

MediPack-Medicine Machine

MEB2063 - ENGINEERING TEAM PROJECT (GROUP 15)

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Introduction



MediPack is a prototype vending machine that utilizes RFID and Apps technology to dispense the type and amount of prescribed medication correctly and instantly after a regular appointment with a doctor.

Caters towards **SDG 3 : "Good Health & Well-being"** by improving current healthcare system in hospitals and clinics. The prototype acts as an inventory and patients do not need to retrieve prescription over-the-counter.

Problem statement

The long waiting time in hospitals or clinics reduces accessibility towards healthcare services, poses a risk of spreading contagious diseases among patients during crowded hours and increases the stress of healthcare staff.

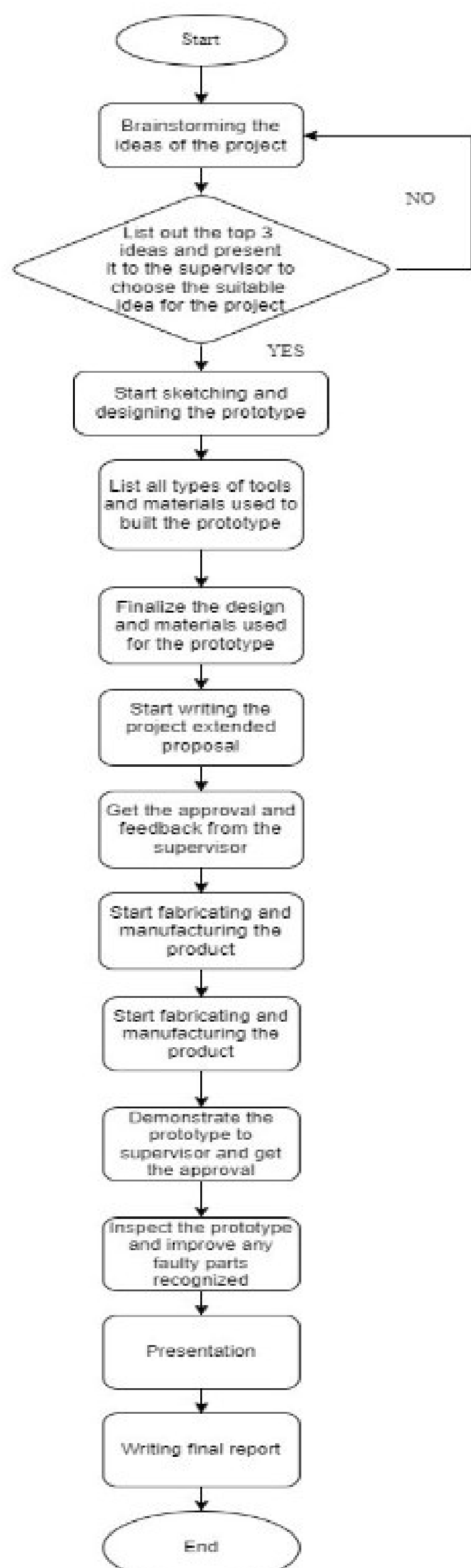
Objectives

- 1.To design a smart vending machine prototype that can dispense different types of common medicines based on a patient's prescription.
- 2.To apply our engineering knowledge learned in classroom into solving real world problems according to the Sustainable Development Goals 2030, specifically SDG 3.
- 3.To develop a team spirit among members of the team project.

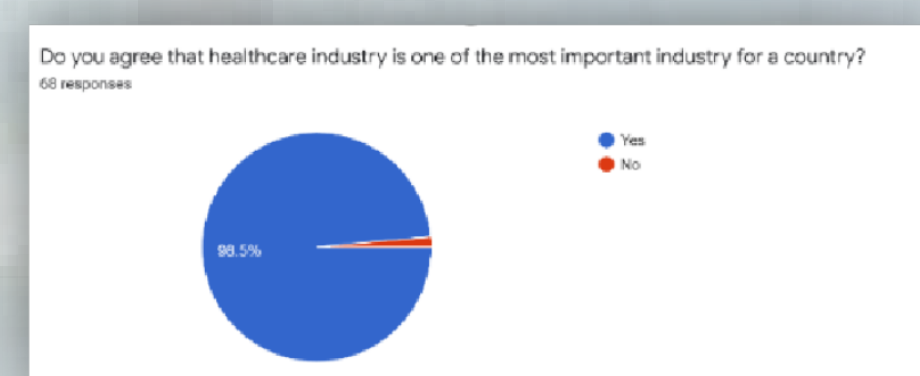
Prototype and Design Concept



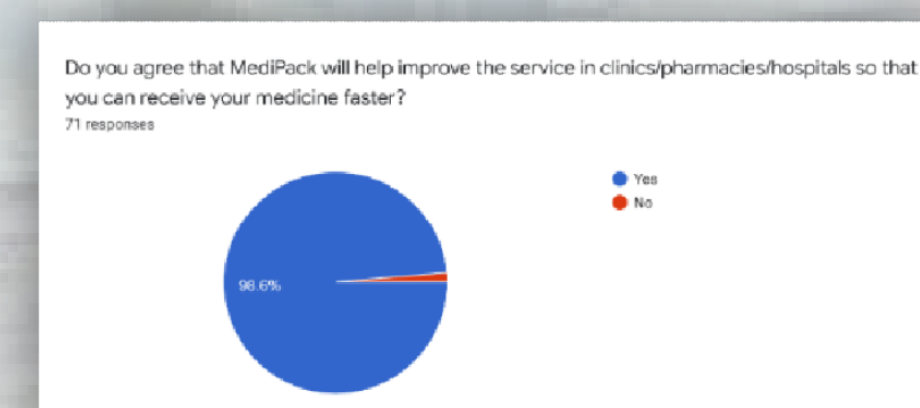
Working Principles



Result



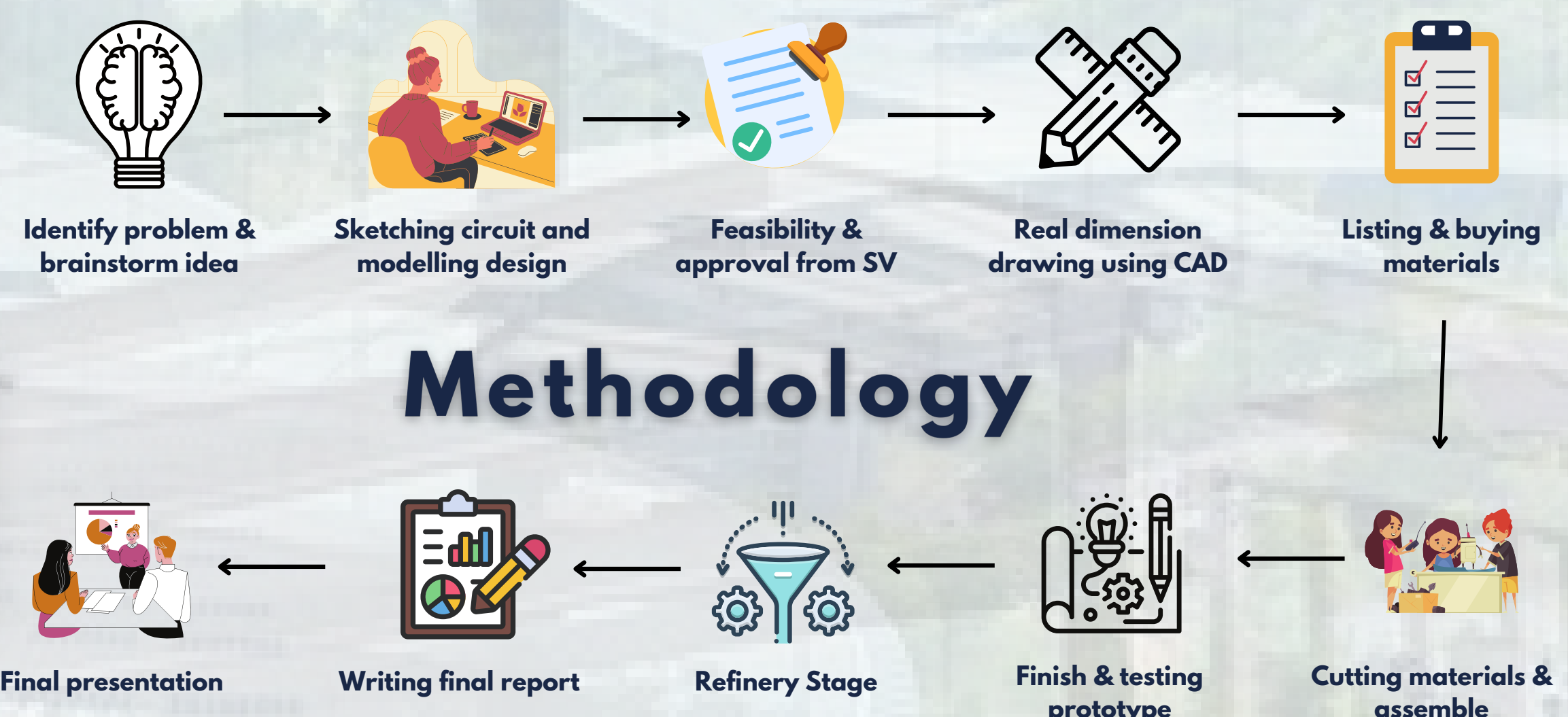
98.5% agrees that healthcare industry is one of the most important industry for a country.



98.6% agree that MediPack will help improve the service in medical centres.

Business Consideration

ETP Parts and Component Check List				
Category	Item	Single Price/ RM	Amount	Total Price
Electronics	Arduino Mega	160.00	1	160.00
	Mifare RC522 RFID Kit	9.00	1	9.00
	RFID Card	1.50	5	7.50
	LCD Display (Blue)	12.90	1	12.90
	SG90 Micro Servo	6.50	6	39.00
	Mini Breadboard	2.50	1	2.50
	Lithium Battery	6.90	1	6.90
	Relay 5V	1.30	1	1.30
	Male-Male Wire 10cm (per 10 pieces)	3.00	2	6.00
	Female-Female Wire 20cm (per 10 pieces)	3.00	2	6.00
	Male-Female Wire 20cm (per 10 pieces)	3.00	2	6.00
	Total:			257.10
Mechanical	Acrylic Prespek	20.00	1	20.00
	Total:			20.00
	Total :			RM277.10



Methodology

Conclusion

Our project is targeted and impacted only in the healthcare industry where we want to improve our services

Time is a crucial element in our daily lives, our project is significant to our community as it saves time for people.

98.6% agree that MediPack will help improve the service in medical centres.