

Initial Design Embedded motion control

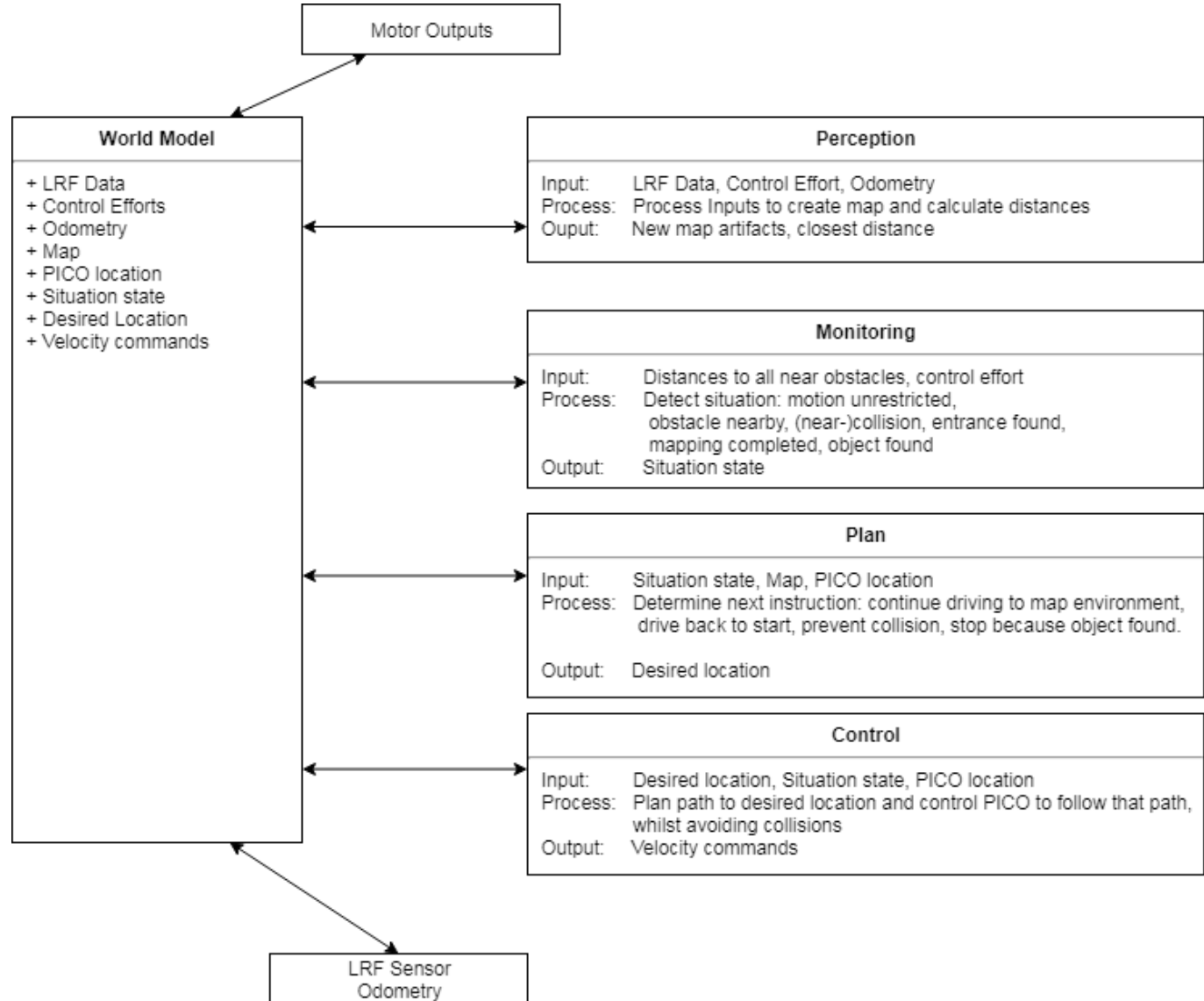
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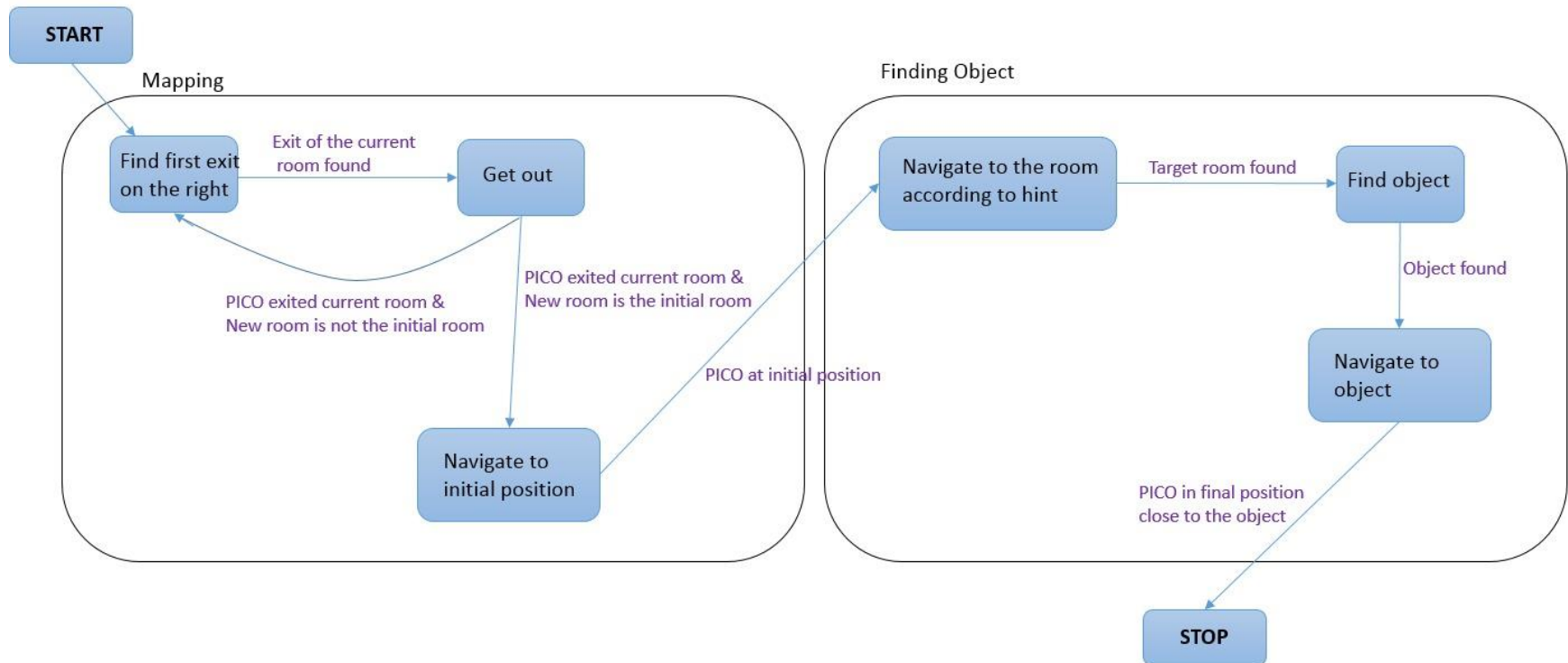
- Requirements
- Components & Function
- Interface
- Initial testing

- Requirements:
 - General:
 - Detect wall
 - Detect gap
 - No touching walls
 - System requirements:
 - System shall be active
 - System shall complete task
 - System respects speed limits
 - Escape room Challenge requirements:
 - System shall identify corridor
 - Hospital Challenge requirements:
 - Map the complete environment
 - Determine own location in environment
 - Park backwards
 - Detect object and identify as goal

- Components
 - Perception
 - Monitoring
 - Plan
 - Control



State machine example: Hospital challenge



First successful testing on PICO

- Function tested:
 - Drive until object detected
 - Turn until no obstacle in sight
 - Drive
- Successful implementation:
 - Sensor no longer detect PICO
 - PICO performs programmed tasks

