

## Glucose Alerting System

Client: Olive Cernigila & Callie Berg, Dr. Beth Martin

Advisor: Dr. John Puccinelli

Design Team:

Isabel Ploessl - Team Leader

Claudia Beckwith – BWIG & BPAG

Lauren Klein – BSAC & Communicator

Business: Kiera Klemm

Date: 3/26/26

### Problem Statement:

Parents and caregivers of children with T1D often struggle to quickly see and interpret glucose readings, leading to stress and delayed decisions. The Wearable Glucose Alerting System aims to solve this problem by providing a clear, visible signal that instantly shows when a child's blood sugar needs attention.

### Brief Status Update:

**We are fixing issues and preparing for ShaRx competition!**

### Summary of Weekly Team Member Design Accomplishments:

Whole Team: Tweaks and final fixes!

Name	Activity	Time (hr)	Week Total (hr)
Isabel Ploessl	<ul style="list-style-type: none"><li>• Show and Tell</li><li>• Client Meeting</li><li>• Making edit to box designs</li><li>• Format progress report</li></ul>	1 hr 1 hr 3 hrs ½ hr	5.5 hrs

Claudia Beckwith	<ul style="list-style-type: none"> <li>• Show and Tell</li> <li>• Client Meeting</li> <li>• Update BLE to be continuously “findable”</li> <li>• Purchasing Request and Invoicing Documentation</li> </ul>	1 hr 1 hr ½ hr ½ hr	3 hrs
Lauren Klein	<ul style="list-style-type: none"> <li>• Show and Tell</li> <li>• Client Meeting</li> <li>• Dr. N Meeting</li> <li>• Battery Troubleshooting &amp; New Parts Research</li> <li>• BSAC</li> </ul>	1 hr 1 hr 1 hr 1 hr 1 hr	5 hrs
Kiera Klemm	<ul style="list-style-type: none"> <li>• RACE Marketing Plans</li> <li>• Possible partnership research</li> </ul>	2 hr 1 hr	3 hr







## Weekly/Ongoing Difficulties: Battery Connection

Upcoming Team and Individual Goals:

- Team:
  - Finish edits before show and tell on Aril 9<sup>th</sup>
- Isabel Ploessl:
  - Final box
  - Receive new battery parts
  - Fix new battery w/Lauren
  - Send clients ShaRx pitch
- Claudia Beckwith:
  - App interface updates
- Lauren Klein:
  - Fix battery & circuit
  - Meet with Clients to prep for ShaRx pitch
  - Begin circuit testing
- Kiera Klemm:
  - Continue marketing plan research

- ShaRx pitch preparation

### Project Timeline :

Project Goal	Deadline	Team Assigned	Progress	Completed
Client Meeting	1/29	ALL	100%	YES 
Weekly Progress Report	1/29	ALL	100%	YES 
PDS	2/5	ALL	100%	YES 
Design Matrix	2/13	ALL	100%	YES 
Preliminary Presentations	2/20	ALL	100%	YES 
Preliminary Deliverables	2/25	ALL	100%	YES 
Show and Tell	3/20	ALL	100%	YES 
Poster Presentations	4/24	ALL	15%	
Final Deliverables	4/29	ALL	15%	

### Expenses :

Category 1 - Appearance										
Item	Description	Manufacturer	Mft Pt#	Vendor	HS Code	Date	Qty	Cost Each	Total	Link
PLA Box Prototype	Box to fit new electronic components	UW Makerspace	N/A	UW Maker space	N/A	3/11/2026	1	0.27	0.27	N/A
Resin Box Prototype	Resized box for electrical housing	UW Makerspace	N/A	UW Maker space	N/A	3/17/2026	1	5.07	5.07	N/A

Watch Band	Apple watch compatible silicone band	PolyJoy	DBGJB Z001Q	Amazon	N/A	3/13/2026	2	4.99	9.99	<a href="#">Link</a>
PLA Box Prototype	Testing new dimensions	UW Makerspace	N/A	UW Makerspace	N/A	3/23/2026	1	0.27	0.27	N/A
Resin Box Prototype	Testing with new circuit components	UW Makerspace	N/A	UW Makerspace	N/A	3/24/2026	1	2.36	2.36	N/A
<b>Category 2 - Internal/Electronic Components</b>										
Item	Description	Manufacturer	Mft Pt#	Vendor	HS Code	Date	Qty	Cost Each	Total	Link
Seed StudioXIAO ESP32-C6 (3PCS)	Microcontroller for internal bracelet circuitry	Seed Studio	102010574	Seed Studio	8543709990	2/4/2026	1 (3 pack)	19.98	19.98	<a href="#">XIAO C6 microcontroller (3 pack)</a>
1 x NeoPixel Jewel - 7 x 5050 RGB LED with Integrated Drivers [ID:2226]	LED light for bracelet	Adafruit Industries	2226	Adafruit Industries	N/A	2/4/2026	1	20.39	20.39	<a href="#">NeoPixel Jewel - 7 x 5050 RGB LED with Integrated Drivers : Adafruit Industries, Unique &amp; fun DIY electronics and kits</a>
1 x Lithium Ion Polymer Battery -	Battery for bracelet	Adafruit Industries	1578	Adafruit Industries	N/A	2/4/2026	1	22.50	22.50	<a href="#">Lithium Ion Polymer Battery - 3.7v 500mAh : Adafruit Industries, Unique &amp; fun DIY electronics and kits</a>

3.7v 500mAh											
1 x Lithium Ion Polymer Battery - 3.7v 500mAh	Battery for bracelet	Adafruit Industries	1578	Adafruit Industries	N/A	3/24 /202 6	1	7.9 5	7. 95		<a href="#">Lithium Ion Polymer Battery - 3.7v 500mAh : Adafruit Industries. Unique &amp; fun DIY electronics and kits</a>
Adafruit Industries LLC LIPOLY BATTERY CHARGER W/USB C	Battery Forward Charger	Adafruit Industries	4410	Adafruit Industries	N/A	3/24 /202 6	1	5.9 5	5. 95		<a href="https://www.digikey.com/en/products/detail/adafruit-industries-llc/4410/10673110">https://www.digikey.com/en/products/detail/adafruit-industries-llc/4410/10673110</a>
Pin Cable Male Header	Battery connector or cable	Adafruit Industries	3814	Adafruit Industries	N/A	3/24 /202 6	2	0.7 5	1. 5		<a href="https://www.digikey.com/en/products/detail/adafruit-industries-llc/3814/9380221">https://www.digikey.com/en/products/detail/adafruit-industries-llc/3814/9380221</a>
								<b>TO</b>	<b>96</b>		
								<b>TAL</b>	<b>.2</b>		
								<b>:</b>	<b>3</b>		