

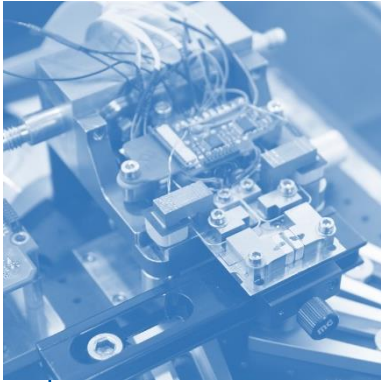
EPIC Webinar  
Introduction to DEMCON Robotics  
01-02-2021

**Jeroen Minnema Mechatronic System Engineer**



**DEMCON**

# Business Units



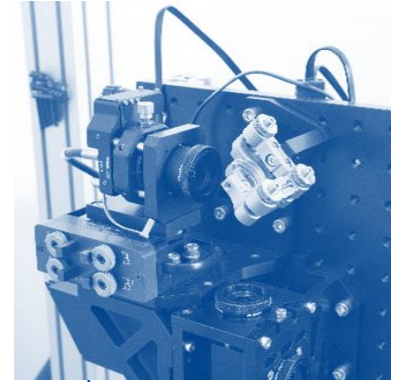
HIGHTECH SYSTEMS



MEDICAL SYSTEMS



ROBOTIC SYSTEMS



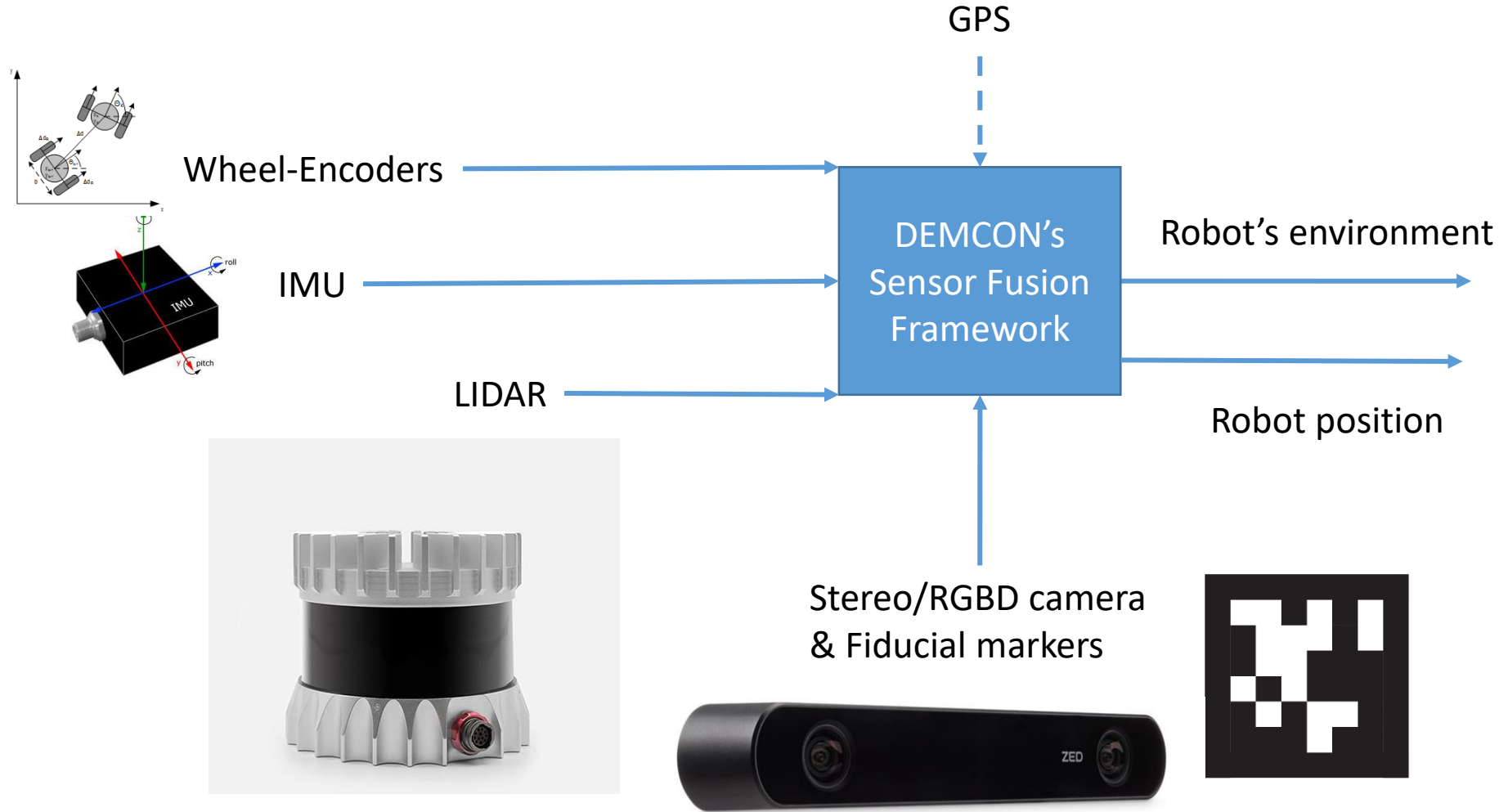
FOCAL OPTOMECHATRONIC SYSTEMS



**DEMCON**

# DEMCON's Sensor Fusion Framework

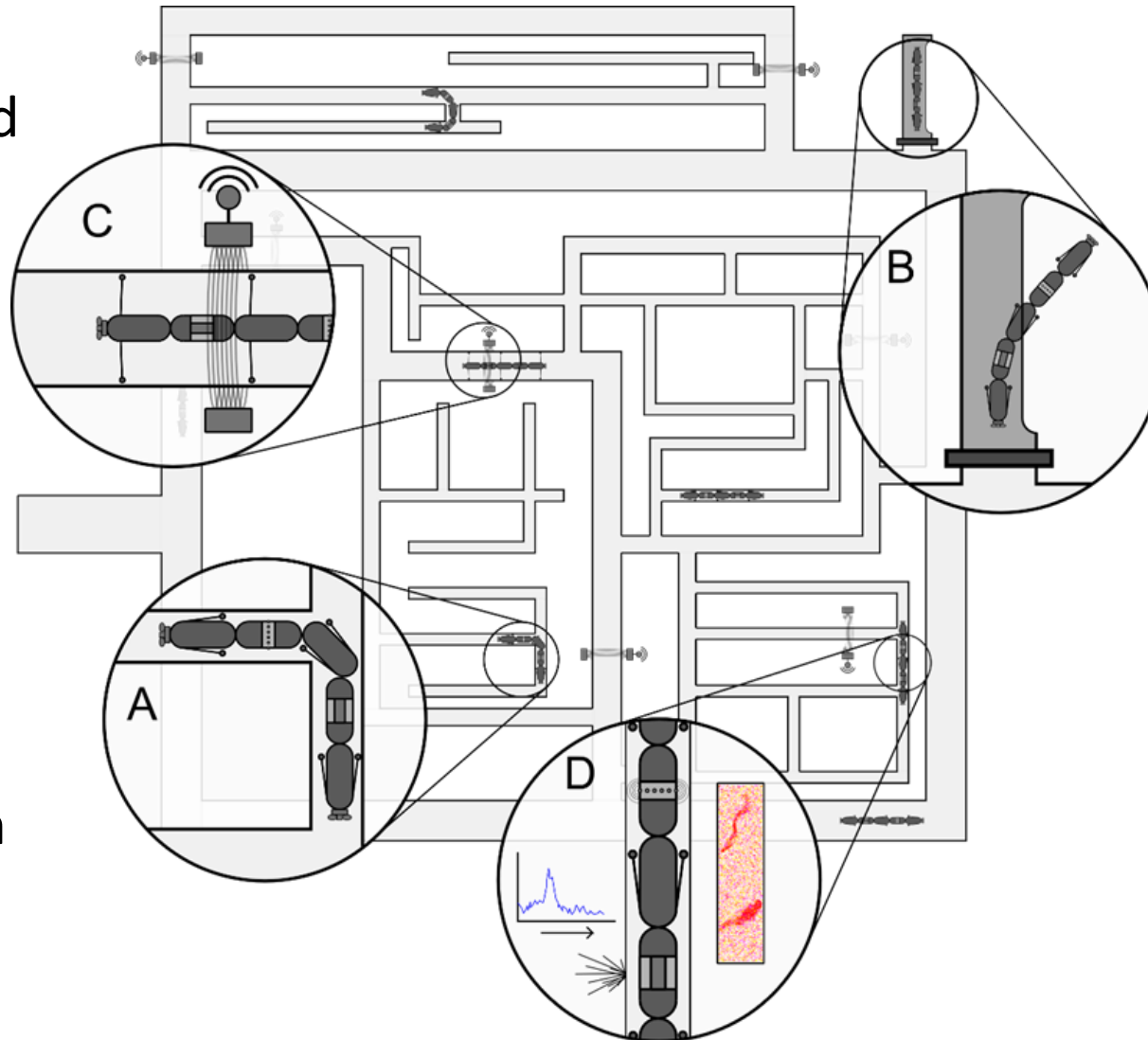
**Challenge:** Combine different sensors to Estimate Robot's position  
Simultaneous Localization and Mapping (SLAM)



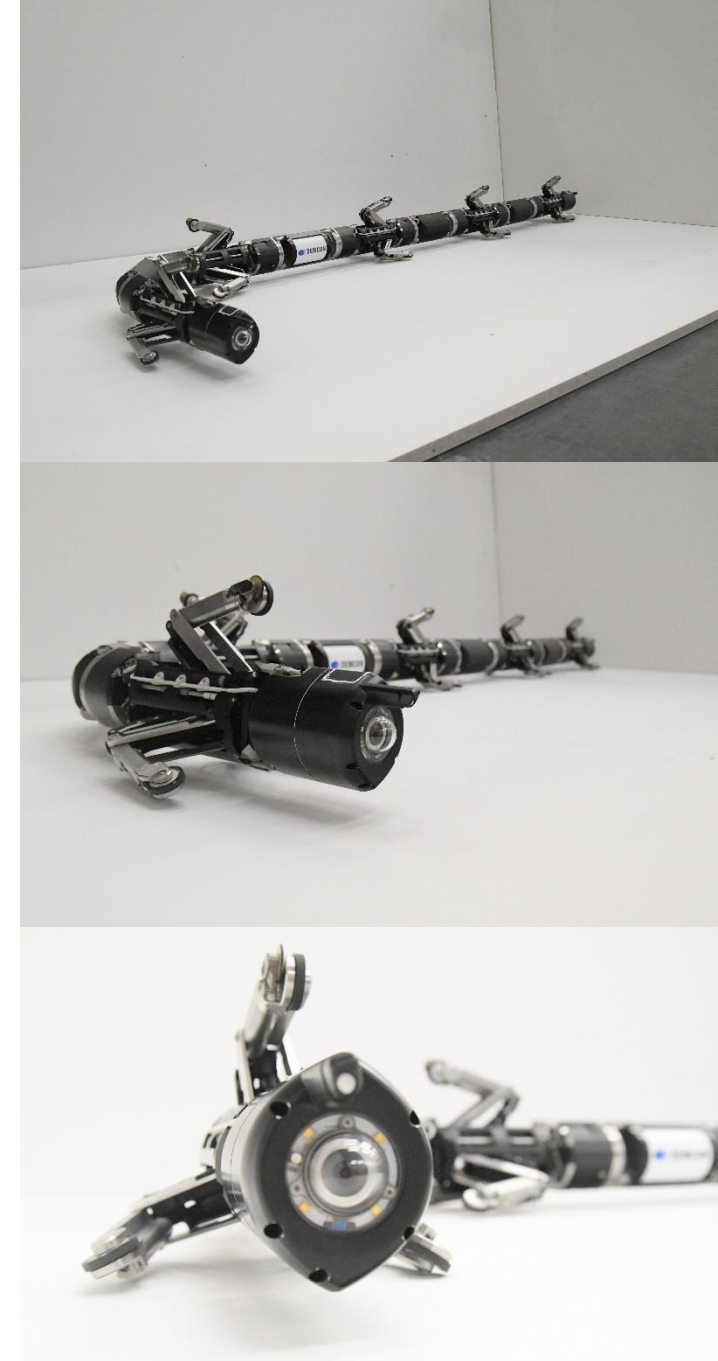
# Combining Sensor Fusion & AI

## Case: Pipeline inspection

Transfer of data and energy

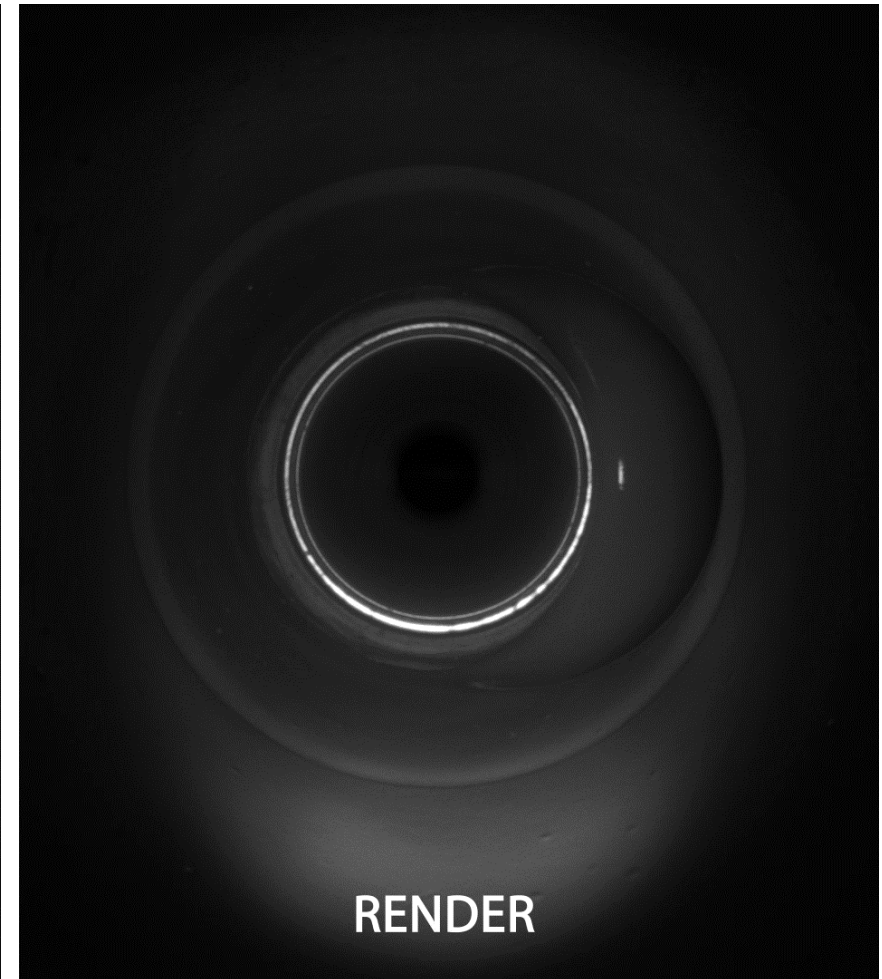
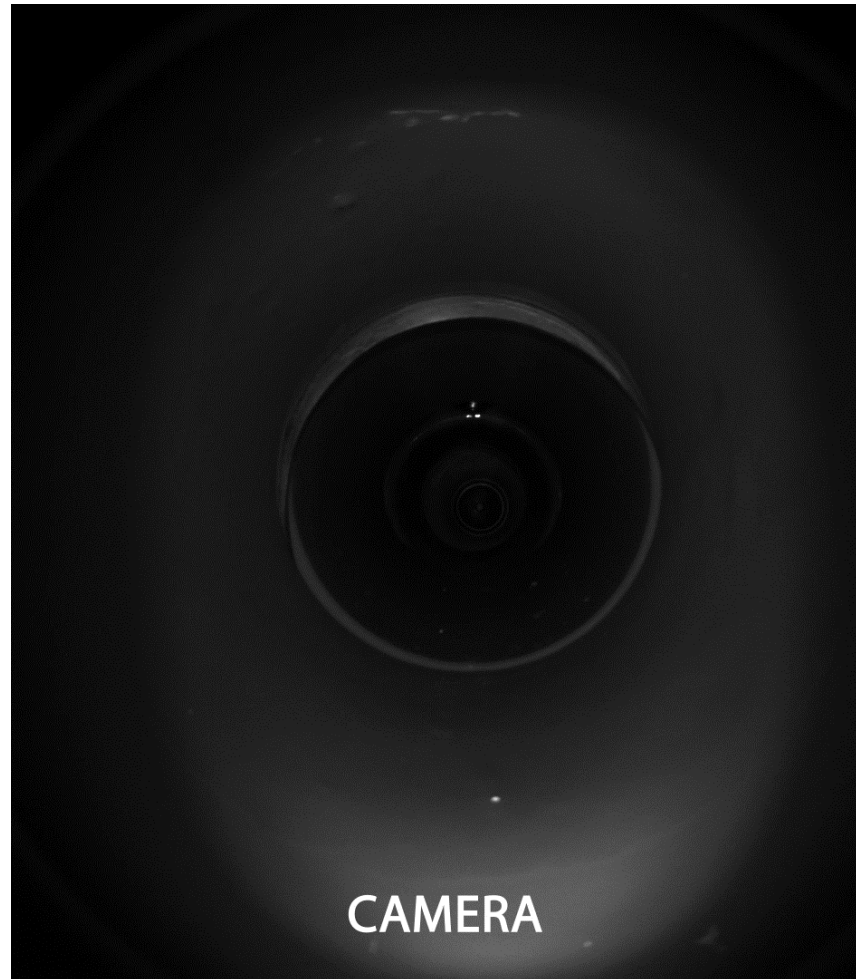


Autonomous navigation through semi-structured environment



# Pipeline inspection: navigation

- Using synthetic training data to teach the robot to recognize relevant features within a pipeline, before ever entering the pipeline



# Conclusion

- Sensor fusion combines strengths of individual sensors in many circumstances
- AI enables cost & time efficient training of intelligent robots
- DEMCON integrates Sensor Fusion & AI in complex (robotic) systems
  - From Concept up to and including production

Looking for valid business cases where robotics could be the solution!