

Services for teaching, research and co-innovation

SAP University Alliances is a global program, which provides free SAP software licenses for academic purposes to over 3,000 universities worldwide. Within this program, the SAP University Competence Centers (SAP UCCs) offer technical and applicative support for SAP solutions in teaching, research and co-innovation.

In addition, the SAP UCCs develop and maintain educational materials for the didactic mediation of the corresponding technologies. While the SAP UCCs ensure 24/7 availability of complex system landscapes and support users in their application, faculty members can focus on their core competencies in teaching and research.

By using our scenario-based and practical curricula on latest SAP solutions, lecturers and students can unlock their full potential. Our comprehensive teaching materials consist of presentations, case studies and hands-on exercises. Additional teaching tools facilitate continuous student assessments and foster group discussions.

Interested? Contact us! Our experts will support you.

SAP UCC

Contact

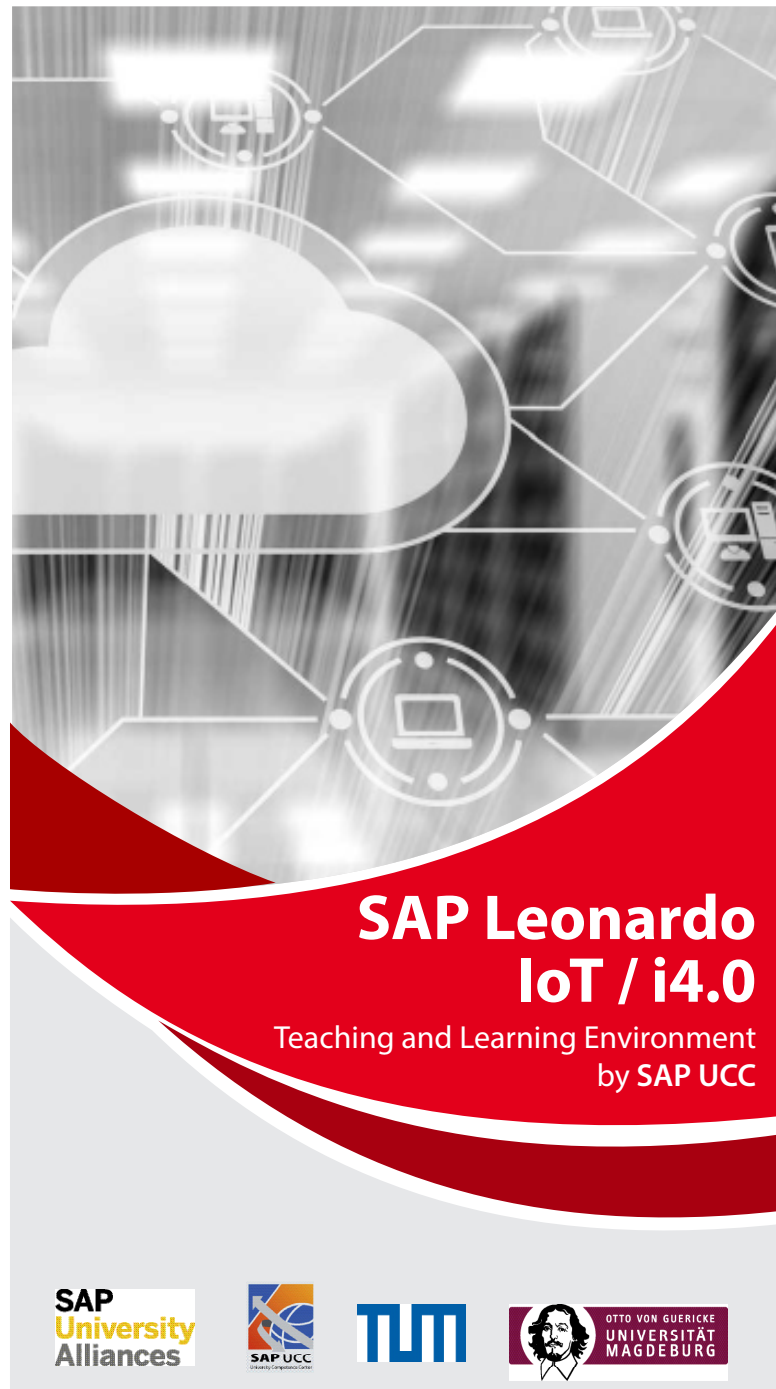
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SAP Leonardo IoT / i4.0

Teaching and Learning Environment
by SAP UCC

SAP University Alliances

SAP UCC

TUM

**OTTO VON GUERICKE
UNIVERSITÄT
MAGDEBURG**

The IoT / i4.0 scenario

The Internet-of-Things / Industry 4.0 teaching and learning environment offered by SAP UCC Magdeburg is intended to map and make the linking of business and production processes understandable. The SAP UCC cooperates with fischertechnik GmbH for this purpose.

By connecting their physical factory simulation system to SAP ME and the additional use of mini-computers, the Industry 4.0 idea is established in the context of the Internet-of-Things theme.

Guiding principle of the IoT / i4.0 scenario

In conjunction with SAP ERP software, this scenario illustrates the paradigm of the single-point-of-truth: The business software becomes the leading control system and ensures the provision of a constant data set across the entire company.

Data on customer orders, material procurement, cost accounting, work capacities, etc. are directly networked with production.

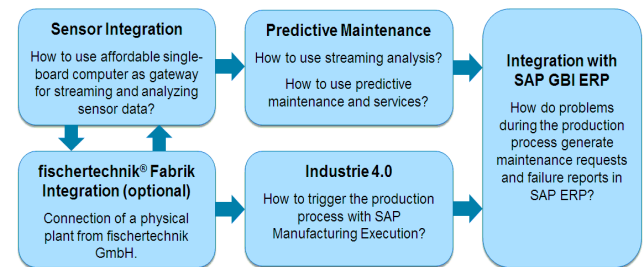
Technical implementation **fischertechnik**

The factory simulation is connected to a production control system (SAP ME) via a mini-computer (Raspberry Pi). A dashboard enables the digital monitoring of production, order management and, with an additional link to an ERP client, the corresponding transfer of data.



Movements and temperature fluctuations can be simulated and monitored with additional sensors and mini-computers. The collected data trigger simulated follow-up actions in the corresponding systems.

Heat development forces a production stop and signs of wear and tear after a certain number of movements generate a maintenance order in the ERP system.



Didactic implementation

The teaching scenario is based on the data set of the fictitious Global Bike Company and thus follows the content of the existing teaching and learning environments of SAP UCC. The example of surface refinement of a bicycle computer is used to describe the individual production steps and their feedback into the corresponding software as well as possible complications during the production process.

The IoT / I4.0 scenario is accompanied by extensive teaching materials consisting of slides, presentations and case studies. It is used at vocational schools, technical colleges and universities, especially in the fields of business administration, business informatics and engineering sciences.

Trial access

The SAP UCCs offer a one-month trial access to SAP systems free of charge. If you are interested and for further information, please contact the SAP UCC.