




# POLARIS


## Library Wayfinding

by NORTHSTAR




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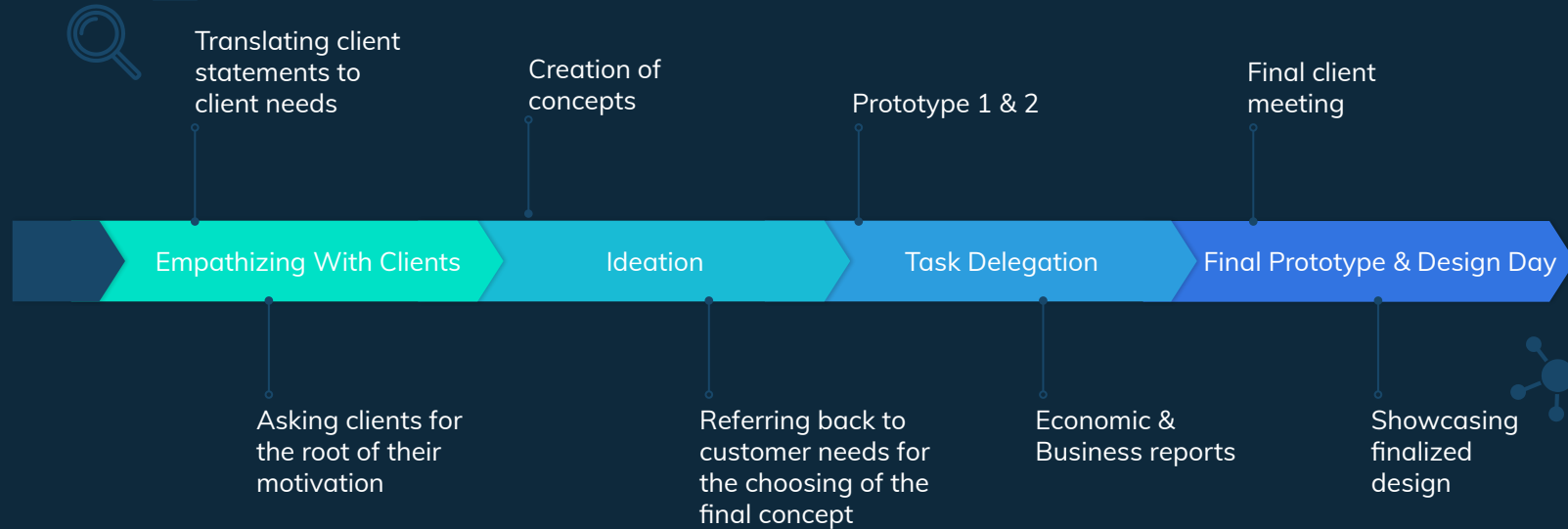
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What is the Issue?

# Timeline





Customer needs



- ▶ Audio / Sensory cues
- ▶ Efficient batteries
- ▶ Bilingual
- ▶ Usability
- ▶ Compatibility
- ▶ Minimum cost
- ▶ Accuracy / User safety
- ▶ Portability / Size



# Current Examples

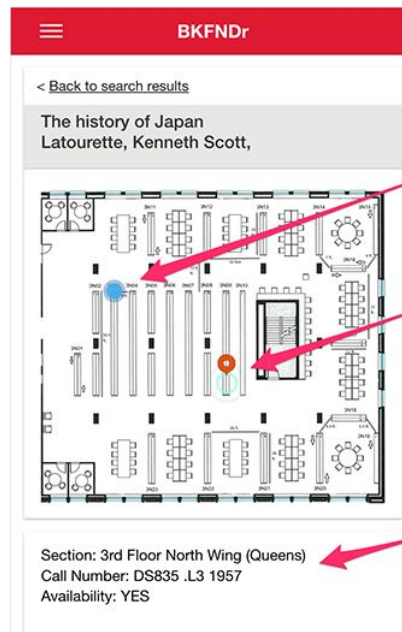
Centrak



Infsoft



BKFNDr



Current Location

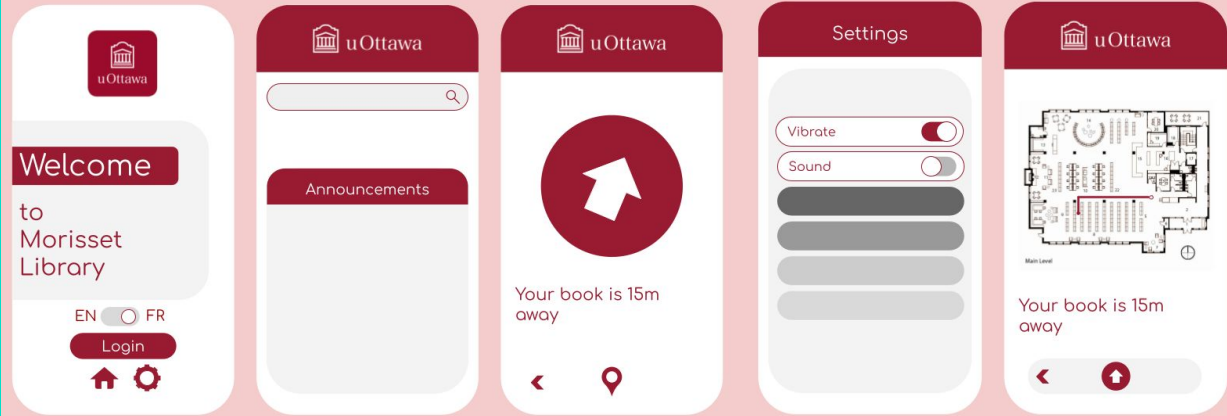
Target Bookshelf

Book Information



# Prototypes

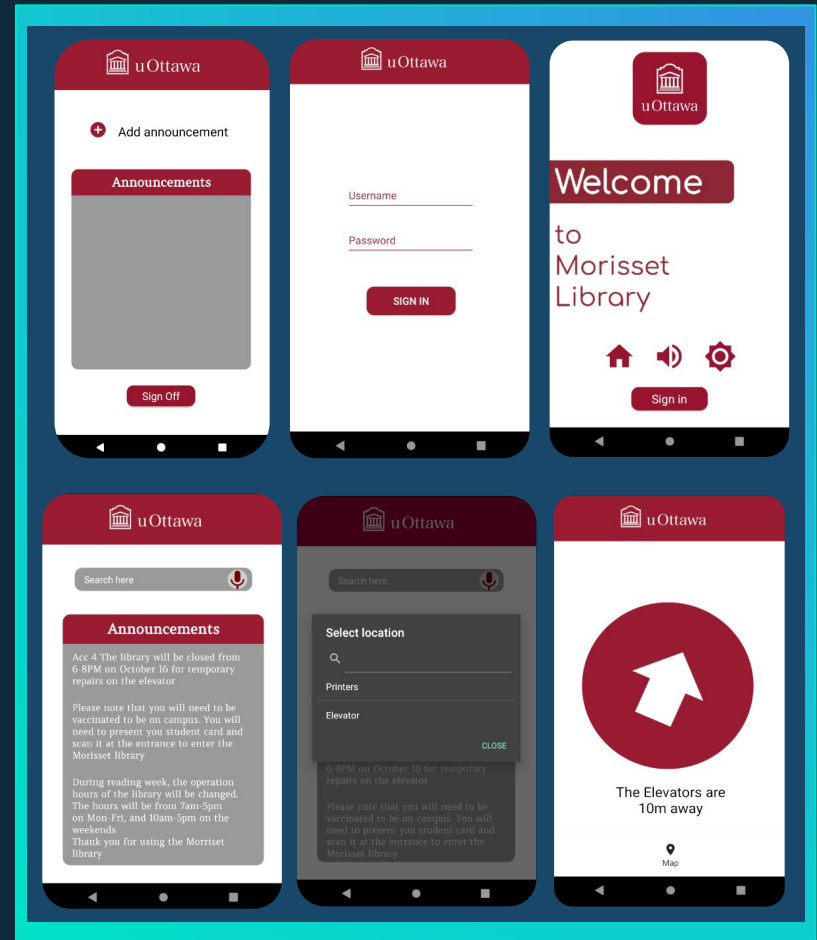
# Prototype 1







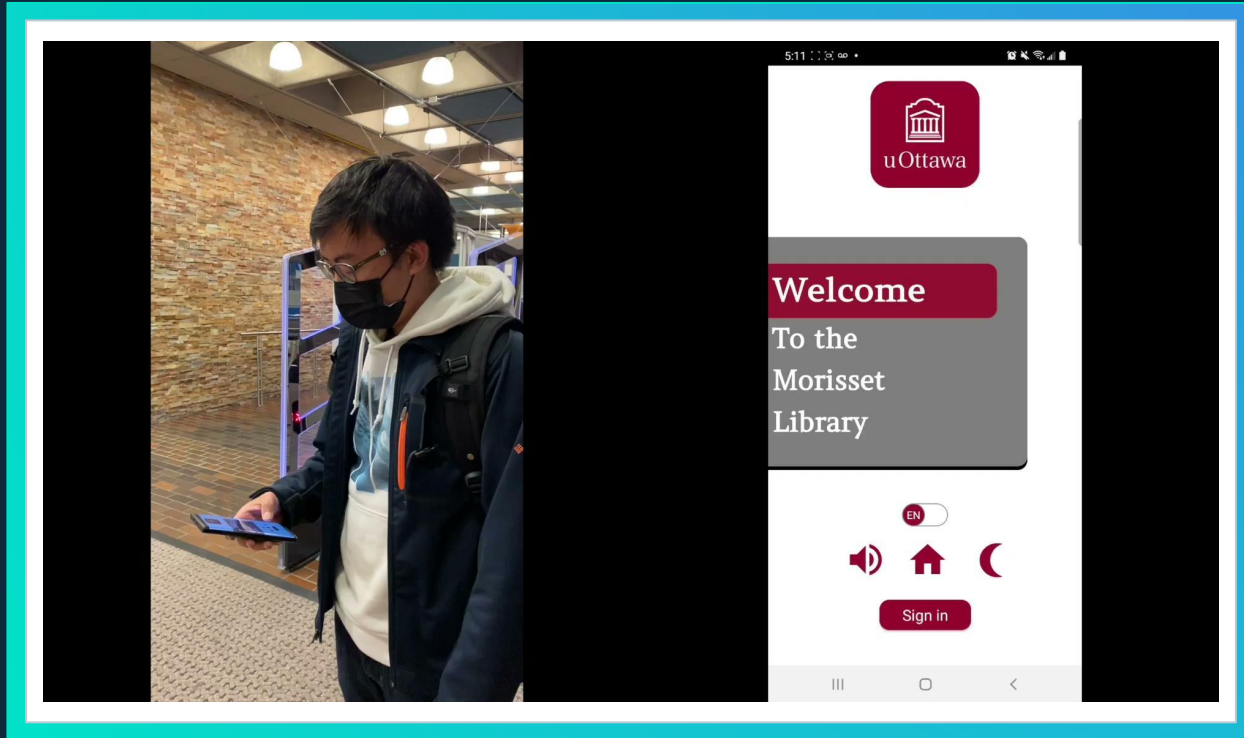
## Prototype 2



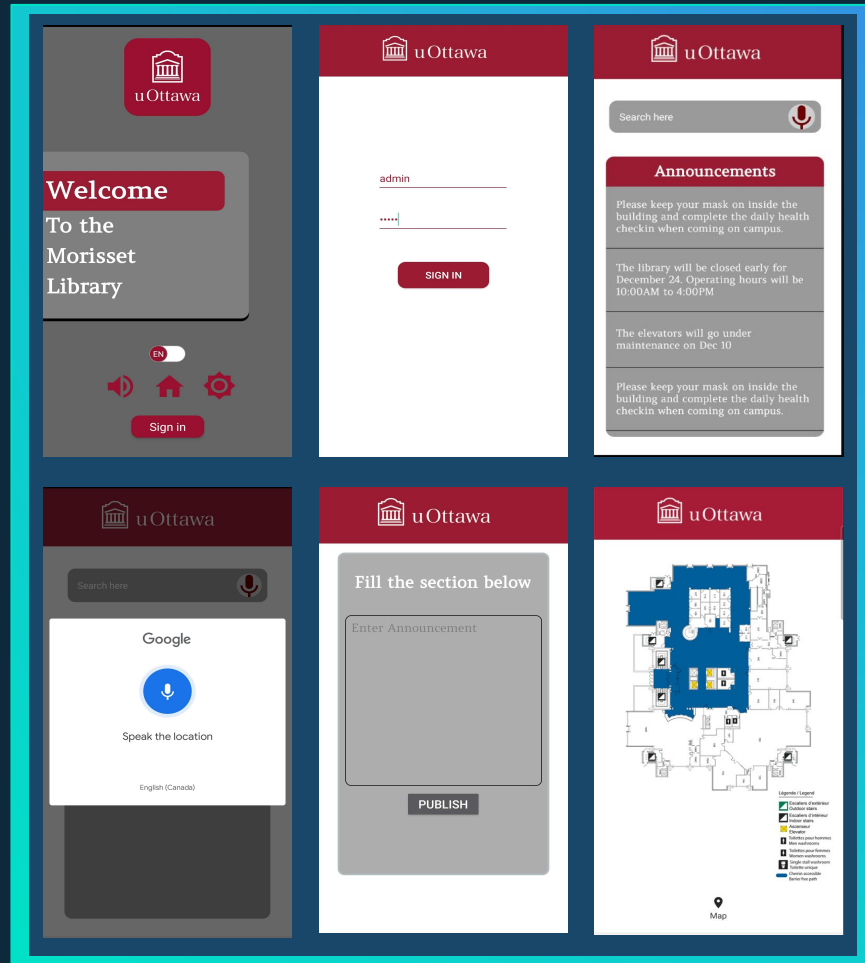


# Prototype 3: Polaris

# Demonstration



- ▶ Dark Mode
- ▶ Language Select
- ▶ Speech to Text
- ▶ Announcements
- ▶ Auditory Navigation
- ▶ Admin Page
- ▶ Location Tracking
- ▶ Map














# Business model

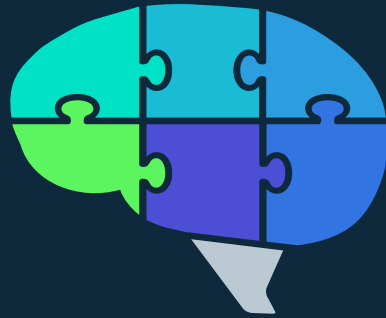


# Business Model Canvas

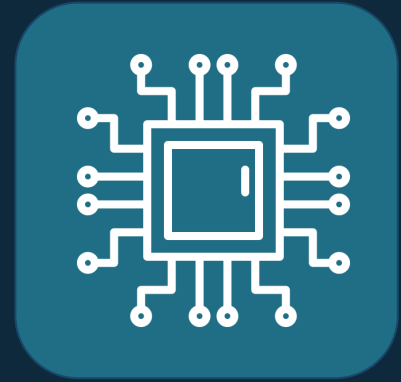
|   |  |   |  |   |
|---|--|---|--|---|
| <b>Key Activities</b>  <ul style="list-style-type: none"><li>● Provide technical and non-technical customer support</li><li>● Initialize database services</li><li>● Platform development</li><li>● Provide consultation on hardware placement</li><li>● Customize visuals</li></ul> | <b>Key Partners</b>  <ul style="list-style-type: none"><li>● Bluetooth beacon manufacturer</li><li>● Database Service Platform</li></ul> <b>Key Resources</b>  <ul style="list-style-type: none"><li>● Software development team</li><li>● Customer support team</li><li>● Bluetooth beacons</li><li>● Smartphones</li></ul> | <b>Value Propositions</b>  <ul style="list-style-type: none"><li>● Increase customer satisfaction</li><li>● Increase visibility of difficult to find business or services</li><li>● Increase efficiency and customer throughput</li><li>● Easy and customizable deployment</li></ul> | <b>Customer Relationships</b>  <ul style="list-style-type: none"><li>● On demand customer support</li><li>● Free defective hardware replacement</li><li>● Customization request</li></ul> <b>Channels</b>  <ul style="list-style-type: none"><li>● Play store (Android)</li><li>● App store (Apple)</li><li>● Website</li><li>● Direct sales</li></ul> | <b>Customer Segments</b>  <ul style="list-style-type: none"><li>● Event organizers</li><li>● Service providers of medium to large facilities (e.g. Malls, library, train stations, museums, theme parks)</li></ul> |
| <b>Cost Structure</b>  <ul style="list-style-type: none"><li>● Product development</li><li>● Infrastructure -(Google Cloud Services)</li><li>● Marketing</li><li>● Product maintenance</li></ul>   |  |   | <b>Revenue Streams</b>  <ul style="list-style-type: none"><li>● Subscription</li><li>● Additional Customization request -Only if accepted</li><li>● Pay per use</li></ul>   |   |



# Trials and Tribulations

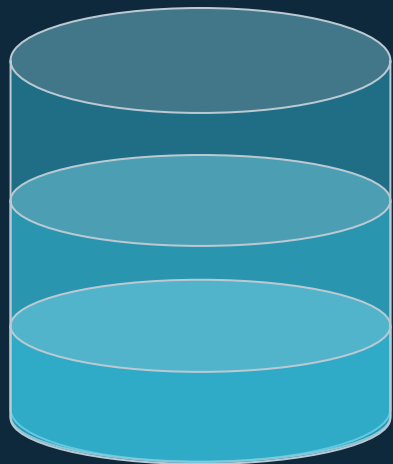


Learning Curve



Hardware





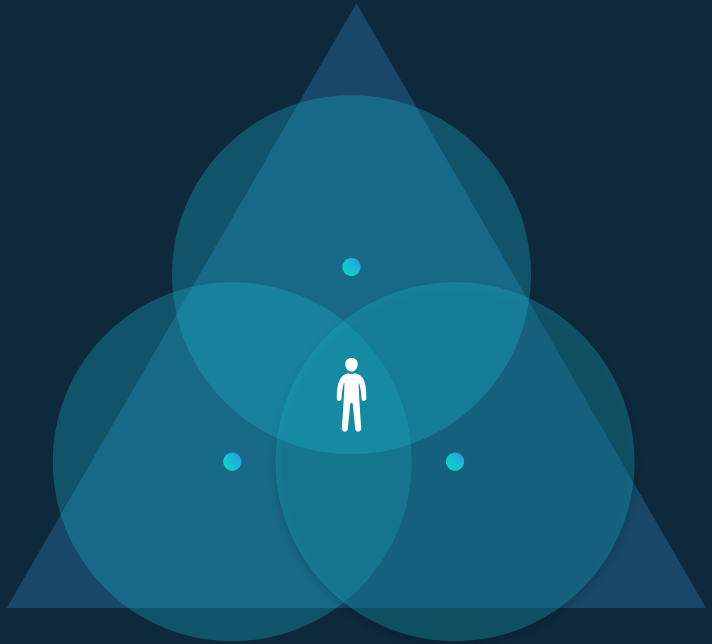
Database



Pathfinding



# Future Work



Triangulation



Gyroscope



Dynamic Path  
Recalculation



Auditory Cue for  
Direction



Thank You!