



Department of Information Systems
IT Project Management (INF3011F) – 2023

Final Report

Linking Project Proposals to Experts/Academic Staff

Prepared for:

Department of Information Systems
UCT Knowledge Co-Op

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1 Business Case & Project Outcomes

1.1 Introduction

1.1.1 Subject of the Report

This report describes the project outcomes for linking project proposals to experts or academic staff at Knowledge Co-Op.

1.1.2 Background

The UCT (University of Cape Town) Knowledge Co-op works to match expertise within UCT to external groups approaching it with research collaboration requests. Through the Co-op, staff, and students at the University of Cape Town have worked with community partners to address multiple developmental challenges. However, groups outside of the university have struggled to access this expertise.

The UCT Knowledge Co-op aims to ease the process of the community workers approaching the university with ideas and requests for joint projects. Furthermore, they aim at improving the provision of UCT expertise to community partners.

1.2 Business Objectives

Using the information that was found during the research into the background of the Knowledge Co-op, the following objectives were established:

- Easing the approach used by community partners to access the expertise within UCT.
- Connecting the community partners to UCT staff or students by topics.
- Improving the communication between students and community partners.
- Improve the mediation between all parties that use knowledge Co-op as a mediator.
- Improve communication between the Knowledge Co-op and the community partners.

1.3 Current Situation of Concern & Opportunity Statement

The Knowledge Co-op has been unable to efficiently link community members and UCT staff due to the rudimentary implementation of information systems. Therefore, there is an opportunity to use technology and information systems to improve how projects are linked from community partners to UCT staff.

1.4 Critical Assumptions and Constraints

To begin the project, it was first imperative to identify the constraints that the Knowledge Co-Op had provided. Moreover, the assumptions about the conditions were also imperative to state.

1.4.1 Constraints

- Protecting the identity and information surrounding the community partners' projects. It was acknowledged that the community partners are involved in work with vulnerable individuals implying that confidentiality and empathy should be at the core of our ideas.
- Due to time restrictions, we cannot develop software, thus, we identified that it is imperative to form ideas surrounding the currently implemented infrastructure.
- Ideally, this will be implemented as soon as the prototyping stage is completed.
- The community partners may not have access to more expensive or advanced technology and as such, the solutions should be kept data-effective and simple.
- There needs to be a demand from UCT staff/students for the projects to occur. This means there needs to be a UCT member with the necessary research/personal interest to accept available projects.
- The UCT human subject ethical guidelines need to be followed.¹

1.4.2 Assumptions

- There is already existing information on UCT members stored on the UCT servers.
- The community partners do not have access to/do not have the understanding to use the existing software (electronic research administration)
- There will be UCT support including but not limited to ICTS and the UCT staff/students.
- The community partners have a Facebook page, an active internet connection, and access to basic technology.

¹ The link to the full set of guidelines is provided in the reference list.

1.5 Stakeholder Analysis [External]

1.5.1 Stakeholder Roles and Responsibilities

Role	Name	Organization/Position	Contact information
Project Sponsor	Roshan Sunday	UCT Knowledge Co-op	021 650 2426 roshan.sunday@uct.ac.za
Project Client	Prince Qwaka	UCT Knowledge Co-op	Prince.qwaka@uct.ac.za
Users	Community Members	Allan Gray, CITC, etc.	
Users	UCT Staff and Students	University of Cape Town	

Sign-off: (Signatures of all above stakeholders)

Comments: (Comments from above stakeholders, if applicable)

According to the UCT Guideline for Risk-Based Ethical Review of Research (Human Participants), individuals that are part of vulnerable groups (e.g., Rural women, and people with disabilities) (Horn & Saner, 2021) are at risk of harm due to social and behavioural research. Due to this risk, we must keep the identities of the community partners concealed. Therefore, we're unable to provide the contact details of some of the organizations and people as we did not receive full permission to do so.

1.5.2 Context diagram

The following context diagram outlines how external stakeholders interact with the Knowledge Co-Op Facebook group platform.

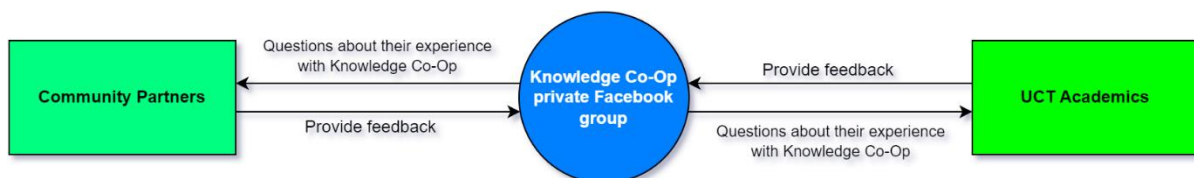


Figure 1: External stakeholder context diagram

1.6 Analysis of Options and Recommendation

The group conferred and brainstormed using evil genius and object-storming methods to devise solutions to the problem posed.

1.6.1 Option 1: Information Technology

Create a database to better manage the projects and sort them by a keyword (i.e., the general area of interest for the project) and use a plugin for the UCT employee database so that the knowledge co-op can sort between professors with an avid interest in taking on a project (on the knowledge co-op side there should be a flag indicating this. Import each of the employees with all their information as an object). Improve the website so that it is more user-friendly for both the UCT members and the community members. The website will have the following features:

- A search function that allows UCT members to view available projects concerning their interests (while still not being able to view the community organization that is sponsoring the project). The search function will also be allowing community members to view UCT members with expertise in the field that is necessary.
- Login method for the community members - added to the database that is outlined in idea 1.
- In each sign-up - ask the members for their keywords so that it is easier to pair them up
- It will be possible to generate a list automatically of professors that will be willing/have the necessary credentials to participate.
- Chat feature to the Knowledge co-op website so that the community partners and the UCT staff can communicate without needing emails. - we noted that the email form is very unreliable.

Advantages:

- Allows UCT members to search for project topics using keywords.
- Allows community partners to have some information about academic staff.
- Allows community members to easily connect with UCT members that have the necessary expertise.
- The chat feature improves communication between community partners and UCT members.

Disadvantages:

- It would take a reasonable amount of time to build the website.
- There will be maintenance costs included after the website and database are created.
- Since the database is hosted online there is a risk of confidential information being compromised.
- This solution is the most complex and as such will require trained individuals to operate and create the website.

1.6.2 Option 2: Facilitating face-to-face interaction events.

Host gala/face-to-face showcase events and invite members of UCT that would be interested in working together. This will allow the UCT & community partners to have a personal relationship, thus allowing for a strong, intimate business relationship. This will also mean that Knowledge Co-op will be a mediator instead of a necessary bridge which allows for a more direct approach between UCT staff and community members thus easily linking the proposed topics by the community partners to the academics/staff.

Advantages:

- It is simple to implement.
- Since the research projects deal with very sensitive community issues, a healthy relationship between the community partners and students will play a critical role in ensuring the deliverance of the project deliverables, hence these events will allow this type of relationship to be established.

Disadvantages:

- This is not an ideal long-term solution as issues could persist due to the sheer number of projects that the knowledge co-op is part of.
- Due to schedule and budget constraints, it may not be possible for UCT to host more than one event for each partner per year.
- It may be difficult to follow ethical guidelines due to the more direct nature of this approach.

1.6.3 Option 3: Social media (a Facebook group)

Research done on community partners showed that it is common for them to have a Facebook page. Therefore, a private group can be used for improved advertising and communication between the knowledge co-op and community members.

Advantages:

- Timeous rewards as the group can be created instantaneously.
- Costs: There will be little costs involved as Facebook and social media are free to use and there will be no maintenance costs.
- The Facebook group is simple to use and as such will not require training of any sort.
- Integration with the current systems. The UCT knowledge co-op, and many community partners such as CANSA, already have Facebook accounts and as such, the private group will integrate seamlessly into the established status quo.

Disadvantages:

- There will be little scope for personalization as to the exact needs of the Knowledge Co-Op.
Privacy concerns since the information will be stored on the Meta servers.

1.6.4 Recommended Option: Option 3 - Social media (a Facebook group)

This option was recommended because of its ease of implementation and its cost. The option will also make it easy for the external stakeholders of the project to utilize because navigating a social media application as a socializer is simple and one can get help via electronic manuals or the internet if they do not know how to use social media.

1.7 Preliminary Project Requirements

Below are the key components of the solution developed for linking project proposals to experts/academic staff.

- To match UCT students and staff to community partners approaching it with research topics.
- To provide a way for them to communicate efficiently.

1.8 Final Selected Solution

For the final solution, the Facebook group idea was selected as the final solution. The sponsors chose this solution as they already own a Facebook account. Additionally, this solution can be implemented immediately, at no cost, and with ease.

To implement this solution, the Knowledge Co-Op must create one or more private groups. The organization has the option to make the group visible or invisible to the public. Thereafter, the organization must invite selected members whom they intend to add to a specific group an invite to join. To be able to create a safe and respectful environment, rules should be set in place for every member to accept before joining the group. The application has a feature that allows the organization to put a set of rules to be followed.

Because Knowledge Co-Op works with sensitive information, this solution would be ideal as they can control who has access to the sensitive information shared in the group. Also, they can create roles and assign different responsibilities and privileges to different people. Group administrators also reserve the ability to ensure that every member complies with the rules and regulations they have set. In cases where the rules are bridged, they reserve the right to revoke the member of some privileges or block them.

Additionally, keywords can be created to restrict some words and phrases from being used in the group. Correspondingly, to manage the members, organizations can set conditions for the type of members to be accepted in the group. In cases where the group accepts posts and comments that violate their rules, there is a group insight feature in place that assesses the quality of the group solely based on the management of the group by the administrators.

Apart from the ethical considerations, this solution fosters a more friendly relationship between the partners and allows them to collaborate better. It allows them to create meetings to improve their relationship and they can share files, and documents, exchange ideas, and

provide feedback on the platform. A socializer role could be allocated to one member to manage the socialization of the members apart from the work that they do. This also allows the UCT members and community partners to have direct communication, while also allowing the Knowledge Co-Op to monitor the relationship. The organization can pause the interaction in the group to limit or prevent members from working or being overwhelmed by messages in their free time. Their posts can also be scheduled, they can set up meetings, and they can indicate their business hours and availability.

Lastly, Meta, the company, has several ethical policies and guidelines to ensure that the platform is used ethically. It also has privacy and data protection to protect users' data and provide control over their data. Thus, this approach provides a satisfactory resolution to the ethical concerns raised by the organization. Meta has also implemented practices to ensure transparency to its users. Some of these include a regular report on issues, data privacy, and allowing users to provide feedback.

Overall, this approach provides a convenient way for members to collaborate, communicate and create a good working relationship while also allowing the organization to monitor the interaction. It also eliminates the stress of worrying about sensitive information leaking as the organization controls who can access it. The process required includes the following steps:

Cost analysis

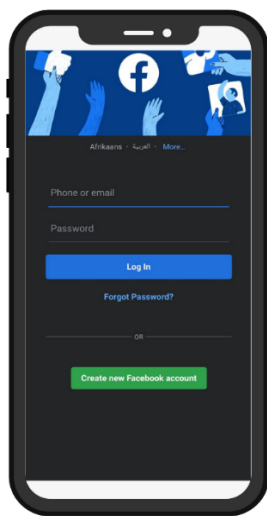
Starting and running a Facebook group won't incur any monetary amount, however, there may be costs that need to be covered, and these include:

- Staff time: The person who will oversee the administration of the group chat will have to spend time managing the account and overseeing the interaction between the group.
- Training: Facebook has features that may be difficult to learn and use, and thus training should be provided to allow for efficient use of the platform.
- Advertising: If ever the organization wishes to promote and grow its group more, it can pay for advertising to reach a much larger audience. These costs depend on how big the audience they are trying to reach is, and
- Data costs: Each member would need to always be updated, and thus organizations should invest in monthly data to be able to use the application anytime when a need arises.

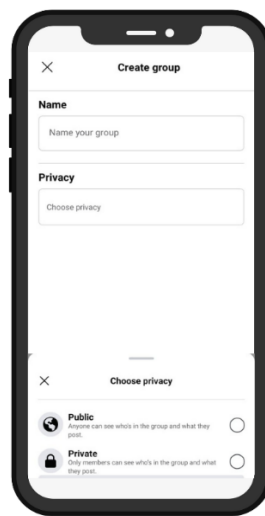
The only cost that may need to be covered is data costs. A typical conversation on Facebook Messenger uses about 0.75 MB of data per minute, which is around 45 MB of data per hour. If the assumption is that a maximum of 4 hours a day is spent on the application, a total of 37 GB per month will be needed. Many South African service providers do not charge more than R1000 for this data. In conclusion, the total cost to implement this idea won't exceed R1000, and it could be limited if users with access to Wi-Fi use that instead of data.

This idea can be implemented by following the following steps:

1. Login to Facebook



2. Create group



3. Invite members

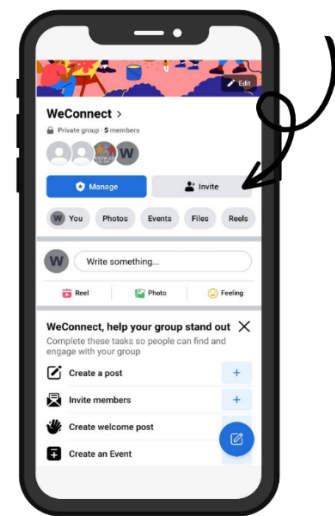
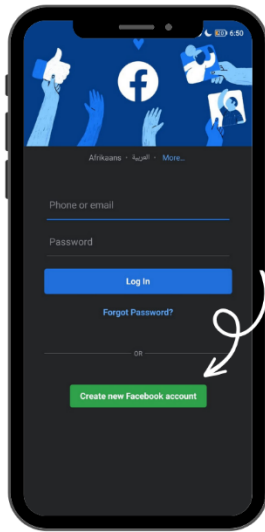


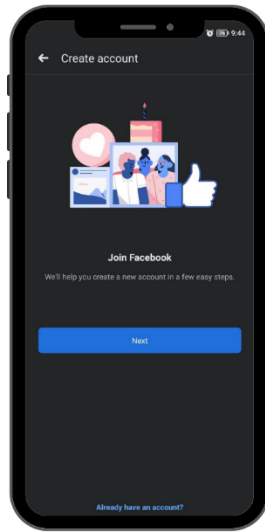
Figure 2: Diagram illustrating steps to creating a private Facebook group.

Members who do not have a Facebook profile need to create it, one and can follow the following steps to do so:

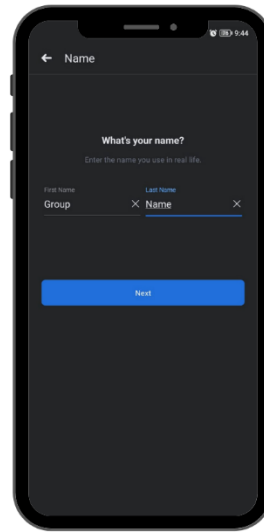
1. Create Facebook account



2. Click next



3. Add personal details



4. Accept Terms and Conditions

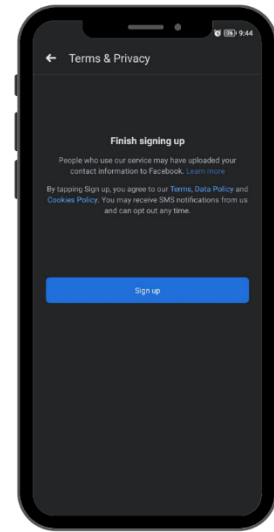


Figure 3: Diagram illustrating steps to create a Facebook account.

Once the members have created their Facebook accounts, the organizations can invite them to the private groups by either emailing them or sending them a link to join.

Appendix

Appendix A

More features to help admins manage groups and prevent ethical guidelines from being violated.

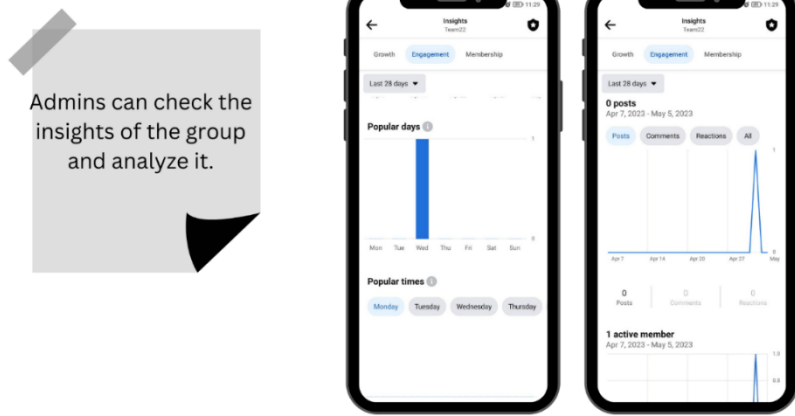
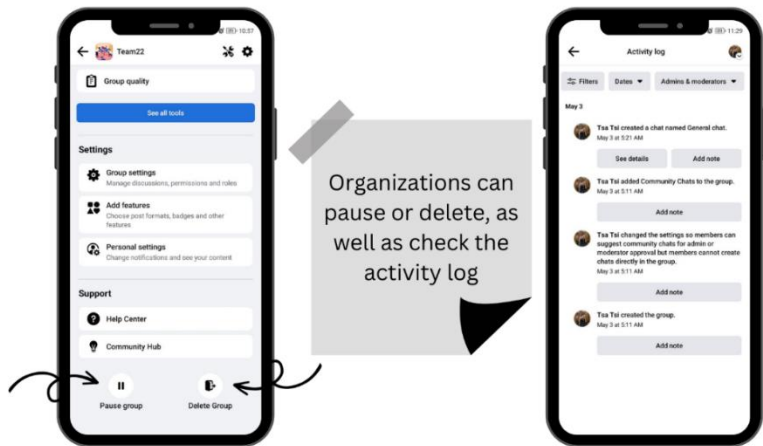


Figure 4: Diagram to illustrate the insight feature.

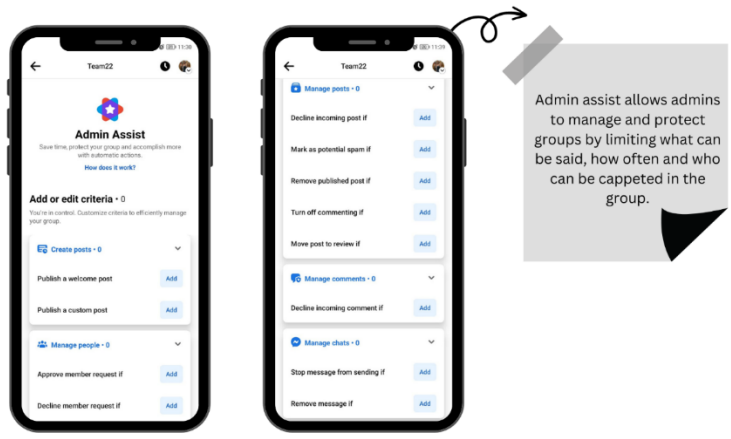


Figure 5: Diagram to illustrate admin assist feature.

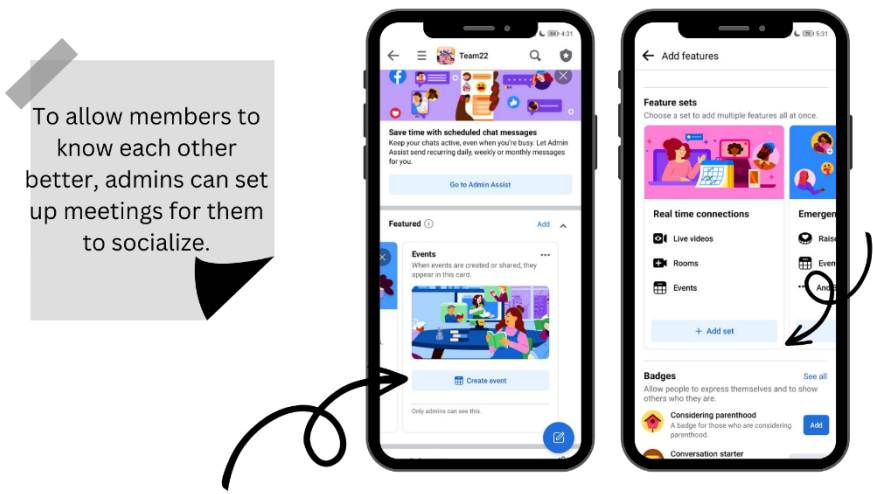


Figure 6: Diagram illustrating features that allow team members to socialize.

References

Horn, L. & Saner, P. 2021. UCT Guideline for Risk-Based Ethical Review of Research (Human Participants)