# THE DOOR SYSTEM:

## CLOSING THE LAST-MILE DATA VISIBILITY GAP FOR FAMILY PLANNING AND REPRODUCTIVE HEALTH COMMODITIES

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## Challenge

Service delivery points in lower- and middle-income countries (LMICs) have frequent stockouts of lifesaving commodities. One driver of this is a lack of real-time visibility into stock levels of health commodities at facilities. Stockouts mean that patients go without the critical lifesaving commodities that they depend on.

Causes include delays because of paper reporting systems, incomplete reporting by facilities, and lack of clarity in reporting expectations.

ℹ️ *Health facilities need to be able to communicate gaps in stock availability in a timely and efficient manner and be confident they will receive the supplies they need.*

## Solution

- ✓ The DOOR (Drugs of our Range) system provides a user-friendly method of real-time alerting of stock status to those overseeing facility order fulfillment.

- ✓ The DOOR system utilizes Wi-Fi enabled Internet of Things (IoT) devices installed in public-sector health service delivery points (SDPs).

- ✓ The DOOR system's goal is to increase visibility into stock levels at SDPs by reducing the time lag to alert supply chain managers of critical stock events and to eventually reduce the prevalence of stockouts in facilities that use the DOOR system.



APENAS PARA USO NÃO COMERCIAL
Para uso apenas pelo Governo de Angola

STOCKED OUT
MINIMUM (LOW) STOCK
RESET
Indicates status of action and confirmation of action

REMÉDIO: IMPLANTE CONTRACEPTIVO DE 2 HASTES

*(Figure 1) The DOOR device*

## How does it work?

The DOOR system hardware is installed in service delivery points, co-located with commodity storage. Each device was assigned to one product.

As part of their routine inventory checks, pharmacy staff press the appropriate button on the device when a stock status changes for a particular product. See Fig 1.

Pressing the button triggers a cascade of actions and responses. See Fig 2.



*(Figure 2) The DOOR approach is integrated into traditional reporting roles*

## Findings from Pilot Evaluation in Angola

A mixed-methods evaluation was conducted to understand the effectiveness, viability, and acceptability of the system. Data collection methods included quantitative analysis, long-format interviews, and closed-ended questionnaires.

The pilot used four different tracer commodities (three modern FP methods and an antimalarial), with each device being used for a single commodity within a facility. Each facility would therefore have four buttons installed in the storage room.

### ✓ What worked well:

— Municipal Focal Points had a high response rate to system alerts

**80 % of button pushes received a follow up from the Municipal Focal Point within 24 hours.**

— Some sites used the button effectively and consistently.

**"Reporting stock outs of medicine is easy and quick."**
- Health facility staffer

— SDP staff felt an increased sense of empowerment to reduce stockouts:

**"I believe I can help prevent the stockouts of medicine."**
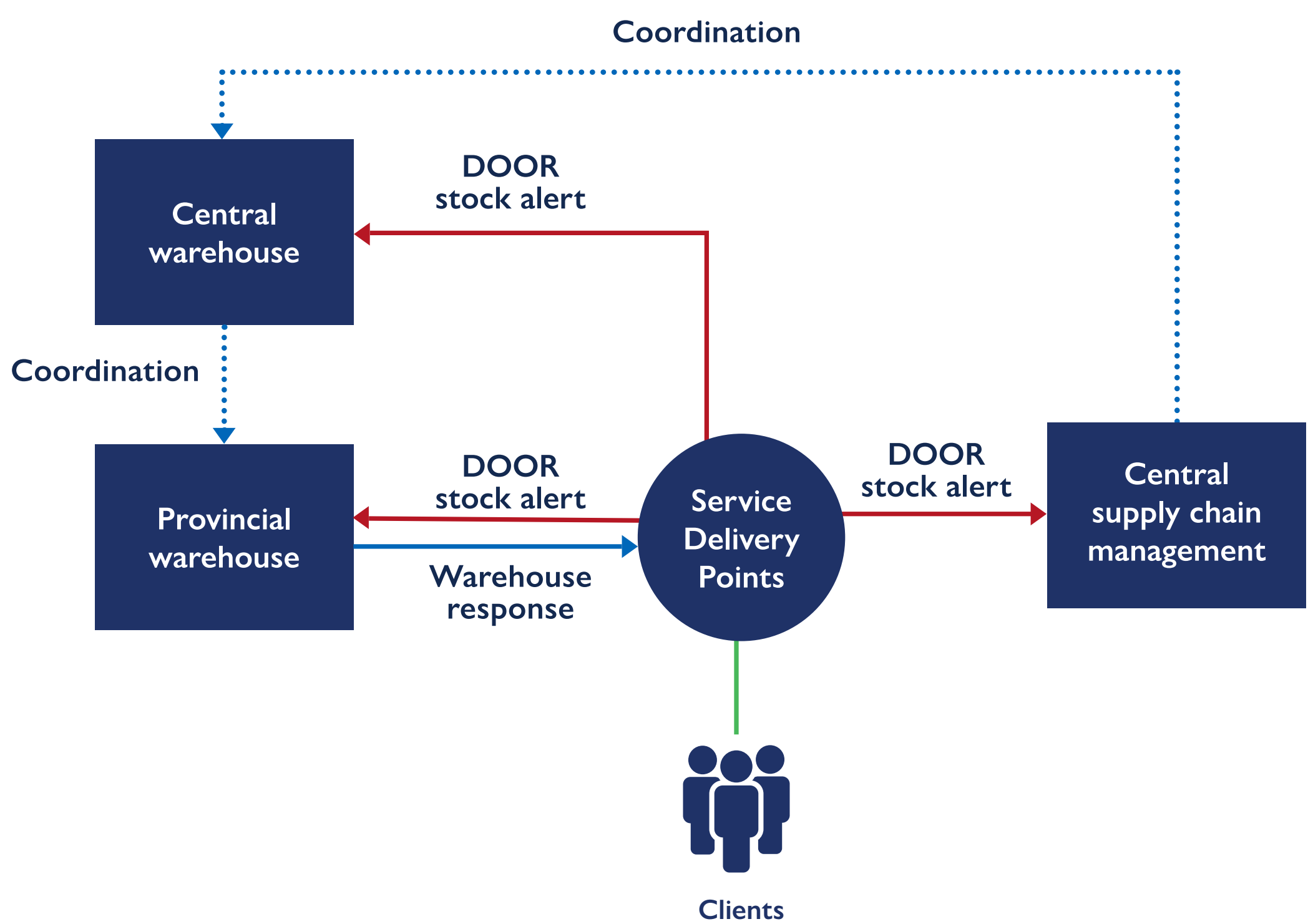- Health facility staffer

### ✗ What didn't work:

— Internationally procured hardware had connectivity issues which created frustrations with the system.

**"I did not use the button to report stock outages because the button had no internet."**
- Health facility staffer

— Some sites with no connectivity issues still used the button intermittently.

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The button push activates a technology stack that (1) records the stock event in a database and (2) sends SMS alerts to key supply chain actors who can follow up with the health facility and respond to their request for emergency stock supply.

## Response Flow

The complete DOOR system requires stakeholders to report and respond, which involves principles of monitoring and modifying behavior. See step-by-step process in Fig. 3

The system influences staff attitude and motivates them to use DOOR to report on stock status in real time.

The system brings the locus of control closer to the end user to increase self-efficacy to report stockouts in a timely manner.
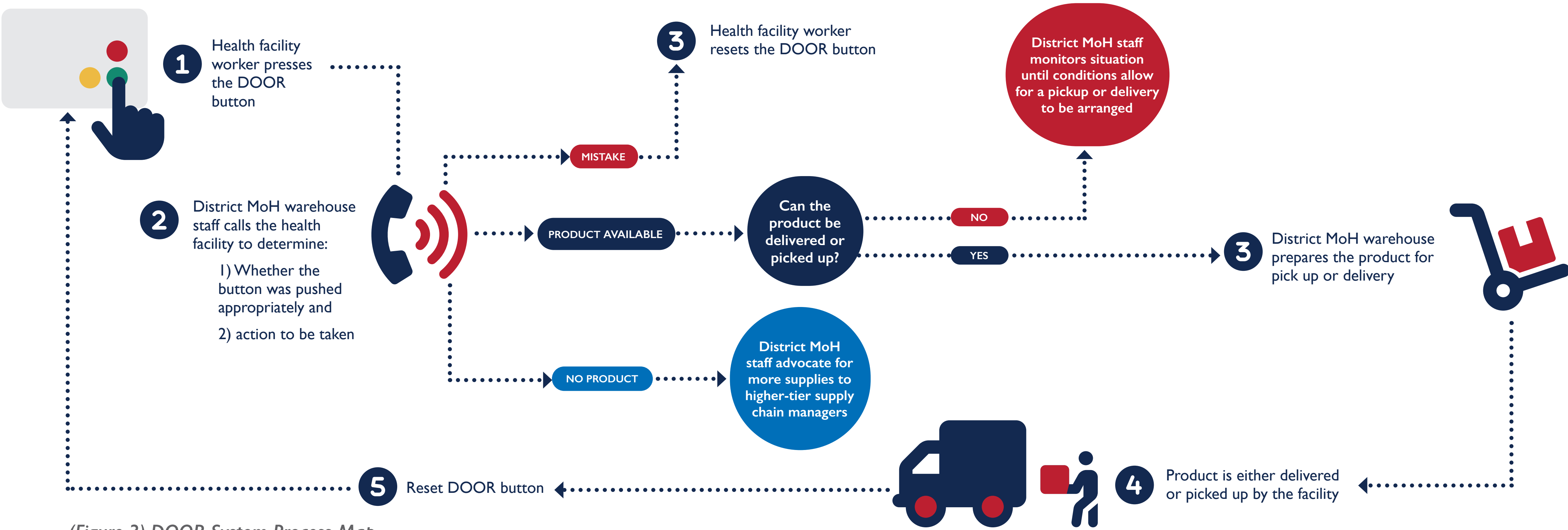


*(Figure 3) DOOR System Process Map*

## Lessons learned

- ➡️ Procure as much hardware locally as possible.

- ➡️ Importation of novel technology can be challenging and requires careful understanding of requirements (e.g. Li-ion battery shipment and customs restrictions).

- ➡️ Local advocacy and buy-in across all stakeholders was critically important for sustaining activity.

- ➡️ Staff turnover at facilities is a perennial challenge, plan for it.