UCT KNOWLEDGE CO-OP

TRACKING SYSTEM Business Case & Project Outcomes
TEAM UNDEFINED

Team members: Jesse Rafael Das Neves, Theresa Banda, Rethabile Modise, Kelvin Yang

The UCT Knowledge Co-op facilitated this collaborative project.

See http://www.knowledgeco-op.uct.ac.za or

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Introduction and Background

Knowledge Co-op is a non-profit organization that collaborates with students and staff members from the University of Cape Town (UCT) to address development challenges in communities. The aim of the organization is to make it easier for community partners to access UCT's skills, resources, and professional expertise.

It functions by allocating community groups to work with academic partners towards a project that meets the needs for research or practical support identified by the community. Students also take up projects allocated and supervised to them by academic partners and those projects address a wide range of needs from ICT support to early childhood development, prisoner rehabilitation and sustainable community gardens.

The organization capacity currently consists of the project manager, the administrative assistant and the web specialist.

Problem Definition

With all the projects that Knowledge Co-op undertakes, it needs a feasible and reliable way to manage and keep track of these projects. Currently, they do not have a feasible method of managing the projects and thus they are faced with the following issues:

- Reporting and recording of data are done in Excel. This has resulted in Excel sheets being all over the place as they have substantial amounts of data.
- There is no central organized method of storing data. Spreadsheets are currently being stored in OneDrive or Dropbox.
- Tracking communication and other processes is a bit tedious, e.g., email threads are currently being stored in a word doc.
- In need of a solution that is intuitive to use and less complex. Previously proposed solution was FileMaker which was too complex and expensive for the team to use.

The Knowledge Co-Op team is not tech savvy thus they required a solution that is easy to understand and use. Overall, Knowledge Co-Op required a solution that is less complex, intuitive to use and allows them to track and store processes in one place.

Business Objectives

Knowledge Co-op allows community partners to access UCT's skills, resources, and professional expertise through:

- Matching community partners with UCT academic partners that meets the needs for research and practical support that have been identified.
- Assigning UCT partners so they can reformulate the problems into manageable student projects, linking them to the students' degree.
- Offering support to both the community and the UCT partners from the initial planning process until the delivery of the final product.

Assumptions and Constraints

- Only freeware and cheap software are within budget constraints.
- The users of the solution are not tech savvy and will require training/tutorials to learn new software.
- Moving data from current system to new system will be time consuming.
- The Knowledge co-op has access to UCT resources.
- There is no need for software that can have many simultaneous users.

Stakeholder Analysis

External Stakeholder Analysis (Roles and Responsibilities table, and Context diagram) was performed so project managers understand the purpose of all stakeholders and the flow of the of the project system. It serves as a tool to aid stakeholders to communicate about the system and anything that lies outside the scope.

Roles and Responsibilities table

| Role	Name	Organization/Position	Contact Information
Project Sponsor	Barbara Schmid	Knowledge Co-op Project Manager	barbara.schmid@uct.ac.za
Administrator	Prince Qwaka	Knowledge Co-op Admin	knowledgecoop.admin@uct.ac.za
Project Manager	Jesse Rafael Das Neves	Team Undefined Team leader	DSNEJS001@myuct.ac.za
Task Team	Undefined	INF3011F Students	MDSRET001@myuct.ac.za,0634364578
Provide approval	Gwamaka Mwalemba	INF3011F Course Convenor	Gt.mwalemba@uct.ac.za, 021 650 2266
Task Team Mentor	Matthew Diedericks	INF3011F Tutor	DDRMAT001@myuct.ac.za

Sign-off: Prince Qwaka
Barbara Schmid

BMSchmid

Date: 24 May 2021
Comments:

Figure 1. roles, responsibilities and contact information of all stakeholders involved in the project, acknowledged and signed off by the Knowledge Co-op sponsor and administrator.

Context diagram
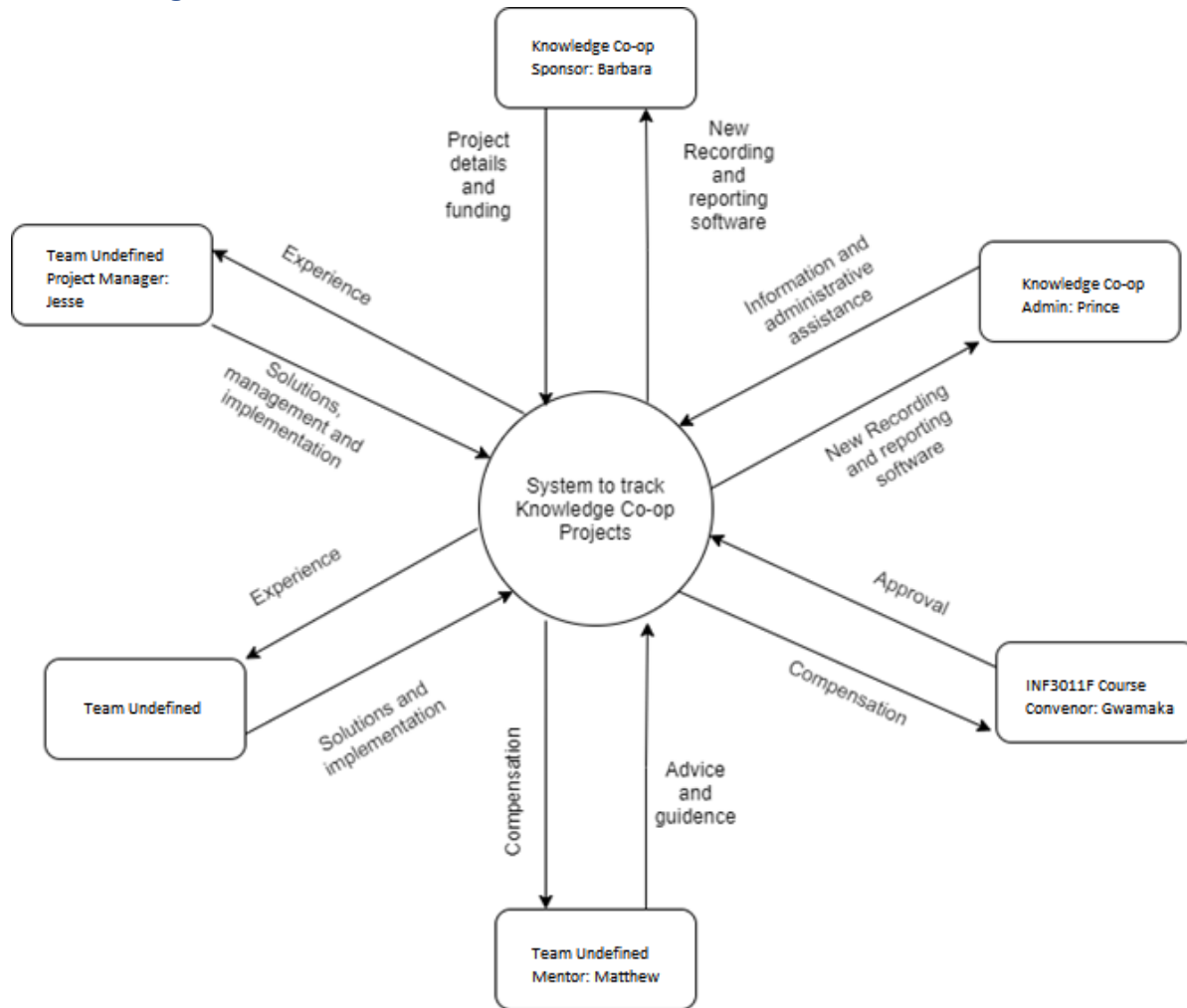
Figure 2. flow of information between the system and external entities.

The context diagram shows the inputs to the system and the players that provide the input to the system, the output of the system and actors receiving them. For example. Team undefined provides solutions and implementation to the system and in return, they gain experience.

Proposed Solutions

Option 1: **Microsoft Access**.

All excel spreadsheets will be imported into Microsoft Access. Microsoft Access is a database software that is easy to use and included in the Microsoft 365 package. The Knowledge Co-op team can easily implement this solution with the help of a few tutorials which the Undefined team will provide in the form of a manual. Otherwise, the solution is intuitive to use and is suitable for beginners.

Pros:

- It is included in Microsoft 365 provided by UCT, so there are no additional costs. (Since Knowledge Co-op does not have a budget, by using Microsoft Access they won't incur any financial costs when implementing it)
- Excel files can be imported and linked to update.
- Easy grouping and sorting of data allowing easier reporting.

Cons:

- The excel files will need to be modified slightly to work properly on Access.
- The program requires a virtual machine or bootcamp to run on Mac OS.

Option 2: **Custom Built Solution**.

A custom software solution can be created which will meet the Knowledge Co-Op's need specifically. Using SQL and forms, a database and user interface, the solution can have all the functionality required and still be easy to use. This can also allow for full reports to be completed in a single click. This solution can be created by students as part of their school projects. Knowledge Co-op will not need to pay the students to make the solution as it will be part of their schoolwork.

Pros:

- Solution is custom fit for user.
- Reports are generated quickly and automatically.

Cons:

- Very time consuming to create.
- No support offered after development, so may be difficult for users to troubleshoot.
- No additional features can be added after development.
- May be too complex for the Knowledge Co-op team to maintain.

Option 3: **ClickUp.**

ClickUp is a software solution that allows users to manage, track and collaborate with partners on projects and tasks. It makes it easier to focus on a single project or projects. The dashboards feature allows you to make interesting and visually appealing reports based on the data. It includes features like

communication channels, task assignment, statuses and embed which allows you to link data from any website, alerts, and task toolbar.

Pros:

- Interesting and attractive reporting.
- Allows for better tracking of individual projects.
- it includes several ways to view tasks and projects.
- Any project manager can also easily assign tasks and projects to the task team.

Cons:

- Time consuming to import excel files.
- Harsh learning curve to fully utilize the software.

Selected Solution

The selected solution was Microsoft Access. The solution addresses the problem at hand. It allows recording and reporting of data seamlessly.

The sponsors were in favor of the Microsoft Access solution as well.

Budget Estimate and Financial analysis

Budget: Knowledge Co-op has no budget set therefore solution must be of the lowest cost possible, or free.

The chosen solution- Microsoft Access has no costs as it is included in the Microsoft 365 office package that UCT offers.

Schedule Estimate

Schedule: All documentation required for the project such as the project charter and stakeholder management document was completed by Friday 21 May 2021. (Iteration 1)

Sponsor's chosen solution was known by Monday 24 May 2021. (Meeting with the sponsors)

Project Report deadline – Monday 14 June 2021.

Project Poster and presentation deadline - Tuesday 15 June 2021

Resulting in 21 days to complete the prototype for the chosen solution.

Potential Risks

Microsoft Access has the following risks:

- It requires a lot of changes to the excel spreadsheet which takes a lot of time to fix.
- Users may require additional training to use more advanced features.
- Microsoft Access does not provide remote access. The team will need to access the files locally or use remote access tools like Microsoft remote desktop which is free.
- The performance of Microsoft Access will depend on the specifications of your local PC. The limited the resources, individually update their software.
- Your data will not be automatically backed up, which means you may lose all records if you format your PC to recover from a malware attack.

Outputs or Exhibits (documentation, business rules)

The output for the solution would be complete and accurate reports based on whatever criteria is selected by the user.

A manual on how to start using Microsoft Access is to be provided for the Knowledge Co-op team to use.

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