

Team 12

Nathan's Monarchy



Unified Butterfly Recorder Elevator Pitch

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Context

- Client: **Reiman Gardens**
- Iowa Butterfly Survey Network
- **Users:** Trained volunteers and researchers



Current Solution: Paper

Iowa Butterfly Survey Network Field Form

Date _____ Location _____ Monitor _____

Start time _____ Stop time _____ Recorder _____

Wind (circle one) Calm Light Air Light Breeze Gentle Breeze Moderate Breeze

Sky/Cloud Cover (10% increments, 0%= Clear): _____ Temp: _____

Transect Key: A=

B=

C=

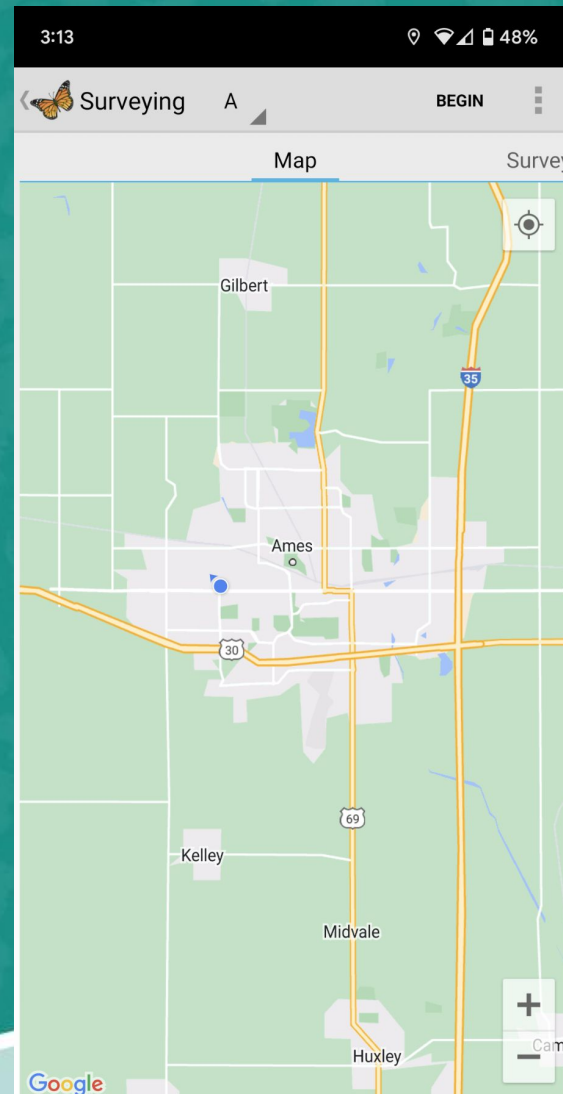
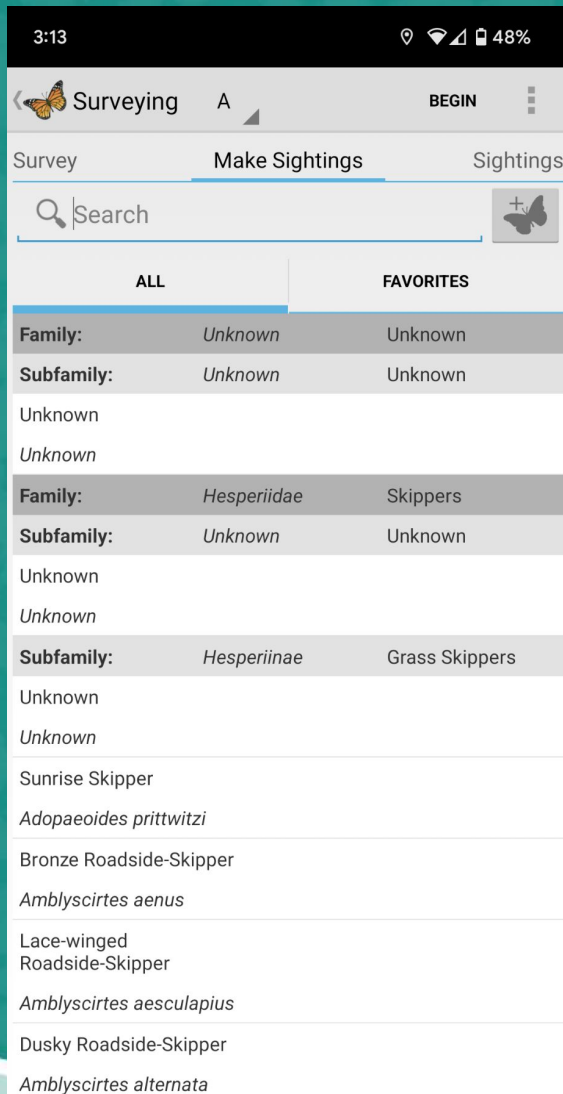
D=

E=

		A	B	C	D	E	Totals
Swallowtails							
Black Swallowtail	<i>Papilio polyxenes</i>						
Giant Swallowtail	<i>Papilio cresphontes</i>						
Eastern Tiger Swallowtail	<i>Papilio glaucus</i>						
Unknown:							
Additional:							
Whites and Sulphurs							
Cabbage White	<i>Pieris rapae</i>						
Clouded Sulphur	<i>Colias philodice/eurytheme</i>						
Cloudless Sulphur	<i>Phoebis sennae</i>						
Unknown:							
Additional:							
Coppers, Hairstreaks and Blues							
Gray Hairstreak	<i>Strymon melinus</i>						



Current UI: 10 Years Old



Requirements

- Cross Platform
- Offline functionality
- Ability to upload surveys to database from app
- Build to last several years with little to no maintenance
- Easy to use



Proposed solution

What is it?

- Progressive Web Application (PWA)

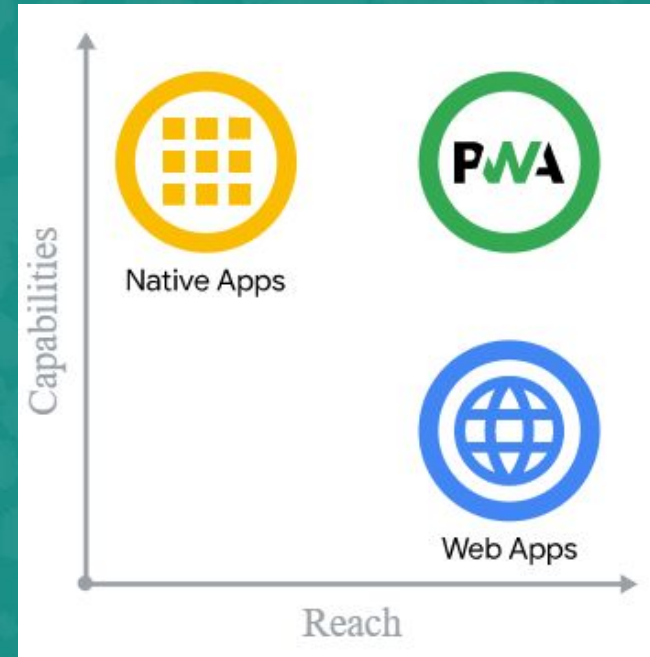


- Mobile application
- React front-end
- Serverless back-end (AWS)
- Offline-first



- Tool

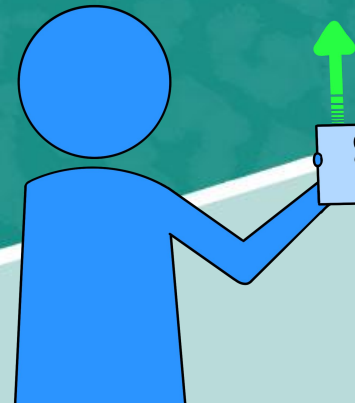
- Used to upload and record butterfly survey data
- Data can be downloaded or exported



How does it work?



1. Install app
2. Create new survey
3. Walk a route, tapping the photo of any butterfly species the surveyor encounters
4. Each screen tap records quantities, coordinates, weather and timing



How does it compare?

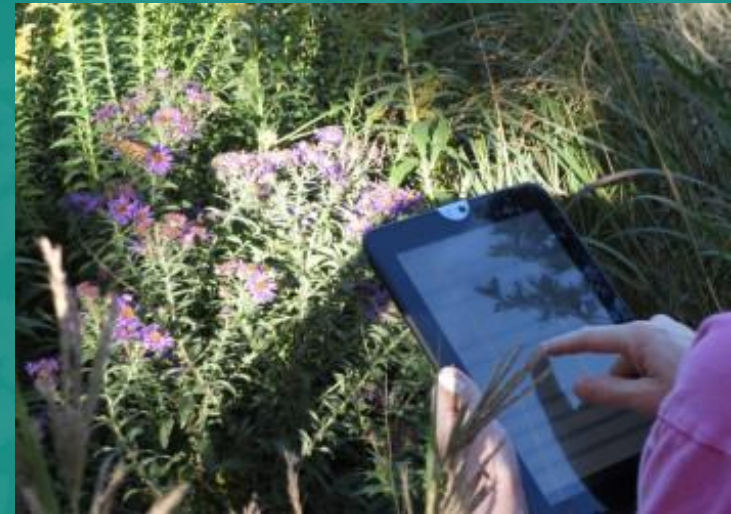


- Paper and pencil
 - Sometimes inconvenient
 - Data entry step
 - Our client mentioned that the process of marking down a new butterfly should be faster/as fast as making a mark on a sheet of paper
- Old UBR
 - Available only on Android devices
 - Still requires a manual data entry step
 - Unintuitive



Why this will be successful

- **Butterfly researchers**
 - Data (GPS, Weather, Time)
 - No manual data entry
- **Surveyors**
 - Cross platform
 - Easier than paper
 - Less to carry on their walks



Questions?

