



CONNECT

share

Interim - Group 05 - Digital Art



■ Digital Isolation

→ Metro passengers are physically packed but socially disconnected within private screen bubbles

■ Passive Users

→ Transit has shifted from a shared community space to a passive "digital void"

Problem Statement

02



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Industrial Organization
Engineering



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Systems Engineering



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Product Development



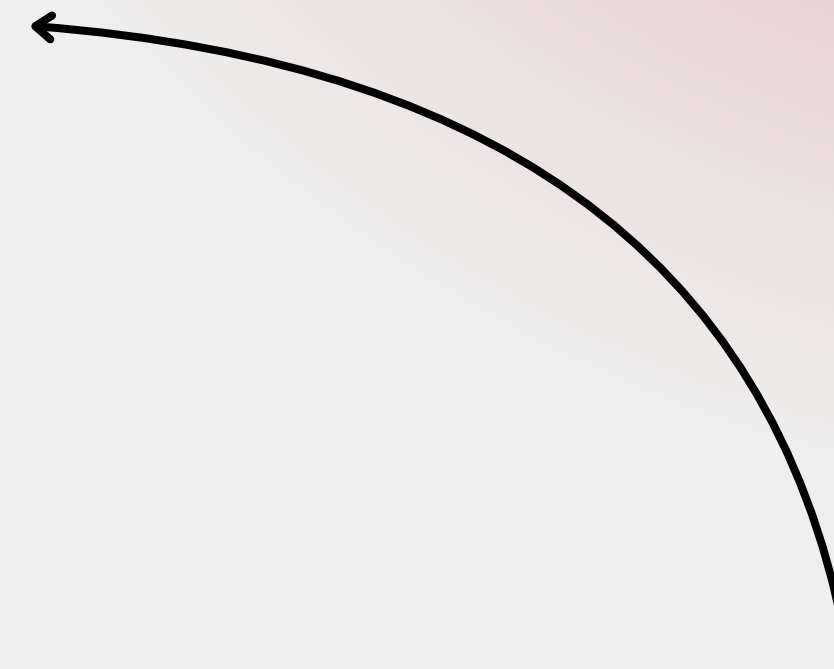
Leon Gunsilius
Interactive Media



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Information Technology



Julian Bednarek
Computer Science



Our Team



■ CONNECT

Visual Connection

- Interactive Poles
- Traveling Light
- Merging Colors

Personal Connection

- QR Code Bridge
- Audio Stories

Concept



■ **Target group**

Young Urban Commuters

- Gen Z & Millennials
- Students & young professionals
- Affected by “alone together” paradox

■ **Connection**

Break the Digital Bubble

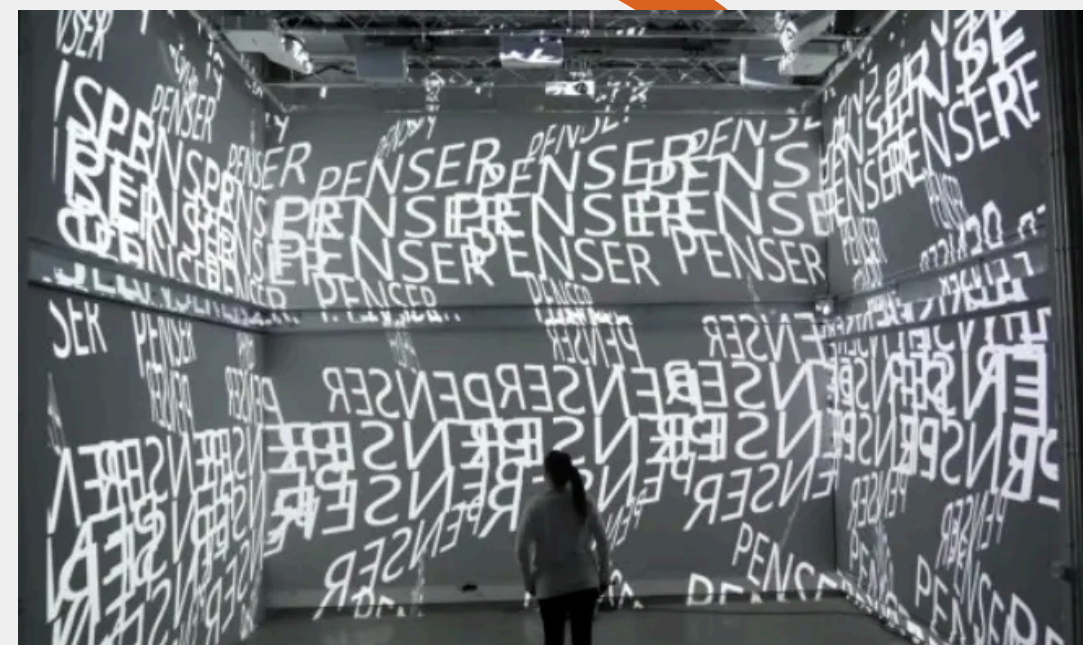
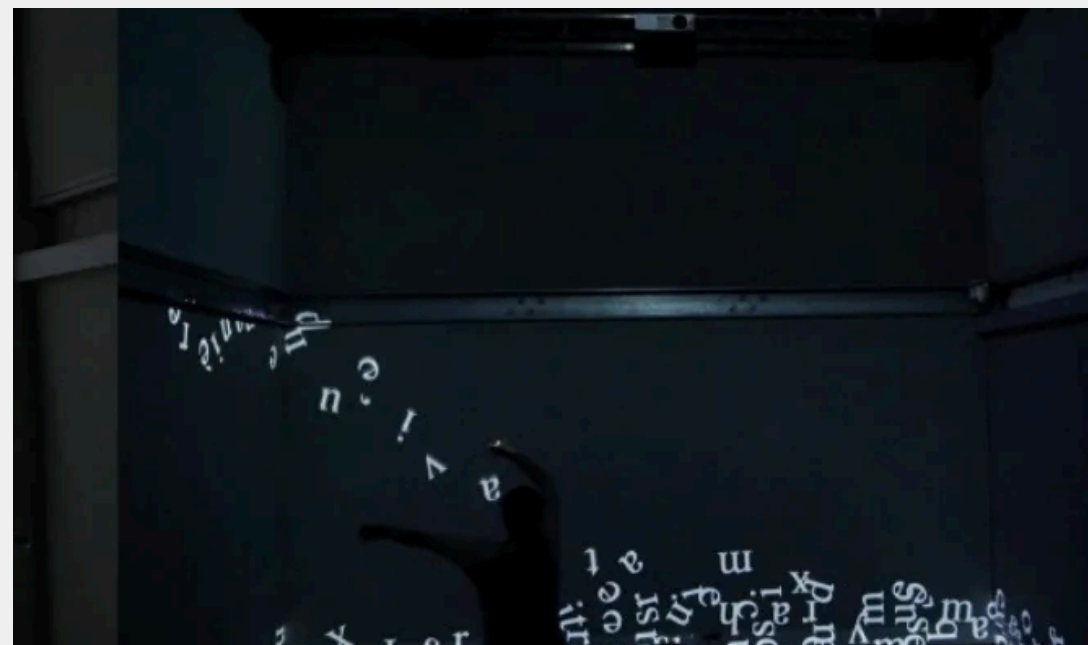
- Urban Well-being
- “Micro-Connections”

State of Art



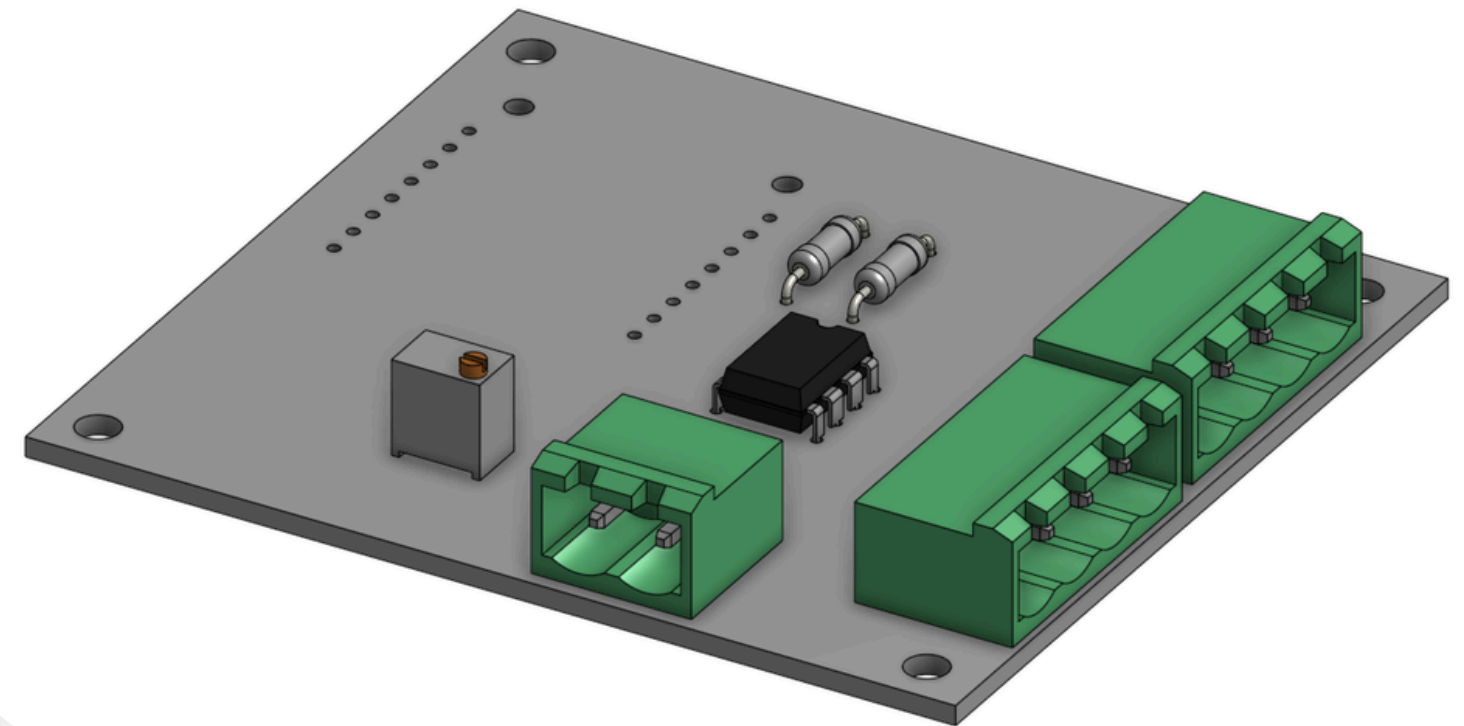
■ Interactive installations

- Kinetic Particles
- Camera and body tracking technology
- Same idea: collective, visual interaction

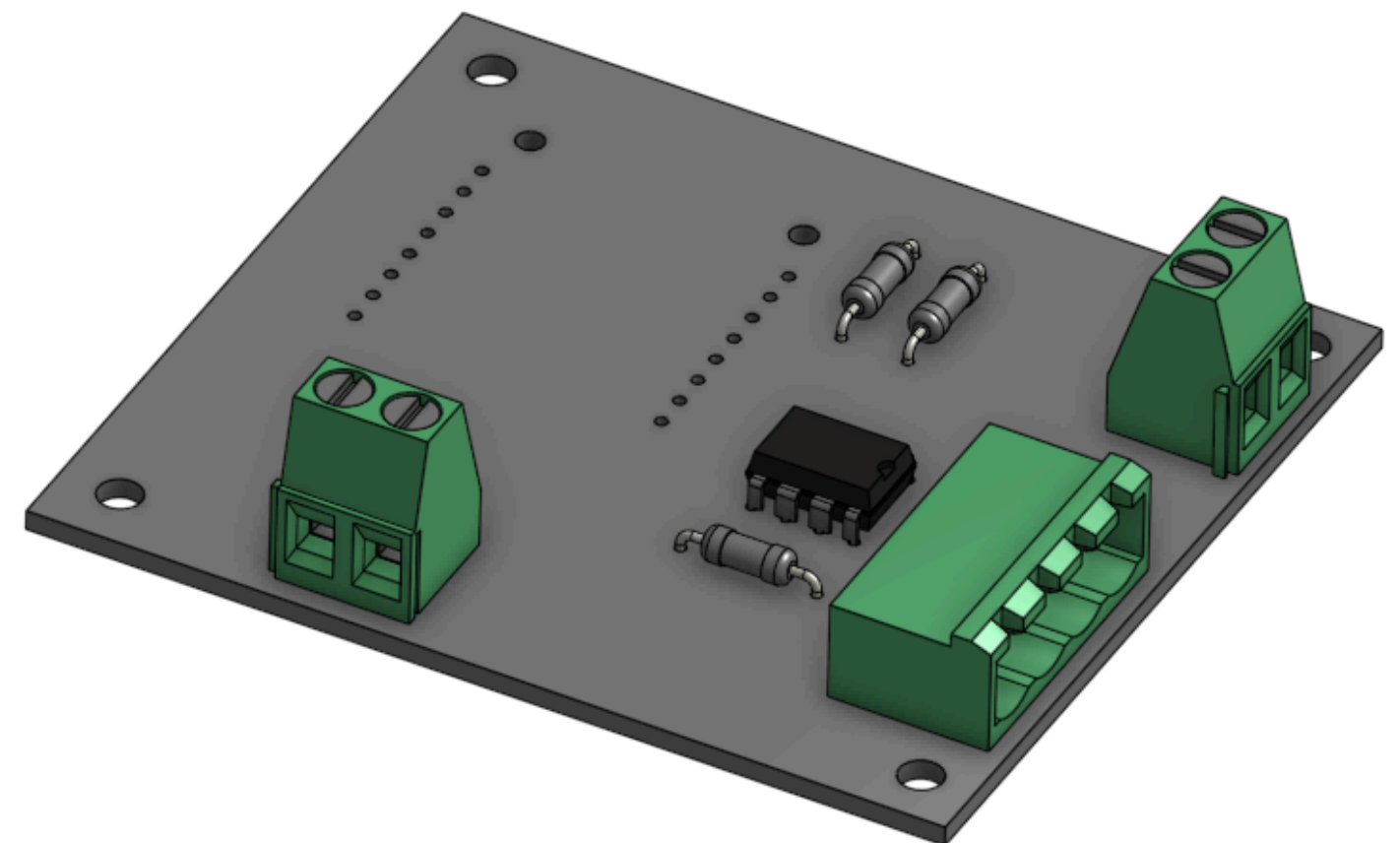


■ Research on technology

- Velostat pressure sheets
- CAN bus
 - protocol for noisy environment
- Datasheets from manufacturers
- Resulted in modular PCB structure



Sensor node PCB (pole)



Central node PCB

Project Management



Agile Framework & Planning

Methodology, Project Plan,
Evaluation



Scope, Time, Cost & Quality

Scope Management, Financial
Tracking, Quality Assurance



People & Stakeholder Management

Team Dynamics, Resource
Leveling, Stakeholder Engagement



Risk & Procurement

Risk Mitigation, Sourcing





■ **Social Marketing**

- Focus on social behavioural change
- Emotional value

■ **Business Model (B2G/B2B):**

- Value creation for both
- The passenger
- The infrastructure partner

■ **Main competitor:**

- The smartphone.
- Strategy: Utilise it by intentional delay

Marketing

■ Action plan

- Physical integration
- Guerrilla marketing in stations
- Digital storytelling via social media.

■ Process and control = PDCA cycle

- Focus on hard data
- 30–60 seconds less screen time & 1,000 stories.



People

Disrupting the
"Together Alone"
paradox (SDGs 3 & 11).
Inclusive, barrier-free
connection

Profit

Highly cost-effective
prototype (< 100 €).
Built for scalability and
indirect value creation.



Planet

70% more energy-
efficient than
traditional displays.
Uses bio-based PLA

LCA

Designed with the
full cycle in mind,
emphasizing
responsible e-waste



Sustainability

Ethics



Privacy

No personal data stored. Data deletion when no longer in use

The Safety Dilemma

Human safety prioritized over ecology / fire-certified material (PA Rail) over bio-plastic (PLA)

Inclusive

Physically accessible to everyone

Commercial interests

Separation between passenger data and commercial interests





CONNECT

Brand



For everyday metro passengers who want to experience their commute differently

How does it work?
1. Touch the handrail
2. Look up
3. Experience

Why?
Invites passengers to share a small moment together during their commute.

Share your experience

LOOK UP CONNECT

Trindade Station | Yellow Line (Line D)
ISEP INSTITUTO SUPERIOR DE ENGENHARIA DO PORTO @Connect_Porto

CONNECT

Color Palette

Colors set the tone and elicit strong feelings in users, influencing user perceptions and emotions. Research reveals that users make a subconscious judgment of a product within 90 seconds of initial viewing and 62%-90% of the assessment is based on the color alone. This is on visual communication.

CONNECT

Buttons

Primary

Normal	Icon-Left	Icon-Right	Icon Only
Button	Button	Button	Button
Button	Button	Button	Button
Button	Button	Button	Button
Button	Button	Button	Button

Secondary

Normal	Icon-Left	Icon-Right	Icon Only
Button	Button	Button	Button
Button	Button	Button	Button
Button	Button	Button	Button
Button	Button	Button	Button

CONNECT

Typography

Typography is the discipline designers use to arrange typefaces in a way that is legible, readable, and scalable. It must also be visually appealing. Typography can enhance a product's aesthetic, optimize user-friendliness, and improve brand perception.

Font

Geologica

HEADLINES

Desktop	Tablet
Headline 1	Headline 1
Headline 2	Headline 2
Headline 3	Headline 3
Headline 4	Headline 4
Headline 5	Headline 5

BODY

Body 1	Body 1
Body 2	Body 2

BUTTON/LINK

Large	Normal	Medium
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FIELDS

Text_Placeholder	Text_Fill	Text_Disabled
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50 100 200 300 400 500 600 700 800

Purple

50 100 200 300 400 500 600 700 800 900

Orange

50 100 200 300 400 500 600 700 800 900

Grey

50 100 200 300 400 500 600 700 800 900

dark blue

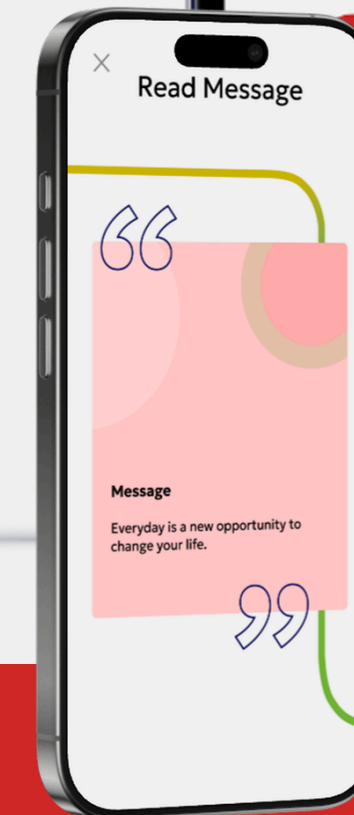
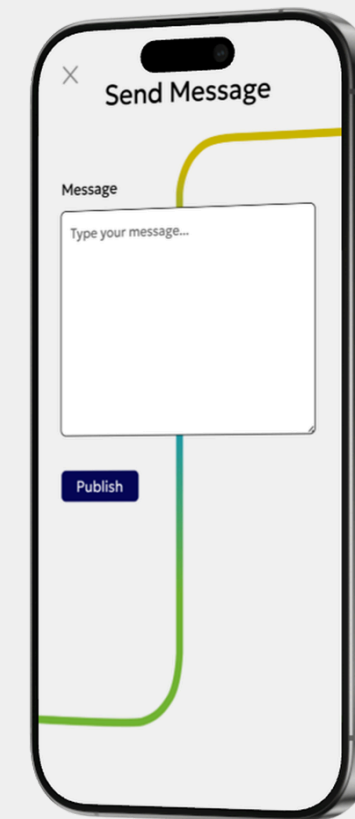


Web App

- **Simplicity** - no Logins, no users
- accessible
- time-efficient
- Only two Possibilities

→ Send Message

→ Read / Listen Message

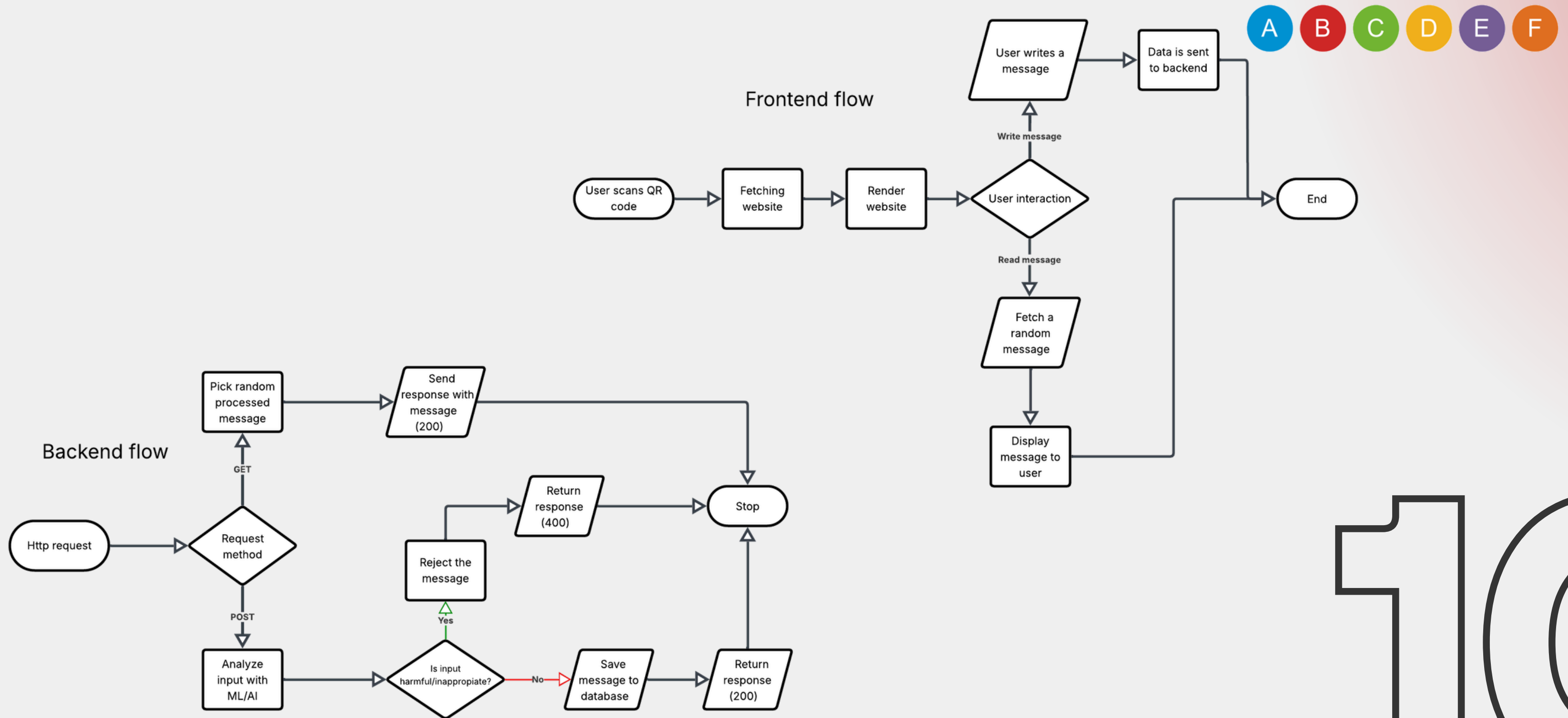


Solution Design



10

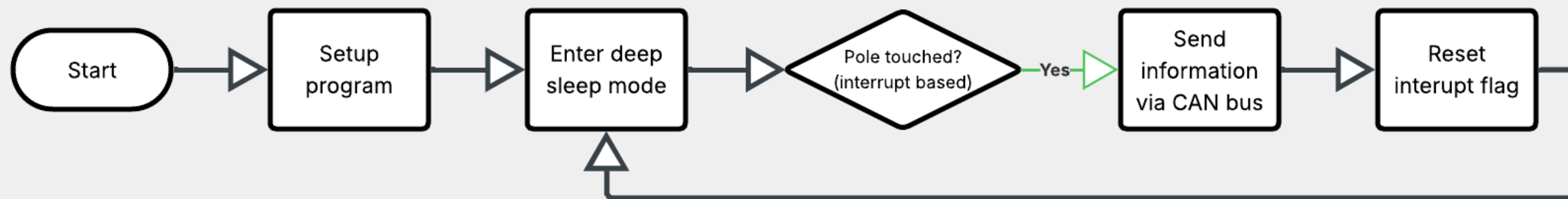
Solution Design



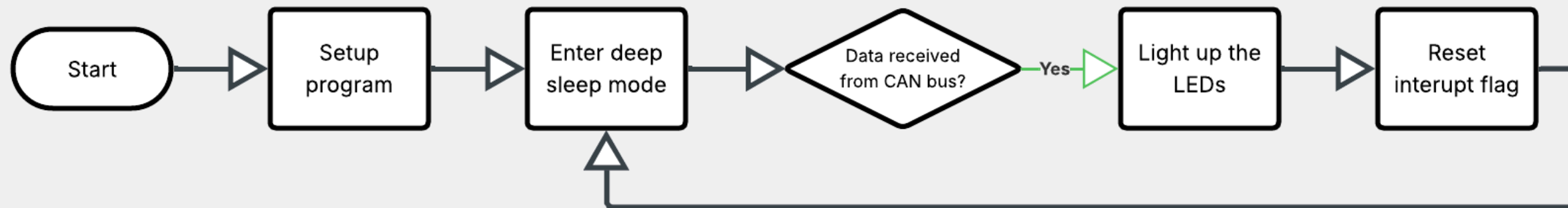
Solution Design

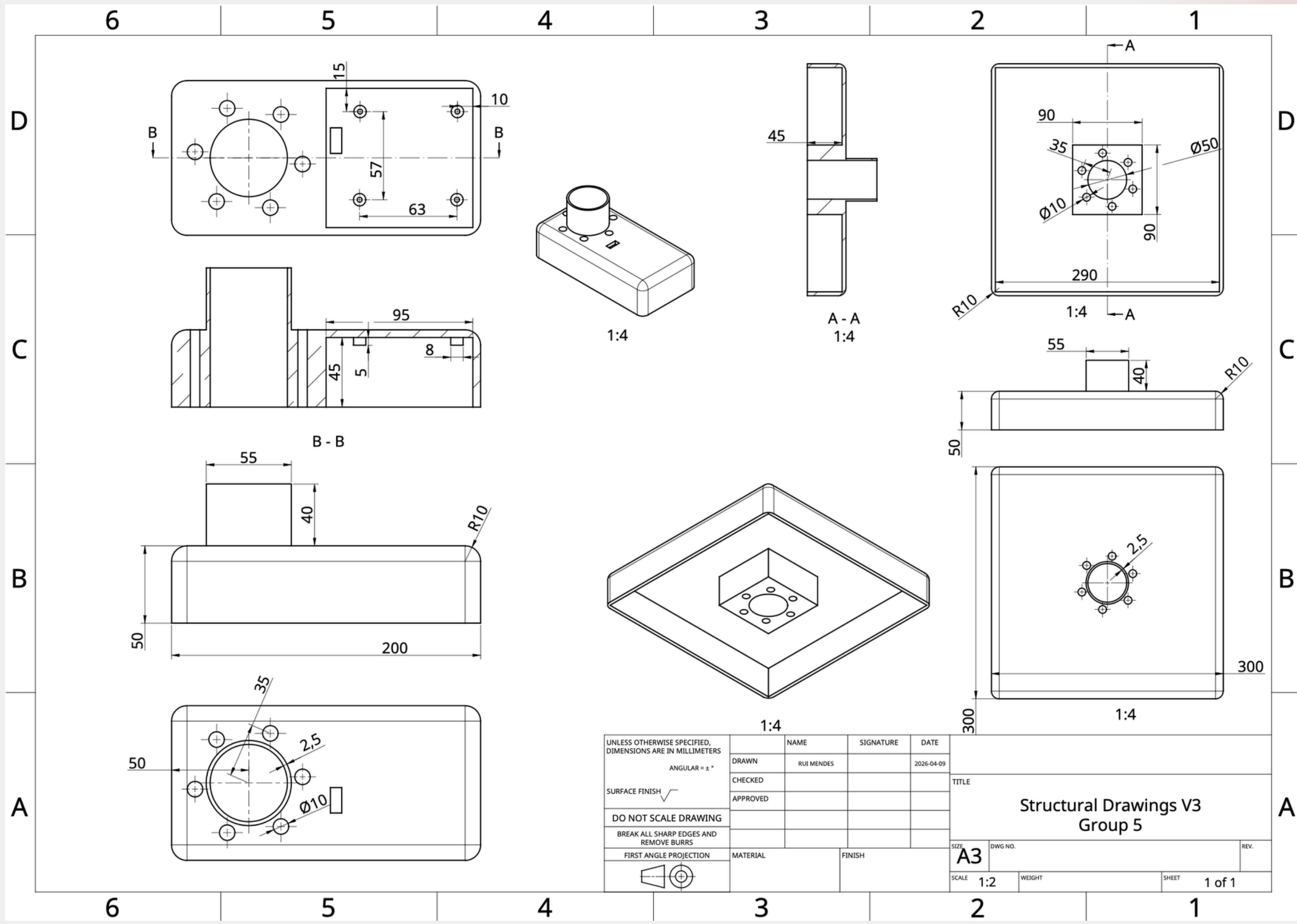


MCU handling velostat sensor



MCU handling LED strip





UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS ANGULAR = ± ° SURFACE FINISH DO NOT SCALE DRAWING BREAK ALL SHARP EDGES AND REMOVE BURRS FIRST ANGLE PROJECTION	NAME	SIGNATURE	DATE
	DRAWN	RUI MENDES	2026-04-09
	CHECKED		
	APPROVED		
MATERIAL	FINISH		

TITLE		Structural Drawings V3 Group 5	
SIZE	DWG NO.	REV.	
A3			
SCALE	WEIGHT	SHEET	1 of 1
1:2			

Conclusion



Result

Innovative solution to combat social isolation in public transit

Innovation

Ethics and sustainability-driven design

Team

Synergy through diverse expertise and backgrounds.

Outlook

Validating real-world utility through a functional prototype.



Thank You

For Listening

