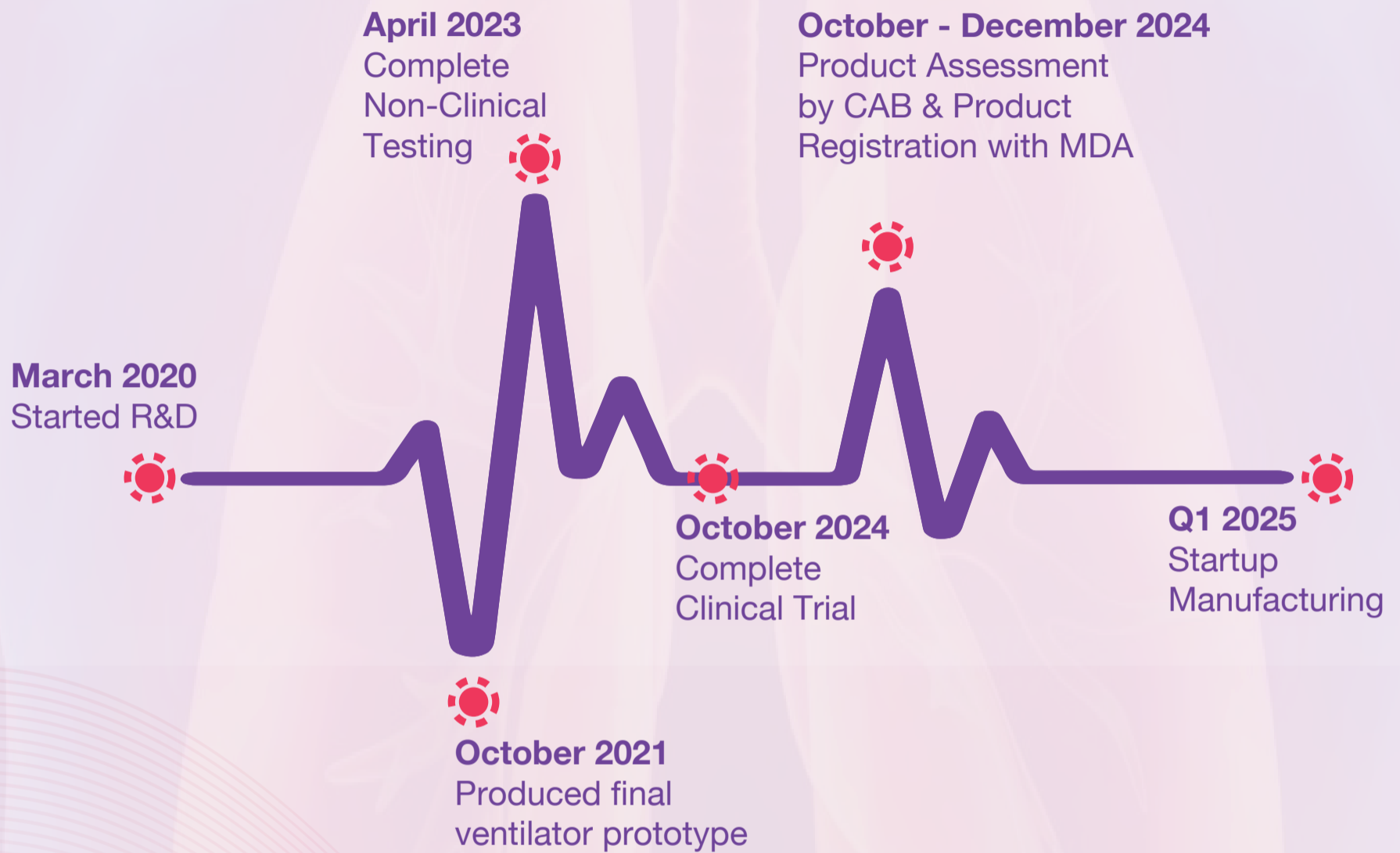




VSI Invasive and Non-Invasive Portable Ventilator



Project Progress



Pre-Development (March 2020 – October 2021)

- Design and develop of Malaysia's first Invasive and Non-Invasive Ventilator



Materials and software for the development of VS1 were designed based on an Open Permissive License from Medtronic

International Standard Compliance

- Guided and in compliance with:

- ▶ IEC 60601-1-1
- ▶ IEC 60601-1-2:2014/ AMD1:2020
- ▶ IEC 60529: 1989/AMD2: 2013/COR1: 2019
- ▶ IEC 60068-2-64: 2008/ AMD: 2019
- ▶ ISO 80601-2-72
- ▶ ISO 18562-1:2017 Part 1
- ▶ ISO 18562-2:2017 Part 2
- ▶ ISO 18562-3:2017 Part 3
- ▶ ISO 10993-1 Part 1
- ▶ ISO 10993-17:2002 Part 17

Tooling and Chassis Production

- Part sourcing / fabrication
- Internal testing
- Tooling production





Non-Clinical Testing (November 2021 – April 2023)

■ 195 Accredited Distinct Tests



SIRIM –
Malaysia



UL, LLC
Marietta
Laboratory
– USA



Intertek
Laboratory -
China



Medical
Engineering
Technologies
Ltd – UK

Comparative Study (March 2022 – April 2022)

- Conduct analysis on other ventilator modalities in market
- Using lung simulator ASL 5000



Carina -
Draeger



Astral 150 -
ResMed



VS1 -
Advance
Pact



Third Party Assessment

**3rd Party Design
and Development
Process Review**
(April 2023 – May 2023)



**Technical Assessment by
Anaesthesiologist Intensivist
from MOH (May 2023)**

 **Ministry of Health Malaysia**



Kementerian Kesihatan Malaysia





Exhibitions Participation Briefing of VS1 through Exhibitions (December 2021- May 2024)

- 100 Hari Aspirasi Keluarga Malaysia (9-12 December 2021), *Kuala Lumpur Convention Centre*
- Healthcare Facility Management Conference and Exhibition 2023 (16-17 August 2023), *IOI Mall, Putrajaya*
- 24th SEA Healthcare and Pharma Show 2024 (17-19 April 2024), *Kuala Lumpur Convention Centre*



Clinical Trial

(February 2024-October 2024)

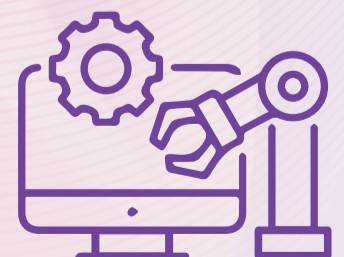
- Developed Clinical Trial Protocol
- Formation of Centre for Mechanical Ventilation (CEMV)
- Clinical Trial at UiTM Hospital, Sungai Buloh





Establishment and Manufacturing Licence

- Product Certification (ISO 13485 - Design, Development, Manufacture, Installation and Servicing of Ventilator).
- Establishment License by Medical Device Authority (MDA).
- Product Verification (Conformity Assessment Body with Medivice Sdn Bhd).
- Manufacturing License by Malaysian Investment Development Authority (MIDA).
- Production Centre – AP Melaka Office, Ayer Keroh.
- Production commences in 1st quarter 2025.



Way Forward 2025

■ VS1 Produce and Market to MOH Institutions



Hospitals



Polyclinics



Ambulances

■ VS1 Produce and Market to Healthcare Institutions in South East Asia and Africa



Way Forward 2025

VS2 Pro Wireless Ventilator with AI Enabled Technology

VS2Pro

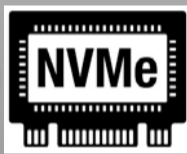


collaboration

HARWARE

Non Volatile Memory

Event Data
Patient Trend Data
Preference Setting Data
Patient Monitoring Data
Binary Encrypted Data



VS2Pro

WIRELESS AND AI ENABLED



Electronics Sensors



AI-MACHINE LEARNING enabled by high end electronic microcontroller, microprocessor and chips ready to serve neural network with adequate Million Instructions Per Second (MIPS) speed for instruction execution of smart ventilator function

SOFTWARE



WIRELESS TRANSMISSION (IEEE 802.11)

AI CLOUD COMPUTING

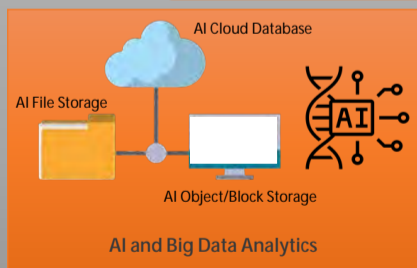


Phd Research Project on AI Application



AI Safeguarded By :

- Data encryption
- Access control
- Limited data retention time
- Regulation - EU AI Act, U.S. Federal Trade Commission (FTC) guidance on using artificial intelligence and algorithms.



AI and Big Data Analytics

END USER



- Benefits :
- Remote patient monitoring
 - Triggered patient-health alert
 - Making patient-health prediction
 - Assisting in decision making



Provide EHR (Electronic Health Record) to database for big data analysis and supervised/unsupervised learning



Red Rose Technology[®]

a knowledge division of Advance Pact

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Jalan PJU 8/5G, Damansara Perdana,
47820 Petaling Jaya, Selangor
- 77-G, Jalan MH 1, Taman Muzaffar
Heights, 75450 Ayer Keroh, Melaka.