



**GLOBAL
HEALTH**
SUPPLY CHAIN SUMMIT



Visualize, Analyze, Improve: Development and Use of the EPI Dashboard in Mozambique

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Agenda

1. Supply chain priorities for PAV and MISAU
2. VAN: An approach for supply chain excellence in Mozambique
3. VAN Activities Year 1 and Year 2
4. VAN Dashboard: Demo
5. Conclusion

PAV (EPI) and MISAU (MOH) have clear supply chain priorities. . .

Supply chain priorities at the last mile:



Increase **commodity availability** and service



End to end **data visibility** with the supply chain to respond to demands

Factors needed to achieve priorities



Trained staff with the appropriate skills and competencies



Appropriate technology to provide end to end visibility to respond to demand



...however, current challenges hinder their ability to achieve these priorities

1

Multiple and parallel systems running for many health programs such as EPI

2

Lack of staff with adequately equipped with the combination of IT and supply chain skills

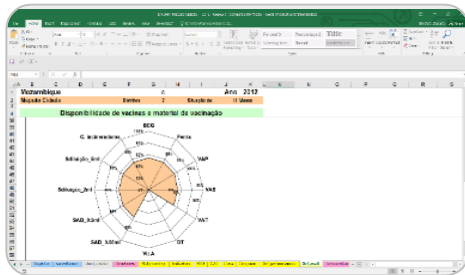
3

Existing systems **don't communicate with each other**, making it difficult to **synthesize data and insights**

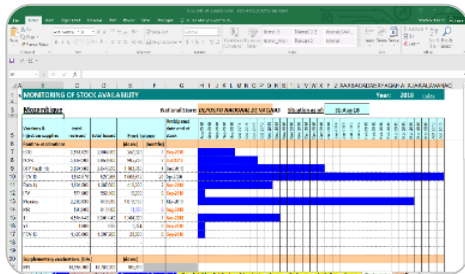


Multiple systems that don't communicate with each other contribute to data burden

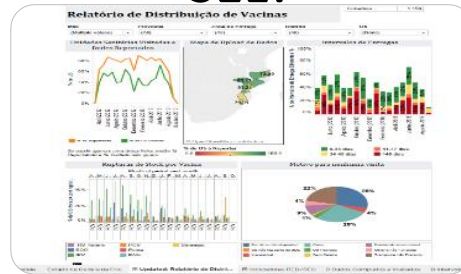
DVD-MT



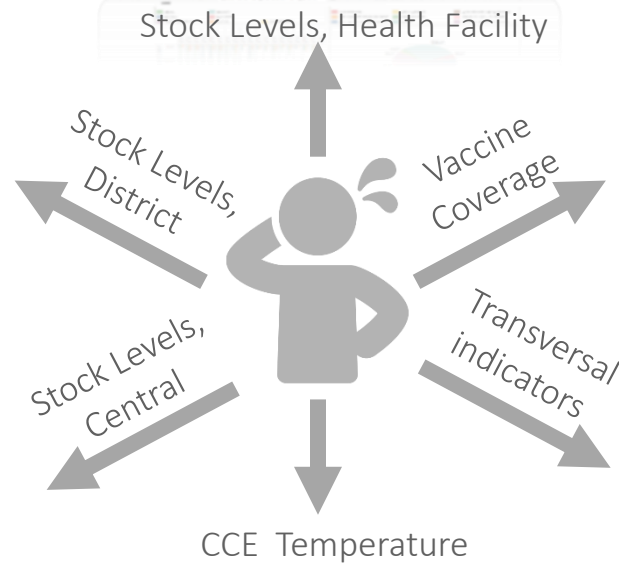
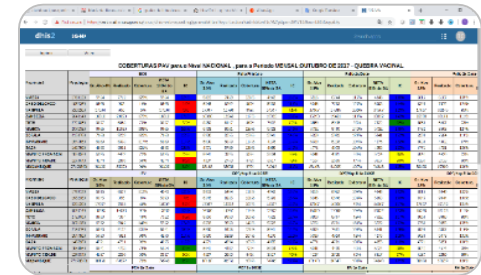
SMT



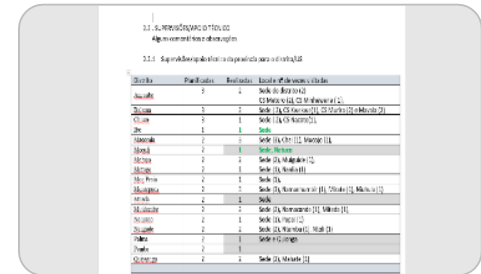
SELV



DHIS-2



Trimestral Reports



ColdTrace





VAN: Progress towards increasing data visibility and data availability

Dual Problem

Addressing dual problem of IT and supply chain skills vacuum and data analysis burden

Human Control Tower

MISAU & VillageReach set up a “Human Control Tower” (HCT) Advisor at PAV central level

Visualize/ Analyze/ Improve

HCT’s work centered on the **Visibility and Analytics Network (VAN)** principles of “Visualize, Analyze, Improve”

VAN Principles

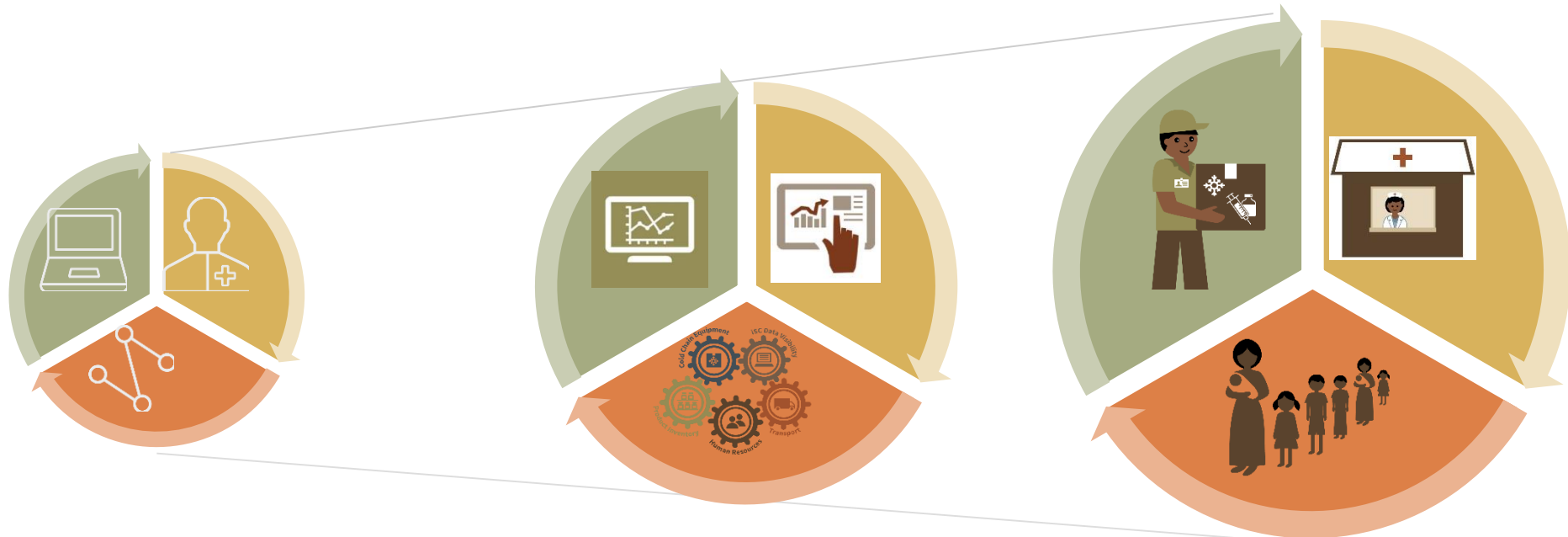
People, technology,
process

+

Visibility, Analyses,
Improvements

=

Adequate resupply
Service delivery,
Children vaccinated



VAN Year 1: Establishing VAN at Central Level

- **KPI Identification**

Gathered all PAV relevant program KPIs from multiple data sources

- **Data Review**

Facilitate **monthly data review meetings** connecting PAV staff and immunization partners to build a data monitoring and data use culture

Provincial Data Review Meeting, 2017





VAN Year 1: The Road to a Dashboard Request

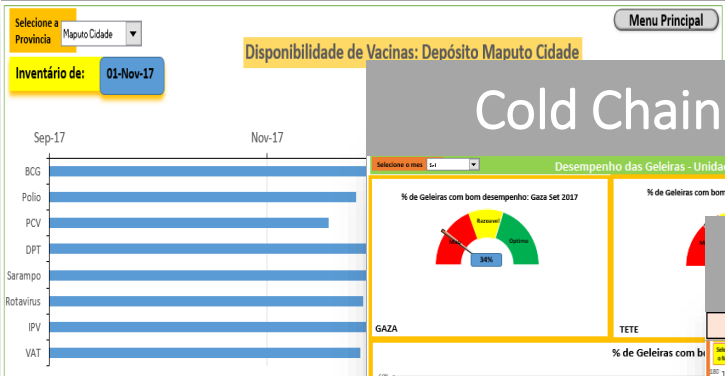
KPI Identification

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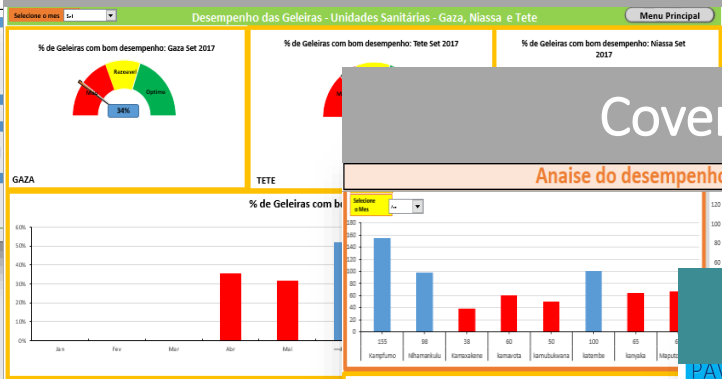
End user needs identified	Dashboard KPIs and Visuals determined	KPIs integration into dashboard
<ul style="list-style-type: none">Conducted a workshop to identify with stake holders the program KPIs from different areas (Stocks availability, coverage, vaccines utilization etc.) .	<ul style="list-style-type: none">Identified the best visualization to present the KPIs to allow data analyses and triangulations.	<ul style="list-style-type: none">The KPI were integrated in to the Dashboard having as the main data sources the DHIS-2, SMT, Cold-trace, SELV.

Excel-based Dashboard

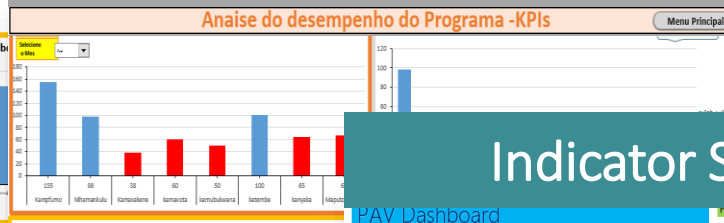
Stock Availability



Cold Chain Equipment



Coverage



Indicator Summary

PAV Dashboard

Selecione o mes: Jan

Menu Principal

Indice de Quebra Vacinal de Polio_DPT_PCV e Rota por Distrito Jan 2017

Distrito	Polio	DPT	PCV	Rota
Kangundo	7.8	4.8	4.8	5.5
Mabimandilo	2.8	2.8	4.8	2.8
Komolondene	4.8	4.8	4.8	4.8
Kamacha	10	10	10	10
Komuzubane	10	10	10	10
Intombe	10	10	10	10
Kangola	10	10	10	10
Nogueira	10	10	10	10

Indice de Quebra Vacinal de Polio_DPT_PCV e Rota por Distrito Jan 2017

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Intombe	10	10	10	10
Kangola	10	10	10	10
Nogueira	10	10	10	10

Coberturas (Nacional)

Vaccine	Posterior	Corrente	Score	Progress
BCG	66%	90.0%	●	●
Polio3	102%	97.0%	●	●
PCV3	101%	99.0%	●	●
DPT3	112%	101%	●	●
Sarampo1	107%	95.0%	●	●
Rota2	107%	88.0%	●	●
CCV	100%	88.0%	●	●

Ruptura de Stock (Depositos Provinciais + Dep. Central)

Vaccine	Posterior	Corrente	Score	Progress
Perla	0%	0%	●	●
OPV	0%	0%	●	●
IPV	0%	0%	●	●
Sarampo	0%	0%	●	●

Taxa de utilização de vacinas (Nacional)

Vaccine	Posterior	Corrente	Score	Progress
Polio1to Polio3	81%	51%	●	●
DTP1to DTP3	61%	31%	●	●
PCV1to PCV3	61%	61%	●	●
OPV	97%	97%	●	●
DTP	93%	88%	●	●
Sarampo	73%	80%	●	●



VAN Year 1: And of year Review

Excel-based Dashboard

Dashboard identified as a solution to **increase data visibility** across data from multiple systems.

Dashboard users	Decisions being driven by dashboard	Results
EPI internal technical group with all different program areas focal points.	<ul style="list-style-type: none">• Control stock availability and address precaution on shortage and overstock.• Monitor low and over target coverage, and address actions to each level of the program (Central/Province, etc.)• Controls data quality issues and address actions to central and province level	<ul style="list-style-type: none">• Possibility to have a clear status of stock availability and precautions in advance.• Identified root causes of low coverages for some cases.• Identification of outliers and data problems before the end of the reporting period.

VAN Year 2: Automation of Dashboard

- **Migration of Dashboard**
To automate data collection and delivery, decision made to migrate to a **new web-based platform**
- **Dashboard set up**
Programmers and systems developers contracted; automated dashboard built to ensure **automatic updates on frequent basis** to provide timely data

PAV web-based Dashboard





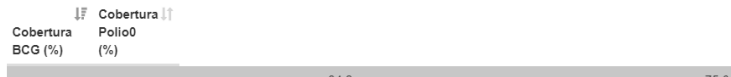
Web-based PAV Dashboard

Dashboard do PAV ☆

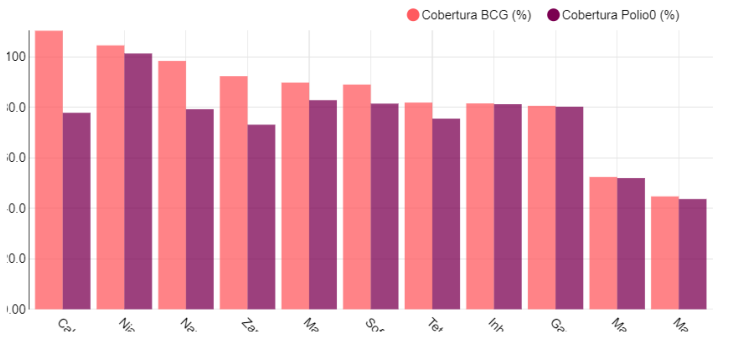
Edit dashboard ▾

84.2 75.3 81.8 74.1 78.0 71.9 81.9 76.1 73.5 48.3 77.9 102 67.8

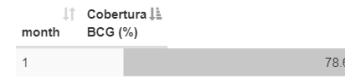
Coberturas de BCG e Polio0 - Filtered Period



Coberturas de BCG e Polio0 - Filtered Period



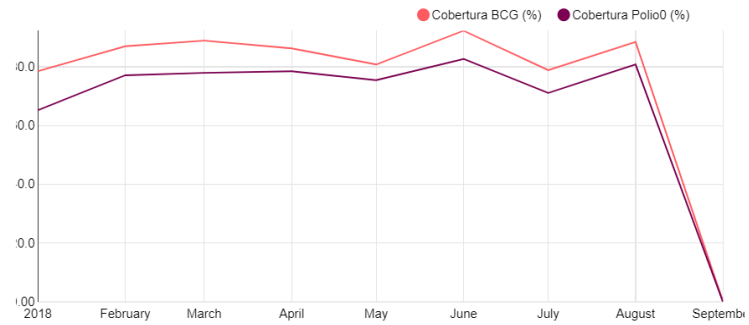
Coberturas de BCG - Worst Month



Coberturas de Polio0 - Worst Month



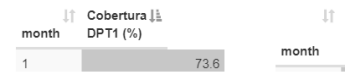
Coberturas de BCG e Polio0 - Filtered Period



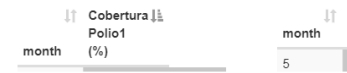
Coberturas de Polio1, DPT1, PCV1 - Filtered Period



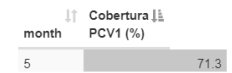
Coberturas de DPT1 - Worst Month



Coberturas de Polio1 - Worst Month



Coberturas de PCV1 - Worst Month





Conclusion – 4 Essentials for Replication

- 1** **Dashboards** can be a solution to an environment of fragmented and multiple data systems running in parallel
- 2** A **HCT/VAN role** can provide solutions and propose strategies for improving data availability and visualization issues
- 3** Data availability is critical to be effective but to be *used*, **data visualizations** must be prioritized
 - Make data easy to navigate, visual and dynamic
- 4** **Combination of People and Technology** made it possible to conduct routine data analysis meetings



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