

Technical Review of Public Health Supply Chain Assessment Tools

An analysis of major tools and approaches 2019

Final DRAFT

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14/11/2019	1.4	1. Updated EVMA chapter	I Dube L. Hedman

1. Technical Review

This review has been based on assessment tools developed by the named partners in this document. It is intended to provide information and act as a supportive tool for users. The review was based on existing versions of assessment tools available at the time of publication and may not fully reflect any updates, revisions, change of features or discontinuation of the tools.

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List of Acronyms

BMGF	Bill and Melinda Gates Foundation
EPI	Expanded Programme on Immunization
EVM	Effective Vaccine Management
GAVI	Global Alliance for Vaccines Initiative
GF	The Global Fund to Fight, AIDS, Tuberculosis and Malaria
GHSC-MM	Global Health Supply Chain Maturity Model
iSC	Immunization Supply Chain
ISG	Inter-Agency Supply Chain Group
KfW	Kreditanstalt für Wiederaufbau
KPI	Key Performance Indicator
MAPS	Methodology for Assessing Procurement Systems
NSCA	National Supply Chain Assessment
OECD	Organisation for Economic Co-operation and Development
SCISMM	Supply Chain Information Systems Maturity Model
SCOR	Supply Chain Operations Reference
APQC	American Productivity & Quality Center
PEPFAR	President's Emergency Program for AIDS Prevention
SCMS	Supply Chain Management Systems Project
ToC	Theory of Constraints
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

Preface

Comments from United Nations Children's Fund and World Health Organization

Estimates for global markets for medicines and vaccines predict a 30% increase by 2030 (IMS Institute for Healthcare Informatics, 2017). Population growth, new products in the pipeline, and changes in public health--such as the growing burden of non-communicable diseases that require lifetimes of treatment--all contribute to the increased demand. Systems for procurement and supply chain management (PSM) must adapt accordingly to reach the ambitions of the Sustainable Development Goals towards Universal Health Coverage to prevent, treat and manage diseases. The invaluable role of supply chains within health systems is indeed underscored by the past three decades of investments by ministries of health, the international development community and other actors. Despite the investments, progress remains fragile in many low- and middle-income countries (LMIC) and the complexity of this problem as a public health issue may not be sufficiently recognized.

From annual reports of USAID, GAVI, The Global Fund, UNFPA and UNICEF alone, more than USD 4 billion are spent annually to procure medicines, vaccines and health products for LMICs with unmet needs. The impact of this significant expenditure on a country-by-country basis, however, is still only a fraction of what ministries of health procure to have a package of essential medicines (WHO Model List of Essential Medicines, 2019) available at points of care, including primary health facilities.

National supply chains for medicines and health products need to be functional for these commodities to safely reach patients. Functional capacity speaks to multiple technical areas that define a supply chain as well as sufficient scope and depth to maintain resilience in the face of changing needs, such as emergencies. Functional performance also has dependencies on areas such as infrastructure, technology, policies and regulatory systems, human resource development, public health programmes and the efficiency of markets. Investments that are strategic, relevant and impactful are critical.

Central Medical Stores (CMS) entities, international development agencies, the private sector and civil society all invest significant resources into building supply chain capacity for public health. These investments are often guided by and monitored through comprehensive assessments. Assessments are investments in and of themselves, representing robust, time-tested processes to identify and prioritize the most debilitating bottlenecks, while also gathering sufficient detail to support well-informed solutions and future strategies. They create baseline information and a framework for monitoring improvements, directing course changes, leveraging across programs and even across national borders, and other areas.

Assessment tools used by UN and bi-lateral development agencies are generally publicly available while protocols and highly specialized assessments from industry, civil society and others may be considered proprietary. Out of the numerous tools available, agencies performing assessments generally use those that they have specifically developed themselves. When a CMS or equivalent entity in a country engages in self-assessments, the fitness for the purpose of any tool is an important consideration.

Preface from UNICEF and WHO

This document is a review of major assessment tools, facilitated by UNICEF in response to a specific request from CMS entities and ministries of health. The request was for a resource on selecting the most relevant assessment approaches, especially with a view of supporting national leadership in establishing supply chain targets and strategies for the important years to come.

While the review responds to questions on selecting the best tool for a given context, it also illustrates opportunities to expand critical thinking about how supply chain performance is measured. Many anecdotal--yet oft repeated--concerns about resources consumed in duplicative large-scale assessments imply a need to strategically and thoughtfully improve the use of assessment information. Fewer assessments and optimized use of resulting information could reduce the burden and cost and thereby open space for more innovations and solutions. Similarly, when international development partners perform assessments, a multi-partner approach, inclusive of national stakeholders, could offer a similar benefit.

Assessments and investment strategies could benefit from an expanded focus, including attention to issues such as triggers for capital or multi-sectoral investments. As an example, private investors, the Global Financing Facility and other investors could use assessment information to consider strategic strengthening of the third-party markets for supply chain services in a given country. Expanding to considering multi-sectoral policies that facilitate or impede the potential for pooled procurement or joint investigation of shortages are other examples.

Current assessment approaches and tools have been developed with the expertise convened by international agencies. Recognizing that the sustainability of any progress achieved will ultimately depend on nationally and in some cases regionally focused efforts, assessments will increasingly need to target specific pathways for these investments to realistically transition and integrate into country-led systems. To this end, future updates to assessment approaches could benefit from systematic and renewed engagement from countries, civil society, academia, regional platforms and the private sector.

In considering any type of reporting or assessment, care should be taken to promote data for decisions and actions versus retrospective critiques. Responding to calls at the level of the World Health Assembly (WHA 69.25), assessment approaches now increasingly focus on systems and capacities to support improved use of supply chain data. This example of progress towards improved data indeed has been a collective effort, underscoring the benefit of harmonized or aligned approaches.

In the short term, assessments will continue to rely on existing tools that are the most relevant and fit for purpose. For example, assessments of overall maturity serve a different purpose from assessments that focus on the specificities of immunization supply chains. The longer term may evolve to include transition, multi-sector investment and other expanded areas.

Preface from UNICEF and WHO

The following document provides a summary of seven different assessment tools developed by agencies as an integral part of their history in promoting the capacity of national supply chains for medicines and health products. The primary purpose of the document is to provide insight into these major tools and their optimal use, acknowledging the many other tools that have important value. Country supply chain stakeholders and leaders are a critical audience for this review, especially recognizing that their active role in shaping assessments and the very rich resulting information defines the future of supply chains for public health. This review also serves as a welcome reminder of the significant innovation, investment and steadfast pursuit of a common vision shared by many where medicines and health products simply reach patients, where ever they are.

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Review of seven major assessment tools for supply chains

Supply chain assessment tools and maturity models from international development agencies

This document was developed by UNICEF with contributions from the Interagency Supply Chain Group (ISG). Its development was motivated during the Health Systems Strengthening Workshop hosted by UNICEF in 2018. During this workshop, national government representatives collectively and unanimously expressed concerns about increasing demands for engagement in assessments of national supply chains for medicines and health products. They expressed a critical need for guidance on selecting the most appropriate tools in order to improve the focus and usefulness of the resulting information.

The growth in supply chain investments by multiple actors in the last decade has come with a corresponding emergence of assessment tools that help measure progress and impact and guide investment decisions. The unintended consequence of the multiplicity of these assessment tools is several similar tools being applied to national supply chains at the same time. Confusion and fragmentation of investments and impact were risks highlighted by country representatives.

The document provides an objective overview of major assessment tools, especially those focused on definitions of supply chain maturity as the core of the assessment approach. It highlights the optimal areas of use for each of the seven maturity assessment models. In addition to supporting country decision making and an improved dialogue among country stakeholders and external investors, this analysis also highlights opportunities where harmonization and alignment across tools and performance indicators can be leveraged in the future. The document is not a critique that considers merits and deficiencies of any particular approach, but rather intends to facilitate informed selection across a variety of national contexts. It also opens a conversation for agencies who invest in maturity assessments to make better use of the resulting information, for example, in common measurement frameworks and the like.

The technical aims of the document are to:

- provide a succinct description of seven major supply chain maturity assessment tools analyzed and articulate their primary purposes, functionality and application for the benefit of national governments and other stakeholders;
- act as a guide to aid national governments and other stakeholders in selecting the most appropriate supply chain assessment tool to select that meets their specific needs, context and budget;
- and to bring to bear the complementarity of the assessment tools including highlighting the unique features and benefits.

The target audience for this document is primarily national governments, donors and development partners and other stakeholders who have interests in contributing to supply chain transformation, including the private sector, civil society, academia and others.

This document is not a repository of all the supply chain assessment tools and does not replace the PSM toolbox hosted by i+ Solutions. Rather, it analyzes seven major assessment tools identified in feedback from country representatives during the UNICEF 2018 workshop. The systematic approach it provides can be used to analyze a larger body of assessment tools over time.

¹ ISG: Bill and Melinda Gates Foundation, DFID, Global Affairs Canada, the Global Drug Facility, KfW, the Global Fund, Gavi, NORAD, UNDP, UNFPA, UNICEF, USAID, World Bank, WFP and WHO

1 Maturity Models in Public Health Supply Chains

The increasing investment by donors in strengthening national supply chains in the public health sector has seen growth of diverse assessment tools that seek to determine existing supply chain gaps and help target investments. The maturity model is one of the assessment tools and approach that has gained prominence in recent years and has seen BMGF, USAID, Gavi, Global Fund, WHO, UNICEF and others develop and deploy similar models and tools that are aligned to their areas of interest. In most cases, these tools are used to assess distinct commodity supply chains and help evaluate risk prior to transformation investments being made.

2 Purpose of this Review

The purpose of this review/analysis is to describe the concept of maturity modelling and communicate the differences and unique characteristics of each distinct tool developed and deployed by the various organizations and agencies. This review aims to articulate the distinct application criteria for each of the tools/models, highlight complementarity and provide guidance to the country offices and national governments on selection of assessment tools applicable to their needs and context.

3 Overview of Maturity Models

Maturity models convey the idea of development from an initial state to a more advanced state. The idea behind this is the notion of evolution, suggesting that an organisation may pass through a number of intermediate states on the way to maturity. Definitions of maturity combine an evolutionary or experiential element with adoption of good practice. Maturity implies that the processes are well understood, supported by documentation and training and are consistently applied throughout the organisation and continually being monitored and improved by its users (**Fraser et al 2002**). Donors and global partners have now adopted the concept of maturity in public health supply chains as a means to assess and monitor performance.

4 Maturity Models Reviewed

The review focused on the BMGF, USAID, Gavi, WHO, UNICEF and Global Fund maturity models/assessment tools. It provides an overview of each of the models and states what it measures, some of the high-level indicators or clusters of indicators, type of assessment, the applicable tiers, purpose, strengths and weaknesses, indicative cost and duration of assessment. This review also highlights complementarity of the models and these are cross-referenced where applicable.

APPROACH

The approach to this analysis was premised on objectivity and impartiality and focused on communicating the individual features and functionalities of the respective tools assessed. Each assessment tool was distinctly and independently analyzed and results presented in a standardized format to enable the reader to make like for like comparison of the assessment tools. The analysis was deliberately designed to avoid direct comparison of tools on the basis of their performance or quality but sought to provide a neutral analysis which countries and partners could consider as a supportive tool for decision making, advocacy initiatives and for triggering conversations on maturity models and assessment frameworks applicable to their contexts.

METHODOLOGY

Selection of Tools for Review

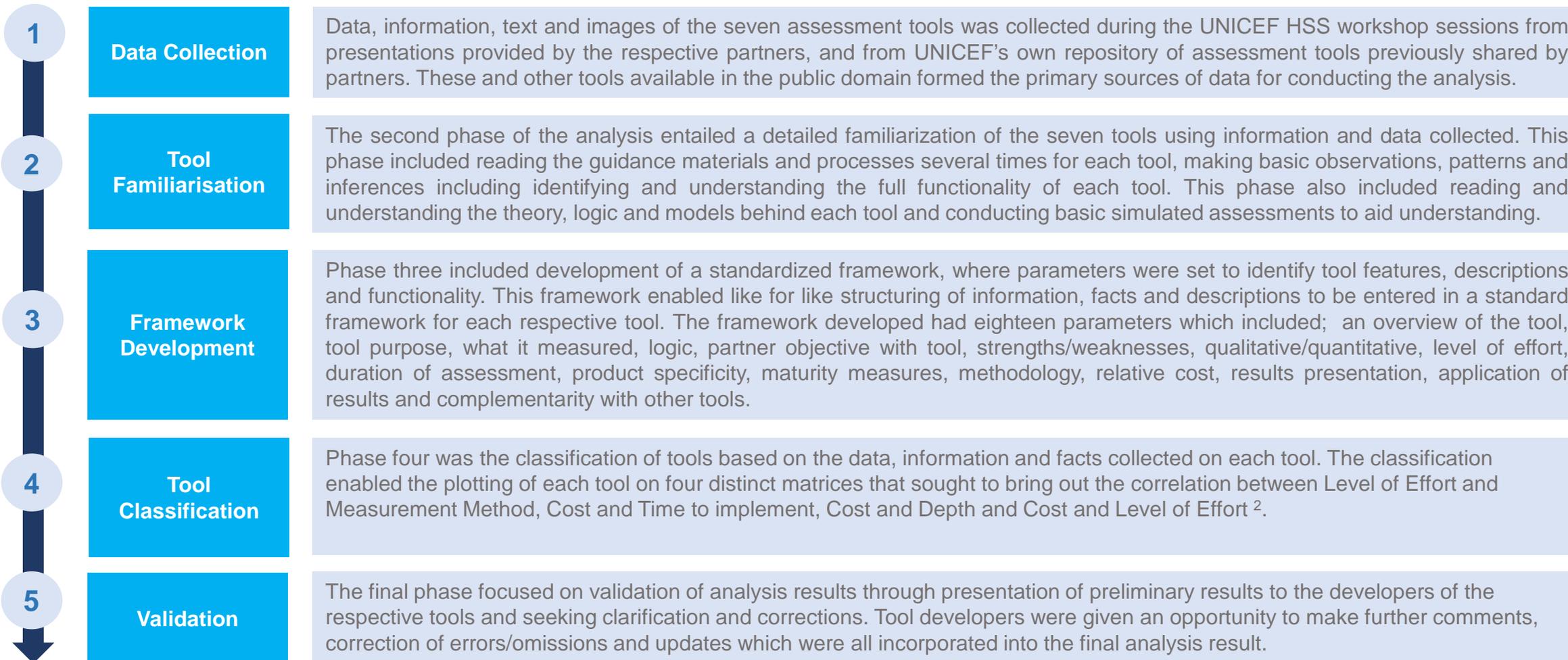
The choice of tools to review was primarily based on feedback and proceedings during the Health Systems Strengthening Workshop hosted by UNICEF in 2018, where global partners comprising BMGF, Gavi, Global Fund, UNICEF, USAID and WHO presented their respective maturity models/assessment tools to workshop participants. The decision to evaluate seven assessment tools was driven by requests from national governments attending the workshop that sought further clarity and guidance to help them select the most appropriate tool for their own needs. Other tools developed by private sector, NGOs and other actors were not included in the review because either they were proprietary tools or were only developed for a specific intervention or programme. The table below provides a list of the tools reviewed.

Assessment Tool	Developer/Owner
Global Health Supply Chain Maturity Model	Bill & Melinda Gates Foundation
Immunization Supply Chain Process Scorecard	Gavi
Maturity Model and Deep Dive Assessment	Global Fund
Supply Chain Maturity Scorecard	UNICEF
National Supply Chain Assessment (NSCA)	USAID
Supply Chain Information System Maturity Model (SCISMM)	USAID
Effective Vaccine Management Assessment (EVMA)	WHO/UNICEF

Methodology & Approach

Assessment Tool Review

The methodology deployed for the review of assessment tools was qualitative and followed a five step process illustrated below.



² **Level of Effort** = Staff time, number of people required; **Depth of Assessment** = Level of detail, number of parameters & performance indicators applied; **Level of Effort** = Staff time, number of people required to implement

Global Health Supply Chain Maturity Model

Overview

The Global Health Supply Chain Maturity Model (GHSC-MM) is a self-assessment tool which helps countries independently assess supply chain needs, and clarify stakeholder expectations against the reality of the current supply chain maturity level. It is based on the premise that well performing supply chain processes lead to higher supply chain performance. It does not measure actual supply chain performance as service levels and/or availability indicators. It is anchored on the Theory of Constraints, which states that the lowest performing element of the supply chain drags down overall performance.

Purpose

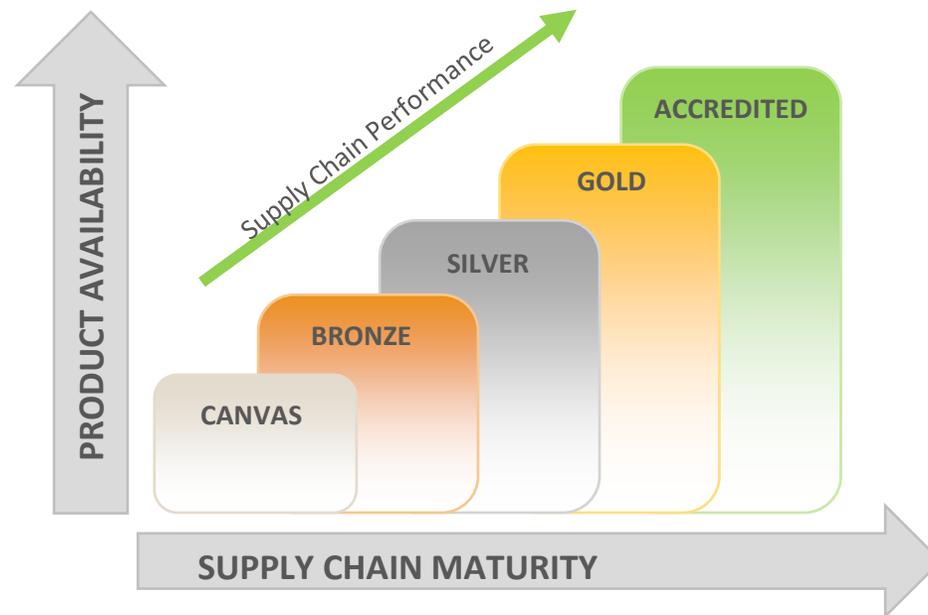
The primary purpose of the Global Health Supply Chain Maturity Model is to help countries increase supply chain performance by focusing effort on improving constraints. It is also intended to help countries highlight areas where investments are needed and also to understand when 'Market Maturity' impacts the supply chain's ability to improve further³.

What it Measures

The GHSC-MM tool is designed to measure strategic, tactical and operational processes in a single tool. Indicators are clustered in categories of critical components, where one would find a complete mix of indicators grouped by category. Each category is evaluated for process maturity, based on specific yes/no criteria. Results are then plotted on a continuum across five levels, where 'canvas' is the least performing level and 'accredited' is the highest performing.

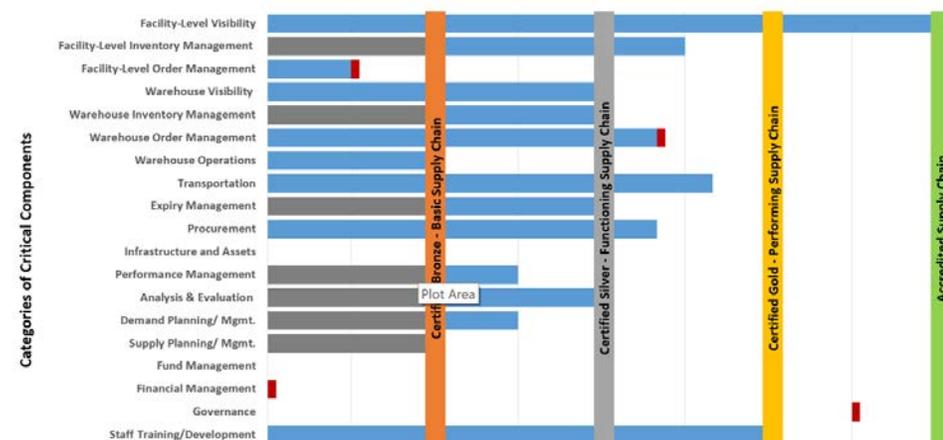
Logic

Overall maturity is based on the Theory of Constraints (ToC)⁴ where the lowest performing element of the supply chain pulls down overall performance. Removing this "weakest link" is the fastest and most effective way to improve performance as there is a relationship between maturity and supply chain performance.



Output of Evaluation, to determine first steps of investments

The purpose is so you can see how your supply chain is performing across many different functions. The takeaway is to locate the areas that require first focus and investment, so your supply chain can perform better.



Constraints on the supply chain

Use this area to explain constraints, and use the red line to indicate where it is preventing your supply chain maturity

³ Market maturity reflects changing patterns in demand and supply, and occurs when there are multiple suppliers and multiple buyers in a market.

⁴ The Theory of Constraints is a suite of management concepts developed by Dr. Eliyahu Goldratt as introduced in the landmark book "The Goal." It helps managers decide: What to change? What to change it to? How to cause the change? <https://www.tocinstitute.org/theory-of-constraints>

Partner/Developer's Objective with tool	A tool to determine current/as-is operational and processes capability of supply chain, and identify the weakest performing areas where improvement efforts should focus
Strengths	<ul style="list-style-type: none"> ▪ A rapid assessment tool ▪ Does not cost too much to implement ▪ Countries can use tool for self- assessments ▪ Allows electronic data collection (tablet/phone) ▪ Assessors do not require in-depth training
Weaknesses	<ul style="list-style-type: none"> ▪ Not a deep-dive diagnostic tool to help in structural reform of the supply chain ▪ Does not account for political economy and other considerations relevant to supply chain reform ▪ Accuracy/consistency of output depends on having the right team of respondents (and right facilitator) in the facilitated workshops sessions which are used for assessment
Quantitative/Qualitative	<ul style="list-style-type: none"> ▪ Qualitative
Level of Implementation Effort	<ul style="list-style-type: none"> ▪ Low
Duration of assessment	<ul style="list-style-type: none"> ▪ Model concept takes 30-45 minutes to introduce and discuss; and 30-60 minutes to conduct, through a focused series of yes/no questions.
Product Agnostic	<ul style="list-style-type: none"> ▪ Yes (Health focused)
Maturity Measures	<ul style="list-style-type: none"> ▪ Rates the performance of business processes (inputs) ▪ Measures process capability
Methodology	<ul style="list-style-type: none"> ▪ Binary questionnaire completed through interview/facilitated workshop with stake holders. ▪ MS Excel based tool
Relative Cost	<ul style="list-style-type: none"> ▪ Low <USD 10,000.00
What it's not	<ul style="list-style-type: none"> ▪ Not a deep dive quantitative end-to-end supply chain assessment
Results	<ul style="list-style-type: none"> ▪ Matrixed summary of the maturity level by supply chain component, result shows areas of largest impact potential
Application of results	<ul style="list-style-type: none"> ▪ Determination of the current state of maturity and where to advance next ▪ For informed discussions on how to create improvements in supply chain performance in the most effective way ▪ To support request for resources for projects that improve performance by removing supply chain constraints ▪ Identification of current "weakest link" to begin focusing resources and effort for the greatest impact ▪ Update supply chain improvement roadmaps
Other Complementary Tools	<ul style="list-style-type: none"> ▪ NSCA ▪ EVMA ▪ Global Fund Maturity Model and Deep-dives ▪ UNICEF Maturity Scorecard
Remarks	GHSC-MM's approach to measuring maturity is sound and follows supply chain Theory of Constraints. The design of the tool is based on maturity of underlying supply chain processes. The tool can be used for a quick assessment (self/external) of the performance of a national supply chain or to highlight low/high performing functions of the supply chain at a relatively low cost. The tool does not provide the root cause of supply chain under performance. Where possible it should be coupled with quantitative indicators of supply chain performance

Overview

The National Supply Chain Assessment (NSCA) is a quantitative, survey-based tool that measures both the capability and the performance of public health supply chains, across all levels of the health system and all supply chain technical areas. It was initially developed between 2010 and 2012 at the request of USAID by the PEPFAR-funded Supply Chain Management System (SCMS) project. In 2016 USAID worked with Axios International to develop NSCA 2.0 building on the lessons from the original NSCA.

Purpose

The primary purpose of the NSCA is to inform and guide supply chain country and donor investments. It helps to identify and prioritize poor performing areas in the public health supply chain. It provides a means to monitor the impact of specific supply chain improvement activities and/or investments. It also helps monitor progress over time and against national performance indicator targets.

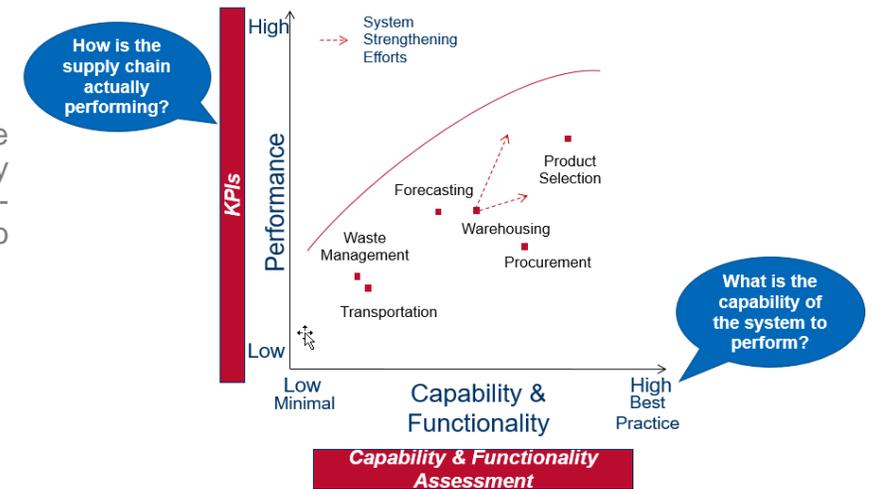
What it Measures

The tool assesses inputs and processes across functional areas and cross-cutting enablers. It measures supply chain performance and capability by identifying bottlenecks and gaps across the supply chain. It provides quantitative scores across functional areas at each level of the supply chain

KPIs are divided into core KPIs and optional KPIs. Core KPIs are recommended for all assessments, while optional KPIs may be appropriate for the assessment of more developed systems, or to provide more detailed analysis of specific performance areas.

Logic

The National Supply Chain Assessment Maturity model is based on theory by Lockamy and McCormack (2004) in developing supply chain process maturity models using concepts of Business Process Orientation. The theory concludes that there is a direct relationship between supply chain management process maturity and performance. A process maturity model could help enhance supply chain performance by identifying points of weakness.



Capability Maturity Heat Map - by Module

Module	Level of the supply chain					
	Health Centers	Hospital: Primary	Hospital: Secondary & Tertiary	Regional Warhouses	Central Medical Stores	MoH
	n = 45	n = 17	n = 6	n = 4	n = 1	n = 1
Strategic Planning and Management	Grey	Yellow	Yellow	Red	Yellow	Green
Human resources	Yellow	Yellow	Yellow	Yellow	Yellow	Light Blue
Financial sustainability	Yellow	Yellow	Yellow	Grey	Yellow	Yellow
Policy and governance	Grey	Yellow	Yellow	Orange	Orange	Green
Quality and Pharmacovigilance	Orange	Yellow	Yellow	Orange	Grey	Grey
Forecasting and supply planning	Grey	Grey	Green	Grey	Grey	Green
Procurement and customs clearance	Grey	Yellow	Yellow	Yellow	Yellow	Light Blue
Warehousing and Storage	Yellow	Yellow	Yellow	Yellow	Yellow	Green
Distribution	Yellow	Yellow	Yellow	Green	Green	Yellow
LMIS	Yellow	Green	Green	Orange	Yellow	Yellow
Waste management	Orange	Yellow	Yellow	Orange	Yellow	Green
	Red	Orange	Yellow	Yellow	Green	Green
	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Blue
	Low score		50%			High Score

Partner/Developer's Objective with tool	To inform and guide country and donor investments in supply chain management
Strengths	<ul style="list-style-type: none"> ▪ A modular tool that can be customized to specific contexts and available resources ▪ Can expand or contract scope without compromising the model ▪ Objective quantitative tool that provides scores of assessed functional areas ▪ Assesses both cross cutting enablers and operations ▪ Aligned with other tools to allow for reciprocity (e.g. EVM) ▪ Does not necessarily require international technical assistance or external expertise
Weaknesses	<ul style="list-style-type: none"> ▪ Describes performance (in terms of KPIs) and capability maturity of a supply chain; however, it cannot necessarily derive the reasons for good/poor performance. ▪ Shows correlation, but not causality. ▪ Is relatively costly to implement, , but can be tailored to fit a reduced budget ▪ Does not provide aggregate score for entire national supply chain ▪ Does not diagnose the precise problem, relies on other detailed function specific assessments
Quantitative/Qualitative	<ul style="list-style-type: none"> ▪ Quantitative
Level of Implementation Effort	<ul style="list-style-type: none"> ▪ High for a "Full" or some "Targeted" assessments. Moderate effort for "Snapshot" or some "Targeted" assessments
Duration of assessment	<ul style="list-style-type: none"> ▪ Up to 29 weeks (including Planning) 3-4 weeks in country implementation Snapshot assessment can be conducted in significantly less time
Product Agnostic	<ul style="list-style-type: none"> ▪ Yes (Health Supply Chain Only)
Maturity Measures	<ul style="list-style-type: none"> ▪ Quantitative scores across functional areas at each level of the supply chain. ▪ Maturity defined across 4 levels ranging from basic to state of art
Methodology	<ul style="list-style-type: none"> ▪ Interviews and direct observation. Observations included assessing the physical infrastructure (warehousing/commodity storage) of facilities via Survey CTO tool ▪ Collection of country supply chain data for KPIs, through direct measurement or from country information systems ▪ Can be implemented directly by countries or partners
Relative Cost	<ul style="list-style-type: none"> ▪ High From \$50,000 to \$350,000, depending on sample size and other factors
What it's not	<ul style="list-style-type: none"> ▪ Not a "rapid" assessment tool or a deep-dive into specific supply chain technical areas. ▪ NSCA NOT designed: As an auditing activity; For detailed ROI calculations; As a method for identifying fraudulent behaviors; To provide longitudinal insights; To provide information on causality of observations
Results	<ul style="list-style-type: none"> ▪ Heat map showing points of high and low capability ▪ Quantitative maturity scores for each functional area ▪ Performance on a series of standardized supply chain KPIs
Application of results	<ul style="list-style-type: none"> ▪ To fulfill pre-conditions for financing ▪ As a self-assessment by country to guide strategy ▪ identifying problem areas of the supply chain ▪ To monitor supply chain progress ▪ Guide country or donor investments
Other Complementary Tools	<ul style="list-style-type: none"> ▪ EVMA ▪ People that Deliver HR Assessment ▪ UNICEF Maturity Scorecard ▪ BMGF Maturity Model
Remarks	NSCA is a robust supply chain assessment tool which objectively determines the weak areas of the supply chain using quantitative methods. The key performance indicators (KPIs) provide a comprehensive picture of supply chain performance. It provides a deep assessment of specific supply chain functions; however additional assessments need to be conducted to uncover specific root causes of weaknesses across all the supply chain functional areas. Countries can use this tool for a national assessment or a targeted assessment.

Overview

The Effective Vaccine Management (EVM) initiative was launched in 2010 to raise global and national attention to immunization supply chain performance metrics and identify areas where supply chain improvements might positively impact immunization and health outcomes. Since then, it has been accepted by all countries and Partners as the standards to evaluate iSC and a target of 80% composite score was set to be achieved by all countries. The new Effective Vaccine Management Assessment tool (EVM2) is built on the heritage of the EVM1 with assessment beyond the 9 facility ISC operations functional area (Criteria E1, ..., E9) to include, four new facility Management functional area (M1, M2, M3, M4) and 6 Program strategic functional areas to be assessed (See EVM Framework below).

The migration of the EVM assessment tool from MS excel to an online application accessible via tablet and PC will facilitate engagement of Expanded Programme on Immunization workforce at sub-national level and bring about streamlined processes and lower cost of implementation. EVM 2.0 has also enabled context led diagnosis of immunization supply chain issues and deployment of relevant continuous improvement initiatives. <https://www.youtube.com/watch?v=xrq2qAOZzzA&feature=youtu.be>

What it Measures

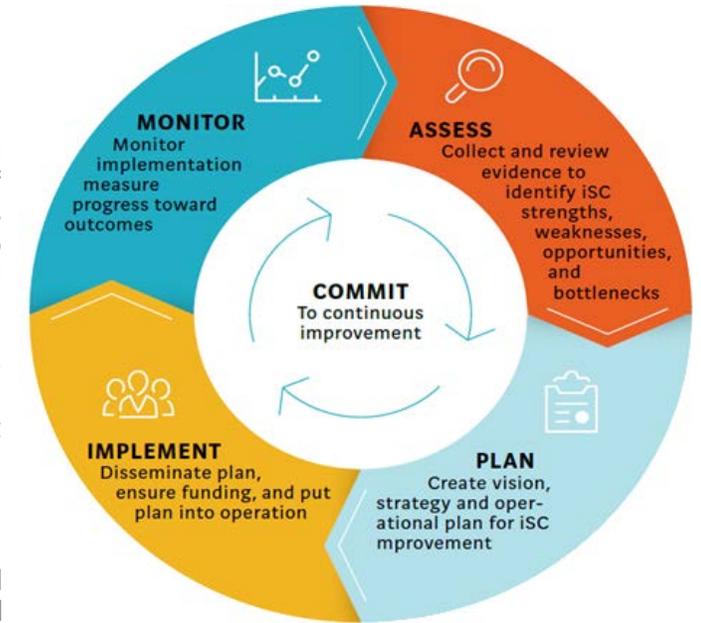
The EVM 2.0 measures the performance of vaccine and supplies management; quality and layout of sites and buildings; physical capacity of storage and transport; quality of fixed equipment and vehicles; repairs and maintenance; human resource capacity and system: policies and procedures and availability of financial resources needed to carry out activities. At the end of the assessment the EVMA 2.0 provide a quick analysis graphs of the assessment. This enables countries to focus on strategic areas of improvement that would be prioritized in the continuous ISC Improvement Plan

Purpose

The primary purpose of the Effective Vaccine Management (EVM) initiative is to provide to countries the materials and tools needed to monitor and assess their vaccine supply chain, and clearly identify weaknesses within the system and help countries develop a comprehensive plan.

Logic

The EVM process provides an entry point to building greater government focus and ownership of their national immunization supply chain leading to sustainable transformation. A country can create any number of EVM assessments, tailored to the requirements of the country by range and scope. Assessments can be National, Subnational or targeted with only selected locations assessed. In term of scope it can be full assessment with all EVM criteria & categories assessed or partial with only selected EVM criteria & categories assessed.



The EVM assessment framework

CRITERIA	INPUT CATEGORIES						OUTPUTS	PERFORMANCE	TOTAL
	C1 Infrastructure	C2 Equipment	C3 Information technology	C4 Human resources	C5 Policies & procedures	C6 Financial resources			
E1 Vaccine arrivals	54	53	50	45	64	58	60	61	56
E2 Temperature monitoring	73	74	75	76	77	78	79	80	77
E3 Storage and transport capacity	83	88	87	77	80	89	92	86	85
E4 Storage of vaccines and dry goods	77	48	88	87	77	80	89	68	77
E5 Maintenance	75	76	77	75	84	78	86	90	75
E6 Stock management	56	76	46	88	87	77	80	89	80
E7 Distribution	88	87	77	80	89	64	79	88	82
E8 Vaccine management	87	77	80	89	64	77	80	89	75
E9 Waste management	89	88	87	77	80	77	80	89	80
M1 Vaccine needs forecasting	75	76	77	75	84	78	86	90	85
M2 Annual Planning	54	53	50	45	64	58	60	61	58
M3 Supportive supervision	89	88	87	77	80	77	80	89	83
M4 ISC performance monitoring	77	48	88	87	77	80	89	68	76
TOTAL	76	74	74	77	78	75	81	82	77

EVMA 2.0

Partner/Developer’s Objective with tool	To raise global and national attention to immunization supply chain performance metrics and identify areas where supply chain improvements might positively impact immunization and health outcomes
Strengths	<ul style="list-style-type: none"> ▪ A Globally established process and tool available in 5 languages ▪ Global assessment with standards that are consistent & comparable across countries ▪ Modular tool which enables targeted assessments ▪ Context sensitive (supply chain tier/function) ▪ Has central repository/dedicated webpage on EVMs conducted ▪ Can be conducted via tablet/PC/mobile phone with online and offline capability ▪ A comprehensive process that goes beyond an assessment to include improvement planning ▪ Capability to centrally manage allocated assessment tasks seamlessly ▪ Comprehensive measurements (assess inputs, outputs and performance requirements) ▪ Powerful to analysis assessment criteria and categories scores and compare different assessments and locations ▪ Immediate display of assessment results/scores that can be shared and discussed with health workers of sites assessed ▪ Objective evidence-based assessment which provides performance scores ▪ Determine root cause of the failings ▪ Tool has links with training materials (assessors can at anytime consult resources) ▪ Immunization focused
Weaknesses	<ul style="list-style-type: none"> ▪ Relatively Costly to implement for complete and structured country assessment ▪ Users require comprehensive training prior to manage a complete and structured country assessment use ▪ HR intensive
Quantitative/Qualitative	<ul style="list-style-type: none"> ▪ Quantitative and Qualitative
Level of Implementation Effort	<ul style="list-style-type: none"> ▪ High
Duration of assessment	<ul style="list-style-type: none"> ▪ 3 weeks (Training, Assessment & Analysis)
Product Agnostic	<ul style="list-style-type: none"> ▪ No - Immunization supply chain
Maturity Measures	<ul style="list-style-type: none"> ▪ Scores for each operational and managerial function areas by inputs, outputs and performance ▪ Composite score
Methodology	<ul style="list-style-type: none"> ▪ Interviews and observation and inspection
Relative Cost	<ul style="list-style-type: none"> ▪ US\$ 50 – 80K (for small to medium sized country)
What it’s not	<ul style="list-style-type: none"> ▪ Not a costing tool
Results	<ul style="list-style-type: none"> ▪ Heat map with scores for each criterion and category, system indicators graph with system indicator scores (Availability, Quality, Efficiency), Comparison graph compares the criteria and category scores of two different assessments.
Application of results	<ul style="list-style-type: none"> ▪ Programme progress measurement ▪ Grant application ▪ Self-assessment for continuous improvement ▪ Guiding and prioritizing investments
Other Complementary Tools	<ul style="list-style-type: none"> ▪ Gavi Process Scorecard, HR Rapid Assessment, NSCA, UNICEF Maturity scorecard, DISC indicators from LMIS tools
Remarks	<p>EVMA is a robust immunization supply chain assessment tool which has a lot of intersection with WHO on vaccine management. It is the global standard for assessing the immunization supply chain which brings out an evidence based result. The EVMA is beyond just a tool, but a quality management approach which enables sustained transformation and continuous improvement of immunization. Countries can conduct a full EVM assessment if they want to uncover the full status of the immunization supply chain. Assessments can also be targeted to bring challenges in discrete areas of the immunization supply chain. https://www.who.int/immunization/programmes_systems/supply_chain/evm/en/</p>

Overview

The Immunization Supply Chain Process Scorecard referred to as the Process Scorecard is a maturity model/approach which provides a consistent framework to assess and track country progress on the implementation of the Gavi Immunization Supply Chain (iSC) strategy. It is organized along a “continuum” for each of the five fundamentals and identifies a country’s baseline. Level 4 of the continuum equates to 80% score on the EVM assessment.

Purpose

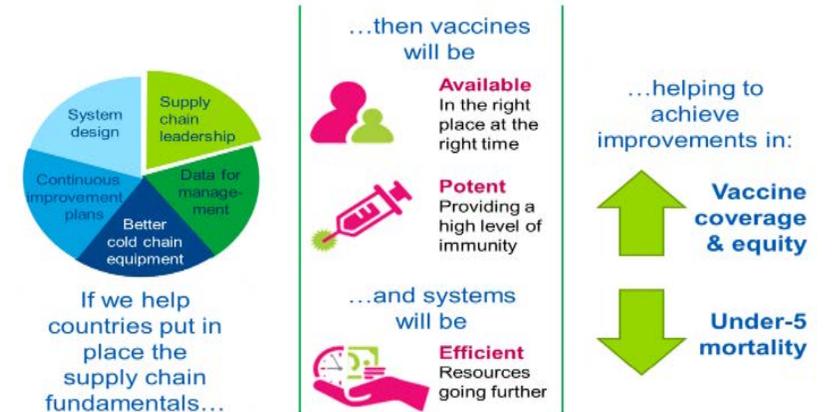
The primary purpose of the Process Scorecard is to provide the immunization supply chain taskforce and partners visibility on country performance and progress against the set targets including the 2020 strategy. It is also intended for the iSC2 partners to track country performance and progress to help guide operationalization of iSC strategic priorities and investments over time. It has an additional purpose for countries and partners to track progress during the intervening years of the EVMA.

What it Measures

The Process Scorecard measures the progress a country has made in implementing the immunization strategy. The Process Scorecard measures country progress through a set of progress indicators that determine what the country has in place or has achieved on each level and across all the five fundamentals of the Gavi supply chain strategy.

Logic

The Process Scorecard is premised on the Gavi Theory of Change which articulates that; if countries have the five fundamentals in place and optimally performing, then vaccines will be available and potent at the point of use, and systems will be efficient. This would in turn improve vaccine coverage and equity and reduce under 5 mortality. By measuring & tracking these fundamentals, countries are able to prioritize investments to ensure attainment of coverage, equity and efficiency targets.



Process Scorecard Overview

The **Process Scorecard** provides a framework to track a country's progress against the iSC strategy across the five fundamentals.

Category	Level 1	Level 2	Level 3	Level 4	Level 5
Leadership	2015 Baseline Leadership Level: 1		Current Leadership Level: 3	2020 Target Leadership Level: 4	
Continuous Improvement Plan	2015 Baseline cIP Level: 1		Current cIP Level: 3	2020 Target cIP Level: 4	
Data for Management	2015 Baseline D4M Level: 1	Current D4M Level: 2		2020 Target D4M Level: 4	
Cold Chain Equipment		2015 Baseline CCE Level: 2	Current CCE Level: 3	2020 Target CCE Level: 4	
System Design	2015 Baseline	Current System Design Level: 2		2020 Target System Design Level: 4	

A triangle at the start of the continuum indicates when a country is at Level 0 (no activity) for the fundamental.

Each fundamental is organized along a continuum that is:

- Logical across fundamentals
- Measurable through a set of progress indicators associated with each level

Level 4 is calibrated to reflect expected performance per the 2020 targets of iSC strategy (in a conducive, non-fragile environment) and/or in line with an ~80% EVM score on the relevant criteria.

The Process Scorecard played a central role in the Mid-Strategy Review, and is being incorporated into the JA process

⁵ Theory of Change is a comprehensive description and illustration of how and why a desired change is expected to happen in a particular context <https://www.theoryofchange.org/what-is-theory-of-change/>

Gavi Process Card

Partner/Developer's Objective with tool	To measure country progress on the immunization supply chain strategy implementation and prioritization of investments
Strengths	<ul style="list-style-type: none"> • Easy and quick to implement • No financial costs, just staff time • Provides global level visibility on country progress • Does not require specialist skills to administer • Countries can self-assess without external assistance • Measures what the country is achieving (outcomes)
Weaknesses	<ul style="list-style-type: none"> • Does not consider supply chain operations in assessment • Does not include other enablers such as policy/regulatory and Finance and Resource mobilization • Is only focused on measuring progress of the immunization supply chain strategy and does not measure maturity of operations • Highlights weak areas but not root cause across functions -requires additional function specific assessment
Quantitative/Qualitative	<ul style="list-style-type: none"> • Qualitative
Level of Implementation Effort	<ul style="list-style-type: none"> • Low
Duration of assessment	<ul style="list-style-type: none"> • < 5 days
Product Agnostic	<ul style="list-style-type: none"> • No (Immunization Focused)
Maturity Measures	<ul style="list-style-type: none"> • Rates attainment of outcomes as enshrined in the 5 fundamentals of the Gavi strategy • Rates immunization supply chain across maturity continuum from level 1-5 (1 being the lowest rating)
Methodology	<ul style="list-style-type: none"> • Consensus based and typically led by NLWGs, interviews with stakeholders in person or remotely. • MS Excel based
Relative Cost	<ul style="list-style-type: none"> • Low <US\$ 10,000.00
What it's not	<ul style="list-style-type: none"> • Not a deep dive supply chain assessment • Does not provide detailed causes of failure or low performance
Results	<ul style="list-style-type: none"> • Supply chain maturity level of each fundamental plotted on continuum
Application of results	<ul style="list-style-type: none"> • Progress tracking during EVMA intervening years • Guide to supply chain investments by partners and govt • Self-assessment and monitoring • Advocacy
Other Complementary Tools	<ul style="list-style-type: none"> • EMVA, HR Assessment, NSCA, UNICEF Maturity Scorecard • http://www.technet-21.org/iscstrengthening/media/attachments/2017/05/22/hr-for-isc-rapid-assessment-sep-21-2016---english-training-guide.pdf • https://peoplethatdeliver.org/ptd/sites/default/files/resource_contents_files/HR%20assessment%20guide%20and%20tool_1.pdf#overlay-context=resources/stepped-approach-documents
Remarks	The Gavi process scorecard is vertical and leans very much towards evaluating the progress of the Gavi immunization supply chain strategy. The scorecard does not include evaluation of other key areas that determine the performance of the overall supply chain. The scorecard is good for global level progress tracking and guiding immunization investments but not for tracking operational maturity. It serves as a good interim tool to measure progress in the immunization supply chain during the EVMA intervening years. Country teams can also use the tool to support structured discussions with country stakeholders regarding prioritized activities, implementation and metrics.

unicef Supply Chain Maturity Scorecard

Overview

The UNICEF Supply Chain Maturity Scorecard referred to as the Maturity Scorecard is derived from Porter's value chain analysis which looks at the business operational process flows (inputs, transformation and outputs) that are supported by enablers to deliver products to end-users. UNICEF's maturity scorecard attempts to evaluate the status of national supply chains by measuring performance of each end to end supply chain function and enabler along a continuum. It provides a framework for assessing and tracking progress. The Maturity Scorecard is product agnostic and can be applied to any national supply chain.

Purpose

The primary purpose of the Maturity Scorecard is to provide a measurement framework and tool that countries can use to track progress in managing national supply chains. It is also intended to help quantify and track UNICEF's supply chain strengthening contributions at country level. The maturity scorecard is also proposed to help guide investments, and highlight areas that require additional effort and attention to bring up the supply chain to a high standard.

What it Measures

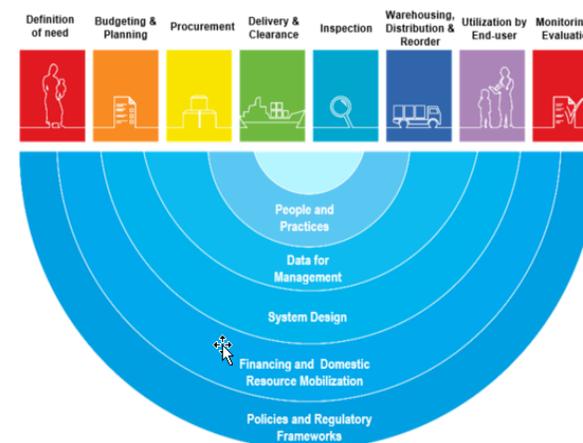
The Maturity scorecard is comprehensive and measures country progress through sets of outcome indicators for each of the defined supply chain functions and enablers. It is focused on measuring what the countries are achieving across all maturity level definitions as opposed to measuring maturity of processes (the how).

Logic

The Maturity Scorecard follows Porter's value chain. It measures the performance of tactical operations of the supply/value chain and the key supportive functions (enablers). The tool is based on the Theory of Constraints, but is more focused on measuring outcomes as opposed to process capability/methodology. The tool and approach is grounded on the concept of maturity modeling of transitioning from an initial state to a more advanced state.

⁶ Porter's Value Chain Analysis is a business management concept that was developed by Michael Porter. A value chain is a collection of activities that are performed by a company to create value for its customers.

Enablers	Score				
People and Practices	1	2	3	4	5
Data for Management	1	2	3	4	5
System Design	1	2	3	4	5
Financing and Domestic Resource Mobilization	1	2	3	4	5
Policies and Regulatory Framework	1	2	3	4	5
Operations					
Definition of Need	1	2	3	4	5
Budgeting & Planning	1	2	3	4	5
Procurement	1	2	3	4	5
Delivery and Clearance	1	2	3	4	5
Inspection	1	2	3	4	5
Warehousing, Distribution and Reorder	1	2	3	4	5
Utilization by End User	1	2	3	4	5
Monitoring and Evaluation	1	2	3	4	5



Supply Chain Functional Areas:

The activities and processes along a supply chain, including **upstream, midstream, and downstream** operations

Enablers:

The fundamentals needed to manage and run the supply chain effectively

UNICEF Maturity Scorecard

Partner/Developer's Objective with tool	To provide a country (national government & UNICEF Country Office) with a rapid assessment tool to measure supply chain strengthening progress and to track UNICEF's contribution in national supply chain strengthening efforts.
Strengths	<ul style="list-style-type: none"> • Considers operations, enablers and operating environment (end to end supply chain) • Simple and easy to understand and use • Quick/rapid assessment • Focused on measuring outcomes • Plots pathways for improvement • Incorporates indicators from existing partner tools and globally accepted measurement frameworks
Weaknesses	<ul style="list-style-type: none"> • Paper/Excel based (transitioning online after testing) • Can be subjective if deployed without progress indicators • Does not define root cause of low scores/performance
Quantitative/Qualitative	<ul style="list-style-type: none"> • Qualitative
Level of Implementation Effort	<ul style="list-style-type: none"> • Low
Duration of assessment	<ul style="list-style-type: none"> • < 1 week
Product Agnostic	<ul style="list-style-type: none"> • Yes
Maturity Measures	<ul style="list-style-type: none"> • Rates what the country is achieving (outcomes) on a scale of 1-5 with 1 being the least mature. • Enablers and Operations are distinctly measured • Each maturity definition is scored to determine level
Methodology	<ul style="list-style-type: none"> • Binary questionnaire • Administered via interviews/questionnaire • Consensus based discussions
Relative Cost	<ul style="list-style-type: none"> • Low <US\$ 10,000
What it's not	<ul style="list-style-type: none"> • Not a deep-dive assessment • Does assess supply chain efficiency
Results	<ul style="list-style-type: none"> • Advocacy for funding • Reporting and monitoring progress • Guiding investment decision and resource allocation • Prioritization of effort
Application of results	<ul style="list-style-type: none"> • Matrixed scorecard showing maturity level for all functions and enablers
Other Complementary Tools	<ul style="list-style-type: none"> • EVMA, NSCA, BMGF GHSC-MM assessment tool, Organisation for Economic Co-operation and Development Methodology for Assessing Procurement Systems (OECD MAPS), HR Assessment tools
Remarks	The UNICEF Maturity scorecard is a simple but comprehensive and powerful tool which considers the maturity of supply chain operations and enablers distinctly. Monitoring and tracking these separately ensures that a more multi-faceted approach is deployed to resolve issues impeding supply chain performance, including issues outside the supply chain operation itself. Because the tool is product agnostic, it can be applied to any product within a national supply chain. The tool is technology agnostic, meaning that countries can still realise the appropriate levels of maturity without necessarily deploying new or current technologies. Countries can use this tool at any time to self-assess, advocate for funding or as a baseline to craft a new strategy or way forward for supply chain strengthening.

Supply Chain Information System Maturity Model - SCISMM

Overview

The USAID Supply Chain Information Systems Maturity Model is a maturity assessment tool that primarily assesses the functional capability of an electronic supply chain information system. It is focused on measuring the functional maturity of software solutions deployed for supply chain execution.

Purpose

The primary purpose of the SCISMM is to provide a framework to prioritise capabilities to be implemented in a supply chain information system. It can also be used for multiple purposes which include;

- A guidance tool for self-evaluation of current IS capabilities and gaps;
- basis to define systems requirements for desired supply chain capabilities;
- a tool to develop roadmaps for implementing supply chain information systems
- Determine the target capabilities that would be introduced based on business requirements for planned implementation

What it Measures

The maturity model measures the functional capability of an electronic supply chain information system by categorizing technical functions across four maturity levels. It focuses on measuring the functional capability of software across 7 system hierarchies (Forecasting & Planning, Supplier & Contract Management, Procurement, Order Management, warehouse Management, Transport Management, Returns and Recalls).

Logic

SCIS Functionalities have been organized based on the Supply Chain Operations Reference (SCOR) model and the American Productivity & Quality Center (APQC) Process Classification Framework.

	Level 1	Level 2
Maturity Level	Basic Warehousing Operations (Manual, if not automated)	Warehousing Operations through electronic data, barcodes and system managed transactions
Benefits	<ul style="list-style-type: none"> - Improved accuracy of inventory data - Improved inventory control and management 	<ul style="list-style-type: none"> - Reduced manual effort in data entry/capture and processing transactions - Improved data integrity and hence accuracy - Better tracking of inventory (at batch level) - Increased visibility of inventory statuses such as expiring
Capabilities	<p>Inbound Processing</p> <ul style="list-style-type: none"> - Capture inbound shipment details including shipment#, item, uom, quantity, and expiration date (at least through upload feature) on weekly basis - Enter or upload received items' details in to the system - Putaway to storage locations through adhoc moves from receiving dock <p>Inventory Management</p> <ul style="list-style-type: none"> - Manually generate cycle counts and provide ability to print cycle count sheets for warehouse personnel to perform counts - Manually generate physical counts and print physical count sheets for the whole warehouse - Manually adjust for count discrepancies - Provide different inventory statuses - Allow ad-hoc inventory adjustments <p>Outbound Processing</p> <ul style="list-style-type: none"> - Perform pick, pack and ship and update the status in the system, manually if not automated - Capture details of outgoing shipment (Requisitions) including Requisition #, products/items, quantities, expiration date and delivery dates (manually, if not automated, within a week of performing the transactions) 	<p>Inbound Processing</p> <ul style="list-style-type: none"> - Capture inbound shipment details including batch details through EDI from the shipping facility/supplier - Receive items through use of barcode scanners - Generate putaway tasks as soon as items are received - Manually assign putaway tasks to warehouse personnel - Generate barcodes for pallets/cases to be used during putaway, storage, picking etc - Define storage/bin locations within the warehouse - Receiving, Staging, QC, Forward Pick, Bulk Pick etc and assign location numbers (GLNs where applicable) <p>Inventory Management</p> <ul style="list-style-type: none"> - Generate cycle and physical counts automatically and print count sheets - Provide ability for supervisors to accept or reject count discrepancies - Track inventory at bin level (location, bin, aisle) - Track batch level details <p>Outbound Processing</p> <ul style="list-style-type: none"> - Capture requisition details through EDI - Generate picklists and tasks for warehouse personnel - Print picklists, pack tasks etc - Generate packing labels and print - Generate details of outgoing shipment (Requisitions) including Requisition #, products/items, batch #, expiration date, quantities and delivery dates based on the associated outbound order in the system

Forecasting and Planning			System Maturity Levels		
System Capability	Definition	Processes	Level 1	Level 2	Level 3
Demand Planning					
Demand History Accumulation	Capture demand data at each node in the distribution chain, particularly at point of use (dispense), within a specific time period (Day, Week, Month).	<ul style="list-style-type: none"> - Capture: Shipment, Issue, Disposition, Adjustment and Dispense in a time-bucketed system using Item ID, Product ID, Item and/or Product Categorization - Translate Units of Measure to a base Unit of Measure - Load data to support hierarchical analysis 	<ul style="list-style-type: none"> - Usage/dispense activity is accumulated on a monthly basis for reporting purposes - Dispense is separated from other forms of usage, including expiry, inventory adjustments (loss), and recalls/defectives - Usage is captured by location (central, prov) 	<ul style="list-style-type: none"> - Usage is captured in a transaction system and reported - Usage can be accumulated in any time bucket, e.g., daily, weekly, monthly (preferably daily but weekly at minimum) - Three years of demand data is maintained everywhere possible - Product inf 	<ul style="list-style-type: none"> - Demand data is accumulated and loaded into a demand management tool - Demand data is analyzed for outliers and actions are taken to smooth demand data where anomalies are identified - Demand history adjustments are captured and preserved - Demand hi

⁷ SCOR is a consensus model developed by the supply chain council which provides a unique framework that links performance metrics, processes, best practice and people in a unified structure

USAID Supply Chain Information System Maturity Model (SCISMM)

Partner/Developer's Objective with tool	To measure functional maturity of electronic supply chain information systems
Strengths	<ul style="list-style-type: none"> Evaluates business processes Uses recognized industry standards
Weaknesses	<ul style="list-style-type: none"> Does not assess people (capability & Staffing levels) Some functionalities deemed as high maturity may not be aligned with developing country context
Quantitative/Qualitative	<ul style="list-style-type: none"> Qualitative
Level of Implementation Effort	<ul style="list-style-type: none"> High
Duration of assessment	<ul style="list-style-type: none"> Not determined
Product Agnostic	<ul style="list-style-type: none"> No - Supply Chain Information Systems
Maturity Measures	<ul style="list-style-type: none"> Rates the categorized functionality of software across the continuum (More functionality = Higher maturity)
Methodology	<ul style="list-style-type: none"> Interview and Observation
Relative Cost	<ul style="list-style-type: none"> Not Estimated
What it's not	<ul style="list-style-type: none"> Tool is not a supply chain assessment tool
Results	<ul style="list-style-type: none"> Maturity levels for each if the IS functional areas Maturity levels for the business processes
Application of results	<ul style="list-style-type: none"> For automation of manual business processes Planning new software implementation Guide investment decisions on supply chain software applications
Other Complementary Tools	<ul style="list-style-type: none"> HR Assessment, EVMA, NSCA, UNICEF Maturity Scorecard
Remarks	<p>The SCISMM is primarily a software maturity assessment tool. While it evaluates the business processes and functionality, it does not touch on the HR aspects which are quite fundamental when automating manual processes and functions. Countries can use this tool to evaluate their eLMIS capabilities and create a baseline from which to make IS improvements. Countries should also consider the broader ecosystem when using this model to decide their information system investments and improvement.</p>

The Global Fund Maturity Model

Overview

The Global Fund Maturity Model and its deep dives are designed to give a data-driven view of public health supply chain performance. It assesses the current state of a country's public health supply chain and produces a baseline that is used for transformation programmes. It assesses 20 different dimensions in 3 categories across 4 maturity levels.

Purpose

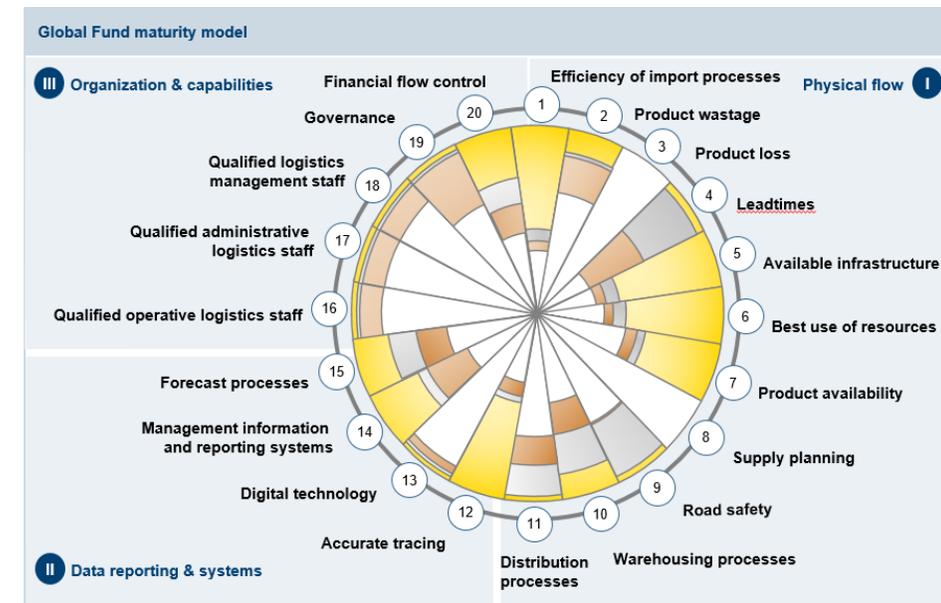
The primary purpose of the Global Fund maturity model and deep dives is to diagnose public health supply chains of grant recipients in order to support further development of their supply chains. This diagnosis is used as part of the overall strategic planning process for The Global Fund and partner resource allocations. The maturity models give an overview of performance across the whole supply chain and these are comparable between countries.

What it Measures

It measures the performance of the grant recipients' supply chain across three domains namely; physical flows, data and reporting systems and organisation & capabilities. The assessment is conducted in two parts (1) an outside-in maturity assessment which uses readily available external data and (2) a deep dive maturity assessment based on in-country data.

Logic

The Global Fund strives to achieve universal availability of health products at the point of service through sustainable, resilient and high performing supply chains. By conducting robust supply chain diagnosis, The Global Fund has sufficient evidence to make decisions on supply chain investments and transformation programmes it embarks on. The deep-dive assessment enables the GF to address the root cause of supply chain failure and non-performance.



Gold



Silver



Bronze

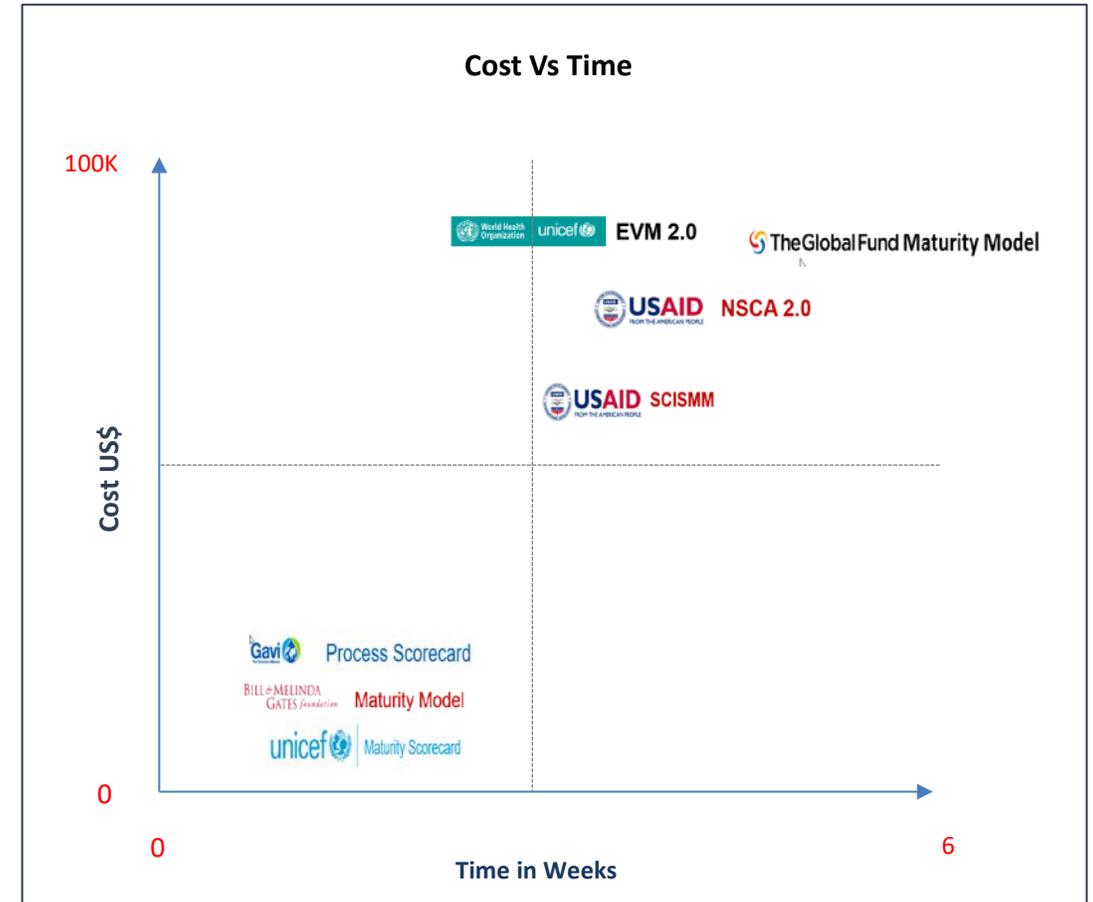
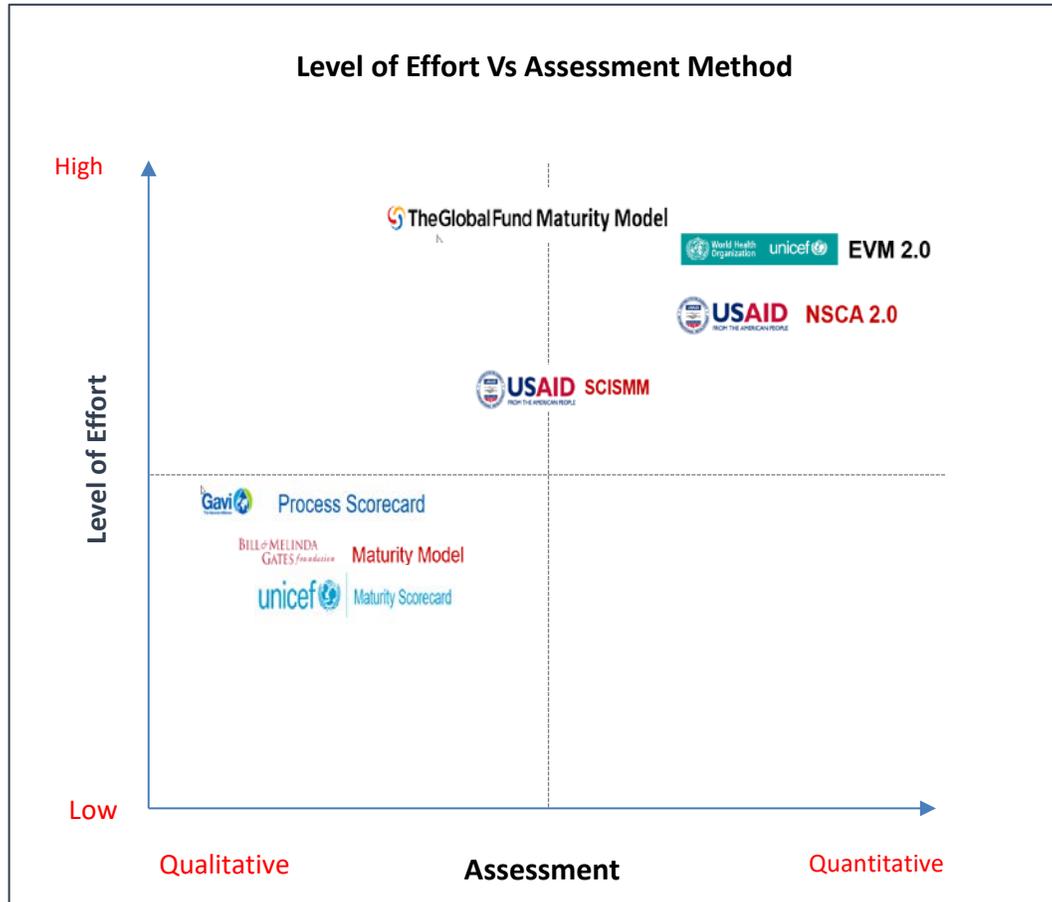


Canvas

The Global Fund Maturity Model

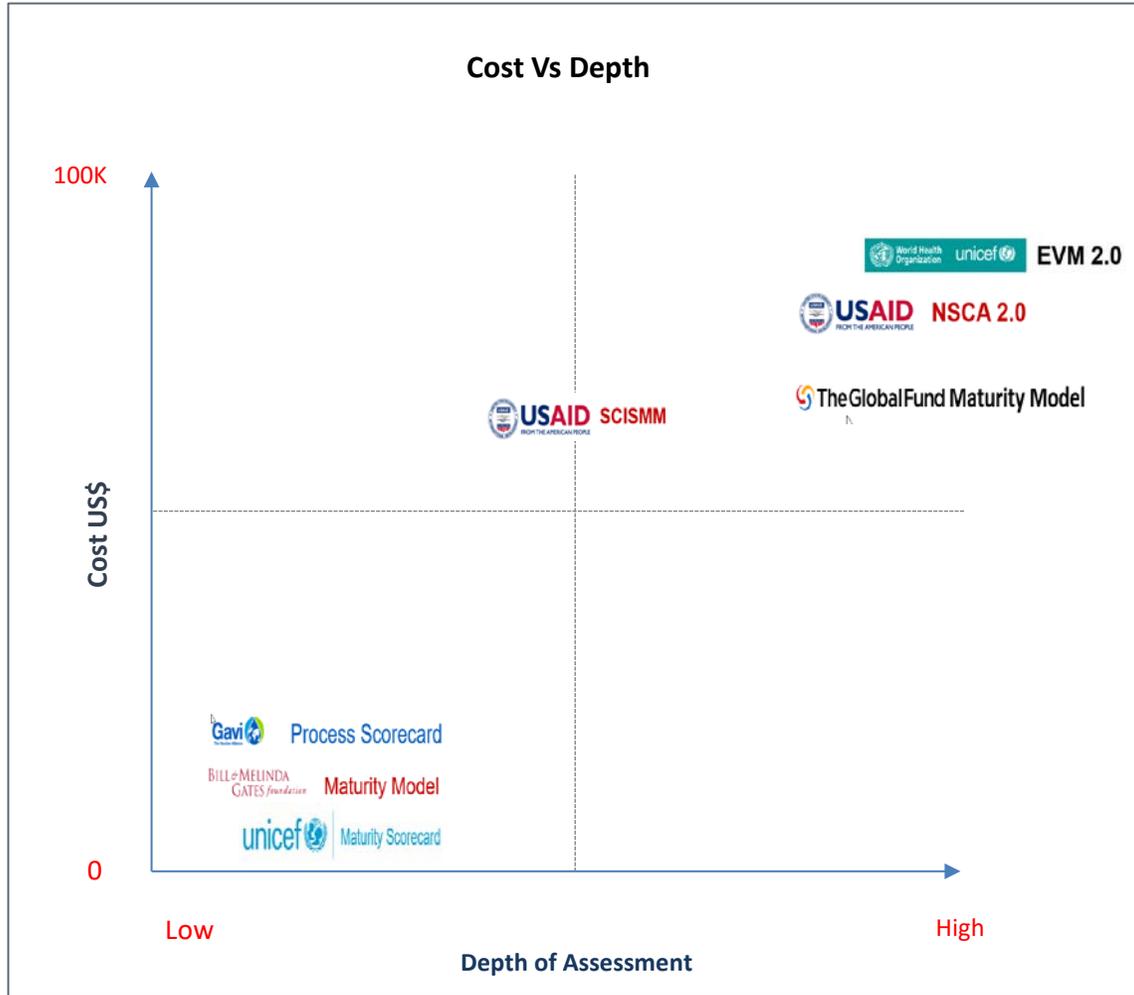
Partner/Developer's Objective with tool	To conduct a diagnosis of a national supply chains to inform the design and support of supply chain transformation programmes.
Strengths	<ul style="list-style-type: none"> • A two-part supply chain diagnosis which looks at micro and macro level performance • Comparable across countries and enables benchmarking • Assesses both operations and enablers • Uses external data Logistics Performance Index (LPI), • Determines root cause of supply chain failure
Weaknesses	<ul style="list-style-type: none"> • Costly to implement • Requires training/skilled resources to implement • Lengthy and requires a procurement process to onboard assessors • Deep-dive highly depends on availability and credibility of national data sources
Quantitative/Qualitative	<ul style="list-style-type: none"> • Qualitative & Quantitative
Level of Implementation Effort	<ul style="list-style-type: none"> • High
Duration of assessment	<ul style="list-style-type: none"> • Up to 13weeks including RFP
Product Agnostic	<ul style="list-style-type: none"> • Product agnostic
Maturity Measures	<ul style="list-style-type: none"> • Rates maturity in 3 categories - Physical Flows, Data and Reporting Systems and Organisation & Capabilities. Evaluates enablers, operations and infrastructure with maturity being measured across 20 dimensions.
Methodology	<ul style="list-style-type: none"> • Desk based (1st Part), Interviews/Observation (2nd Part/Deep-dive) • Implemented by third parties via an RFP route • MS Excel based tool
Relative Cost	<ul style="list-style-type: none"> • High
What it's not	<ul style="list-style-type: none"> • Not a rapid assessment tool • Not an eLMIS assessment tool
Results	<ul style="list-style-type: none"> • Spider-chart showing maturity levels of each of the 20 dimensions • Provides consolidated national supply chain maturity levels • Provides root causes of failures in identified weak areas
Application of results	<ul style="list-style-type: none"> • Primarily used for Global Fund grants to guide investment decisions to recipients • Partner driven supply chain assessment
Other Complementary Tools	<ul style="list-style-type: none"> • BMGF maturity model • UNICEF Maturity Scorecard • NSCA • EVMA
Remarks	The Global Fund maturity model and deep-dives is a robust tool for assessing supply chains. The 2-step approach enables assessors to have a broad view of the general development of a country's supply chain landscape at macro level, enabling inferences to be made prior to conducting deep-dive assessments in the country. One of the key strengths of this tool and approach is the provision to determine the root cause of the identified weak performing areas. The tool adopts the BMGF maturity classification which rates maturity from canvas to graduated. The deep-dive assessment (part 2) largely depends on availability of data at national level.

Visual Summary (Based on full assessment)



* Level of Effort = Staff time, number of people required

Visual Summary Continued...



* Depth of Assessment = Level of detail, number of parameters & performance indicators applied



* Level of Effort = Staff time, number of people required to implement

Conclusion

This review and comparison of major assessment tools for public health supply chains illustrates the level of sophistication and detail required to make impactful investment for future supply chains. Investors, ranging from national government, private sector, civil society, the international development community and others depend on the information from robust and state-of-the-art assessments to guide and monitor progress. As the environment for public health supply chains becomes increasingly complex, so must the assessment tools. Collaboration around the use of assessment results will also need to shift to include efficiency and judiciousness in considering how to better leverage the information for maximum benefit. This document has been provided to contribute to progress towards continual improvement of public health supply chains and to the strategies to build them for the needs of future generations.

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