



# 4K450

# Embedded Motion Control

Group 11

Task-skill-motion system  
architecture and the composition  
pattern

**TU** / **e**

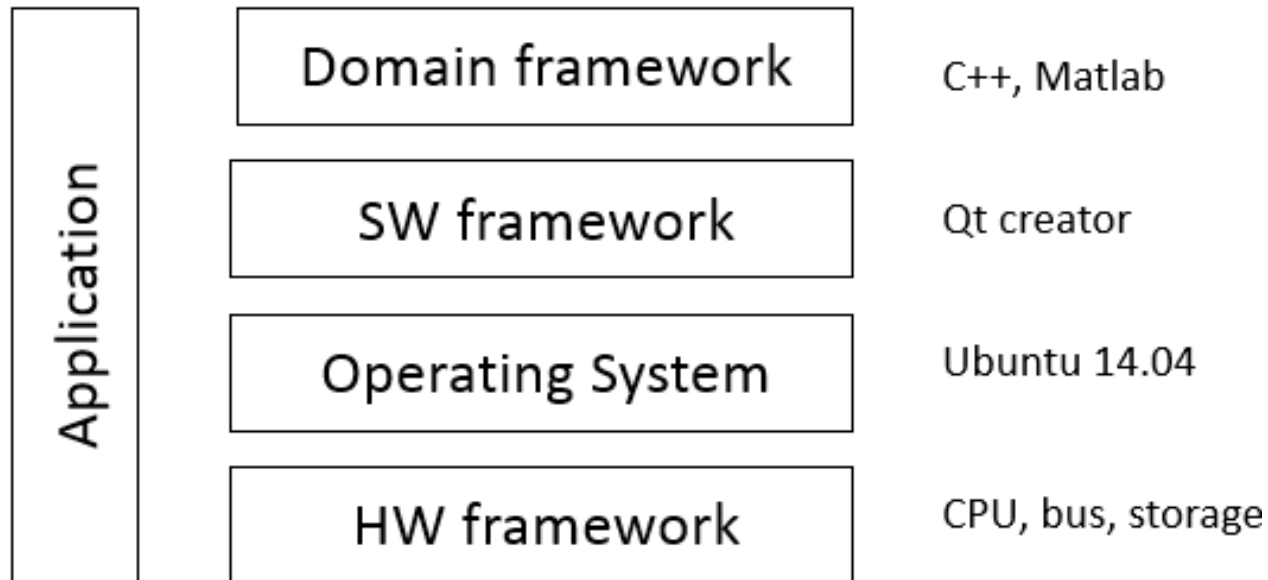
Technische Universiteit  
**Eindhoven**  
University of Technology

Where innovation starts

# Content

- **Activity model: port-based interaction**
- **Behavioural model: Task-Skill-Motion**
- **Structure model: Composition Pattern**
- **Brief research on the policy**

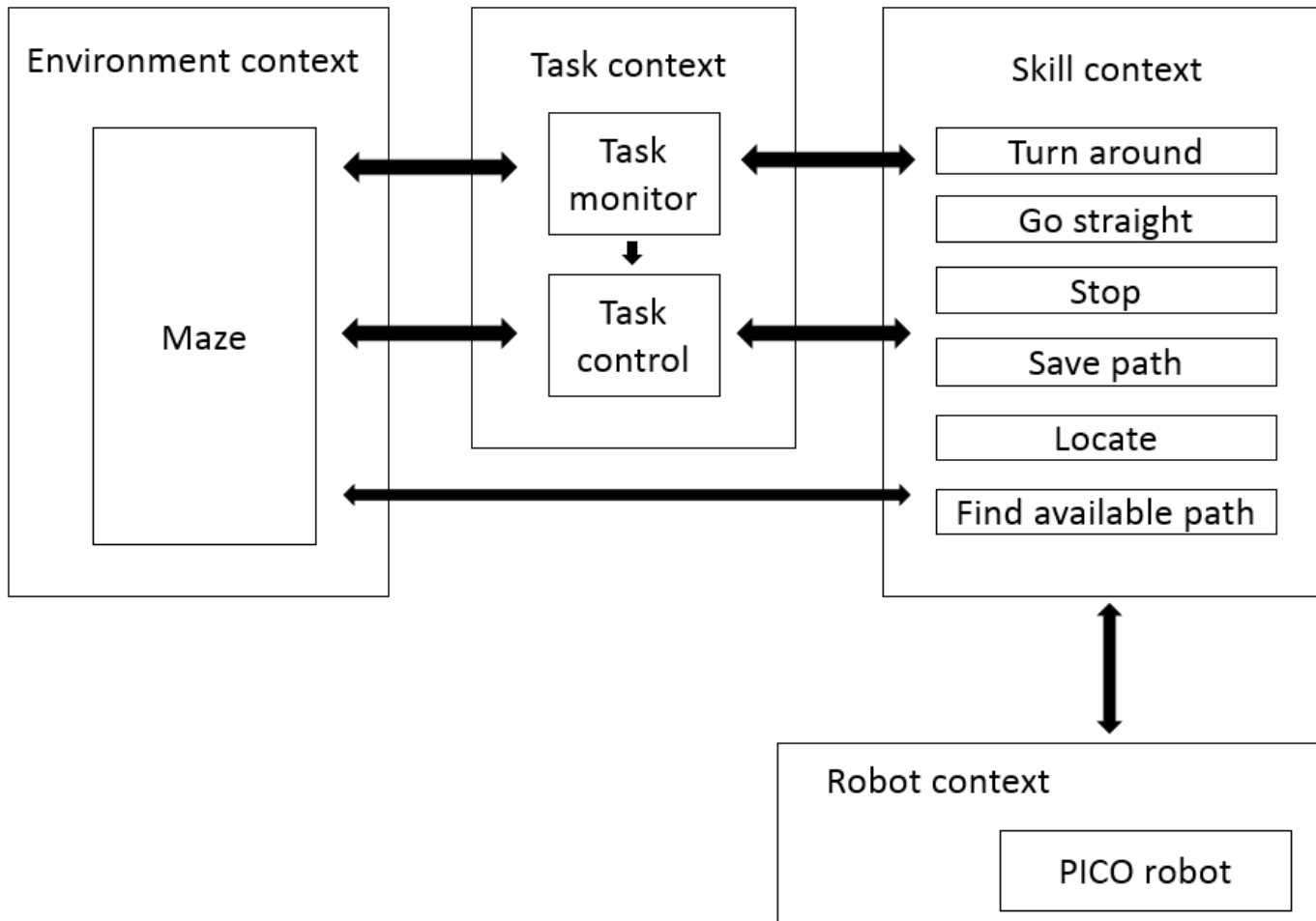
# Activity model: port-based interaction



# Behavioural model: Task-Skill-Motion

- **Behavioural model:**
- \* Environment context
- \* Task context
- \* Skill context
- \* Robot context

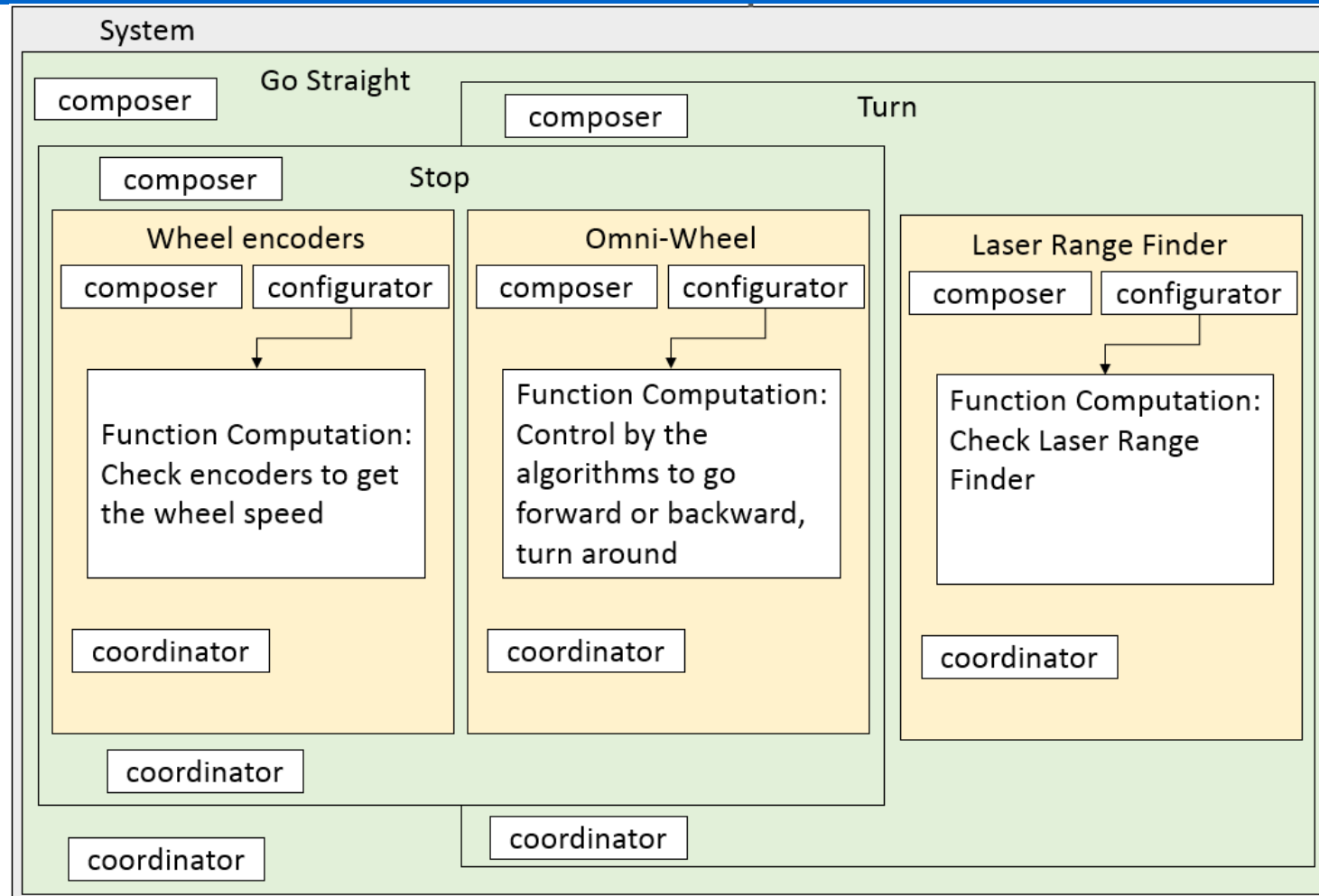
# Behavioural model: Task-Skill-Motion



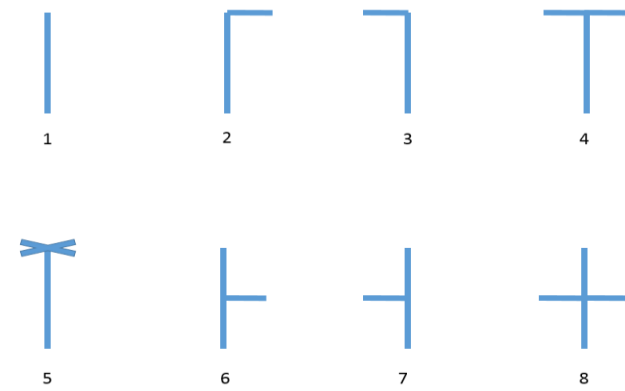
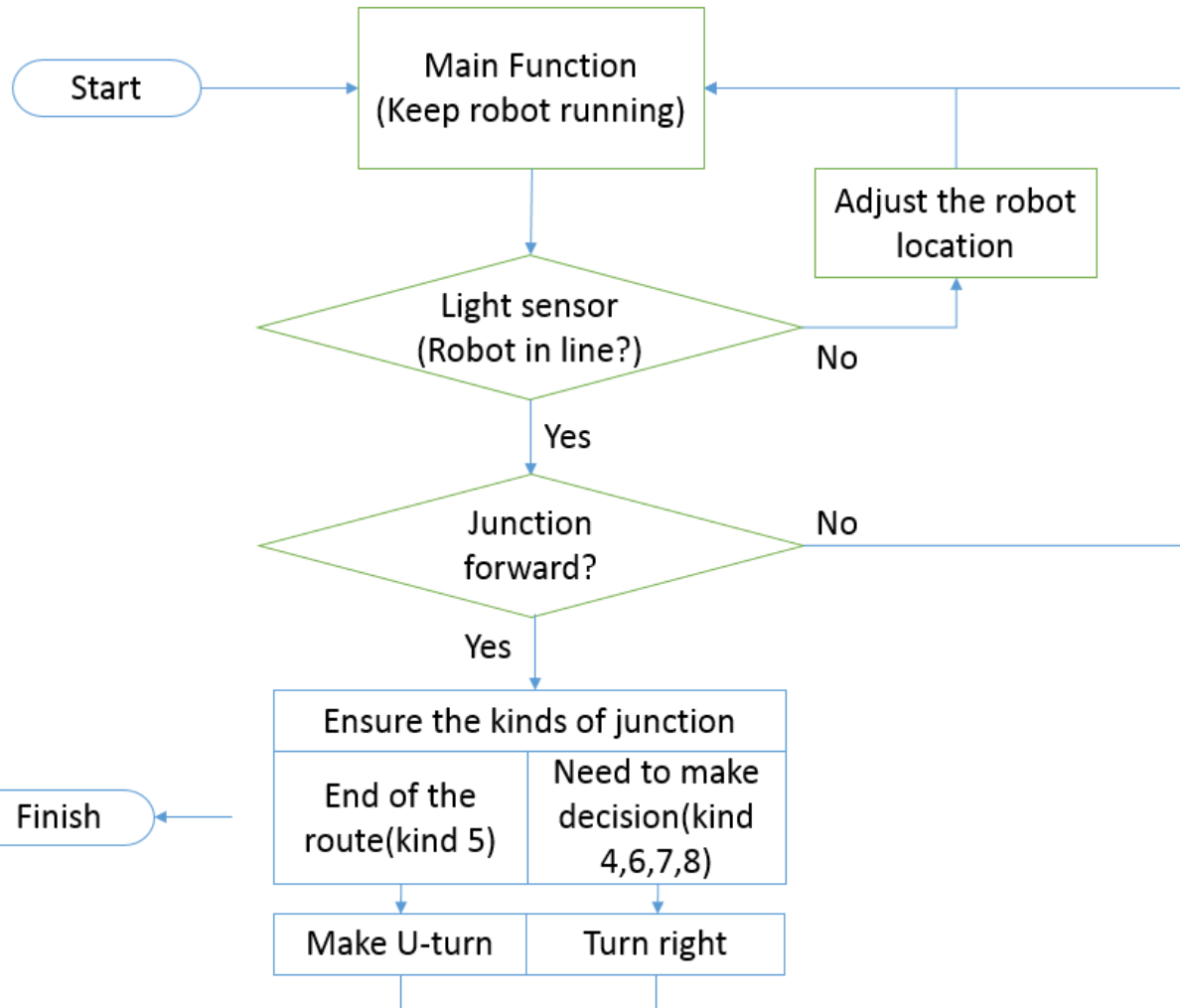
# Structure model: Composition Pattern

- **Context A: base on the hardware, explain the function of the hardware.**
  - \* Wheel encoders
  - \* Omni wheel
  - \* Laser range finder
- **Context B: Base on the basic function that consist of different hardware function**
  - \* Go straight
  - \* Turn
  - \* Stop
- **Context C: the whole system**

# Structure model: Composition Pattern



# Brief research on the policy







**Thank You!**

**Any questions?**

**TU** / **e**

Technische Universiteit  
**Eindhoven**  
University of Technology

**Where innovation starts**