FIFO:

How Mobile Apps are the First In, First Out Solution to Advancing the United Nation's SDGs

Elizabeth Saunders

Interdisciplinary Studies Thesis Presentation

with advisors Dr. Mahendran Velauthapillai and Dr. William Hahn

Presented on May 1st, 2024

GEORGETOWN UNIVERSITY

AGENDA

- Introduction
- Part 1: Collect (Natural Cycles)
- Part 2: Connect (Empower)
- Part 3: Protect (MeetingMaker)
- Part 4: Affect (Politicking)
- Conclusions

INTRODUCTION

Why the SDGs?

TRAVERSE CITY, MICHIGAN

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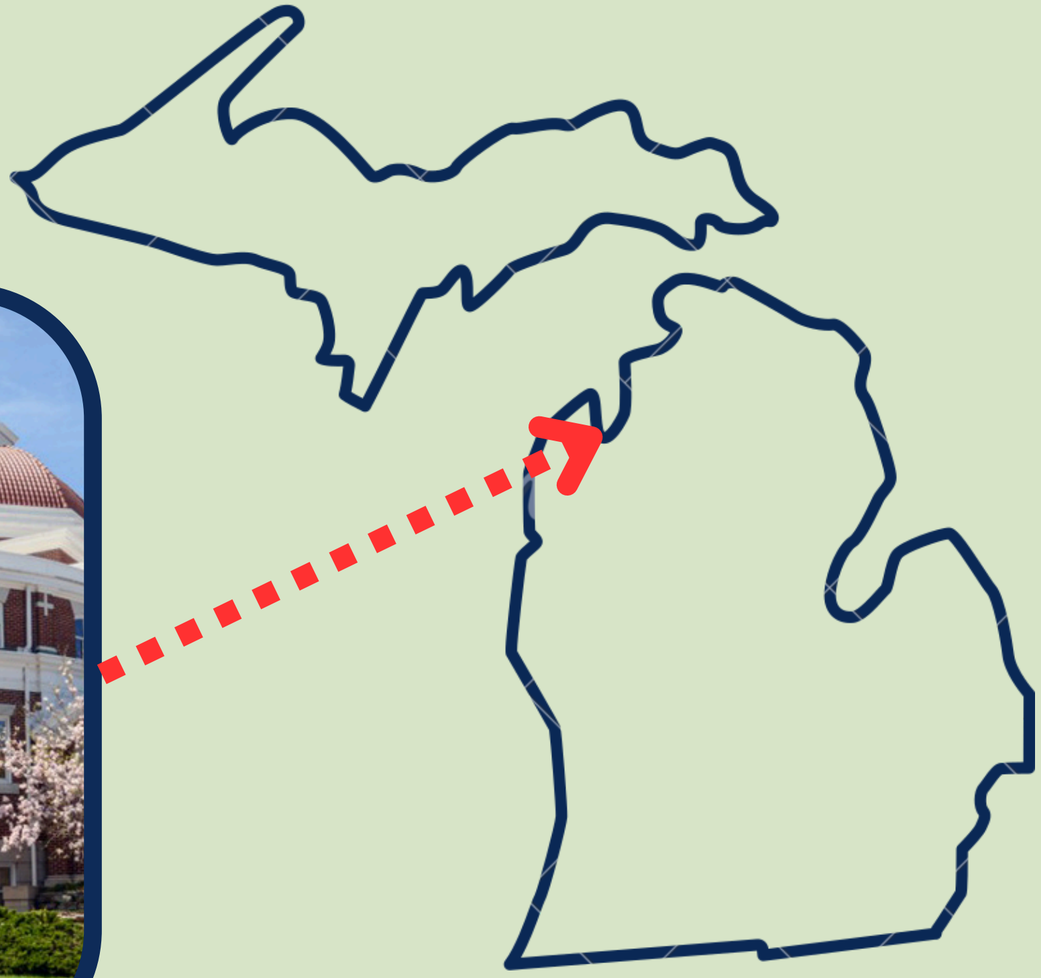
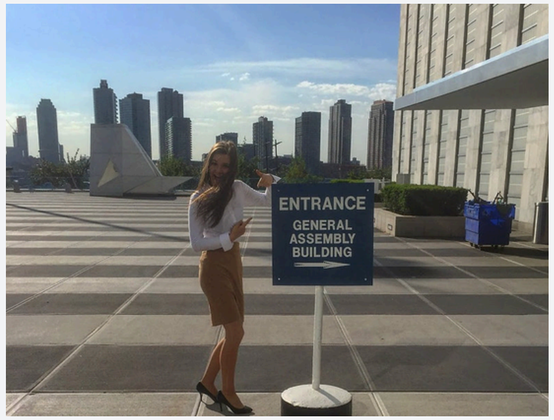


WHY THE SDGS?



photos from Emily Falconer's blog, www.goglobalgoals.com

“**Do all the good you can,**
By all the means you can,
In all the ways you can,
In all the places you can,
At all the times you can,
To all the people you can,
As long as ever you can.”

JOHN WESLEY

founder of the Methodist church

HISTORY OF THE SDGS

MDGs
2000

Millennium Development Goals (MDGs) were established to tackle poverty and other development priorities. The MDGs focused on measurable objectives such as reducing:

- **extreme poverty,**
- **improving access to education and healthcare, and**
- **combating diseases like HIV/AIDS.**

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Need for a more comprehensive and ambitious agenda

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THE 17 SDGS

1.) No Poverty
2.) Zero Hunger
3.) Good Health & Well-being
4.) Quality Education
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8.) Decent Work & Economic Growth
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CALCUSAVER

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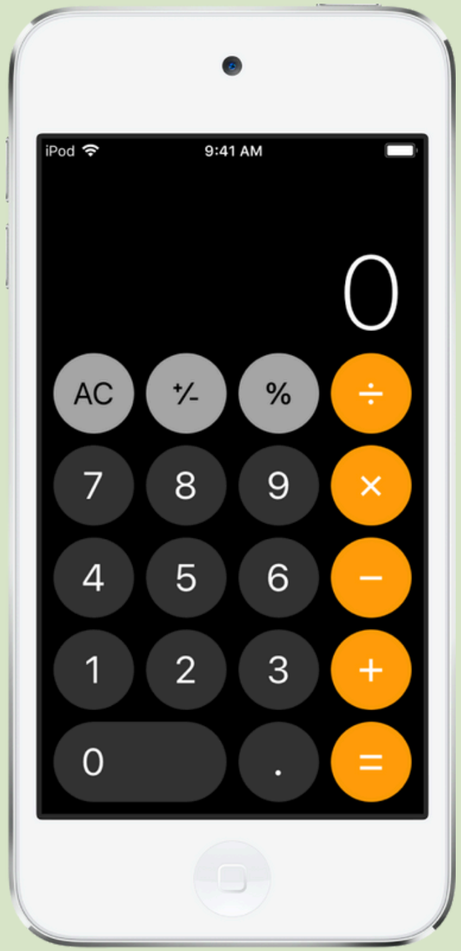

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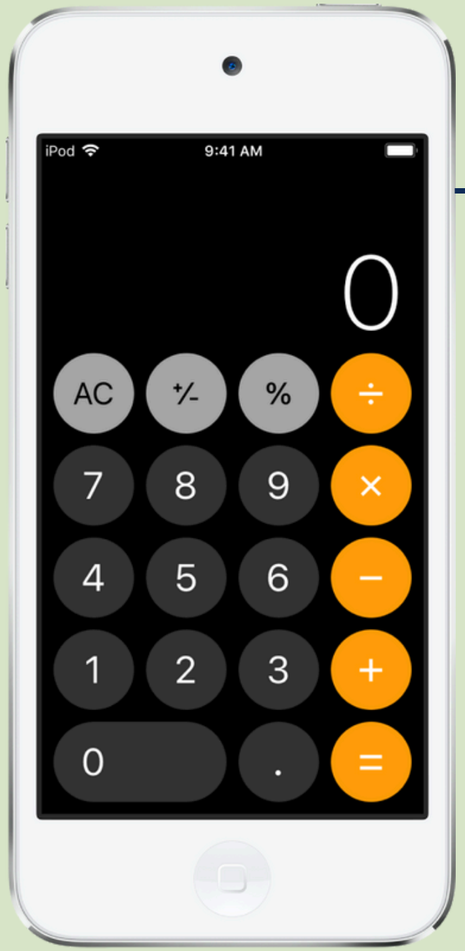
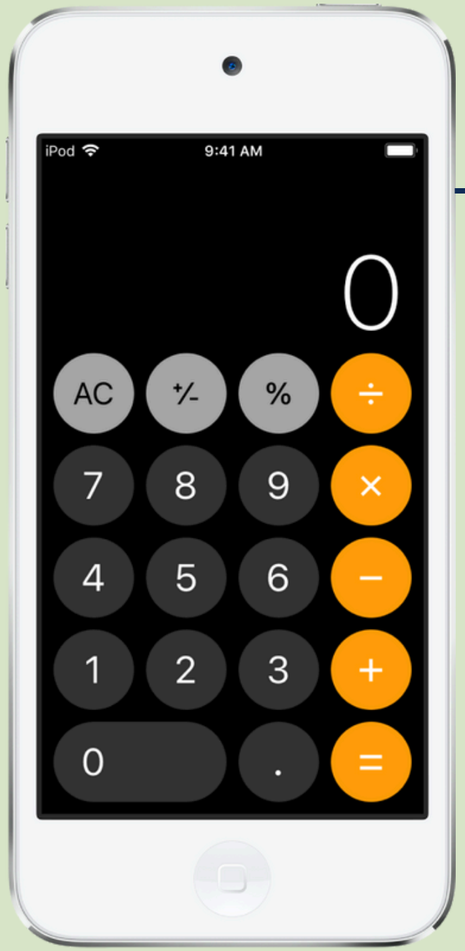


User inputs their

- **Name**
- **Emergency Contact's Phone Number**
- **Calculator Code**

CALCUSAVER



User inputs their

- **Name**
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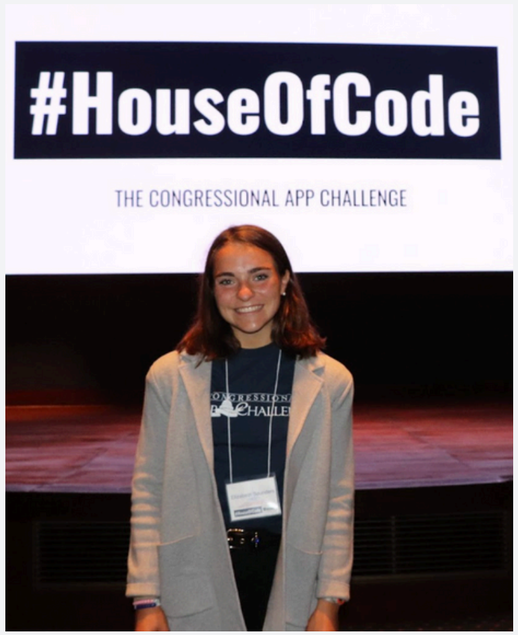
- **Calculator Code**

When the calculator's output equals their calculator code, an emergency message is sent to the user's emergency contact.

CALCUSAVER



photos from my Dad

These SDGs are powerful!

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These goals do an excellent job of providing room for:

entrepreneurs,
developers, and
changemakers

to explore, interpret, and expand the meaning of sustainability within the private sector.

THESIS

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Mobile app technology should and can be used to implement the United Nations Sustainable Development Goals to complement current initiatives of the program

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Mobile app technology should and can be used to implement the United Nations Sustainable Development Goals to complement current initiatives of the program **through tech's ability to connect, collect, protect, and affect.**

COMING TO GEORGETOWN

Pursuing a Computer Science education

Fall 2020

The Final Project in COSC 051 with Dr. Clay Shields was to design a database for a made up food bank.

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Fall 2020

Significant amount of food insecurity and food waste in the DC area.

Fall 2021

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On-Campus Solution: The “Free Food On Campus” GroupMe

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Fall 2021

On-Campus Solution: The “Free Food On Campus” GroupMe

This Group me:

CONNECTS Students

COLLECTS food

PROTECTS the safety of the community

AFFECTS change to both food insecurity and food waste

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Fall 2021

ampus Solution: Free Food On Campus" GroupMe

How could I apply what I am learning to outside the classroom?

SURVEYING THIS GEORGETOWN GROUP CHAT IN FALL 2021

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67.7% of respondents **_confidently_** believe that the food on the group chat is of quality.

69.5% of respondents frequently use this chat to get food.

76% of the food respondents consumed were perishable items.

85% of respondents check the group chat at least once a day.

*288 respondents from the 2,215 Total GroupMe Population (studied from 11/2/21 - 11/6/2021)

peak enrollment in group chat for the 2021-2022 school year = 4,000+

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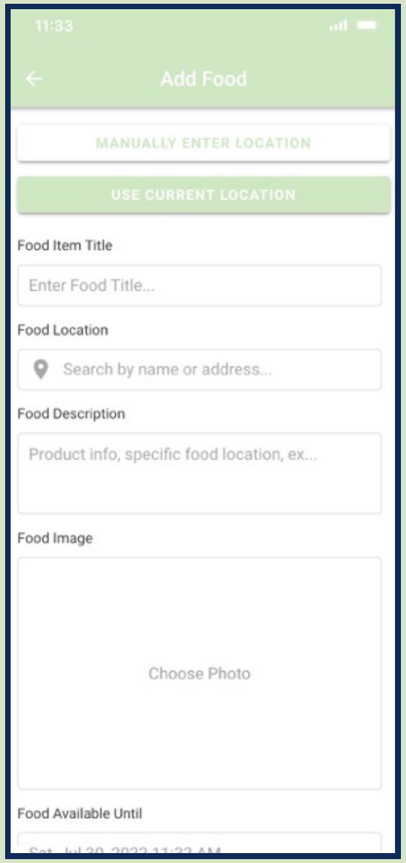
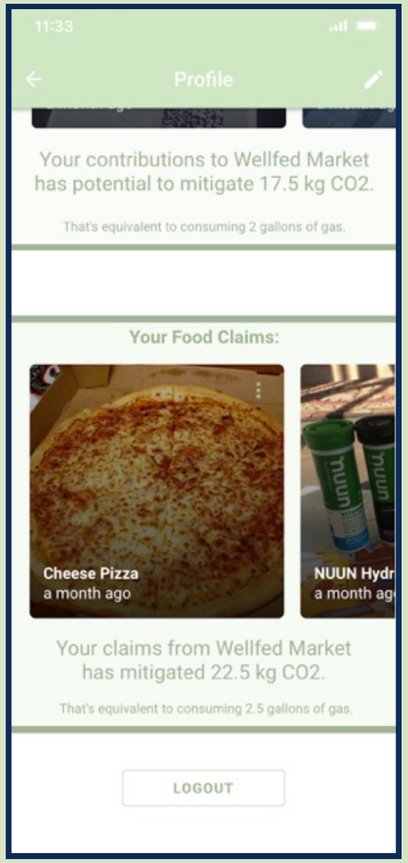
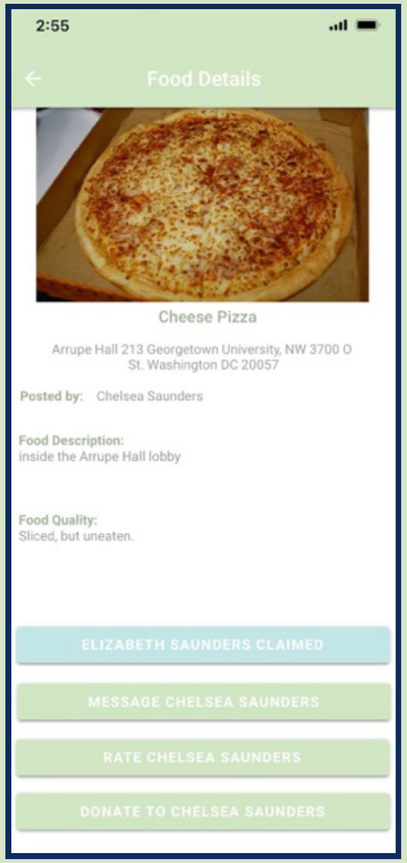
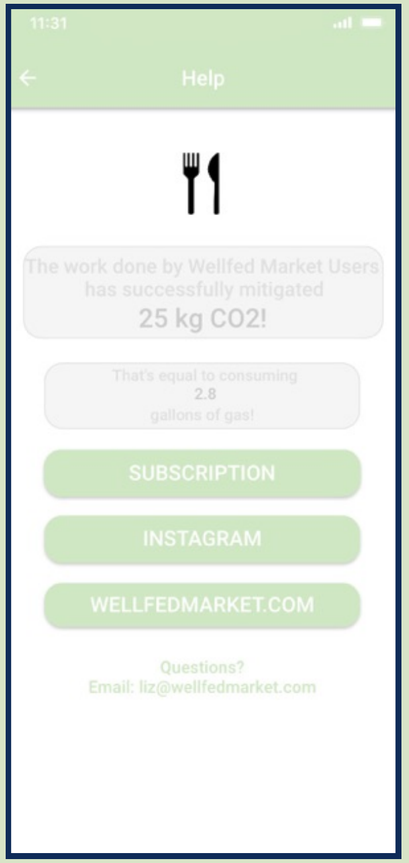
WELLFED MARKET









INTRO ···· COLLECT ···· CONNECT ····· PROTECT ···· AFFECT ····· CONCLUSION

THESIS

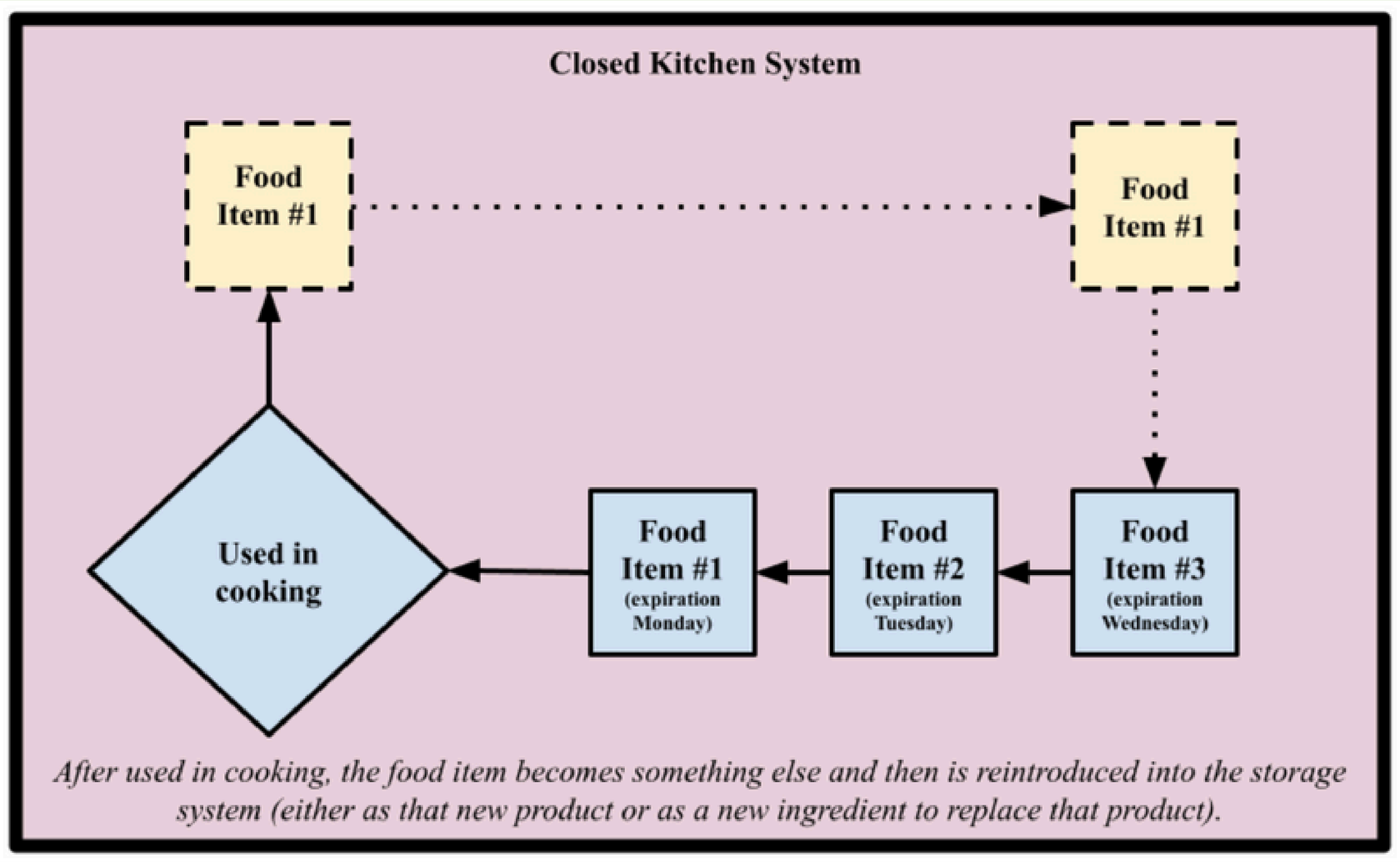
Mobile app technology should and can be used to implement the United Nations Sustainable Development Goals to complement current initiatives of the program through tech's ability to connect, collect, protect, and affect. **Moreover, these technological solutions are most effective when implemented as FIFO (First In, First Out) solutions; meaning the future of sustainability relies beyond singular technological solutions and exists in additional collaborative, creative, and community-based measures.**

INTERDISCIPLINARY STUDIES - CS VS. CS

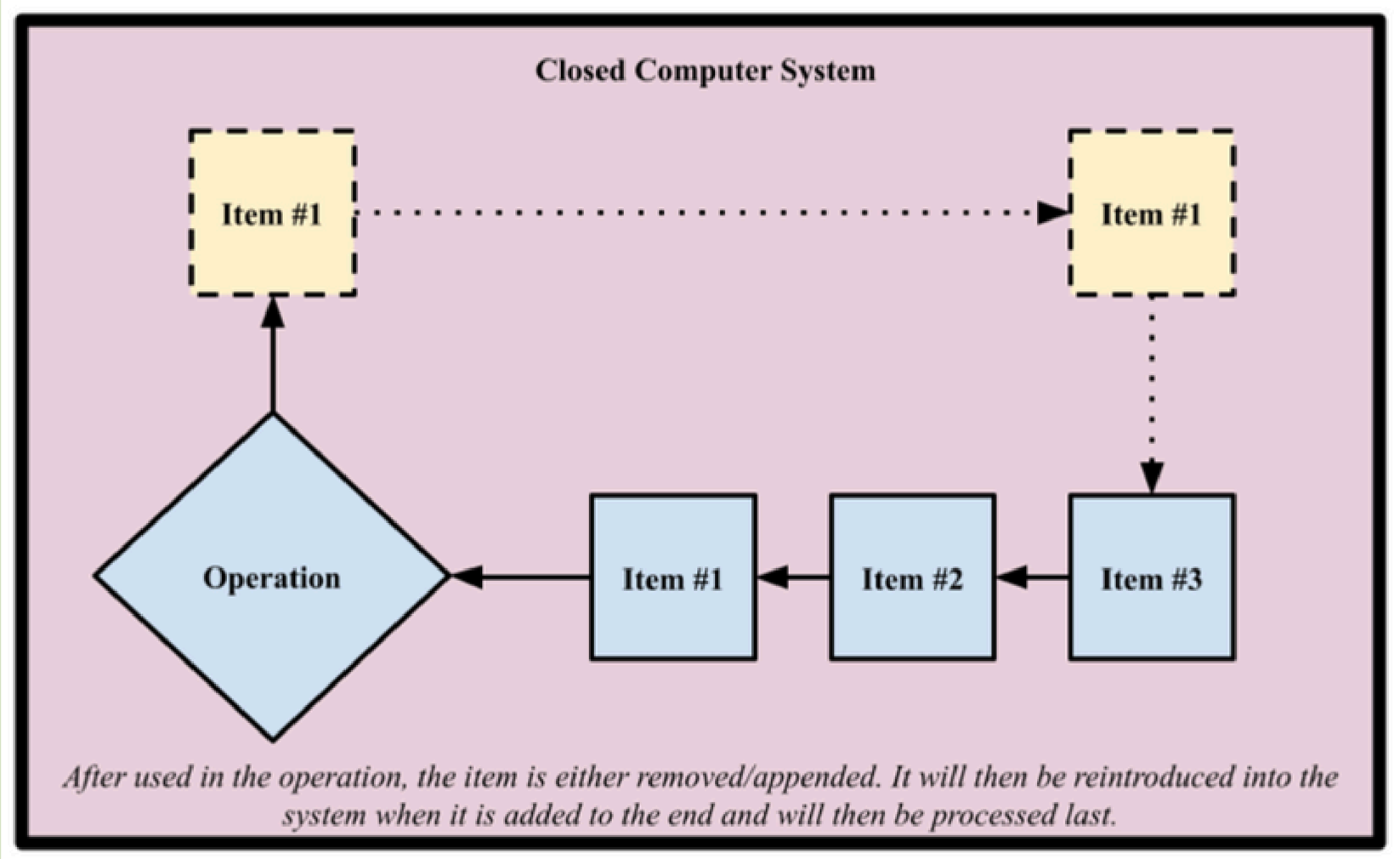
Computer Science

Culinary School

FIFO (CULINARY SCHOOL)



FIFO (COMPUTER SCIENCE)



“Technology has the shelf life of a banana.”

SAM MCNEALY

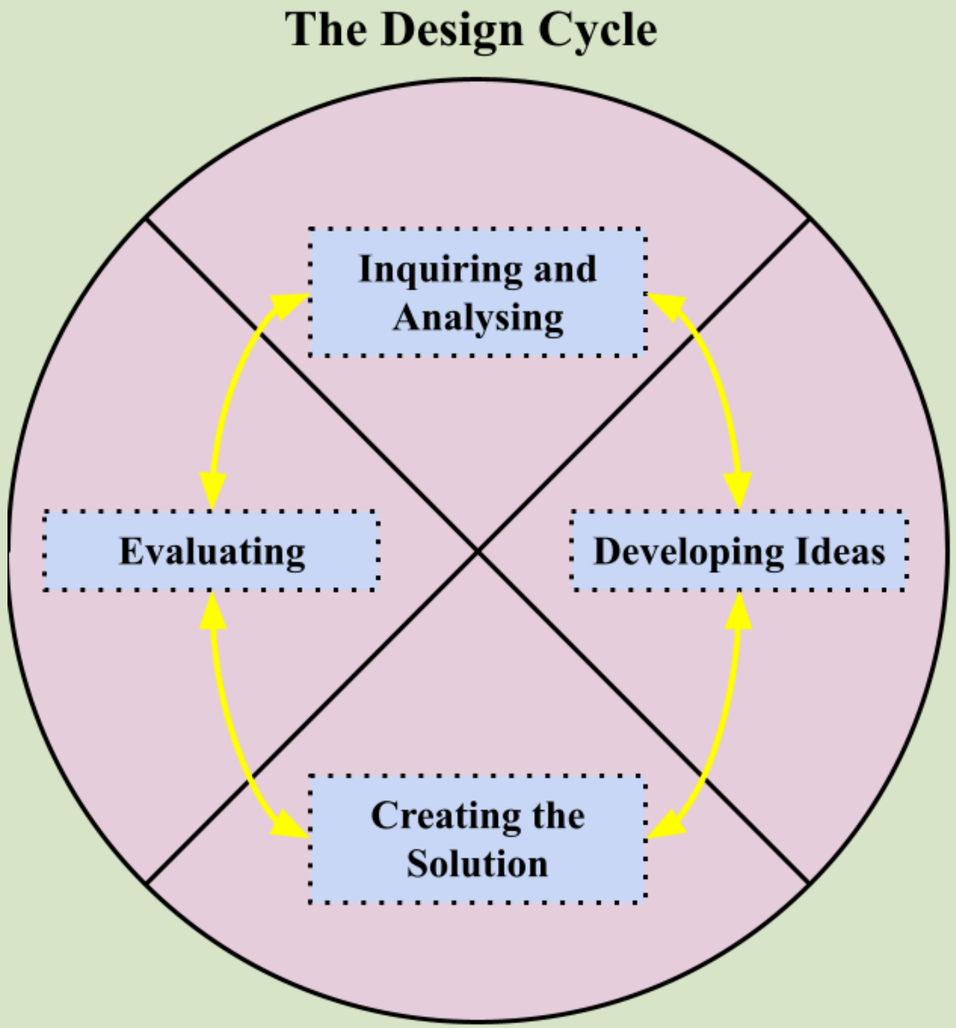
CEO AND CO-FOUNDER OF SUN MICROSYSTEMS

“By the time you buy it, implement it, and train people on it, it’s obsolete.”

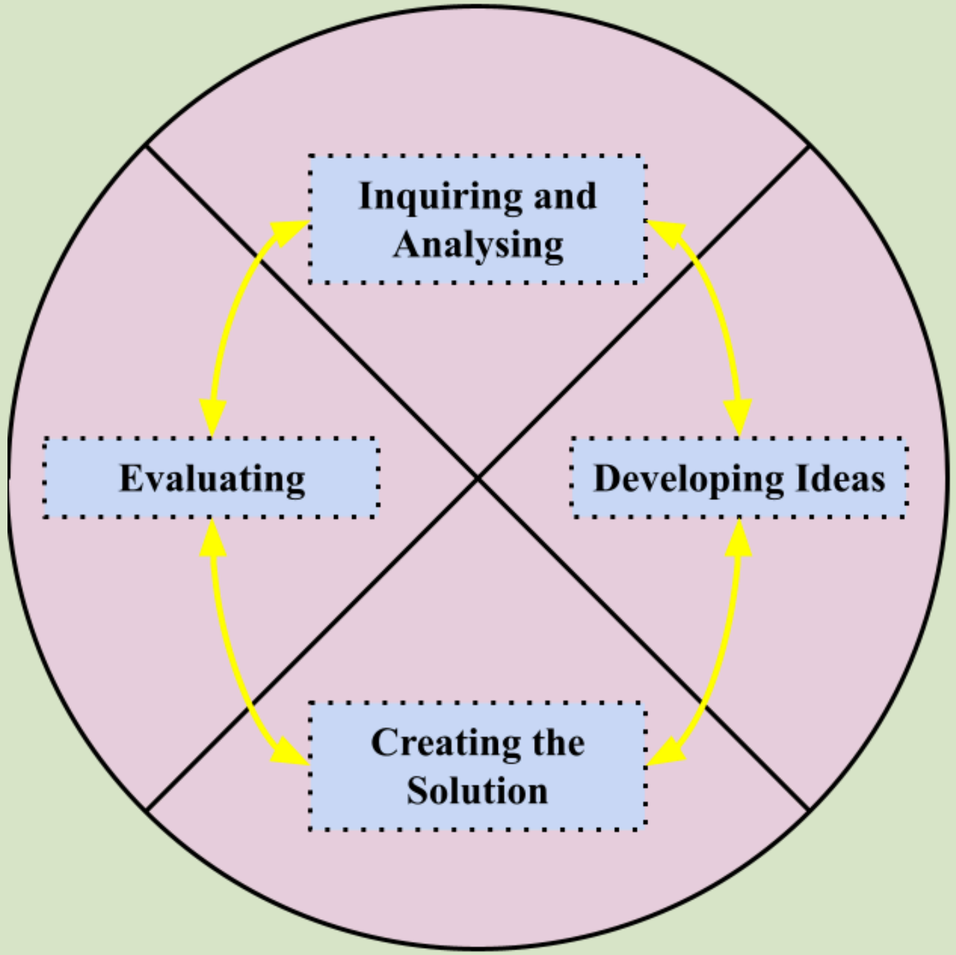
DEFINING SUSTAINABILITY

“Meeting the needs of the present without compromising the ability of future generations to meet their own needs.”

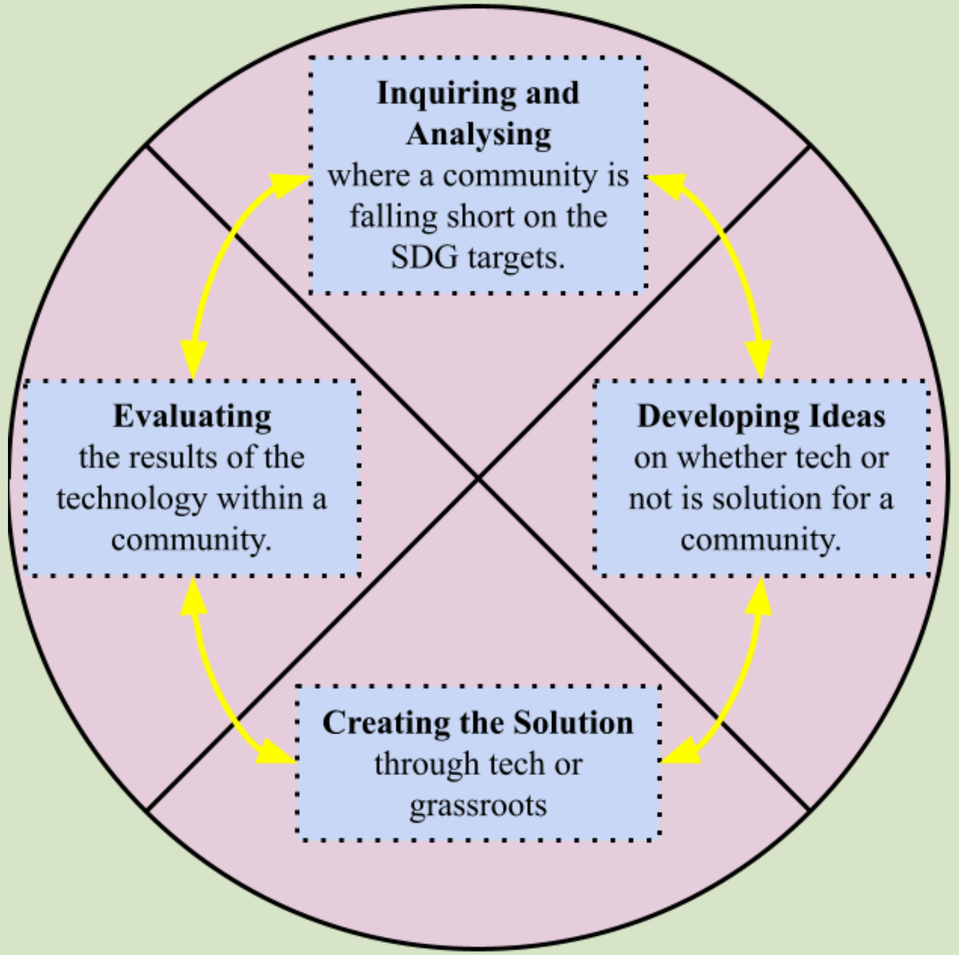
UNITED NATIONS


The Design Cycle
Inquiring and Analysing
Developing Ideas
Creating the Solution
Evaluating

The Design Cycle



The Design Cycle (SDG-specific)



THESIS

Mobile app technology should and can be used to implement the United Nations Sustainable Development Goals to complement current initiatives of the program through tech's inherent abilities to connect, collect, protect, and affect. Moreover, these technological solutions are most effective when implemented as FIFO (First In, First Out) solutions; meaning the future of sustainability relies beyond singular technological solutions and exists in additional collaborative, creative, and community-based measures.

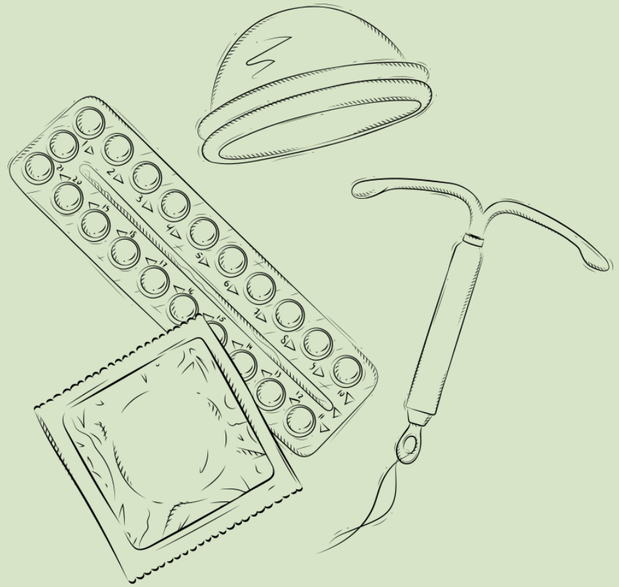
MOBILE APPS

COLLECT

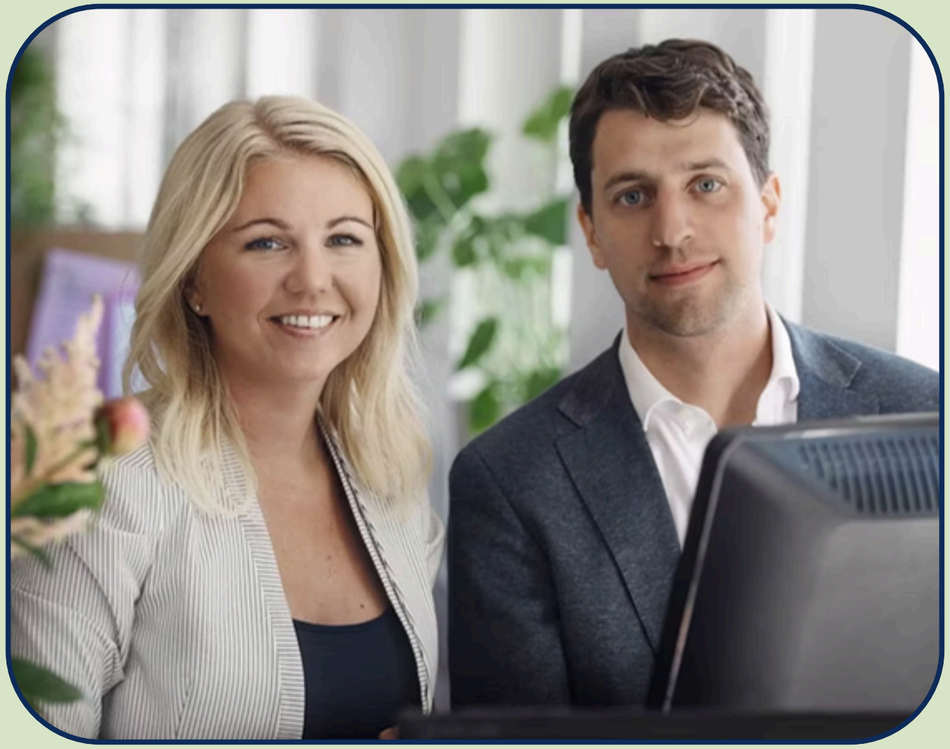
PART 1

THE PROBLEM

Accessibility to birth control.



NATURAL CYCLES



Dr Elina Berglund and her husband, Dr Raoul Scherwitzl

Natural Cycles Founders

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FIFO APPLICATION

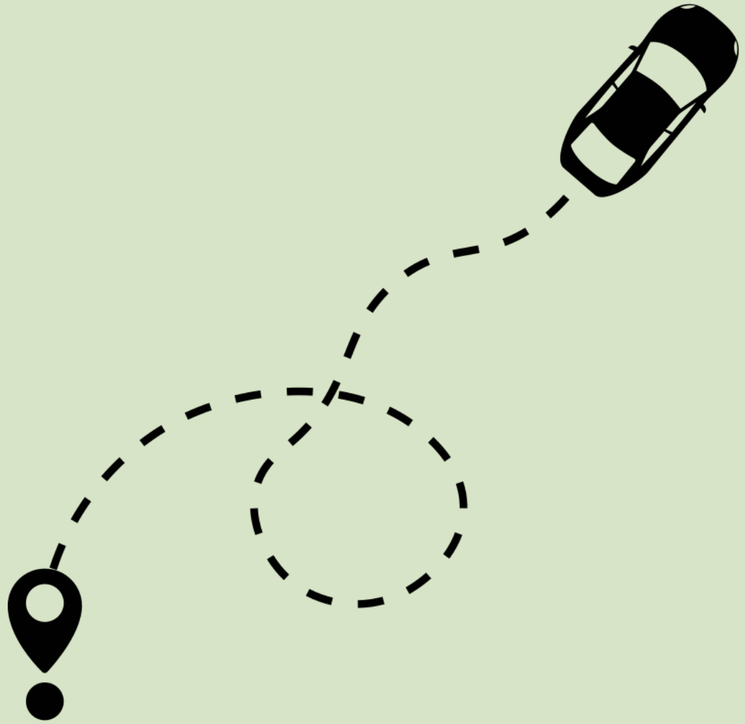
MOBILE APPS

CONNECT

PART 2

THE PROBLEM

Empowering rideshare drivers.



EMPOWER

Joshua Sear

Empower Founder

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“Technology is best when it brings people together.”

MATT MULLENWEG
WORDPRESS FOUNDER

MOBILE APPS

PROTECT

PART 3

THE PROBLEM

Accountability in addiction recovery.

MEETINGMAKER

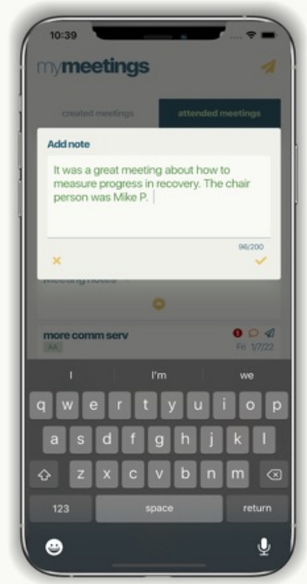
Go to a meeting and swipe right ...

... and attend! No paper.

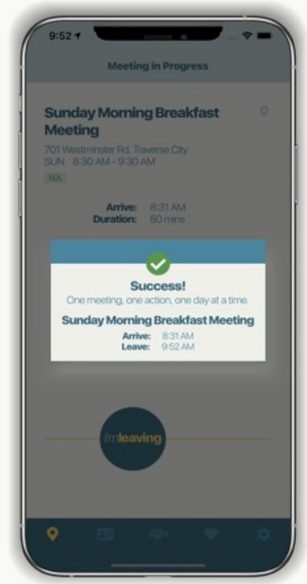
NO PAPER.

Choose (or create) your in-person or online meeting ...

Add notes to attended meetings, view details, and even remove meetings if you choose.



Arrive, stay, and leave on time - success! Otherwise, a warning.



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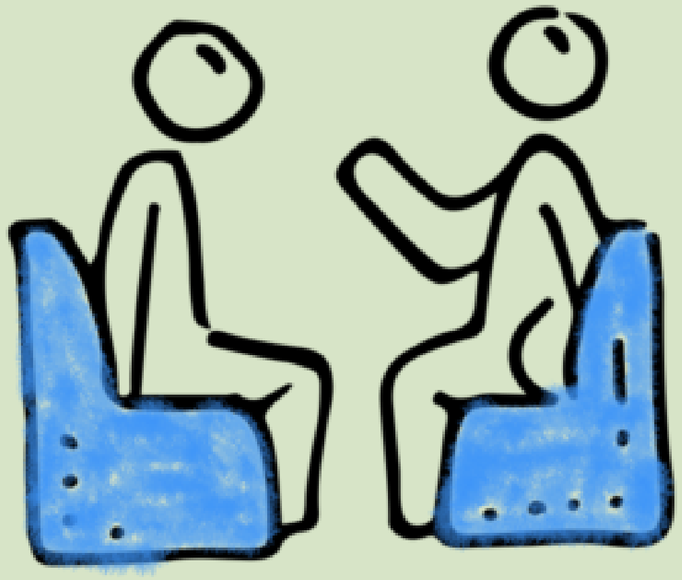
FIFO APPLICATION

Jodie Schanhals
MeetingMaker Founder

Me and the MeetingMaker team at the Rise23 Conference in Houston, Texas (2023)

FIFO APPLICATION



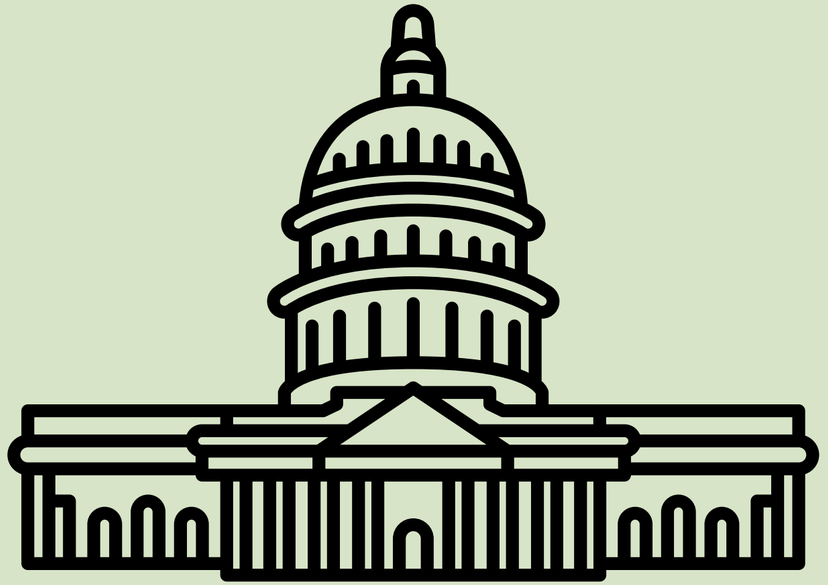
MOBILE APPS

AFFECT

PART 4

THE PROBLEM:

Educating and mobilizing voters.



POLITICKING

Wen-kuni Ceant

Politicking Founder

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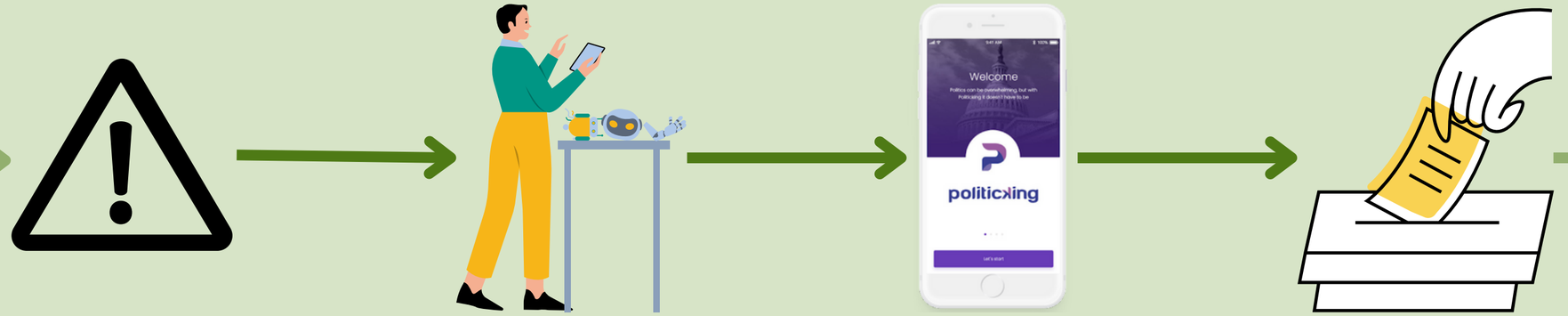
FIFO APPLICATION

TECH'S ABILITY TO AFFECT CHANGE REMINDS ME OF THE QUOTE:

"The most important thing about technology is that it changes people."

JARON LANIER
COMPUTER SCIENTIST

FIFO APPLICATION



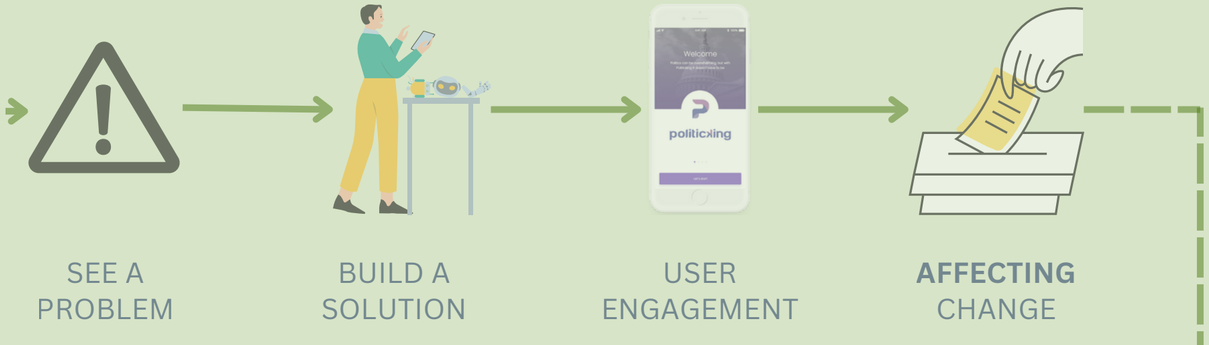
SEE A PROBLEM

BUILD A SOLUTION

USER ENGAGEMENT

AFFECTING CHANGE

FIFO APPLICATION



CONCLUSIONS

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JOHN WESLEY

founder of the Methodist church

CU Boulder's Interdisciplinary Engineering Program (ATLAS).

Sko Buffs!

Thank you!

I WELCOME ANY QUESTIONS

ACKNOWLEDGEMENTS:

THANK YOU DEAN COOK, PROFESSOR MAHE, PROFESSOR HAHN, AKIL, CAS, MSB, SAFE, STIA, AND MY INCREDIBLY SUPPORTIVE FRIENDS & FAMILY!