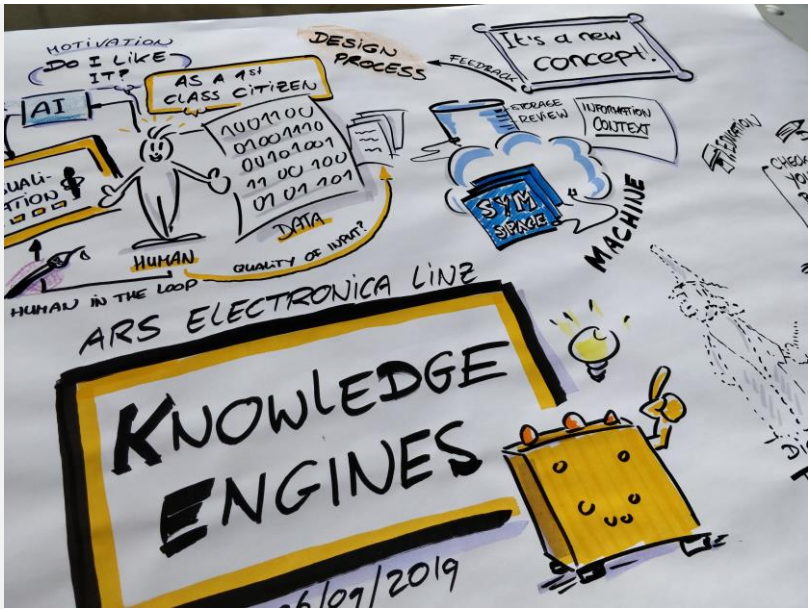
SUCCESS STORY

LCM – Center for Symbiotic Mechatronics

Programme: COMET – Competence Centers for Excellent Technologies

Program line: COMET-Center K2

Strategic project:
Knowledge Engines Extended Hackathon – KEEH



SANDBOX-FORMAT FOR AUTOMIZED DIGITAL SERVICES

LCM DEVELOPED A NEW TEST-BEFORE-INVEST FORMAT. IT ESTABLISHES CONCRETE USE-CASES THAT ALLOW TO EXPERIMENT HOW EXISTING KNOWLEDGE CAN BE REPRESENTED DIGITALLY AND CAN BE USED BY EXTERNALS. THE RESULTS ARE USED TO BETTER ASSESS RISKS AND POTENTIAL OF INNOVATION IMPLEMENTATIONS.

Increasing digitization of knowledge intensive processes create new abilities. A prominent example is artificial intelligence (AI). Companies and research organization need to assess this potential and how it affects their business opportunities. Especially for digitized knowledge intensive processes this assessment is hard to make. Markets often do not exist yet, or best-practice examples seem to be incomparable. To get some hands-on experience with automized digitized knowledge, LCM developed a new format. The **„Knowledge Engines Extended Hackathon (KEEH)“** format provides a sandbox environment in which new digital services can be tested and experienced. Participating organizations open internal digital processes for external use, e.g. autonomous problem solvers. First, the participants draft a joint win-win situation – a very specific supplier-customer relationship. Once specified, the use- case is implemented in the form of an “extended hackathon”, a time frame of a couple of weeks, or months at most. Both organizations learn about concrete challenges that apply for their specific organization. These may address the information

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transfer, company culture, requirements on the offer, liabilities or the scope of the intended service.

At LCM, several of those use-cases have been implemented in different areas. One very successful example included the experimentation of knowledge exchange between two research centers, the Wood-K-Plus, a research center on wood composites, and the Material Center Leoben (MCL) a research center on metal. Wood-K-Plus was interested in finding new possibilities to decrease their development time, potentially by utilizing AI. MCL was interested in finding new market opportunities for their existing AI tools. To implement their use-case, LCM provided its open source software tool SyMSpace as a neutral platform. The KEEH format was used in different fields. The cooperation partners were international organizations such as the Aarhus University in Denmark, a Fraunhofer Institute in Germany, the Research Institute Sweden (RISE) and the University KTH Stockholm. The national cooperation partners were Wood-K-Plus, MCL, University for applied Sciences Wels as well as the Ars Electronica Center. Within the Ars Electronica Festival 2019 artists and a broader audience were invited to reflect aspects of digital services.

For the K2-COMET center, the KEEH format has various benefits: With the test-before-invest format LCM can provide new value adding perspectives for its partners. The existing software platform SyMSpace can be extended to a broader application area (following the KEEH spirit). LCM can deepen its knowledge in the field of automized digital knowledge representation, the so-called “knowledge engines”. Furthermore, LCM can extend its networks for potential future digital service providers.

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Project partners

- Wood K Plus, Linz
- Materials Center Leoben Forschung GmbH (MCL), Leoben
- FH Wels
- Aarhus University, Dänemark
- RISE, Schweden
- KTH Stockholm, Schweden
- Fraunhofer, Deutschland

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