

trinity

CONNECTING VIRTUAL MODEL WITH THE PHYSICAL MODEL

PRODUCTION MANAGER VERSION



www.trinityrobotics.eu



The TRINITY project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 825196

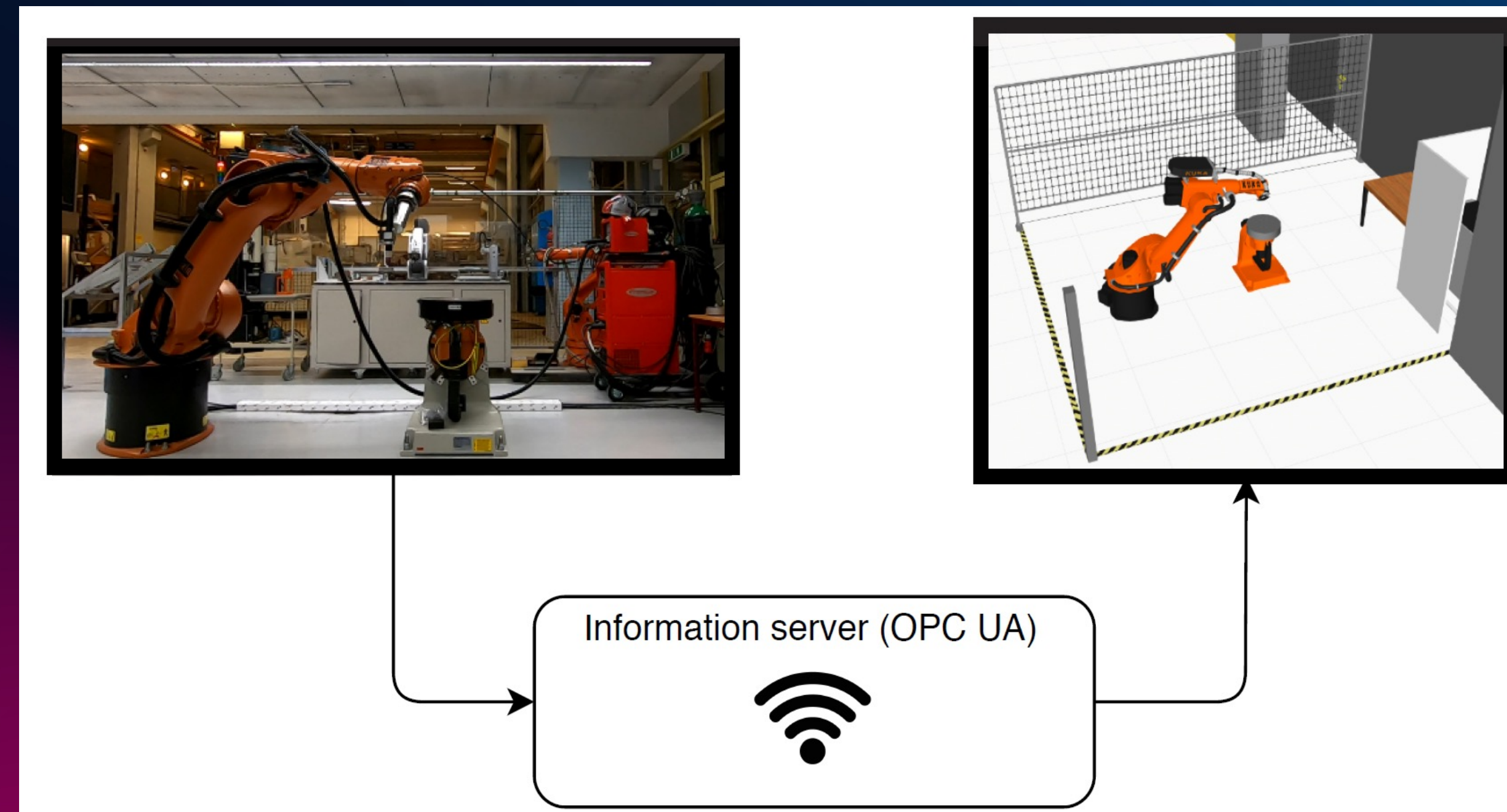
Objective of the training

- In the training lecture, you will learn and have an insight about how to connect robots and other machines together. This is again a crucial part of digitalization and Industry 4.0
- The training material showcase how you can monitor the manufacturing environment with a digital twin which created in the previous module



1. Module component

- The module describes how robots and other machines can be connected together, through an information server.
- Remote control and monitoring are usually needed in the modern industrial 4.0 factory. The module demonstrated how to make a connection between the physical system and the virtual model.



2. Module environmental requirements

- The module requires critical information of each device (e.g., robot joint angle, speed) to allow for direct control through the network.
- The module requires a digital model of each device. However, most modern robot arms can be found in the simulation software (Visual Components).



3. How to integrate this system with the rest of the production line

- The module offers a method of remote control/monitoring of an industrial system. The operator can control the industrial system with a centralized information server and supervise it in the digital twin.
- The platform independent method can be a general system that supports multiple types of industrial machines from different vendors. The data from the module can be further analyzed for optimization and improvement of the industrial system.



4. Adaptability

- This module can be used in e.g., manufacturing/production industry, automotive and aerospace industry
- The major changes for integration of the system will be:
 - Connecting all devices to the network or adding an extra controller to allow the central network server to access the devices.



Thank you.

If you are interested in more tutorials on this module or other use cases, please follow the links in the use case lectures.



trinity

 www.trinityrobotics.eu



The TRINITY project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 825196