

Toilets for the homeless Project Presentation

Team Omada



The UCT Knowledge Co-op facilitated this collaborative project between CCID and UCT.

See <http://www.knowledgeco-op.uct.ac.za> or
Contact us at know-op@uct.ac.za / 021 – 650 4415



The Team



Elizabeth Leech

Coordinator of
research



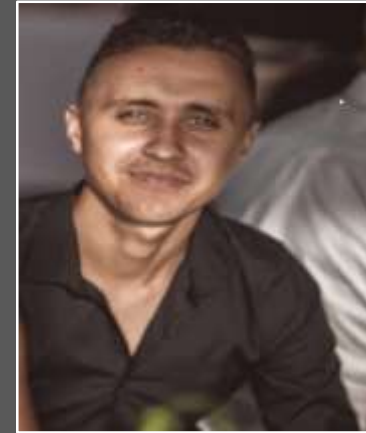
Robert Walton

Coordinator of
Research and
Project
Documentation



Piero Puccini

Coordinator of
Research



Matthew Diedericks

Project Manager

The Sponsor and Project

- Team Omada was tasked with creating a sustainable cost-effective toilet for the homeless citizens of Cape Town.
- We have worked closely with CCID to further understand the issue at hand and have compiled previously in iteration one, three solutions, that could potentially solve the underlying issue.
- This presentation will describe Team Omada's final solution to the issue of the homeless people not having access to proper toilets.
- Furthermore, this presentation will also outline our approach to each of the solutions and provide details of a Campaign that support our solutions, as well as giving testing outlines and a visual prototype.



The Cape Town Central City Improvement
District

Pat Eddy

Social Development Manager at CCID

Project Background/ Problem Definition

Background

- CCID ensure Cape Town CBD safe, clean and caring city
- Focus on assisting homeless in Central City, alleviating poverty.
- Limited quantity of public ablution facilities
- Opening times of facilities restricted
- Leads to non-availability of ablutions, public urination and defecation
- Loss of Dignity
- Health risk and management challenge

Problem Definition

The problem is that there is a lack of public ablution facilities within the Cape Town CBD and that those that do exist only operate for limited time on a daily basis. This leads to defecation and urination in the streets of the CBD by those not having access to facilities causing a health and urban management problem.

Project Situation of Concern/ Opportunities

Situation of Concern

- Not enough ablution facilities within the CBD
- Facilities close early
- +- 700 Homeless people currently live in the CBD
- Frequent urination and defecation in public spaces within the Cape Town CBD
- The unpleasant odours within the CBD create a problem with tourism and local businesses.
- Increasing numbers of hotspot areas which need to be cleaned daily
- Loss of dignity for the homeless living on the streets
- Hotspots of where homeless live are always changing

Opportunities

- Provide portable ablution facilities to address seasonal hotspots
- Extend the hours in which these facilities can be used or make them accessible 24/7
- Put facilities within a 5 – 10 minute walking distance from homeless hotspots
- Offer incentive for Homeless to manage facilities
- Make facilities visually appealing to fit in with CBD landscape
- Facilities can be used by anyone within CBD
- Create a campaign, #dignityforall, highlighting the struggles that homeless face creating public awareness

Preferred Solution: Mobile Toilet Trailer

Description

- Each mobile solution can contain one or two cubicles on a trailer unit.
- Solution highly portable
- Renting more realistic, but there is also an option to purchase the unit and customise
- Facilities are smart, simple and convenient
- The toilets are unisex
- The units can have Wheelchair-friendly access.
- A cubicle contains a toilet, hand basin, paper towels, soap dispenser, pad dispenser, bin, lighting and mirror, occupied lever for privacy and windows for ventilation.
- They also have inside locks for privacy of users.



Description continued

Location

- The toilet solution will be located close to the hotspot areas

Management

- These units could be managed by a homeless person who lives in the vicinity and overseen by a CCID employee.

Security

- Units are lockable from the inside.
- The units gets unlocked and locked by the unit manager
- Secure locks on the outside of the doors so no after hours errors.

Open-closed

- The new opening hours could be: 07:00-20:00.

Maintenance

- CCID personal
- cleaned by dedicated homeless
- an option to have the company that it is rented from to provide a cleaning service.



Feasibility

Feasibility Table

Feasibility for Toilet Solution (Rent & Purchase)		
	Renting	Purchasing
Time to implement	1 week	A month
Initial Cost	-	R40 000-R50 000
Monthly Rent	R2000-R4000 p/m	-
Monthly Maintenance	Included in rental	R600p/m
Monthly Consumables	R500p/m	R500p/m

Overview of length of time that rental would equal purchase cost:

Purchasing Price	40000	40000	50000	50000
Monthly Maintenance (cleaning)	600	600	600	600
Monthly Expense If Rent	2000	4000	2000	4000
Time taken for rental to equal purchase	28 Months	11.2 Months	36 Months	14 Months

Generate Income:

- Partnering with local businesses in the area and linking the toilet units to the #dignityforall campaign.
- This campaign can be linked with major retailers such as Pick n Pay or checkers, and their customers could contribute R1 for every purchase towards this initiative.

Benefits & Challenges

Benefits

- Portable
- Attractive
- Usability
- Time-efficient
- Cost effective

Challenges

- Less accessibility
- Potential risks: theft & damage to property
- Maintenance



*The
Campaign*

**WHILE YOU USE YOUR BATHROOM
JUST KNOW
I AM SLEEPING ON MINE.**

Everyone deserves dignity

#dignityforall



#DignityForAll

Description

- It is the campaign which is in support of the homeless and their loss of dignity due to their lack of access to toilet facilities

Purpose

- Create awareness & gain support

How?

- Marketing/advertising
- E.g. billboards, website, social media, on the facilities etc.

Campaign includes:

- Information about the homeless
- Information about the project

The bigger picture

- To show that everybody deserves the dignity to use the toilet
- Age, gender, race, disability status

Prototyping

- The following images outline the prototype of Team Omada's final solution. They are 3D modelled, graphical representations of what the final product will look like.
- Each unit has a hand sanitizer dispenser for sanitary purposes. Furthermore, it saves water and is mandatory during the COVID-19 Pandemic.
- Every unit will have two stalls for public use and is mobile, which allows the unit to be easily transported to any location.
- Once this design has been approved, a working prototype can be built by CCID for public use.



Prototypes



Advisory Testing Guidelines:

- For the testing of the final product, the prototype can be placed in one of the hotspots in Cape Town City Centre. CCID can then monitor its usage and progress, to determine whether this design can proceed to be mass-produced.
- If enough homeless citizens utilise the unit, then it can be approved for mass production.
- Other requirements, such as user safety and unit maintenance must also be met, in order to allow the unit to be mass produced.
- At least 30 citizens must use this unit per day and no citizens must be harmed or injured.
- Finally, if the number of homeless citizens utilizing this unit increases, then the prototype can be classified as a success.



Conclusion

- We have taken all the requested requirements into consideration, based on feedback from CCID, to create our final solution as well as the campaign.
- With their support and guidance, we believe we have designed a potential solution to the issue of homeless citizens not having access to toilet facilities, in Cape Town City Center.
- Along with the provided prototype and testing guidelines, we hope CCID can use this design to implement a more efficient and effective toilet facility for all citizens.
- Thank you for taking the time to watch our presentation and we hope you enjoyed it.

