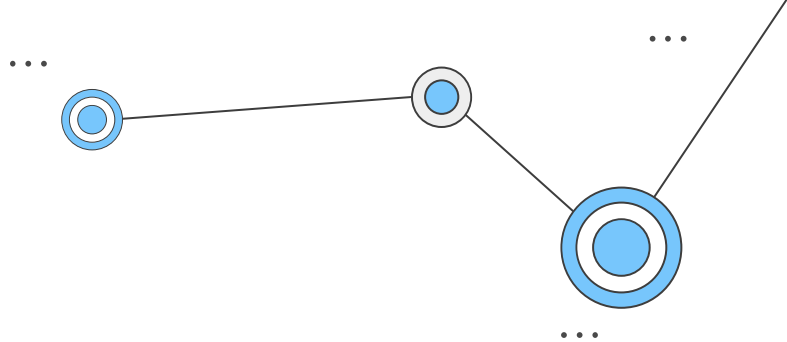


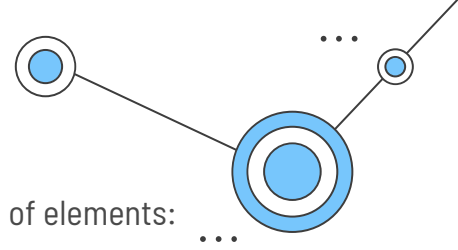


# WasteService

Raffaele Battipaglia  
Karina Chichifo  
Michele Righi



# Project Theme



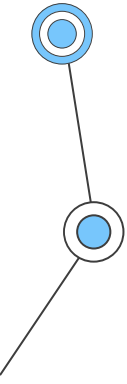
A company intends to build a **WasteService** for the separate collection of waste, composed of a set of elements:

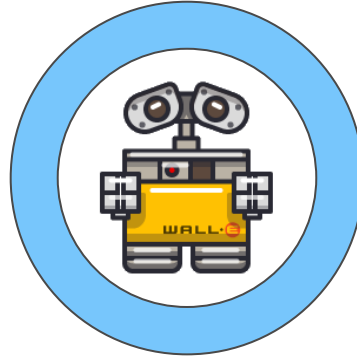
1. A service area (rectangular, flat) that includes:
  - a. An **Indoor** port, to enter waste material.
  - b. A **PlasticBox** container, devoted to store objects made of plastic, up to **MAXPB** kg of material.
  - c. A **GlassBox** container, devoted to store objects made of glass, up to **MAXGB** kg of material.
2. A DDR robot working as a **transport trolley**, that is initially situated in its **Home** location. The transport trolley has the form of a square of side length **RD**.

The transport trolley is used to perform a **deposit action** that consists of the following phases:

1. Pick up a waste-load from a **waste truck** located at Indoor.
  2. Go from the Indoor to the proper waste container.
  3. Deposit the waste-load into the container.
3. A **Service-manager** (a human being) which supervises the state of the service-area by using a **WasteServiceStatusGUI**, that must display:
  - a. The current state of the transport trolley and its position in the room.
  - b. The current weight of the material stored in the two waste containers.
  - c. The current state of the Led.
4. A **Sonar** and a **Led** connected to a RaspberryPi. The Led is used as a warning device, according to the following scheme:
  - a. The Led is **Off** when the transport trolley is at Home.
  - b. The Led **Blinks** while the transport trolley is moving.
  - c. The Led is **On** when the transport trolley is stopped.

NB: The sonar is used as an alarm device: when it measures a distance less than a prefixed value **DLIMIT**, the transport trolley must be stopped. It will be resumed when the sonar detects a distance higher than **DLIMIT**.





# Agile Scrum Methodology

Agile scrum methodology is a **sprint-based** project management system with the goal of delivering the highest value to stakeholders/customers. Each sprint consists of a Scrum goal, a work plan, a sprint review and a sprint retrospective.

...

# Table of Contents



## Sprint 0

Requirements formalization,  
System overview and Model



## Sprint 1

WasteService **Core-Business**  
(requirements 1° & 2°)



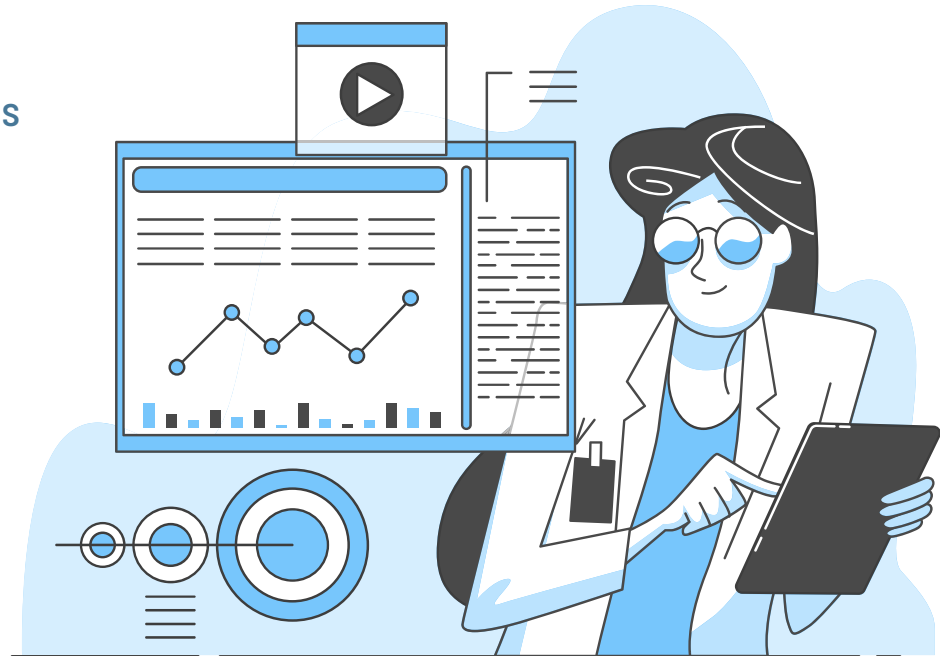
## Sprint 2

WasteService **Raspberry Pi**  
(requirement 4°)

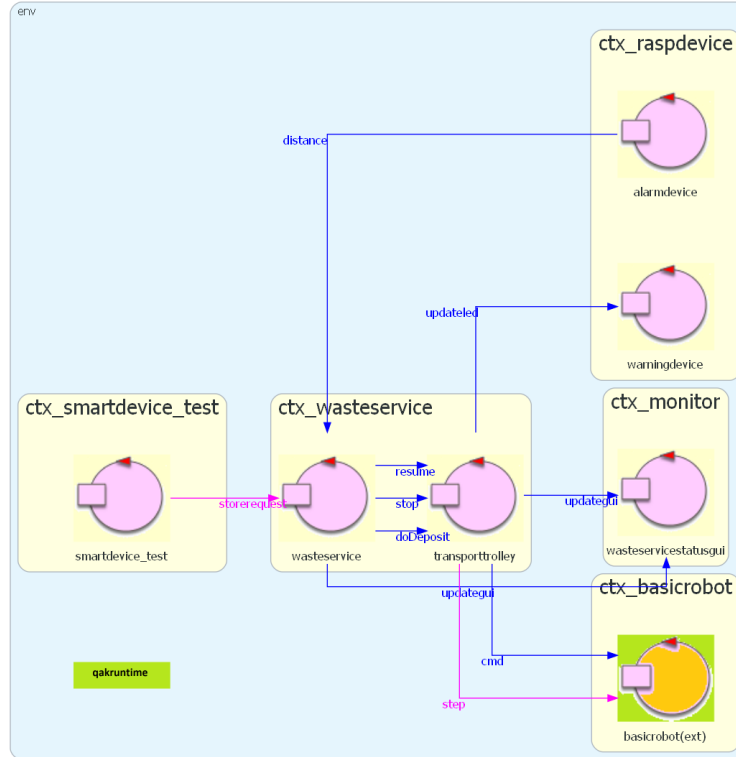


## Sprint 3

WasteService **Status GUI**  
(requirement 3°)



# Sprint 0: System Overview



sprint0\_system\_overviewArch



## Sprint 1: Core-Business

Requirements **1 & 2**



## Sprint 2: Raspberry Pi

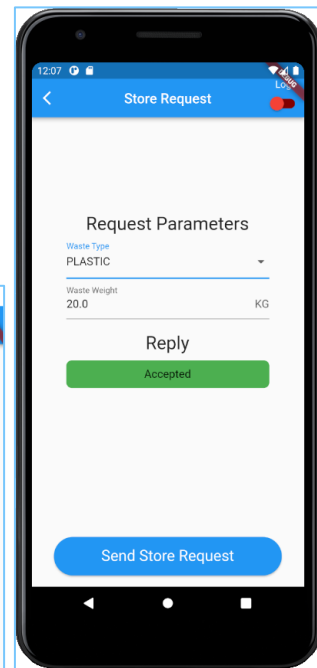
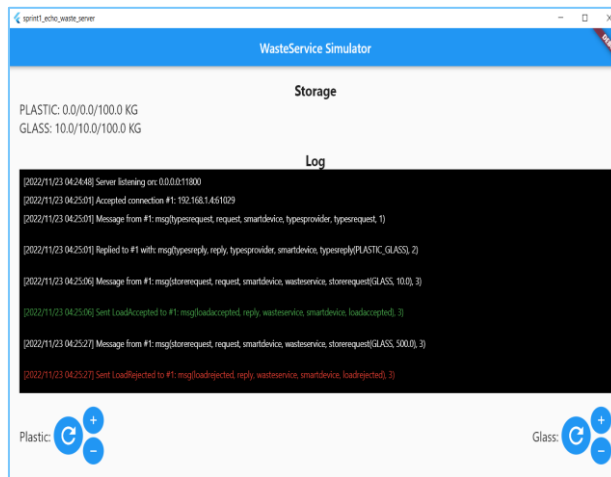
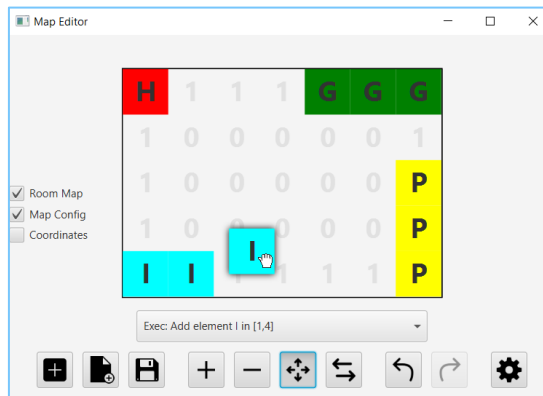
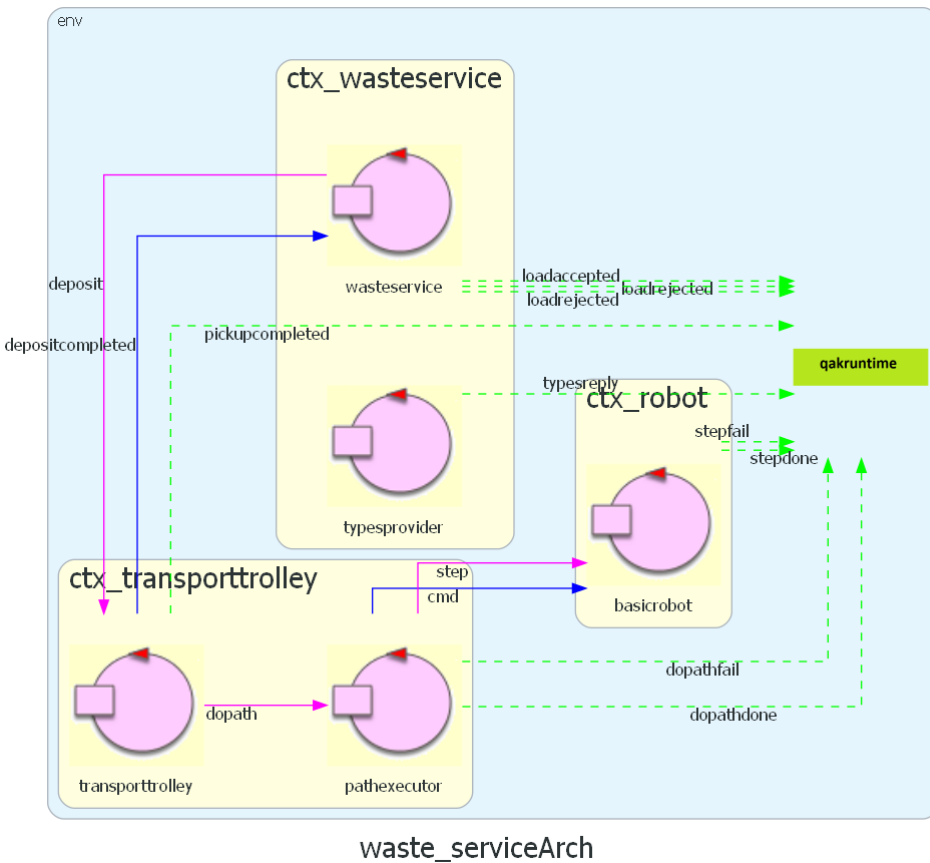
Requirement **4**



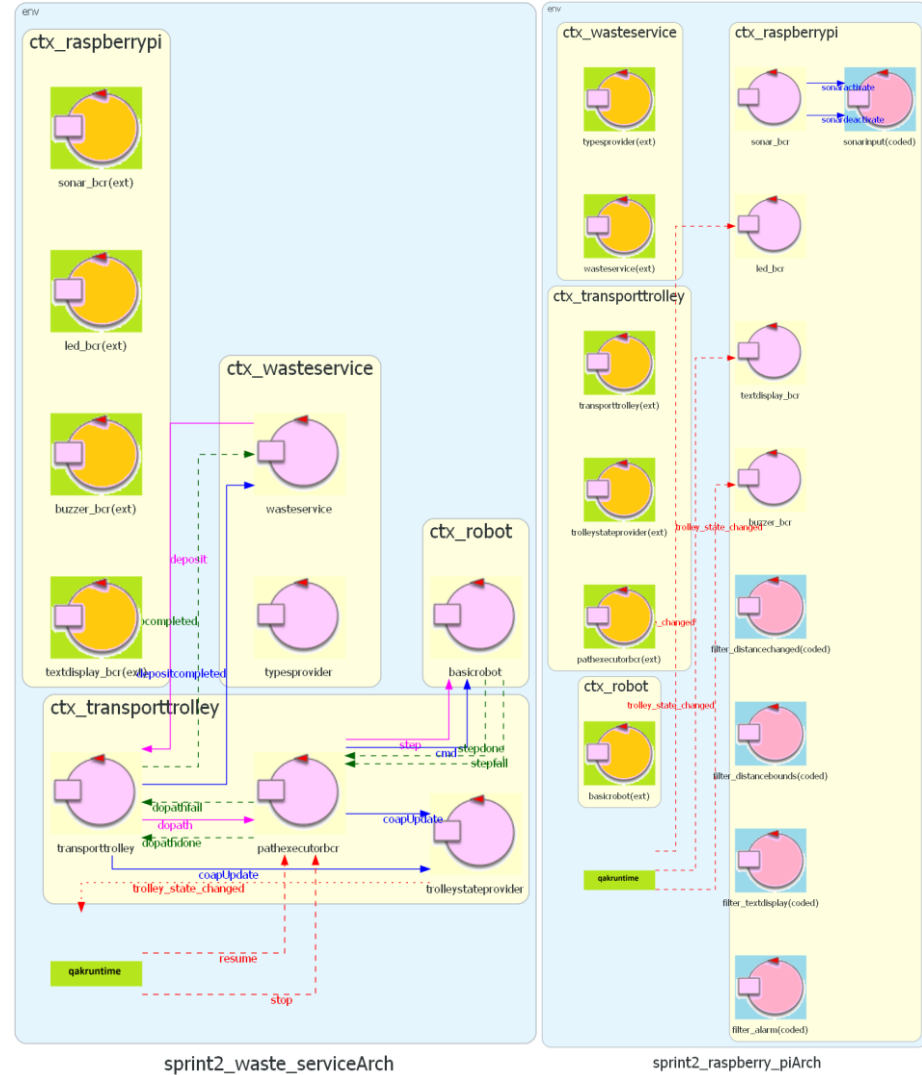
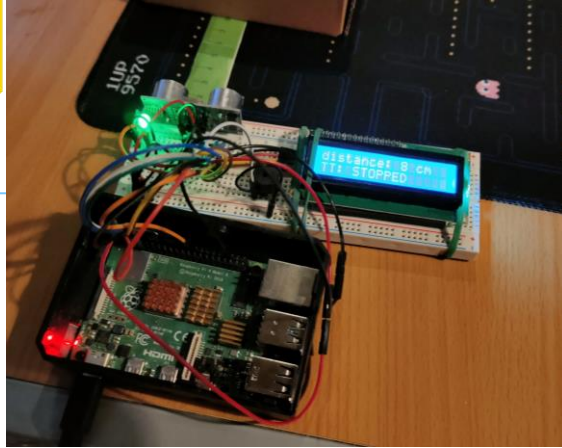
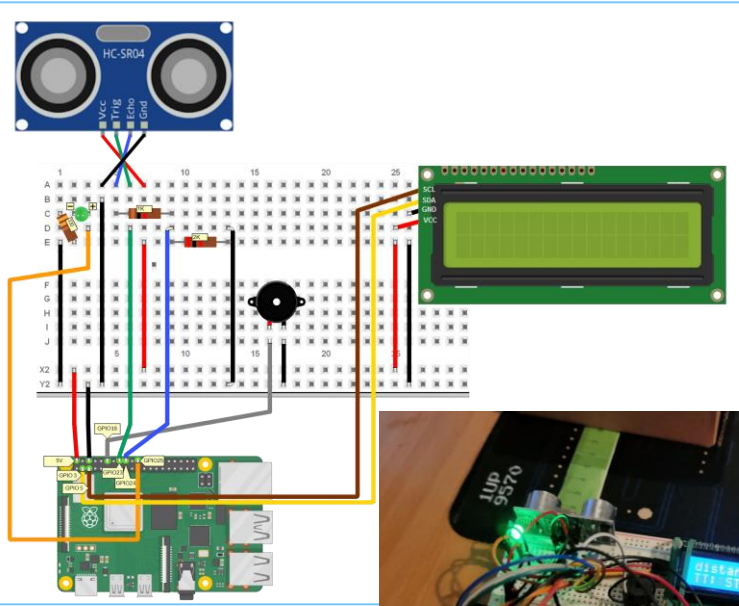
## Sprint 3: Monitoring

Requirement **3**

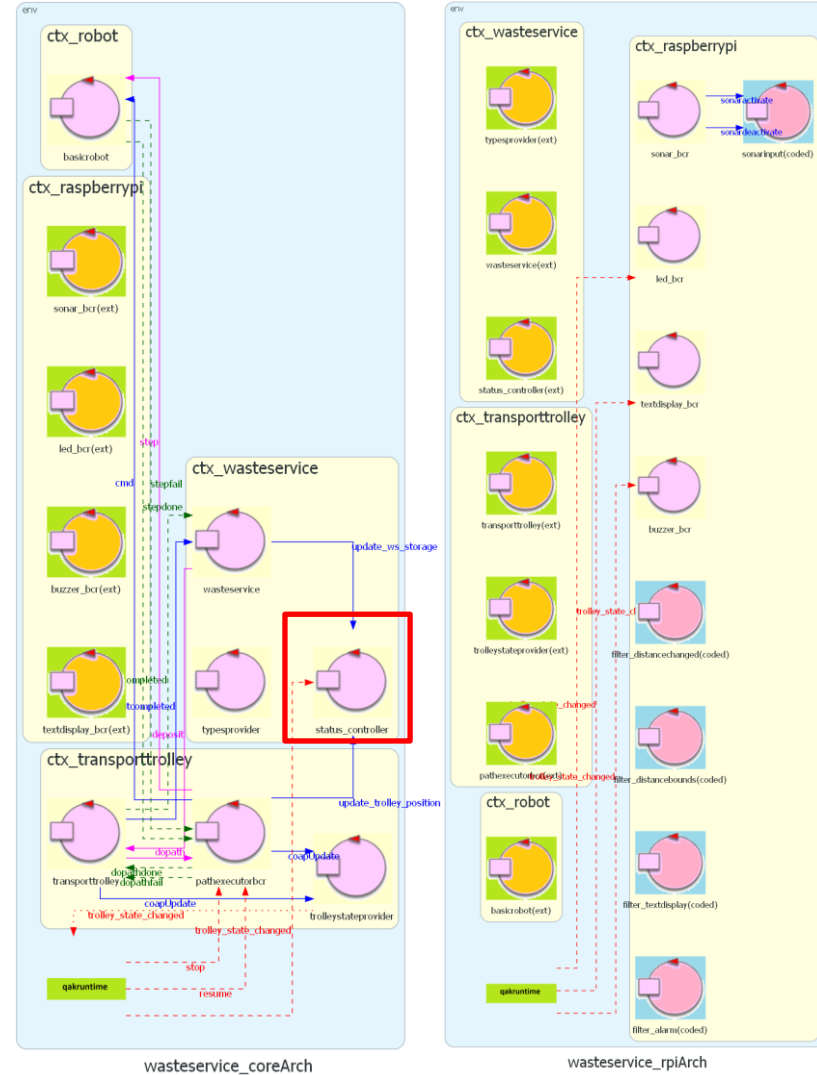
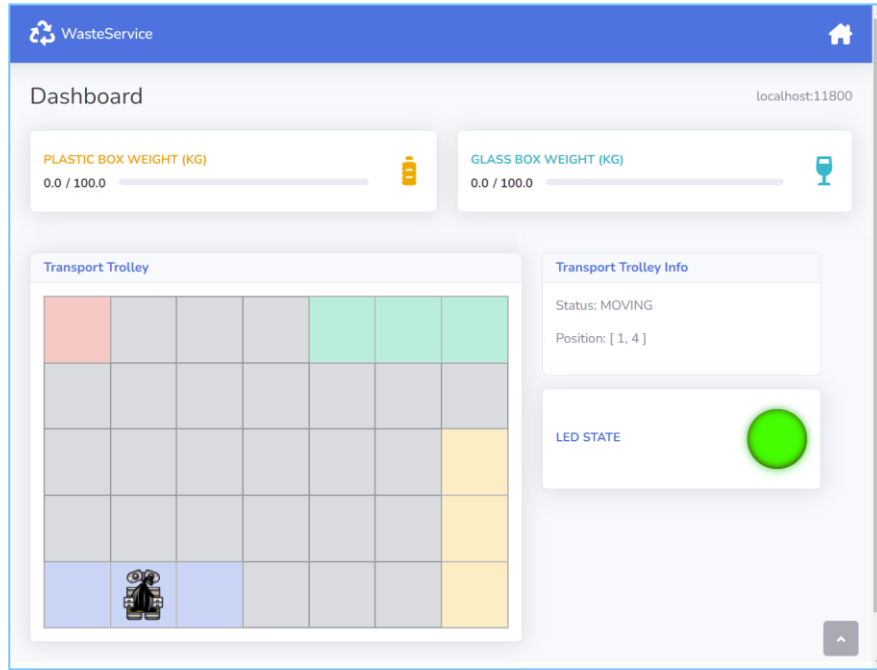
A diagram illustrating a network topology. A central node, represented by a large blue circle with a white border, is connected by lines to several peripheral nodes. The peripheral nodes are smaller blue circles with white borders. One peripheral node is on the left, and another is on the right. There are also three dots above the right peripheral node and three dots below the central node, indicating a larger network structure.



# Sprint 2: WasteService RPi



# Sprint 3: WasteService GUI





# Thanks!

Do you have any questions?

GitHub repository:  
[iss2022-BCR/WasteService](https://github.com/iss2022-BCR/WasteService)



**CREDITS:** This presentation template was created by [Slidesgo](#), including icons by [Flaticon](#), infographics & images by [Freepik](#) and illustrations by [Stories](#)

Please keep this slide for attribution