MEDICINE FLUID LEVEL INDICATOR USING I.O.T SYSTEM

INTARG®
EMINENT NURTURING IDEAS
MAJLIS AMANAH RAKYAT MARA
LEDANG

PROJECT BACKGROUND

Medicine Fluid Level Indicator Using IOT System is a system that notify user's of the fluid level inside the IV Drip bag over a network. IV Drip is a common procedure that taking place in any private / government hospital and veterinary clinics despite the risk of air-embolism when misconducted. There will be 32% of fatality rate and side effects would scoring from low blood pressure, difficulty of breathing and stroke.

PROBLEM STATEMENT

Air-embolism during IV Drip procedure

"Infused air may produces tissue necrosis if it reaches a vulnerable end organ such as the heart or brain."
(Wilkins,2012)

AWARDS AND RECOGNITION:

- Silver Award in Inventions De Geneva 2022
- Gold Medal in Regional Innovation Showcase on Team Excellence 2021 (RiStEx)
- Top 19 Group in Annual Productivity and Innovation Showcase 2021 (ArISE)
- Third Place in Malaysia Technology Expo 2021 (MTE)
- Gold Award in International Invention, Innovative and Creative 2020 (InIIC)

AUTHORS
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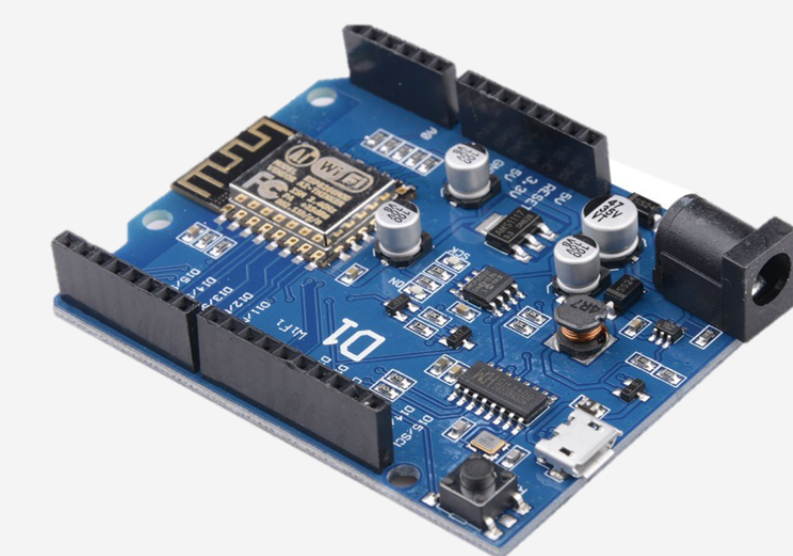### INSTITUTION
MARA High Skill College of Ledang, Johor.

COMMERCIALIZATION

Our target clients would be:
- General Hospital
- Private Hospital
- Veterinary Clinics

HTGK HOSPITAL TANGKAK
Gleneagles
PANTAI HOSPITAL Kuala Lumpur
KPJ HEALTHCARE
HTAR KLANG

NOVELTY

This system uses two non-contactless sensors to detect the fluid level and notify user's phone through BLYNK Apps.

Device	Alarm	Display	Water Level	IOT
IVSMART	✔	✔	✔	✔
DripAssist	✔	✔	✔	
IOT Based Drip Infusion Monitoring System	✔		✔	✔

Input: Two non-contactless sensors

↓

Controller: WIFI Module
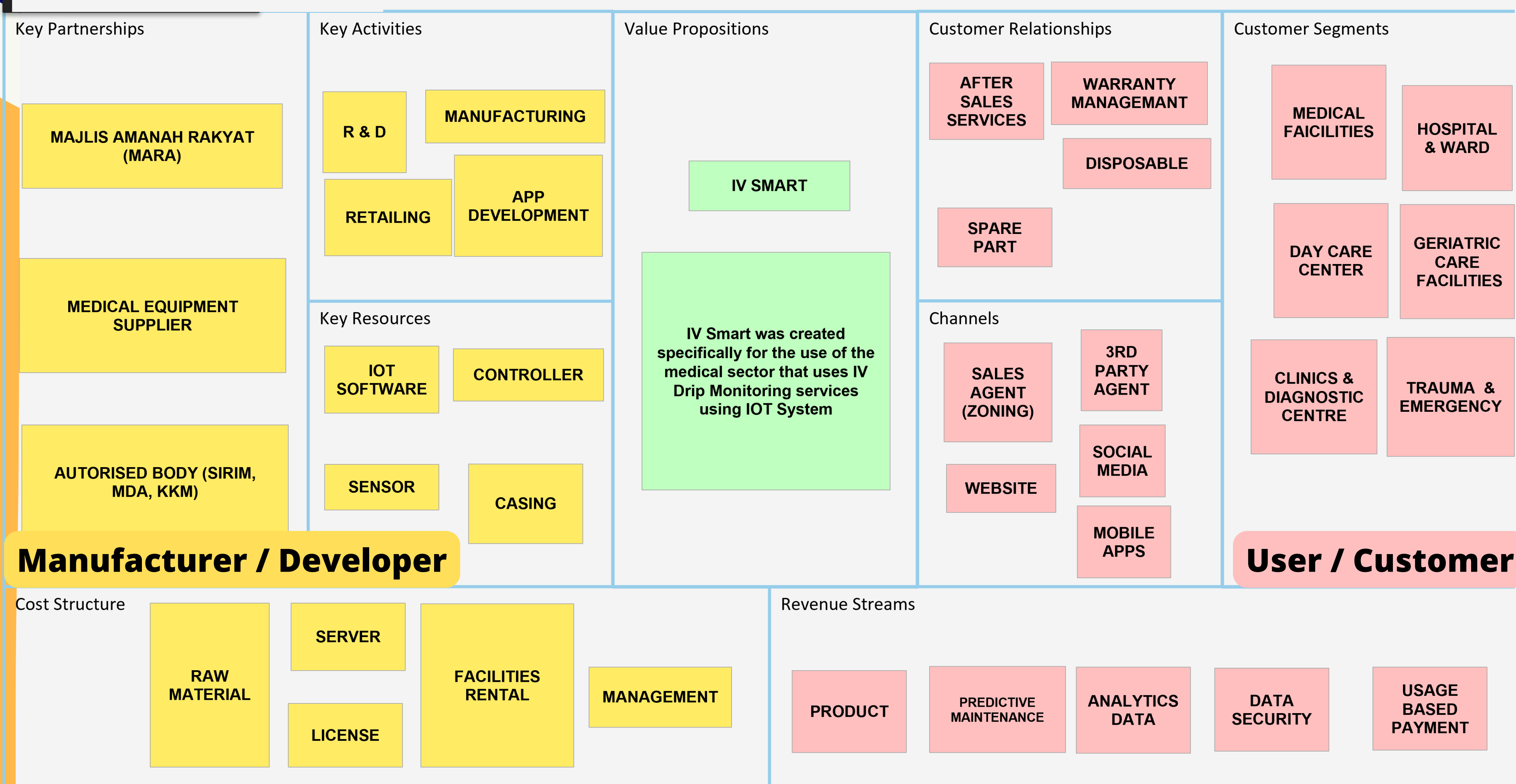
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Output: BLYNK Apps / User's Phone

BUSSINESS MODEL CANVAS

Manufacturer / Developer

Key Partnerships
- MAJLIS AMANAH RAKYAT (MARA)
- MEDICAL EQUIPMENT SUPPLIER
- AUTORISED BODY (SIRIM, MDA, KKM)

Key Activities
- R & D
- MANUFACTURING
- RETAILING
- APP DEVELOPMENT

Key Resources
- IOT SOFTWARE
- CONTROLLER
- SENSOR
- CASING

Value Propositions
- IV SMART
- IV Smart was created specifically for the use of the medical sector that uses IV Drip Monitoring services using IOT System

Customer Relationships
- AFTER SALES SERVICES
- WARRANTY MANAGEMENT
- DISPOSABLE
- SPARE PART

Channels
- SALES AGENT (ZONING)
- 3RD PARTY AGENT
- WEBSITE
- SOCIAL MEDIA
- MOBILE APPS

Customer Segments
- MEDICAL FAICILITIES
- HOSPITAL & WARD
- DAY CARE CENTER
- GERIATRIC CARE FACILITIES
- CLINICS & DIAGNOSTIC CENTRE
- TRAUMA & EMERGENCY

User / Customer

Cost Structure
- RAW MATERIAL
- SERVER
- LICENSE
- FACILITIES RENTAL
- MANAGEMENT

Revenue Streams
- PRODUCT
- PREDICTIVE MAINTENANCE
- ANALYTICS DATA
- DATA SECURITY
- USAGE BASED PAYMENT

PATENT REGISTRATION

PERBADANAN HARTA INTELEK MALAYSIA
INTELLECTUAL PROPERTY CORPORATION OF MALAYSIA
(Diperbadankan)
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REGISTER OF COPYRIGHT SUMMARY

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BENEFIT TO COMMUNITY

Legend:
- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree

Chart categories: Practicality, Performance, Easy-to-use, Compatiblity (y-axis 0–40)

1.Wilkins, Robert G. MBChB, FRCA; Unverdorben, Martin MD, (2012) Accidental Intravenous Infusion of Air, November/December 2012 - Volume 35 - Issue 6 - p 404-408. DOI: 10.1097/NAN.0b013e31826ae0fde