



# Virtual testing as a safe playground

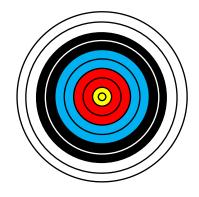
Stefan Lekkerker – Technical Specialist – VSE Stefan Geerts – Director EV FH – WL







#### During engineering



**Actual tests** 



Digital twin / HIL









Digital twin

simulation

Physical Testing







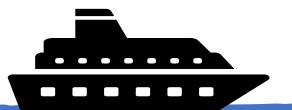
















## Advantages HIL simulator

Repeatability

Risk

Supplies

Ability to test details

Speed







#### **Control system**



#### **Physical world**



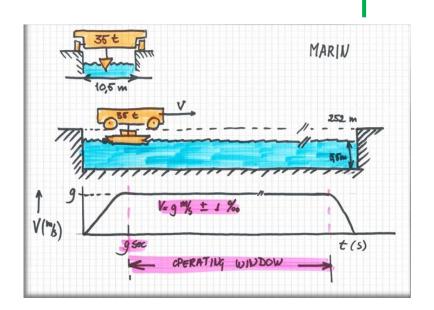




#### **Control system**



#### **Physical world**



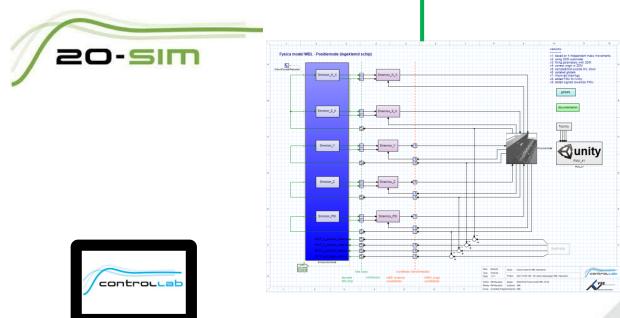








#### **Physical world**

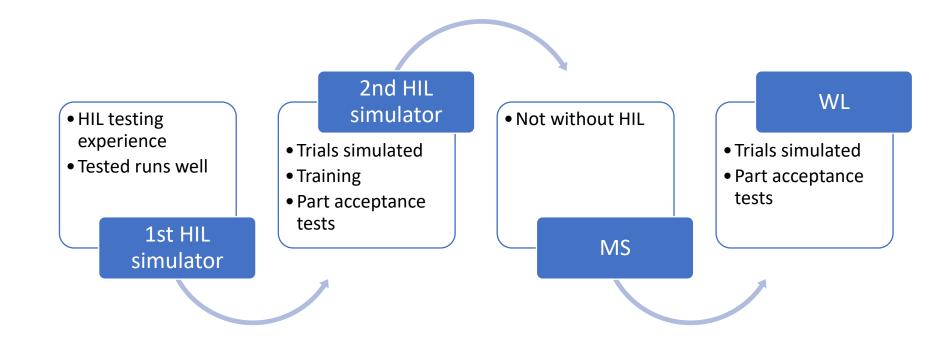








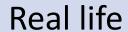












### Digital Twin

Product availability

Few risks

Parallel testing to production

Unpredictable returns

Short commissioning times









