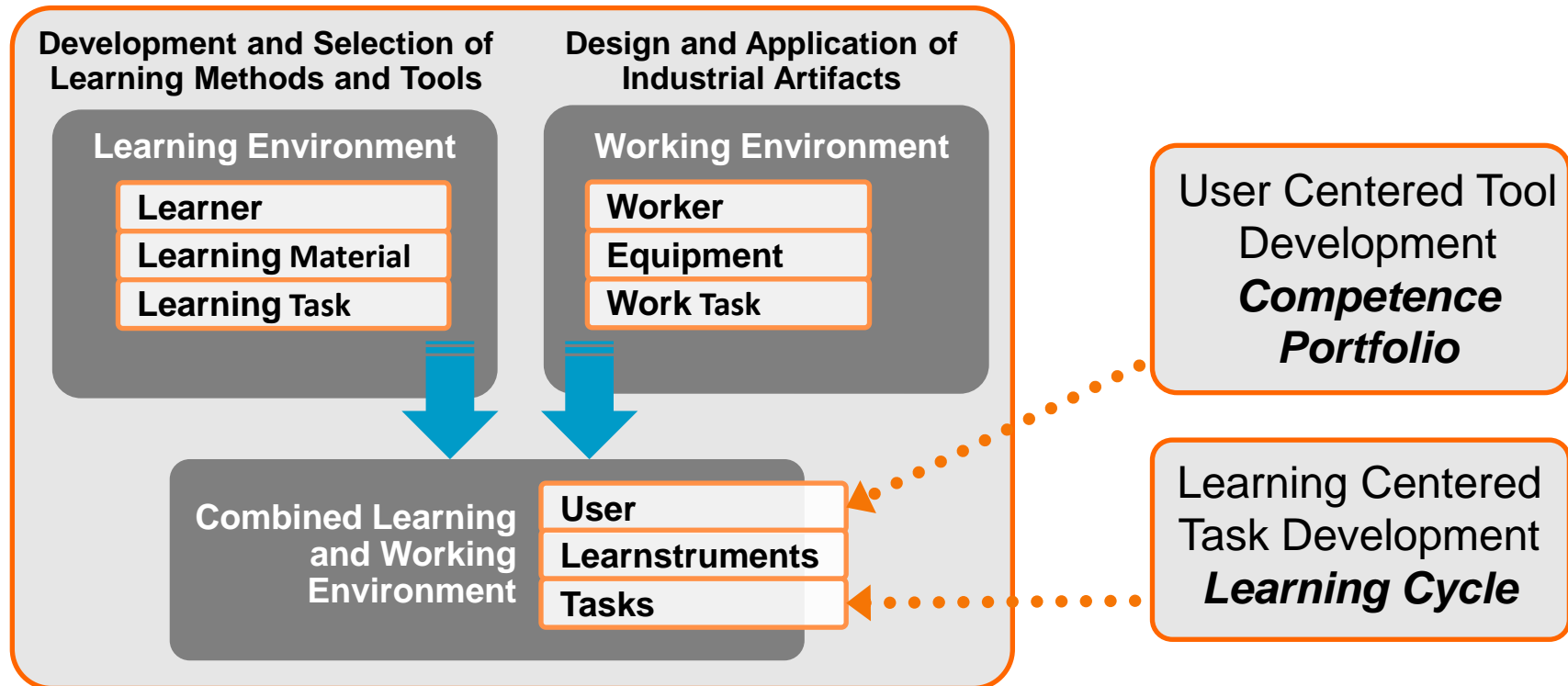


# C5 Unique contribution to sustainable manufacturing

- ▶ Goal: Increase in Teaching and Learning Productivity for Sustainable Manufacturing through application of Learnstruments

Learnstrument Development in Design for Mediation Approach



- ▶ Approach: Learning and user centered design in combined learning and working environment

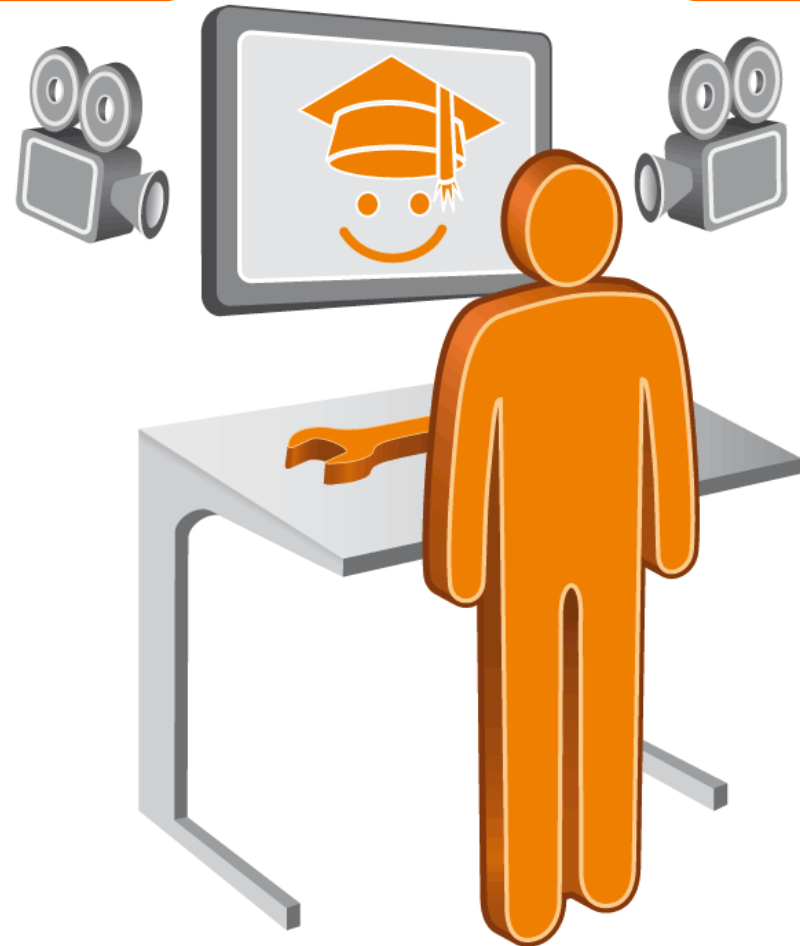
## C5 Learnstruments

**Learnstruments** are objects which automatically demonstrate their functionality to the learner. They consist of aspects of *cognitive stimulation* and *emotional association* with new and existing ICT and design approaches for *productive mediation*.

**Adaptation of  
functionality  
and interfaces**

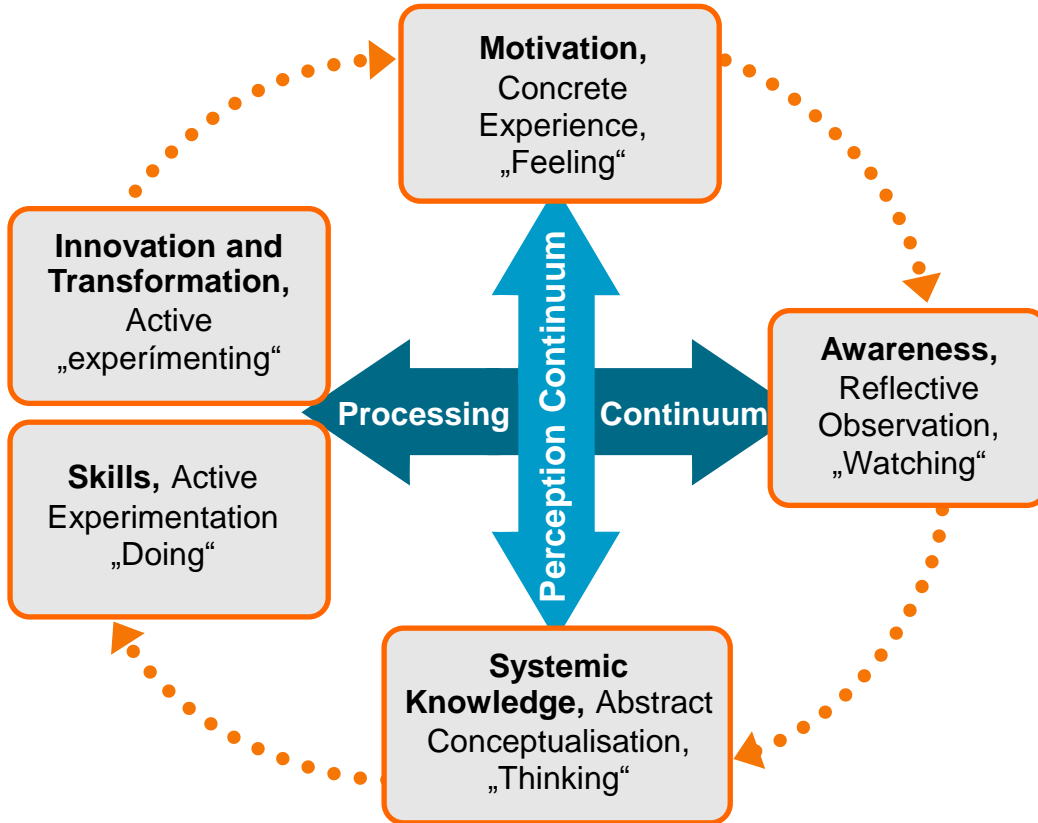
Technology  
**identification**

**Combination  
with learning  
materials program**



# C5 Learning Cycle / Portfolio Strategy

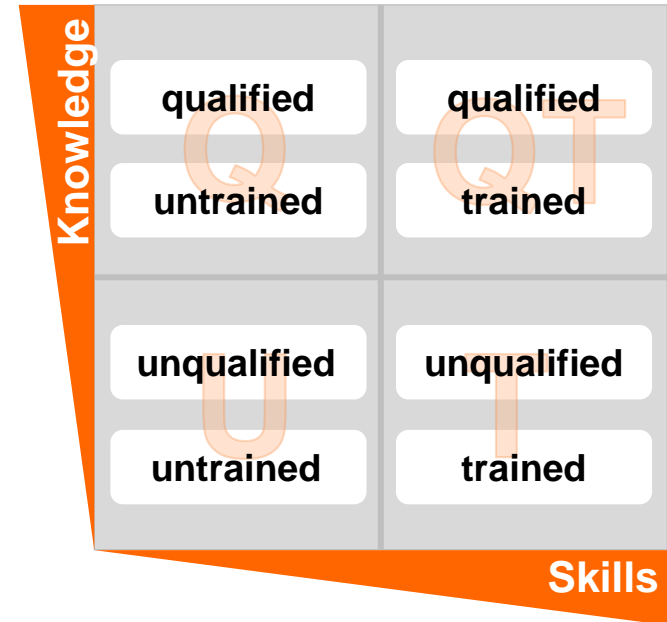
Learning Centered Task Development **Learning Cycle**



## Cycle Strategy

Learnstruments cover all aspects of the perception and processing continua for highest teaching productivity

User Centered Tool Development  
**Competence Portfolio**



## Portfolio Strategy:

Increase error tolerance for untrained and unqualified users