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*SMILE – Sistem  
Monitoring  
Imunisasi  
Logistik Secara  
Elektronik  
“Electronic  
logistic  
monitoring  
system”*

# SECURE WEBINAR SERIES #1 VACCINATION DAYS IN SOUTHEAST ASIA



1. Indonesia context and challenges of cold-chain supply
2. SMILE description
3. Interface and technical usage
4. Distribution pathway
5. SMILE key progress
6. Challenges in the implementation
7. Enablers and solutions
8. Key messages

# OUTLINE



## Challenges

Stock of vaccine and storage temperature cannot be monitored real-time

Difficult geography and disaster-prone

Uncomplete and unstandardized documentation system

Unmatched supply and demand

Lack of vaccine data consumption



Estimated 5.3 million pregnancies annually



23.9 million children under 5



Around 10 000 public primary care facilities

# INDONESIA CONTEXT AND CHALLENGES OF COLD-CHAIN SUPPLY

Source:  
 Agustina R, Dartanto T, Sitompul R, Susiloretni KA, Suparmi, Achadi EL, et al. Universal health coverage in Indonesia: concept, progress, and challenges [Internet]. Vol. 393, The Lancet. Lancet Publishing Group; 2019. p. 75–102  
<https://elearning.smile-indonesia.id/publication>; UNDP Indonesia



# SMILE

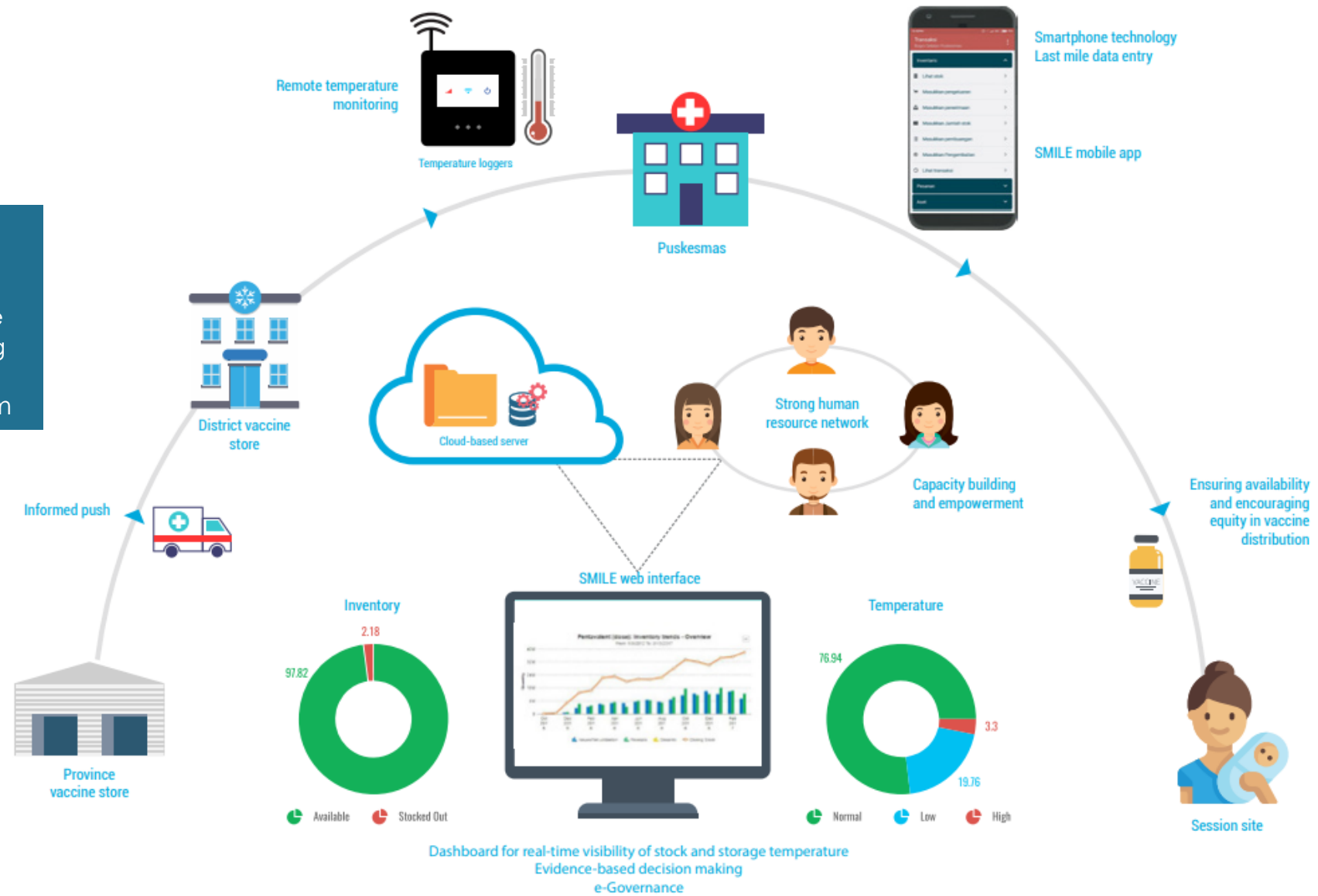
SISTEM MONITORING  
IMUNISASI DAN LOGISTIK  
SECARA ELEKTRONIK

- SMILE: A technological solution that aims to strengthen the immunization supply chain system in Indonesia by enabling real-time visibility of vaccine cold chain logistics and digitizing stock supplies and storage temperature across vaccine cold chain points
- Launched in 2018 initially to support the national immunization program (currently have two different system –for COVID19 and for national immunization program)
- Initially, piloted in 54 public primary care in Kota Bogor and Kota Tangerang Selatan

## DESCRIPTION

<https://www.id.undp.org/content/dam/indonesia/2018/Doc/SMILE-Brochure-Eng.pdf>

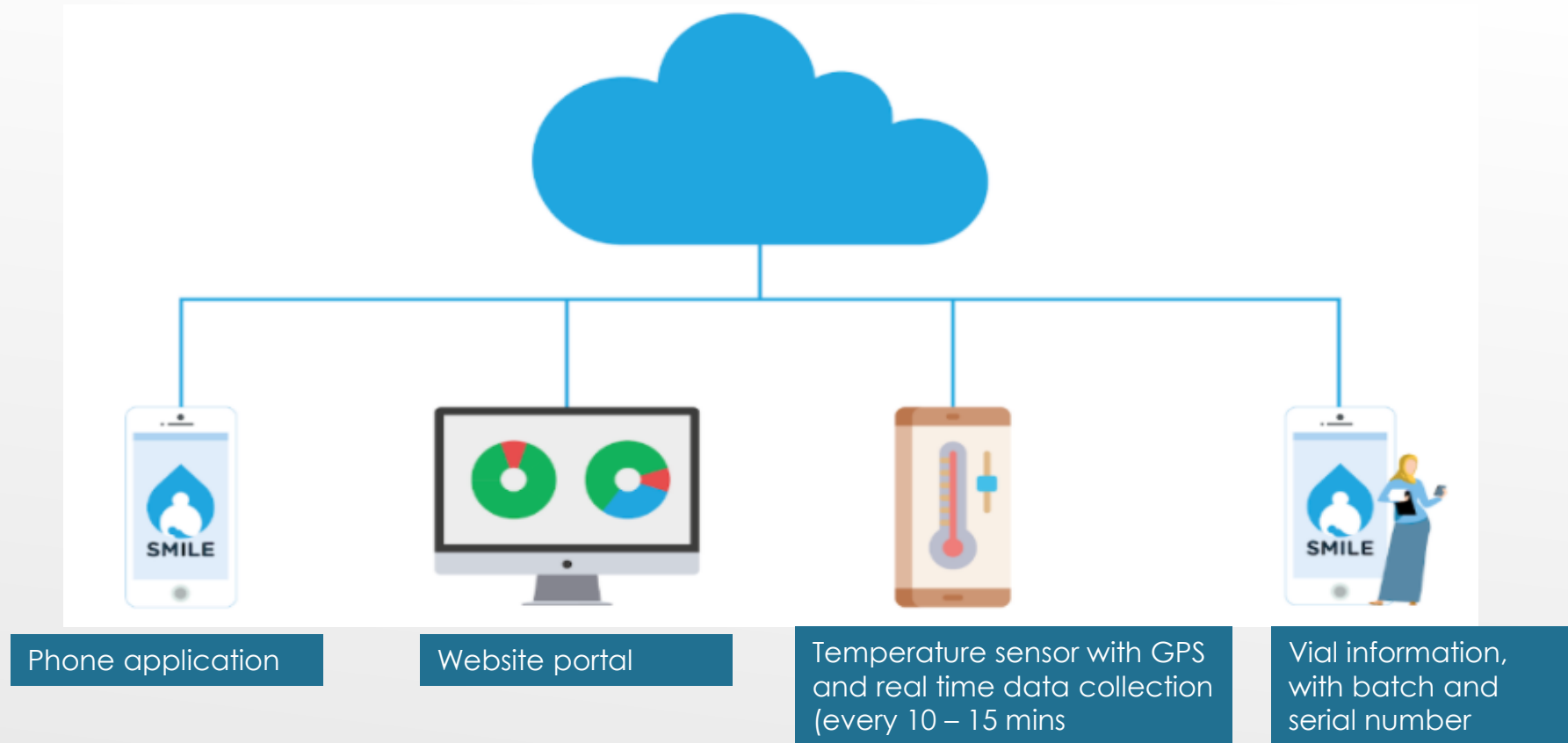
Monitoring system from Bio Farma warehouse to Provincial vaccine warehouse is using Bio Farma Application System



PUSKESMAS is SMILE main institution for the vaccine distribution – supervise private facilities and hospital in their area

# INTERFACE & TECHNICAL USAGE

# Key Features of SMILE



## INTERFACE & TECHNICAL USAGE

<https://elearning.smile-indonesia.id/publication>

Dashboard for planning and budgeting  
Demand management  
Supply-chain management

Production  
Provision management  
Distribution planning

Reservation and demand management  
Provision management  
Temperature control

Reservation and demand management  
Provision management  
Temperature control

Stock calculation and waste management  
Booking management  
Temperature control  
SMS notification

Vaccine delivery point

## MINISTRY OF HEALTH

## BIO FARMA

## PROVINCIAL HEALTH POSTS

## DISTRICT HEALTH POSTS

## PUSKESMAS



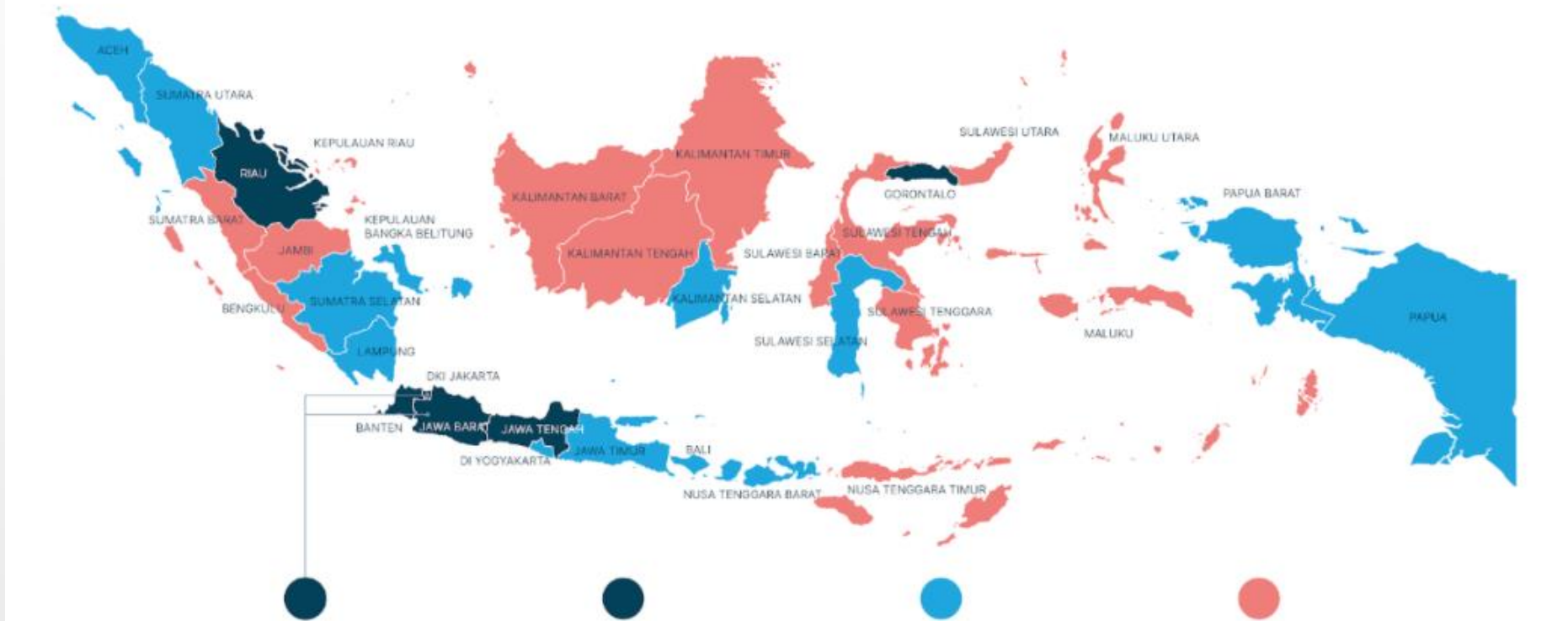
Private practices

Hospitals

Midwife clinics

# DISTRIBUTION PATHWAY

# SMILE Location Coverage 2018 - 2021



SMILE Pilot Location in 2018  
2 districts

SMILE Location 2020  
6 Provinces

SMILE Location 2021  
18 Provinces

SMILE Location for  
COVID-19 2021

Target to reach 12 000 public primary health care (Puskesmas)  
and hospitals in 514 districts and 34 provinces

## KEY PROGRESS

<https://www.id.undp.org/content/dam/indonesia/2018/Doc/SMILE-Brochure-Eng.pdf>



- ▶ Policy makers' skepticism
- ▶ Hesitancy due to assumed lack of healthcare worker capacity and their adherence of data entry
- ▶ Internet signal at the health facility
- ▶ Glitches with other application when it was needed to be integrated

## CHALLENGES IN THE IMPLEMENTATION

Source: Personal communication with UNDP representative

- ▶ Strong political willingness (e.g. support from MoH and Coordinating Minister of Economic Affairs and supporting regulations)
- ▶ Experienced implementers (from implementation of routine immunisation program)

## ENABLERS AND SOLUTIONS

Source: Personal communication with UNDP representative

- COVID-19 pandemic has accelerated the progress and scaling-up implementation of SMILE program
- The importance of strong political willingness in the introduction of new health solutions
- Match between the existing needs with the solutions offered by SMILE application

## KEY MESSAGES