

IMPLEMENTATION OF BLOODKAD MOBILE APPLICATION THROUGH PUBLIC-PRIVATE PARTNERSHIP

OBJEKTIF



To encourage engagement and public outreach thus increasing blood donation rate



To improve data management system and to provide sustainable blood donation management

PENERANGAN RINGKAS

- Revolutionises blood donation by seamlessly connecting donors, public and blood banks across Brunei Darussalam.
- Enables users to access donation information; facilitates donor registration; delivers timely alerts; optimises appointment scheduling; and enables donors to complete assessment prior to visiting blood donation centres.
- Its real-time communication feature fosters connectivity between donors and blood banks, facilitating alerts, emergencies and awareness campaigns.

LATAR BELAKANG PROJEK

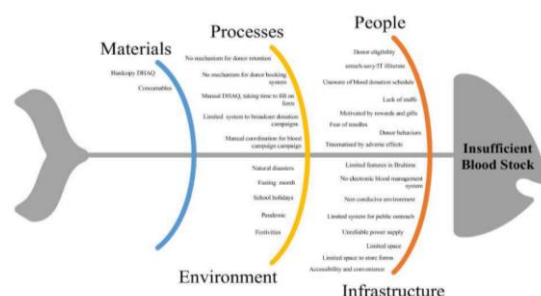
- The process of blood donation involves a few basic steps i.e. donor registration and filling in DHAQ, a brief health screening and hemoglobin check, blood donation process, and a short recovery period with provision of refreshments. The entire process typically takes less than an hour.
- Blood Donation Centre performs business as usual almost on a daily basis, conducting blood drives at many locations across the country collaborating with both public and private sectors, Non-Government Organisations (NGOs), schools and institutions in conducting these blood drives.
- The centre also operates at its main office in RIPAS Hospital to cater walk-in blood donors, meanwhile also providing other services such as plateletpheresis and venesection
- Due to the **constant need for blood, there is often a shortage, making regular donations essential and BDC faces significant challenges in recruiting and managing donors through manual processes.**

RASIONAL

- Towards realising Wawasan Brunei 2035 by aligning it to the high-level Strategic Goal 2: towards ensuring highest quality of life.
- Aligned to one of the department's strategic plans for 2019- 2023 i.e. "Excellence in Clinical Laboratories" with one of the action plans being to ensure sufficient supply of safe blood and blood products.
- To support United Nations Sustainable Development Goal 3 – Ensure healthy lives and promote well-being for all at all ages

ANALISIS MASALAH

The Fishbone Diagram of Insufficient Blood Stock



LAPORAN INFOGRAFIK TAHUN 2025

KUMPULAN HEMAHEROES
JABATAN PERKHIDMATAN MAKMAL
KEMENTERIAN KESIHATAN



AIP
ANUGERAH INOVASI PERDANA

CONTOH | SAMPLE

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MEKANISME PELAKSANAAN

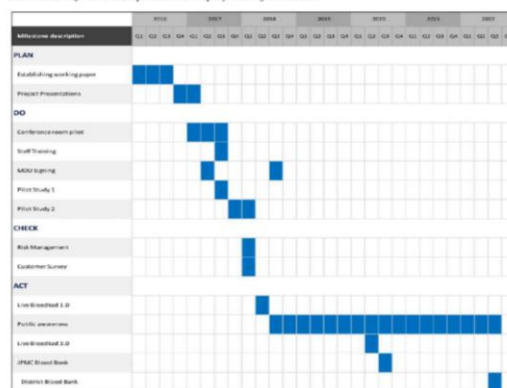
TEKNIK | KAEDAH PENGURUSAN

SWOT Analysis for Blood Donation Centre

Strengths	Weaknesses
<ul style="list-style-type: none"> - Support from private sectors, embassies, educational institutions and NGO - High customer satisfaction level - Backed by Infectious Diseases Act - Internationally recognized and accredited (ISO:15189) - Experienced phlebotomists 	<ul style="list-style-type: none"> - Limited skilled phlebotomists and other manpower - No dedicated building - Multitask responsibilities - No public relation or donor recruitment unit - Limited system in place to reach out to donors and coordinators - Logistics and transports - Not GMP, AABB certified
Opportunities	Threats
<ul style="list-style-type: none"> - Support from private sectors - Research and development - Technology advancement - Potential collaboration and support from local institutions - Raising awareness on importance of blood donation 	<ul style="list-style-type: none"> - Shortage of blood supply (impact: hinder patient treatment and safety) - Competition from other private blood banks - Donor deterrent and behaviors - Ageing population - Insufficient funding - Pandemic, emerging blood borne diseases

- Support from private sectors
- Research and development
- Technology advancement
- Potential collaboration and support from local institutions

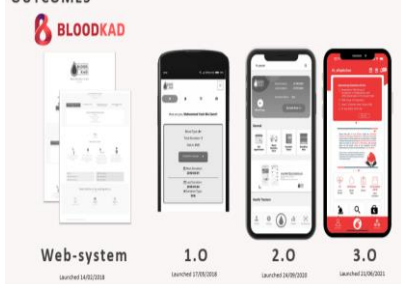
Gantt Chart of the Development and Deployment of Bloodkad



- Plan
- Do
- Check
- Act

INOVASI

OUTCOMES



FEATURES

Vr 3.0



A CENTRALISED PLATFORM

Blood donors can access information on blood donation real-time and stay connected to blood banks activities

ELECTRONIC PRE-SCREENING FORM

Saves time by eliminating the need to fill out physical forms, especially when booking donation appointments

PAPERLESS SOLUTION TO FILTERING DONORS

Online DHAQ form on [Bloodkad](#) significantly reduces costs and consumables

FACILITATE DATA ENTRY

Donor would be entering their own data and information to the system thus saving staff time

NOTIFICATION ON SPECIFIC BLOOD DONORS

Efficiently reach or contact individual donors based on specific requirements

REMINDERS TO ENGAGE DONORS

Ongoing interaction between blood donation centres and donors to ensure a consistent blood donation flow

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HASIL & IMPAK

PENCAPAIAN OBJEKTIF

Increase in Blood Unit Collection

Total Blood Collected Per Year

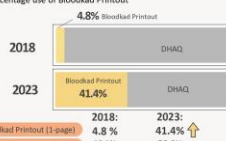


With increasing utilisation of Bloodkad with subsequent improvement in donor recruitment and retention strategies, the total number of blood units collected each year has increased.

IMPAK PELANGGAN DALAMAN

05 Reduce Usage of Paper

Percentage use of Bloodkad Printout



06 Cost-Saving from Reduce Use of Paper

Total cost saved from reduction in paper printing

85275 paper conserved
\$xxxx.xx Total costs saved

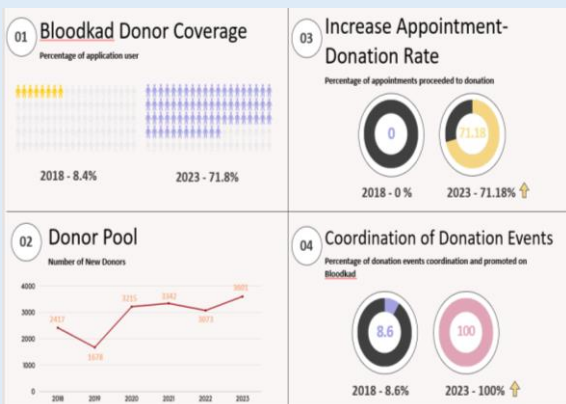
07 Zero Cost for Application Development and Maintenance

Implementation Cost \$xx,xxx.xx
Recurrent cost per year \$xx,xxx.xx x 6 YEARS
Total Cost \$xx,xxx.xx

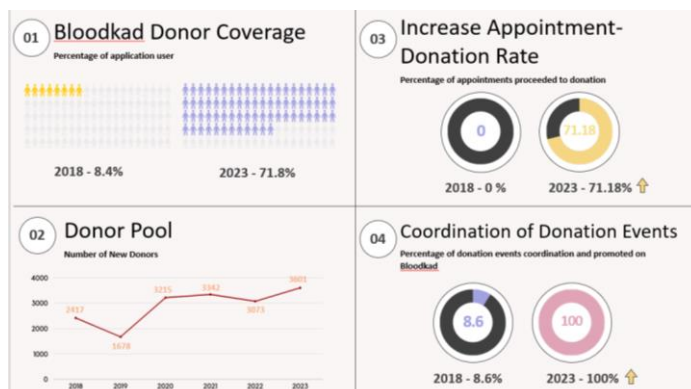
ALL associated costs covered by xxxxxxxx

- Zero cost for maintenance
- No paper needed

IMPAK PELANGGAN LUARAN



- Increase in number of Bloodkad donor through the new application.
- Increase in the number of new donor.



- Easier for donor to access the information on blood banks
- Easier for donor to book for appointments .

IMPLEMENTATION OF BLOODKAD MOBILE APPLICATION
THROUGH PUBLIC-PRIVATE PARTNERSHIP

CABARAN & MITIGASI

Challenges:

- The online system has to be used by every blood donor at every donation to achieve 100% donor coverage
- Blood donors and system operators need to have smart phone and internet to access the system
- Certain process still require print-out in order to proceed to the next blood donation process i.e. consent and donor declaration
- District Blood Banks require constant and efficient internet coverage, particularly during blood donation campaigns to streamline workflow processes

Mitigations:

The Risks Identified From the Implementation of Bloodkad and Their Mitigation Strategies

Risk	Likelihood	Impact	Causes	Mitigation	Responsibility	Action Plan
No internet connectivity	Medium	High	No network	Bring alternative internet source (Broadband, Mobile data)	Blood Banks and BDC	Prepare sufficient credit
No power or electricity	Medium	High	Disable usage of hardware needing power	Provide additional powered (charged) electronics	Blood Banks and BDC	Fully charge hardware (laptops)
Data loss	Medium	High	No records from Pre-screening	To do regular data back-up and maintain saving mechanism as mitigation	NT, and Blood Banks and BDC	Prepare copy of data collected
Human error during input	Medium	Medium	Wrong data	To improve admin dashboard so that key personnel can view their activities in the system clearly to fix any errors inputted	NT	Ability to amend data for the key user.
Unauthorise d access to confidential data	Low	Low	Leak of collected data	To tighten security by giving access levels for key personnel and tracking activity log	NT	Tighten security
Hardware malfunction	Medium		Cannot print hardcopy of consent	To prepare backup equipment if there is any malfunction that may disrupt operations	Blood Banks and BDC	Prepare hardcopy DHQAQ form

RANCANGAN LANJUT

- Action Plan
- Bloodkad 4.0
- Sustainability and Resilience:
 - Environmental Sustainability
 - Long-Term Viability of Blood Supply
 - Resilience to external Challenges
 - Community Engagement and Education