***Walk-Aid Test Plan***

**Pre-requisites:**

* All device wearers have familiarised themselves with the device and are comfortable with using the device and understanding the haptic feedback.
* Wearers all wearing 1 layer of clothing between device and back

**Measured results:**

* 2D Aerial map of room and obstacles showing path through space
* 3D point cloud map of room and obstacles showing path through space
* Computational usage data including CPU load, Algorithm processing times etc.
* Directions output by the APF algorithm
* Minimum distance from obstacle
* Same set of questions after all tests for each method of haptic feedback to gauge ease of use etc.
* Time taken to traverse the room

**Test setup:**

* Cleared room with any other objects out the way and not moved for whole duration of the test.
* Predefined starting point where all tests shall start
* Predefined goal point where all tests shall end

**Test method:**

1. Moderator sets up room with device wearer outside the room having no knowledge of obstacle placement. Once set up and ready, wearer is lead into the room to the starting point marked out, facing towards the goal and waits there.
2. Once person is waiting there, moderator moves out of view of the camera and informs the wearer once the vest has initialised.
3. Wearer slowly walks across the room responding to the haptic feedback moving towards the goal point.
4. Once the wearer has reached the goal point the moderator will tell them they have reached the end, data will be saved, and the wearer can remove the blindfold.
5. This will be repeated 2 times for each wearer for each form of haptic feedback (Each wearer does 2 tests using shoulder straps, 2 tests using compass)
6. After the 2 tests of one method the wearer will complete the questionnaire detailing how they found that method of haptic feedback, and the same done for the other method of haptic feedback.
7. After both tests, they will be asked which method they preferred.