

# COLLECTIVE STEWARDSHIP FOR SUSTAINABILITY TRANSFORMATIONS

LEIDEN, 28. JANUARY 2020

TRIPLE-E LECTURES

UNIVERSITY OF LEIDEN

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Petra Kuenkel

# Stewarding Sustainability Transformations

An Emerging Theory and Practice of  
SDG Implementation

**In-depth transdisciplinary  
research about interconnected  
conditions for life to emerge  
and how to translate these  
scientific insights into  
multi-stakeholder collaboration  
and transformative change**

**Kuenkel, P. (2019).** *Stewarding sustainability transformations: An emerging theory and practice of SDG implementation.* Cham, Switzerland: Springer.

**Waddock, S., & Kuenkel, P. (2019).** What gives life to large system change? *Organization & Environment.*  
<https://doi.org/10.1177/1086026619842482> SAGE Publishing.

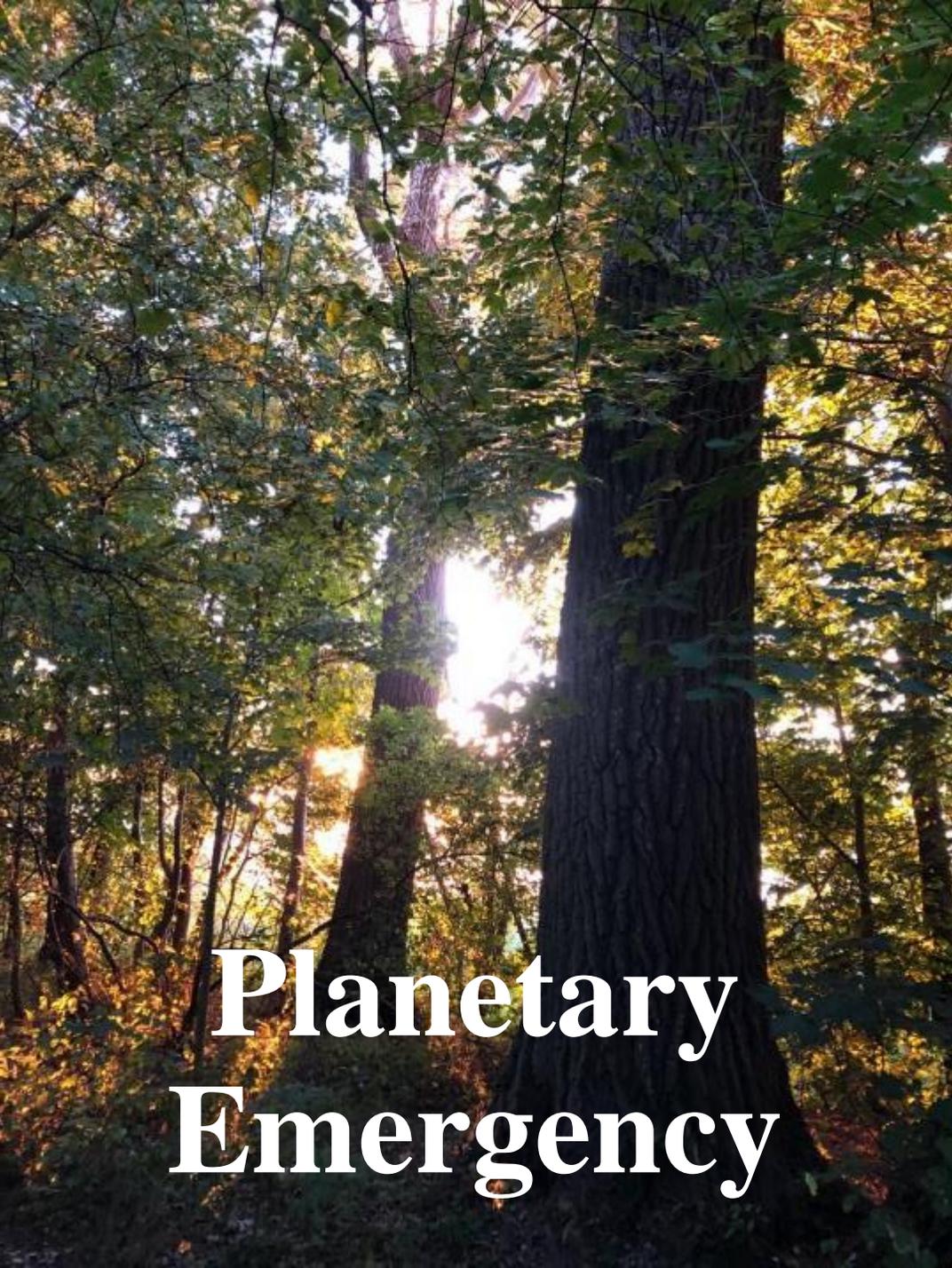
**Kuenkel, P. & Waddock, S. (2019).** Stewarding Aliveness in a Troubled Earth System. *Cadmus Journal*, Volume 4. Issue 1. October, 2019. Online available:  
<http://cadmusjournal.org/article/volume-4/issue-1/stewarding-aliveness-troubled-earth-system>

**Kuenkel, P. & Waddock, S. (2019).** 6 Strategies for Stabilizing the Planet  
Online at Network for Business Sustainability, US. September 16, 2019. <https://nbs.net/p/6-strategies-for-stabilizing-the-planet-4f076d68-a406-4cb5-b951-38d53b54053d>



A Report to the Club of Rome

 Springer



**Planetary  
Emergency**

**2020**

# Climate crisis: 6 million people join latest wave of global protests

**Week of strikes and demonstrations is 'only the beginning', say organisers**

<https://www.theguardian.com/environment/2019/sep/27/climate-crisis-6-million-people-join-latest-wave-of-worldwide-protests>





# European Parliament Declares 'Climate And Environmental Emergency'

'Given the climate and environmental emergency, it is essential to reduce our greenhouse gas emissions by 55 percent in 2030'

LIAM GILLIVER · DEC 1, 2019



<https://www.plantbasednews.org/news/european-parliament-declares-climate-and-environmental-emergency>



# The narrative that belongs to the past.....



“Success”



“Progress”



“Development”



“Return on Investment”



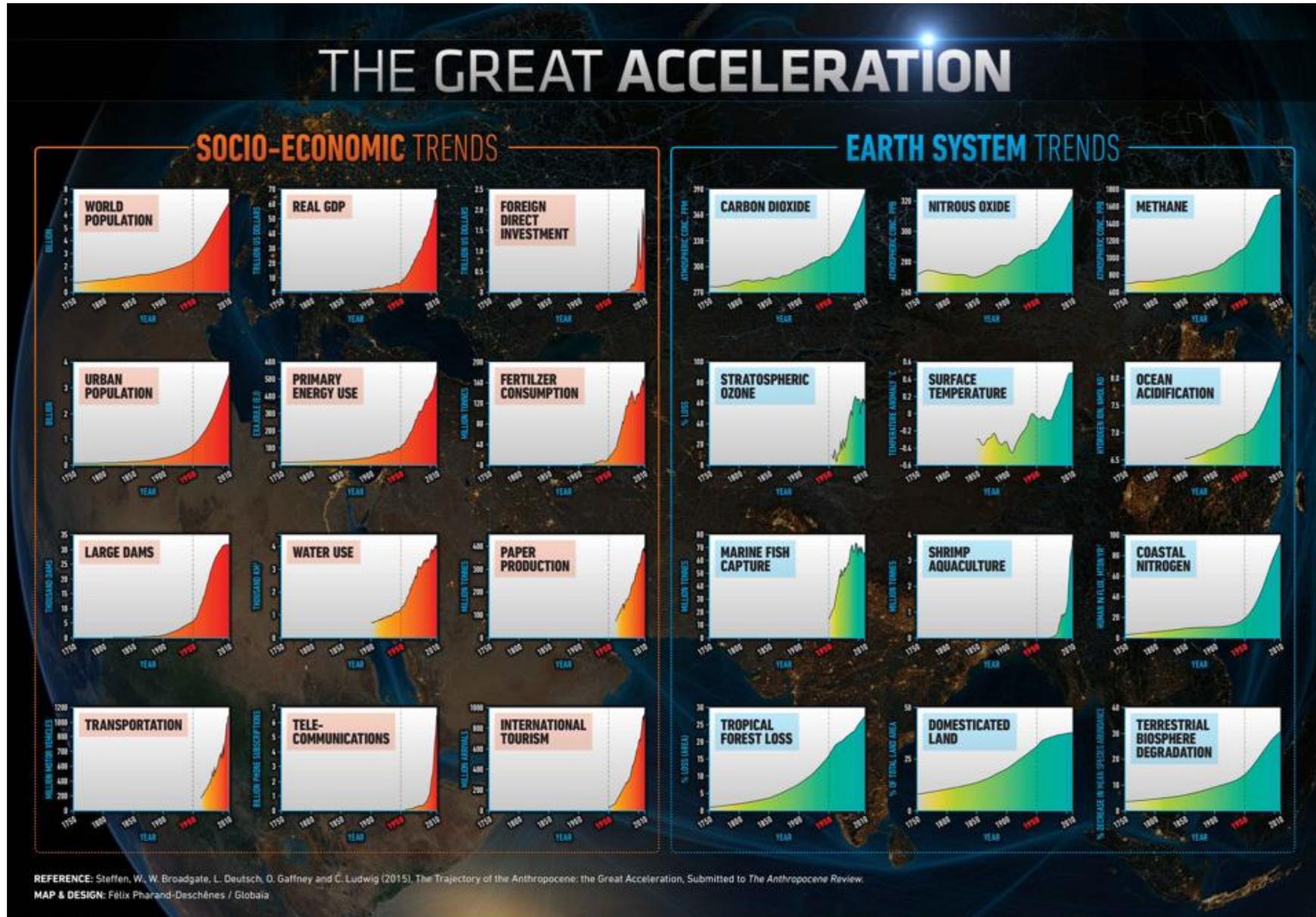
“Economic Success”



“Quarterly Reporting”

With many thanks taken from Prof Dr. Maja Goepel, WBGU and Member of the Club of Rome

.....but is still active and has its effects!!!!



# THE LIMITS TO growth

Donella H. Meadows  
Dennis L. Meadows  
Jørgen Randers  
William W. Behrens III

*A Report for THE CLUB OF ROME'S Project on the  
Predicament of Mankind*



A POTOMAC ASSOCIATES BOOK

\$ 2.75

## 50 Years ago

.....

The message of this book still holds today:  
The earth's interlocking resources – the  
global system of nature in which we all live  
– **cannot support present rates of economic  
and population growth** long, even with  
advanced technology.

# Approach # 1: Global guidance through **consensus building** and **collective action**



# A NEW GLOBAL ECONOMY

Science can define how companies and cities can operate in environmentally sustainable ways to restore balance to the Earth's systems.

**Approach # 2: Guidance through appropriate measurements**  
– aligning growth targets and planetary boundaries

<http://sciencebasedtargetsnetwork.org>

**Companies are already future-proofing growth by setting science-based climate targets specifying how much and how quickly they need to reduce their greenhouse gas emissions through the [Science Based Targets initiative](#).**

Building off the success of the Science Based Targets initiative and in response to business demand to set targets for the whole Earth system, a group of organizations have come together to form the Science Based Targets Network.

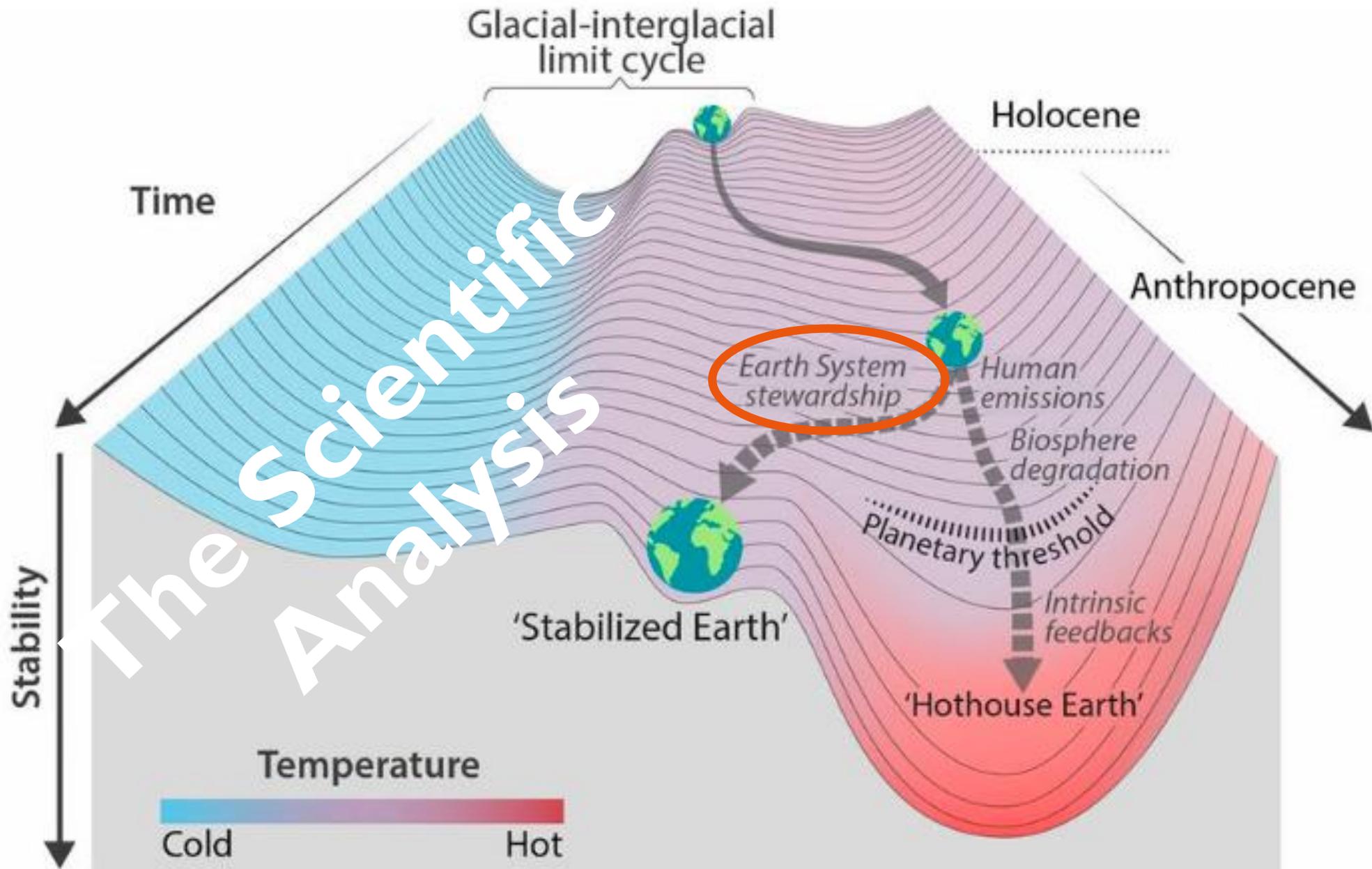
They are developing methods and resources to enable companies and cities to set science-based targets for the interrelated "systems" of freshwater, biodiversity, land and the ocean across their value chains. These will be informed by current science along with reports to be produced by the newly formed [Earth Commission](#).

**Approach # 3: Global guidance through laws and regulations leading to changed behavioural practice**

**Make ecocide  
a crime against  
humanity**

**Polly Higgins**  
One of the Top Ten Visionaries to  
Save the Planet





Steffens W. et al. (2018) Trajectories of the Earth System in the Anthropocene. *Proceedings of the National Academy of Sciences*, August 115(33):201810141



**A fundamental  
turnaround in  
the way we  
relate to each  
other, to nature  
and to  
technology**

**!!!**

# 10 COMMITMENTS FOR OUR GLOBAL COMMONS



1. **By 2030, declare critical ecosystems as Global Commons** and protected areas, through a regime of stewardship and co-responsibility by the entire global human community.
2. **By 2020, set a universal global moratorium on deforestation**, using a net-zero deforestation and degradation metric and, **by 2025, triple annual investments** in forest conservation and forest landscape restoration.
3. **By 2020, sign an immediate moratorium on developing Arctic oil and gas** reserves, support withdrawal from fossil energy exploration and use and **establish a Cryosphere Preservation Plan** to protect this critical ecosystem more broadly.
4. **In 2020, significantly enhance public and private finance flows for restoration of critical ecosystems**, including by mobilising \$200billion for the GCF and GEF over the next decade.
5. **In 2020, halt the decline of critical and vulnerable ocean ecosystems and habitats and secure a robust New Ocean Treaty** (under UNCLOS) for the protection and sustainable use of biodiversity in areas beyond national jurisdiction, which constitute half of our planet.
6. **In 2020, launch a permanent public-private Planetary Emergency fund for the Global Commons** building upon the G7 Amazon Emergency Fund and committing the necessary capital to insure humanity against present and inevitable future crises.
7. **By 2020, ensure all sovereign wealth funds commit to defunding deforestation** and, **by 2025, halt all investments** driving continued deforestation and unsustainable land-use change of intact and irreplaceable ecosystems.
8. **By 2025, require all large publicly-listed and family-owned companies to commit to science-based targets, shift to green investments** (climate mitigation and adaptation as well as ecosystems protections and regeneration), **disclose** using available taxonomies **and report** according to material risks from the Planetary Emergency.
9. **By 2025, halt all conversion of wetlands, grasslands and savannahs** for the production of agricultural commodities and **triple annual investments** in their effective **protection, restoration and resilience**.
10. **By 2020, introduce financial mechanisms and policy instruments** to support local farmers, foresters and indigenous people to **secure their livelihoods** and to shift to **regenerative agriculture, sustainable forestry** and other sustainable land-use practices.

# 10 URGENT ACTIONS FOR THE TRANSFORMATION



## TRANSFORMING ENERGY SYSTEMS

1. **Halt all fossil fuel expansion, investments and subsidies by 2020** and shift investments and revenues to low-carbon energy deployment, research, development and innovation.
2. **Continue the doubling of wind and solar capacity every four years, and triple annual investments in renewable energy, energy efficiency and low-carbon technologies** for high-emitting sectors **before 2025**.
3. **Set a global floor price on carbon (>30 USD/ton CO<sub>2</sub> and rising) immediately** for developed countries and **no later than 2025 for the most advanced transition economies**, that internalises high-carbon energy externalities in all products and services.

## SHIFTING TO A CIRCULAR ECONOMY

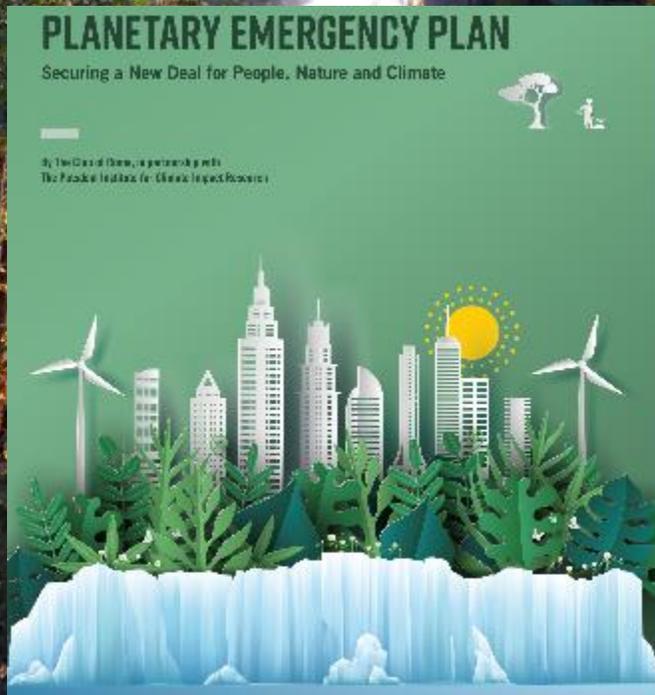
4. **Agree in 2020 to halve consumption and production footprints** in developed and emerging economies **and close loops in inefficient value chains, by 2030**.
5. **Internalise externalities in unsustainable and high-carbon production and consumption** through targeted consumption taxes and regulation, as well as consumption-based accounting, **by 2025**.
6. **Develop national and cross-national roadmaps for all countries towards regenerative land-use and circular economies**, including a reduction in global carbon emissions from basic materials to net-zero, **by 2030**.

## CREATING A JUST AND EQUITABLE SOCIETY FOUNDED IN HUMAN AND ECOLOGICAL WELL-BEING

7. **Introduce** economic progress indicators that include **socio-ecological and human health and well-being by 2030**, recognising that the latter depends on the flourishing and stewardship of natural ecosystems.<sup>3</sup>
8. **Provide legal tools by 2025 that allow indigenous, forest and tribal communities** to secure their rights to traditional land, recognising their vital role as stewards of these lands in mitigating climate change and ecosystem degradation. Such mechanisms must include **funding and legal aid** to guarantee that these communities have access to justice.<sup>4 5</sup>
9. **Shift taxation from labour** to the use of all natural resources, final disposal, emissions to land, air and water **by 2020**.
10. **Establish clear funding and retraining programmes** for displaced workers, rural and industrial communities **by 2025**.

The manner and priority in which these actions are implemented will vary from country to country and between developed economies and economies in transition, but the overall objective of rapid carbon emissions reduction and nature regeneration should be a common goal over the next decade.

What does  
such an **action  
plan** require  
and what is the  
**role of science?**





## Proposition 1:

The new role of **science**  
(politicians and activists) is to  
reconnect and integrate what  
belongs together

Re-enchanting the world

Grace Lee Boggs  
American  
Revolutionary,  
wurde 100 Jahre alt

„The new  
paradigm we  
must establish is  
about **creating  
systems  
that bring out  
the best** in each  
of us.“  
2010



KNOWLEDGE

MEANING



Co-creating  
futures



Connecting people  
and knowledge



Innovating  
pathways

Appreciating  
dignity

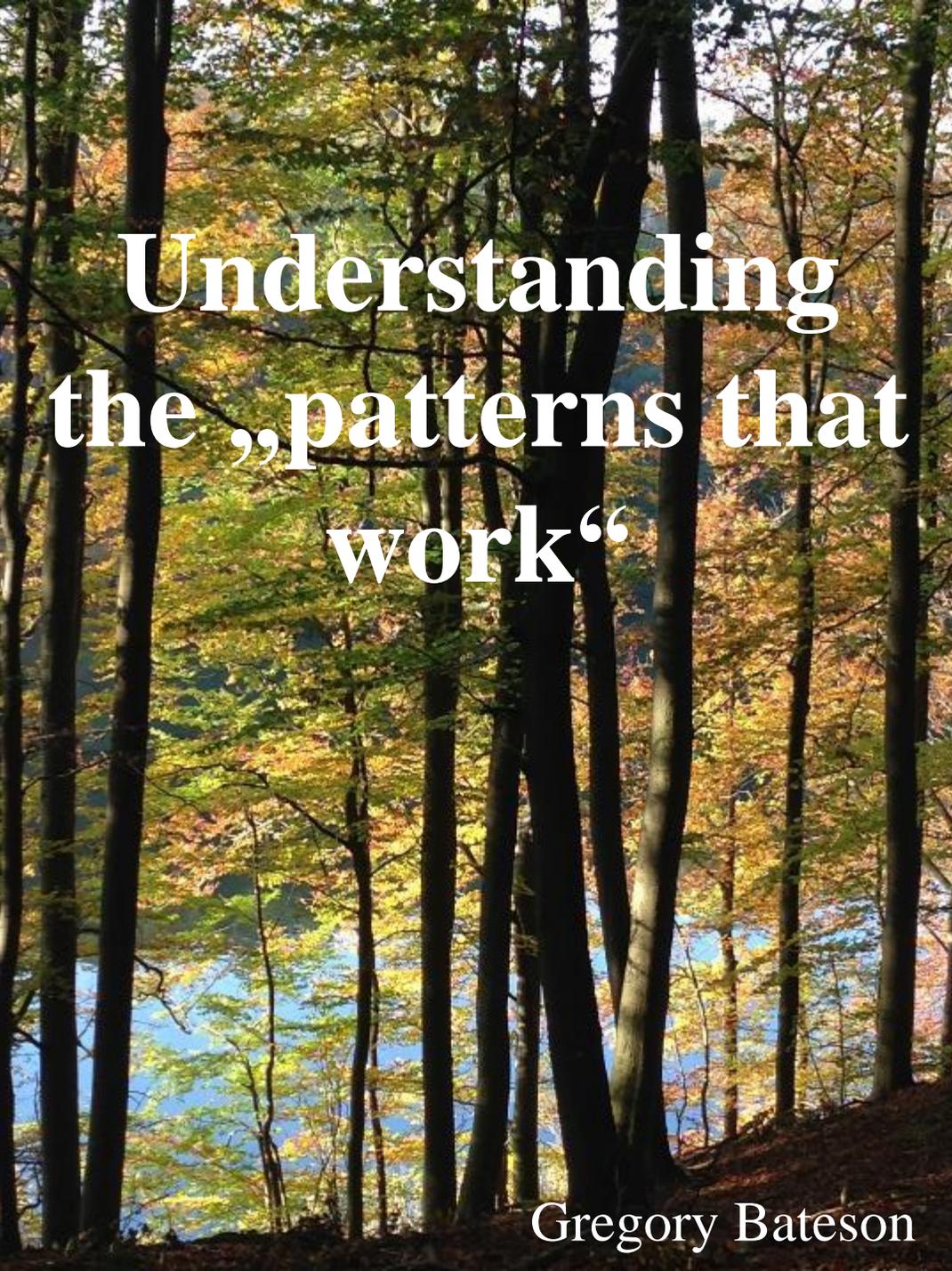


Collective  
sense-making



Understanding the  
web of life





Understanding  
the „patterns that  
work“

Gregory Bateson

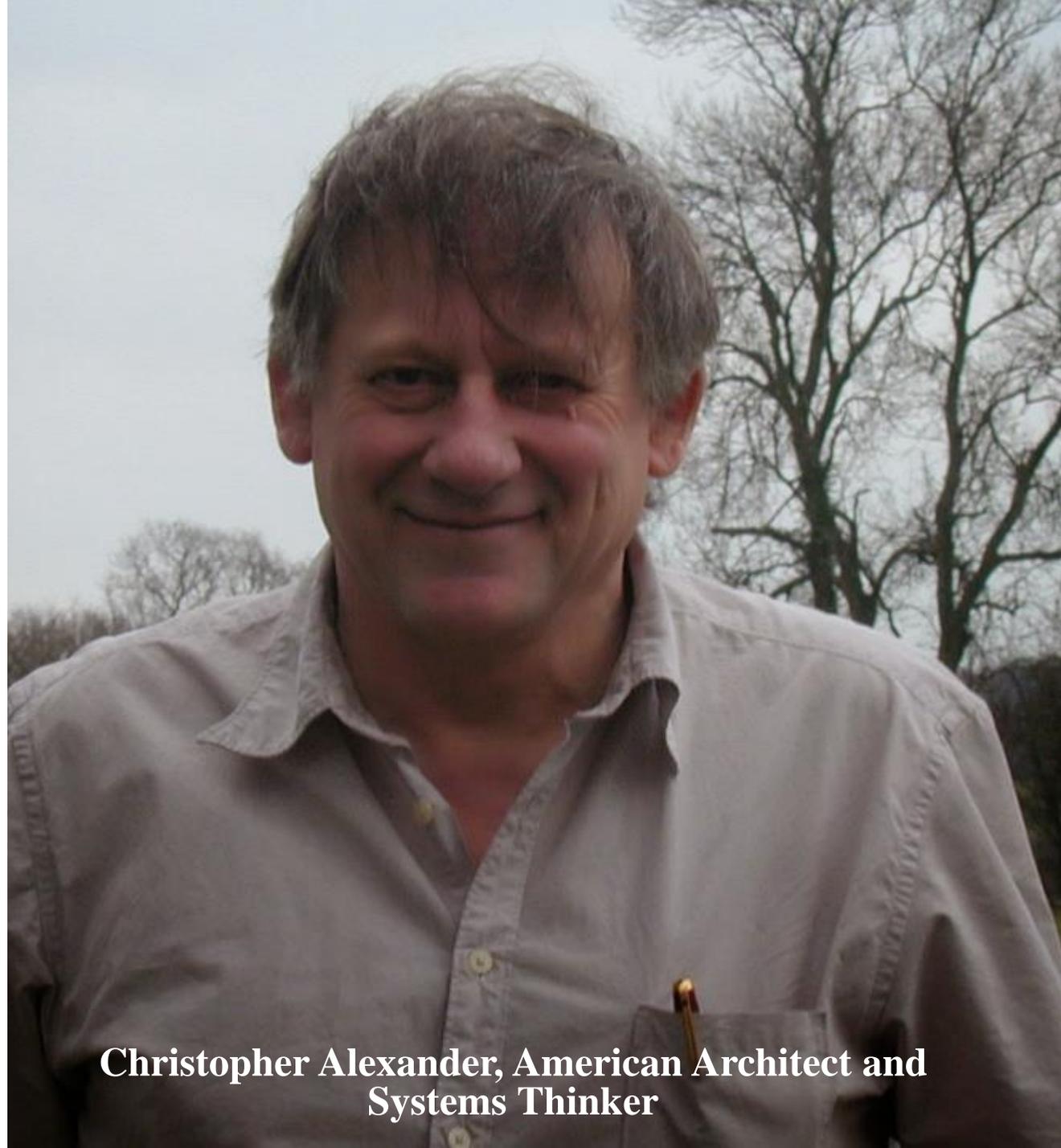
## Proposition 2:

**Science** (politicians and  
activists) need(s) to  
understand and **model**  
the pattern approach of  
life's support system



„All systems in the world gain their life from the **cooperation** and **interaction** of the living centres they contain. All centers that appear in space (.....) animate space. It is **animated space** that has its functional effect upon the world “

2002



Christopher Alexander, American Architect and Systems Thinker

# ALIVENESS

Patterns & conditions to create...

for ourselves, our teams & systems we change



diagnosis      design      action      meta-level

- H. MAREANA
  - FRANCISCO VARELA
  - ANDREAS WEBER
  - GREGORY BATESON
  - DAVID BOHM
  - CHRISTOPHER ALEXANDER
- 
- DANNA MACY
  - ELIZABET SHILOVIS
  - MARGARET WHEATLEY
  - JAMES LOVELOCK
  - ILVA PRIGOBINE
  - STUART KAUFFMANN

LIFE IS PURPOSEFUL & GROWS EVERMORE  
future possibilities

LIFE THRIVES ON IDENTITY & SUFFIC. BOUNDARIES  
engagements

UNFOLDING ALIENITY  
LIFE IS GENEROUSLY CREATIVE  
innovation

LIFE EMERGES FROM MEANING  
humanity

CONTEXTUAL CONNECTEDNESS  
LIFE OPERATES WITH DIVERSITY IN CONSTANT ADAPTIVE INTERACTION  
collective intelligence

LIFE OPERATES AS AN INTEGRATED WHOLE  
wholeness

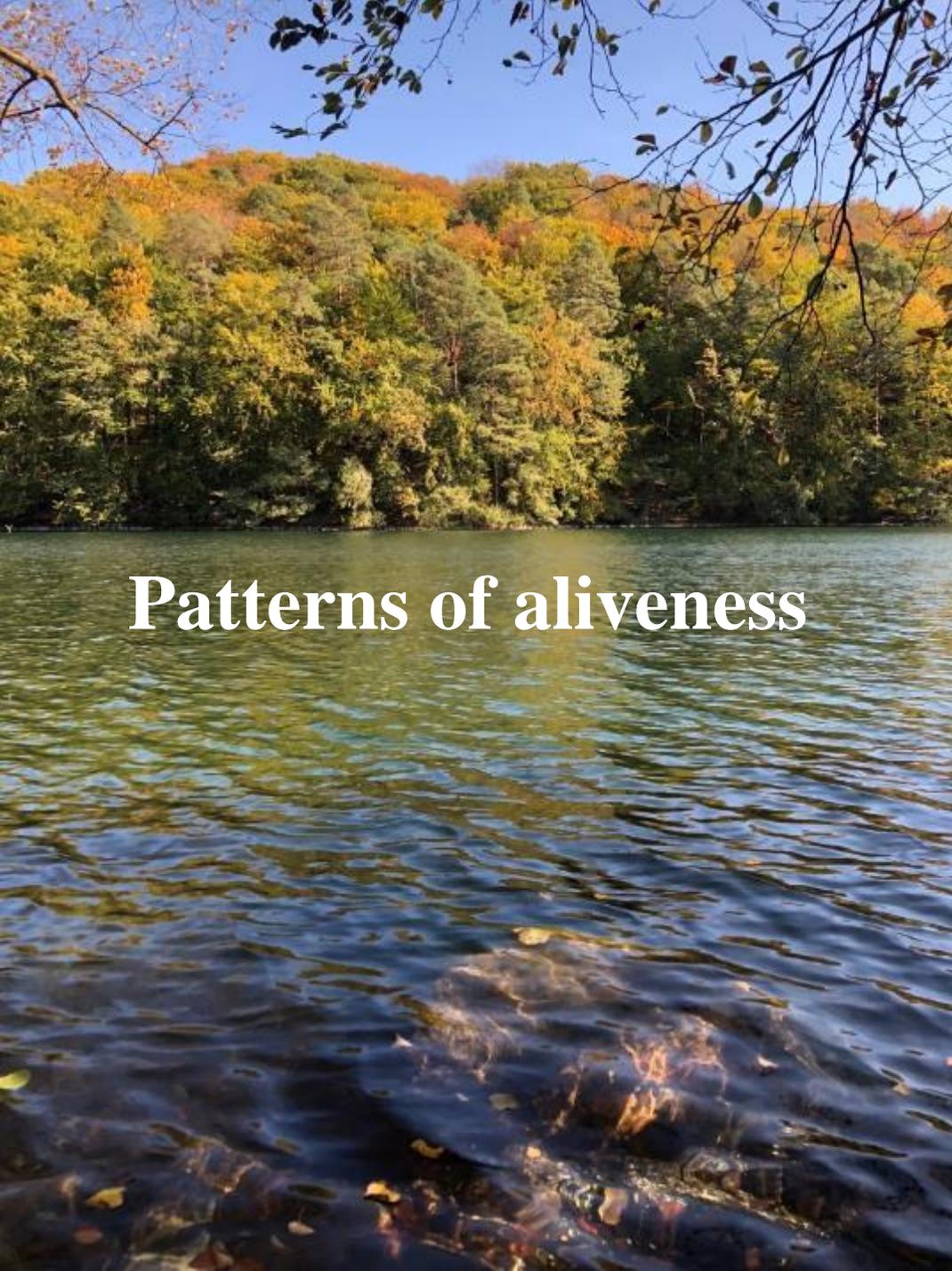
self  
understand competence patterns

systems  
diagnosis system pattern

process  
designing transf. change  
monitoring pattern change

## Proposition 3:

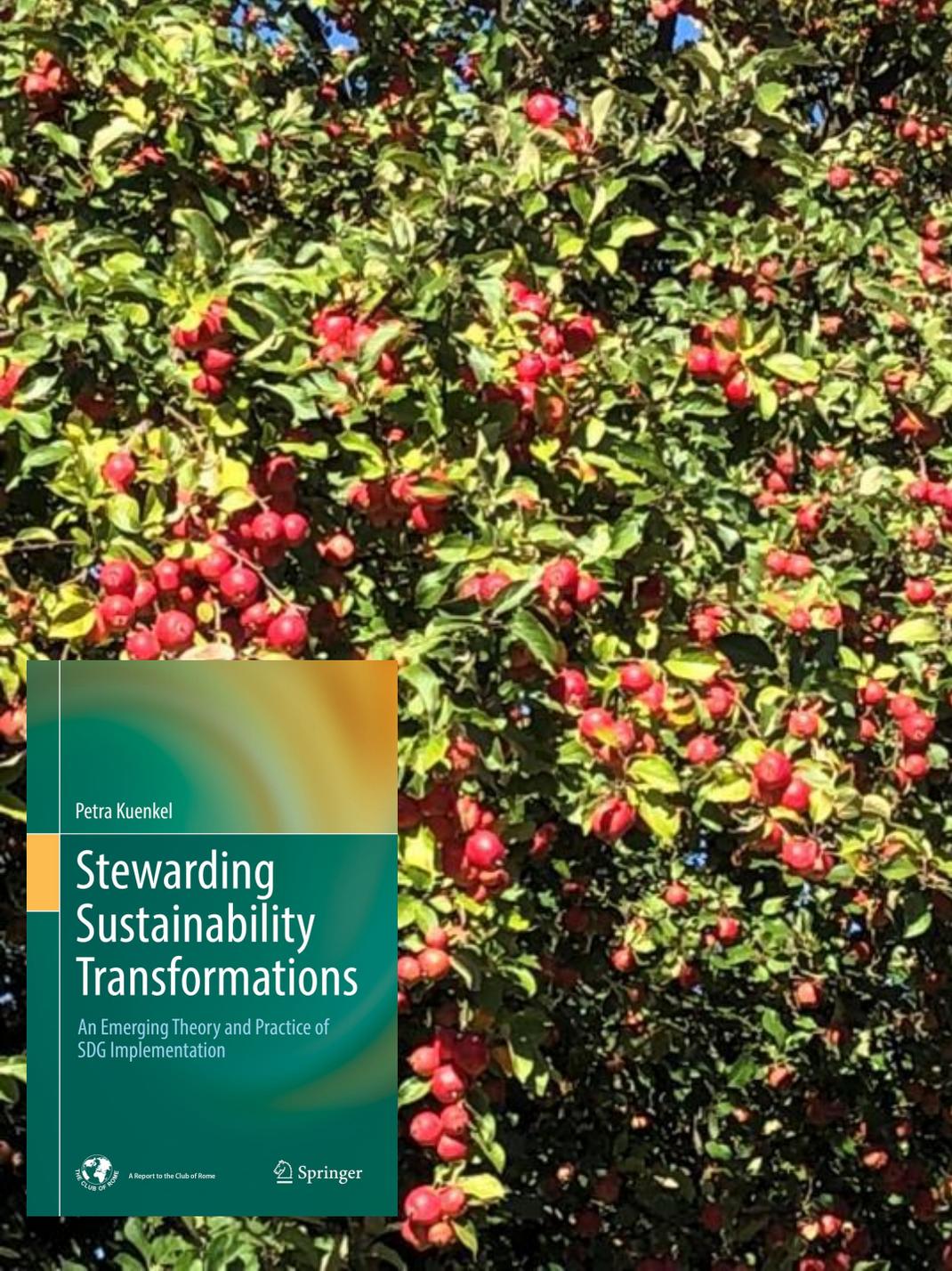
**Science** (politicians and activists) need(s) to become **collective stewards** of transformations towards increasing **systems aliveness** in **networked** knowledge and action **patterns**



Patterns of aliveness

## **Systems Aliveness**

**is defined as the capability of a systems – small or large – to develop a sufficient degree of **vitality and resilience** as well as the ability to maintain and renew these in collaboration and interaction with other systems.**



**Systems aliveness** can be recognized as the **QUALITY** of a patterned composition of mental or physical structures in natural or human system.

The emergence of such a structure follows certain **organizing principles**.

Human beings can **steward systems aliveness**.

Petra Kuenkel

## Stewarding Sustainability Transformations

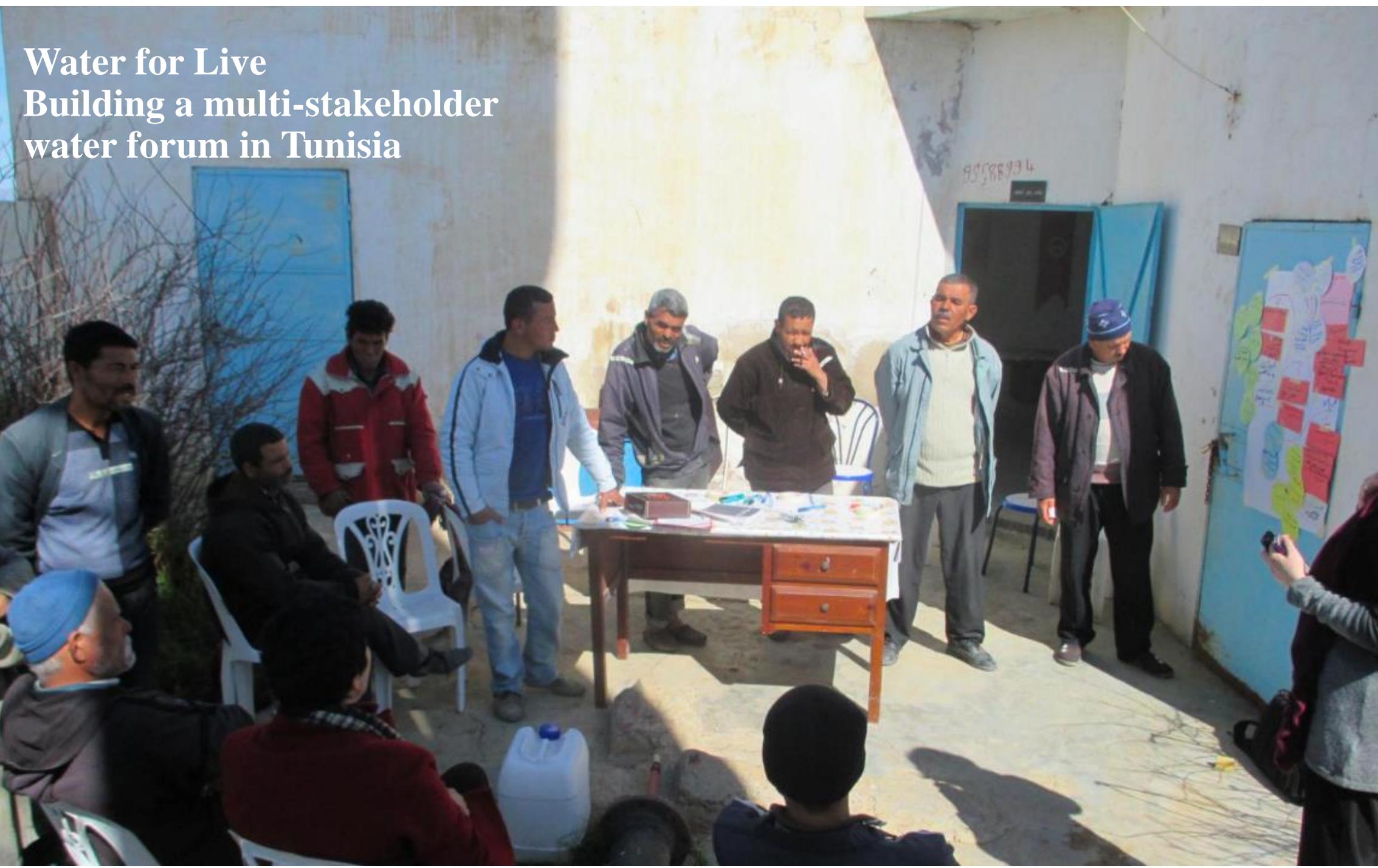
An Emerging Theory and Practice of  
SDG Implementation



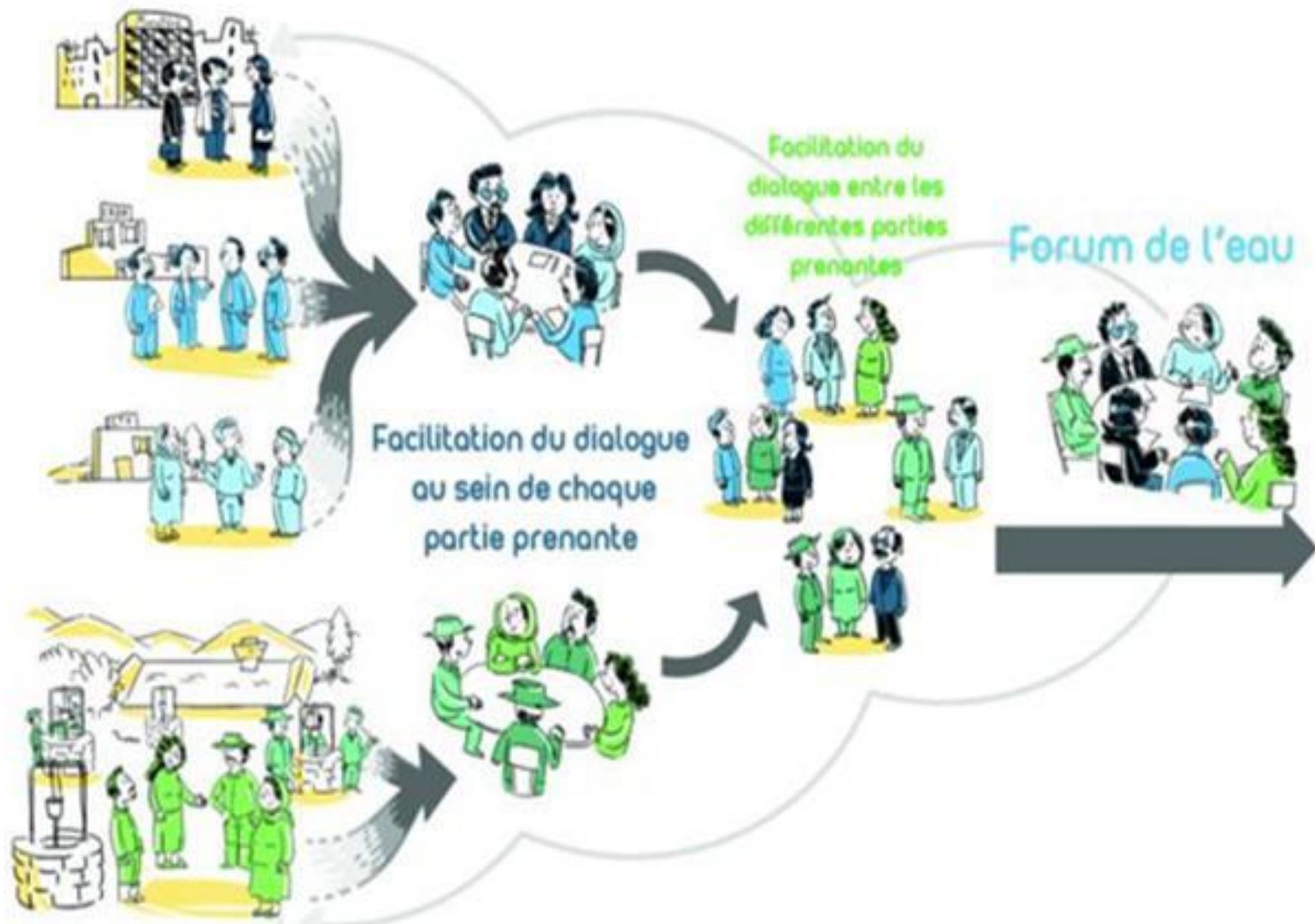
A Report to the Club of Rome

Springer

**Water for Live**  
**Building a multi-stakeholder**  
**water forum in Tunisia**







# Proposition 4:

## The life cycle continues in a new loop

At the end of its life cycle, the product and material returns to the loop – in the same life cycle or that of another product. It is impossible or very uncommon for it to become waste.

**Science** (politicians and activists) need(s) to become **transformation literate**



## SHIFTING TO A CIRCULAR ECONOMY

4. **Agree in 2020 to halve consumption and production footprints** in developed and emerging economies **and close loops in inefficient value chains, by 2030.**



5. **Internalise externalities in unsustainable and high-carbon production and consumption** through targeted consumption taxes and regulation, as well as consumption-based accounting, **by 2025.**

6. **Develop national and cross-national roadmaps for all countries towards regenerative land-use and circular economies**, including a reduction in global carbon emissions from basic materials to net-zero, **by 2030.**

**What would  
transformation  
literacy  
mean for  
implementing  
the action plan?**



**Understanding what  
enlivens human agency**

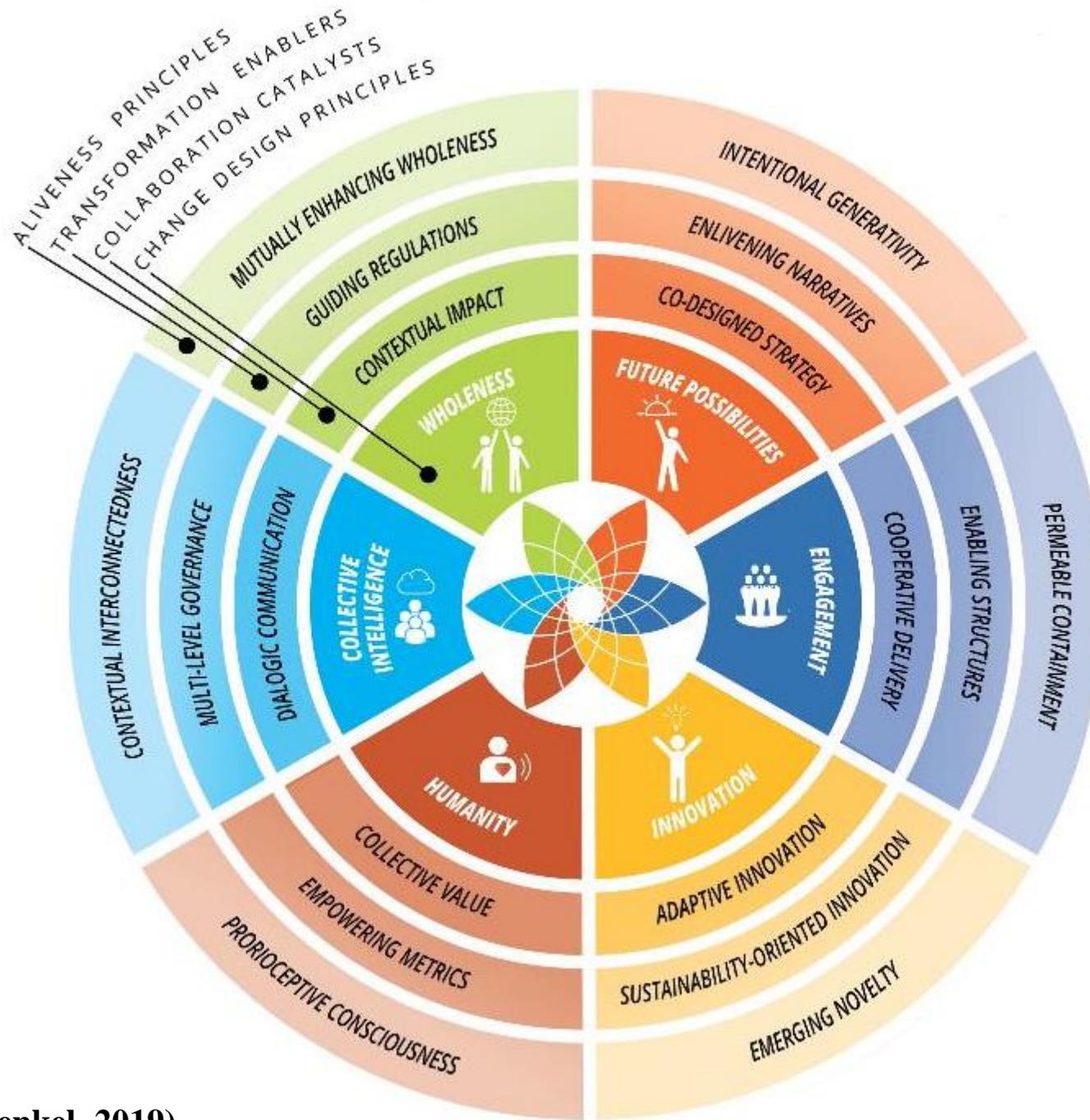
**Understanding  
what makes  
processes  
transformative**

# Transfor- mation Literacy

**Understanding  
functionality  
and dysfunctionality  
of systems patterns**

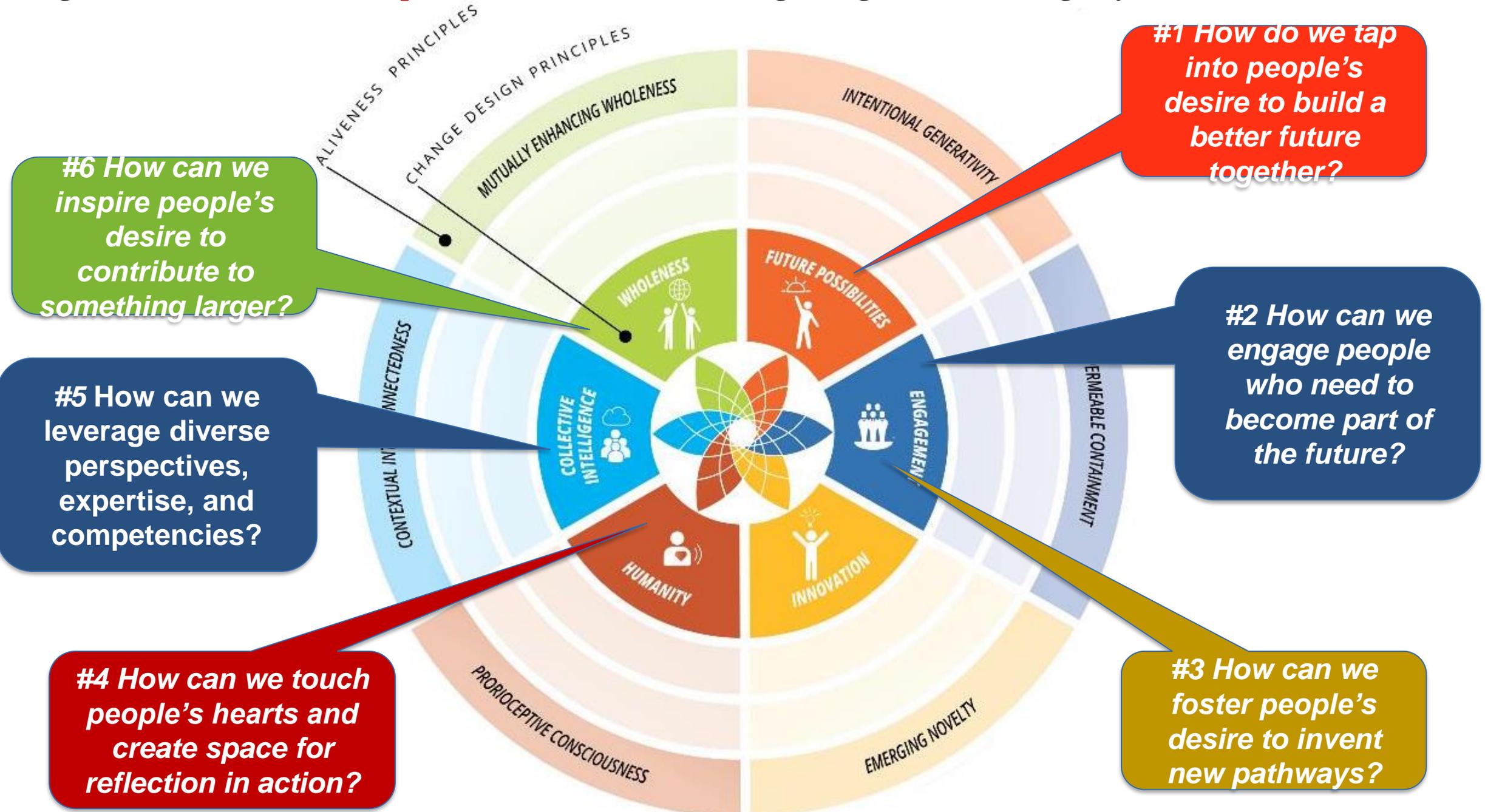


# The Stewardship Architecture



- Focus on invigorating **human interaction systems** as core drivers of transformation processes
- **Design guide** for transformative human agency
- **Diagnose tool and a process methodology** for planning and implementing collaborative change
- **Meta-level guiding structure** for large system change designs

**Integrated focus area #1: Build *patterns of aliveness* into change designs for human agency**



**#1 How do we tap into people's desire to build a better future together?**

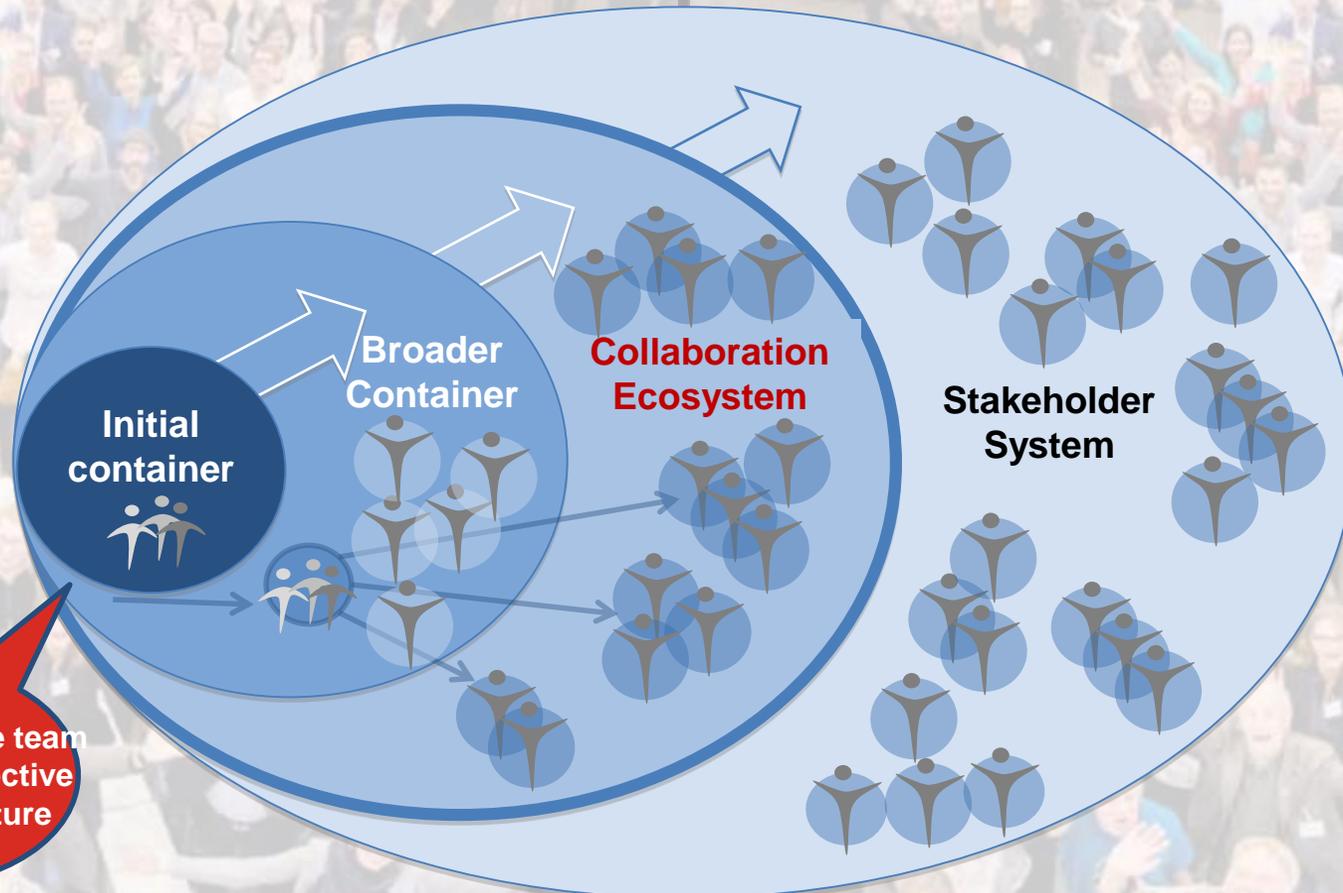
**#2 How can we engage people who need to become part of the future?**

**#3 How can we foster people's desire to invent new pathways?**

**#4 How can we touch people's hearts and create space for reflection in action?**

**#5 How can we leverage diverse perspectives, expertise, and competencies?**

**#6 How can we inspire people's desire to contribute to something larger?**

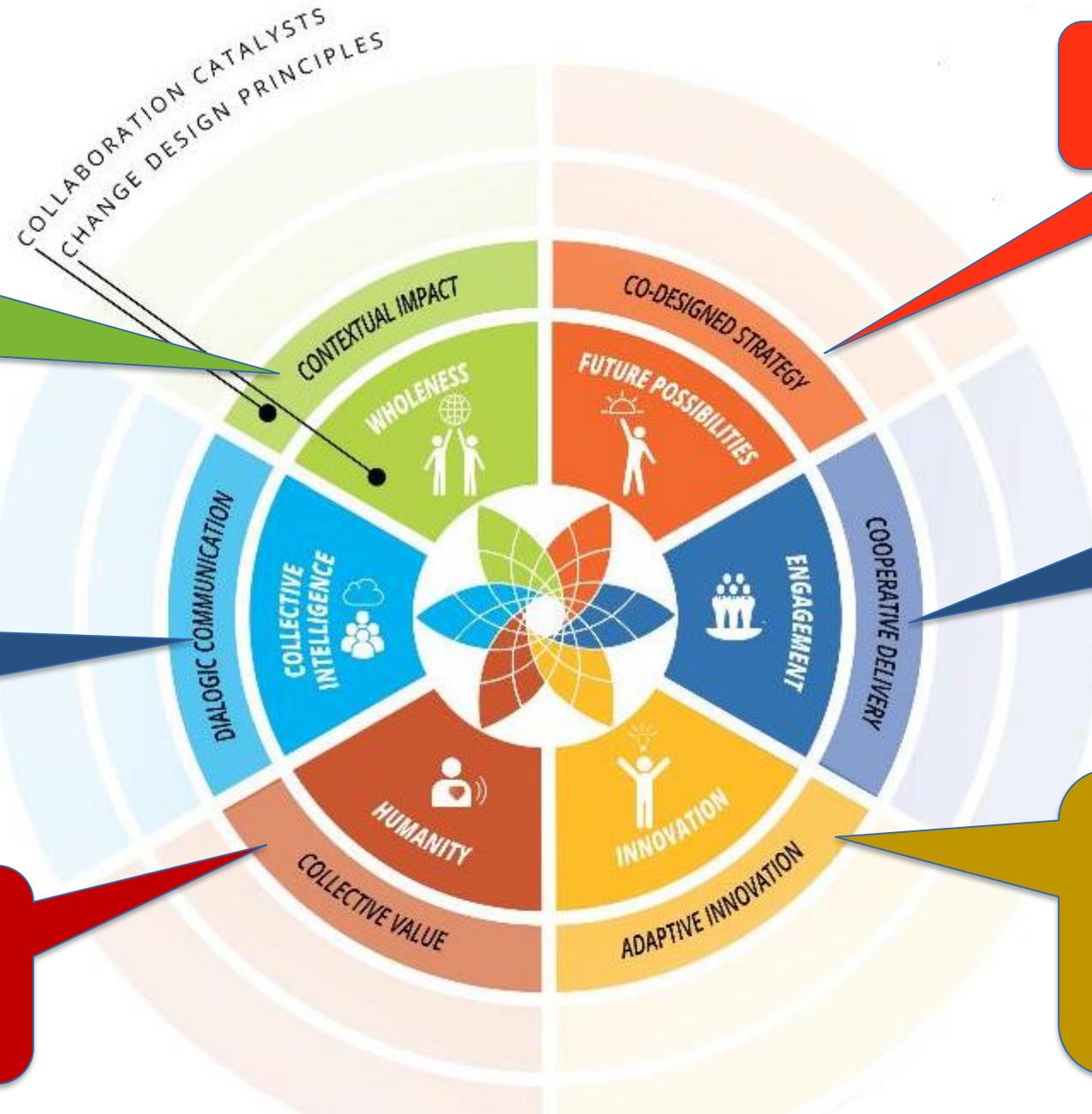


Cross-sector core team with strong collective leadership culture

Collaboration Ecosystem

Stakeholder System

# Integrated focus area #2: Grow high quality **collaboration ecosystems**



**#6** How do we contribute to and act in relation to a larger transformation system?

**#1** How do we ensure all actors co-own the strategy?

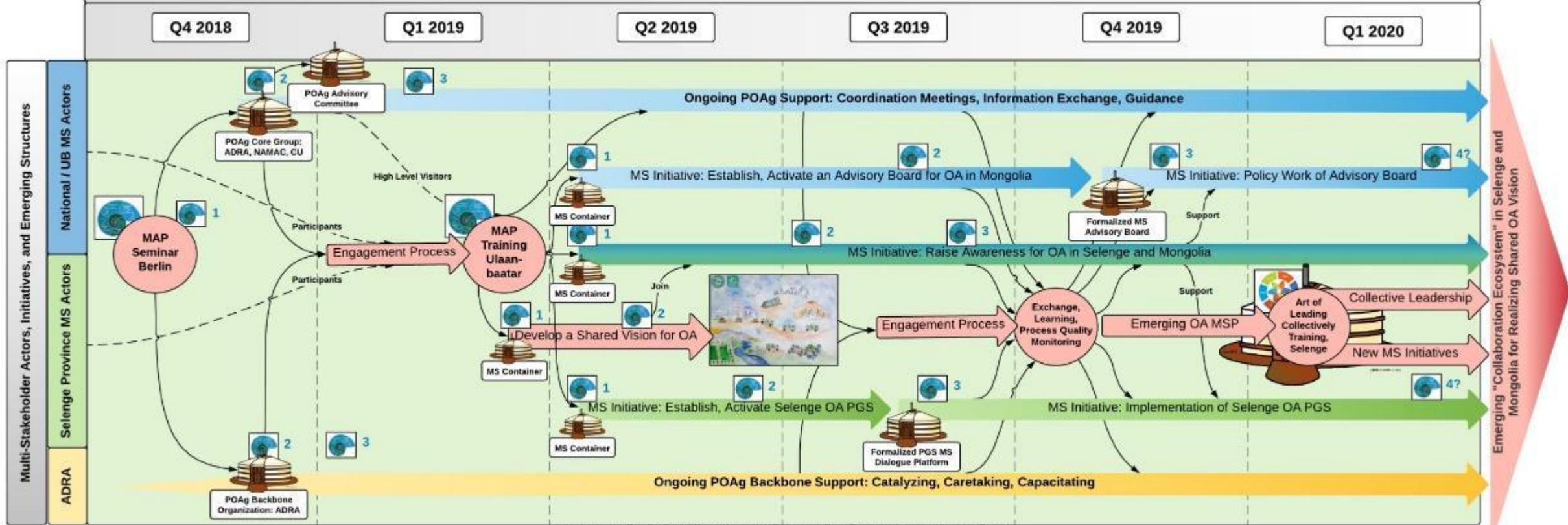
**#2** How do we cultivate a network of complementary collective action?

**#3** How do we build on existing innovative approaches and foster new approaches?

**#4** How do we continuously attend to value creation for all?

**#5** How do we establish high quality dialogue structures that enhance implementation?

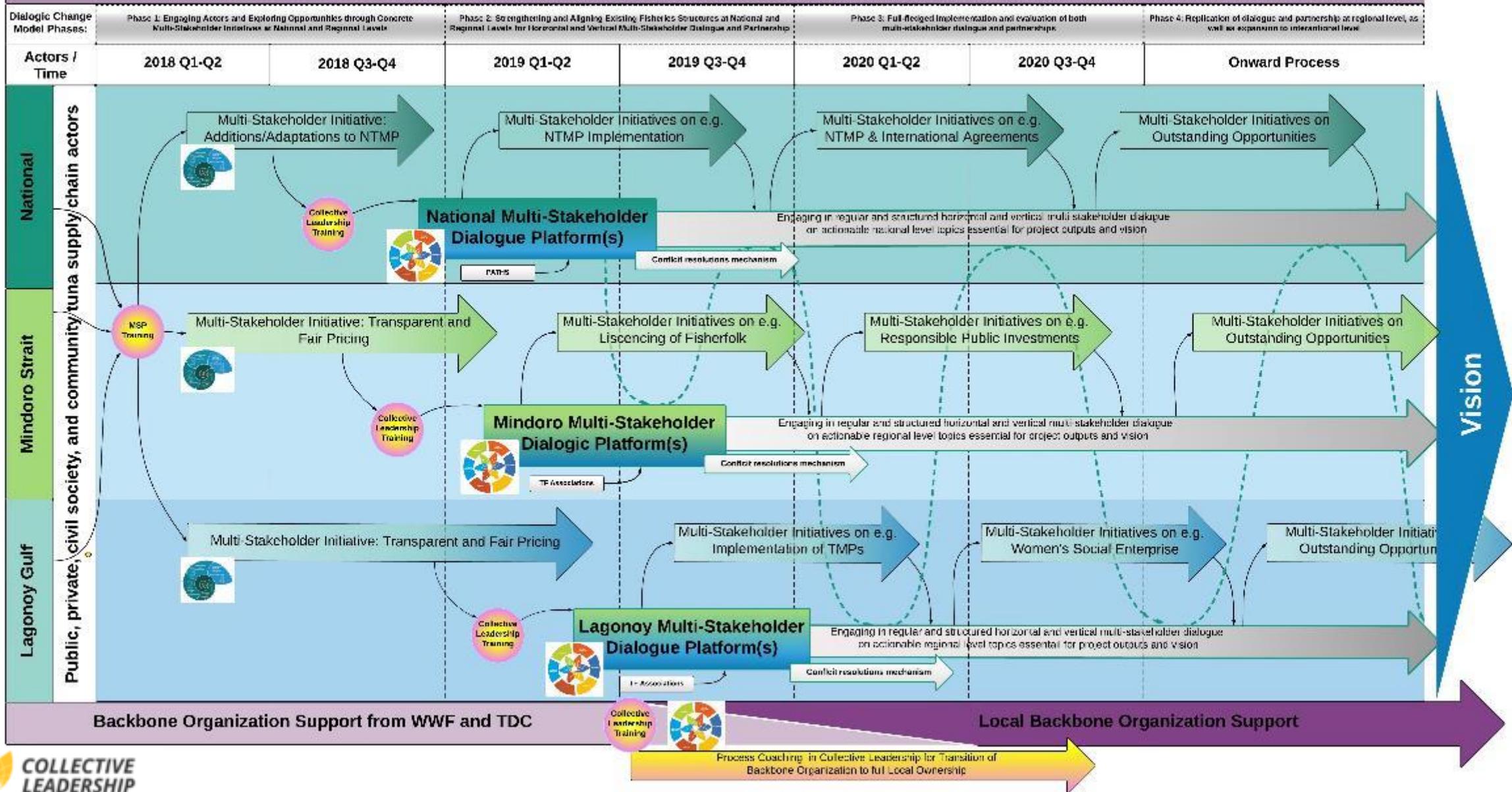
## Process Architecture: Multi-Stakeholder Partnership for Organic Agriculture in Selenge Province and Beyond



For more guidance, see "Next Steps" documentation and Container-specific recommendations in CLI's report.

Emerging "Collaboration Ecosystem" in Selenge and Mongolia for Realizing Shared OA Vision

# The Sustainable Tuna Partnership and Beyond: Toward an Equitable and Sustainable Tuna Supply Chain

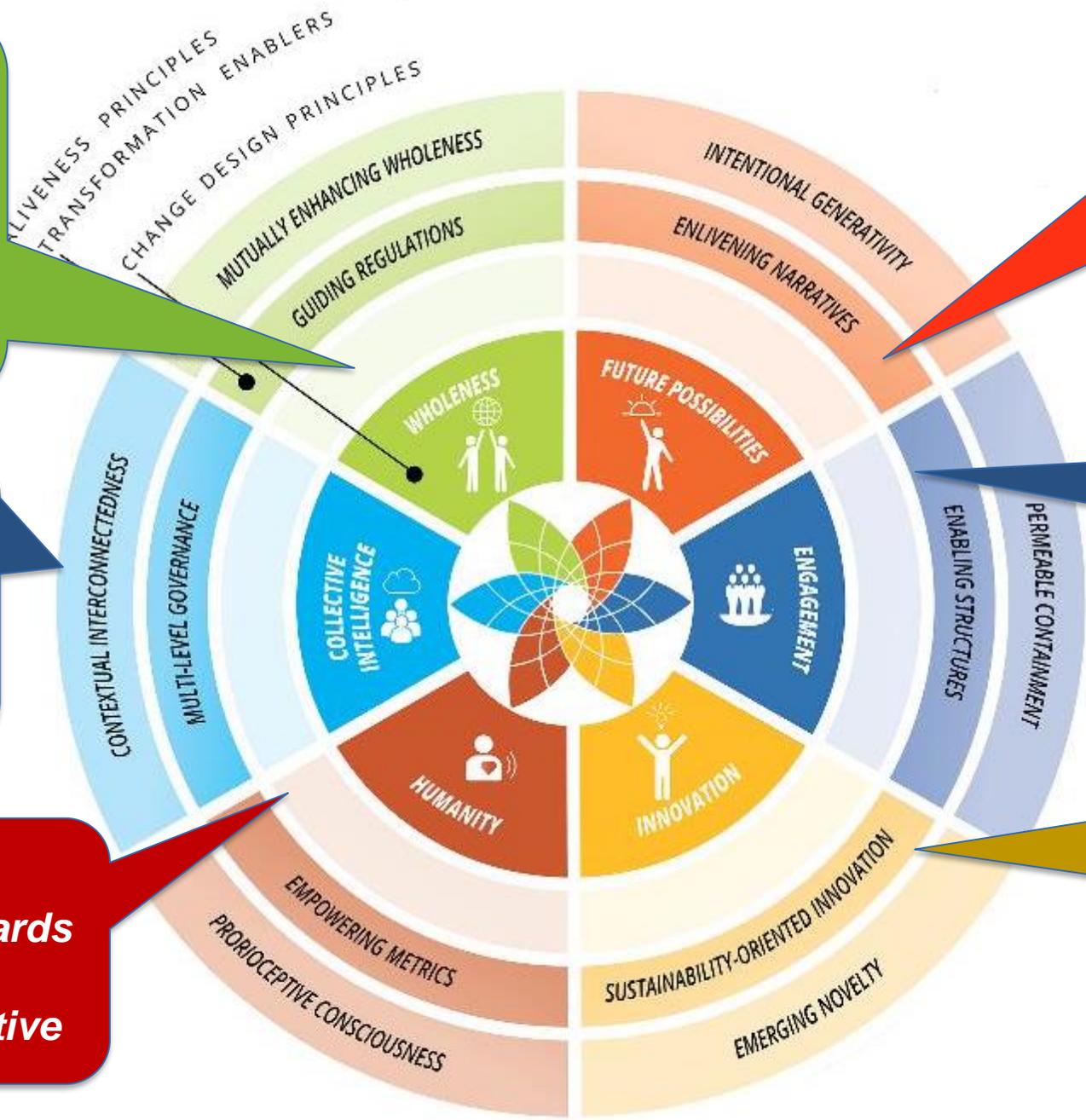


# Integrated focus area #3: Designing **systems strategies** for transformative change

**#6 How do we promote regulations and resource allocations that support circular economy (regenerative agriculture practices)?**

**#5 How do we establish governance mechanisms that are highly inclusive and foster multi-level implementation?**

**#4 How do we shift economic measurements towards a circular economy/regenerative agriculture?**

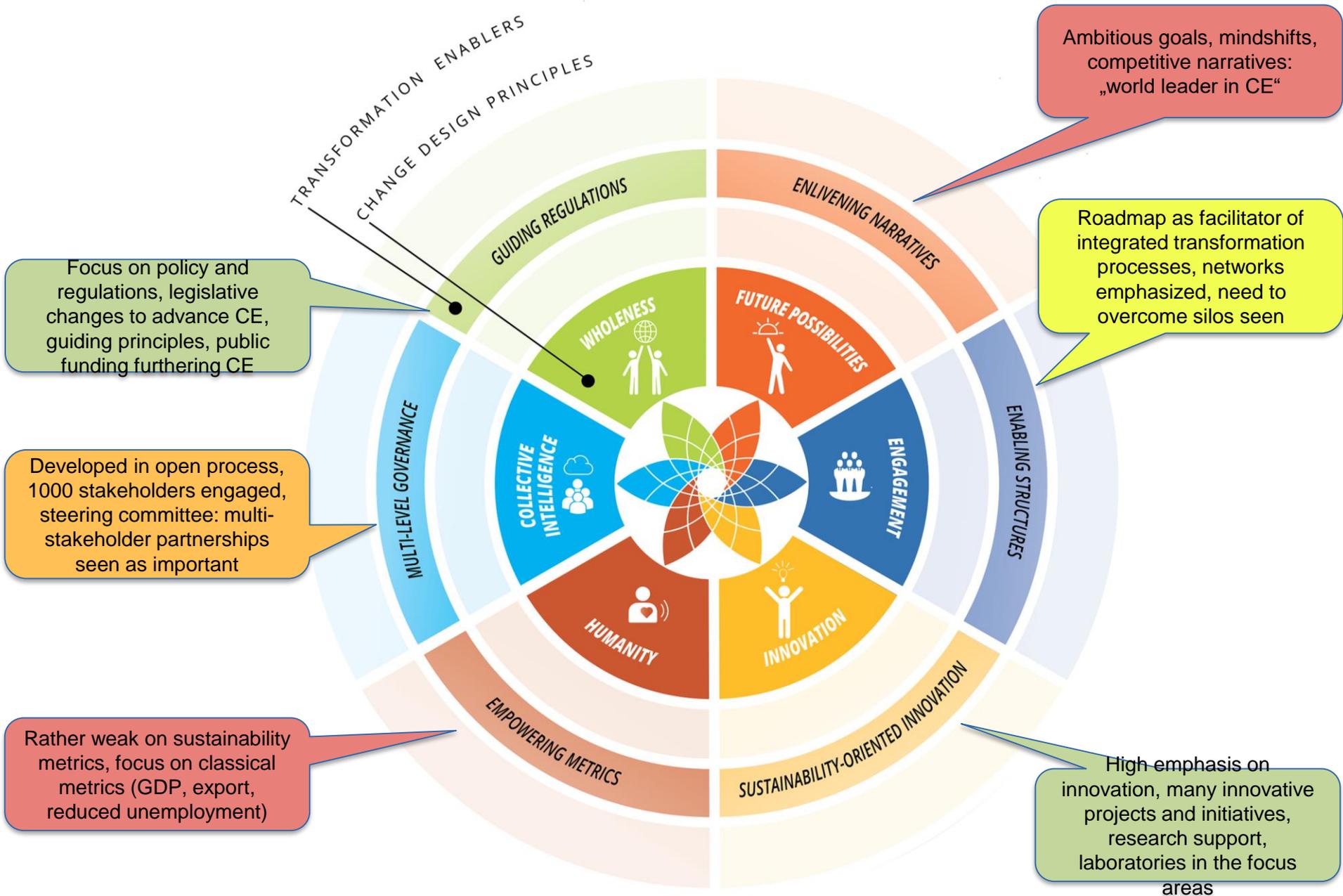


**#1 How do we create narratives that inspire companies, entrepreneurs, consumers and politicians alike to drive a roadmap towards a circular economy?**

**#2 How do we create network structures and process flows that foster circular/regenerative practices?**

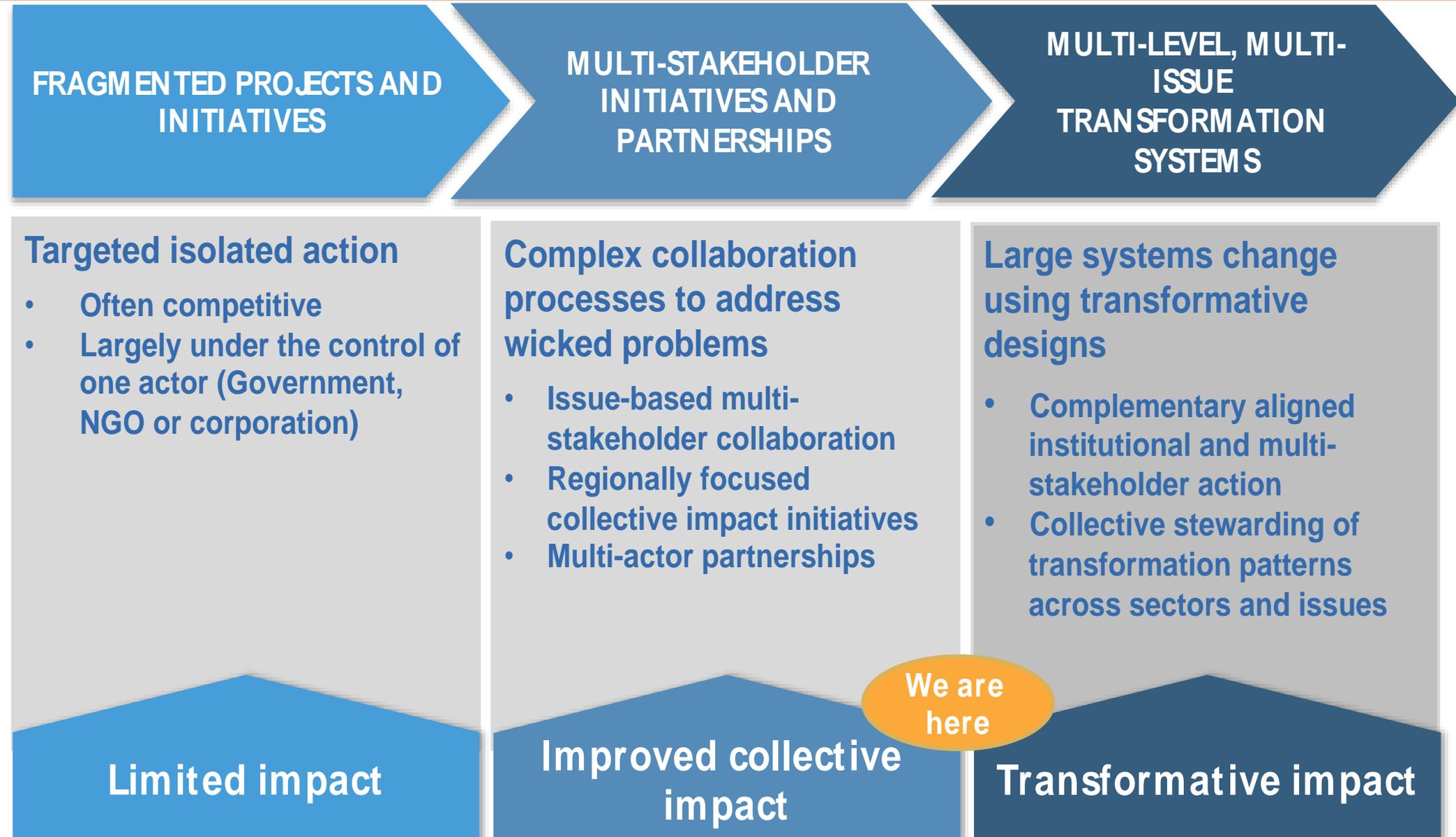
**#3 How do we incentivize and leverage innovation for circular economy/regenerative practices?**

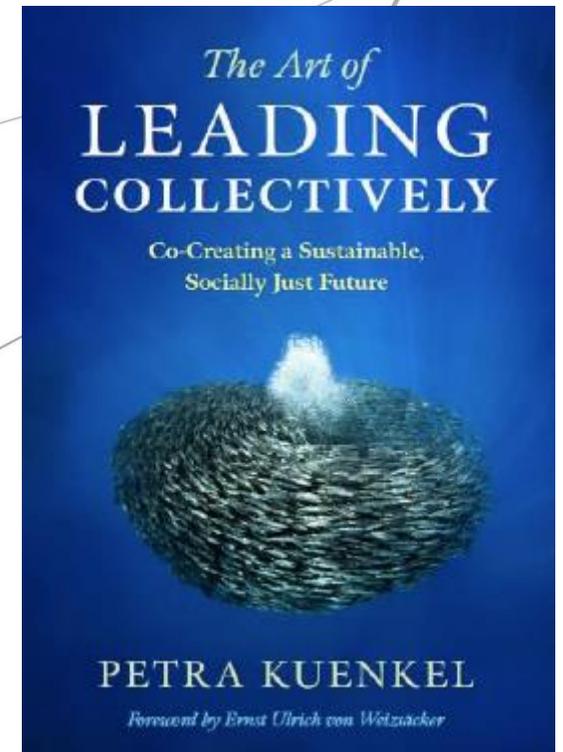
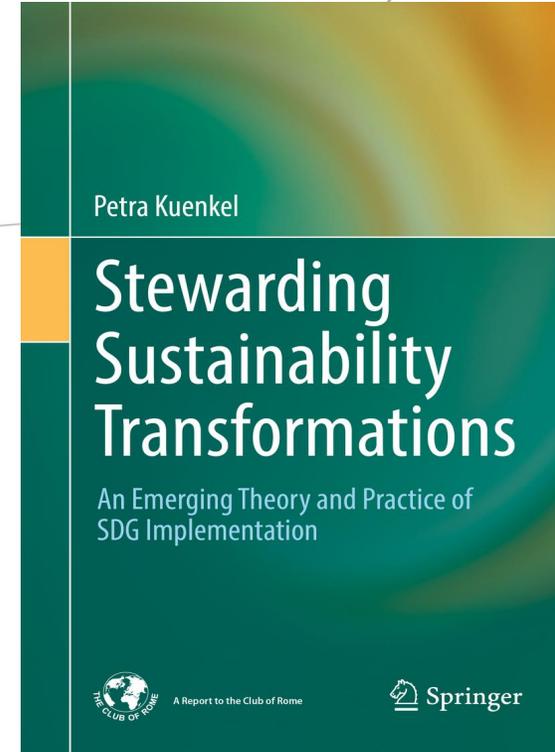




**Meta-assessment Finnish Roadmap to a Circular Economy.**

# From isolated action to **collectively stewarding sustainability transformations**





**Thank you for your attention!**

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