign, security and defence policy. The courses are meant to improve the cooperation

between different sectors of society and facilitate networking of people working in the various fields of comprehensive security. The National Defence Courses organize four national and one to three special courses annually for target groups defined by the Advisory Board for National Defence Education.

What is unique to the course is that they are invitation only and the contents are strictly confidential. Altogether about 50 influencers from different fields – business, politics, culture, media, NGOs are selected for a 3,5 week-long and a very intensive course with 11-12 hour days. Days consist of short lectures, panel discussions, group work and site visits. Much emphasis is placed on providing networking opportunities and encouraging informal dialogue between the participants. The contents and the percentage of different groups invited is drafted by the Advisory Board for Voluntary Defence, which coordinates, steers and develops voluntary national defence together with the Ministry of Defence. After the course, attendants can join the National Defence Association, which organizes different kinds of networking events. Approximately 95 % of the attendants join the Association. Networks are maintained by informal activities including sports and culture. Furthermore, continuity is enforced by inviting participants to official follow-up courses every 5 years. (MPK 2022, Wikström 2022.)

According to Tienari et al. (2009), who have done research on the course from the viewpoint of developing strategic leadership, the key themes defining the National Defence Courses have been 1) a holistic approach 2) patriotism 3) wide societal ground 4) economics of defence 5) consensus 6) openness vs. confidentiality.

The course doesn't follow a particular pedagogical approach nor does it have s strict concept (Wikström 2022). According to the two impact studies conducted of the National Defence Course (Ekholm 2006, Kalliomaa & Pulkka, 2014), the National Defence Course receives very good feedback from the participants. Attendants are particularly pleased with the content and the organization of the course as well as the networking possibilities during and after the course (Wikström 2022). However, in the latest impact study respondents also considered the amount of critical questions presented too low. According to the impact study this could imply a need for more polyphony in the teaching (Kalliomaa & Pulkka 2014, 14).

Impact studies have also been conducted on the "National Defence Course" on sustainable economics run by Sitra. Also the latest impact study by Sitra (2020) highlights that the participants have been very satisfied and given good reviews particularly to issues being topical and the group of participants versatile.

5.2.3   Summarizing the key elements for a transformational learning concept

Although the research on inner transformation on sustainability and transformational learning on sustainability is still on a very theoretical level, key elements for a transformational learning concept on the ecological crisis could be identified. These highlight the non-rational, sensuous and experiential aspects of learning, collaborative nature of knowledge creation, self-reflection and mindfulness skills as necessary leadership skills as well as the systemic nature of the ecological crisis.

The illustration below (Figure 12) crystallizes the three essential components of the learning concept. These components illustrate the systemic, intra-personal and inter-personal aspects of transformational learning. The model is a simplification and tries to capture the essential elements highlighted in the different studies and by the interviewees. The three components are unraveled in more detail below.
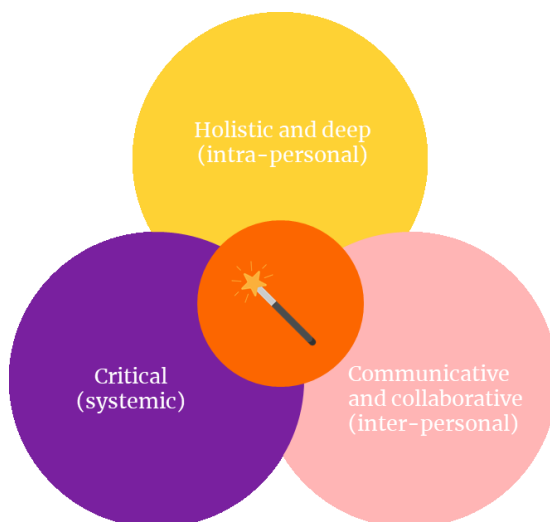

Figure 12: Essential elements of a transformational learning concept

Critical. The concept acknowledges the systemic nature of the ecological crisis. It provides an overall picture of the ecological crisis and the participants' role in it. It brings in inter-transdisciplinary perspectives, helps to understand path dependencies of the system, and encourages critical reflection and cognitive dissonance by recognizing and unraveling mental models that define the practices in our daily lives. It equips the participants with tools to lead change within their organizations.

Communicative and collaborative: The concept brings together a heterogeneous group of leaders from very different fields (researchers, activists, politicians, business leaders, officials). Learning is co-created through dialogue and sharing with the participants.

Approaches relate to meaningful interaction (communication, collaboration, etc.). Expertise can stem from research, advocacy, practical solutions – diversity of participants is considered a key component of a successful programme. The concept manages to develop a sense of community and allows for generous time for establishing a sense of safe space. A concrete output/project work will be created together.

Holistic and deep: The concept connects the participants role and personal search for meaning to the big picture. Learning includes the head, the heart and the hands. Experiential learning is of essence, linking thinking to doing and feeling: site visits to experience nature loss – and the solutions to it also enhance nature-connectedness. Self-reflection and mindfulness exercises are embedded in the programme. Reflection should be enabled also through an extended period of the programme. Careful and emotionally tuned facilitation of the learning process is of essence.

These three components summarize not only the essence of a transformational learning concept based on the theoretical framework and its practical applications but also the needs and features identified by the business leaders to make it appealing for the target audience. For concept development, the components were further enriched by the learnings from the interviews and research on the National Defence Course and the feedback it has received. Thus the design drivers for the concept development were defined as follows:

1. **Exclusive.** To attract attendants, concept should convey the experience that you have been chosen to take part for a reason (for your merits) and it is an honor that you don't want to refuse.
2. **Personal and deep.** Fundamental change towards sustainability can only succeed through transformation processes that also address inner dimensions at personal and collective levels. To enable transformational learning, psychologically safe space must be established. The content and the form must support open dialogue and interaction. Defining our purpose provides a compass to actively shape a better world. The concept must also enable personal growth through critical reflection and personal development as a sustainability leader. Sensous knowledge is combined to scientific knowledge by showing and experiencing. Compassion and empathy are encouraged. Site visits and nature experiences are essential to also intuitive learning and understanding the role of nature-connectedness to our worldview.
3. **Systemic.** The programme gives a realistic picture of the magnitude of the ecological crisis while equipping attendants with tools to address it. It addresses relationships and path-dependencies and seeks patters, flows and processes. It also unravels and critically examines the paradigms that underpin current ways of operating.
4. **Collaborative.** The interviewees highlighted that there is still a strong sense of confrontation in the context of the ecological crisis. Using group projects uses the

diversity of the community (different mental models, different ways of working) and is supported in many studies of transformational learning. From the research insights it also became evident that the course should not target merely business leaders, but bring together different actors of the society. This could also spur creative innovation.

5. **Topical and relevant.** Content of the programme should offer access to the most recent information and solutions, introduce new tools and great case examples. It should connect the dots and help see complexity. But most importantly, it should give a realistic picture of what the high leverage points for transformational change are in the context of biodiversity loss and the ecological crisis as a whole.

6. **Continuous.** The concept should not be a one-off experience but promote and maintain networking and learning also after the programme. Extending the learning period (for example three 2-day sessions during 3 months vs. one week full programme) enables reflection in between sessions.

Focus of the programme would be not only in the practical tools and case examples to help integrate biodiversity better into company strategies, but on understanding how and why biodiversity plays a role in the first place, how different actors are addressing the problem, what are the different angles to the issues, and particularly what each individual can do to catalyze change within their organization.

As highlighted also by the interview insights, leading sustainability transformation is about much more than making a successful business case for sustainability. Understanding and driving change, preparing for an uncertain future and building coalitions are key competencies needed from the new business leaders.

Thus the objective was to understand the role of nature for business and its interlinkages with climate change, bring tools and good case examples but also promote personal growth, critical reflection and address the intrinsic side of the ecological transformation.

Learning objectives for the course were defined as understanding the big picture of the ecological crisis, providing concrete tools and networks to leadership within the planetary boundaries and finding inner potential through self-reflection and strengthening the change leadership capacities of the leaders.

Thus the success factors for the leadership programme are defined as illustrated below (figure 13).
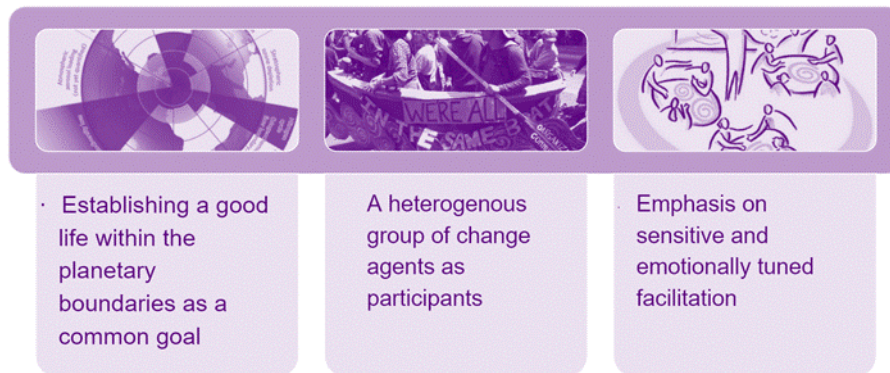
Figure 13: The success factors for the leadership programme on the ecological crisis

5.3   Results from the workshop: the early prototype of the Planetary Boundaries Leadership Programme

The key output from the ideation workshop held with the core team and a few other experts were the concrete ideas gathered for the learning programme as well as the drafts for the invitation letter.

Both of the groups had a similar tone-of-voices in the invitation letters, but the content from the ideation phase differed – it is difficult to say whether this was because of the different empathy maps or because of the members in the group or because of the way the different facilitators prompted questions to help the ideation. Group 1, focusing on the Change Driver, highlighted more the intrinsic side of transformation, cognitive dissonance, diversity, critical reflection, and group 2, focusing on the Opportunity Seizer, highlighted more the practical tools, international speakers and interesting case examples.

Concrete methods and content listed by the groups included

- Allowing generous time for establishing a safe space
- Using positive psychology and connecting the participants role to the big picture
- Mindfulness and self-reflection as key components
- Concrete output/project work created together (pamphlet, report): A joint vision 2030 when we stop nature loss & climate change?
- Site visits to experience nature loss – and the solutions to it
- At least 1-2 overnight periods in the wild to build a sense of community

The ideas from the workshop were the backbone of developing the actual prototype for the learning concept. The prototype was developed online with the core team after the workshop. Reflection on the topics discussed was included in the programme for each session. Immersive nature experiences and community building exercises were included in the

programme as well as mindfulness practices. The role of the facilitator was highlighted in the discussions.

The result of the development process, the Planetary Boundaries Leadership Programme, is an 8-day transformative learning experience on the ecological crisis. The key components and the structure of the programme are illustrated below (figures 14 and 15), and the prototype of the programme can be found in Appendix 2. In the figure of the key components (figure 14), the essential elements presented in subchapter 5.2.3 are further elaborated with Rimanoczy's (2021) twelve principles for developing a sustainability mindset, the learning goals for the programme and the success factors identified.
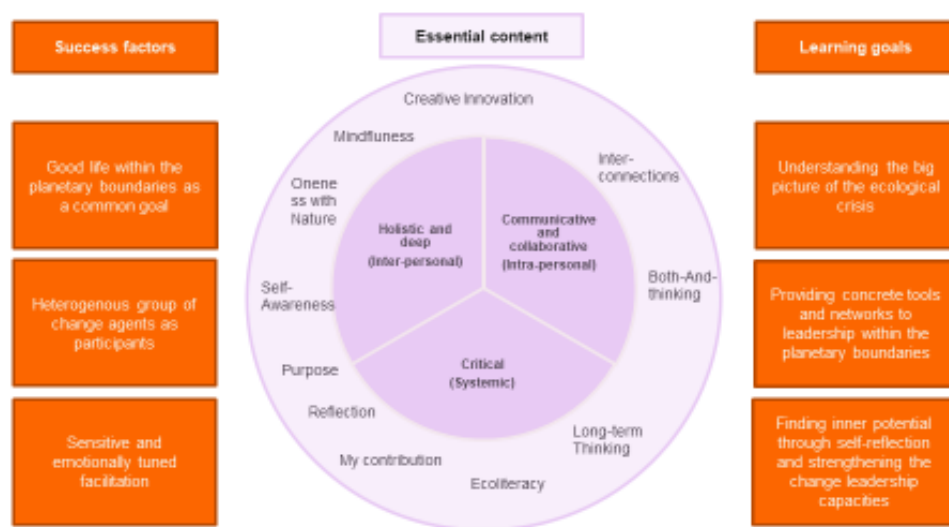

Figure 14: The elements of the Planetary Boundaries leadership programme

The prototype of the Planetary Boundaries Leadership Programme aims to find a balance between the needs of the business leaders and the elements required for transformational learning on the ecological crisis. It provides concrete tools and case examples as well as networks around the theme, but also encourages self-reflection, mindfulness and long-term thinking needed for transformational leadership on sustainability.

Isabel Rimanoczy's (2021) twelve sustainability mindset principles act as as a checklist for content development for the programme and are clustered around the three key elements. They are not necessarily visible to the participants for example in the prototype, but are more a guide to the facilitators and organizers.

The themes for the sessions of the Planetary Boundaries Leadersghip Programme were defined as illustrated below in figure 15.

Figure 15: The structure of the Planetary Boundaries Leadership Programme

As stated, preliminary feedback was collected from the interviewees. The feedback was mainly positive commenting that the programme looks "very interesting". Some doubts were raised about the possibility to allocate a long period of time with intense sessions as many 20-40-year-olds are juggling family and careers, and it is of essence that all participants can dedicate a fair amount of time for this kind of programme. Interviewee also noted that bold thinking and bold leadership should be highlighted more and emphasized the need to pull together the best possible participants as the group can either "make or brake" the programme. One respondent noted that it would be necessary to define whether the programme was directed at leaders or influencers already very much aware of the biodiversity crisis or to those that are not. Respondent considered the programme to be targeted to those already motivated to engage more on the issue. These are issues that need to be considered in the further development of the concept.

6   Conclusions and reflections

The purpose of this thesis was to develop a learning concept that would support the agency of young business leaders on biodiversity loss and the ecological crisis. The starting point was to develop a form of engaging business leaders on the issue, but what the concept would be was not defined nor decided further. Forming the brief and the design drivers was a part of the design process.

While much of the focus on sustainability transformation has been on developing practical, measurable solutions, the role of inner transformation needed has been neglected. Theoretical background of systems thinking and transformative learning for developing sustainability mindset guided the process – and became more essential to it than perhaps initially envisioned. Co-creation was at the heart of the process from the beginning – first in defining the starting point, then in defining the design drivers and finally in the development of the concept. Based on the insights, the essential elements of a transformational learning

concept were discovered and the prototype of the Leadership Programme on the Planetary Boundaries developed.

This development work was guided by three research questions:

1) Which factors influence young leaders' commitment to integrate biodiversity loss to the strategies in their respective businesses?
2) What kind of learning needs do they have related to nature loss?
3) What are the key elements to an appealing and transformational learning concept on ecological sustainability?

The answers to these questions are summarized below.

Which factors influence young leaders' commitment to integrate biodiversity loss to the strategies in their respective businesses?

Key factors inhibiting the commitment of leaders were identified as

- The lack of understanding of the magnitude of the problem, it's interlinkages with climate targets and relevance to business operations and strategy.
- The difficulties examining the entire value chain in order to determine and measure how biodiversity impacts business and vice versa.
- The lack of standardized indicators for business' impact on biodiversity.
- Lack of pressure from the investors and customers.
- Lack of pioneering companies and established networks to share information and build capacity
- Rigid organizational culture.

Enabling factors on the other hand included

- Intrinsic motivation of the leaders
- Enabling organizational culture (sustainability in a company's DNA)
- Business advantage in the long run
- New regulation being developed globally, on the EU-level and nationally. These include the new global agreement on biodiversity framework (CBD), EU-strategies and their national implementation, CSR reporting regulation as well as sustainable finance regulation (taxonomy) in the EU-level.

Based on the interviews the most influential factor driving leaders' commitment seemed to be the intrinsic motivation. Thus two different empathy maps were formed – the Opportunity Seizer and the Change Driver. This distinguishing factor between these maps became

significant for the development project. What is it that motivates the Change Driver to take a step from business as usual and even push change even when the organization is not particularly receptive to it or rather the opposite? Finding invited to ponder the Rimanoczy's (2021) idea of a sustainability mindset – had the Change Drivers developed one? Or were they more open to do so? And what about the Opportunity Seizer? How might we help them to "fall the scales from eyes" for a paradigm shift – or do they need it? Could the development of this sustainability mindset be facilitated, and if so, how? These insights were introduced thoroughly in chapter 5.

What kind of learning needs do young business leaders have related to nature loss?

The interviews also provided insights to what kind of learning needs would the leaders have on biodiversity loss or ecological crisis as a whole. The interviewees clearly articulated the need for "understanding the big picture", "having up-to-date information", understanding different perspectives, learning about tools and pioneers and combining change leadership skills and personal development to sustainability leadership.

Thus the learning needs identified were

1) grasping the current big picture of the ecological crisis and interlinkages between the climate targets and biodiversity
2) exchanging ideas and experiences with various actors in the society to understand different viewpoints to nature loss
3) finding benchmarks and concrete tools to reduce business impact on nature and
4) developing and strengthening change leadership skills for sustainability

Studies on business education on sustainability highlighted also that personal reflection (what is my role in the sustainability crisis and my purpose in solving it) and nature-connectedness are essential in developing a sense of agency for the ecological crisis and in empowering business leaders to take action. Based on the intrinsic motivation identified in some of the interviewees, this is a key learning component for establishing transformational leadership on the ecological crisis. .

What are the key elements to an appealing and transformational learning concept on ecological sustainability?

The key elements for a transformational learning concept on ecological sustainability were identified through theoretical research, desktop research and interviews. They were crystallized into the essential elements of a learning programme and to help ideation, enriched by the insights from the National Defence Course (see subchapter 5.2.3). Finally they were summarized to the essential elements of the Planetary Boundaries Leadership

Programme (subchapter 5.3). Key three elements for a transformational learning concept on ecological sustainability were identified as 1) critical, 2) communicative and collaborative and 3) holistic and deep. The elements capture the systemic nature of the ecological crisis, collaborative nature of knowledge construction, and self-reflection, mindfulness and experiential learning necessary to developing a sustainability mindset.

The key elements of a transformational learning concept differ quite substantially from the needs identified by the users and put emphasis on the role of reflection, connectedness, collaboration, experiences, emotional intelligence and systems thinking. An important task in the final concept development was to find a balance between the "needs of the planet" and needs of the potential customer.

6.1   Evaluation of the process and the outcome

This development project used the methods of service design. Design thinking made the concept development more customer-oriented. The Double Diamond model was helpful in depicting the convergence and divergence of thinking needed in different phases, but in practice, these phases overlapped and didn't always follow a clear structure. Moments of revelation happened along the way – some of them so powerful that they led to a complete change of direction in the focus of the research.

The insights from the interviews as well as the theoretical framework formed the backbone of this work. Interviews provided genuinely new insights. Through the clustering of the data, clear categories were formed and two empathy maps were drafted to illustrate different motivations of the business leaders. The empathy maps proved to be a great method to communicating the most important insights from the interviews for the development phase.

In the development phase the key components of the transformational learning concept were identified and a prototype for a learning concept on the ecological crisis developed. Most important step in the development process was the co-creation workshop where the different components and content for the prototype were identified. It was easy to recruit participants for the workshop although the invitation came at a rather short notice – only 2 weeks before the workshop took place. It was essential that the workshop was attended by potential partners as Puistokatu 4 is a small project with only 2 full-time employees at the time of writing this. The execution of a pilot project will require partners, and the enthusiasm around the concept development showed at least preliminary interest in collaboration. The energy in the workshop was high and attendants seemed to trust the process and the facilitator and were at ease with ideating freely.

In retrospect the time constraints of the project were the biggest challenge for the maturity of the concept presented. The collaboration with the commissioner started very slowly: it

took months to set a date for a kick-off workshop, which caused a big delay for the project. But once the process started properly, the collaboration was intense and fruitful. The progress was followed-up in weekly status calls. The development process answered a clear need in the organization and the commissioner became more committed in every step as the results started to show. Time constraints did influence the outcome: It would have been very useful to allow for at least two workshops for the concept development and discuss the insights with the core team in depth and in person several times before drawing conclusions. Also the iteration would have benefitted if the feedback from the customers could have been sourced with time, and through interviews versus through email.

The learning concept was designed for business leaders. But as the heterogeneous group of participants is an essential element of the Planetary Boundaries Leadership Programme, further iteration rounds should consider how the concept will serve leaders in very different fields and in different kinds of organizations. How can the programme find a balance between these needs? Another key question for future research is whether the content is targeted to those who are already aware of the different aspects of the ecological crisis and want tools (practical, psychological) to tackle it – or should it target also those that are not? This work will continue outside of these pages. Finally, a key consideration is also the response of the participants to the transformational elements of the programme. When these elements have been applied in university courses for sustainability students, many have been skeptical and even reluctant to engage in these contemplative practices at first – while they have seen the value later on (Bryant et al. 2021, Hermes & Rimanovcy 2018, Leichenko et al. 2022). If and when a pilot programme will be implemented, it is necessary to scan the feedback from the participants carefully and adjust the methods and also the communication about the methods based on that feedback.

Could the results of this development and research process be repeated? As the thesis writer didn't have a team of designers to collaborate with, the analysis of the interviews and desk research is a subjective one and I'd consider the repeatability low. I have, however, tried my best to bring transparency to the analysis process. Validity of the research can be examined from a number of perspectives. Have the research questions been answered and has the study concentrated on the right issues? As stated above, all the research questions have been answered. There is also external value on the research done on the learning for sustainability leadership, and the final output of the project - the essential elements of a leadership development programme (figure 14) – are transferable and could benefit any organization interested in developing leadership skills for sustainability in these defining years.

The end result of the project is a rough prototype, but the actual planning, finding speakers, selecting participants, finding the right facilitator etc. are left to the core team. No matter how the concept looks on paper, much of its success is up to the implementation: carefully

utilizing various pedagogics, enabling learning independently, in pairs and in groups and most importantly, finding engaging experiences, facilitating with wisdom and emotional intelligence and establishing a safe space and a community that continues to support one another after the programme has ended. This requires detailed planning and skillful implementation. In the process we took first steps to identify key partners, but as they are an essential factor for success, there is still much work ahead. Finding the best organisations to collaborate with and the best possible facilitator or a course leader is, however, made easier by this development project, as the competencies and approaches needed are clear.

A learning concept or a project mission is only as good as the outcomes it achieves. Elements of learning for sustainability transformation have been studied extensively, but no longitudinal impact studies could be found of putting these elements in use. This would be particularly interesting to Puistokatu 4, whose tagline is a space for *science* and hope. The Nessling Foundation funds researchers focused on solving the ecological crisis – perhaps a joint study on the impacts of the leadership programme could be of interest and something to consider as a next step once the concept is finalized and the courses running. Building a review framework would benefit also other initiatives under Puistokatu 4 following the framework for transformational learning drafted in this thesis.

6.2 The need to develop a Theory of Change for Puistokatu 4

Although the main product of this development process is the crystallization of the elements for a transformative leadership programme on the ecological crisis, the discussion held around the focus, the approach and the methods helped to clarify the overall mission and the approach of Puistokatu 4. This proved to be the biggest value of this development work for the commissioner.

"This development project has been pure gold. The joint revelations and the articulations in this thesis are most valuable for us – I can easily admit that much more valuable than I imagined in the beginning", said a member of the core team. "It's been wonderful to bring concreteness to the abstract plans we've had", said another member.

Going back to Meadows' (2009) concept of high leverage points – the highest leverage points are the mindset or the paradigms "out of which the system arises". Although Puistokatu 4 isn't (purely) an educational actor but much more, it is filling a gap that is – based on the research on sustainability transformation – crucial for the transformation to be possible. Puistokatu 4 cannot reform adult education, but it can provide an example of how to put these principles into action in a non-formal setting that could well be replicated anywhere in the world. Puistokatu 4 will be addressing the paradigms and mindsets of sustainability education through a living lab. Collaborating with business schools or different research programmes on sustainability leadership could help to push systemic change forward.

Value of the process was also illustrating how design thinking and co-creation methods can help in finding focus and developing a strategy, theory of change or a mission model canvas – whatever is helpful in communicating the ideas behind a project to the whole project team and beyond. Through this process, Puistokatu 4 took steps to identify the key components of its theory of change. Puistokatu 4's primary focus is to help develop a sustainability mindset or mainstream ecosocial civilization through providing transformational content and using methods that support reflection, collaboration and experiential learning.

As Puistokatu 4 will open its doors in a few months, this work provides the backbone for developing their mission further as they move along the path to shake the minds of leaders, empower activists, engage artists and help ordinary citizens find a community of change agents. As a next step after this development project, it would be useful to draft a more detailed theory of change for the project. By articulating the ultimate goal of Puistokatu 4 and making assumptions explicit on how the proposed strategy is expected to help achieve the goal, the theory of change helps to make sure that there is a sound logic for achieving change. A theory of change would also help to articulate the approach to the boards of the foundations as well as to the other stakeholders who have been involved in the process from the beginning, and make building different strategic partnerships, programs, social media content or events easier to support the ultimate goal.

6.3   Final words and personal learnings

The biggest personal gains of the development process were the interesting insights, the sense of community and profound discussions held during the process. Having worked with environmental communications for almost two decades, it was refreshing to examine sustainability communication from the perspective of transformational learning and through research gain understanding of the psychological side of sustainability – which is absolutely essential also to strategic communications.

Accepting the relevance of the spiritual and emotional aspects of learning as equally important as rational aspects or even more so to developing a sustainability mindset was difficult at first, but research led to understanding and embracing the complexity of human psyche at the heart of solving the ecological crisis. This is testimonial also to Isabel Rimanoczy's (2021) claim that just by communicating openly about the different principles for developing a sustainability mindset, we increase reflection and self-awareness, both critical components to sustainability transformation.

Finally a special thanks to Anna Herlin and Minttu Jaakkola for inviting me in on the ride and dropping words of wisdom in all the right times and places – it was a pleasure!

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Figures

Appendices

Appendix 1: Interview field guide (in Finnish)

Haastattelun tavoite: ymmärtää, mitä nuoret yritysjohtajat ajattelevat luontokadon merkityksestä itselleen ja liiketoiminnalle. Millaisia haasteita nuorilla johtajilla on ekologisen kriisin, erityisesti luontokadon ja toisaalta luontokadon ja ilmastokriisin linkitysten tuomisessa yrityksen päätöksenteon yhdeksi ajuriksi? Mikä heitä voisi auttaa ja mikä rooli Puistokatu 4:llä voisi siinä olla?

Esittelyt

Laitan tallennuksen päälle (kerron, että laitan sen päälle). Nauhoitusta käytetään vain muistiinpanojen tekemiseen ja litteroimiseen, poistetaan sen jälkeen

Vahvistetaan haastattelun kesto (noin 1 h)

Kerron, kuka olen ja miksi teen haastattelun. Tiina ja Antti Herlinin säätiö ja Nesslingin säätiö ovat yhdessä perustamassa Kaivopuistoon Puistokatu 4:ää, jonka tavoitteena on olla ekologisesta kriisistä käytävän keskustelun ja ratkaisujen kotipesä. Eli toimia tapahtuma-alustana, joka tuo ihmisiä yhteen yli siilojen, tarjota vertaistukea ja mahdollistaa yhdessä oppiminen. Oma roolini on auttaa Puistokatu 4:ää rakentamaan toimintaa niin, että ne palvelut tai tapahtumat olisivat asiakkaille hyödyllisiä. Yksi kohderyhmistä on yritysjohtajat ja siksi haastattelen nyt sinua.

Ei oikeita tai vääriä vastauksia, kaikki tieto auttaa P4:ää työn suuntaamisessa ja tapahtuma- ja palvelukonseptien suunnittelussa

Lämmittely ja taustat (15 min)

Haluaisin jutella tänään kanssasi ekologisen kriisin merkityksestä, mitä itse ajattelet siitä ja millainen merkitys sillä on sinun organisaatiossasi. Erityisesti olen kiinnostunut näkemyksistäsi luonnon monimuotoisuudesta ja miten se näkyy osana strategista päätöksentekoa.

Luontokadolla tarkoitetaan luonnon monimuotoisuuden eli lajien häviämistä. Tällä hetkellä luonto köyhtyy nopeammin kuin koskaan aikaisemmin historiassa. Luonnon köyhtymisen myötä sen kyky tuottaa ns. ekosysteemipalveluita eli esim. puhdasta vettä ja ilmaa tai hedelmällistä maaperää heikkenee ja voi paikoin romahtaa kokonaan. Suurin draiveri luonnon köyhtymiselle on maankäyttö eli esimerkiksi rakentaminen ja metsä- ja maatalous.

Mitään oikeita tai vääriä vastauksia ei ole, vaan haluan ymmärtää sinun näkökulmasta, minkälaisia haasteita, esteitä ja mahdollisuuksia näihin teemoihin liittyy. Haastattelen yhteensä 7 ihmistä, jokaista noin tunnin verran.
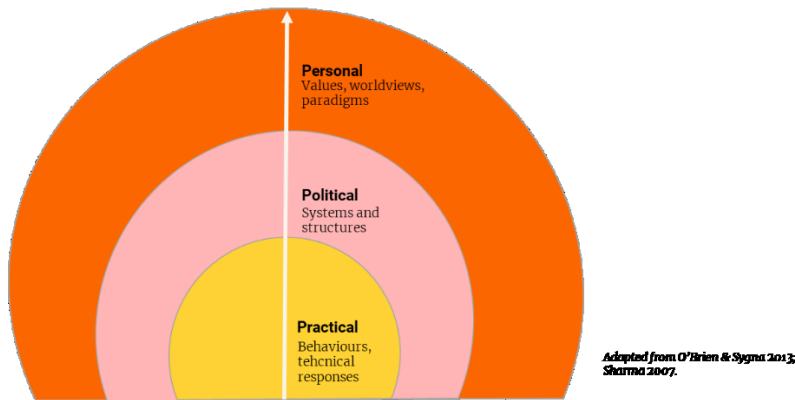
Haastatteluvastaukset anonymisoidaan, eli vastauksesi eivät ole henkilöitävissä sinuun missään vaiheessa.

1. Kerrotko vähän itsestäsi, miten olet päätynyt yritykseen X ja mikä nykyinen roolisi pitää sisällään?

2. Millaisia ajatuksia luontokato ja ilmastonmuutos sinussa herättävät?

3. Asteikolla 1-10 miten luontokato on yrityksenne agendalla (ei ollenkaan – huomioitu kaikessa)

4. Missä määrin luontokato ja luonnon monimuotoisuus näkyvät konkreettisesti omalla työpöydälläsi?

Haasteet ja mahdollistajat (20 min)

5. FIBSin viimevuotisen yritysvastuukyselytutkimuksen mukaan vain 13 % yritysjohtajista ajattelee, että luonnon monimuotoisuus on tärkeä teema heille. Vastaava luku ilmastonmuutoksessa on 69 %. Mistä tämä mielestäsi johtuu?

6. Minkälaista painetta (asiakkailta, sijoittajilta tai kollegoiltasi, lainsäädännöstä) tulee luontokadon huomioimiseen?

7. Uskotko, että luonnon kokonaisvaltaisempi huomioiminen voisi tuoda yrityksellesi kilpailuetua?

8. Voisitko kuvitella, että itse ajaisit vahvemmin luontokatoa yrityksenne strategian ytimeen?

9. Kuinka paljon valtaa ajattelet, että sinulla on tähän asiaan?

Alla on kestävyysmurroksen kolme kehää. Olemme nyt sivunneet vähän jokaista kehää, mutta käydään vielä nämä keskustellen läpi. Eli mitä ajattelet, että (liiketoiminnan) arvoissa ja ihanteissa pitäisi tapahtua, jotta luonnon arvo tulisi paremmin huomioitua? Entä systeemi/poliittisella järjestelmätasolla, eli lainsäädännössä tai sitten liiketoiminnan rakenteissa? Entäpä sitten ihan tuolla teknisten ratkaisujen kehällä?

Personal
Values, worldviews, paradigms

Political
Systems and structures

Practical
Behaviours, tehcnical responses

Adapted from O'Brien & Sygma 2013; Sharma 2007.

Oppimiseen, koulutuksiin ja Puistokadun tarjoomaan liittyvät kysymykset (20 min)

10. Jos ajattelet ilmastotietoisuuttasi, onko jokin yksittäinen hetki tai tapahtuma, joka on ollut merkityksellinen sen kannalta, että olet alkanut pohtia kysymystä enemmän?

11. Olisitko valmis käyttämään enemmän aikaasi luontokadon ja ekologisen kriiisin merkityksen ymmärtämiseen? Miten sen ajan haluaisit mieluiten käyttää?

12. Onko sinulla sparrauskumppaneita luontokatoriskien ja ilmastoriskien tunnistamiselle yrityksesi toiminnassa?

a. Jos on, millaisia verkostoja nämä ovat? Mitä apua olet verkostolta saanut?

b. Kenen kanssa haluaisit näistä asioista erityisesti keskustella?

13. Kerro jostain tapahtumasta tai koulutuksesta, joka on saanut sinut oivaltamaan jotain uutta tai jolla oli tavalla tai toisella käänteentekevä rooli?

14. Minkälaisista sisällöistä ajattelet, että sinulle olisi eniten hyötyä, kun mietit omaa rooliasi tulevaisuuskestävän bisneksen rakentajana?

15. Jos Puistokatu 4 järjestäisi luontokadon ja ekologisen kriisin ratkaisujen ympärille mpk-henkisen kurssin, voisitko olla kiinnostunut sellaisesta? Mitä siltä toivoisit?

16. Tuleeko mieleesi vielä jotain muuta, mitä en ole kysynyt, mutta mitä pidät tärkeänä?

Appendix 2: Prototype of the Planetary boundaries leadership programme (in Finnish)

Kutsu: Planeetan rajojen johtamisohjelma

Sinä olet tulevaisuudelle tärkeä!

Tervetuloa mukaan Puistokatu 4:n historian ensimmäiseen Planeetan rajojen johtamisohjelmaan. Kutsumme mukaan nuoria vaikuttajia ja johtajia yhteiskunnan eri saroilta.

Ohjelman myötä

- Hahmotat ekologisen kriisin ison kuvan ja tärkeimmät polkuriippuvuudet: mistä luontokadossa on kysymys ja miten se kietoutuu ilmastokriisiin
- Saat konkreettisia työkaluja ja verkostoja planeetan rajojen mukaiseen johtamiseen
- Löydät oman potentiaalisi, parannat itsetuntemustasi ja vahvistat kyvykkyyttäsi muutosjohtajana

Luvassa

- 8 päivän intensiivinen ja transformatiivinen kurssikokonaisuus, joka pitää sisällään kaksi maastojaksoa, saaristossa (Porkkala) ja metsässä (Evon retkeilyalue).

- Turvallinen tila merkityksellisille kohtaamisille ja reflektoiville keskusteluille takkatulen äärellä Puistokatu 4:ssä

- Kansainvälisiä ja suomalaisia tieteen, liiketoiminnan, aktivismin, politikan ja hallinnon huippuasiantuntijoita

- Esimerkkejä jo käytössä olevista luontoa ja ilmastoa säästävistä ratkaisuista sekä työkaluja muutosjohtamiseen

- Silmiä avaavia vierailukohteita: metsät, meret, maatilat; huipputeknologia, innovatiiviset ratkaisut, kierrossa pysyvät luonnonvarat

- Ohjelman yhteinen projektityö: Yhden planeetan hyvän elämän visio 2030

- Elämänpituisia ystävyyksiä ja alumnitoimintaa

Kurssin vetäjänä toimii XX ja se järjestetään YY.-YY.XX. Toivottavasti tartut tilaisuuteen! vahvistathan osallistumisesi XX.X mennessä.

Lämpimästi tervetuloa,
Antti Herlin Simo Honkanen

TAH-säätiö Nesslingin säätiö

Ohjelma - jakautuu noin 3 kk ajalle

AVAUSPÄIVÄ: Ekologisen kriisin iso kuva (Puistokatu 4)

- Johdanto kurssin tavoitteeseen, sisältöön ja lähestymistapaan.
- Keynote: Planeetan rajat. Johan Rockström
- Erätauko-keskustelu: Hyvä elämä planeetan rajoissa
- Vastuullisuus - kohtuullisuus - ihmistenvälisyys. Arto O. Salonen
- Systeeminen tarkastelu: Oireet → rakenteet → ajattelumallit. Miten muutetaan ajatusmalleja, rakenteita ja käyttäytymistä yhtä aikaa?
- Oma roolini osana kokonaisuutta. Miksi olen täällä tänään?
- Lounas Ravintola Elmissä
- Tulevaisuustyöpaja osa 1: Yhden planeetan visio
- Kakluunikeskustelu
- Päivän päätös ja ohjeita maastojaksoille

SESSIO 1: JUURISYYT, TAUSTAT JA MUUTOSPOLUT (Retriitti Evolla + vierailut, 2 päivää)

- Minkä kaiken pitää muuttua? Luontokato ja ilmastonmuutos systeemisenä ongelmana, Ilari Sääksjärvi, Markku Ollikainen, Eeva Furman
- Kansainvälinen yhteisö – EU - Suomi - mitä juuri nyt tapahtuu? Johanna Kentala-Lehtonen
- Vierailut Lammin biologiselle asemalle/ojitettu avohakkuualue/linturetki Juha Kauppisen johdolla
- Tulevaisuustyöpaja osa 2: Yhden planeetan visio

- Kakluunikeskustelu

SESSIO 2: RATKAISUT JA TYÖKALUT (Retriitti Porkkalassa + vierailut, 2 päivää)

- Millä on suurin vaikutus? Millaisia vipuvarsia meidän kannattaa hyödyntää?
- Ratkaisuja luontokatoon – apuja myös ilmastokriisiin
- Alustukset ja minipaneelit: KV-sijoittaja (Blackrock), yritys (Rudus), aktivisti, toimittaja
- Yrityscaset, mittaroinnin nykytila, ekologinen kompensaatio
- Luokkaretket: Qvidja/Paimion tekstiilikierrätys/Tvärminnen tutkimusasema
- Tulevaisuustyöpaja osa 3: Yhden planeetan visio
- Kakluunikeskustelu

SESSIO 3: MUUTOSJOHTAMINEN (PUISTOKATU 4, 2 päivää)

- Miten systeemistä muutosta johdetaan?
- Minä muutosjohtajana. Tietoisuustaidot, tunneälykkyys, myötätunto, rohkeus.
- Metsämieli-harjoitus
- Ketä tarvitsemme, että saisimme aikaan haluamamme muutoksen?
- Miten voimaannutamme muita johtamaan muutosta?
- Tulevaisuustyöpaja osa 4: Yhden planeetan visio
- Kakluunikeskustelu

PÄÄTÖSPÄIVÄ (PUISTOKATU 4)

- Ryhmätöiden esittely
- Evästyksemme seuraavalle Planeetan rajojen johtamisohjelmalle
- Lounas Ravintola Elmissä
- Kakluunikeskustelu. Kurssin summaus + alumnitoiminta ja oppien jakaminen

+ Viikottaiset tunnin Teams-tapaamiset oman ryhmän ja ryhmän mentorin kanssa ja Howspace-alusta keskustelulle sessioiden välillä

Osallistujat (max 15)

Elinkeinoelämä 4 henkeä

Politiikka - 3 henkeä

Hallinto - 2 henkeä

Järjestöt - 4 henkeä

Media & kulttuuri: 1 henkeä

Tiede: 1 henkeä