PURPOSE:
To improve data collection and analytics capacity of the AMS Safewalk service through the implementation of a reliable data collection, dispatch and analytics system. This upgrade will ultimately enable us to back budgetary decisions with timely data and lay the foundation for a timely reporting structure to the UBC Campus Safety Committee.

PROPOSAL:
The purchase of a five (5) user licenses for Google Maps Coordinate - an open source, web based, personnel dispatch system capable of assigning walks, collecting usage rate data and compiling realtime metrics and usage analytics.

Video link: [http://www.google.ca/enterprise/mapsearth/products/coordinate.html](http://www.google.ca/enterprise/mapsearth/products/coordinate.html)

The technology offered by Google will allow the nightly dispatcher to input walk requests into the system, assign walks based on geo-location of active Safewalk teams and monitor walk progression / nightly efficiency of the Safewalk service.

Setting up the service the administrator will be able to pre-group users into “Dispatch” and “Safewalk Team” classifications, each allowing for different functionality and required fields of input.

Dispatch will collect the student number, select a pick up location from a complete campus directory (pulled from the Safewalk HUB System already deployed), add a note for exact pickup arrangements and assign the walk to a walking or driving team.

Walking or driver team leader will receive pending walk requests via their google maps coordinate app and will be able to see other jobs for other teams in their vicinity as well. The walking team will then deploy to the student's location and upon arrival will input the student number to initiate the walk with a timestamp (later replaced with auto-fill via swipe of Student Card through an attached mag-stripe reader to mobile device).

Upon completion of the walk, the walking or driving team leader will input drop off location via in app campus location directory listing to end the walk with a timestamp.

This technology is open source, allowing us to collaborate with student groups to further develop functionalities, such as online walk request submission, as well as releasing APIs to OOHLALA for integration in the AMS Mobile and Web App.

CONTRACT DETAILS:
Full contract has been provided for council review. The contract will be for a 1 year tenure.
COSTS:
The cost of licensing on a per user per year basis has been deemed more appropriate then purchasing a yearly enterprise license agreement at a substantially higher cost (further detail in the Comparison section). Despite plans for future integration within various other services, in the short term, it will be more practical to start this technology in the Safewalk service as we develop a more concrete understanding of the wide range of functionalities and their potential implementation in other services.

Per user, per year, the cost of licensing Google Maps Coordinate will be $250. We are proposing the purchase of five (5) license agreements - 3 for walking teams, 1 for the driving team and 1 for the dispatcher. The total annual cost will be $1250.

HARDWARE:
We aim to replace existing dispatch and data collections systems with this more efficient technology. As such, it would be counterintuitive to risk service interruption due to compatibility issues with staff’s personal mobile devices and we should not rely on such personal hardware.

After investigating multiple solutions, we are proposing the purchase of five (5) Nexus 5 phones from the Google Play store at an individual cost of $350 before tax. The Nexus 5 phone is capable of wireless charging by placement on a charging mat, autonomous background firmware updates (removing the need for ongoing IT support and regular maintenance) and come unlocked and capable of connecting to any service provider.

The Nexus 5 will be stored in the locked Safewalk dispatch office but will remain the property of the office of the Student Services Manager and can be re-tasked during daytime hours as needed by the department. A similar system is in place with other mobile technology owned by the department and has been found very efficient in covering operational needs.

We had come to the decision of implementing a cellular enabled device due to service inconsistencies of the UBC Secure campus wifi network. The inconsistencies had been encountered in the deployment of other wifi enabled hardware for the purposes of tracking group tutoring usage and resultantly created data gaps in last year’s mobile backups - forcing us to move back to an antiquated paper collection process in some specific scenarios / locations.

We believe that the investment in five (5) Nexus 5 smartphone devices is an integral part of a smooth role-out of the Google Maps Coordinate technology solution and will be viable for many other applications over the course of the device’s usable life.

We plan to operate the devices on a data only plan from Wind Mobile at a rate of $30 per device per month. We are prototyping the Wind network prior to making a final service provider decision.

We are planning to enable all devices with VOIP communication and group chat capacity. Once this is beta tested and deemed functional, we plan to discontinue our usage of all but one (1) UHF Digital Radios at an annual savings of $2000 to our digital repeater service provider (BC Comms). At this point we will also sell the hardware to re-coup sunk costs.
COMPARISON:

After a month of investigating several options we’ve come to the conclusion that the purchase of five (5) license agreements for Google Maps Coordinate proves most cost effective and viable for implementation by the end of the summer term.

The second most viable alternative was the full development of an app boasting the same functionality through Alchemy Technologies at a cost of $15,000 for a Minimal Viable Product, totalling in excess of $28,000 for the full software solution for all of our services. This would have been a one time expense, but without the guarantee of continued maintenance from the firm, this route would cost the society much more in up-keep costs down the road.

In comparison, the implementation of Google Maps Coordinate on an Enterprise License would only cost $10,000 per year and would allow for unlimited user-ship, constant upgrades and fixes as well as guaranteed ongoing support from Google and their industry partners. As prior mentioned, this is still a viable option for the future.

The cost of purchase of hardware would have been incurred regardless of the software solution.

TIMELINE:

MOTION:

We ask council to approve the one time expenditure of $1,250 from the Capital Projects Fund (CPF) for five (5) one year user licenses of the Google Maps Coordinate technology solution.

We ask council to approve the one time expenditure of $350 per device before tax for the purchase of five (5) Nexus 5 smartphone devices from the Capital Projects Fund (CPF).