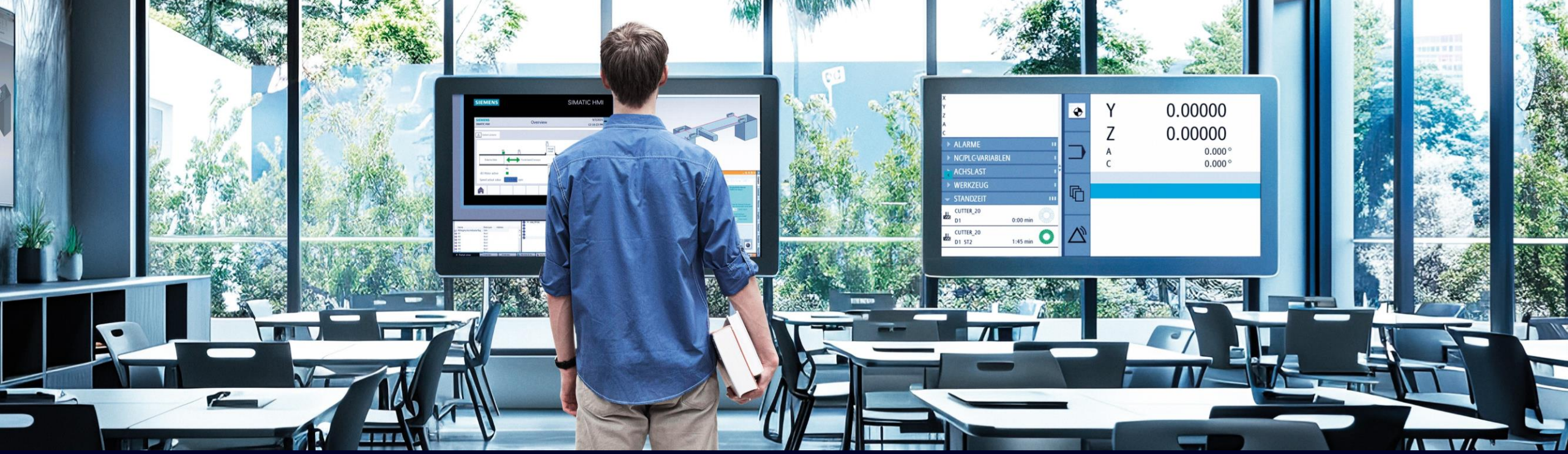

SCE Digitalization Concept –
Comprehensive support for educators on the journey to Industry 4.0

Siemens Automation Cooperates with Education (SCE) | 02/2026

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SCE Digitization Concept –
Interdisciplinary skills are the key to professional success.

New competency profiles

Interdisciplinary competences...

Technological knowledge	Comprehensive system understanding
Simulation techniques	Agile development processes
Computer-aided product development	Design thinking
Understanding of value chains	IT expertise
Modeling	…

Interdisciplinary knowledge...

Problem-solving ability	Dynamic learning
Communication skills and ability to work in a team	Independence/self-motivation
Dealing with complexity	…

Multi-stage concept for holistic knowledge transfer

	Digital Twin	Digital Workflow	Factory Intelligence
CAx, IIoT and cloud technologies	**Computer-assisted technologies** Virtual commissioning using simulation models	**Industrial Edge & IIoT** Analysis and further processing of data	**Cloud technologies** Connection and data analysis with smart data, manufacturing execution system and enterprise resource planning
Automation and industrial communi-cation technologies	**Industrial automation** e.g. distributed IO, HMI, RFID, IO-Link, drive systems, safety technologies		**Industrial IT technologies** e.g. Industrial Ethernet, interface with software of third-party providers (OPC UA), security, communication networks
Basics of automation technologies	**Digital technologies** Boolean functions	**PLC technologies** PLC programming according to IEC 61131	**IT technologies** Ethernet and high-level programming languages, e.g. Python, Node-RED, JSON, C/C++, Linux

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SCE Digitization Concept –
Traditional job descriptions are increasingly merging...

Mechanical engineering	Automation technology	Information technology
Digital twin, digital workflow, multiuser	**Edge computing, artificial intelligence, IIoT**	**Factory intelligence, cloud-based systems**

Mechatronics	Industrial automation	Industrial IT Technology
Mechanics, electronics, robots, sensors, actuators, drive systems...	PLC, HMI, TIA Portal, RFID, IO-Link, safety engineering...	e.g. Industrial Ethernet, integration of third-party providers (OPC UA), security...

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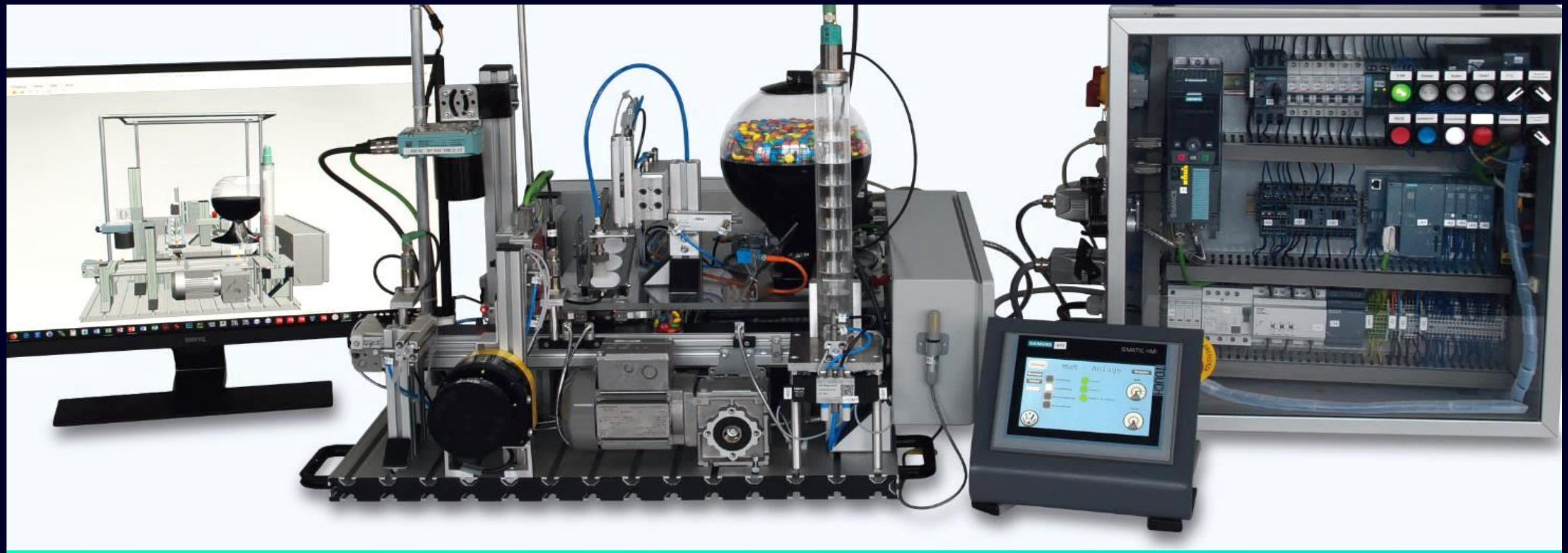
SCE Digitization Concept –
Implemented by Vocational School 2 in Wolfsburg, Germany in a group project

***Best Practice:** Implementation by BBS 2 Wolfsburg. Not available for purchase!*



1. **Intuitive TIA Portal engineering of the real automation plant with SIMATIC S7-1500/ET 200SP/RFID/SCALANCE/SINAMICS**
2. **Virtual commissioning with the help of the digital twin using Siemens NX-MCD CAD software**
3. **Cloud connection via IOT2050 for evaluation of production data**

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SCE Digitization Concept –
Interdisciplinary Skills are the key to professional success

Digitalization is quickly and radically changing our world.

What does this mean for education?

Many schools, colleges and universities are facing the challenge of conveying Industry 4.0 know-how as part of their teaching and training. In order to support educators and their students on their way to Industry 4.0, SCE created a digitization concept for educational institutions

↗ Discover the SCE digitalization concept

Additonal Informationen

Future of Manufacturing

DigiTwin learning & training documents

Use Cases

TIA Portal & SIMIT SW for Educators/Students

Solid Edge Learning Resources for Educators/Students

PLM Software Academic Partner Program for Educators/Students

PLM SW Academic Partner Program – Requests

EDA Academic Products

Mendix - University Program

Siemens Xcelerator – accelerate digital transformation

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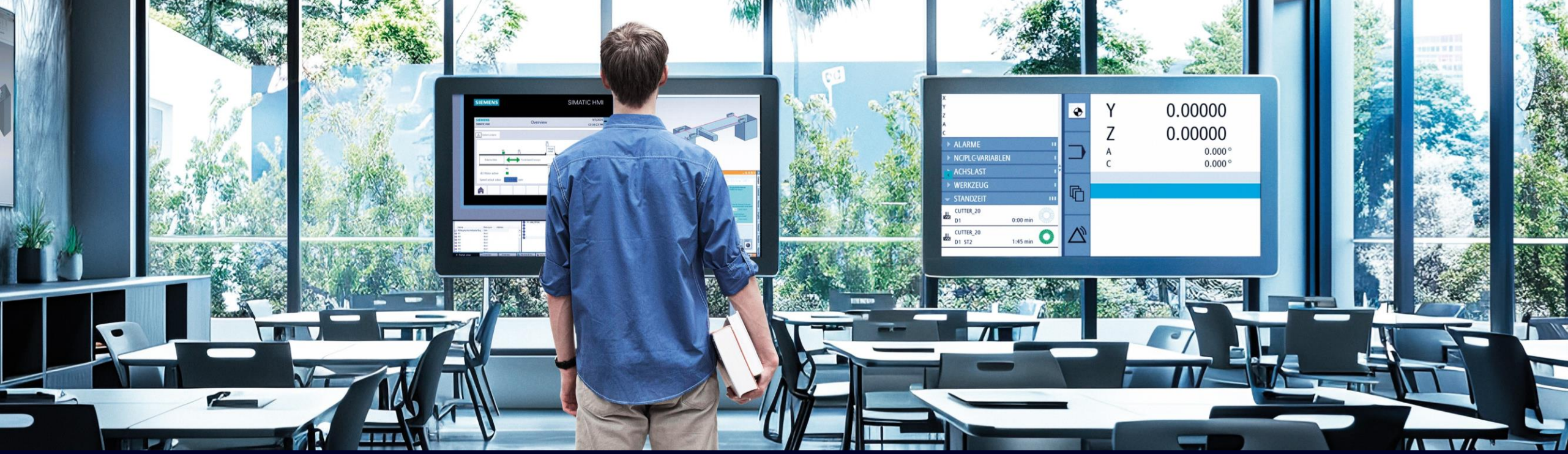

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