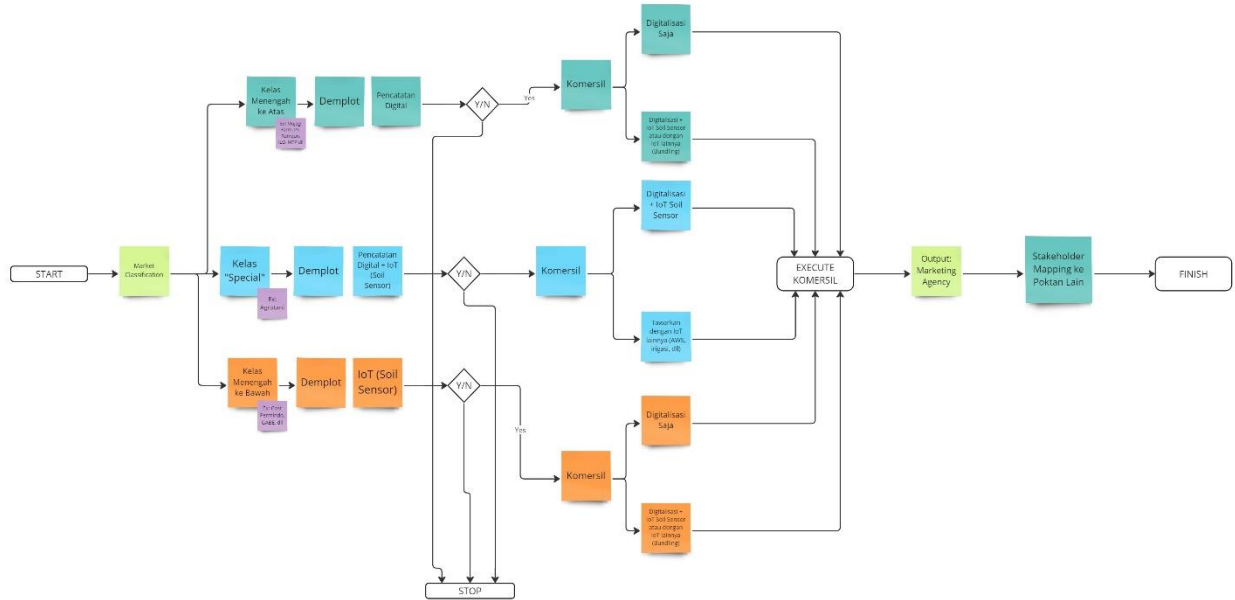


## PORTFOLIO

## Human Resource Planning

### Field Officer Planning

*Tools: MIRO, Draw.io*

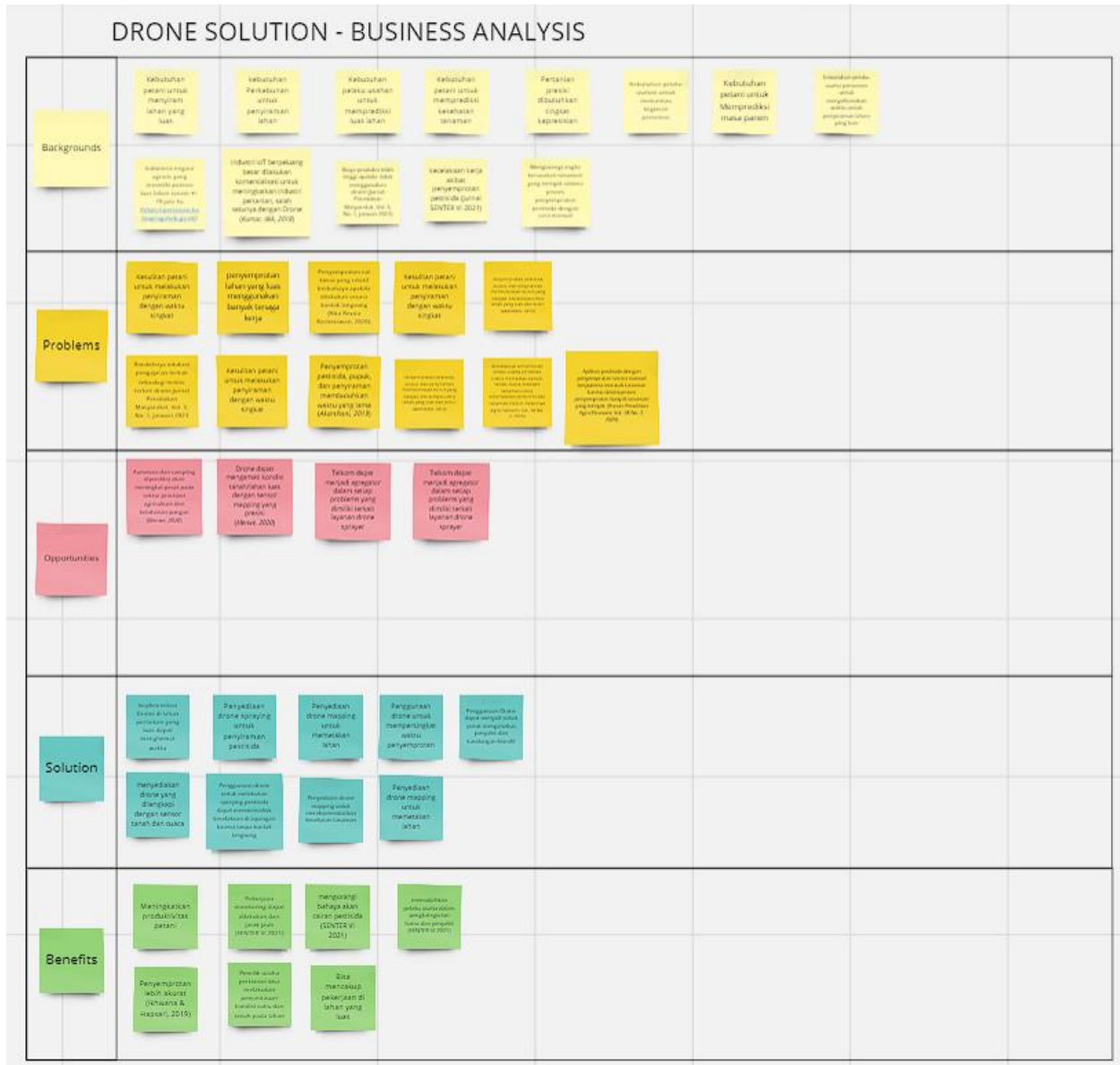


### Internship Participants Resource Planning

*Tool: MIRO*

Name	Short Term		Mid Term	Long Term	
A	Survey pasar SMK	Reading club: SMK	APT - Cianjur (GH)	GH - SMK	
B	Survey Pasar Poktan	Reading club: Poktan	APT - Cianjur (GH)	GH - Poktan	
C		Reading club: Data GH	APT - Fertilizer Calc (SM)	Analysis data cuaca GH	Kebutuhan IoT untuk GH
D		Reading club: Data analis		Analysis data cuaca open field	
E	Reading club: Service rumah	Monitor Vendor Drone	APT - Fertilizer Calc (SM)	Persebaran smm	
F	Reading club: Review paper	Monitor Vendor Drone	Business Dev Kebun	Persebaran "sabu"	

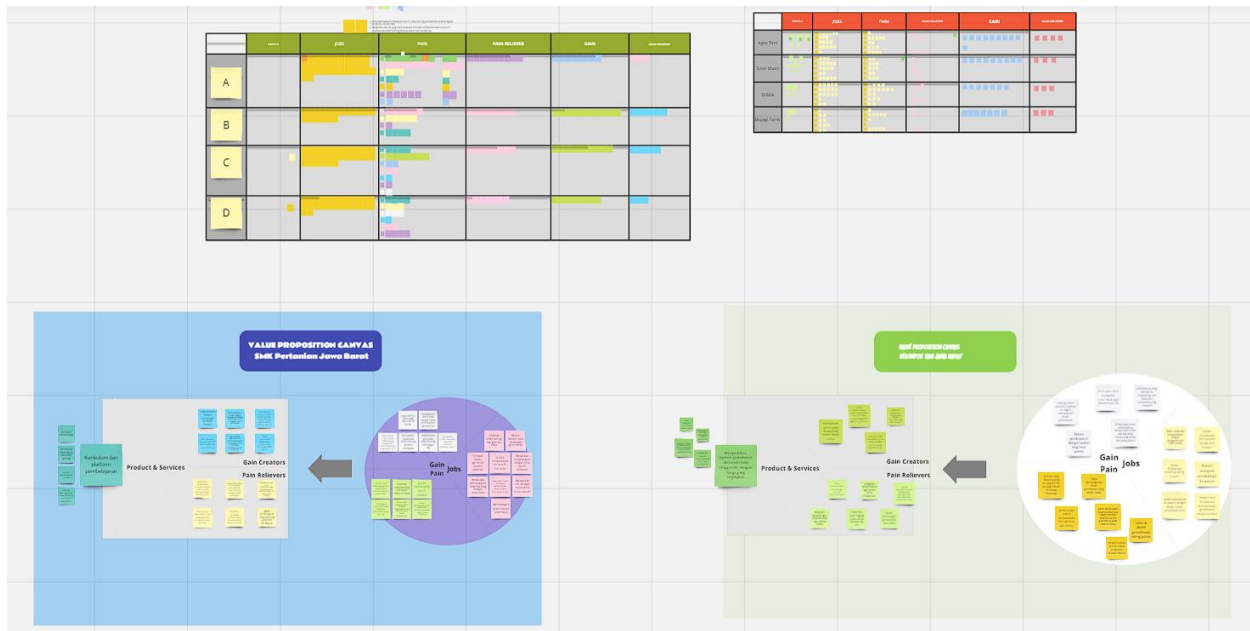
*Tools: MIRO, Draw.io*



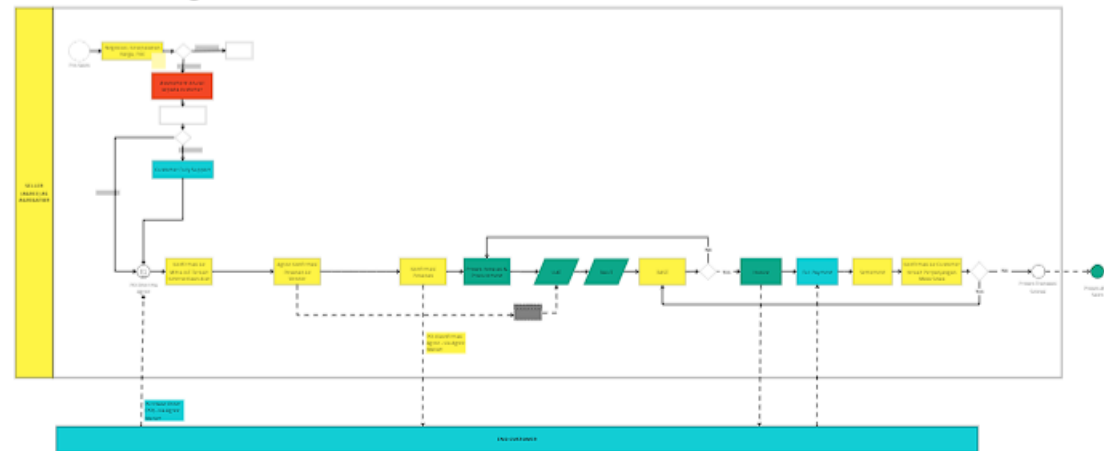
## Product Validation - Value Proposition Canvas

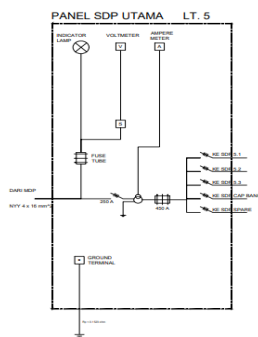
### Product Validation Canvassing

Tool: MIRO



*Tool: MIRO*





## Programming

### C/C++

*Tools: Arduino IDE, Visual Studio Code*

```
1 #include <SPI.h>
2 #include <nRF24L01.h>
3 #include <RF24.h>
4 #include <SoftwareSerial.h>
5 #include <PZEM004Tv30.h>
6 #include <PZEM004T.h>
7
8 //PZEM004Tv30 pzem(10,11);    /// Software Serial pin 10 (RX) & 11 (TX) for arduino uno
9 //PZEM004Tv30 pzem(&Serial2); // (RX) PZEM004Tv30 -> Tx2Arduino ; (TX) PZEM004Tv30 -> Rx2ArduinoMega for arduino mega2560
10 //PZEM004Tv30 pzem2(&Serial3); // (RX) PZEM004Tv30 -> Tx3Arduino ; (TX) PZEM004Tv30 -> Rx3ArduinoMega for arduino mega2560
11
12 //PZEM004Tv30 pzem(10,11);    /// Software Serial pin 10 (RX) & 11 (TX) for arduino uno
13 PZEM004T pzem(&Serial2); // (RX) PZEM004Tv30 -> Tx2Arduino ; (TX) PZEM004Tv30 -> Rx2ArduinoMega for arduino mega2560
14 PZEM004T pzem2(&Serial3); // (RX) PZEM004Tv30 -> Tx2Arduino ; (TX) PZEM004Tv30 -> Rx2ArduinoMega for arduino mega2560
15 IPAddress ip(192,168,1,1);
16 IPAddress ip2(192,168,1,1);
17
18 RF24 radio(7, 8);
19 //variabel millis
20 unsigned long tb1 = 0;
21 unsigned long tb2 = 0;
22 unsigned long tb3 = 0;
23 unsigned long tb4 = 0;
24
25 unsigned long tn1;
26 unsigned long tn2;
27 unsigned long tn3;
28 unsigned long tn4;
29 const byte address[] = "nodel";
30
31 void setup() {
32 // put your setup code here, to run once:
```

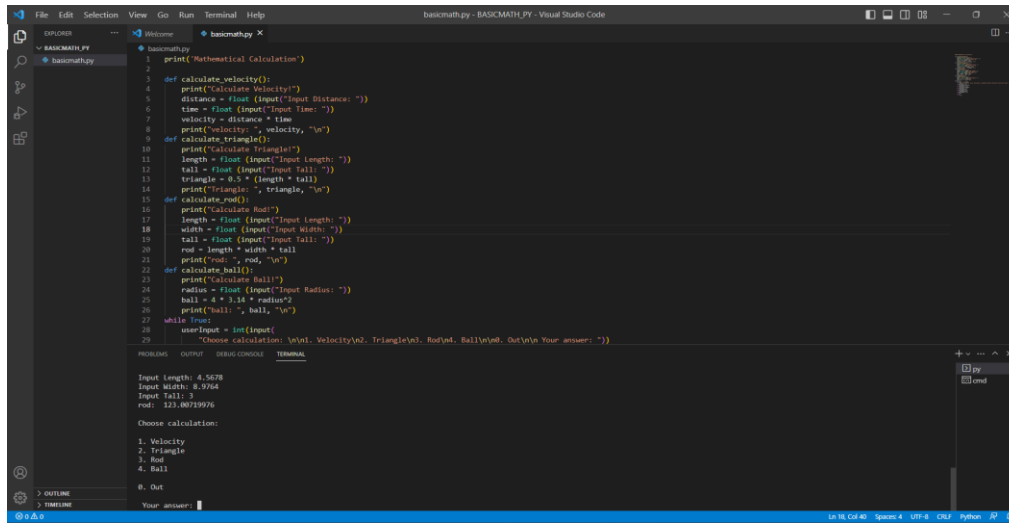
## HTML: Basic Website Design

*Tool: Visual Studio Code*

```
21 <td></td>
22 </tr>
23 <tr>
24 <td>THIS IS MY PUBLICATIONS, CHECK THIS OUT!</td>
25 </tr>
26 </tbody>
27 </table>
28 <table border="1">
29 <thead>
30 <tr>
31 <td>TITLE</td>
32 <td>YEAR</td>
33 <td>DOI</td>
34 </tr>
35 </thead>
36 <tbody>
37 <tr>
38 <td>The Prototype of Smart Garden Fertigation System with Solar Photovoltaic System Based on IoT </td>
39 <td>2021</td>
40 <td>https://doi.org/10.1109/ICWT52862.2021.9678421</td>
41 </tr>
42 <tr>
43 <td>Data Logger System for Hybrid Renewable Energy System (HRES)</td>
44 <td>2022</td>
45 <td>https://doi.org/10.1109/ICWT55831.2022.9935404</td>
46 </tr>
47 <tr>
48 <td>Smart Medication Box Based on Android Mobile Application</td>
49 <td>2022</td>
50 <td>https://doi.org/10.1109/ICWT55831.2022.9935404</td>
51 </tr>
52 <tr>
53 <td>Supervisory System for On-Grid Solar Power Plant</td>
54 <td>2022</td>
55 <td>https://doi.org/10.1109/FORTE1-ICET57243.2022.9972921</td>
56 </tr>
57 </tbody>
```

## Python

Tools: Arduino IDE, Visual Studio Code



```
1 print("Mathematical Calculation")
2
3 def calculate_velocity():
4     print("Calculate Velocity")
5     distance = float(input("Input Distance: "))
6     time = float(input("Input Time: "))
7     velocity = distance / time
8     print("Velocity: ", velocity, "\n")
9
10 def calculate_triangle():
11     print("Calculate Triangle")
12     length = float(input("Input Length: "))
13     tall = float(input("Input Tall: "))
14     triangle = 0.5 * (length * tall)
15     print("Triangle: ", triangle, "\n")
16
17 def calculate_root():
18     print("Calculate Root")
19     length = float(input("Input Length: "))
20     width = float(input("Input Width: "))
21     tall = float(input("Input Tall: "))
22     rod = length * width * tall
23     print("rod: ", rod, "\n")
24
25 def calculate_ball():
26     print("Calculate Ball")
27     radius = float(input("Input Radius: "))
28     ball = 4 * 3.14 * radius**2
29     print("ball: ", ball, "\n")
30
31 while True:
32     userInput = int(input(
33         "Choose calculation: 1.Vel, 2.Velocity, 3. Triangle, 4. Rod, 5. Ball, 6. Out\n"))
34     if userInput == 1:
35         calculate_velocity()
36     elif userInput == 2:
37         calculate_velocity()
38     elif userInput == 3:
39         calculate_triangle()
40     elif userInput == 4:
41         calculate_root()
42     elif userInput == 5:
43         calculate_ball()
44     elif userInput == 6:
45         break
```

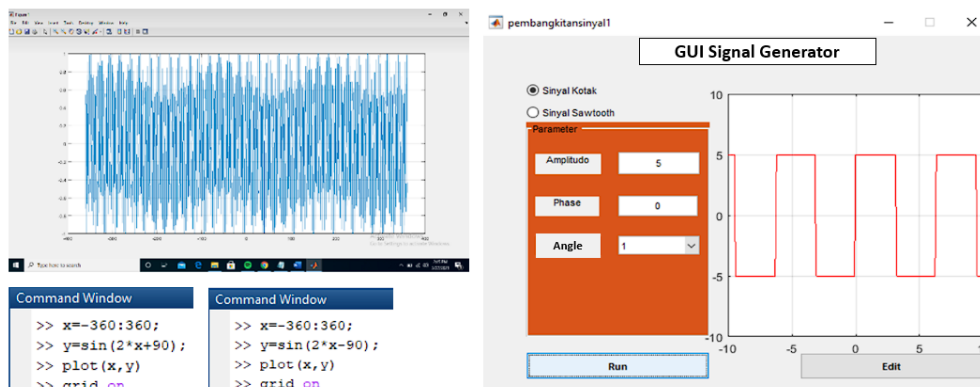
Terminal Output:

```
Input Length: 4.5678
Input Width: 4.9764
Input Tall: 3
rod: 123.80719976

Choose calculation:
1. Velocity
2. Triangle
3. Rod
4. Ball
5. Out
```

## MATLAB

Tool: MATLAB, Simulink



- PSIM: DC-DC Converter

