DEPARTMENT OF INFORMATION SYSTEMS
IT PROJECT MANAGEMENT

IN PARTNERSHIP WITH: UCT KNOWLEDGE CO-OP

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1. INTRODUCTION

This project was conducted for The UCT (University of Cape Town) Knowledge Co-op. The project team (FreeThinkers) is composed of UCT students in fulfillment of the requirements for INF3011F (IT Project Management). This document will outline the problem faced by the Co-Op and the process taken by the team in finding a possible solution.

1.1.   KNOWLEDGE CO-OP BACKGROUND

The Knowledge Co-op is an organization that aims to make the resources and professional expertise within UCT, more accessible to community partners. It does this by matching community groups, in need of help, and academic partners, with the relevant interest, together. This relationship provides both research information and practical solutions for the community. Some of the projects the Co-Op conducts include early childhood development, community agriculture and prisoner rehabilitation.

2. PROBLEM DEFIN*ITION*

The Knowledge Co-op currently makes use of a spreadsheet to keep track of their projects and partners. As their list of past and present projects continues to grow, it becomes harder for the Co-op to keep track of communication throughout a project and the extraction of information from the spreadsheet is quite tedious making it difficult to effectively report on projects. Data on over 700 past and present projects can be found in one sheet, and since the spreadsheet does not check for data types, the Co-op is left vulnerable to inconsistencies and inaccuracies further impeding their ability to effectively provide project reports.

3. BUSINESS OBJECTIVES

The Knowledge Co-op aims to provide the required resources to community partners involved. The Non-Profit organization provides community groups with skills and resources acquired from UCT. The organization seeks to oversee projects and research tasks performed by member of the community, mainly being students.

4. PROJECT OBJECTIVES

The objectives of the project were centered around implementing a solution that will track and process the current operations of the Knowledge Co-op. The goal was to address the problem areas and help the company improve their communication methods, introduce a smatter way of processing information, and provide easy data extraction for reporting purposes.

The project aimed to improve communication methods rapidly by allowing the current admin facilitators (Barbara Schmid and Prince Qwaka) to be able to communicate with community members efficiently. Introducing an easier way of processing information other than using Excel increases the organization's operational efficiency and allows for the company to take up more projects or attend to the current projects at hand accordingly. The solution also entailed of a tool that aids with the extraction of information, which in the future increases the organizations efficiency

5. ASSUMPTIONS AND CONSTRAINTS

Recognizing and stipulating the assumptions and constraints of the project were essential before solutions were proposed. The assumptions that the group gathered from the project brief and first few meetings are:

- o The Knowledge Co-Op did not need a heavily technologically based system.
- o The current systems used by the Knowledge Co-Op members were not modern systems.
- o If funding were needed, the Sponsors would provide according to the budget spoke about.
- o The Current systems used by the Knowledge Co-Op are hindering the expansion and efficiency of the organization.

From the assumptions gathered, the project brief and the first meeting, the team also was able to gauge any possible risks and identify the constraints that were going to come into play during the research and implementation stage of the project.

5.1 CONSTRAINTS

- There are budget constraints: The Stakeholders have stated that they are looking for the cheapest option, preferably a once off payment.
- Subscription constraint: some of the solutions cannot be tested as they require purchases to be made before hand.
- Time constraint: Possibility that the research and adaption of the solution will not be finalized within the time constraint.

5.2 Risks

- Risk of information loss: Through implementing new systems and changing the current systems in place, certain information can be lost in the process.
- Project not completed on time: Due to Physically distanced learning and the difference in time schedules, there is a risk of the project not being completed within the stipulated time.
- Project failure: If the research and testing phase of the project are not carried out thoroughly, there lies the risk of the final product not being sufficient for the members of the Knowledge Co-Op.

6. STAKEHOLDER ANALYSIS

This analysis provides an insight into the relevant stakeholders and their participation in affecting the project solution.

6.1 Context Diagram

The figure below shows the interaction between the perspective solution and the stakeholders that have an influence on the solution.
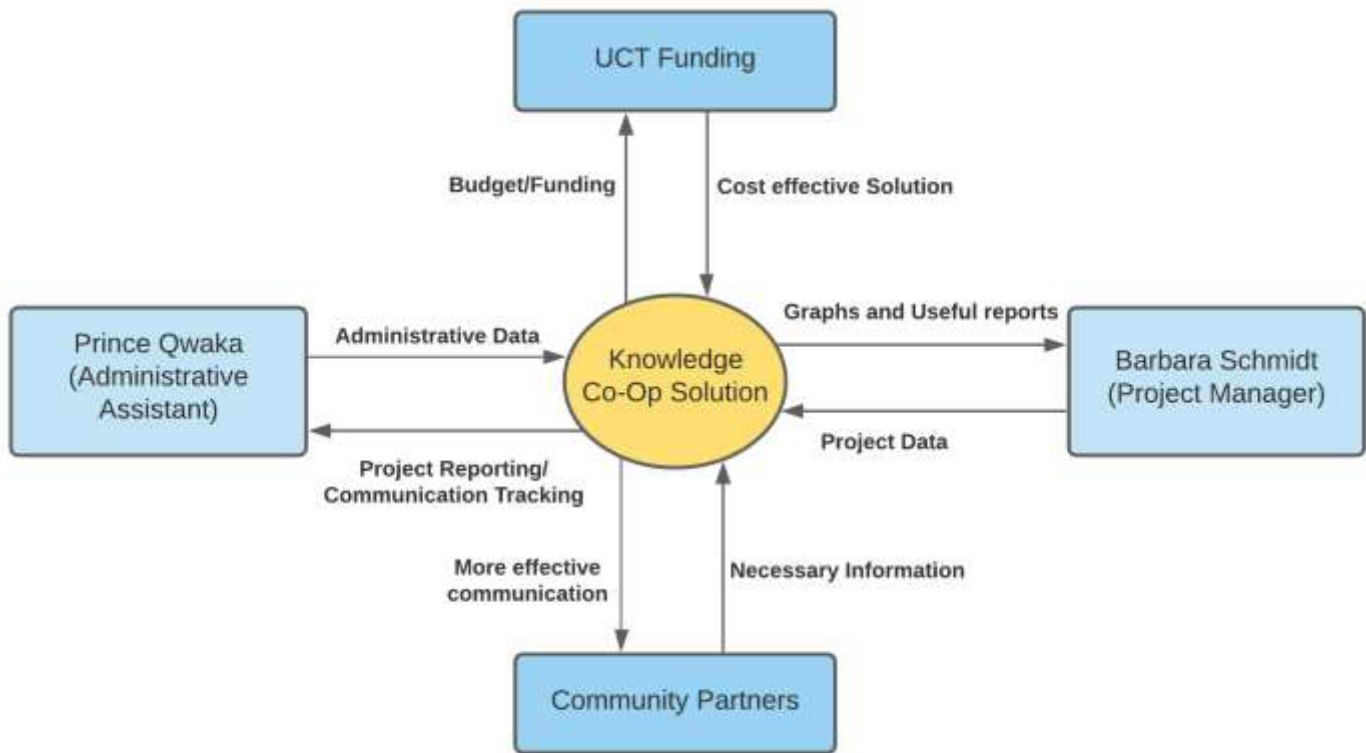

Figure 6.1 Context diagram for Knowledge Co-Op data management project.

7. PROPOSED SOLUTIONS

7.1 HubSpot

Hubspot is a customer relations management system. It has free tools that can be used for marketing, customer service interaction and management.

Details:

- Hubspot is free to use for the basic platform, but costs $45 per month (approx. R618.00) to unlock more features.
- The basic system has features that allow users to create contacts and track their progress throughout a project.
- Once a contact is created, users can track their emails, meeting schedules and allocated tasks to ensure that everybody is on the same page on a project.
- Another unique feature is the ability to manage clients from one universal inbox. This means that unnecessary emails and cluttered communication is limited. Hubspot supports integration with Microsoft Outlook so communication can be managed in one place.
-

Summary:

- Hubspot is great for managing communication between individuals and groups involved in projects, and thus succeeds in solving one of the issues the Knowledge Co-op is facing - tracking communication with relevant stakeholders throughout a project's lifecycle. The cost to unlock more features is expensive and not financially feasible, however this is not an issue as those features are not necessary for the operations of the Knowledge Co-op.

7.2 Monday.com

Monday.com is a project management tool that enables organizations to manage tasks, projects, and teamwork. It is customizable to fit a wide range of organizational operations.

Details:

- Monday.com has great Microsoft Excel integration, which allows users to accurately import large amounts of data in the form of spreadsheets quickly and easily.
- It provides features for reporting and data extraction but learning to do so has a steep learning curve.
- It also supports integration with apps such as zoom Microsoft teams, Outlook and many more, making it a great tool to keep track of communication and meetings for specific projects.
- The platform costs $8 to $16 per user per month (approx. R110 - R220), depending on the plan but includes a free option as well.

Summary:

- The simple reporting features (chart view) would require the Co-op to break down their spreadsheet data based on the year a project started/ended. Doing this would allow the Co-op to get real-time reports on their projects. All in all, monday.com manages to fulfill most, if not all the operations of the Knowledge Co-op, namely keeping track of past and present projects as well as information on students in project teams; generating reports on projects and student information; and keeping track of project progress. In addition to that, it offers an intuitive user interface with fewer tedious annoyances as compared to Microsoft Excel.

7.3 Project Management Templates

Ranges of templates that can alter the appearance and functionalities of excel to make tracking and reporting processes easier without having to change platforms.

Details:

- This solution involves implementing Microsoft Excel project management templates instead of introducing a whole new platform to the Knowledge Co-op.
- These templates alter their appearance and functionalities of Excel itself helping to make the tracking and reporting process a little easier.
- The range of templates include report makers, project dashboards and Gantt chart makers.
- The package of templates is a once off payment of $100 (approx. R1375.00), and the templates included in the package each have demo videos to show how they can be used and tailored to the organization's needs.

Summary:

- These templates offer a cosmetic overhaul to the spreadsheets the Knowledge Co-op work with, along with templates for different types of reports and other project management tools. However, the objective of the Knowledge Co-op with respect to this solution, is to make the generation of the reports they currently use, easier – which is something these templates may or may not offer. We were not able to test them on the sample documents provided to us by the Knowledge Co-op as the product has no free trials or free versions for us to do so. As a result, we cannot recommend purchasing/going through with this solution.

7.4 ClickUp

Clickup is a cloud-based project management platform for all types and sizes of teams used to keep track project related operations.

Details:

- Clickup combines important features like tracking of tasks, dashboards and several features present in Microsoft Excel into a single online solution.
- It allows users to assign tasks to team members, manage projects for clients and collaborate with colleagues on documents online.
- The platform allows users to look at spreadsheets in multiple views for a clearer understanding of the data and easier tracking. Users can create useful tools like tables, to-do lists, workflows and Gantt charts for project schedules.
- It requires a monthly subscription of 5-9 (approx. R70 - R125) to access the more advanced features that allow a user to create custom charts, graphs and do mathematical calculations, features, which are otherwise free Microsoft Excel.
-

Summary:

- After experimenting with the platform using sample documents supplied by the Knowledge Co-op, the overall experience turned out okay, but lacking in critical features. It offers a simple intuitive UI and allows users to quickly get useful information at the click of a button. More importantly, the process of importing an Excel document is seamless. However, the graphs and reports it offers are limited in ability when compared to Excel as they only support time management related visualizations and calculations and not the insights that the Knowledge Co-op needs. Hence, this is not a solution we can recommend.

8. FINAL SELECTED SOLUTIONS

Project Management (PM) Solution

8.1 MONDAY.COM

After prototyping and testing, it was found that Monday.com can efficiently import data from the Co-op's spreadsheet and create reports from it with little to no technical knowledge required. The spreadsheet data just needs to be broken up by year to allow for the type of reporting required by the Knowledge Co-op, should it not be feasible to break down the spreadsheet, reporting using Monday.com would require extensive technical knowledge.
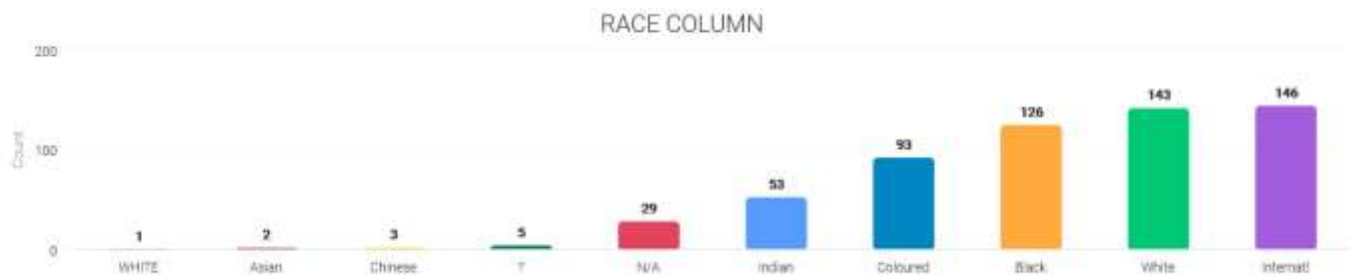
Figure 8.1 Monday.com breaking up Knowledge Co-op data by race.

A paid subscription is required to use Monday.com, it can be anything between R110 to R220 per month but Monday.com allows registered non-profit organizations to get discounts or even free accounts. Monday.com has the potential to be the Co-op's one-stop shop for their project management needs as it also seamlessly integrates with communication platforms such as Outlook, Gmail, Microsoft Teams and more. This will allow them to keep track of project communications and/or automate their communications. The figure below shows the different integration options built within the system.
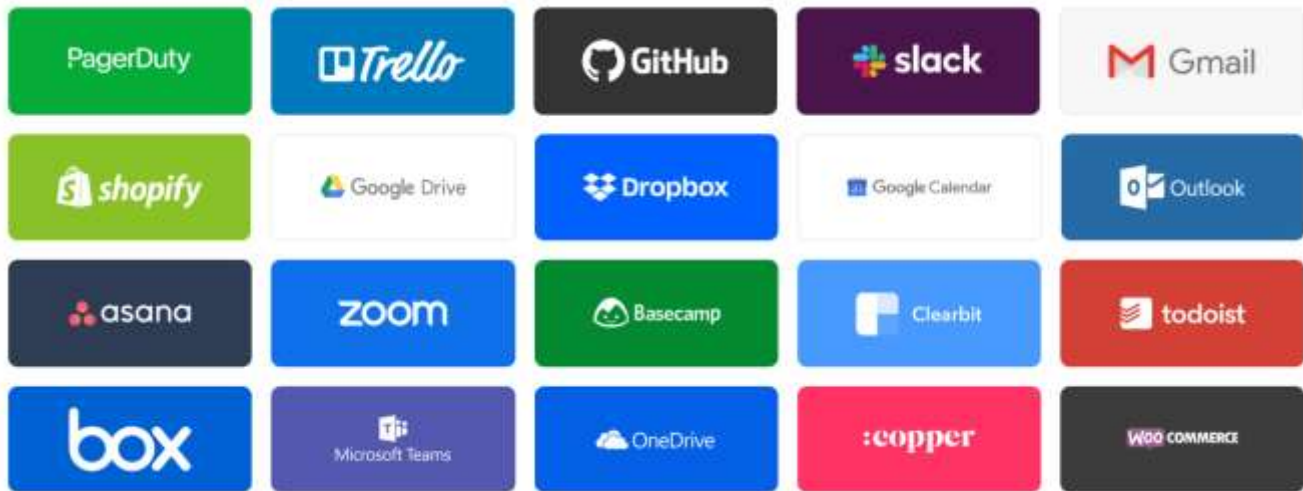
Figure 8.2 Monday.com integrations

Should the Co-op use Monday.com to replace their spreadsheet, they will be less exposed to inconsistencies due to incorrectly captured data, collaboration will be easier as many people can use the platform at once without it slowing down or data being corrupted. Monday.com will also automatically detect and correct for incorrect data types when importing.

Figure 8.3 Data on Monday.com

Customer Relations Management (CRM) solution.

8.2 HUBSPOT

Hubspot is a customer relations management system. It makes process of communication with the client more efficient by providing a catch all platform for communication. It interfaces well with excel, which is the current primary tool used by the client. Contacts can be extracted from excel, however they cannot be organised into groups. This would be a positive for the client, but a workaround could be the use of the search feature to save time. The system can create tasks (known as tickets) that can be assigned to an owner and can track the stages of the task. Hubspot can also allow the user to send bulk emails for advertising and promotions to certain contacts.

The figure below shows the main features of Hubspot and the primary features that were identified that meets the Co-Ops needs.

Figure 8.4 Free to use features on Hubspot

9. PROTOTYPING AND TESTING

9.1 MONDAY.COM

Monday.com allows users to import data from the applications shown below (figure 8.1) to create a board, boards are Monday.com's way of presenting data to the user.
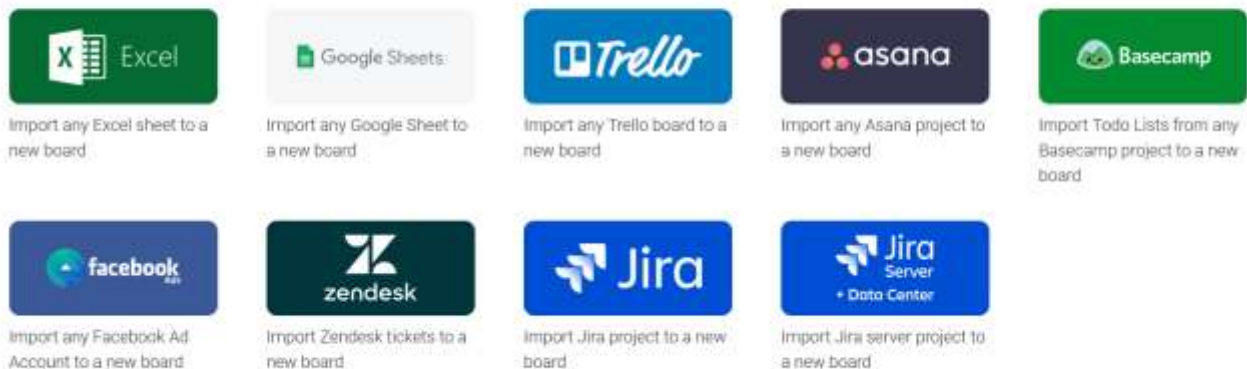
Figure 9.1 Importing data on Monday.com

Below (figure 8.2) is a Monday.com board of the Knowledge Co-op's student excel sheet. When importing, Monday.com will automatically detect data types and make necessary adjustments to ensure data integrity.

Figure 9.2 A Monday.com board

Rather than having to manually do the calculations and checks, Monday.com has a simple built-in feature that automatically generates graphs and charts at the click of a button. This is done by simply changing to Chart view. As can be seen in figure 8.3, Monday.com is good at recognizing inconsistencies in the way data was recorded and where data is missing.
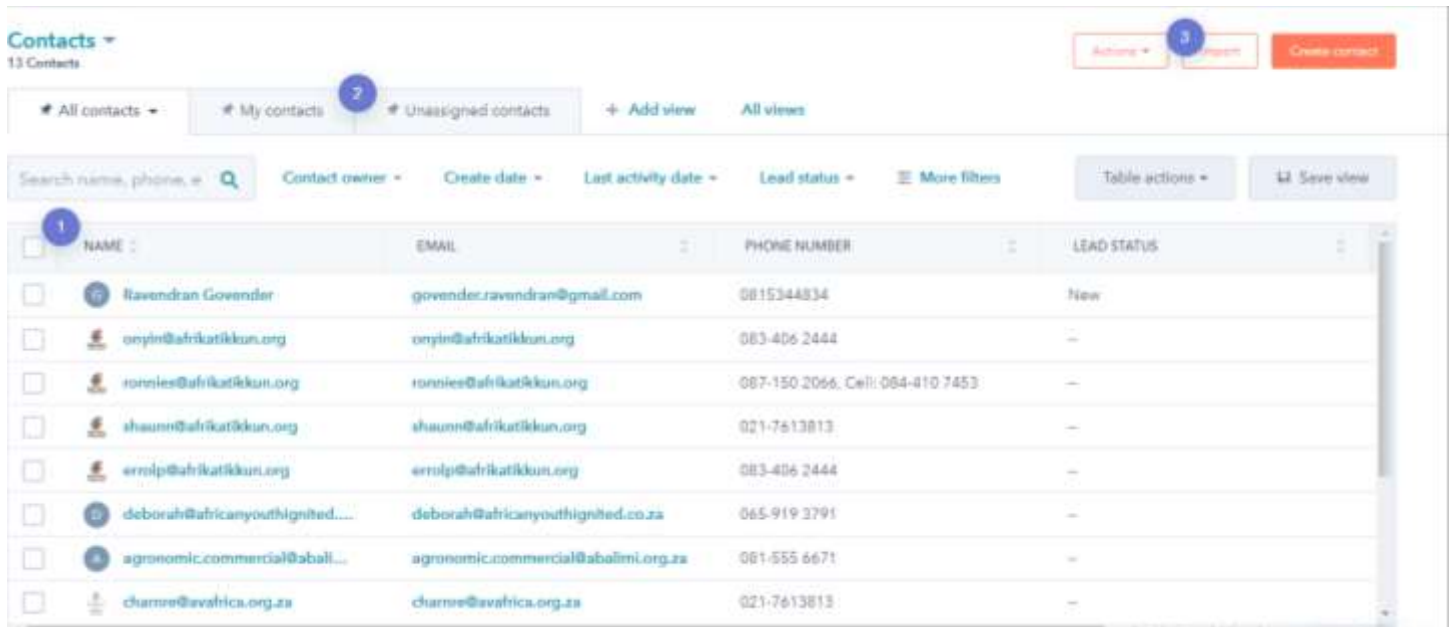
Figure 9.3 A breakdown of the student spreadsheet by Gender on Monday.com

In addition to providing an efficient and clean way of storing and reporting data, Monday.com also provides a mechanism to keep track of project communication by integrating seamlessly with Gmail, Outlook, Teams, and many more.

9.2 HUBSPOT

Hubspot allows you create contacts from data on excel spreadsheets. The contacts are displayed in the columns from the excel sheet or and be further filtered by certain columns. The figure below shows imported clients from the data provided by the client.

Figure 9.4 Contact display on Hubspot

The system allows you to track the communication between yourself and a contact. You can track emails, calls and meetings with a contact. You are able to set tasks and notes for a contact. Email tracking is provided by connecting the organizations email to the system. The site uses a Google Chrome plugin to allow the user to use their email service from either inside Hubspot or from email providers site. The figure below shows the contact tracking available.

Figure 9.5 Contact tracking Display

10. CHALLENGES AND LIMITATIONS

The project beforehand came with limitations that the team members had to work around. These include:

- o Resource limitations- limited resources provided in order to complete the project.
- o Budget limitations- UCT was not providing additional funding towards the Knowledge Co Opp, therefore the solution was going to funded via one of the sponsor's portion of salary.

Together with the beforehand limitations, there were challenges that were faced throughout the process of completing the project. The challenges faced can be listed below:

- Communication challenges due to Covid protocols and physically distanced learning
- Differences in time schedules opposing challenges to set meeting times that are suitable for team members and the Knowledge Co-Opp sponsors.
- Trying to find a solution that was not budget strenuous.
- Finding solutions that do not require additional training in order to use efficiently.
- Creating prototypes according to the specific needs of the Knowledge Co Op.