Creating Learning Spaces for Researchers within Interdisciplinary Research Projects

Dr. Katharina Biely

Introduction

The research program **Transformative Bioeconomies** studies the Materials transition. This is framed as a combination of
- Bio-economy
- Circular economy
- Carbon economy
- Dematerialization

The research program focuses on two domains:

Textiles   Building Materials

Collaboration among researchers and stakeholders is considered to generate a comprehensive understanding of the materials transition. Accordingly, the Transformative Bioeconomies research teams have an interdisciplinary setup.

To provide room for creativity and learning, the research program does not have a linear outline that predetermines the course of action. Instead, the research program aims to create space for experimentation, learning, creativity, and innovation.

Learning Spaces

To facilitate learning the research program has adopted an Agile process. Agile provides a frame for collaborative research. It creates spaces for learning through its circular process that is supported by structures, culture, people, stakeholders, and leadership.

More than a process:
For Agile to provide learning spaces, not only the process, but also the other components of Agile need to be considered.

Vision:
The vision is the anchor and the lighthouse. Without a clearly predefined plan, the vision guides the reiterative trial and error process.
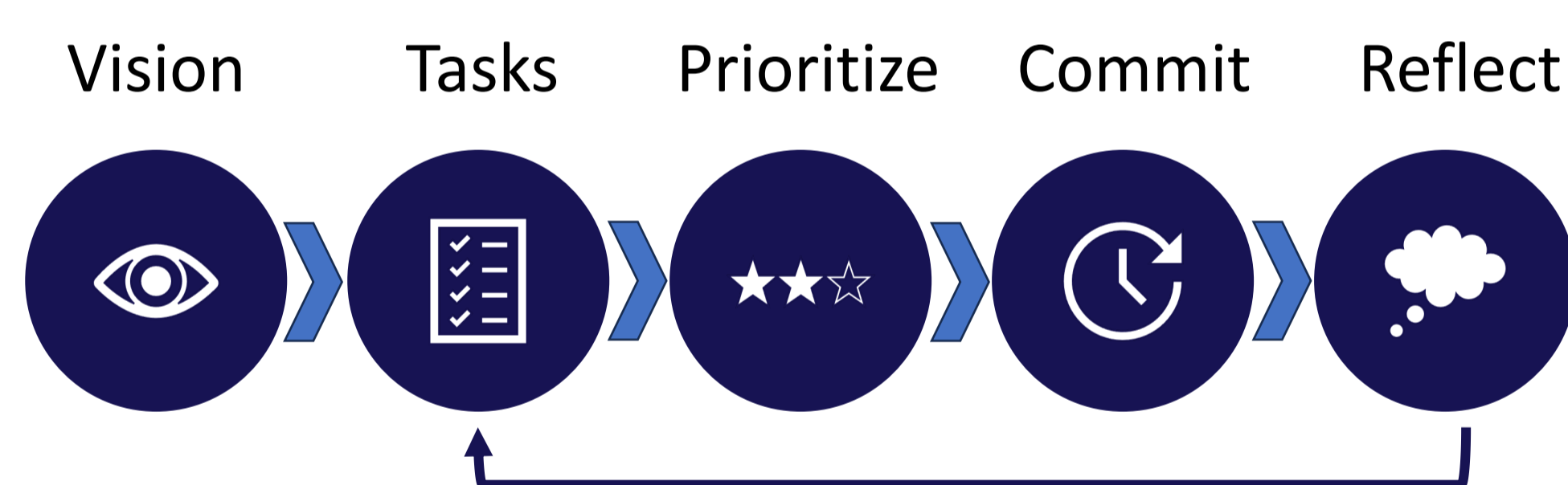
Key Insights

Communication:
The Agile process might be new to the involved people. Thus, clearly communicating the process is crucial to set the right expectations.

Trust:
Agile builds on trial and error. Facilitating learning means creating spaces that provide psychological safety.

Agile

PROCESS

Vision   Tasks   Prioritize   Commit   Reflect

Learning is facilitated through a circular process that is guided by a clear vision of the program. Tasks are developed to work towards the goal. Teams work iteratively on these tasks in short time intervals. Through, **reflecting on the results, learned lessons can be integrated and ongoing work can be adapted**.

STRUCTURE

Small (+/- 7) **interdisciplinary** teams work **autonomously** on a task. Tasks are commonly defined, but how the team implements the task is up to the abilities & creativity of the team. Ideally, team composition is guided by the skills needed to work on the tasks.

STAKEHOLDERS

Agile is stakeholder oriented. Projects start with collaboration with stakeholders through problem identification. Thereafter stakeholders should be part of the process. Thus, they are **partners in identifying and testing solutions.**

CULTURE

Agile builds on trial and error, experimentation, and learning. To facilitate this, **a culture** that creates **psychological safety and trust** needs to be created and maintained.

PEOPLE

People that exhibit certain characteristics flourish more in an Agile setting. Characteristics are, swimming against the stream, high **creativity**, preferring working **autonomously**, being able to deal with constantly inflowing **feedback**, and being highly **adaptable**.

LEADERSHIP

Agile has flat hierarchies, still, leadership is key. Leaders need to create and maintain a supportive culture, and suitable structures, initiate the process, and support people so that they can live up to their full potential. Thus, leaders should **create an inclusive environment** that supports those who might be struggling with an Agile setting.

TRANSFORMATIVE Bioeconomies
Towards a materials transition that phases out fossil feedstock