25/10/2019

19WSD001 Team Project – E.A.R.T.H

Objectives/ Aim (What?)

- Accurately identify and sort rubbish from a beach leaving it in a higher standard than when arriving
- Identify and mitigate hazards

Stakeholders (Who?)

- Group members
- University
- National Instruments + Prospective Employers
- Wildlife on beaches

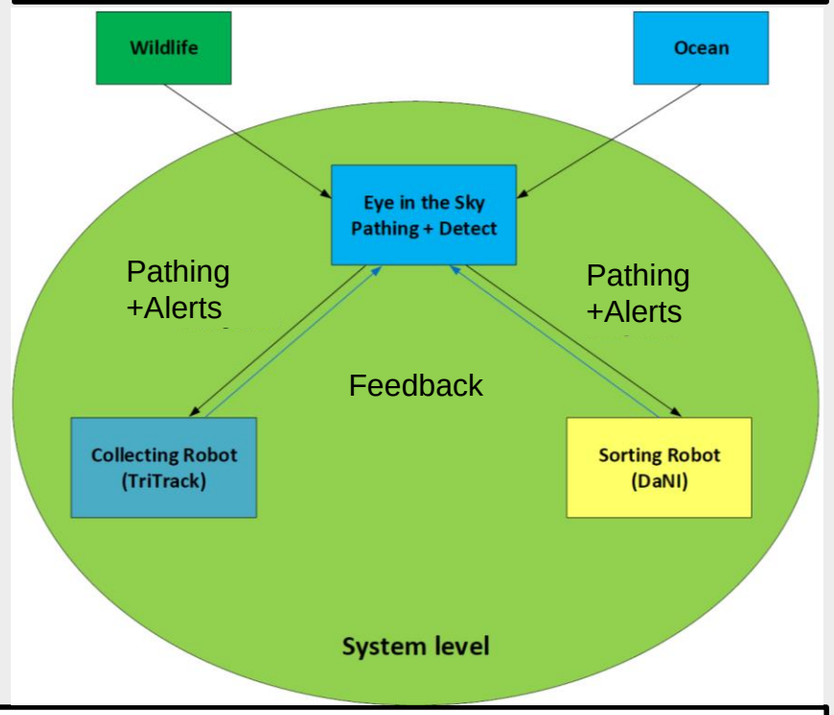
Strategy/ Plan (Why?)

- Research different ways of sorting rubbish, applying them to devices we have access to
- Develop Systems from research presenting ideas and design decisions to group
- Implement different modules of the system using ROS
- Add complexity to the system over time

Currently working on: Development of potential systems
Target: High level of autonomy

Activities (How)

Actions	State
Independent control of robot vehicles and arms Via Xbox Controller	
Sorting System	
Integration between systems using ROS	
Basic Pathing for robots	
Detection of Wildlife	
Telemetry	



Budget statement

- **Remaining Budget: £199.6**
- 40p on testing components
- Budget Plan please see link: https://bit.ly/2BA4OFz

Mission phase completion

Phase	Completion
Research + Initial Ideas	
Basic Control	
Human Control	
Automation	

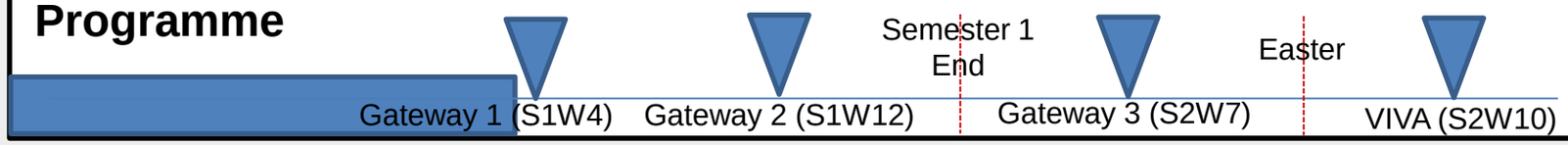
Key issues and risks

- Need more uControllers e.g. Pi's, Arduino's
- Hardware failure from lack of best practice
- Knowledge Gaps
  - Computer vision algorithms
  - ROS
  - Sorting systems for rubbish
  - Arm trajectory calculation

Team information

E.A.R.T.H
https://github.com/orgs/lboroWMEM/E-19WSD001/teams/e-a-r-t-h

Programme



Key	
Completed	
In progress	
Not Started	

Loughborough University

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