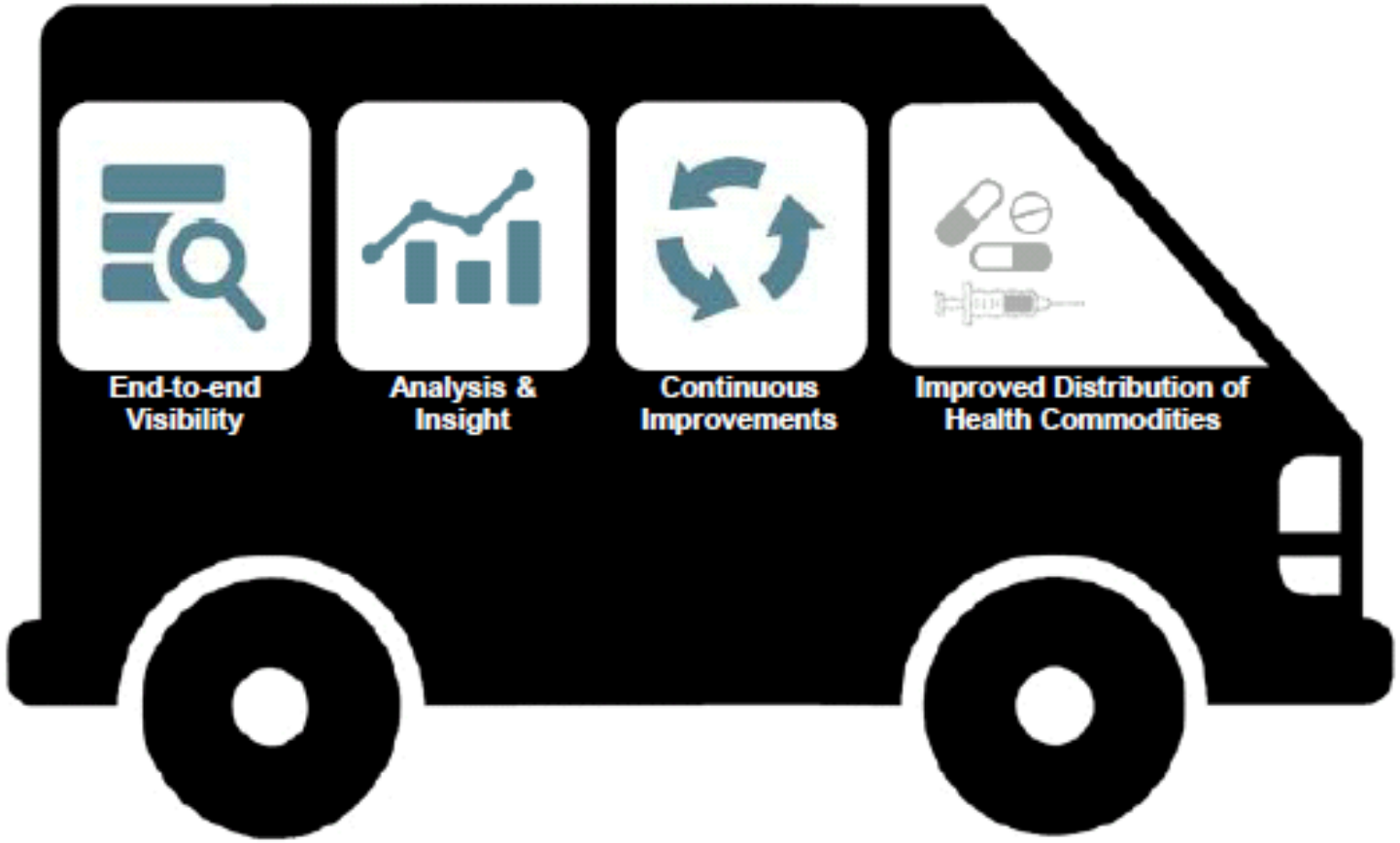
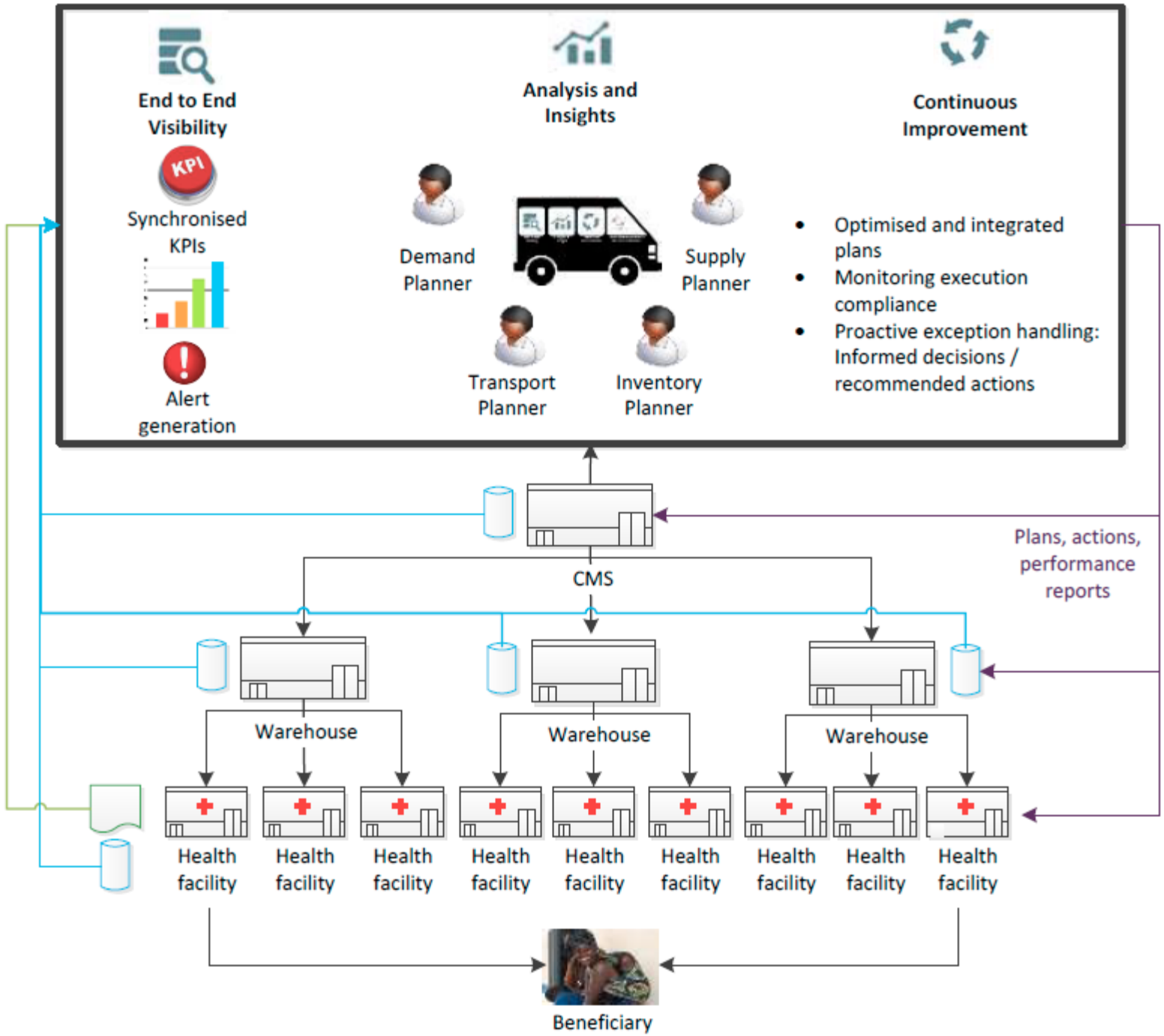
VAN High Level Design



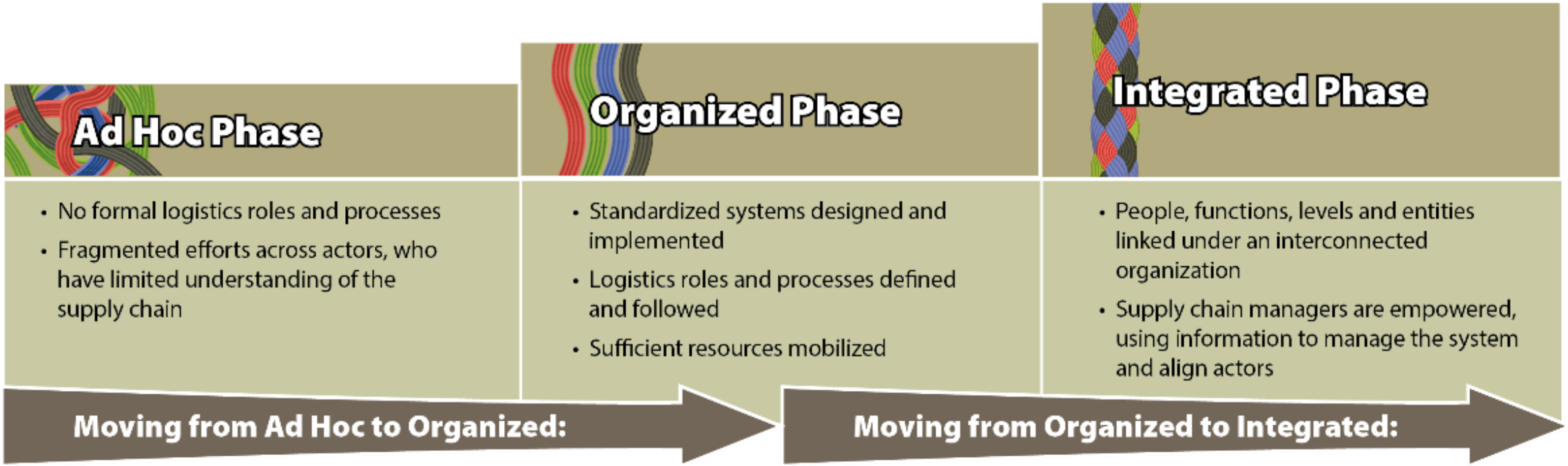
What is the VAN concept?

Element	The VAN is…	The VAN is more than…
People	• Centralized and integrated team, of **supply chain professionals**	• People trained on **quantitative analysis** of supply chain performance • A new name for the existing roles that operate the supply chain
Process	• Data driven processes that use analytical methods to **plan**, **proactively respond** and **recommend continuous improvements that improve availability to beneficiaries**	• Better SOP's and improved adherence • Business process re-engineering of everything on the 'World on a Page' • One-off system redesign
Technology	• Systems for data **collection and aggregation** that **generate alerts** and deliver **actionable insight**, with automation wherever possible	• New supply chain transactional systems for recording orders, shipments, budget etc.
Policy	• Enabled with visibility of **the end to end *supply* chain** • Setup to deliver supply chain services to **all programs and tiers** • Empowered to **measure performance**	• An improvement mechanism for one domain (procurement, warehousing) • A project to improve milestones/KPIs for one program



The Cross-Program VAN can be situated at any level of the Supply Chain but it should still be able to:

- Have end to end visibility of ***what happens*** *and* ***how well it happens (closed loop)***
- Have a ***highly skilled*** team of people on board delivering a set of well defined services
- Perform ***complex analytics*** (what if, root cause, predictive)
- Provide ***optimized holistic plans*** *and* ***proactive corrective action recommendations*** down to the execution layers aiming for ***meeting the beneficiary needs***


Ad Hoc Phase
Organized Phase
Integrated Phase
• No formal logistics roles and processes
• Fragmented efforts across actors, who have limited understanding of the supply chain
• Standardized systems designed and implemented
• Logistics roles and processes defined and followed
• Sufficient resources mobilized
• People, functions, levels and entities linked under an interconnected organization
• Supply chain managers are empowered, using information to manage the system and align actors
Moving from Ad Hoc to Organized:
• Conduct system assessment, using process mapping, network optimization and costing analysis
• Undertake system design for functions and products using segmentation analysis
• Roll out logistics system by conducting training on developed SOPs and supervision guidelines
• Conduct regular quantification of commodity needs
Moving from Organized to Integrated:
• Establish logistics management units and technical working groups
• Professionalize supply chain managers
• Optimize performance with analysis and tools
• Strengthen automated processes for data collection and sharing
• Develop performance management indicators and incentives

What are the VAN priorities outcomes?

Six priority outcomes were identified:

1. Sufficient quantities forecasted and ordered
2. Commodities ordered on time
3. Order delivered in full
4. Order delivered on time
5. Commodity arrives with sufficient remaining lifetime before consumption
6. Commodity maintains potency/efficacy

The VAN will improve the identified priority outcomes through:

- End-to-end visibility and analytics across all supply chain tiers
- Improved business processes and proactive planning
- Exception handling processes to deal with emergency events (mitigate risk / impact)

The United Republic of Tanzania
Ministry of Health and Social Welfare

V Vaccines

I Information

M Management

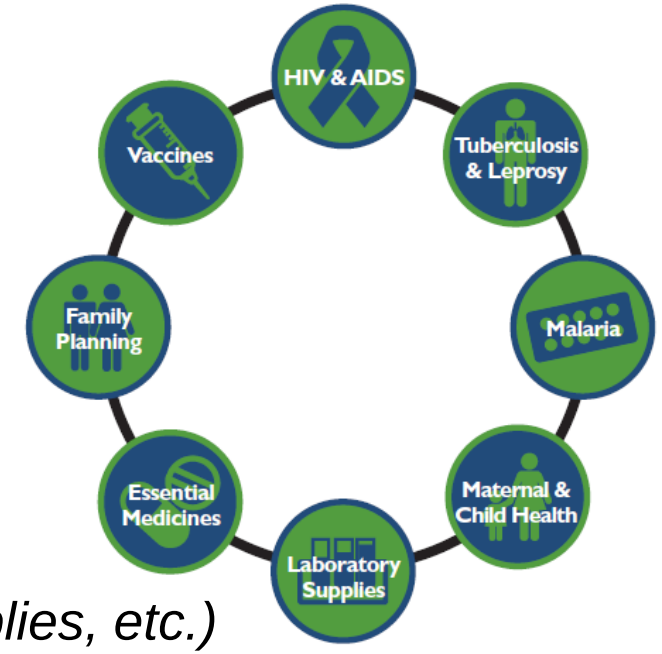
S System

14th TechNet Meeting, Bangkok, Thailand, May 11th – 15th, 2015

Tanzania's eLMIS vision

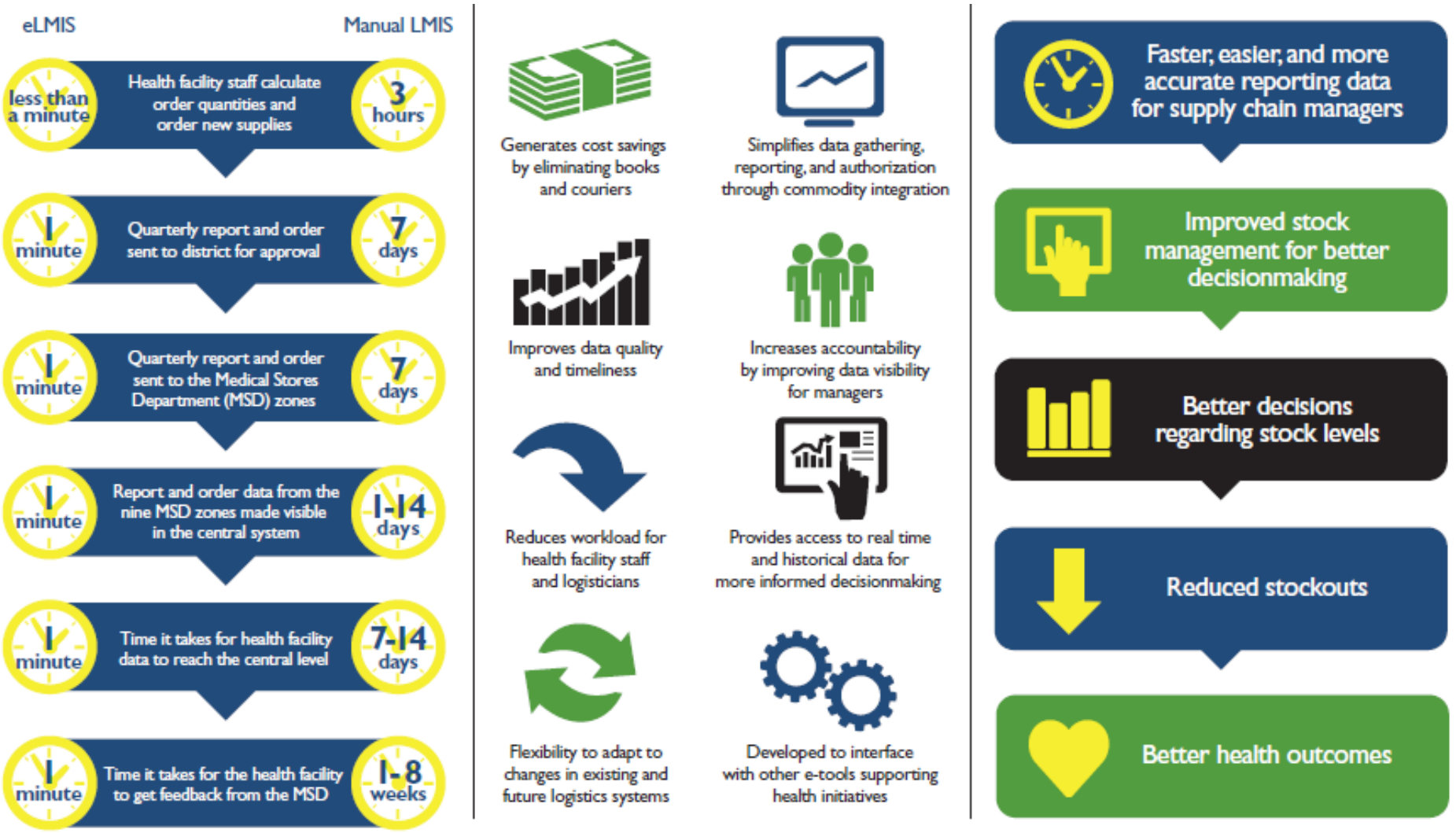
An effective and sustainable electronic logistics management information system (eLMIS) should be user friendly and facilitate that adequate quality and quantities of health commodities are always available at the point of service to meet patient demand. The eLMIS must provide integrated access to:*

- *Accurate, timely and routine consumption data*
- *Real-time logistics management capabilities covering point of origin to point of consumption*
- *Demand forecasting, capacity planning & modeling based on consumption*



(vaccines, medicines, medical & diagnostic supplies, etc.)*

eLMIS is driving supply chain system strengthening



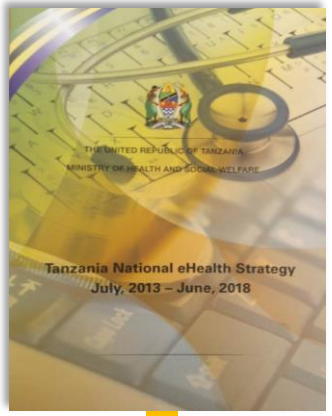
Key milestones in the evolution of Tanzania's vaccine supply chain system

Jul 2013

IVD stock management requirements established

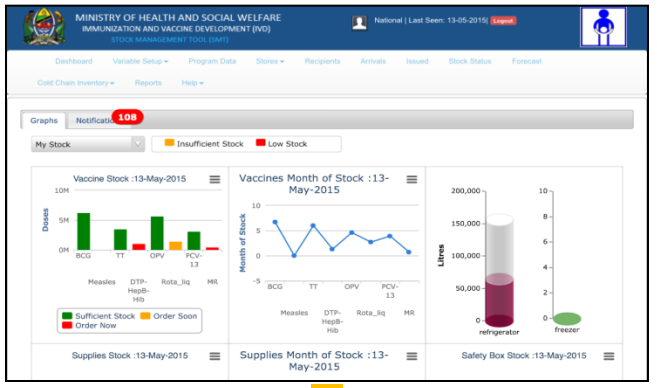
Oct 2013

eHealth strategy launched



Sep 2014

SMT and Cold Chain Inventory Tool rolled out nationally



Sep 2013

eLMIS rolled out nationally

Jun 2014

Piloted use of GS1 barcodes on packaging

Dec 2014

VIMS requirements review workshop

VIMS conceptual framework

Logistics National, District and Regional Levels	**Routine Data** Facility Level
• Forecasting • National Arrival Tracking/Receipt • Regional and District Receipt • Inventory Management of Vaccines and CCE • Order Requisition • Temperature Monitoring • Barcoding	• Facility information • Number of children vaccinated • Stock management vaccine and supplies • Cold chain and temperature monitoring • Adverse events following immunization • Disease surveillance • Vitamin A supplementation
⇳⇳⇳ **Interfaces and Exports** ⇳⇳⇳	

EPICOR E9 Only at MSD Level	**Forecasting & Financing**	**DHIS2** All levels
• Storage (central vaccine stock, receipts, issued to each region) • Distribution (picking and packing, delivery schedules, arrivals)	• Take logistics and routine immunization data to create national forecast	Takes from Program Data: • Coverage rates • Drop-out rates • Access and Utilization

VIMS is being implemented through a multi-stakeholder partnership

Leadership

Donors

BILL & MELINDA GATES foundation

USAID FROM THE AMERICAN PEOPLE

Gavi The Vaccine Alliance

World Health Organization

unicef

Partners

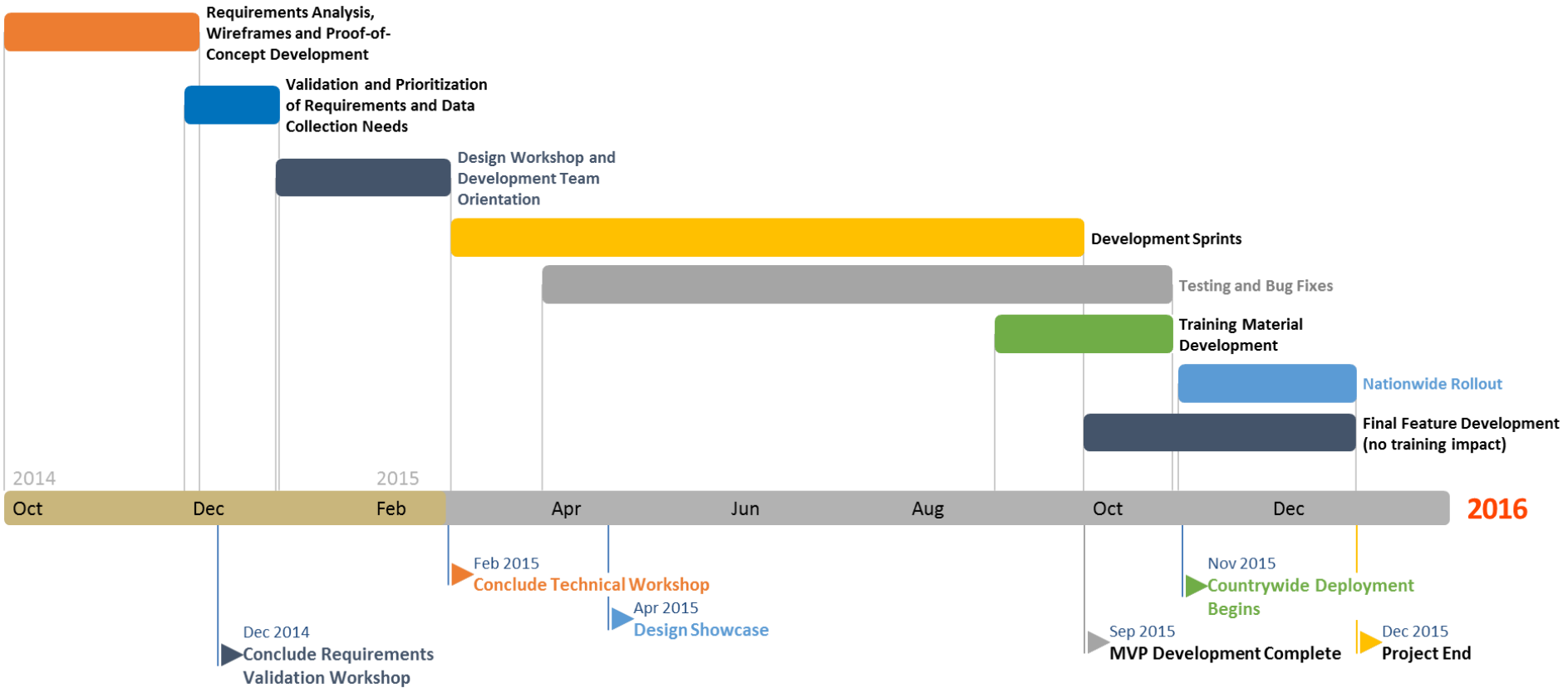
CLINTON HEALTH ACCESS INITIATIVE

JSI

PATH A catalyst for global health

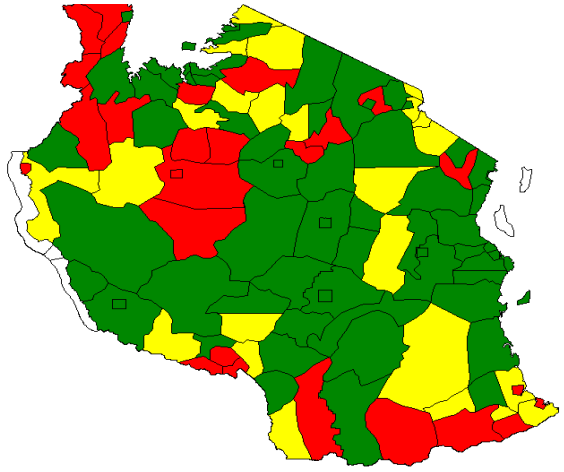
VILLAGEREACH

VIMS project schedule

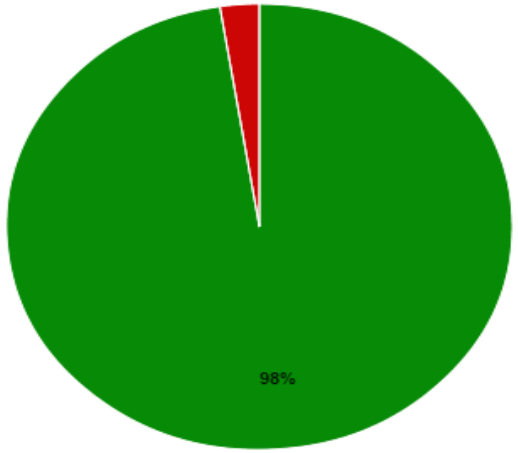


VIMS dashboard is set to visualize KPIs to enhance data for management

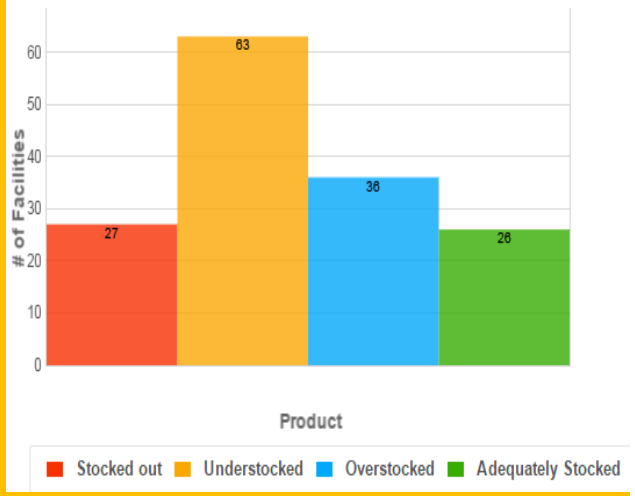
Vaccine Coverage



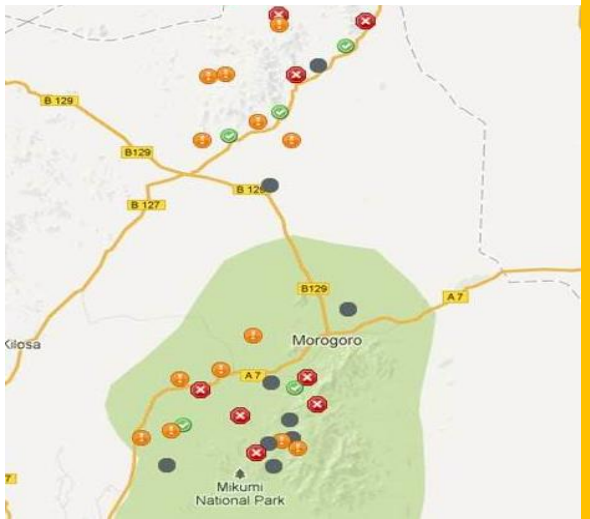
Order On Time & In Full



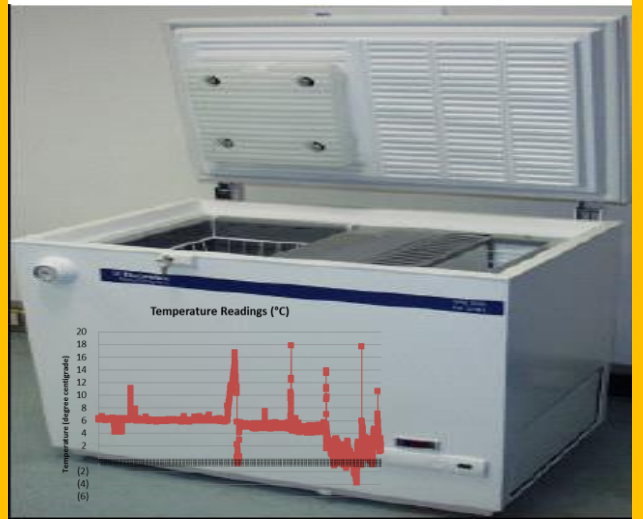
Stocked According to Plan



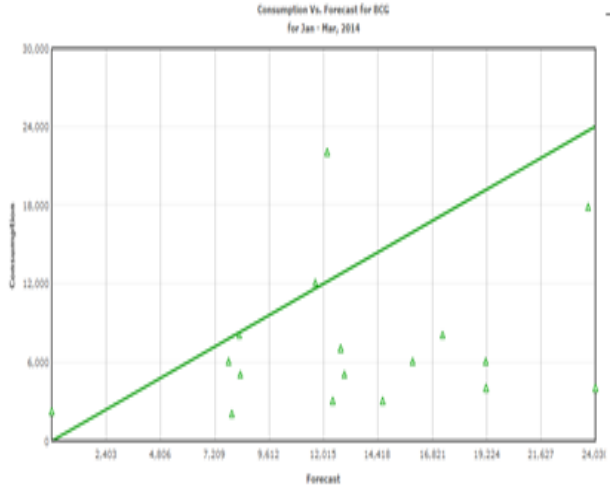
Stock Out Rates



CCE Functioning



Forecasted Demand Ratio

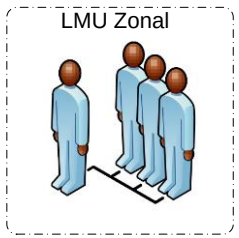


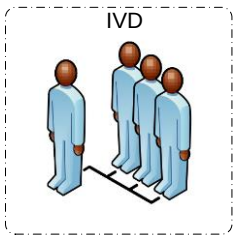
Key takeaways on VIMS objectives

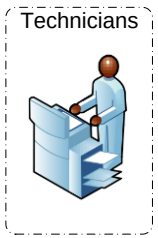
- VIMS is maintaining the standards of WHO and UNICEF in reporting for DVDMT and SMT
- VIMS will facilitate critical linkages between DVDMT and SMT for improved immunization supply chain decision making
- As an open source tool, VIMS code base will be freely available to countries to adapt with minimal configuration
- VIMS can be implemented in a phased approach beginning with districts or facilities that have the requisite infrastructure
- VIMS will enhance the quality of data reported throughout the immunization system through improved checks and balances
- To work VIMS will need trained people willing to use the data it generates for decision making

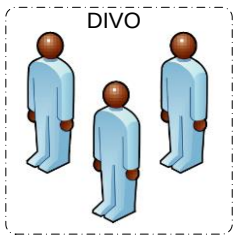
What are the key supply chain challenges that remain?

- Complex paper-based reporting and requisitioning
- Insufficient staff capacity at facilities, districts, regions, and nationally to use data for appropriate analysis, proactive action, and continuous improvement
- Inadequate definition of roles and accountability for supply chain performance
- Limited knowledge of continuous improvement options and approaches
- Insufficient compliance with standard operating procedures
- Uncertain denominators for forecasting supply needs at various facilities









DP 1.2.1 Define forecast KPIs & targets

DP 1.1.3 Escalate about non-receipt of expected demand data

DP 1.1.2 Update expected demand data

DP 1.3.3 Create statistical projection

DP 1.4.1 Consolidate regional/ zonal demand plans

DP 1.4.2 Review forecasted demand against allocated budget and previous budget used

DP 1.2.2 Inform Demand Planner & health facility about budget & demand change

DP 1.5.1 Track/report KPIs

DP 1.1.1 Review previous performance

SPIM 2.1.3 Set planning parameters

SPIM 2.5.2 Review supplies

SPIM 2.1.2 Define service levels

SPIM 2.4.1 Inventory reporting & analysis

SPIM 2.2.2 Calculate net inventory requirement at each supply point

SPIM 2.2.1 Redistribute material with lesser shelf life between facilities

SPIM 2.5.1 Generate supply plan based on material receipt schedule

SPIM 2.3.1 Initiate inventory distribution/stock transfers

SPIM 2.5.4 Communicate supply plan to facility representatives

DTM 3.2.2 Generate distribution plans

DTM 3.1.5 Update inventory count

DTM 3.3.2 Alert stock mismatch

DTM 3.1.4 Pick, pack & ship

DTM 3.2.3 Monitor delivery (in country)

DTM 3.3.3 Alert Regional/Zonal Officer and/or health facility for exception

DTM 3.1.1 Receive materials

DTM 3.2.1 Recalculate lead time

DTM 3.3.1 Alert Transport Planner & Regional/Zonal Officer for exception

DTM 3.1.2 Put away (good stock)

DTM 3.4.1 Calculate material requirement and excess stock at nearest location

DTM 3.5.1 Perform root cause analysis

DTM 3.1.3 Put away (rejected stock)

DTM 3.1.7 Dispose of rejected stocks

DTM 3.1.8 Calculate KPIs

CCM 4.3.2 Review faulty equipment

CCMO 4.3.2 Submit status report on scheduled maintenance/ breakdown

CCM 4.6.3 Identify stock that needs to be moved to other health facility

CCM 4.3.1 Coordinate with Technician

CCM 4.1.2 Temperature monitoring

CCM 4.4.3 Perform root cause analysis

CCMO 4.3.1 Inform reason for breakdown/tentative date to finish repair

CCM 4.1.1 Report status of cold storage equipment

CCM 4.4.2 Calculate KPIs

CCM 4.5.1 Arrange spare parts

CCM 4.6.1 Calculate remaining cold storage space at facility with broken fridge

CCM 4.3.3 Perform maintenance/ repair work

CCM 4.6.2 Check cold storage space availability at nearby health facility

VIMS (*in development*)

Epicor 9

eLMIS

SMT

CCIT

DVDMT

Forecasting Tool

Beyond Wireless (RTM)

Proof of Delivery

DHIS2

Surveillance

Immunization Registry (*in development*)

Master Facility List

Bureau of National Statistics

Snapshot of existing systems and processes

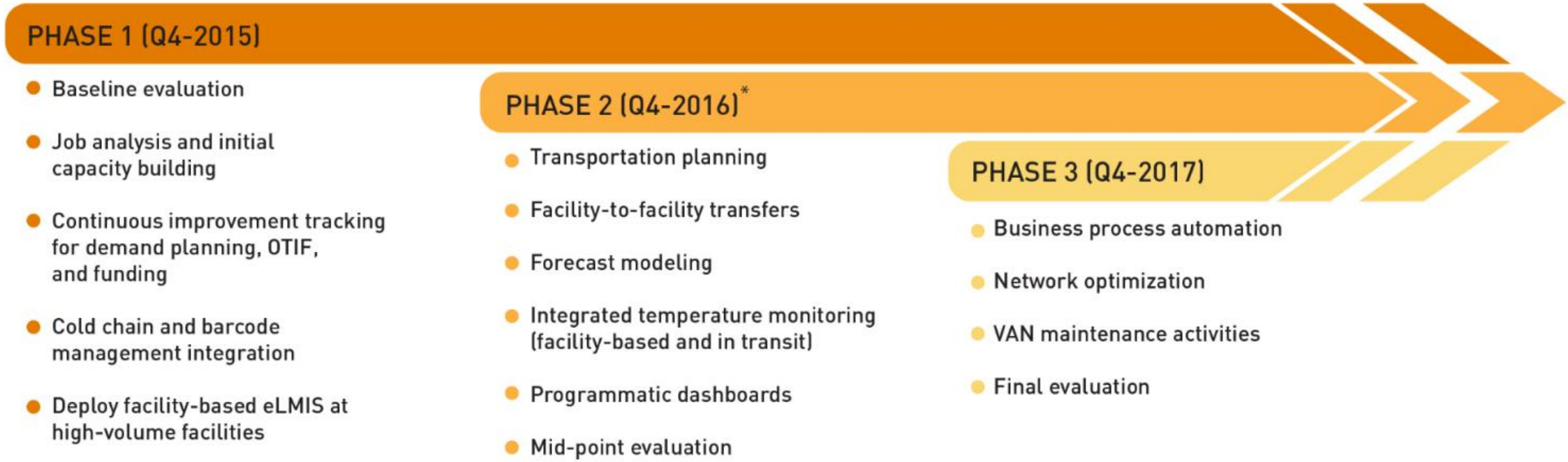
What key processes are we targeting for improvement?

1. Demand planning (DP)
2. Supply planning and inventory management (SPIM)
3. Distribution/transportation management (DTM)
4. Cold chain management (CCM)

What additional activities do we plan to undertake to implement the VAN?

- Build capacity to institutionalize VAN roles and accountability
- Link demand planning to forecast accuracy
- Ensure continuous improvement of “on-time, in-full” delivery
- Track funding in full
- Improve cold chain maintenance
- Increase visibility of facility accounts and stock held at the Medical Stores Department
- Deploy facility-based electronic logistics management information system (eLMIS) at high-volume facilities
- Use manufacturer barcode data to manage batches and expiry

What is our planned approach?



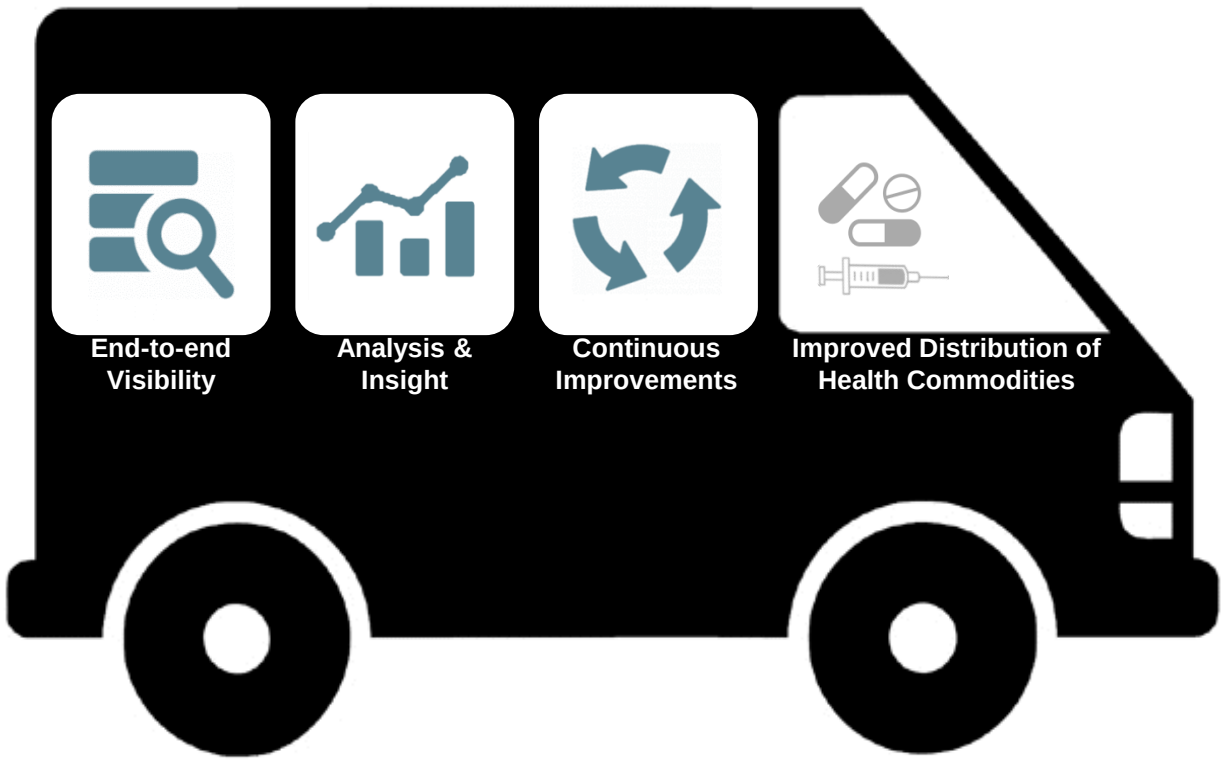
* Pending Phase 1 analysis

Driving the VAN in Mozambique

TechNet Conference

May 14, 2015

Taking the VAN vision….

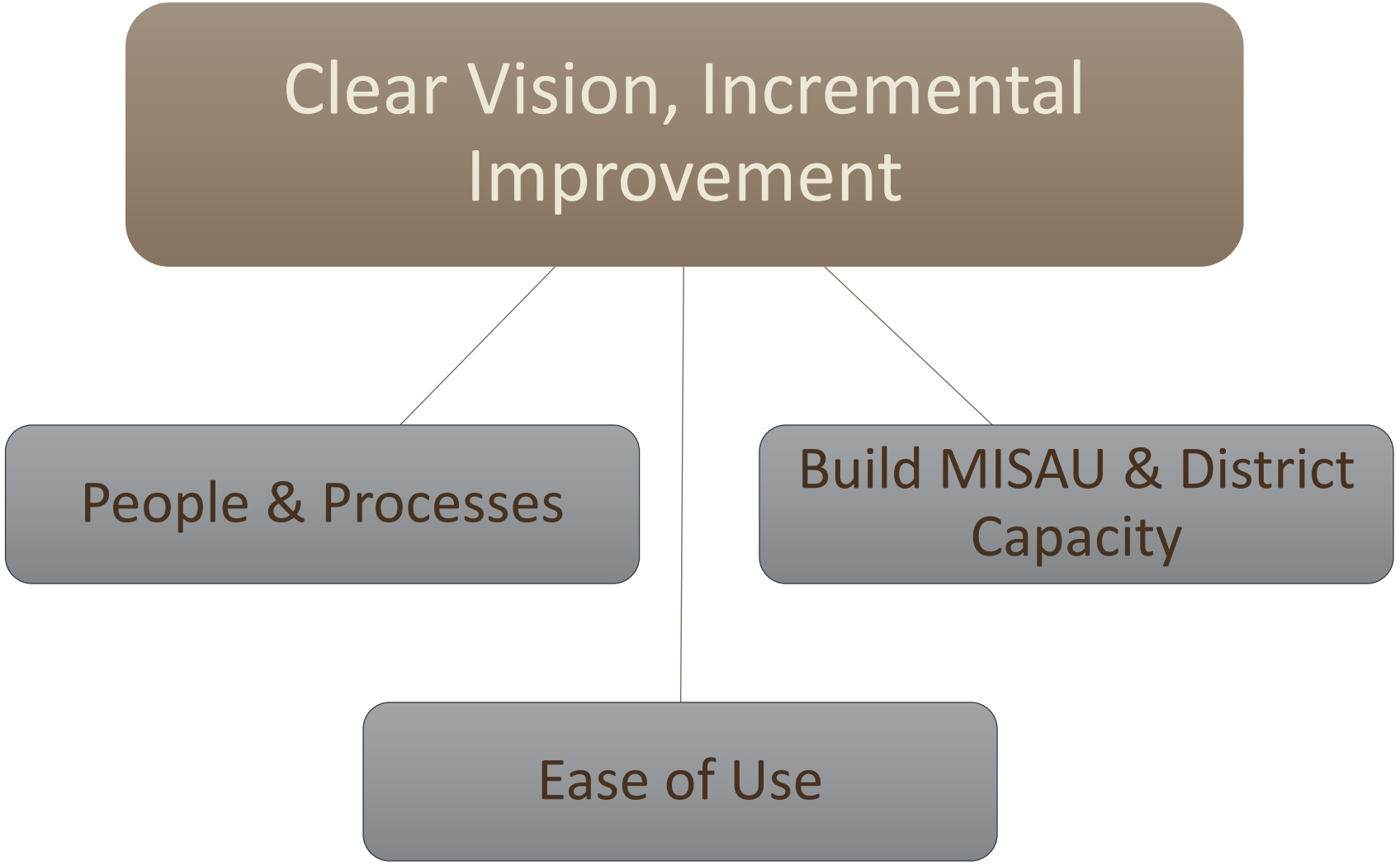


…into Mozambique reality

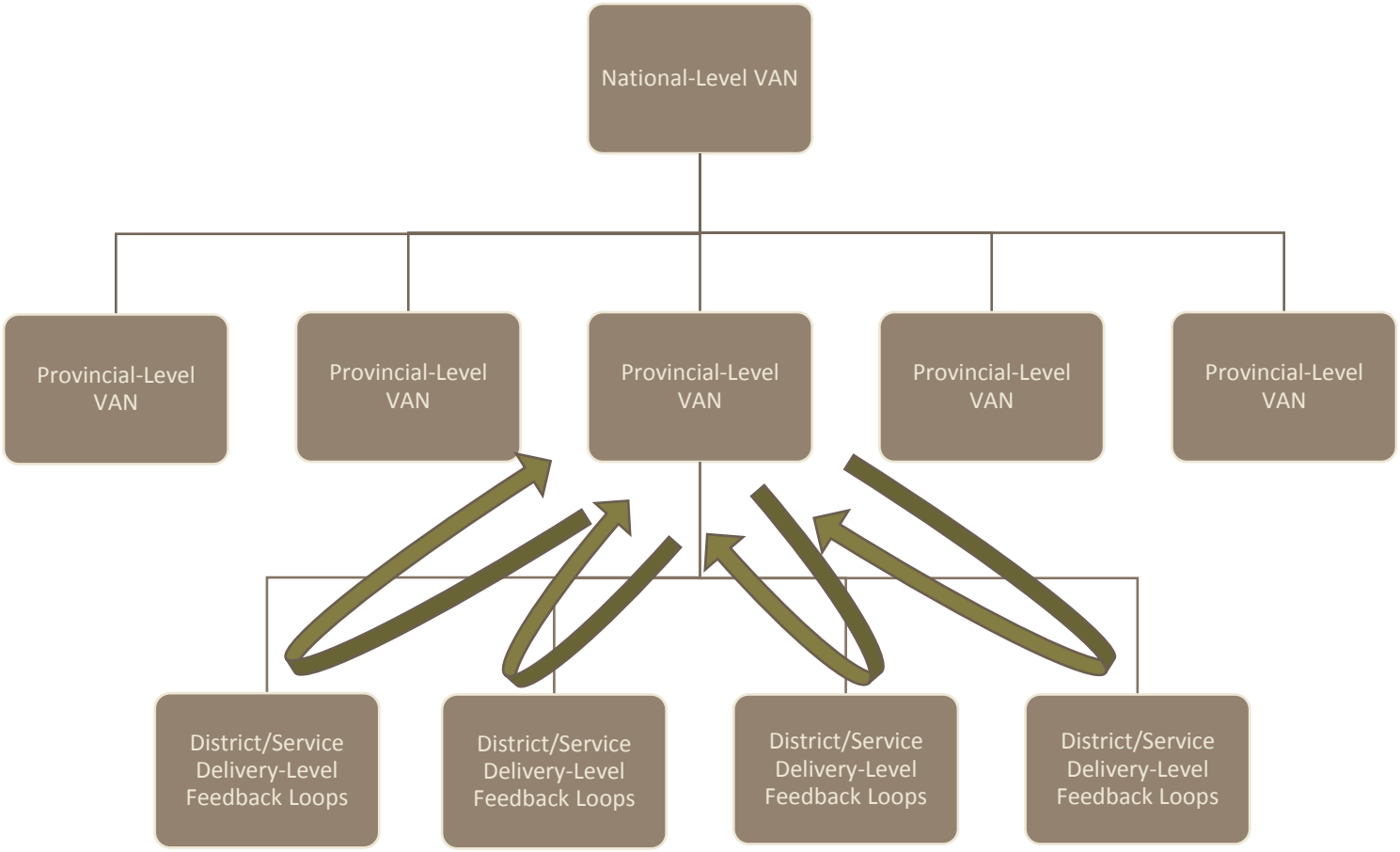
Challenges Identified by EPI Program

- Duplicate Data in Multiple Systems
- Facility-Level Stock Data Not Available Nationwide
- EPI Indicators and Stock Data In Different Systems
- Poor Data Utilization at Lower Levels
- Difficult to Assess Wastage Rate
- Limited Data Feedback to Lower Levels
- SMT Hard to Use

VAN Approach



Mapping VAN to Administrative Hierarchy



Building the VAN

People

- Secunded Logistics Data Analyst to MISAU
- Transport Management Capacity

Processes

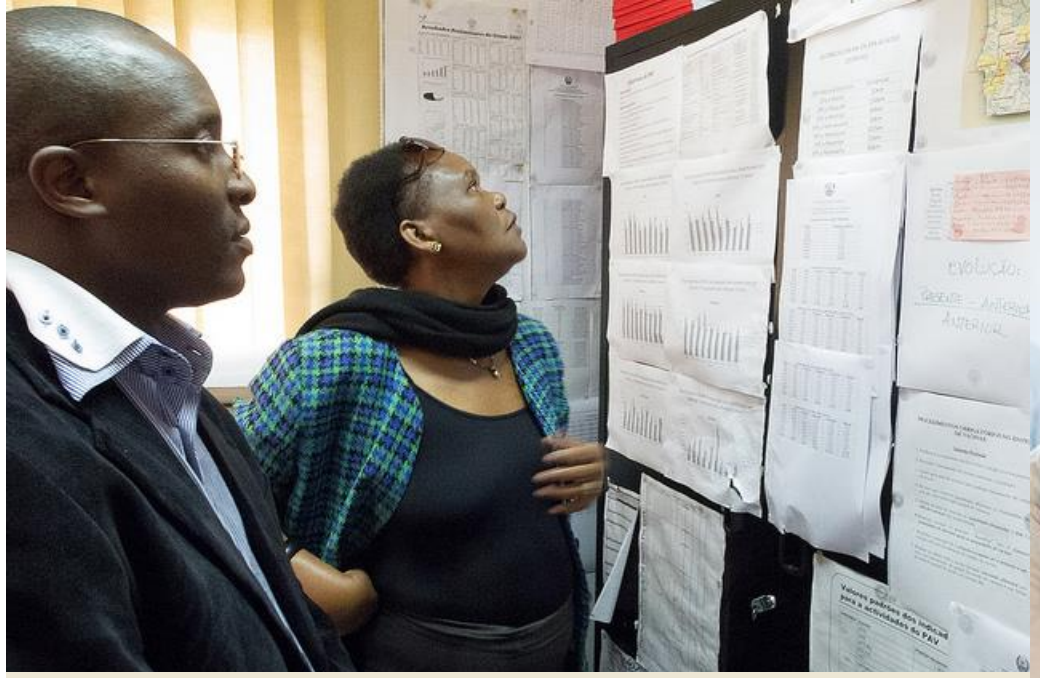
- Systematic Monthly Data Review Process
- KPIs tied to roles
- Data Collection Process
- Data Feedback to Health Centers

Technology

- Consolidated Vaccine Data Platform
- Exception Alerts
- Transport Management/GIS
- What-If Analysis

Policy

- Flexibility to Change Annual Plan
- System redesign?
- Outsources transport?
- Integration of vaccines with CMS?



THANK YOU

MAY 2015

TECHNET BRIEFING

Visibility & Analytics Networks in Nigeria

NATIONAL PRIMARY HEALTH CARE DEVELOPMENT AGENCY (NPHCDA)

CLINTON HEALTH ACCESS INITIATIVE (CHAI)

eHEALTH SYSTEMS AFRICA (eHA)

MCKINSEY & COMPANY

WHO & UNICEF - NIGERIA

ACCENTURE DEVELOPMENT PARTNERS (ADP)

VAN nigeria

Background

- Formation of DL&HC
- Gavi graduation and funding gaps
- New vaccine introductions

VAN in Nigeria

- Construct for reframing programmatic challenges
- Adaptation of blueprint through the White Paper

VAN OVERVIEW

Build on existing systems

- Integrate and network existing systems

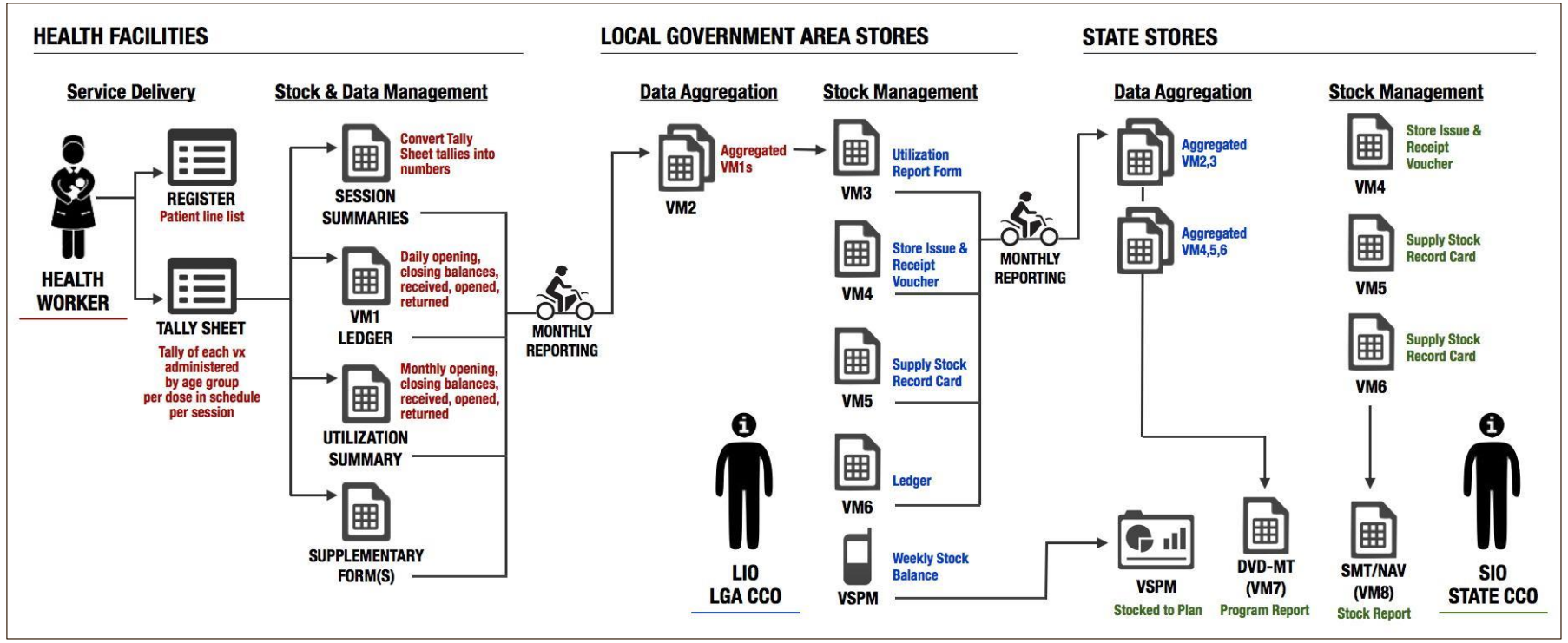
Analytics framework

- Value-chain views
- Performance management
- Bottleneck analysis

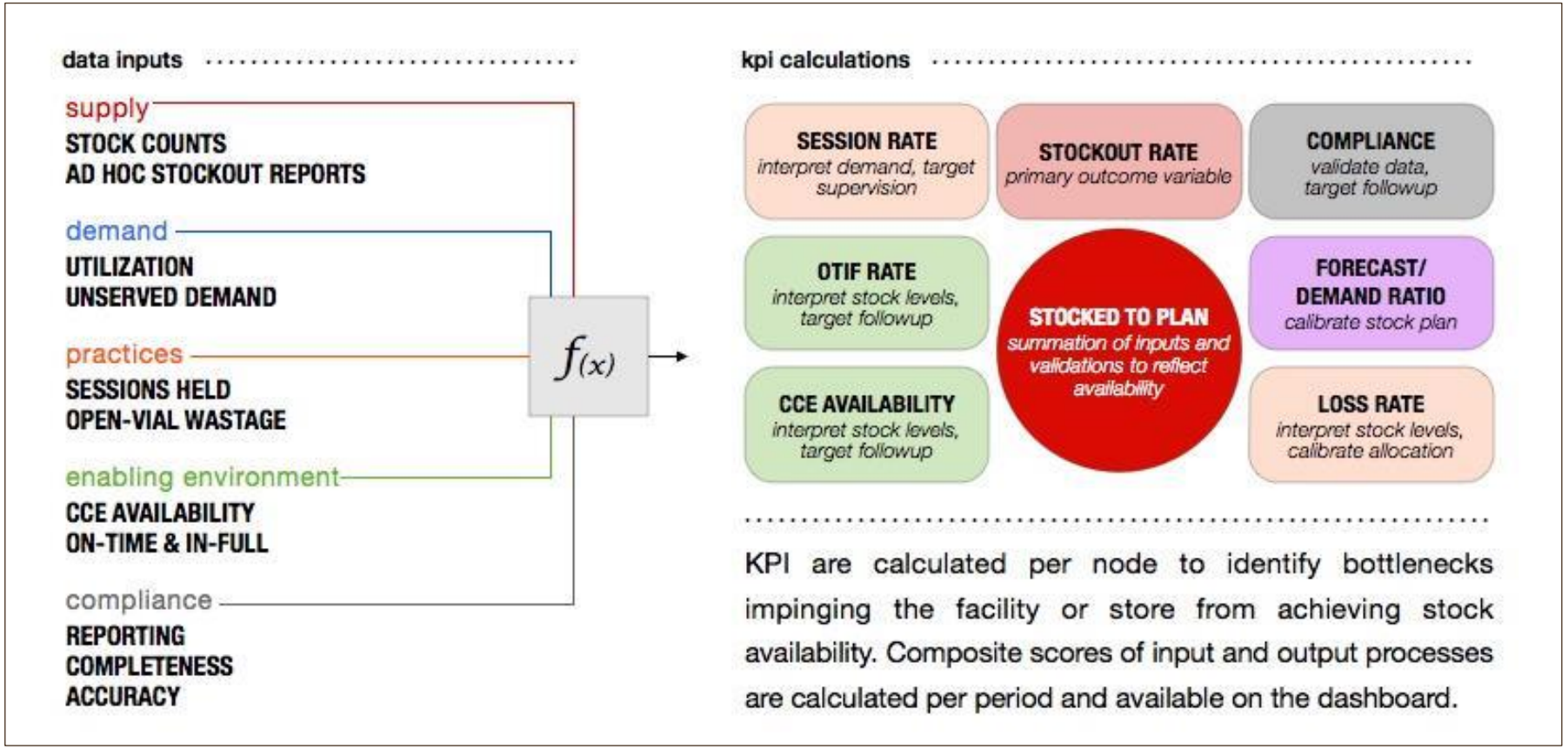
Focus States

- All along maturity curve
- Custom strategies
- Build reference models for scale

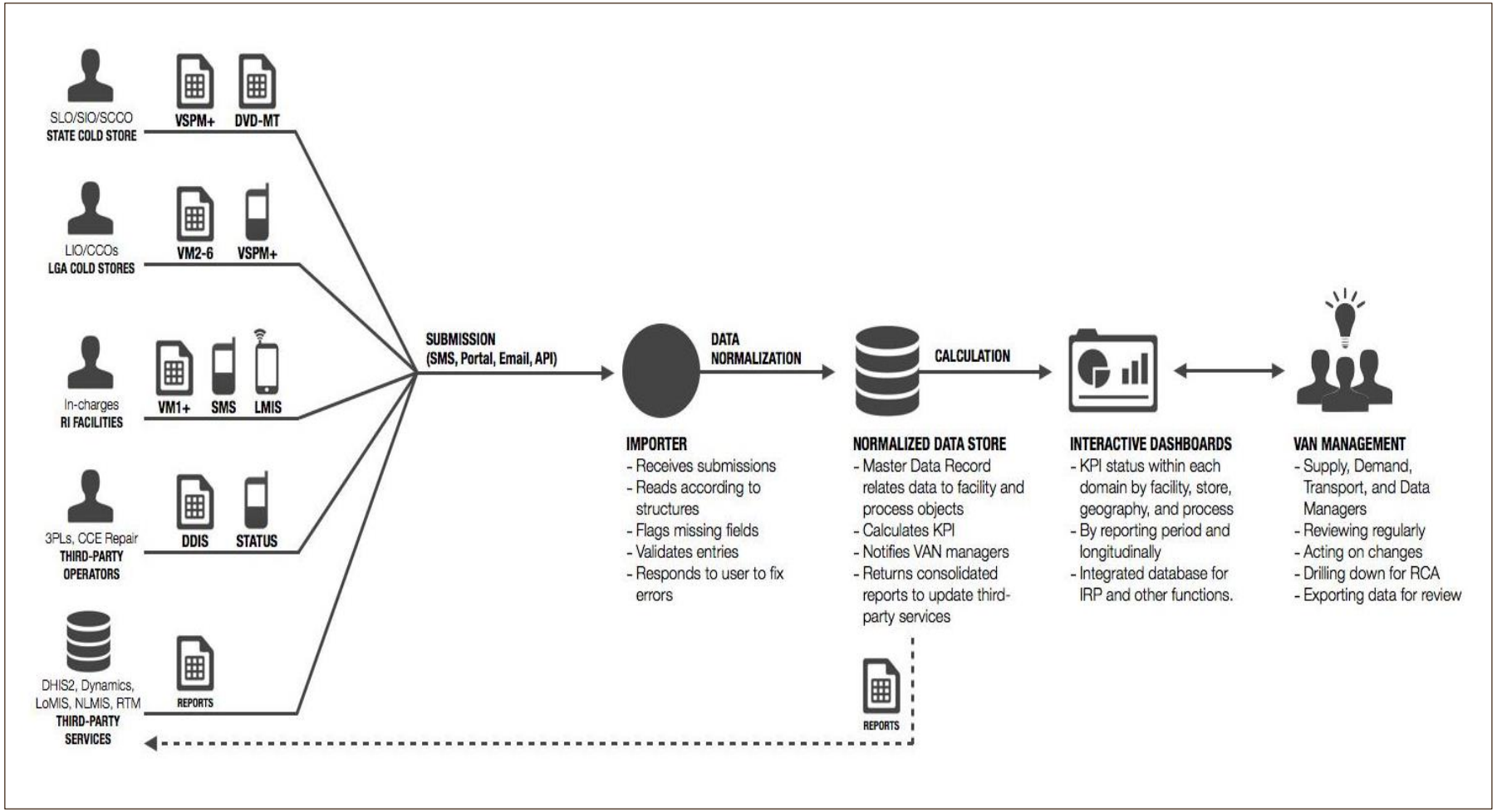
VAN BASELINE SYSTEM



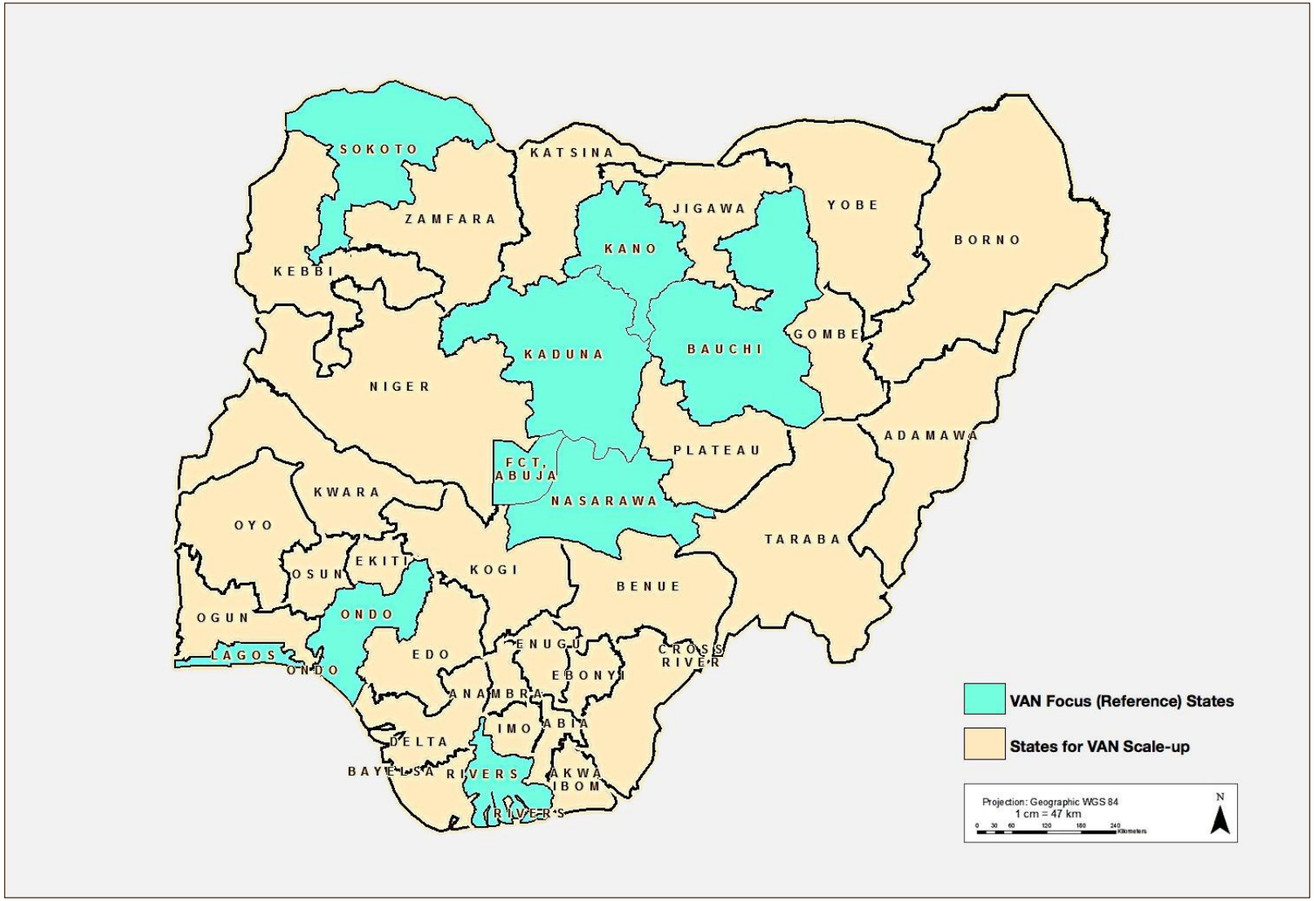
VAN ANALYTICS FRAMEWORK



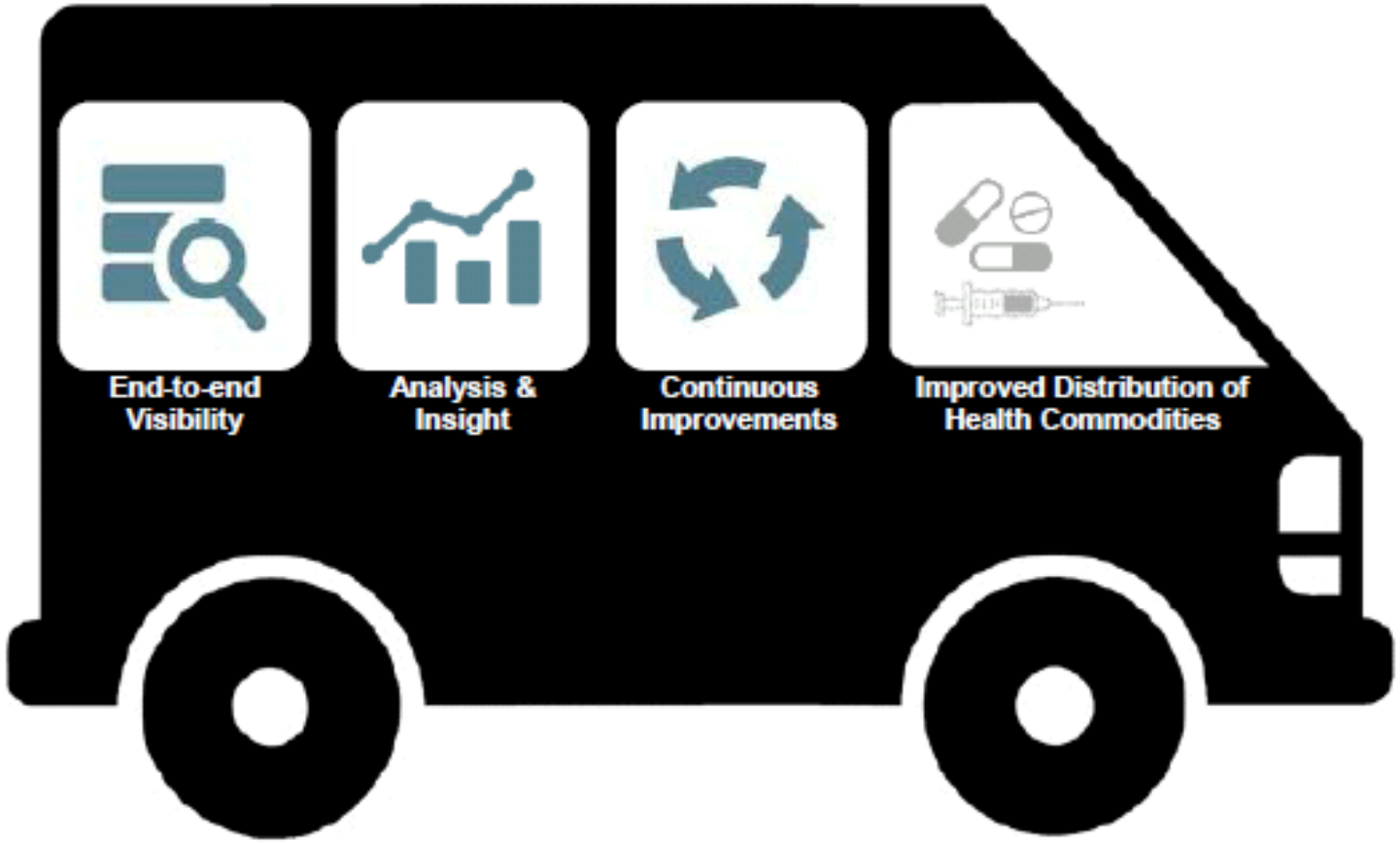
VAN TECH STRATEGY



VAN FOUCS STATES



It’s time for a song…



Here are the lyrics if you'd like to sing along…

It has to VAN! It has to be VAN!

The data it flows, to a dashboard it goes

To an aspirational plan, and fina'ly you can

Get all vaccines there, not lost in the air, and not Disneyland

Some centers we've seen, excellent and clean

Puts us on track, there's no turning back

We'll land and expand!

For nothing else gives visibility

Please David help, it's not going to be free

It has to be VAN, analytical VAN

Fabulous VAN!!