



RUB

RUHR-UNIVERSITÄT BOCHUM

Co-determination – An interdisciplinary concept to train PhD students from different disciplines

by Anna Conrad, Henning Oberc, Manfred Wannöffel, Bernd Kuhlenkötter

9th Conference on Learning Factories, March 28th 2019

Hans **Böckler**
Stiftung 

GEMEINSAME
ARBEITSSTELLE
RUB/IGM



Agenda

- Motivation
- Target group
- Overview
- Modules
- Learning objectives





Motivation

- Industry 4.0 will affect **all sectors** of the working world
- Lack of qualification outside the technological sectors
- Longstanding cooperation between the Chair of Production Systems and the Office of Cooperation RUB/Industrial Metal Union
- **Socio-technical** Learning Factory offers a holistic learning experience (T-O-P)

Target group

- **PhD students** from all over Germany
- **different scientific backgrounds**
- interested in **Industry 4.0**
- **scholarship** holders
- who do not intend to stay in the academic field but
- want to work in **NGOs, administrations or enterprises.**



Overview

| | | Content | Exercises |
|-----------------|---|---|--|
| Module 1 |  | <ul style="list-style-type: none"> • Lean production • Digitalization • Socio-technical approach | <ul style="list-style-type: none"> • Management of co-determination • Change management • Conflict management <ul style="list-style-type: none"> • LEGO exercises • Simulation game |
| Module 2 |  | <ul style="list-style-type: none"> • Assistance systems and co-determination • Learnability | <ul style="list-style-type: none"> • Participation • Demographic change • Manufacturing execution system <ul style="list-style-type: none"> • 5 round based exercises |
| Module 3 |  | <ul style="list-style-type: none"> • Knowledge management • Handling of data | <ul style="list-style-type: none"> • Competences vs. knowledge • Assistance systems and knowledge management <ul style="list-style-type: none"> • Recording, storing |
| Module 4 |  | <ul style="list-style-type: none"> • Project management • SCRUM and other methods | <ul style="list-style-type: none"> • Demographic change • Agility: meaning and use <ul style="list-style-type: none"> • LEGO exercise • Planning of a generic project |

Office of Cooperation RUB/IGM & Chair of Production Systems

4 modules à 2 days

1. Co-determination and the new working world 4.0


| | Content | Exercises |
|---|---|---|
| Module 1   | <ul style="list-style-type: none">• Lean production• Digitalization• Socio-technical approach | <ul style="list-style-type: none">• Management of co-determination• Change management• Conflict management• LEGO exercises• Simulation game |

- Common ground for the following modules
- Networking between different disciplines
- Simulation games
 - different roles and perspectives (works' councils, management, logistics, assembly, sales etc.)

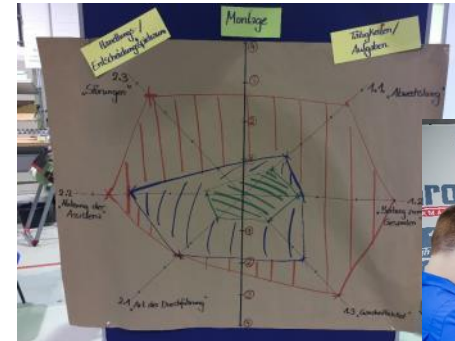


LPS Learning Factory

2. Digitalization, assistance systems and re-organization of work

| | Content | Exercises |
|--|--|---|
| Module 2  | <ul style="list-style-type: none">Assistance systems and co-determinationLearnability | <ul style="list-style-type: none">ParticipationDemographic changeManufacturing execution system |
| | | <ul style="list-style-type: none">5 round based exercises |

- Focus on **assistance systems**
 - Practical experiences
 - Interface between human, technology and organization
- Simulation game with 5 exercises
- **Reflection and discussion**
 - **chances** and **challenges** of assistance systems
 - **Involvement** and **participation** of employees




Ex. of an evaluation result

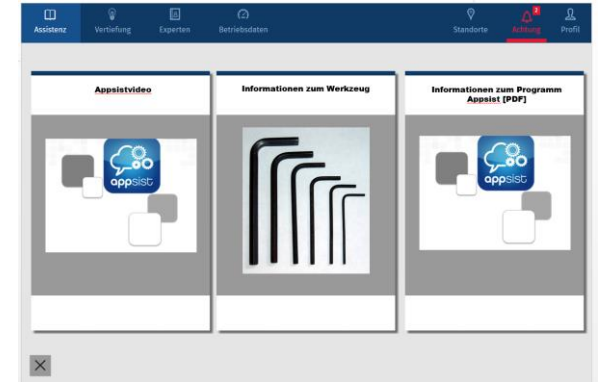


Maintenance task in the LPS learning factory

3. Management of knowledge

| | | |
|---|---|---|
| Module 3  | Content | Exercises |
| | <ul style="list-style-type: none">• Knowledge management• Handling of data | <ul style="list-style-type: none">• Competences vs. knowledge• Assistance systems and knowledge management |

- Knowledge is often lost or left unused
- Ownership of knowledge? Classification of jobs? Changes of salaries?



APPSist: adaptive assistance system and learning tool (LPS)

4. Agile project management

| | | |
|---|---|--|
| <p>Module 4</p>   | <p>Content</p> <ul style="list-style-type: none"> • Project management • SCRUM and other methods | <p>Exercises</p> <ul style="list-style-type: none"> • LEGO exercise • Planning of a generic project |
|---|---|--|

- Agility = ability to act purposefully in a volatile, uncertain, complex environment
- Agile project management requires **redesign** of organizations and processes towards **transparency, flexibility and self-responsibility**
 - Work-life-blending, subjectification, digitalization = **key features** of a new working world

4.0

Learning objectives

Participants will...

- gain first insights into shaping **processes**, organizing **projects** and employing models of **knowledge management**,
- gain knowledge about **concepts of management** oriented towards **co-determination** and **participation**,
- practically experience **new technologies** and
- be **sensitized** to their chances and challenges for the changing working world.



ANNA CONRAD

OFFICE OF COOPERATION RUHR-UNIVERSITÄT
BOCHUM / INDUSTRIAL METAL UNION

CONTACT:

+49 234 / 32-25239

ANNA-KATHARINA.CONRAD@RUB.DE

Thank you for your attention!