The (almost infinite) range of maintenance activities in industry is not affordable individually due to its diversity, the specific features of each industry and the different maintenance policies in the companies.

However, MAINBOT has identified and proposes grouping some of the **most relevant activities and provide a common solution to them**
. The selection criterion has been the relevance of the task in terms of economical impact, the general application and the feasibility to achieve a solution in the timeframe of the project.

The industrial objectives are summarized according to the type of operation and the nature of the equipment to inspect/maintain:

- To provide a means to help measuring several physical parameters in multiple points by **a utonomous robots able to navigate and climb structures**
, handling sensors or special non destructive testing equipment.

- To develop a **surveillance robotic system** able to detect leakages of fluids using vision system in the range of thermal and visible or/and gas sensors.

- **Robotized non destructive testing** of surface deterioration of equipment in extensive plants and detection of broken elements.
- **Robotized non destructive testing** of internal deterioration in pipes and walls of tanks, chimneys etc., from outside the element to be inspected.

- **Ground robots** able to navigate in large industrial plants handling sensors and manipulator for inspection and maintenance, and overcoming obstacles and terrain conditions.

- Robots able to **climb** vertical (or almost) industrial equipment handling sensors and manipulator for inspection and maintenance.

These industrial objectives will be validated in a real industrial scenario, a thermal solar plant that has been chosen for two main reasons: Representativeness and Impact.