

Status update project idea

DigitalSiteTwin

Prof. Dr.-Ing. Christian Schlette
SDU Robotics, Maersk Mc-Kinney Moller Institute
University of Southern Denmark

Target of your pitch:

- Participation in EUREKA Advanced Material and Green Transition Call, deadline 30. June 2020
- Participation in EUREKA ITEA Project Outline (PO) Preparations Days in Helsinki 8. to 9. Sept 2020

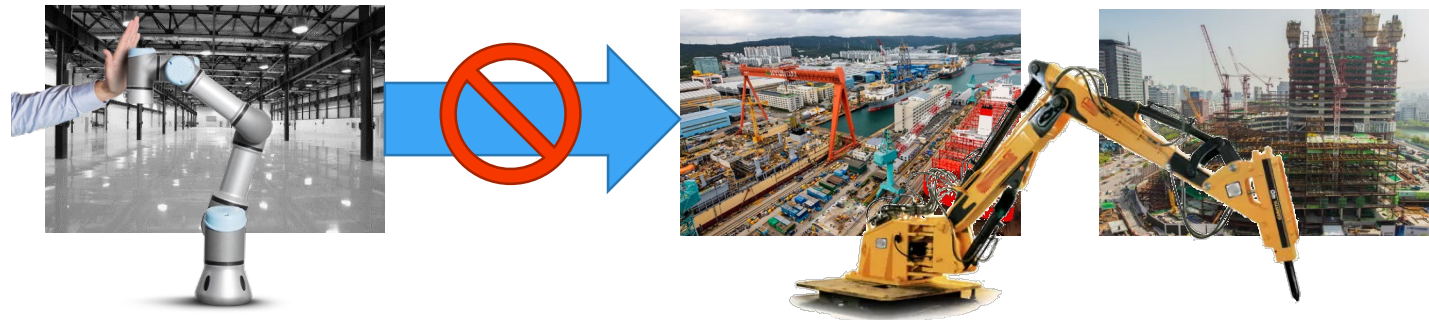
Project idea description

Problem statement

- Both, shipyard and construction site operations, are highly dependent on manual labour, with lots of potential to introduce means of robotics and automation
 - to support workers in dull, dangerous and dirty tasks with robots
 - to improve workplaces with human-robot collaboration
 - to reduce material and waste reduction with more precise operations

State of the art

- Applying today's human-robot collaboration solutions is not possible yet
 - as typical "cobots" are often too weak for heavy tasks
 - as shipyards and construction sites are unstructured, mixed indoor/outdoor environments

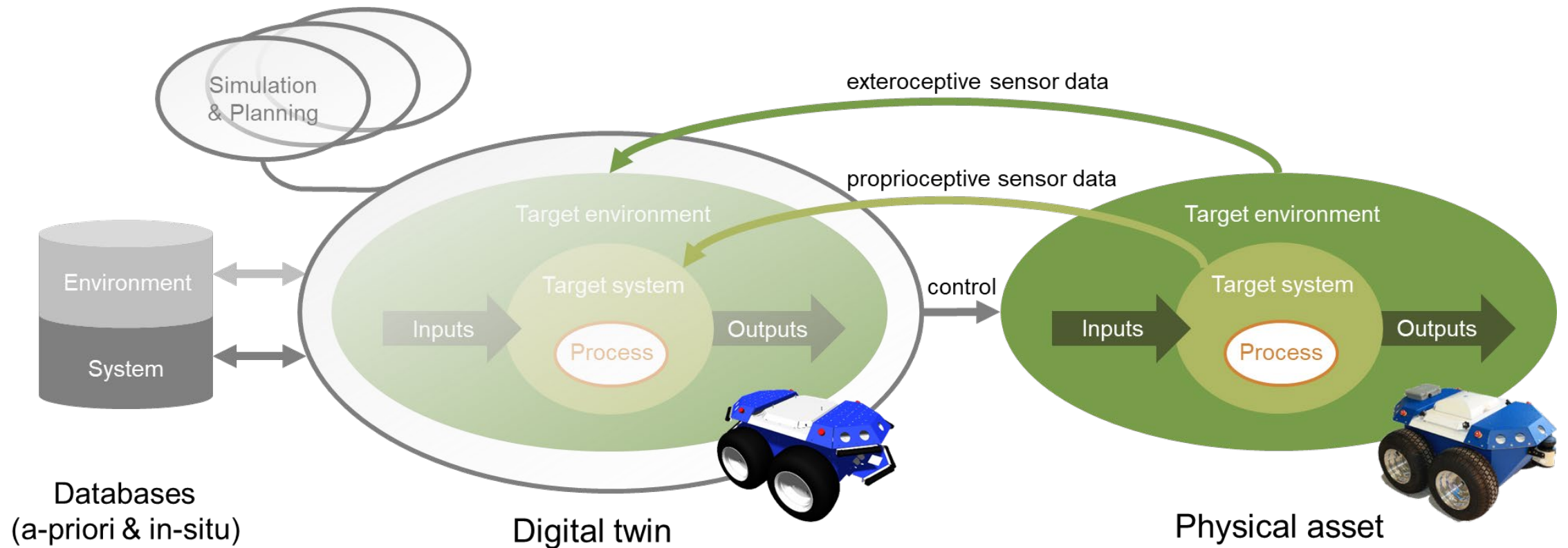


Project idea description

Objectives in DigitalSiteTwin:

- design and develop digital twins of heavy duty robots
- design and develop digital twins of complex shipyards and construction sites
- based on digital twins, make it easy to design, commission and operate heavy duty robots
- based on digital twins, collect sensor data
 - of the product (ship/ building)
 - of the production system (heavy duty robot and tools)
 - of the production environment (shipyard/ construction site)
 - of the production processes (handling, assembling, pouring, grinding, ...)
- interpret the sensor data in the digital twin to allow for safe human-robot collaboration similar to what is today possible with “cobots”

About the digital twin



Partners & expertise

Partners involved

SDU Robotics / Denmark

Missing partners / expertise

Advanced shipyard operators / Korea

Advanced construction companies / Korea

Applied robotics research institutes / Korea

Contact details

Christian Schlette
SDU Robotics / MMMI / SDU

chsch@mmmi.sdu.dk
+45 9350 7377



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