SMART COMMUNITY PROJECT INF3014F REPORT 2018

PREPARED FOR
WHIZZ ICT

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Part 1: Business Case and Project Outcomes

1. Introduction/ Background

Whizz ICT is a company based in Khayelitsha that offers Information and Communication technologies (ICT) services to residents at low rates. Services offered include: printing, internet access, typing courses, mobile support, curriculum vitae writing assistance, computer training and end-user training. The company was started as an informal project, in a shack, but soon expanded as it gained popularity. Whizz ICT has many competitors as there is a huge market for ICT services in Khayelitsha, however they have a competitive advantage over other companies as they offer services at much lower prices. Furthermore, the company is situated close to a taxi rank, making it easier for more people to access their services. These factors have helped to contribute to the success and expansion of the business.

Currently, Whizz ICT has multiple locations around Khayelitsha and a small staff of 9 dedicated employees who work 7 days a week. The company aims for community upliftment through teaching courses to build the ICT skills of community members, they have taught over 400 students, 20% of which went through the courses free of charge. Thembinkosi, the founder of Whizz ICT, believes that in teaching these ICT skills to community members they are able to compete in the competitive job market and work towards the improvement of the community.

Whizz ICT would like to implement courses on teaching community members on how to use their smartphones to their full potential and to make the lives of these community members a little bit easier. The company has noted that many people in Khayelitsha have multiple smartphones but are unaware of how to use them properly, only making use of these devices for social media sites such as Facebook/WhatsApp. For the most part, these community members are not aware that they can use their smartphones to print important documents, scan documents, send emails etc. Whizz ICT have also expressed their interest in collaborating with corporate sponsors to fund such courses as well as getting more involvement from student volunteers of higher education institutions such as the University of Cape Town (UCT). In linking with their new smartphone education courses, Whizz ICT would like to introduce an aspect of mobile phone accessories to the business - assisting community members with phone repairs.

2. Current Situation of Concern and Opportunity Statement

Whizz ICT would like to implement a smartphone education course, however, as it stands, the course does not have a curriculum and needs to be accredited through the National Qualifications Framework (NQF). They are also interested in getting access to funding, particularly for the smartphone courses, as well as access to mobile phone accessories.

Opportunity exists in getting funding from larger companies, such as corporates, that would benefit from penetrating the township market. Whizz ICT would be able to advertise the company within the township space e.g. advertise the company's mobile application and thus receive funding in return. This is an invaluable tool to many large companies who have previously been unable to gain a following in the Khayelitsha community.

Thembinkosi also noted that student volunteers would be beneficial to help in the running of the courses. Thus, opportunity exists in using the NoName2 group members' connections throughout higher education institutions in the Western Cape to determine which institutions would be interested in collaborating with Whizz ICT to provide student volunteers, as well as to provide Whizz ICT with contacts in large corporates who would be interested in funding such courses.

Thembinkosi has also expressed his interest in running a smartphone repair course and so opportunity exists in connecting Whizz ICT with mobile phone accessory suppliers.

3. Business Objectives

The Business Objectives are the high-level objectives of Whizz ICT, they have been listed below:

- Provide mobile phone support to community members
- Provide formal training on how best to use computers and smartphones
- Close the digital divide by increasing accessibility and affordability
- Teach people how to use technology to solve the issue of poverty

Final Recommendation: Whizz ICT Excel Contact Database & Communication Pack

NoName2 recommends creating a database of contacts for Whizz ICT which will add value to the business by expanding their networks and getting the company to be more well known, as the final solution. Such contacts will include corporates who have bought into Whizz ICT's ideas and are willing to collaborate and/or provide funding. The contact database will also include HEIs around the Western Cape who are willing to provide student volunteers, such institutions we are looking at contacting are the University of the Western Cape, Varsity College etc.

This database will also include information on companies which supply phone accessories, this will be done to address Whizz ICT's expressed interest in providing mobile phone repair services. The team will make initial contact with the above mentioned organisations determining who would be interested in a collaboration with Whizz ICT, passing any successful relationships over to Whizz ICT.

A excel product has been created and can be improved to the point that Whizz ICT will be able to use this as a daily driver in keeping track of contacts they make in the future. This prototype is designed to allow for easy tracking of contacts and filtering the status of the communication. It will also provide a functionality for Whizz ICT to keep track of any upcoming appointments they have with these contacts. Furthermore, the team will provide Whizz ICT with a comprehensive communication pack, this communication pack includes a custom made Whizz ICT letterhead used in communications and email templates for any future connections they may wish to initiate.

Benefits of this recommendation

- This solution is beneficial to Whizz ICT as it provides them with resources needed to move into other spaces within Cape Town, to get their business more well-known and potentially improve their business performance.
- The idea is not only to increase Whizz ICT's networks but to provide them with the tools to continue communications and to initiate their own contacts in the future. The team hopes to add value to the company which will continue to have an impact once the project has completed. As the old saying goes: "*Give man a fish and you feed him for a day. You teach him to fish and you give him an occupation that will feed him for a lifetime*". The aim of our communication pack is to not just give Whizz ICT a small list of contacts (the analogous fish), but rather we believe in empowering Whizz ICT to further expand their networks, we can teach Whizz ICT how to fish for a lifetime (get new clients).
- By providing a wider range of mobile phone accessory suppliers, Whizz ICT may discover more competitive price ranges in the market and hence liaise with suppliers at a more affordable rate. They may also come to discover more services that can be provided by Whizz ICT and hence help with expansion and scalability,
- By providing access to HEI volunteers, Whizz ICT has access to increased staff, in essence, that can be used for various events such as workshops, course deliveries, and general remote support services. The opportunities are endless, and Whizz ICT will be provided with free support for their endeavours.
- By providing contacts to the various corporates where there is potential for collaboration, new initiatives and partnerships can be created in the future through just having introductions with corporates. Corporates need an opportunity to penetrate into the Khayelitsha market, and Whizz ICT can be that opportunity.

In-scope processes addressed:

- The team have compiled an excel database of contacts from corporates, HEIs and mobile phone accessory suppliers. This database details the name of the

organisations, who the person contacted was, contact details used in contact as well as the status of the communication i.e. if communication was successful / unsuccessful / pending

- Team members initiated contact with the various organisations, filtering through who was interested in collaboration and following up as far as possible with organisations who were not returning communications. For organisations who were interested in collaborating with Whizz ICT, we introduced them to Thembinkosi, updating the excel spreadsheet accordingly.

Additional processes addressed:

- Instead of just creating a simple excel spreadsheet the team created a tailor made solution for Whizz ICT, including designing a GUI around the Whizz ICT logo and company colour scheme. Our database has visual appeal and ease of use through designing and implementing an intuitive user interface on the spreadsheet. Our interface includes principles of user experience design such as use of branding, redundancy and help documentation. The interface includes buttons to allow for navigation between the pages of the database, splitting the contacts according to categories to reduce information overload and make it easier to find data wanted. The ability to filter according to the status of the communication has also been provided. Helpful messages been included throughout the spreadsheet to help guide users through its use, allowing for any employees within Whizz ICT to use the database with minimum training. Users also have an option to search entire database or a specific page with information.
- The excel spreadsheet will also include functionality for Whizz ICT to keep track of upcoming appointments with their contacts, the team thought this a useful additional feature allowing Whizz ICT to keep track of all information relating to contacts in one central location. This will hopefully keep them more organised and improve business processes.
- A communication pack will be created including a letterhead designed for specifically for Whizz ICT and templates that can be used in future email communications. The team has done so to empower Whizz ICT to continue to make contacts and expand their networks even after we are no longer involved.

Part 2: Project Planning and Implementation

Project Objectives

The business objectives are the goals which the smart community project is aiming to achieve, they have been listed below:

- Connect Whizz ICT with corporates/ businesses in order to get funding and support
- Connect Whizz ICT with higher education institutions to provide student volunteers either as facilitators or technical support.
- Create a database of potential networks for Whizz ICT which will add value to the company.
- Connect Whizz ICT with suppliers of smartphone accessories in consideration of running courses to repair smartphones

Prototype and Testing

The prototype delivered to Whizz ICT and the process and outcomes of testing is explained in this section.

Prototypes

1. Letterhead

Our team designed a letterhead which Whizz ICT can use in their communication with potentials partners.

2. Email Template

- **Emails to Higher Education Institutions**

A sample of one of the emails to High Education Institutions is shown below:

Good -day ,

I trust you are well.

This email serves to propose a connection for a way forward between WhizzICT and **<company_name>**.

Whizz ICT is based in Khayelitsha. It offers ICT services ,such as printing,internet access ,CV assistance etc, to community members at very competitive rates. They also offer a variety of courses to help teach computer skills to residents - teaching these residents skills to improve their employability. They have offered such courses at very low rates to hundreds of residents, as well as for free to others who are in desperate need of the skills to find jobs.

The company's aim is to bring about positive change in Khayelitsha by helping educate its residents. My team and I have been tasked with initiating contact with organisations within higher educational institutes,such as yourself, in an attempt to find those who are interested in getting involved with Whizz ICT.

Would your organisation be interested in starting a student volunteer programme which would assist Whizz ICT in running such courses/workshops? Alternatively, it would be of great help if you know of student society's or departments within your organisation who may be interested.

Thank you for your time and I look forward to hearing from you.

- **Corporate**

A sample of one of the emails to corporate is show below:

Good day,

This email serves to propose a connection for a way forward between WhizzICT and **<company_name>**.

WhizzICT:

Whizz ICT is a company based in Khayelitsha that offers ICT services to residents at a low rate. Services offered include printing, internet access, mobile phone usage support (app installations), PC usage training and CV-writing & typing courses. They have multiple teaching locations around Khayelitsha and a small staff of 9 dedicated employees, with 1 volunteer, who work 7 days a week. They have trained over 400 people in computer literacy. They have many competitors, as this is a huge industry in Khayelitsha, but Whizz ICT offers prices lower than most competitors. Whizz ICT is also situated close to the main taxi rank exiting Khayelitsha which has foot-traffic of approximately 80 000 commuters daily (taxi & train), making it easier for more people to access their services.

Whiz ICT introduced a mobile support course which does basic training of user on how to use mobile phones. The course was created after users were coming to whiz and paying to have things like WhatsApp installed on their phone or to do factory resets. The course aims to help users better understand and use the features on their smartphones. They also make people aware of the free internet services that are offered in the community (eg: At the library and taxi rank).

Unfortunately, there is a lack of funding for the courses offered and for WhizzIT as a business. Users pay a small fee of R10 to do the course but the opportunity exists in getting funding from larger companies that would benefit from the community learning how to use the corporates online services. The business also wants to continue to offer low-cost services to the community in an attempt to uplift the community. By partnering with corporates and helping them get access to insights from their users in townships, there is an opportunity. for value-creation. WhizzICT is also in talks about a potential partnership with Telkom which isn't finalized yet, where they could train users on how to use their smartphones and encourage them to buy a Telkom sim at the Whiz ICT center as the Telkom data costs are much lower than most network providers.

A potential connection we see for National Lottery:

The **<company_name>** might have projects or an app that that is targeted at the the extremely large user base in townships. We identified the potential for user-experience insights and user testing for township-targeted apps to take place at Whizz during the mobile courses that they run. This training data could be provided to National Lottery as to how to improve the app and to make it easier for the users. A lot can be done with these insights and it allows **<company_name>** to penetrate into a very inactive market with a large number of users very easily simply by providing funding to Whizz and potentially establishing a long-term relationship with them.

We look forward to seeing the potential that can arise in the future from this interaction.

3. Contacts Database

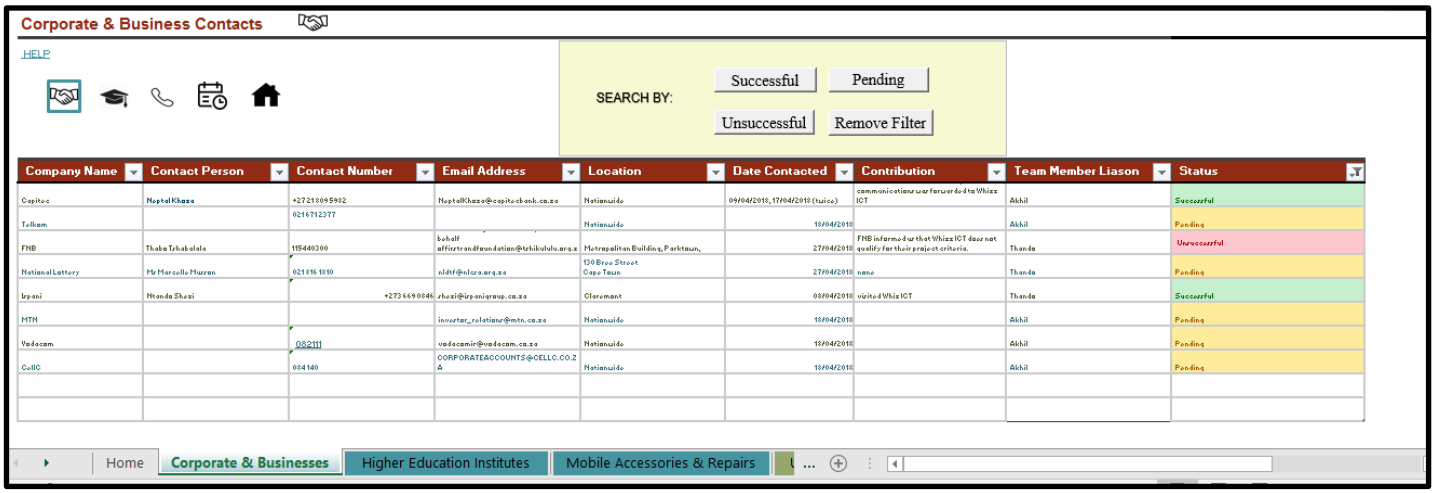
The excel database contains contacts of corporates, HEIs and mobile phone accessory suppliers which were contacted and/or discovered.

Home Page
This is the first page which the user sees when they open the database.

Components	**Functionality**
Menu - Upcoming Appointments - Corporate & Business - Higher Education Institutions - Phone Accessories & Repairs	Shortcut to navigate the entire workbook. When clicked, buttons take the user to the appropriate pages.
Help Button	Gives users introductory information on how to use the system
Excel's search engine (top right corner)	Search options for the current page and the entire database "workbook" by simply holding ctrl + find

Corporate & Business Contacts Page

This page has a list of all corporates and businesses contacted.

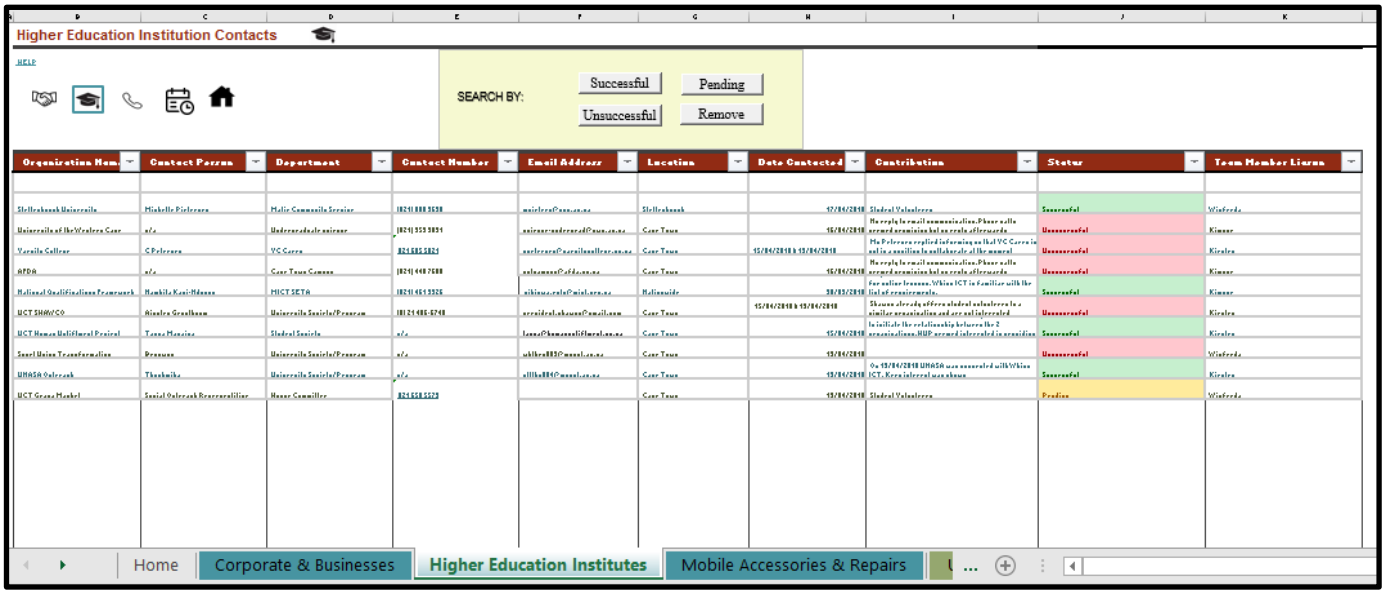


Components	Functionality
"Search By" Bar - Successful - Pending - Unsuccessful - Remove Filter	Shortcut to categorize the contacts according to their status. When clicked, the data on the page is filtered appropriately.
Navigation Bar	Shortcut to navigate around the database.
Filtering & Ordering - Ascending Order - Descending Order - Filter by day contacted - Filter by location - Contact Person - Team member liaison - And loads more...	The down arrows on the column headings offer a multitude of ways of filtering the data in the entire table.
Help Button	Gives users information on how to use this page.
Information tips	When the user clicks on any column heading, an informative note appears, informing the user what the column is for.

Higher Education Institutions (HEI) Page

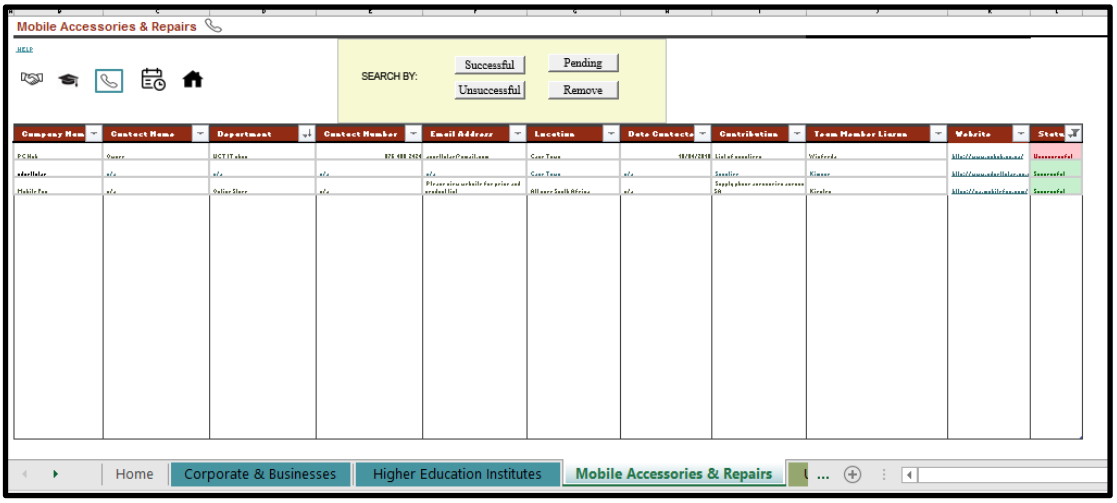
This page has a list of Higher education institution's contact details.

The components and functionalities are the same as the Corporate Page.



Mobile phone accessories supplier

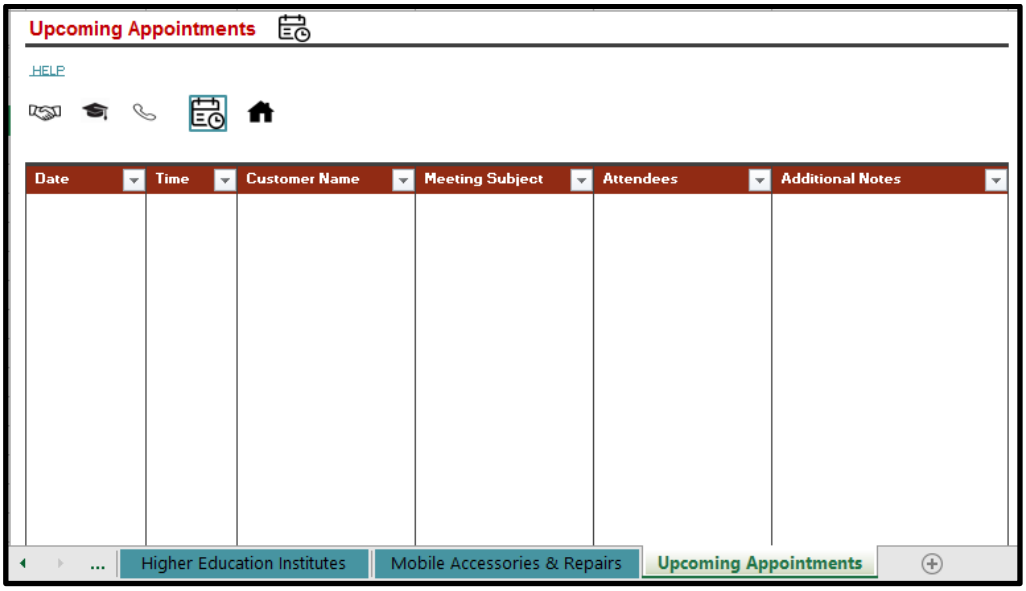
This page has a list of Mobile Phone accessories supplier contact details.



The components and functionalities are the same as the Corporate Page.

Upcoming Appointments

This is an additional page. Whizz ICT can use this part of the database to keep track of the appointments which they make with their contacts in the database.

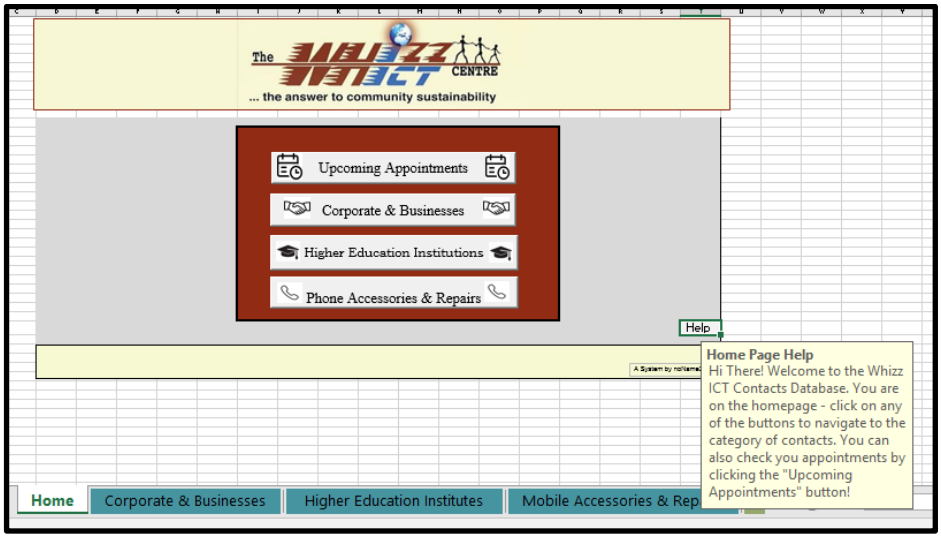


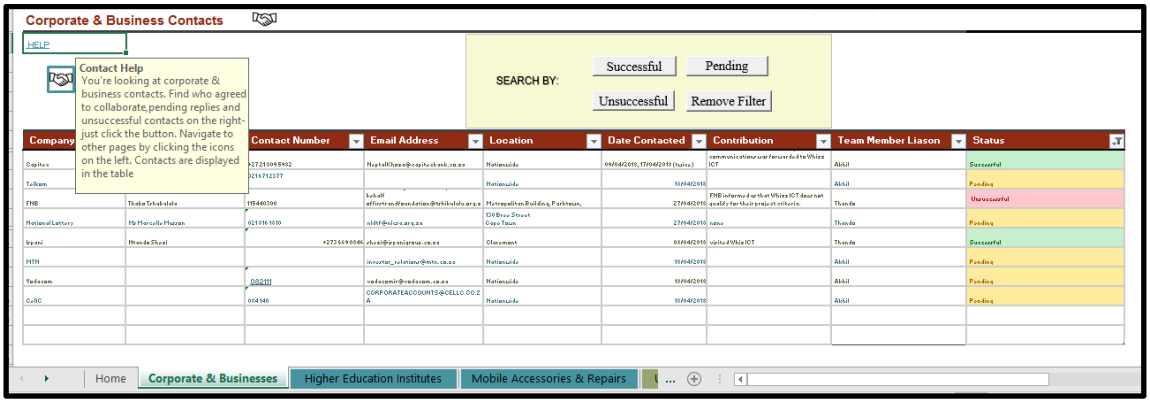
Components	**Functionality**
Navigation Bar	Shortcut to navigate around the database.
Filtering & Ordering - Ascending Order - Descending Order - Filter by date - Filter by time - Filter by customer name - Filter by meeting subject - Attendance	The down arrows on the column headings offer a multitude of ways of filtering the data in the entire table.
Help Button	Gives users information on how to use this page.
Additional notes column	Additional notes for the meeting

Help Documentation

Help guide tips

A guide to use the system is included by clicking the “Help” link on all the pages or by clicking on the column heading to get further information about what input to add to the table.





Editing the database

The following websites have well detailed descriptions of how to edit the internal functions of the database i.e. adding in using the excel spreadsheet.

Feature	**Website**
Adding buttons (Macros functionality)	https://support.office.com/en-us/article/assign-a-macro-to-a-form-or-a-control-button-d58edd7d-cb04-4964-bead-9c72c843a283 https://support.office.com/en-us/article/quick-

	start-create-a-macro-741130ca-080d-49f5-9471-1e5fb3d581a8
Filtering Columns	https://www.gcflearnfree.org/excel2010/filtering-data/1/

Database Testing

Approach 1: Specifications Testing

Specification	Working	Not working
Filtering by row	✓	
Buttons (macros functionality)		✓
Entire database search engine	✓	
Individual page search engine	✓	
Inputting functionality	✓	
Saving changes successfully	✓	
Sharing of the database on google drive		✓

Approach 2: User testing

In an attempt to improve our final solution - to get feedback on our prototype as well as a different perspective, two users from the information systems department and one user from the humanities faculty were selected to test our system.

Our observations

- The users spent a lot of time, at the start of the test, trying to figure out how to navigate the database.
- Users made spelling errors when they were inputting data into the status column.

Feedback from users

- The main navigation was easily identifiable, however the icons and labels on some of the buttons were not clear.
- Users had a hard time finding the search engine of the whole database.
- Despite the inclusion of the column filters, users wanted a quicker way to search for all successful contacts, specifically.
- Generally, the interface design was good and user friendly.

Changes made

- Introduction of a search bar which includes options for filtering the information according to contact status (i.e. successful, unsuccessful, and pending).
- Help buttons, which users can click on to get tips on how to use the database.
- Help pop ups on each column; these inform the user what each column is for.
- Colour coded status columns were added, this improved readability and reduced the possibility of spelling errors during input.
- To share the database on Google Drive and other platforms, we zipped the database before transfer.
- To accommodate the use of macros, we changed the excel sheet extension from .xlsx to .xlsm.

6. Conclusion

The project ran successfully over three months. Our final deliverables for the project included a comprehensive project report, a poster summarising our journey, an excel contacts database prototype, as well as a tailor-made communication pack. The project report included an in depth analysis into the project objectives, problem, opportunity statements and possible solutions. For efficient project management, the team constructed work plan artefacts inclusive of a Gantt chart, networking diagram, work breakdown structure, etc. We hope that our deliverables and diagrams will make a positive impact on the progress of Whizz ICT and provide an informative background into the various steps taken throughout the development of the project.

In our approach to the project, we hoped to provide a customised solution which Whizz ICT will use well into the future and expand on. We have thus included helpful tools such as email templates to assist Whizz ICT in initiating communication with potential stakeholders, an easy-to-use excel database and some helping guides to assist Whizz ICT in tracking the contacts provided and further customizing the database.

We hope that our efforts to this project will add value to Whizz ICTs short term and long term plans and goals.