| **Project Title: Inviol Body Camera Project**  **Date:** 22/03/2022 **Prepared by:** Julia Borlase |
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| **Project Justification:**  Injury in the workplace worldwide occurs every 7 seconds, costing US $250 billion worldwide annually. Within New Zealand, 63% of fatalities are related to motor vehicles, and 80% of these can be avoided by following health and safety measures correctly. Companies have many policies in place to prevent these accidents from occuring, however, overtime people become complacent to these policies.  This project will contribute to breaking the habit of complacency between employees and in turn keep them safe, and create safer workplaces. |
| **Product Characteristics and Requirements:**  **Hardware Requirements:**  Hardware requirements for the project are defined as the requirements that have been set out for the wearable body cameras. They have been discussed and defined with the client and include;   * Camera resolution (pixel resolution) * 8-hour battery life, enough to last a full work day, needs to take into account the power for the camera, WIFI, GPS, and processor. * Camera size and weight, need to be easily wearable for employees who have active jobs, must be less than 500g * Minimum performance models include: jetson/ raspberry pi, object detector, position estimation * Onboard and post-processing, either combined   **Architecture / Design Requirements:**   * Send messages through the internet from the hardware * Will use BLOC diagram * Detect objects * Framework/programming language (for app and device) * Hardware restraints * Open source repos to use for model training and detection |
| **Summary of Project Deliverables**  **Project management-related deliverables:** business case, charter, team contract, scope statement, WBS, schedule, cost baseline, status reports, final project presentation, final project report, lessons-learned report, and any other documents required to manage the project.  **Product-related deliverables:** research reports, design documents, software code, hardware, etc.  1. Hardware - wearable body camera  2. Software - API  3. Software - Mobile/ Web Application  4. Hardware - a software for the camera to be installed |
| **Project Success Criteria:**  We would deem the project successful when;   * A hardware prototype has been selected and * The hardware prototype has software installed and * The hardware prototype can detect incorrect employee behavior * A software has been created for the hardware prototype * A web / mobile application has been designed for connection with the hardware prototype |

Scope related risks and mitigation plans

List and briefly explain one or two scope related risks and mitigation strategies [risk register]

Infrastructure and Human Resource Requirements

* Identify technical infrastructure specifically needed which AUT or client have to provide or purchase for the team
* Required Upskilling

As seen in the requirements stated in the scope, our team will need several resources to complete this project defined by our definition of success. These resources include; the cameras (lens, battery, camera harness, camera processor, etc) that will be selected after the research phase of the project, the software API which is to be provided by the client, the azure development software which is to be provided by the client.

To achieve the requirements set up above, our team will be required and responsible for undertaking some upskilling in model training and detecting for the software to be implemented for the body cameras. This was discussed with the client and they are happy to run workshops in upskilling these areas, so we are able to learn how to train models correctly and in the way that suits the client and how they currently train models themselves.