



## University of Applied Sciences Technikum Wien



Horst Orsolits MSc and his student Patrick Pirringer used Vuforia® Studio™ and ThingWorx® in a research project focused on smart factory implementation.

The major research facility for automation & robotics at UAS Technikum Wien is called the “Digital Factory”. A key focus for the factory is to control a manufacturing process through the use of integrated smart connected products.

By creating a digital twin of the factory and augmenting it into 3D space, Horst and Patrick were able to allow students, visitors, and industry partners to visualize production flow and interact with the factory.




## Why Create a Digital Factory AR Experience?

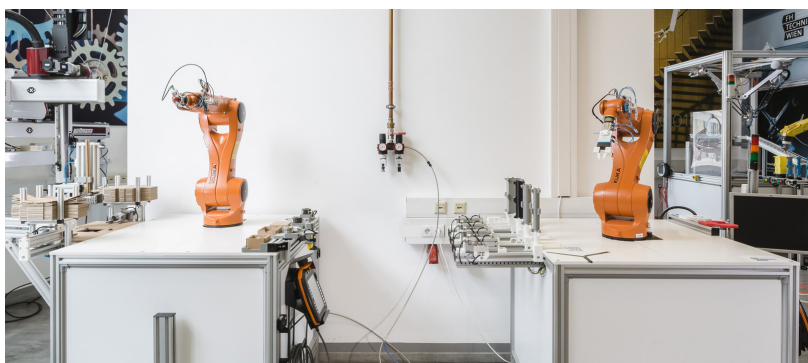
The purpose of the Digital Factory AR Experience is to use augmented reality to present the infrastructure, work progress, and research activities involved in a production line. In a digital factory, 2D data is enriched with 3D models and animations that help visualize the production flow digitally.

During the development of a new manufacturing process, time consuming and costly errors can be avoided if decision makers can view a demonstration before it is implemented. Simulating the planned process in real time requires powerful and expensive computers, which puts simulation out of bounds for small and medium size developers.

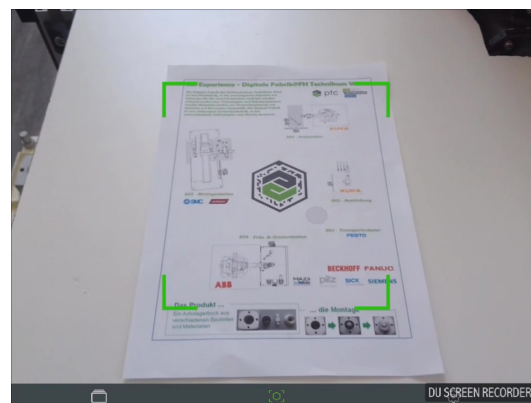
By creating a digital twin of the factory, the students were able to bypass many of the obstacles listed above.

## 3 Benefits of a Digital Factory AR Experience

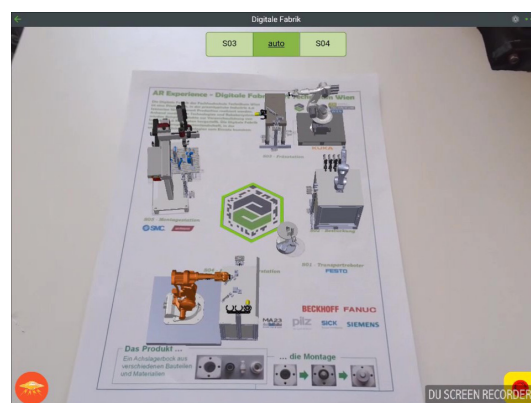
-  Visualizing the factory's order of operations in AR saves time and resources
-  Interacting with the digital twin allows the students to test ideas without fear of mistakes
-  IoT data connected with the models can allow professors to instruct students on how tests affect the factory in real time



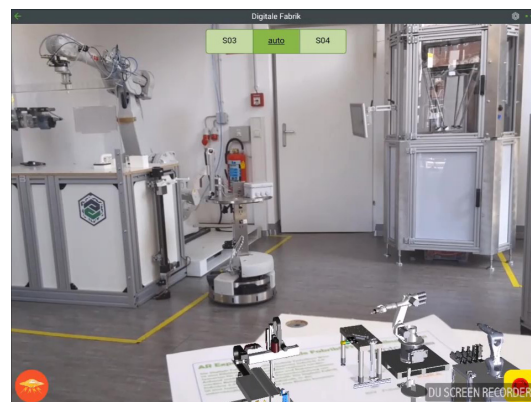
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Scanning the ThingMark with the smart device.



The experience is placed on the desk, tracking to the ThingMark.



The "Digital Factory" juxtaposed against its physical counterpart.

