

## **Use Case Vignette: Item Pick-Up**

### **Description:**

The TurtleBot drives to a target location to pick up an item. After a successful pick-up, it drives back to the initial location.

**Primary Actor:** TurtleBot Operator

**Trigger:** The TurtleBot Operator activates the mission.

### **Main Success Scenario:**

1. The TurtleBot is activated and starts up.  
[rule PR-1: pre setup]
2. The TurtleBot calibrates its sensors and lidar unit.  
[rule PR-2: calibrating]
3. The TurtleBot is calibrated and ready to receive commands.  
[rule PR-3: ready for mission]
4. The TurtleBot receives the target location.  
[rule PR-4: home zone]
5. The TurtleBot leaves the home zone and drives to the target location.  
[rule PR-5: travel to target]
6. The TurtleBot enters target area.  
[rule PR-6: enter target zone]
7. The TurtleBot arrives at the target pickup location.  
[rule PR-7: target reached]
8. The TurtleBot waits for 30s for the pick-up activity to be completed.  
[rule PR-8: pick-up item]
9. The TurtleBot drives back to the initial location.  
[rule PR-9: return to home]