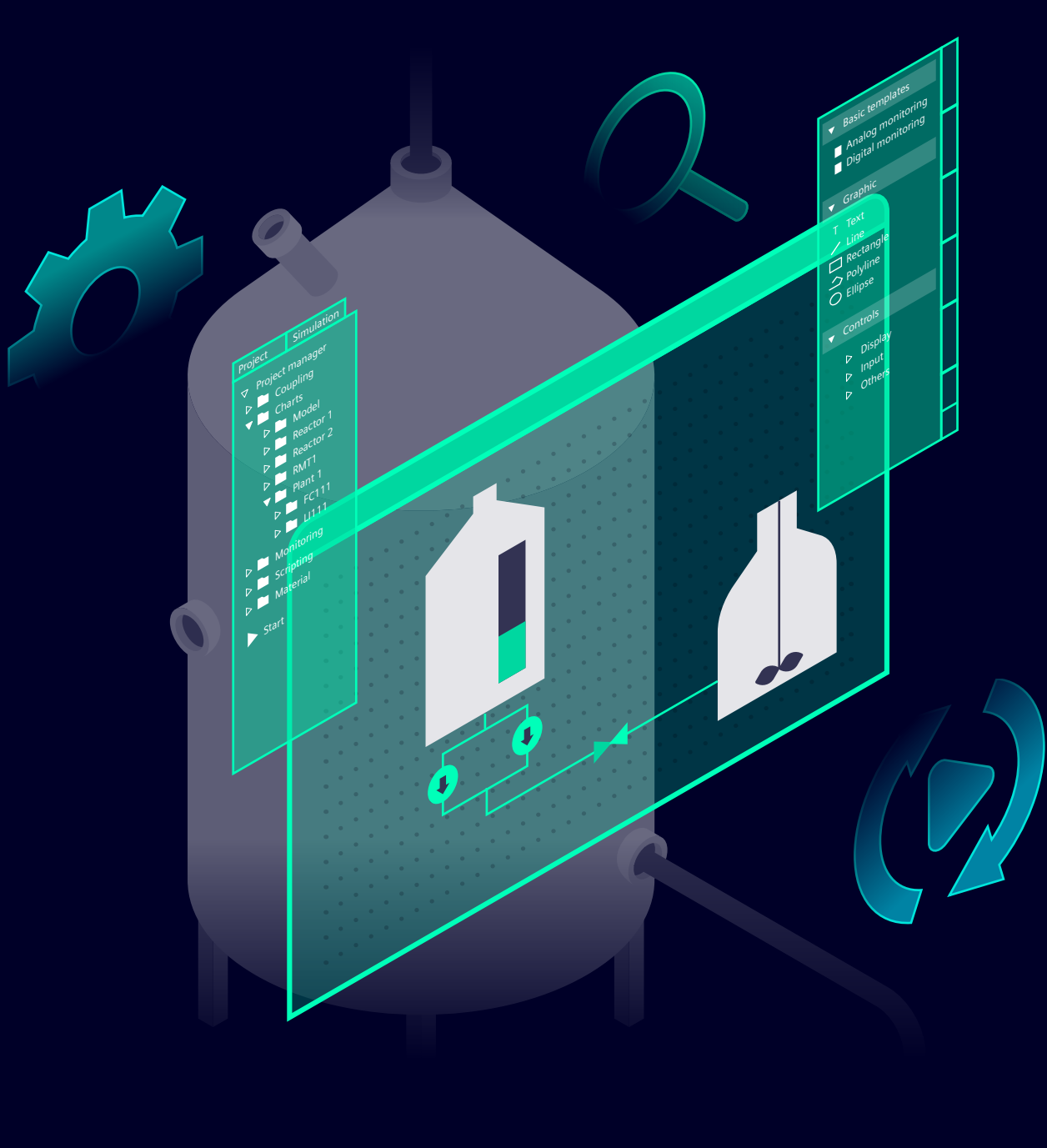


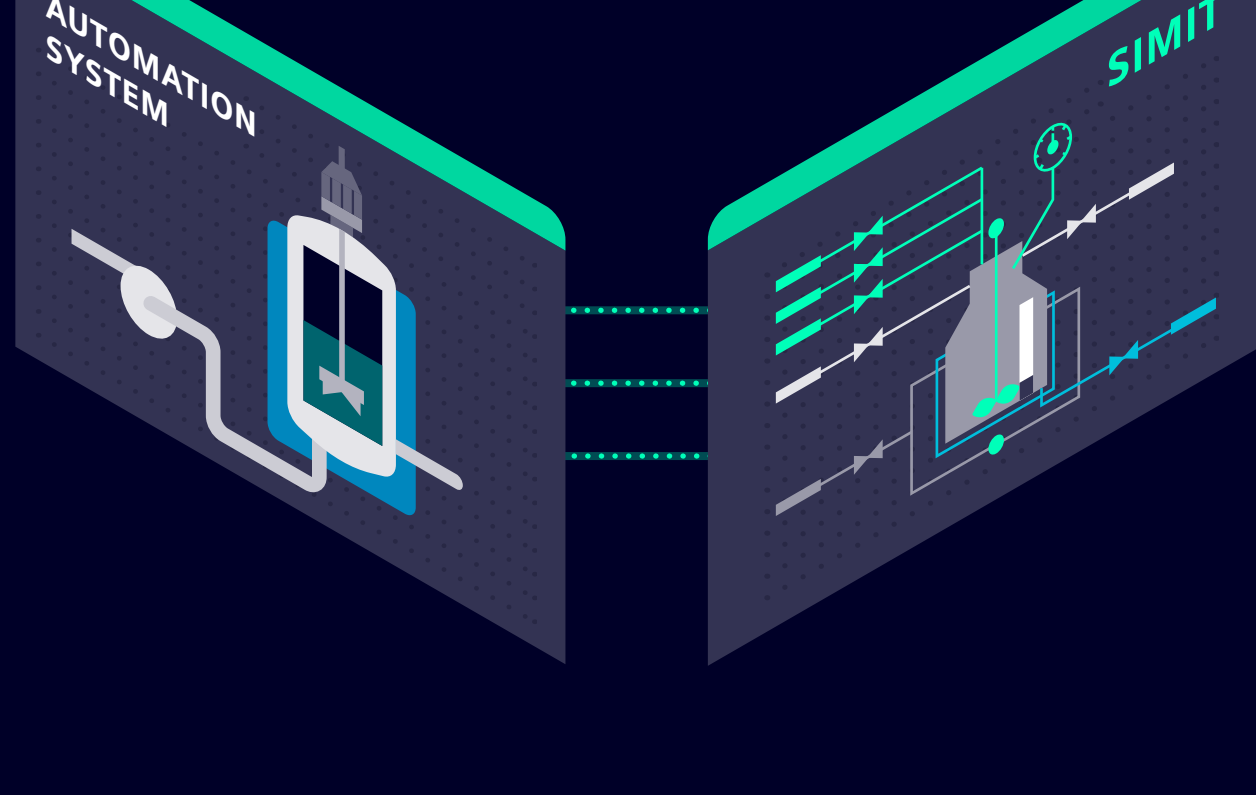
# Elevate life cycle efficiency with **SIMIT**

Real time simulation with industrial automation



## Simulation of your reality

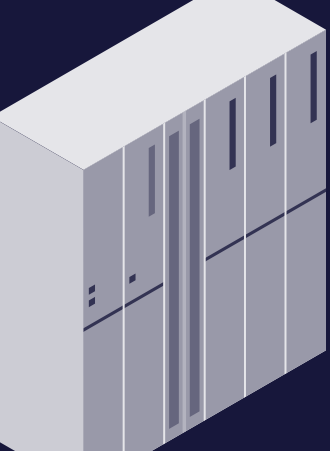
The simulation platform SIMIT enables comprehensive tests of automation applications and offers realistic training environments for operators before real systems go into operation.



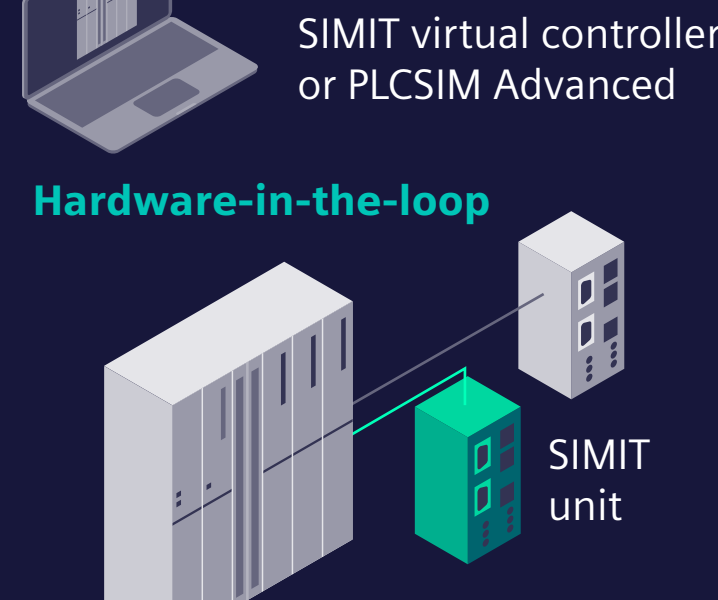
## We make the virtual production real

SIMIT enables easy coupling between the simulation and the automation environment, which can be done either with the automation systems' real hardware (hardware-in-the-loop) or with the integrated virtual controller (software-in-the-loop).

### REAL PRODUCTION

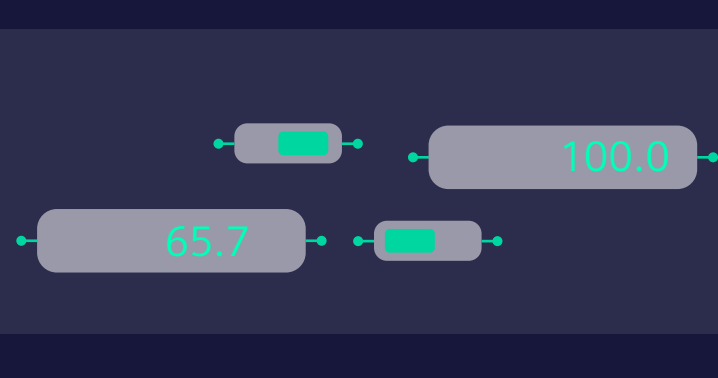


### SIMULATED PRODUCTION



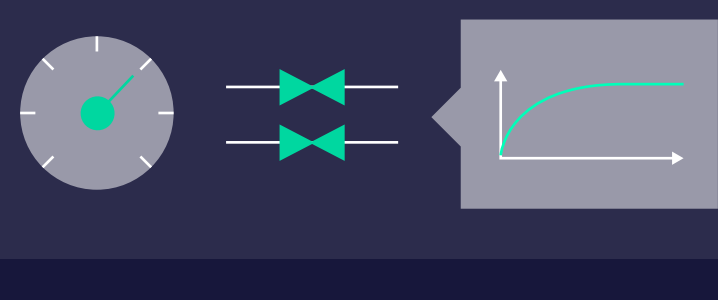
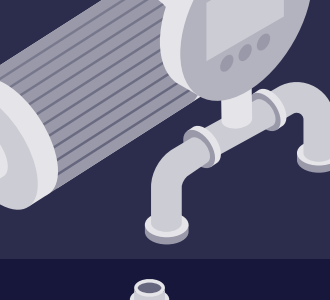
### SIGNAL LEVEL

Simulation of signals



### DEVICE LEVEL

Simulation of behavior and reaction of devices and sensors



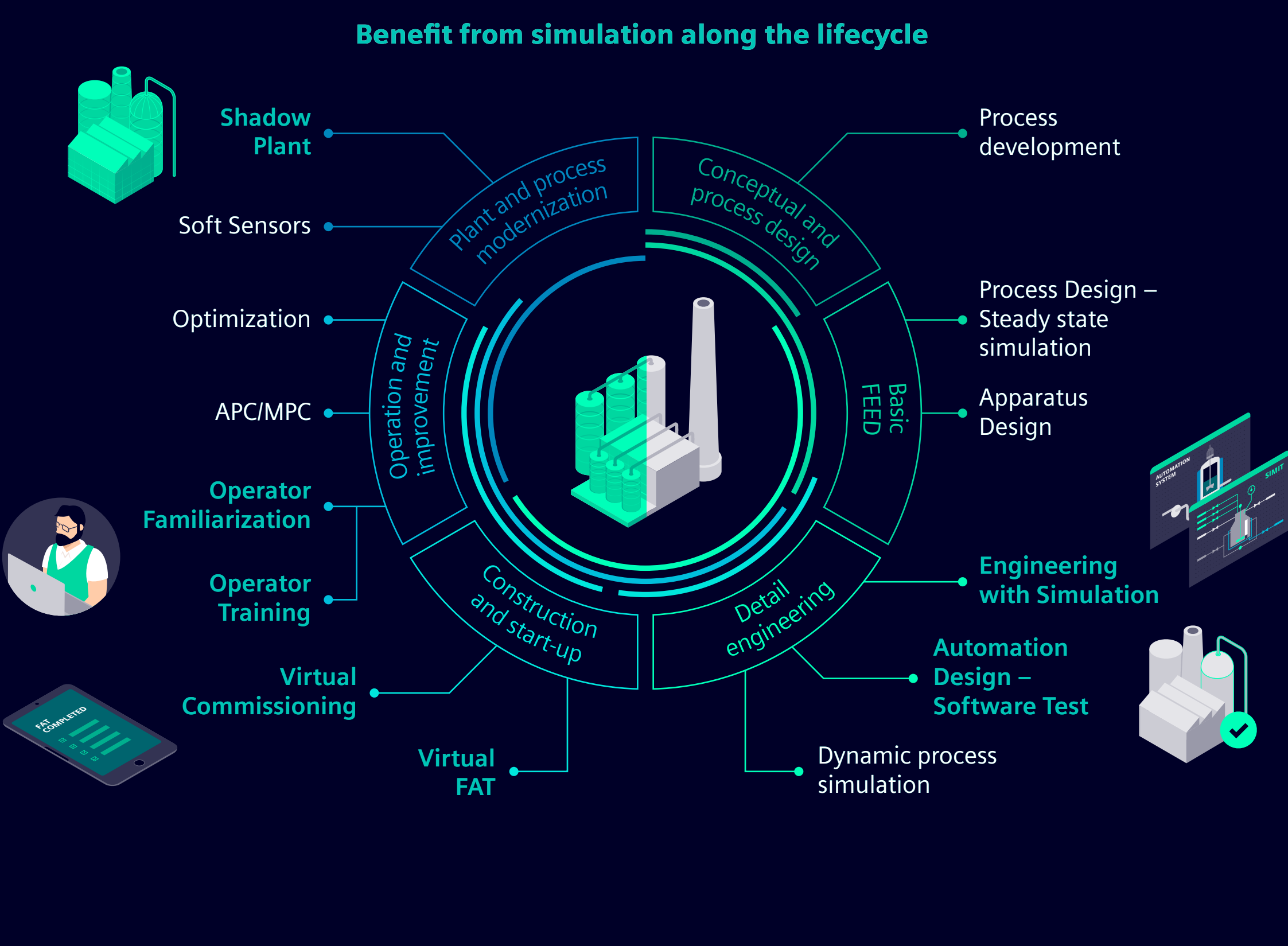
### PROCESS LEVEL

Simulation of technological behavior



## More efficiency throughout the complete system lifecycle

From development of a new product to optimization of the system during live operation: Simulation with SIMIT lets you test and optimize in a virtual environment with no risk before you implement everything for real – and it will all work right away.



## The right solution for all industries

Domain-specific libraries guarantee optimal adaptation to requirements and purpose. Predefined models ensure that plants and factories can be simulated fast, efficiently and realistically. Save time, effort and costs by using standardized modules for easy model creation and maintenance.



### USE CASE: VIRTUAL COMMISSIONING

## Get faster to production

Make big savings on commissioning time: SIMIT allows the testing of all automation functions prior to actual commissioning, with simulations based on real engineering and design data.

- Emulation of automation systems
- Software module tests
- Simulation of I/O signals, sensors, actuators
- Execution of virtual FAT
- Test of control concept, sequences and recipes

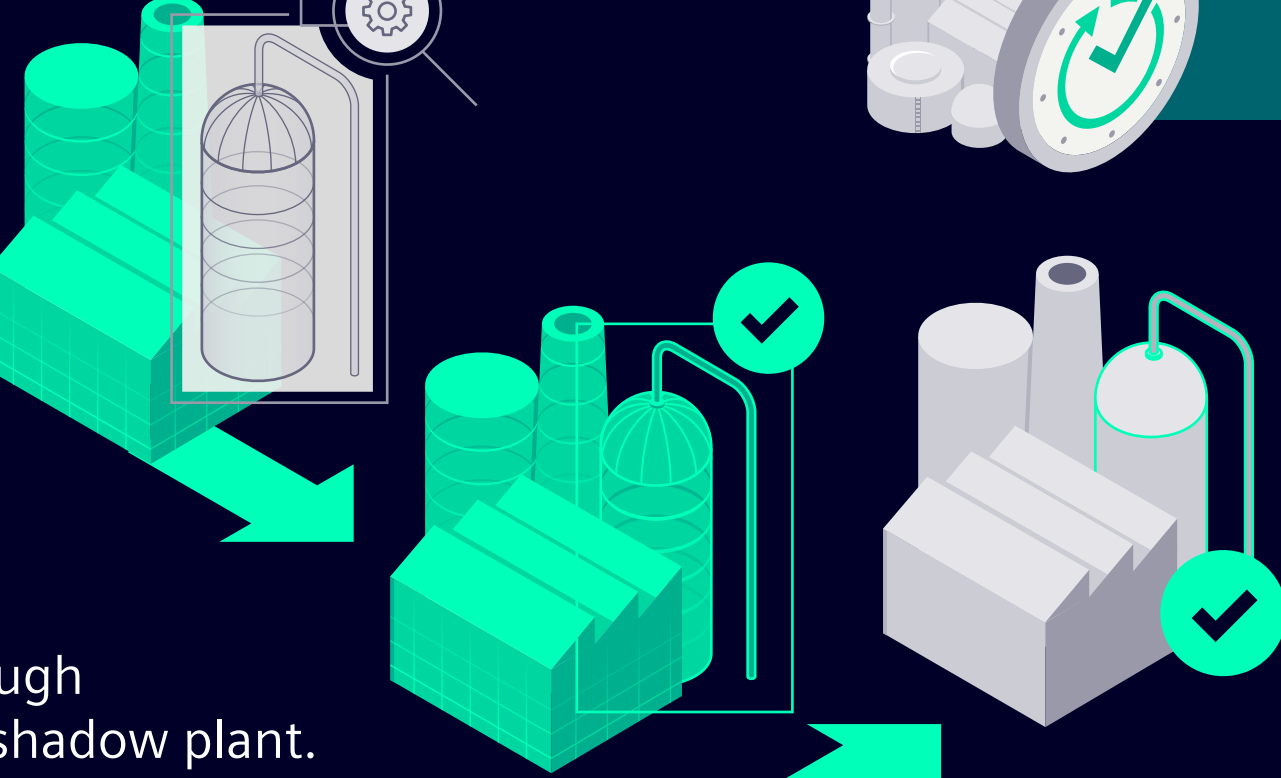


### USE CASE: SHADOW PLANT

## Ensuring high plant availability

Once process or production plants are up and running, changes can have unforeseen and costly consequences, including shutdowns. Testing changes with SIMIT's digital twin of the plant increases safety for staff and equipment and ensures plant availability.

- Digital image of automation and process
- Based on original SIMATIC PCS 7 / SIMATIC PCS neo / TIA Portal project
- Allows for virtual deployment and test of planned changes and improvements
- Validation of interfaces to 3rd party systems (e.g. SAP, MES)

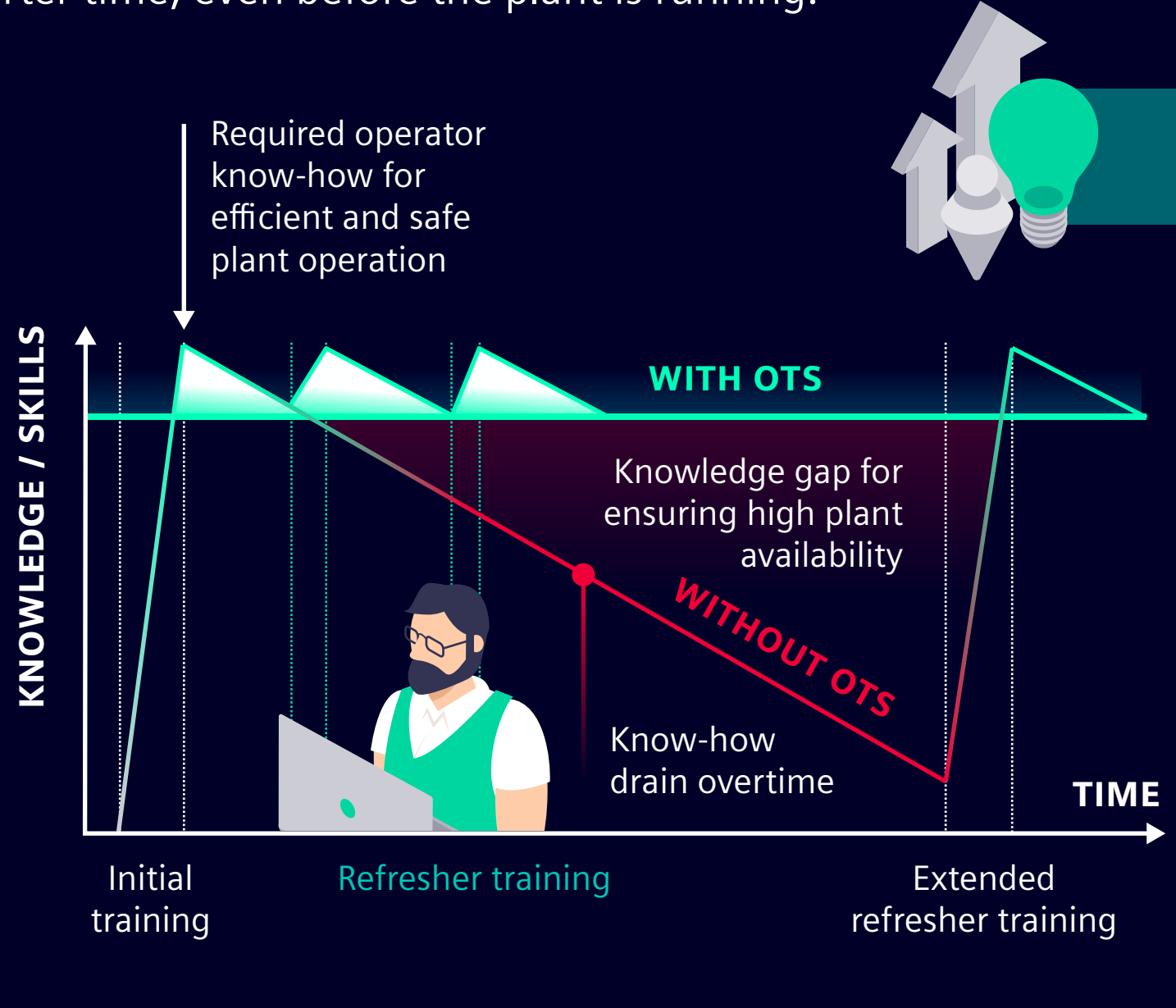


### USE CASE: OPERATOR TRAINING SYSTEM

## Increase operator skills and know-how

About 80% of accidents and productivity loss of up to 6% can be attributed to human error. With the help of SIMIT, operators can be trained on process upsets or critical situations, leading to better decisions in a shorter time, even before the plant is running.

- Mapping of original automation system
- Process model in SIMIT or domain specific simulator (e.g. gPROMS) or third-party simulators
- Freely programmable scripts
  - Start-up / shutdown of the plant
  - Process disturbances / plant failures
- Monitoring and evaluation of training performance



## Your Benefits with SIMIT

Customers around the world have achieved outstanding results using SIMIT within various industries and use cases. SIMIT brings actual proven benefits such as:

Direct integration of engineering data	Faster time to market	Enhanced openness	Increased quality	Increased operator know-how
Savings of 30–40% of in-house DCS testing time	Speed up commissioning up to 60%	Increased productivity by 12%	High plant availability	Improved safety