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The Implementation of Serialization And Agregation/Track And Trace System on Bio Farma's Product (Update) & Vaccine Distribution Management System

Supply Chain and Tracibility Consortium Working Group, Geneva, 23 - 24 June 2022

> Yudha Bramanti Vice President Distribution & Sales Services Geneva, 23 June 2022

About Us PT. BIO FARMA

Bio Farma was established first on August 6th, 1890 in Batavia (Jakarta at present time) with the name of Parc Vaccinogene. 65 years later, Bio Farma was moved to Bandung in 1955 and named as Institute Pasteur. Since 1997 Bio Farma became a state owned company and changed it name to Bio Farma until today. There are 2 production sites both located in West Java, Indonesia. One is in Cisarua-Lembang (slightly on the outskirts of Bandung) for animal breeding, and the second is in Bandung for production and all other activities.

On January 1, 2020 BIO Farma has been incorporated as a pharmaceutical holding consisting of Kimia Farma and Indofarma, where Biofarma is the parent.

Biofarma itself will continue to focus on life science products such as vaccines and antisera. Kimia Farma will focus on chemicals, life style and beauty and Indofarma will focus on herbal products and medical devices BUMN MER biorormo kimia farma





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About Us

Bio Farma



VISION

To Become a World Class Life Science Company with Global Competitiveness



MISSION

Provide and Develop Life Science Products of International Standards



PHILOSOPHY

Dedicated to improve quality of life



CORE VALUE

 $\label{eq:PRO-ACTIVE Professional,Customer Orientation, Team Work, Integrity, \& Innovation$

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Current



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HOLDING ORGANIZATIONAL STRUCTURE



Source: Danareksa Securities, PwC Strategy Analysis, and Public Data related to Hospital Holding





OUR INTERNATIONAL ROLE



Organisation of Islamic Cooperation (OIC) VACCINE MANUFACTURER GROUP

Islamic Development Bank's Self-Reliance in Vaccine Programs (IDB-SRVP) , Centre of Excellence for Biological



BILL& MELINDA GATES foundation

PATH

Collaborating Partner

Developing Countries Vaccine Manufacturers Network

7





International Vaccine Institute (IVI)







PASS WHO PREQUALIFICATION

YEARS	VACCINES
1997	OPV, Measles 10 ds
2001	DTP, DT, TT (Vial)
2003	TT (Uniject)
2004	Hep B (Uniject)
2006	DTP-HepB, Measles 20 ds
2009	mOPV1
2010	bOPV (1,3)
2011	Td
2013	DTP/HB/Hib



List of Product's Biofarma

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DID YOU KNOW

This Years Bio Farma turn 132 year's

Bio Farma Vaccine's has been used in more than 140 countries in the world

2/3 of World's Polio Vaccine Needs are Fulflled by Bio Farma

Bio Farma was chosen to be the Center of Excelence for vaccine and Biotechnology Research for OIC Countries

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Vaccine Distribution





Implementation of GS1 2D Data Matrix in Bio Farma Summer biogram King farma (Track and Trace System)



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Highly Consideration :



Global references & Business Process



GAVI announcement: Vaccine manufacturer GS1 compliance

GS1 barcoding on the secondary packaging will be a requirement by latest 31st December 2021 for vaccine tenders backed by Gavi financing and issued by UNICEF.

UNICEF

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https://www.unicef.org/supply/stories/gavi-announcement-vaccine-manufacturer-gs1-compliance







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The role of manufacturers in the implementation of global traceability standards in the supply chain to combat vaccine counterfeiting and enhance safety monitoring



There are many acts of product counterfeiting of health care products that's happening all over the world. This is done by many product counterfeiters to gain an enormous profits.



It is recommended for vaccine manufacturers to **implement a tracking system according to the GS1 traceability standards** to suppress counterfeiting products worldwide



kımıa farma

BUMNUNTUK INDONESIA biofarma indofarma

Simplify the product tracing process, to **ensure product authenticity** and minimized losses due to the use of counterfeit products. Improving the image of vaccine manufacturer which of course can take effect on income







Use of GS1 DataMatrix for healthcare products

Working in close co-operation with healthcare regulators, hospitals, pharmacies and medical suppliers, GS1 has and continues to develop standards to improve patient safety needs by using GS1 DataMatrix to encode the information such as, but not limited to, the following:

GTIN 00314141999995 EXP 120125 LOT 987654321GFEDCBA SN 1000000234

- AI (01) Global Trade Item Number (GTIN)
- AI (17) Expiration Date
- AI (10) Batch Number
- AI (21) Serial Number

ld201899495700190110240xxxx172212102112345678901234

GS1 DataMatrix



STRING

2 ENCODE (PRIN



(01)8994957001901 DECODE (10)240xxxx (Hasil scan)(17)221210 (21)12345678901234

Simbology (]d2)

Symbol used to distinguish the type of code (GS1 data matrix or other type of code), which is used to determine how to translate the scanning results in 2D code.

AI (Application Identifier)

Application Identifier İS а special code that has been standardized display to product information from a string according to the GS1 recommended format.

GTIN (01)

Global The Trade Item Number (GTIN) is GS1 а numbering system used by companies to uniquely identify all traded products.

Serialization & Aggregation Concept

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Packaging (Secondary Packaging) Agregation



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Distribution (Tertiary Packaging) Agregation



n carton box with unique 2D code, aggregated with unique 2D code of Master box

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Track and Trace Implementation Level SUMING bioportion Kumina farma Windofarma



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Process

Serialization & Agregation Method

Currently the serialization and aggregation process can be done manually or automatically. But the entire data stream will flow to the same system. Bio Farma Track and Trace System



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Vaccine Distribution Management System (SMDV)

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Vaccine Distribution Management System biorormo kuma farma Vindofarma



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SMDV Overview



SMDV is Vaccine Distribution Management System is a system that was built to support the process of distributing vaccines, especially the covid-19 vaccine through out Indonesia

Production	Distribution	Health Facility
	ÎÎT	TĜI
Printing GS1 Code on Every vaccine package	KEMENTERIAN KESEMATAN REPUBLIK INDONESIA	
Primary, Secondary, Tertiary ID	Secondary, Tertiary ID Transportation Tracking and Temperature Monitoring	Secondary ID Temperature Monitoring
Track n Trace / Biotracking	Track n Trace/ Biotracking IOT for transport tracking and temperature monitoring	Secondary ID Temperature Monitoring
COMMAND CENTER	& DASHBOARD (NATIONAL & MANAGER	MENT OPERATION)

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Objectives





01 Digitization

Digitalization Vaccine distribution process





Displaying Realtime monitoring vaccine distribution



03 Monitoring & Evaluation

To Improve accuracy for monitoring and evaluating vaccine distribution

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Benefits





Barcode identification & authentication

The system provide identification and authentication of vaccine authenticity identity by providing GS1 QR code on vaccine packaging.

Temperature Monitoring

The system monitor the temperature condition of the vaccine with a temperature sensor, so that the quality of the vaccine can be monitored.





The system perform distribution and tracking of shipments from the starting point to the last point.

Becurity Delivery Monitoring

The system equipped with GPS sensor, door lock, SOS button so delivery can be monitored to ensure security

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Dashboards



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1.	P0037	PS- 00045525	Gudang Vaksin Dinkes Prov. Nusa Tenggara Timur	150	-	Ade Yayan	B 9194 BXA	Siap Dikirim	1
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3.	P0019	PS- 00045528	Gudang Vaksin Dinkes Prov. Lampu	ng 8775		Badru Salam	D 8571 TO	Siap Dikirim	
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Product authenticity verification

2D barcodes on primary packaging that have been reported to the BPOM system can be recognized by the BPOM Application (National Agency of Drug and Food Control (NA-DFC))





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The achievement and still continue for next products





Milestones & Investment



Lesson Learned

Healthcare – Product Identification (Establish System)

GS1-Data Matrix





AI (Application Identifier)

(10) Batch Number (17) Expiry Date (21) Serial Number

Implementation of TnT System

Qualified Person

System

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- Manufacture process : machine, and other equipment
- Reporting data to NRA System

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Scope of Government Support

NRA – BPOM Indonesia

- 1. Regulation of Track & Trace System
- 2. Reporting data of Track & Trace System

Ministry of Health

- 1. Coordination of all health services
- 2. Coordination of all stakeholders



Thank You