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: 3/19/26

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 fabricating and getting ready for show and tell!

Summary of Weekly Team Member Design Accomplishments:

Whole Team: Fabrication

Name	Activity	Time (hr)	Week Total (hr)
Isabel Ploessl	• Recreating/Changing box ○ on SolidWorks • Created mock app interface • Researched how to connect to phone	5 hrs 2 hrs 1 hr	8.5 hrs

	• Format progress report	½ hr	
Claudia Beckwith	• Reformat app interface • Build BLE connection to microcontroller • Integrate BLE into app • LabArchives update with new code • Order request and receipt upload	4 hrs 1.5 hr 3 hrs 1 hr 0.5 hrs	10 hrs
Lauren Klein	• BSAC • Battery Issue research • Protocol for Circuit	1 hr 2 hrs 2 hrs	5 hrs
Kiera Klemm	• RACE Marketing Plan • Market size supplemental slides	2 hr 2hr	4 hrs

Weekly/Ongoing Difficulties: BLE connection establishment

Upcoming Team and Individual Goals:

- Team:
  - Take advice from show and tell to start deciding on connectivity
- Isabel Ploessl:
  - Start testing box
- Claudia Beckwith:
  - Maintain BLE connection when app sleeps
- Lauren Klein:
  - BSAC
  - Testing circuit
  - Final research
- Kiera Klemm:

- Revise slides
- RACE analysis for partnership

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		
Final Deliverables	4/29	ALL		

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 compnents	UW Madersp ace	N/A	UW Makersp ace	N/A	3/11/2026	1	0.27	0.27	N/A
Resin Box Prototype	Resized box for electrical housing	UW Makersp ace	N/A	UW Makersh pace	N/A	3/17/2026	1	5.07	5.07	N/A
Watch Band	Apple watch compatibl	PolyJoy	DBGJBZ 001Q	Amazon	N/A	3/13/2026	2	4.99	9.99	Link

	e silicone band									
Category 2 - Internal/Electronic Components										
Item	**Description**	**Manufacturer**	**Mft Pt#**	**Vendor**	**HS Code**	**Date**	**QTY**	**Cost Each**	**Total**	**Link**
Seeed StudioXIAO ESP32-C6 (3PCS)	Microcontroller for internal bracelet circuitry	Seeed Studio	102010574	Seeed Studio	8543709990	2/4/2026	1 (3 pack)	19.98	19.98	XIAO C6 microcontroller (3 pack)
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	NeoPixel Jewel - 7 x 5050 RGB LED with Integrated Drivers : Adafruit Industries , Unique & fun DIY electronics and kits
1 x Lithium Ion Polymer Battery - 3.7v 500mAh[ID:1578]	Battery for bracelet	Adafruit Industries	1578	Adafruitr Industreis	N/A	2/4/2026	1	22.50	22.50	Lithium Ion Polymer Battery - 3.7v 500mAh : Adafruit Industries , Unique & fun DIY electronics and kits
								TOTAL:	**62.87**	