



THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA

PROJECT PROPOSAL

COMPANUON

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INITIATION

Project Initiation (Minor Projects)
Project Idea Document
Project Proposal

DISCOVERY

Project Schedule Guideline
Business Requirements
Business Case

Project Charter

Guidelines for Developing the Project Proposal

Document Purpose

The purpose of the Project Proposal document is to introduce the project and provide initial information regarding the proposed idea/solution.

Context

The Project Proposal is produced in the **Initiation Phase**. The **Initiation Phase** focuses on defining the project, along with potential business benefits, with a view to gaining authorisation for the proposal to become an official project.

If the Project Proposal is approved, the project will progress to the **Discovery Phase**, where the following documents may be produced:

- Business Requirements Document
- Business Case

Resources and Time

Although the Business Owner is the owner of this document, they will usually assign a Project Manager to complete this document, with assistance from the Project Management Office.

Output

The output is a Project Proposal document, which provides a summary and overview information related to a particular business idea, concept or proposed solution.

Sign Off

The Project Proposal is to be authorised by the Business Owner.

Using this template

- Within the template itself, guidelines and 'prompts' have been added (*in grey italicised help text*) to guide you at each section. This text should be deleted after completion of the section.
- To update the <Project Name> fields, you will need to update the title field in Document Properties (File – Properties), click into the text wherever you see <project name> and press F9.
- To update this Content Table, click into the table, press F9, and select 'update entire table'.
- This 'guidelines' page can also be deleted on completion of this document.

Guidelines

- IT Services Team Leaders must be consulted on any technical resource requirement and the resource type. (e.g. Sysadmin Win, Sysadmin UNIX, Peoplesoft).
- Estimates of any development timeframe should also be done in consultation with IT Services.
- Cost estimations should include an estimate of 4 weeks post production managed support. This should cover Project Manager, Business Analyst and any other resource costs. Typically the post production period is to iron out teething problems post go live, and the PM time should be at least 1 day per week for 4 weeks.
- Cost estimates for on-going support of the service or application must also be factored in to costs. These costs relate to any **new** resource technical or business that will be required once the application is in operational support. (e.g. Business support specialist, System administrator).
- Cost estimates for IT Development staff should be based on contract rates.
- Cost estimates for Business Resources should be based on a backfill of the position.
- Rates for PMs and BAs should be based at the maximum Hew 9 and Hew 8 respectively.
- Please ensure that the scope of the project is clear and explicit.

Document Control

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Confidentiality:	Team Only
EPMM Version:	5.0

Document change control:

Version #	Change Description	Date	Author
2	Added sections 4 – 16	21/05/2021	Group 11

Business Approval

ACCEPTED: _____
Project Sponsor

DATE: ____ / ____ / ____

ACCEPTED _____
Business Owner

DATE: ____ / ____ / ____

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Project Overview

1. PROJECT DETAILS

Project Name:	CompanUON
Date:	21/05/2021
Project Sponsor:	University of Newcastle
Business Owner:	University of Newcastle Information Technology Department
Project Manager:	Adam Jeans
Stakeholders:	Students, Staff, University of Newcastle (Sponsor), IT Services, UoN Clubs
Category:	<input checked="" type="checkbox"/> Major : Duration > 3 Months OR Cost > \$100K <input type="checkbox"/> Medium : Duration 1 -3 Months OR Cost \$50K- \$100K
Mandatory Requirement:	Use and disclosure of personal information in accordance with University of Newcastle's Privacy Policy, which user must accept upon installation of app (UoN Student Privacy Policy)

2. PROJECT PURPOSE & OBJECTIVES (SHORT DESCRIPTION)

CompanUON aims to become a staple of the University of Newcastle Student and Staff experience. It will primarily act as a social platform to facilitate communication and interaction between university clubs and club members, while also relaying important notices from staff to students. CompanUON will also offer a campus navigation service to help new students and staff members get around the Callaghan campus.

We will be able to measure the success of this project based on the end of semester feedback and amount of traffic CompanUON receives.

This is an ambitious project, as its success relies on building and maintaining an active user base, however, we believe the demand for our product will make this a very achievable goal.

CompanUON has the potential to benefit many generations of UoN students and staff members, as the navigation component will help them get familiarized with the campus, while the social aspect will keep them engaged throughout - and potentially long after - their university career.

Although this is a quite complex project with various components we believe we can comfortably complete a working prototype within 6 months and have the project finished within a year.

3. PROJECT SCOPE

Inclusions (List in-scope items)

- Hybrid Application – Works on both mobile devices as well as web-browsers.
- Map navigation using functionality like Geolocation so that when GPS satellites are patchy (e.g. in some building at UON in the basement), it would still give you exact x, y coordinates by sniffing signals from Wi-Fi-router.
- A social media platform (Instagram page) to promote the application/other activities.
- Welcome events/merch for marketing (Unsure if this falls under the project plan?)
- Free-standing touch screens with app integration
- Coverage across the Callaghan campus
- Available to staff and students
- Integrates within Universities campus wide Wi-Fi network.
- Frequently asked questions and tutorials to help users get familiarized with the app.

Exclusions (List out-of-scope Items)

- Dedicated desktop app
- Not covering Ourimbah Campus
- Not covering NUspace
- GPS for maps not available while offline
- Does not cover anywhere outside of Callaghan campus
- Does not cover groups or clubs that are not approved by the University of Newcastle
- Not available to users without a University of Newcastle email address

Project Justification

4. PROJECT BENEFITS

Project Benefit	Benefit Realisation
Cultivate a stronger community	CompanUON will make it easier to communicate and interact with University clubs and social groups. This will strengthen and grow the University's community, creating a more enjoyable environment for students and staff members.
Easier navigation across the University	Our robust GPS navigational system will be available to use via the mobile app. We will also strategically place solar powered touch screens with GPS functionality across the campus so all students and staff members can access our navigation system.
More students on campus	With a stronger community, and system to assist students in navigating the campus, we expect an influx of students coming to the University to socialize and attend their lectures in person.
Higher student enrollment rate	<p>We believe our project will drastically improve student satisfaction and quality of life. This will strengthen the University's reputation, making it more attractive for future students, and increasing our enrolment rate.</p> <p>By making the University easier to navigate, and getting students more socially invested in various clubs and groups, we also expect to see a higher student retention rate.</p>
Increased university revenue	<p>This project will indirectly increase the University's revenue, by attracting more students to enrol, and increasing the chances that they stay enrolled to their courses completion.</p> <p>Another indirect source of revenue will be the increased number of students attending the campus in person, as they will generate more traffic for the established businesses throughout the University.</p>

5. CRITICAL SUCCESS FACTORS

Deliverable	Success Criteria
UX/UI Mockup of CompanUON	The mockup needs to demonstrate that the application is responsive, user friendly, and accessible - adhering to best practices outlined in the Web Content Accessibility Guide.
Campus navigation framework	The application needs to show a detailed map of the campus with "landmark" facilities highlighted. The navigation system needs to reliably track the user's location and be able to calculate accurate routes across the campus. Sufficient security and privacy measures must be in place to maintain the integrity of our users' data.
Social club framework	The application needs to be able to handle a large amount of traffic and host the variety of clubs throughout the University. It is also critical that we can provide core functionality enabling messaging between users and clubs, event calendar exports and push notifications. Sufficient security and privacy measures must be in place to maintain the integrity of our users' data.
Free standing navigation screens	Touch screens must be durable, as they will be accessible by the public and will be positioned in high traffic areas, and exposed 24/7 to the weather. They must also be in range of the University's wi-fi network and efficient enough to run off solar power. The screens should also be easily accessible in case maintenance is needed.

Description	Revenue Generation (\$ per annum)	Cost Saving (\$ per annum)
Higher student enrolment rate: The University of Newcastle has roughly 40000 students currently enrolled. We believe CompanUoN will increase student enrolment rate by 0.125% each year, this was calculated using the compound interest formula. Revenue is calculated by multiplying the additional students enrolled by the average yearly university fees (\$15000). NPV is calculated using a discount rate of 12% over an indefinite period.	Year 1 (PV): \$669750 Year 2 (PV): \$598497 Year 3 (PV): \$535336 Year 4 (PV): \$478791 Year 5 (PV): \$427380 ... NPV: \$6250000	N/A

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Parking revenue: <p>The University of Newcastle has roughly 40000 students currently enrolled.</p> <p>We expect to see a 2.5% increase of students on campus.</p> <p>We estimate that the average student spends \$10 a week by parking on campus, for 26 weeks over the 2 semesters.</p> <p>Revenue is calculated by multiplying the estimated cost of parking per student, by total increase of students on campus.</p> <p>NPV is calculated using a discount rate of 12% over an indefinite period.</p>	<p>Year 1: \$232470</p> <p>Year 2: \$207738</p> <p>Year 3: \$185815</p> <p>Year 4: \$166188</p> <p>Year 5: \$148343</p> <p>...</p> <p>NPV: \$2169375</p>	N/A
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6. ALIGNMENT TO UNIVERSITY STRATEGIC PLAN / OPERATIONAL PLAN

Initiative	Description of how this project aligns with Strategic/ Operational Plan
Next generation resources	CompanUON will utilize the latest technologies to deliver a mobile app and campus wide self-sustainable touch screen navigational stands, helping students traverse the university with ease, while staying connected with their favorite University communities.
Connected communities	The social aspect of CompanUON will facilitate communication between University clubs and students. This will make it easier for students to connect with groups of likeminded individuals and be more engaged with the community.
Reimagining our campuses	CompanUON will transform the way students traverse the campus, by providing a reliable, accurate navigational tool that is tailored for the Callaghan campus. It will also indirectly create more events across the campus by getting students more engaged with University clubs, creating a more vibrant and connected community.

7. ALIGNMENT TO UNIVERSITY POLICY

1. Risk management study must be taken, and a plan be made.
2. Allow for staff to have access to WHS services.
3. Provide more than enough resources before the beginning product to ensure the final product is completed.
4. Website standards must meet the standards outlined by the World Wide Web Consortium.
5. The university has the right to remarket information of the users of the system.
6. Website and navigation app must not include advertisement or information that will grant an income to incur by displaying said information.
7. Website and application web links must be hosted on www.newcastle.edu.au.
8. No copyright material may be used on a webpage owned by the university.
9. All information stored must abide by the Privacy Management Plan created by the university of Newcastle.
10. The university can use stored user data to help populate the club database due to it being a university product.
11. All data used to make the GPS and website needs to be stored on secure University approved databases.

8. ALTERNATIVE SOLUTIONS

Option	Description	Rejection Reason
Option 1	Using underground power sources for free standing touch screens.	Installation and maintenance cost would be too high.
Option 2	Paper maps installed across campus	Paper maps are not dynamic, thus not as effective in terms of navigation capabilities.
Option 3	Placing a list of clubs at student hubs	Utilizing the university website to allow clubs to be found easier, clubs are also more interactive this way.

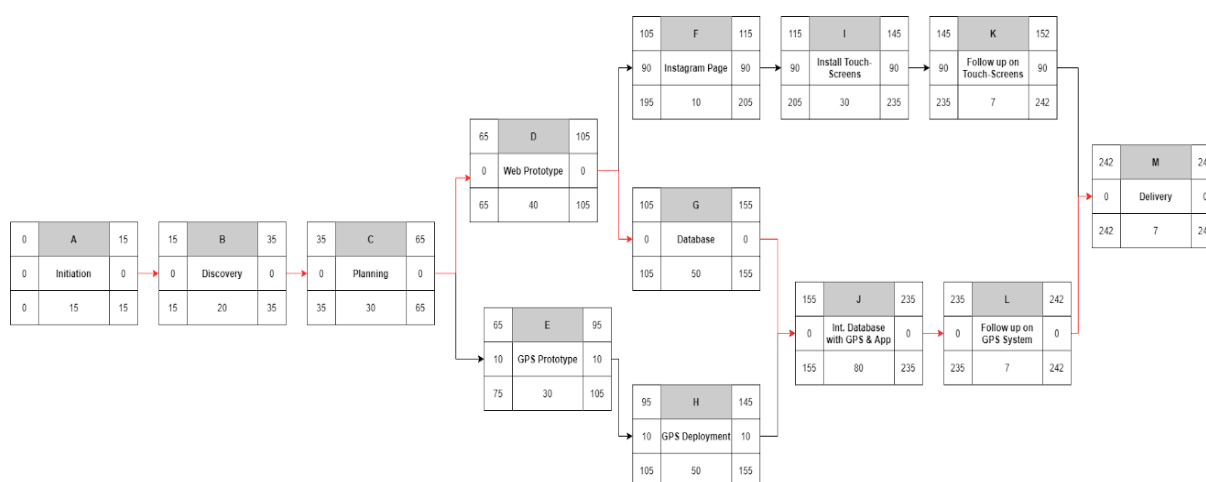
Project Details

9. PROJECT TIMELINE AND RESOURCES

ID	Phase Name	Estimated Duration (Weeks, Months)	Estimated Completion Date	Resources required. e.g. Business Analyst, Web developer, consultant engineer, design engineer
A	Initiation	15 days	15/06/2021	project manager, business analyst, consultant engineer
B	Discovery	20 days	05/07/2021	project manager, business analyst, consultant engineer
C	Planning	30 days	05/08/2021	project manager, business analyst, consultant engineer, design engineer, app developer
D	Delivery: Website prototype to connect to database	40 days	15/09/2021	project manager, consultant engineer, design engineer, app developer
E	Delivery: Prototype of the GPS system	30 days	15/10/2021	project manager, consultant engineer, design engineer, app developer
F	Delivery: An Instagram page	10 days	25/10/2021	project manager, consultant engineer, design engineer, app developer
G	Delivery: Database of clubs	50 days	15/12/2021	project manager, consultant engineer, design engineer, app developer
H	Deploy: GPS Deployment	50 days	5/01/2022	project manager, consultant engineer, design engineer, app developer
I	Deploy: Installation of touch screen navigation machines	30 days	5/02/2022	project manager, consultant engineer, design engineer, app developer
J	Deploy: Integration of club database to GPS System and website	80 days	25/04/2022	project manager, consultant engineer, design engineer, app developer

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K	Close: Monitor activity and maintenance of navigation machines, do solar panels supply enough charge.	7 days	02/05/2022	project manager, consultant engineer, design engineer, app developer
L	Close: Follow up on GPS system to ensure it works	7 days	09/05/2022	project manager, consultant engineer, design engineer, app developer
M	Close: Delivery	7 days	16/05/2022	project manager, app developer



10. PROJECT DEPENDENCIES

Project / System / 3 rd Party	Dependency e.g. Decommission
Google Maps	CompanUON will make use of GPS data provided by Google Maps API
Android and iOS Mobile Operating Systems	The CompanUON standalone application will only run on these two operating systems.
Web Browsers	The web-based version of CompanUON will require a well-maintained web browser, such as Mozilla Firefox, Google Chrome, Safari or Microsoft Edge.
Existing Map Touchscreens on Campus	These will be converted to run the CompanUON software.
Club Groups on Social Media	These groups are to be assimilated into the CompanUON app while still maintaining their individual pages on social media.
Course Coordinators	Course coordinators will need to be able to push important course information to students through the app.
Installers of Touch Screens	Installers will be required for installation of touch screen units.
Software Developers	Required for creation of mobile and web applications
Design Engineer	Required for planning layout and functionality of the application

11. PROJECT CONSTRAINTS

Constraint	Comment
Project Completion	Project must be completed within 12 months.
Project Deliverable	UON Management expects some deliverables in 6 months.
Project Budget	Budget for the project is set at \$250,000
Availability of Touch Screens	Touch screens will need to be ordered after the design of the application is completed which will need to arrive within the 4 Month time frame.

12. ASSUMPTIONS

Description	Notes/Comments
Developers will have access to Club information	Software developers will need access to all Club information such as contact for Club manager, meeting times, venues etc.
Project Manager access to possible sites of touch screens	Project Manager will require access to areas on campus that could potentially be a location for a touch screen unit. The project manager may also need access to non-student areas for power source locating for the units not able to be powered by solar.
University Website	Software developers will need access to the University's website to integrate links to the CompanUON web application.
Install of touch screens	Installation of touch screens will require barricades while the technician's complete installation which may interfere with student movement through some areas
Project Manager informed of University changes	Any proposed changes to the layout of the university such as additional buildings or rearrangement of room numbers will require notification of the Project Manager as soon as possible. This is to ensure the GPS navigation stays up to date and reliable.
Club Cooperation	Clubs are to keep the Project Manager up to date of any changes to their clubs such as venue changes, meeting time variances etc. This will ensure that the CompanUON app is up to date on launch.
Club Training	Club managers are to be trained in the use of running their club through the application to ensure smooth transition from previous social media-based club organisations.
Project Manager to be notified of any development delays	The App Developers and Design Engineer are to keep the Project Manager informed of any delays in development and design of the application to keep the project on track where slack may be able to be taken from other deliverables.

13. PROJECT SOURCE OF FUNDING

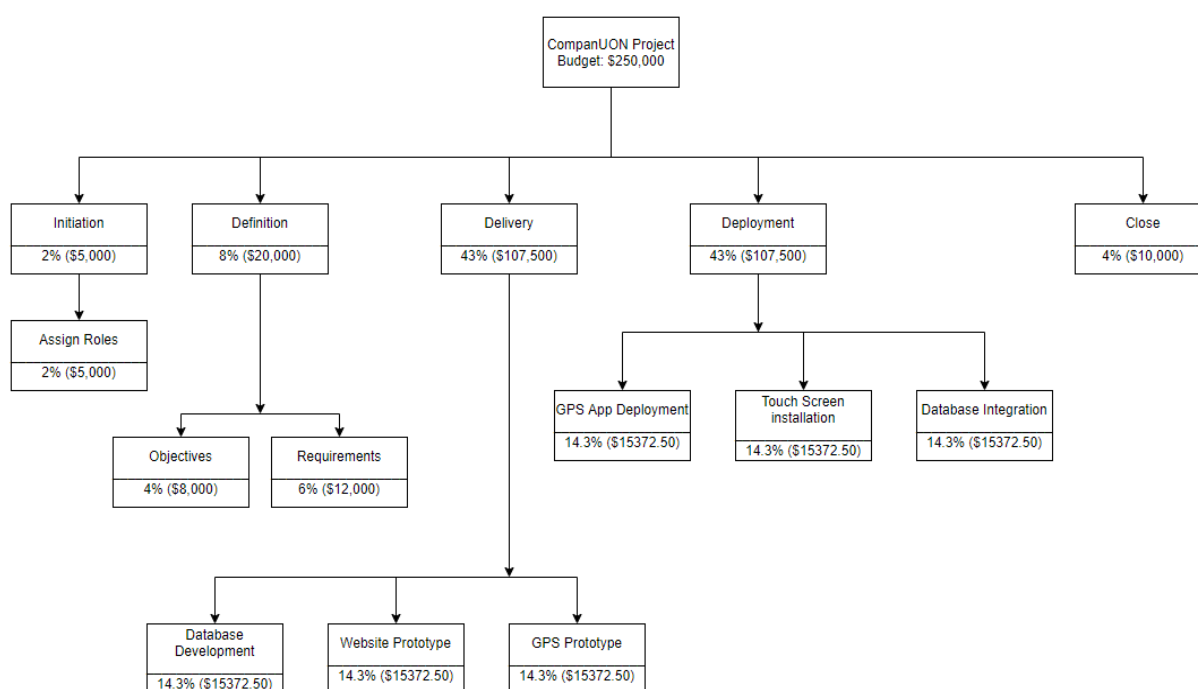
Source Of Funding	Yes/ No	Comment
Project Capital Expenditure	Yes	Project's capital expenditure will be provided by UON to create, maintain, and improve the efficiency of the app; CompanUON, and physical assets (Merch, free-standing desks etc)
Project Operating Expenditure	Yes	Source of project's operating expenditure would also come from UON, which can be used for marketing strategies, free-standing touch screen with app-integration and much more
IT Operating Expenditure	Yes	To keep CompanUON up-to date and in-sync with activities happening around the campus, we will be needing System analysts and software developers at most of the time. IT Operating expenditure will be provided by IT Services at UON.
Research Expenditure	Yes	CompanUON would use best network technologies, multi-platform, and Map integrating functions like Geolocation, hence, research would be conducted prior to implementation. Research and Innovations services at UON will provide research expenditure for the project

14. PROJECT COST

Our Estimation Approach

To estimate the project cost, we used a top-down approach with an apportionment method. This helps our team estimate the cost of each individual part of the project. We have chosen this approach as we have historical data that relates to this project from projects that were implemented in a similar fashion to our CompanUON project.

The budget of our project is \$250,000, and our estimated breakdown of how our budget will be spread out is shown in the following WBS Figure:



CompanUON - Project Proposal

Types of Costs

This section describes the different types of costs related to our project.

Direct Costs:

- Labour costs (programming etc.)
- Equipment costs (such as computers, software)

Direct Overhead Costs:

- Project Manager salary (based on Hew 9)
- Business Analyst salary (based on Hew 8)
- Stationary supplies

General/Administrative Overhead Costs:

- Employee insurance
- Employee salaries (based on Hew 5)
- Electricity bills

15. ON-GOING COSTS POST PRODUCTION

Cost Type	Hew Level	Existing or New	Cost Per Annum (\$)
<u>Resources</u>			
Business Analyst salary	8	Existing	\$112,583.95
Project Manager salary	9	Existing	124,391.32
Programmer salary (App Developers)	5	Existing	73,482.76
<u>IT Support</u>			
IT Support salary	4	Existing	65,424.85
<u>License and Support</u>			
Web hosting Annual Fee	-	New	1,000.00
Website Maintenance Costs	-	New	60,000.00
CompanUON App Maintenance Costs	-	New	25,000.00
		Total (\$):	388400.12

16. PROJECT RISK PROFILE ANALYSIS

Category	Risk Description	Likelihood	Consequence	Risk Rating	Mitigation Strategies
Project implementation risks	Financial approvals: can slow down processes	Likely	Major	HIGH	Get financial aids approved prior to finishing of preceeding task
Project implementation risks	User acceptance	Possible	Major	MODERATE	Focus on marketing strategies before the launch of the product
Project implementation risks	Security attacks: Private data of Students and Staff	Possible	Catastrophic	HIGH	Implementation of secure pages and secure hosting
Project implementation risks	Unavailable resources or experienced team member: Such as Signal towers in ES building, absense of Senior developer)	Likely	Major	HIGH	Communicate with Software developers on daily basis. Direct contact with the contractors who can provide equipments
Project implementation risks	Acts of God: Such as extreme weather could lead to damage the free-standing touch screen	Possible	Catastrophic	HIGH	Ensure the materials are covered by insurance. Familiarise the team with safety procedures.
Project implementation risks	Material damage: Such as vandalism or theft of free-standing touch screens	Possible	Catastrophic	HIGH	Safety cameras around the desks, ensure the materials are insured. Put up signs and certificates near the desks.
Project implementation risks	Lack of communication between departments i.e. UON, IT Services, Research & Innovation	Possible	Moderate	MODERATE	Write a communication plan and make sure all of the departments including stakeholders, follow up day to day communication like notices, alerts etc. Use of most appropriate channel of communication.
Project implementation risks	Scope Creep (Integrating Geolocation)	Likely	Moderate	MODERATE	Geolocation might have additional components in order to incorporate in the project, such as GPS towers near every building and so, carefully write the project scope statement, if there's any scope creep in future, make sure to document that in Project charter and approve it with the appropriate management in time
Project implementation risks	Added workload because of new extra features	Possible	Moderate	MODERATE	No control over it
Project implementation risks	Inadequate customer testing	Likely	Major	HIGH	Ensures customer test all cases. Selecting random people from majority backgrounds for testing
Project is not approved	Out of Scope: cost estimate	Likely	Major	HIGH	Get precise cost estimation as soon as the project proposal is approved and carefully track costs and make adjustments where necessary. Remove any features which may not affect the overall project
Project is not approved	Project too ambitious in terms of completion time; extra ordinary effort	Unlikely	Moderate	LOW	Revise the project plan and scope statement and in order to corporate more realistic goals in terms of time and cost
Project is not approved	Unstable Team credentials	Possible	Major	MODERATE	Team would instantly revise their learning and undertake e-learning and advise from previous projects managers on certain areas