

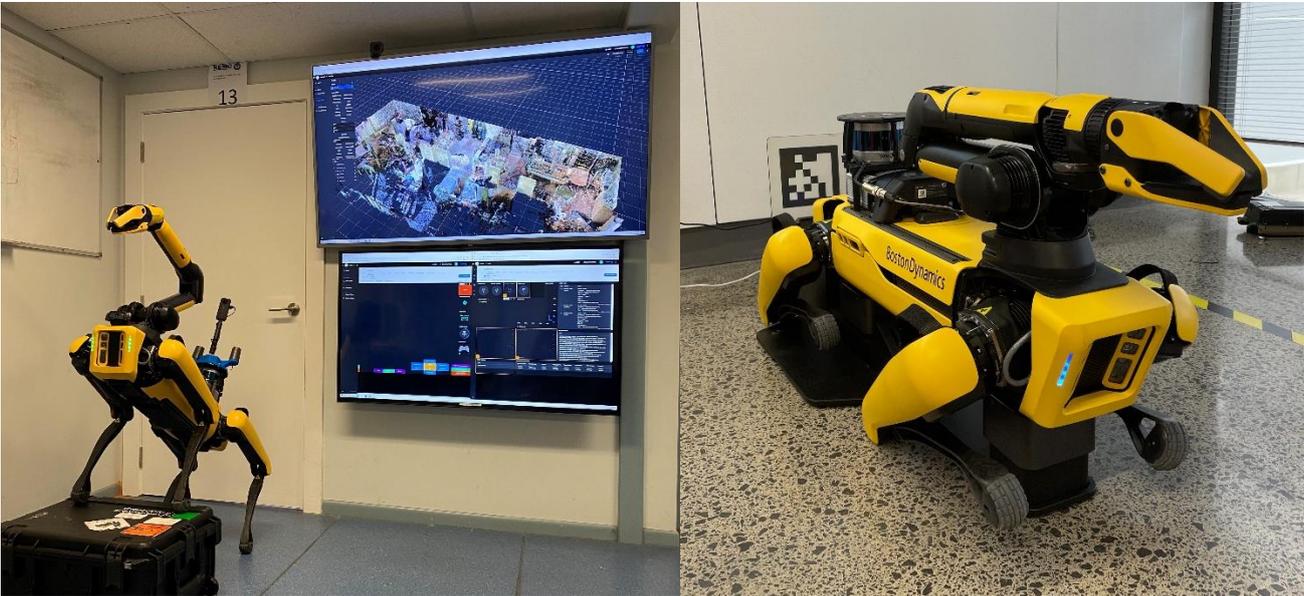
Robot Procurement

AGVs (with articulated legs) - Stage 2 & 3
Hardware

Project Code
2021-1270

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Project Description

The purpose of this project was to cover the hardware requirements and setup requirements of a selected robotic solution to be used in Project 2021-1271.

Project Content

The objective of this project was to conduct a thorough investigation with current knowledge and expertise to select and validate the most viable robotic solution and its payloads to achieve the broadest range of capabilities while proving potential use cases.

This project covers the selections process and documents the robot that was selected to be used in Project 2021-1271

Project Outcome

The following robotic solution was selected for the project

- Spot Enterprise
- Docking Station
- 2x Docking Station compatible batteries
- Boston Dynamics Controller
- Battery Charger (separate to the docking station)
- Spot Core compute unit
- Spot EAP (VLP16 LiDAR attachment)
- Spot Actuating Arm attachment

3rd party sensors included

- Insta360 One X2 360 Camera
- Logitech Webcam – for teleoperation
- Dual Antenna GNSS Mounts with RTK Base Station

The Spot Enterprise on a docking station is a functional and practical solution as an autonomous ground robotic platform.

Boston Dynamics have developed a wide range of payloads specific to some applications which allow the robot to be useful in industrial applications.

DroneDeploy was able to successfully integrate 3rd party sensors through their platform to enable extra functionality that Spot does not have as standard.

Benefit for Industry

This robot was to be tested in a wide range of activities on site to prove out the feasibility and industry fit for this form factor of robot and its current capability

Useful resources

<https://www.bostondynamics.com/products/spot/arm>

<https://www.bostondynamics.com/payloads>

<https://www.emesent.io/hovermap/>