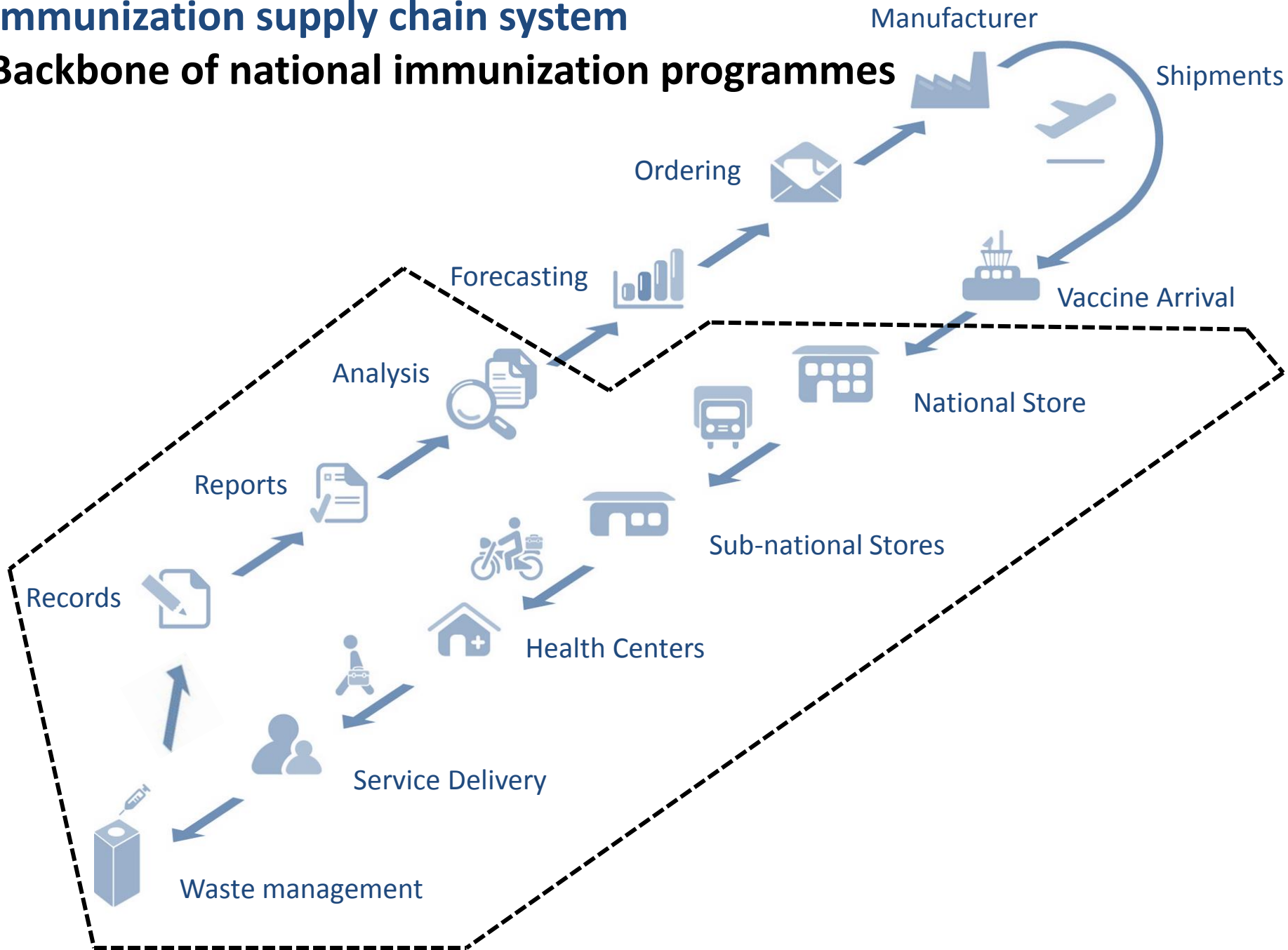




# Immunization supply chain system

## Backbone of national immunization programmes



# **Immunization supply chain system**

## **Backbone of national immunization programmes**

**Supply chains developed over 30 years ago!**

**Taken for granted that these systems run smoothly today**

**Recent evidence indicate that systems are stretched**

**And will be a bottleneck to new vaccine introduction if we continue with “business as usual” approaches to addressing current and future challenges!**

# Vaccine Arrival


Frequency and quantities are increasing



One of 20+ vaccine shipments arriving per year

## Vaccine Arrival

### Vaccine volume beginning to exceed management capacity



Shipping container of pneumococcal vaccine = 400 kg / 2m tall

Palletized containers and no forklift

Non-recyclable containers

# Storage Capacity

## More and new vaccines fill limited space



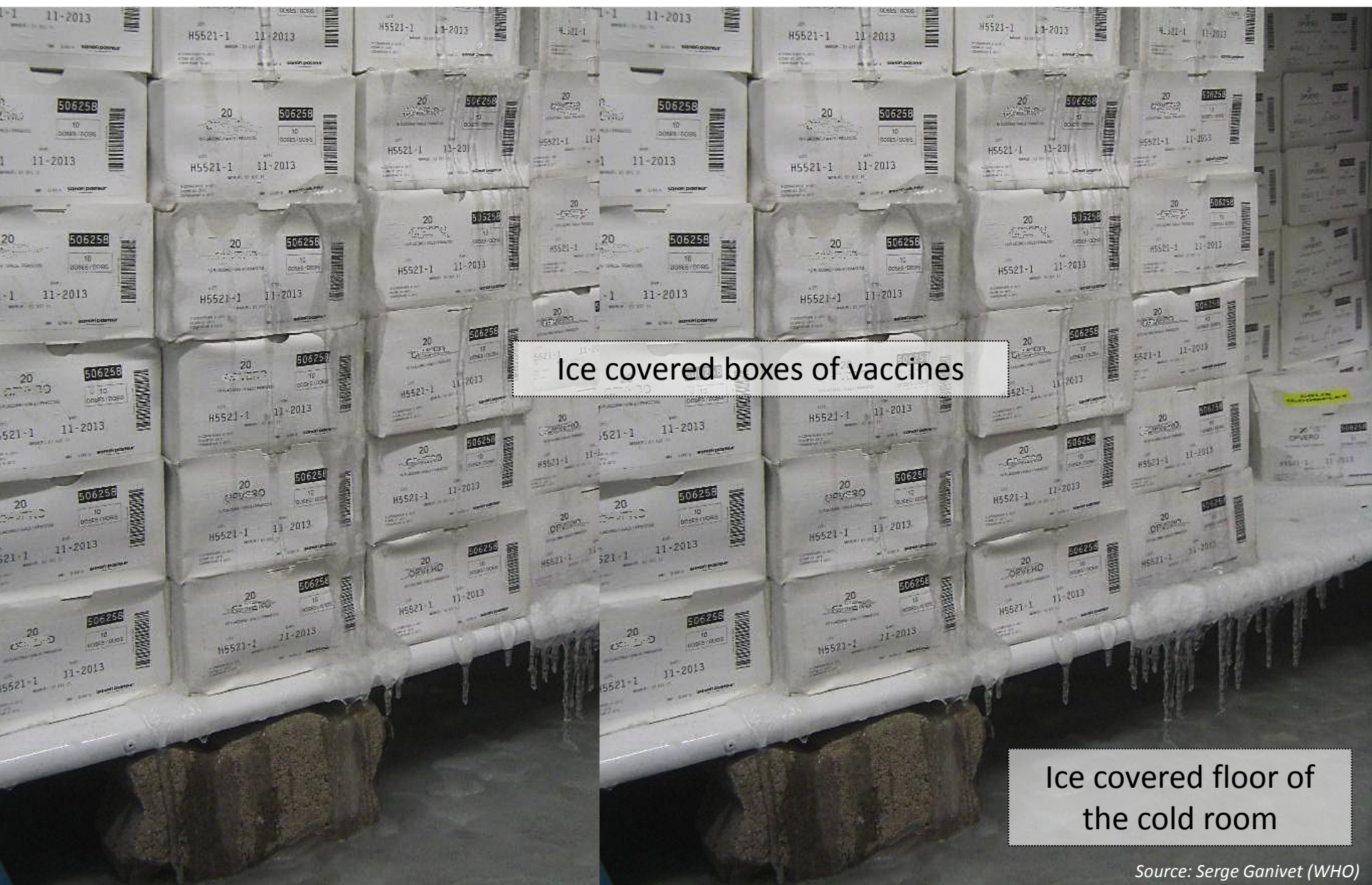
Source: Bertrand Jacquet (UNICEF)



Source: Andrew Garnet (Independent)

# Temperature Control

## Temperature monitoring essential but costly and not prioritized




Ice covered boxes of vaccines

Ice covered floor of the cold room


## Maintenance

### Cold chain equipment requires regular maintenance



Cold room door  
no longer closing

In Nigeria, 40% of the  
cold chain equipment is  
non-functional



lack of spare parts and  
technical ability to  
maintain equipment



# Distribution

**In-country transport is the weakest link in the supply chain**



In-country transport of vaccine often lead to temperature excursion

## Distribution

Getting more vaccines to remote communities is difficult



Reaching the last mile with more vaccines is a challenge

# Infrastructure

## Ancient and inefficient equipment is still used at health center level



Inefficient and costly kerosene refrigerators still used today



Source: Simona Zipursky (WHO)

# Human resources

## The supply chain extends all the way to service delivery



New vaccines means health workers need to carry more and more supplies

# Vaccine Management

## Avoidable wastage is widespread



VVM is great innovation...  
... but makes the amount of damaged  
vaccines visible from poor vaccine  
management

# Vaccine Management

Use of expired and poorly stored vaccines is a concern



Expired vaccines still  
being administered in  
October 2010

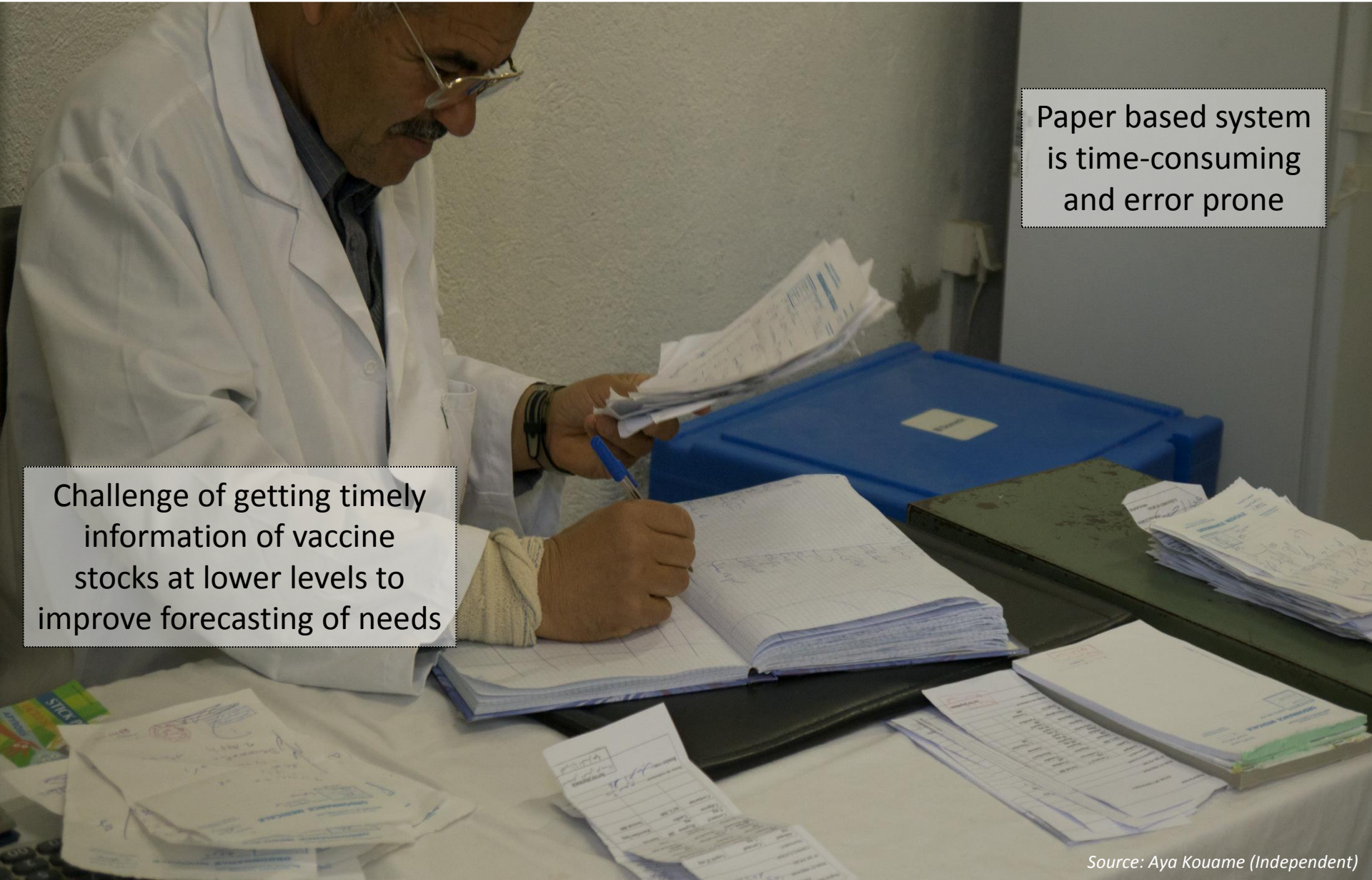
## Waste Management

More and more syringes to dispose of safely



# Information Systems

## Point of service data could help improve forecasts



Paper based system is time-consuming and error prone

Challenge of getting timely information of vaccine stocks at lower levels to improve forecasting of needs



# Thank You

