

Four dimensions of learning

And what they mean for change

Learning can happen in different dimensions

1. Individual learning
2. Collective learning
3. Institutional learning
4. Societal learning

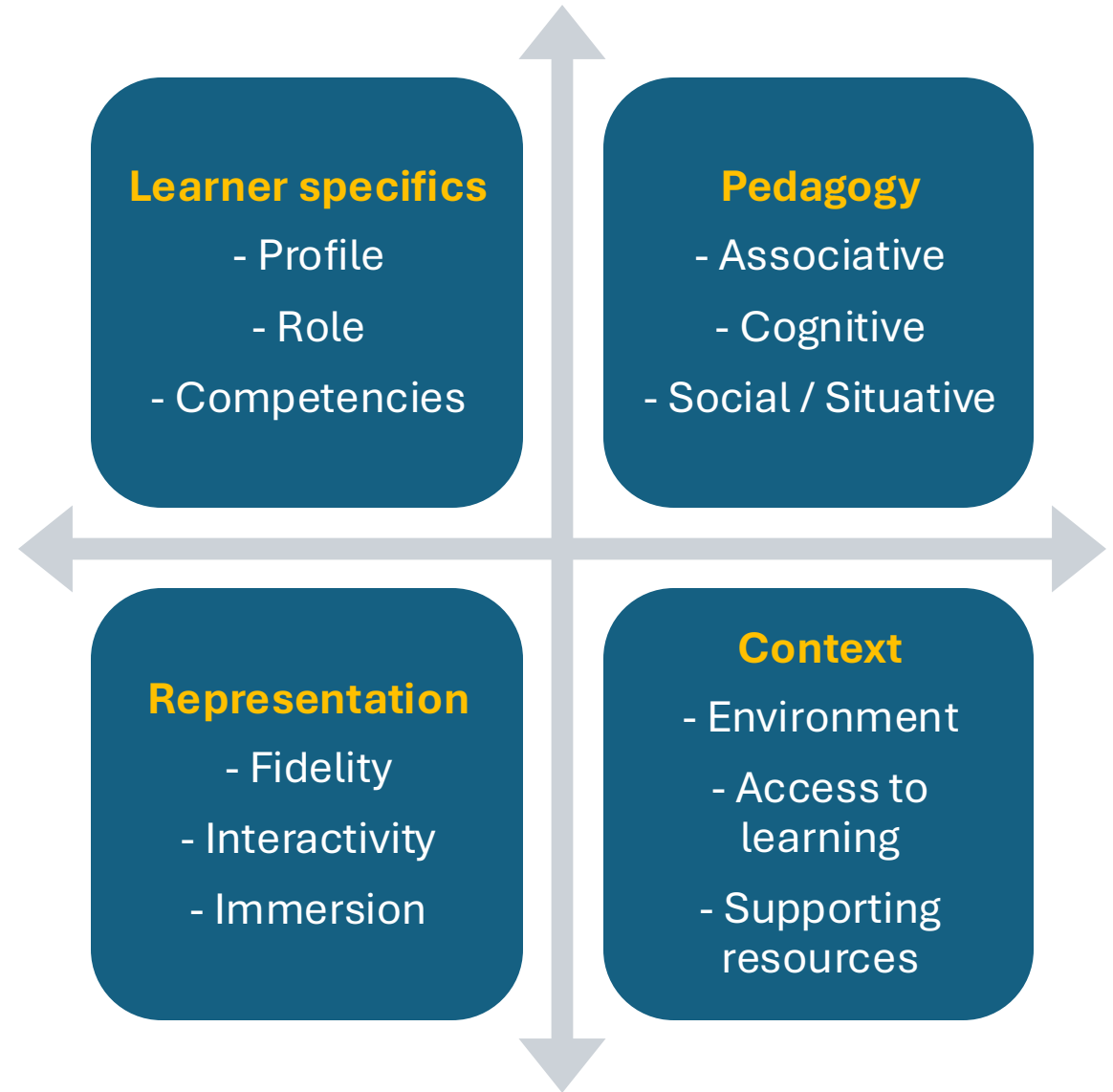
These dimensions represent different scales and often happen simultaneously, not always at the same pace, but they do interact and coexist and would not happen in isolation.

Individual learning

An evaluation framework for understanding immersive individual learning consists of four components, each of them having a number of attributes (de Freitas et al., 2009)

Within this framework, the process of learning can take place

Learning is a process involving change in the learner's behaviour or knowledge



Ontology, epistemology, methodology, methods and data all influence learning

- Ontology asks the question ‘What is real?’ and can be very different for people who have grown up in different cultures, language, religions, countries and eras. (How we make sense of the world)
- Epistemology is the theory of knowledge, what can be known or not known, and how you can find out about it
- Methodology is the theory of methods, the methodological rationale and principles for defining the question
- Methods: tools and techniques to gather data
- Data: information gathered when using a method

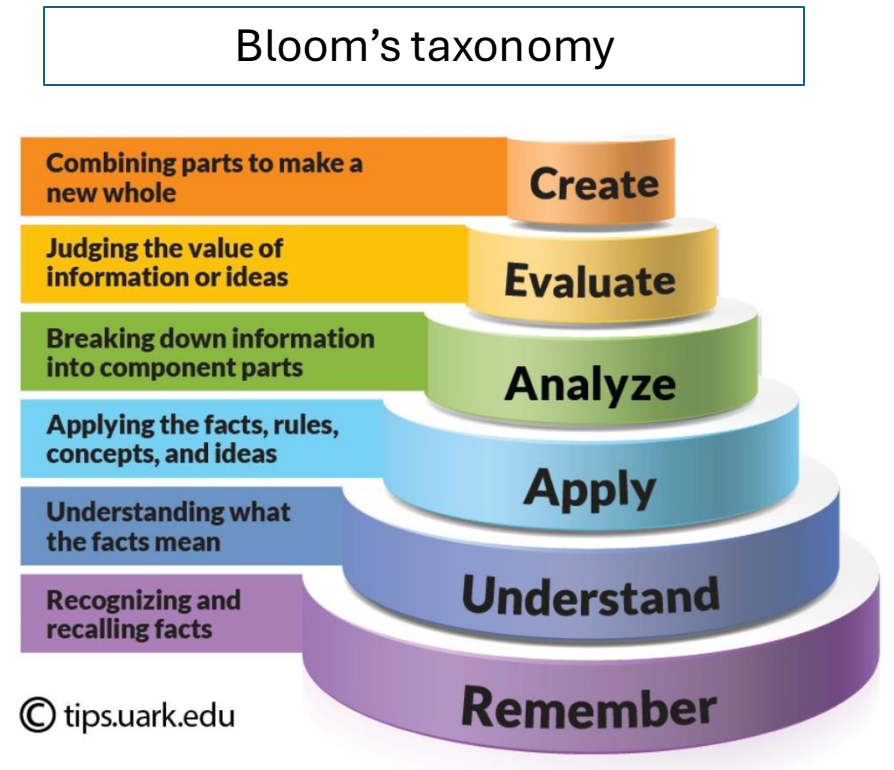
Individual learning process

1. Attitudes and perceptions
2. Acquire and integrate knowledge
3. Extend and refine knowledge
4. Use knowledge meaningfully
5. Habits of mind

Evaluate with: MSC (most significant change) (Davies and Dart, 2005)

Three domains of learning

- **Cognitive learning:** remember, understand, apply, analyse, evaluate, create (Bloom's taxonomy)
- **Affective learning:** emotions and feelings, motivation and engagement, interconnectedness of emotion and cognition
- **Psychomotor learning:** physical skills , integration of cognitive and motor skills, practical applications



Credit Jessica Shabatura;
<https://tips.uark.edu/using-blooms-taxonomy/#gsc.tab=0>

Collective learning

- Shared knowledge and understanding
- Dynamic and cumulative
- Social process
- Beyond individual learning (outcomes are greater than the sum of individual efforts)

Without collective learning, the human species would not have evolved the way it did. Collective learning also gets passed along cumulatively to future generations.

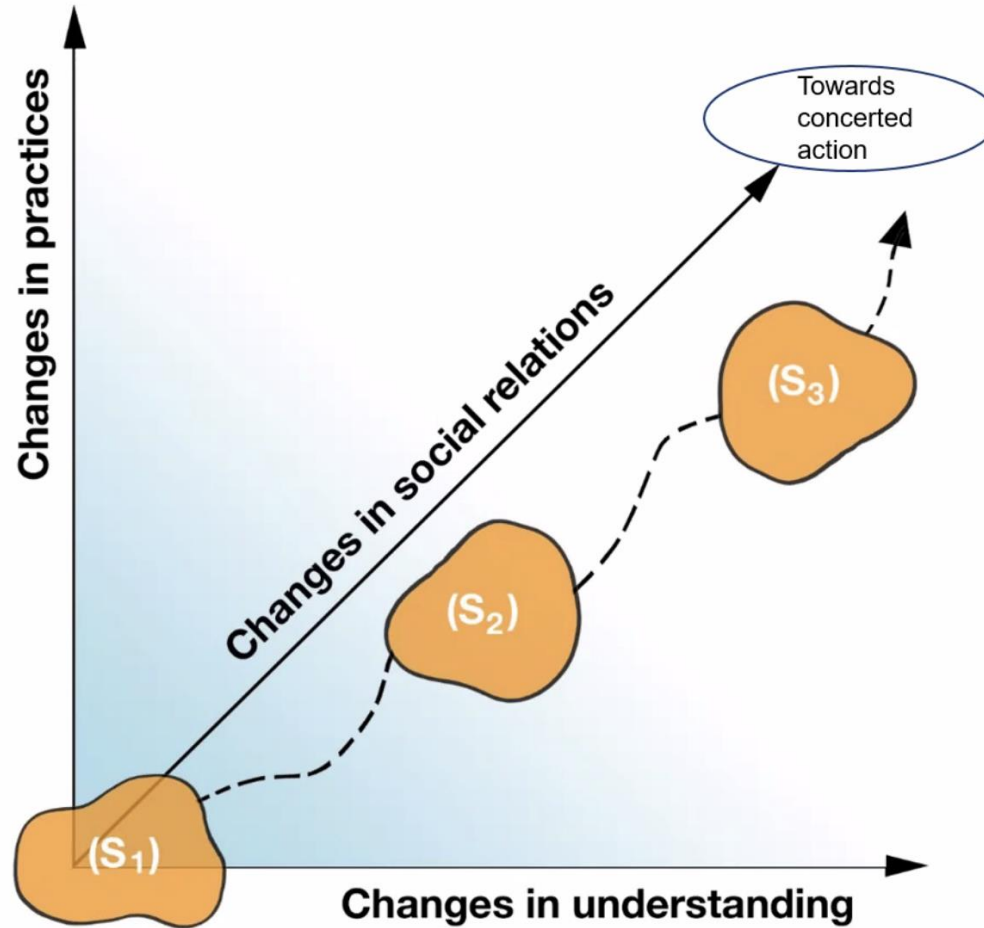
Collective learning can be transformational.

Evaluate with: MSC (most significant change), case studies

Understanding transformations ...and making sense of the evidence

**Transform
situations (S)
not systems**

**Use Systems
Thinking in
Practice
(STiP) to help
transform
situations**



Institutional learning

- Learning from experience
- Adaptation and change
- (i.e. adaptive management)
- Knowledge sharing
- Focus on outcomes
- Continuous improvement

Leveraging the collective wisdom of an organization to continuously improve its performance and achieve its mission

Evaluate with: community impact tool



Societal learning

- Political, economic, social, natural (Waddell, 2002)
- Linked to adaptive management
- Triple loop learning: improvement, reframing, transforming (Pahl-Wostl, 2009)
- Capacity influenced by interactive dimensions of collaboration, leadership and institutions, and biophysical feedback loops (Bouckaert et al., 2020)

Evaluate with: policy tracking tool.

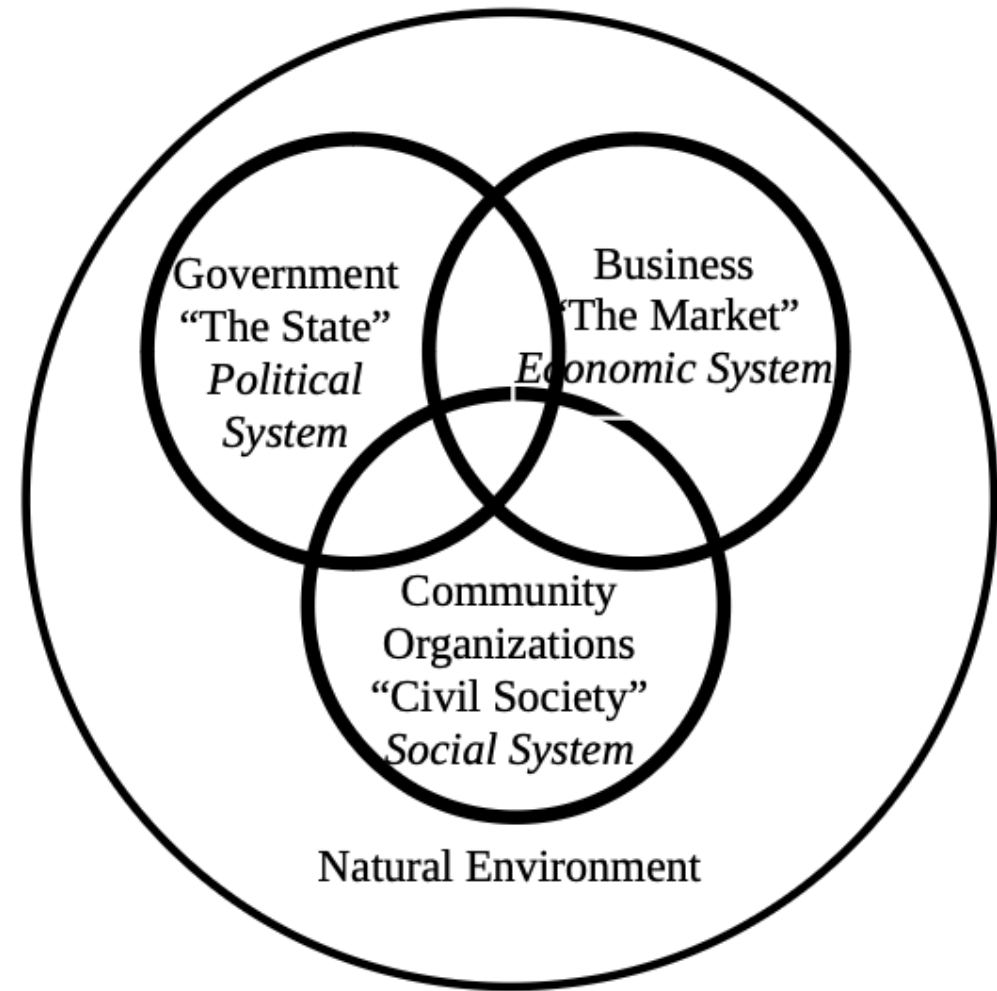


Figure t The four-sector model

Triple loop learning

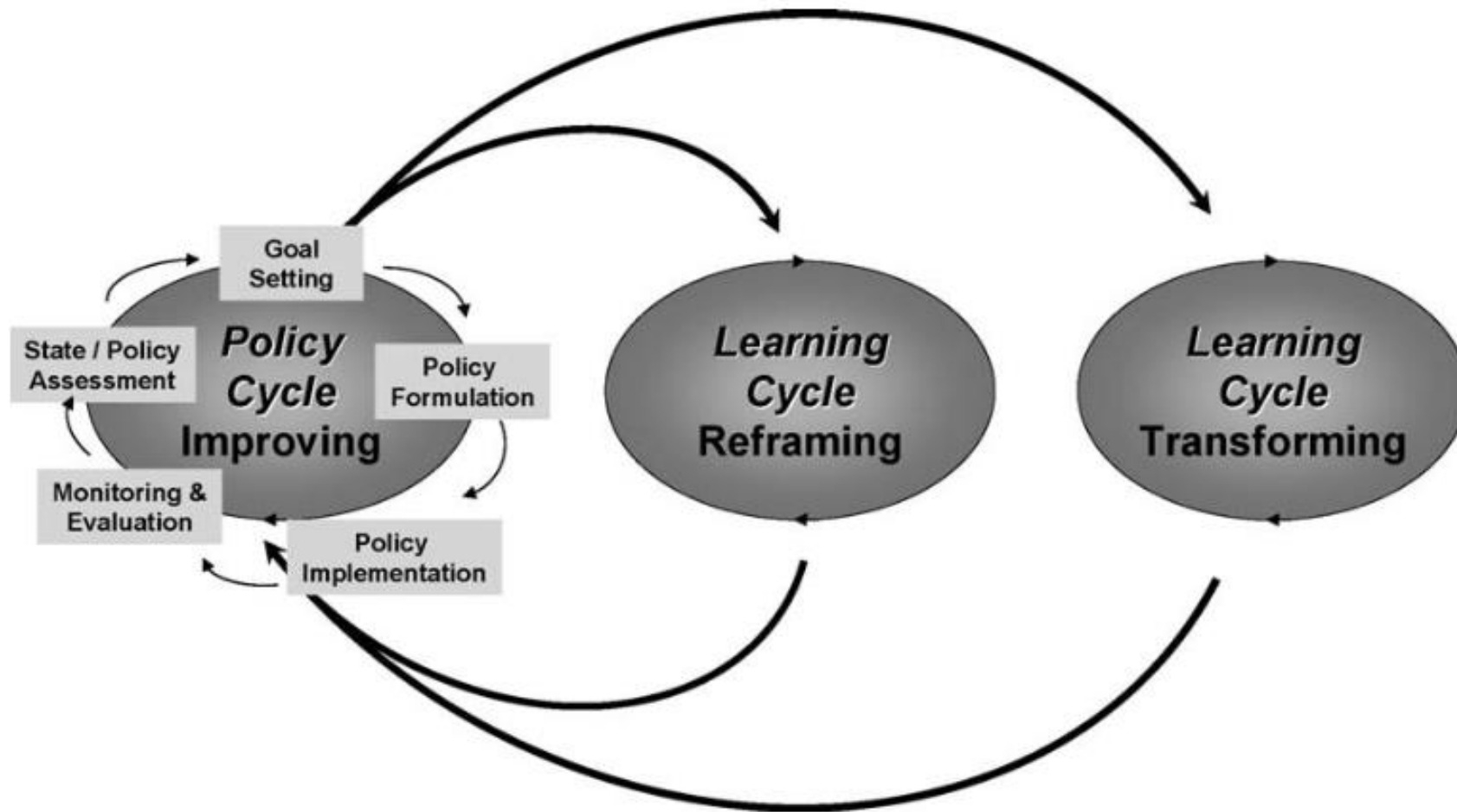
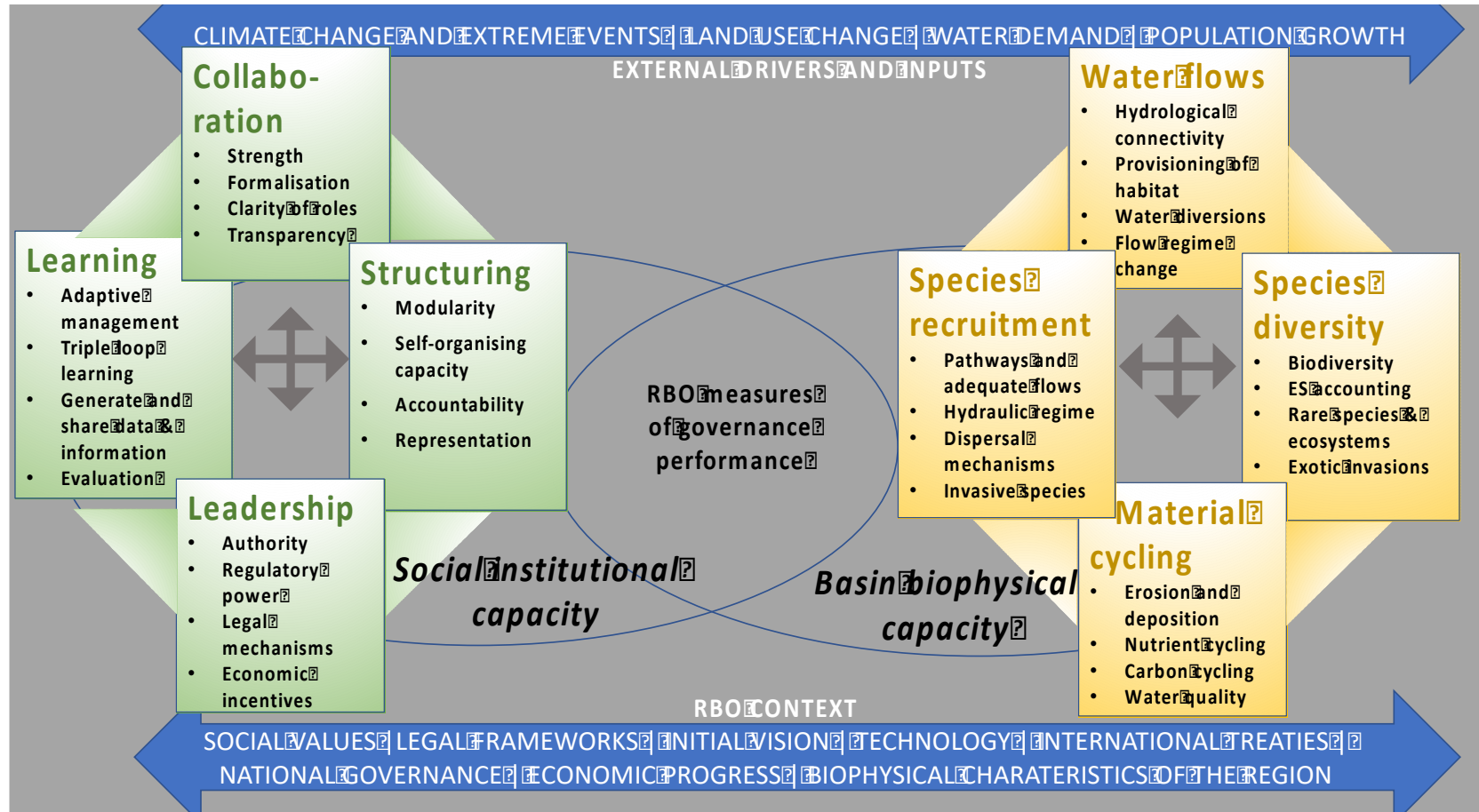


Fig. 3 The concept of triple-loop learning applied to the policy cycle and governance regimes. Source Pahl-Wostl 2009

Diagnostic framework for socio-ecological learning



Learning needs to be formalised

- To consolidate learning in each of the four dimensions, we need to formalize our learning
- From intrinsic learning, we need to externalise it in order to:
 - Take action
 - Transform and implement objectives
 - Evaluate
 - Report
 - Communicate
- Karen will now present on some of the tools that are available for evaluating and reporting on learning

References

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