**Goal:**

-Development of a Smart RescueRobot that is able to perform and assist on rescue operations.

**Problem:**

-Adaption of the vehicle from land to water and vice-versa.

**Main Requirements Specification**

**Two scenarios are considered for the RavioliRobot:**

1. Operation on a collapsed building caused by an earthquake.
2. Operation on water due to a plane crash that ended up in the ocean.

**Requirements:**

(functional, interface, performance)

Functional: mode1, mode2….(normal/emergency)

Interface: (user,hard/software,communication)

* The robot should examine the territory in order to detect people.
* If people are detected, the robot should notify the Central System of the Rescue Team.
* The robot should provide communication interfaces so that the people in danger can communicate with the Rescue Team.
* The robot should be able to sense smoke, heat, gas, humidity and some basic air parameters.
* All the information gathered by the sensors should be transmitted to the Central System.
* The robot should provide some essential helping tools like: oxygen masks, lifebelts or medicine.

Design and development requirements:

-design constraints(hardware limitation):

* Weight
* Width
* Length
* Up-thrust
* Hydro-dynamic
* Speed (10 km/h at least)
* Cargo capacity

**Requirements validation**