**CHART**

* **Space:** large room with floorspace (15 to 20 m2) for running experiments with mobile robots. This will also make for a good showcase of our research and encourage external stakeholder engagement and outreach activities.
* **Equipment:** the following equipment is needed to support the group’s development:

Robot Arms Kinova Gen3 Lite x 1 (£13K)

Kinova Gen3 x 1 (£30K)

Mobile Platform Turtlebot version 4 x 2 (£7.2K)

Mechabot X TX x 2 (£12.3K)

Social robot Navel x 1(£16.3K)

Telepresence Robot Stretch x 1 (£21K)

Sensors Xsens wireless AWinda suit x 1 (£34K)

Delsys Trigno x 2 (£6.8K)

**Total: £151K**

* **Technical Support:** only one technical support member has been appointed; a second is needed.

**COL**

* **Recruitment of 2 R&T staff** with skills in in data science and machine learning with knowledge of optimisation.
* We would also like to invest in a **drones platform** for research. We are in the very early stages of assessing the options available, hence I can only give you a rough estimated cost of approximately £10K. It would be small drones for research on swarm intelligence, machine learning, and optimisation.

**CVL**

* **Expansion of lab space**: to include a **multimodal data capture suite** (audio, video, radio frequency, brain activity such as FNIRS and EEG, and other physiological responses) to enable human behaviour/activity analysis.

*Note: this would also support the Brain Data SIG.*

* **Strategic investment in machine learning GPU cluster:** CVL’s GPU cluster is now a sizeable HPC capacity within the university. Having grown the system in-house for the past 5 years, we now need strategic investment to make the system future proof and more easily maintainable. As users extend beyond CVL, the School should take over running and maintenance/expansion costs. This is a heavily used resource by many members of the school that has gone an additional year without maintenance funding, as we haven’t had the funds in CVL to expand or properly maintain this.

**CybSec**

* Appointment of two academic **staff**

**DREAM**

* Appointment of academic **staff** to support research priorities

**FP**

* Appointment of two academic **staff**

**Horizon**

* Continued support of **technical staff** for Cobot Maker Space

**MRL**

**Critical Sound Studio:** a flexible studio space to support innovation in audio, sound and musical arts consisting of a sound-proofed space (4m x 4m x 2m) with 4 main infrastructures:

1. 35 speaker system for research in 3D sound, immersive audio, and music technology.
2. High-end IP routing system throughout the studio.
3. Hyperscanning, wireless and motion-capture technologies to sense and read the physiological and psychological attributes of music-based practice and creativity
4. Software-based editing, mixing, programming workstations (minimal hardware interfacing).

**Integrated Science and Arts Lab:** supporting scientific study of the interaction, production and experience of emerging technologies. ISAL will support research that spans technological, creative-artistic and cultural innovations. This medium sized lab will have a cutting-edge infrastructure but will be flexible and adaptable. It will measure 10m x 10m x 6m, and will be fitted with the following key features:

* Sound-proofed walls (not sound deadening)
* Floating floor for dance and performance
* Wrap around black curtains (for theatre experimentation)
* Sound-treated internal rigging structure (see image)
* 80-speaker setup, with audio over IP, for 3D surround sound research (music, performance, cinema and gaming)
* Qualisis Motion capture systems (3) for scientific tracking of participants and motion capture research (gaming, digital performance)
* Projection systems
* Wireless VR/AR system
* Hyperscanning EEG and FNIR (near-infrared spectroscopy) equipment
* Separate server and hardware / storage room
* Plus VR, AR, motion tracking, and project technology.

***Note:*** *it may be useful to see these as requirements for a single lab space.*

**RDF**

Strategic appointment of **Marina Jirotka** to support group development <https://www.rti.ox.ac.uk/people/>