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MID-TERM EVALUATION OF MOU8



Evaluation Report

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ABBREVIATIONS

AD	Auto-Disposable
ACT	Artemisinin-based Combination Therapy
ARV	Antiretroviral
AS	Authorisation Schedule
BCG	Boston Consulting Group
BMGF	Bill & Melinda Gates Foundation
CCE	Cold Chain Equipment
CCEOP	Cold Chain Equipment Optimisation Platform
CMP	Cash Management Plan
CNL	Country Notification Letter
CO	Country Office
CO2	Carbon Dioxide
COP	Costed Operational Plan
CRC	Contracts Review Committee
CTN	Cash Transfer Note
DL	Decision Letter
ERP	Enterprise Resource Planning
EYE	Eliminating Yellow Fever Epidemics
FER	Fragilities, Emergencies, Refugees
FTE	Full-Time Equivalent
GDF	Global Drug Facility
GHI	Global Health Initiative
GHSC-PSM	Global Health Supply Chain Program-Procurement and Supply Management
HLRP	High Level Review Panel
HPV	Human Papilloma Virus
HSIS	Health System and Immunisation Strengthening
HSS	Health System Strengthening
IF&S	Immunisation Financing & Sustainability
IRC	Independent Review Committee
ILR	Ice-Lined Refrigerator
KII	Key Informant Interview
KPI	Key Performance Indicator
LLIN	Long-Lasting Insecticidal Net
LTA	Long-Term Agreement
MOU	Memorandum of Understanding
ODP	Operational Deployment Plan
OTIF	On-Time In Full
PCV	Pneumococcal Conjugate Vaccine
PEF	Partners' Engagement Framework

PEPFAR	President's Emergency Plan for AIDS Relief
PfSCM	Partnership for Supply Chain Management
PMI	President's Malaria Initiative
PO	Purchase Order
PPC	Programme and Policy Committee
PQ	Prequalification
PRG	Procurement Reference Group
PYCR	Programme Year Completion Report
RDT	Rapid Diagnostic Test
RfP	Request for Proposal
SAP	Systems, Applications and Products
SCM	Senior Country Manager
SDD	Solar Direct-Drive
SIE	Safe Injection Equipment
SOP	Standard Operating Procedure
TB	Tuberculosis
TCA	Targeted Country Assistance
TGF	The Global Fund to Fight AIDS, Tuberculosis and Malaria
UN	United Nations
UNEG	United Nations Evaluation Group
UNICEF SD	UNICEF Supply Division
USD	United States Dollar
VAR	Vaccine Arrival Report
VfM	Value for Money
VI	Vaccine Implementation
VIS	Vaccine Investment Strategy
WAP	Weighted Average Price
WHO	World Health Organisation
YF	Yellow Fever

EXECUTIVE SUMMARY

Introduction

This evaluation covers the implementation of the eighth Memorandum of Understanding (MOU8; 2016-2020) between Gavi, the Vaccine Alliance, and UNICEF Supply Division (SD). UNICEF SD provides procurement services to Gavi. These services cover the supply and procurement, including shipment and delivery, of vaccines and certain vaccine-related supplies funded by Gavi and by those countries fulfilling their co-financing obligation through UNICEF. In addition, UNICEF SD also acts as Gavi's procurement partner in market shaping activities as set out in Gavi's Supply and Procurement Strategy (2016-2020), and in the Cold Chain Equipment Optimisation Platform (CCEOP) launched in 2016. The MOU8 governs the legal and formal relationship and partnership between the two agencies, outlining the roles and responsibilities as well as the obligations of each agency.

Evaluation purpose and objectives

MOU8 differs from the previous MOUs in the sense that this is the first MOU covering an entire Gavi strategic period (five years compared to previous MOUs of two years). The MOU8 includes a provision that a mid-term evaluation should be commissioned. The purpose of the evaluation is to assess how UNICEF and the Gavi Secretariat are performing in the implementation of all aspects covered by the MOU8 with a view to obtain insights in (i) the suitability of the arrangements for the period covered by the MOU8 and (ii) in the changing demands during Gavi's current and next Strategic Period. The specific objectives include (i) the evaluation of the performance of UNICEF SD as a procurement agency, (ii) the evaluation of effectiveness and efficiency of the changes made to the MOU8 resulting from the earlier identified improvement initiatives, and (iii) reviewing if the design of the MOU is fit for purpose. The results of the evaluation will be used to inform the relevant Gavi Governance Committees regarding possible improvements needed for the remainder of the MOU8 period, informing decisions on structuring a possible next MOU (MOU9), and providing an update on whether UNICEF SD continues to provide Value for Money (VfM) for its services, based on past and current performance.

Methodology

The evaluation used a mixed-methods approach based on the matrix of evaluation questions (see **annex 2**). Quantitative and qualitative data was extracted from documents and regular reporting. Quantitative data analysis was mainly performed on the specific obligations of both agencies as laid down in the MOU8 and its Annexes. The main data collection method for the qualitative aspect of the evaluation was key informant interviews with staff at the Gavi Secretariat and at UNICEF SD. In addition, the evaluation team assessed whether the CCEOP project was sufficiently mature to allow for a proper VfM analysis. It proposed a VfM framework that could be used for future evaluations focusing on VfM aspects and applied it to the CCEOP project. As expected, the limited time of implementation with consequent absence of certain data, did not allow performing a full analysis. The data requirements and framework for future use are summarised in **annex 1**.

Key findings and conclusions Objective 1 (Evaluation of UNICEF SD's performance as per the MOU8)

UNICEF SD's performance as per the MOU8 (vaccines and devices)

Beyond the formal obligations detailed in the MOU8 it should be recognised that UNICEF SD implements the MOU8 as expected, manages the vaccine procurement services well, has the capacity and capability of addressing new and complex projects, and is able, jointly with Gavi, to course correct along the way. Indeed, the quantitative analysis demonstrates that both UNICEF SD and Gavi adhere to a large extent to the MOU8 obligations and both agencies consider the partnership as 'very functional'. Overall, the processes specified in the MOU8 and its annexes are quite detailed, which is considered an enabling factor facilitating adherence as well as a hindering factor because of its prescriptiveness. The UNICEF SD staff directly involved in the implementation of the MOU are well-aware of the contents and processes laid down in the MOU8. The absence of a Gavi Secretariat focal point for the implementation of the MOU may explain the more modest ownership of the MOU8 at Gavi. The current Key Performance Indicators (KPIs) pertaining to the MOU8 stem mainly from the improvement initiatives further to the 2013 Boston Consulting Group (BCG) study and not all of them remain representative of the current key areas for improvement under the MOU8 as some of them have been successfully addressed. Consistent monitoring of the KPIs is not institutionalised.

The evaluation team is of the opinion that the current selection of KPIs requires revision in order to reflect better current practice and performance as well as areas for improvement. Despite some different perceptions on the level of detail and prescriptiveness of the Gavi Roadmaps, there is overall alignment between the Roadmaps and the UNICEF SD Procurement Strategies. Both agencies consider the Procurement Reference Groups an added value to inform and guide the procurement process.

Update of the 2013 BCG study

At the request of the Gavi Alliance Board in December 2012, the Gavi Secretariat commissioned the BCG to evaluate the Alliance's vaccine procurement activities. A benchmarking study was conducted along four topics: value and cost performance, operational excellence, joint operating model and enablers, and specific strengths and capabilities. Overall, the outcome of the study was that UNICEF SD's procurement activities "bring value", and that the "operational performance was overall good but indicated potential to improve and achieve best practice in selected areas." Following the BCG study specific working groups were established to address four key areas for improvement (see objective 2).

Although the landscape of vaccine procurement is changing continuously, UNICEF SD has a track record of dealing with these changes and has over time introduced measures for efficiency gains in its processes and created a robust system to address issues such as market dynamics, volatile demand, emergencies, etc. Portfolio complexity during implementation of the MOU8 included new vaccine introductions, more countries transitioning from Gavi support, and increased number of fragilities, emergencies and outbreak responses. UNICEF SD also notes an increase in the workload for preventive campaigns whereby country applications and Gavi approvals are often delayed. During the last years, no significant changes occurred or new organisations with similar expertise as UNICEF SD emerged, particularly for vaccines and devices procurement, that would justify a shift in the current set-up of the partnership. Lessons (both positive and negative) can be drawn from recent developments in the landscape of procurement agencies for Global Health Initiatives (GHIs) (e.g. engaging two or more procurement agencies; increased attention for improved performance and efficiency with possibilities for re-negotiation of the contracts; and increased attention to data management and data exchange). The average fee that Gavi pays UNICEF SD for the vaccines and devices procurement, continues to compare favourably, percentage-wise, with global health procurement benchmarks. Gavi stakeholders foresee that more transparency will be expected from the Board on the justification of the fee paid to UNICEF SD. The evaluation team is of the opinion that a procurement fee reflecting the level of effort and the remuneration could be considered.

CCEOP

The CCEOP project was established in recognition that functional CCE is a critical precondition to safeguarding the massive increases in the value and quantity of vaccines. A decision was made to integrate the CCEOP project into the MOU8 even though the products, as well as the planning/forecasting, delivery, installation, commissioning and related services, are not comparable to the regular vaccines and devices procurement and are characterised by different in-country complexities distinct from vaccines and devices. The CCEOP project was indeed characterised by a challenging start-up with perceived delays, documented by the studies carried out by McKinsey and JSI. This was to a certain extent unsurprising, given the complexity of the project and some competing objectives (e.g. the need for a rapid implementation (immediate results) while at the same time aiming at price reductions). Alliance partners involved in the project acknowledge the complexity of the project, with multiple stakeholders involved in the implementation, including country-level stakeholders. While course corrections have been made, the current average time between the approval of the application and the first deployment is still 21 months. According to both Gavi Secretariat and UNICEF SD, this is largely due to the time-consuming process of getting the ODP in place and approved, which takes on average 11 months. The absence of an agreed results monitoring framework, including high-level result indicators, leaves room for varying interpretations of the current status of the project, which is reflected by different stakeholders' perceptions on current performance. Major efforts have been invested and the efforts made by both Gavi Secretariat and UNICEF SD to introduce timely course corrections based on external professional advice is commendable. Considering that procurement activities started in September 2017, the project is almost on track in terms of the number of POs placed, and the project's progress can be judged to be reasonable under the current circumstances, considering the challenges it experienced during the start-up phase. The evaluation team is however of the opinion that there is still room for improving VfM (including for a large part to

meet the optimal target timelines). The MOU8 provided a solid basis to integrate the CCEOP project. While the Fee Trigger Model provides a workable set of criteria to trigger a discussion on fees, the evaluation team is not convinced about its added value in determining weights to specific criteria. The model may be too complex to help set fee levels. Fair fees should cover the level of effort invested by UNICEF SD to implement the CCEOP.

Key findings and conclusions Objective 2 – Improvement initiatives

One of the two objectives of the 2013 BCG study was to identify and prioritise opportunities for improvement with recommendations for implementation. Following the evaluation, four joint improvement initiatives were launched by Gavi Secretariat and UNICEF SD, which included:

i. optimisation of the Authorisation process;
ii. simplification of the Authorisation process for devices;
iii. improvement of the reporting requirements; and
iv. the operational forecast.

The improvement initiatives are to a considerable, albeit variable, extent implemented. Two of them, the bundling of devices and the approval process, yielded clear results. While for the majority of the country renewals and new introductions the approval process works rather well, the timelines of the approval process, particularly for campaigns, still raises some concerns. The reporting generally improved, although some challenges remain regarding the definition of appropriate reporting needs and the selection and consistent monitoring of KPIs. Lastly, the harmonisation of the forecasting process between the two agencies is considered "unfinished business" and requires additional efforts to work together in partnership, and to make optimal use of each other's intelligence on data needed for forecasting.

Key findings and conclusions Objective 3 – Assessment of fit-for-purpose of the MOU

MOU8 during Gavi 4.0

The current structure and design of the MOU8 is serving its purpose, and no immediate need was identified to change or modify the MOU. The MOU provides a solid base and is found to be sufficiently flexible to cater for changes, emerging needs, and expanding portfolio. This is illustrated by the inclusion of the CCEOP project in the MOU, as well as by the implementation of the FER policy. However, the evaluation team identified some challenges in the day-to-day collaboration and communication. Both at Gavi and at UNICEF SD there are many people involved at different steps of the processes. A Gavi Secretariat focal point for the implementation of the MOU would contribute to improved communication, collaboration, coordination and institutional memory. Furthermore, Gavi Secretariat's rollout of SAP provides a timely opportunity to address how information can be better exchanged between the agencies and how it can be used for decision-making, reducing the need to manually extract data for reporting in Excel.

Potential new MOU for Gavi 5.0

The evaluation team acknowledges the solid basis of the current MOU8 for a potential future MOU. The Gavi country portfolio is likely to become considerably more challenging in the next strategic period. Consequently, the need for information and data may become more prominent and in this regard, it is important that both agencies agree on the scope and content of data sharing (including how to address confidentiality of data) prior to putting in place a new MOU. The CCEOP and the FER policy implementation both provide important lessons learned in case the scope of the services is expanded under Gavi 5.0, and the CCEOP provides a mixed experience in this regard. The annexes of a potential new MOU could cater for reporting requirements, procedures and other operational additions, as is currently the case with MOU8, but should include provisions to update and/or modify these requirements as and when needed. It is also important that the selection of KPIs focus on areas for improvement, and are being modified once performance of a specific KPI is considered adequate. Depending on the commodities foreseen and taking into account the strengths and specificities of the current partnership, fair consideration should be given to selection of the most appropriate procurement partner in case of an expansion of scope and services. If the current absolute fee requires further justification, there is room for an in-depth review of the suitability of the Fee Trigger Model, whereby consideration should be given to ensuring that remuneration reflects level of effort invested. When

maintaining the mechanism of a Fee Trigger Model, the definition of the triggers, their weight and interdependence merit a critical review.

Recommendations

Based on the analysis of findings in response to the evaluation questions, the evaluation team formulated six recommendations. In addition to these essential recommendations, a number of suggestions for consideration that the evaluation team identified as 'nice to have' for the current MOU as well as for the next iteration of the MOU are provided as well.

 Immediate action  Longer-term perspective  Considerations for next MOU under Gavi 5.0

Vaccines and devices		
1	**Forecasting**: Consider a better aligned and optimised forecasting process, with the objective to make optimal use of all the data available across the Alliance. Even though Gavi Secretariat and UNICEF SD have different forecasting purposes, the same data should ideally be used to feed the forecasting process. Discussions between both agencies have been initiated recently to agree on an improved process. This is a low-cost recommendation not requiring any additional resources with potentially a high return through optimised forecasting.	 Gavi & UNICEF SD
2	**Data sharing:** Gavi Secretariat and UNICEF SD should discuss and agree on the data needs of the two agencies, their use, and ability to share relevant data for optimising MOU8 implementation between the two agencies, especially country-based data on stocks of vaccines and demand forecasting. This could be done through confidentiality arrangements or other sharing mechanisms discussed and agreed by the two agencies. Implementing this recommendation will facilitate the use of the same base data for forecasting, avoiding spending time on discussion which data are more accurate, and increase accuracy of forecasting. In case confidentiality agreements are in place between UNICEF and countries that may present obstacles in sharing of data, Gavi and UNICEF should formally request the countries that the relevant data can be shared, specifying the purpose which is to the country's benefit. Alternatively, when a confidentiality agreement is signed by UNICEF with a country, permission to share specific data with Gavi could be part of the agreement. If the above solution is not feasible, UNICEF and Gavi could discuss and share specific data in closed bilateral meetings. This is a low-cost recommendation not requiring additional resources beyond some travel costs and staff time, with potentially a high return through optimised forecasting (see recommendation 1). This could also be carried over to the planning of a next MOU.	 Gavi & UNICEF SD
3	**Roadmaps and Procurement Strategies:** Consider re-assessing jointly the Roadmap and Procurement Strategy development process in order to determine if it would be desirable to harmonise certain aspects of the process, what the exact needs of both agencies are, and how it could be best harmonised. There should be a focus on added value of both documents, avoiding duplication of efforts. This is a low-cost recommendation not requiring any additional resources. This can be introduced during the remainder of the current contract and/or for the next MOU.	 Gavi & UNICEF SD
4	**Focal point:** At the Gavi operational level, consider appointing a focal person for the implementation of the MOU8. The Gavi focal person would have the Partnership Specialist at UNICEF SD as its counterpart. The evaluation team considers that the Gavi focal point is ideally positioned in the VFGO or in the Vaccine Implementation unit, which is part of Gavi's new Vaccine Supply and Demand Team. The focal point could function as a link between the various teams in Gavi that are involved in aspects related to the implementation of the MOU. The Gavi MOU8 focal point does not have to be a new cadre, nor does it require a FTE as this function can be carried out by one of the existing cadres. This coordination function is estimated to require 25% FTE. The key functions of the focal point should include: • Serve as between the various teams in Gavi that are involved in aspects related to the implementation of the MOU	 Gavi

- Support and monitor adherence to SOP by relevant Gavi teams
- Ensure appropriate communication channels between Gavi and UNICEF teams
- Ensure a strong linkage with the SCMs, including that that they have timely access to required information and understand the specificities of the MOU
- Face-to-face meetings and regular update calls with the UNICEF focal point to discuss implementation challenges of the MOU (could take place at least twice a year)

CCEOP

5 **Monitoring CCEOP implementation for optimising performance:** Consider developing a results framework with agreed baselines values and targets. This will facilitate monitoring and recording of progress, avoiding future differences in perceptions on progress. This is a low-cost recommendation that can be introduced immediately. Agreement between UNICEF and Gavi on rate of progress made will help setting or adjusting feasible targets and developing appropriate solutions where necessary. At best, the results framework is developed together with the VfM framework (see consideration 3).



Gavi & UNICEF SD

Potential new MOU for Gavi 5.0

6

a. **Review of legal framework:** In line with the flexibilities identified for the current MOU, consider a broad review of the structure and legal framework of the MOU, focusing on integration of the minimum required legal conditions in the main text of the MOU. Reporting requirements, procedures as well as other possible technical or operational additions to the MOU should be covered in annexes (as is the case currently), but provisions should be made to update and/or modify these requirements as needed during the time the MOU is valid.

b. **Review of the Fee Trigger Model**

- *Vaccines and devices*: There is room for a review of the Fee Trigger Model including assessing options for reflecting the level of effort and level of remuneration. Should the Fee Trigger Model continue to be found suitable, consider reviewing the definition of the triggers (e.g. expected increased complexity in country and vaccine portfolio, etc.), their weight and interdependence.
- *CCEOP:* Consider to carefully reviewing the suitability of the Fee Trigger Model for CCEOP. The added value of the current model is not fully clear and a simplified fee calculation based on level of effort may be considered.



Gavi & UNICEF SD

Suggestions for consideration - Current MOU8 and potential new MOU

1 **Reporting needs and KPIs**

a. Consider re-assessing the reporting needs at both agencies. Without changing the contents of the MOU8 and its annexes, the evaluation team is of the opinion that the current reporting can be simplified (scope of content, detail and frequency). Reducing the level of effort of reporting and ensuring that reported data are used for performance assessment and/or decision-making is a win-win for both agencies; and reduce some reporting costs. Considerations could be made to distinguish between reporting within the context of the MOU, and more "ad-hoc" requests from the Board. This can be introduced during the remainder of the current contract and/or for the next MOU.

b. Consider to review the KPIs for vaccines and devices. It is important that the selection of KPIs cover processes and outputs, and focus on areas for improvement. There should be a provision to modify them once performance of a specific KPI is considered adequate. Some suggestions for KPIs include on-time deliveries, and forecast accuracy, among others. Addressing the KPIs during MOU8 implementation can help preparing the selection of KPIs for a next MOU.

c. It is recommended for Gavi Secretariat to explore the use of a software like Power BI, which UNICEF SD also uses and provides appropriate functionalities to automate certain reporting.



Gavi & UNICEF SD

2	**Extended services:** If other services or commodities are added to the Gavi portfolio (VIS, YF diagnostics, others), it is recommended to systematically review whether UNICEF SD would be the most appropriate procurement agency (as is the case in the current strategic partnership) and how its services could best be organised under the new MOU or whether the use of a different contract modality should be considered.	 Gavi
CCEOP		
3	**VfM Framework:** Consider reviewing and deciding on the proposed VfM framework and the proposed VfM indicators, including those on sustainability. Some of the VfM indicators can be monitored as part of the KPIs.	 Gavi & UNICEF SD
4	**Learn from experience**: Taking advantage of the ongoing work of the JSI evaluation, which will provide further insights in the key challenges and how these are being addressed, to organise a joint self-reflection exercise towards the end of the MOU8. This will allow to build on evidence from the previous evaluations as well as to update the results framework.	 Gavi & UNICEF SD

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1 INTRODUCTION

1.1 BRIEF DESCRIPTION OF THE PROJECT

This evaluation covers the implementation of the eighth Memorandum of Understanding (MOU8) between Gavi, the Vaccine Alliance, and UNICEF Supply Division (SD).

Created in 2000, Gavi is an international organisation, bringing together public and private sectors with the shared goal of creating equal access to new and underused vaccines for children living in the world's poorest countries.[1] The Convention on the Rights of the Child and the principles of social justice demand that all children have equal access to effective childhood immunisation. Gavi brings together all the main actors in immunisation including developing country and donor governments, the World Health Organisation (WHO), UNICEF, the World Bank, the vaccine industry in both industrial and developing countries, research and technical agencies, civil society organisations, the Bill & Melinda Gates Foundation (BMGF) and other private philanthropists.

The Gavi Board is responsible for strategic direction and policy-making, oversees the operations of the Vaccine Alliance and monitors programme implementation. UNICEF is co-founder of Gavi, the Vaccine Alliance, and is represented on the Board.

UNICEF SD provides procurement services to Gavi in support of the mission and achievement of Gavi's strategic goals of Gavi. Both organisations first entered into a MOU in May 2006 (MOU1) and have renewed these MOUs up to the current eighth agreement, which was signed in March 2016 and covers the period up to the end of 2020 [1]. UNICEF SD's services cover the supply and procurement, including shipment and delivery of vaccines and certain vaccine-related supplies funded by Gavi and those countries fulfilling their co-financing obligation through UNICEF. In addition, UNICEF SD also acts as Gavi's procurement partner in market shaping activities as set out in Gavi's Supply and Procurement Strategy (2016-2020) [26], and in the Cold Chain Equipment Optimisation Platform (CCEOP) launched in 2016.

The MOU8 put in place between Gavi and UNICEF SD governs the legal and formal relationship and partnership between the two agencies, outlining the roles and responsibilities as well as the obligations of each agency for the procurement of vaccines, devices and cold chain equipment (CCE). The MOU does establish a relationship of principle and agent between parties, but Gavi does not have a management or oversight role in connection with UNICEF. The MOU covers only vaccines, devices and CCE that are funded by Gavi. As such, it does not cover vaccines and devices procured using non-Gavi funding sources, including government funds for co-financing obligations.

1.2 PURPOSE AND USE OF THE EVALUATION

1.2.1 PURPOSE AND OBJECTIVES

The purpose of the evaluation is to assess how UNICEF and Gavi are performing in the implementation of all aspects covered by the MOU8 with a view to obtain insights in (i) the suitability of the arrangements for the period covered by the MOU8 and (ii) in the changing demands in Gavi's current and next Strategic Period [2].

[1] https://www.gavi.org/about/

The key objectives of the evaluation are:

1. Evaluate the performance of UNICEF SD, as a procurement agency for vaccines, devices and cold chain equipment for Gavi, the Vaccine Alliance, as per the MOU8.
2. Evaluate effectiveness and efficiency of the changes made to the MOU as the result of the improvement initiatives identified during the previous evaluation to achieve expected outcomes.
3. Review, in the context of key focus and investment areas of Gavi, if the design of the MOU is fit for purpose and leverages the full scope of expertise in supply and procurement through UNICEF

1.2.2 USE OF THE EVALUATION

MOU8 differs from the previous MOUs in the sense that this is the first MOU covering an entire Gavi strategic period (Gavi 4.0 with a duration of five years compared to previous MOUs of two years The MOU8 includes a provision that a joint mid-term evaluation should be commissioned. The results of the evaluation will be used to inform the relevant Gavi Governance Committees (Audit and Finance Committee; Programme and Policy Committee; and the Gavi Board) with the following objectives:

- Refining improvement initiatives identified during the previous (or current) evaluation in order to achieve expected outcomes for the remainder of the period that the MOU8 is valid.
- Informing decisions on structuring a possible next MOU (MOU9) between Gavi and UNICEF for Gavi's next Strategic Period (Gavi 5.0), allowing it to accommodate for new policies and expansion of the scope in line with new Gavi strategic focus areas.
- Providing an update on whether UNICEF SD continues to provide Value for Money (VfM) for its services, based on past and current performance.

2 METHODOLOGY

The MOU8 does not have a formal outcome centred logical framework. It is defined to a large extent through its annexes and additional documents that further outline the specific obligations, roles, responsibilities and procedures for all aspects of the procurement services arrangement. These were tested in the evaluation using a perspective of efficiency and effectiveness on past and current performance by applying quantitative and qualitative analysis. The evaluation was implemented using a mixed-methods approach based on the matrix of evaluation questions (see annex 2).

2.1 DATA COLLECTION AND DATA ANALYSIS METHODS

Throughout the evaluation the following data collection and data analysis methods were applied.

Data collection

Primary data:

- Interviews with key informants (semi-structured)
  - Telephone or Skype interviews
  - Face-to-face interviews at UNICEF SD and the Gavi Secretariat

Secondary data:

- Document review

Quantitative and qualitative data analysis

- Document analysis
- Quantitative analysis of records
- Content analysis of key informant interviews
- Process mapping

2.1.1 DOCUMENT REVIEW, KEY INFORMANT INTERVIEWS AND DATA ANALYSIS

Documents were obtained from Gavi and UNICEF SD, and through internet searches to identify published papers and other relevant publicly available documents. They include the MOU8 including its Annexes, MOU7, reports as per MOU8 reporting obligations, Standard Operating Procedures (SOPs) and relevant documents related to the identified improvement initiatives, Gavi Board Papers, UNICEF Procurement Strategy, Gavi Procurement roadmaps, Vaccine Investment Strategies (VIS), relevant documents related to Gavi 4.0 and Gavi 5.0 documents, and relevant reports and presentations on the CCEOP project. Quantitative and qualitative data was extracted from documents and regular reporting. See also the Bibliography in annex 3.

The main data collection method for the qualitative aspect of the evaluation was key informant interviews. Some interviews were conducted via Skype or telephone. Respondents at the Gavi Secretariat in Geneva and respondents at UNICEF SD in Copenhagen were interviewed in face-to-face meetings. For a sample of key informants among five initially identified informant/respondent profiles, interview guides were developed. For some particular evaluation questions, additional phone interviews were held to complete certain information gaps. In line with the United Nations Evaluation Group (UNEG) norms, notes/transcripts were anonymised, and confidentiality was respected throughout the process. The evaluation topic did not allow using a gender equality lens to the evaluation, although equity aspects were to a certain extent addressed under the VfM analysis.

Relevant qualitative information extracted from documents and obtained through interviews was coded according to its contribution to answering specific evaluation questions and analysed using a qualitative data analysis software[2]. Quantitative data analysis was mainly performed on the specific obligations of both agencies as laid down in the MOU8 and its Annexes. The MOU8 obligations are to a large extent focused on reporting requirements, therefore analysis includes timeliness and completeness of reports. In addition, quantitative analysis was carried out on specific performance results. Quantitative data was analysed in Excel.

2.2 Value for Money analysis

At inception, there was overall agreement that the evaluation team would assess if the CCEOP project was sufficiently mature to allow for a proper VfM analysis and whether sufficient and appropriate data was available to allow for a robust analysis. In this evaluation report the evaluation team has proposed a VfM framework that could be used for future evaluations focusing on the VfM aspects. The framework was applied to the CCEOP project, but as expected, the limited time of implementation with consequent absence of certain data did not allow to perform a full analysis could not be performed. The data requirements and framework for future use are summarised in **annex 1**.

2.3 Limitations of the evaluation

2.3.1 Quantitative and qualitative data

At the inception phase all parties agreed on the importance of quantitative analysis in support of qualitative analysis. To the extent possible, the evaluation team has provided analysis based on quantitative data. However, quantitative data was not always available or formatted in such a way that it allowed an appropriate quantitative analysis in the timeframe of the current evaluation. Throughout the evaluation, additional pieces of justification/evidence were requested and provided to support (or not) certain findings. The findings presented in the evaluation are based on qualitative findings from interviews and documents. Wherever possible they are supported by quantitative data. If findings are based solely on qualitative data, this is indicated in the text. In a few instances, the perceptions and views of informants differed considerably, which created challenges for the evaluation team to make an accurate judgment. This has been highlighted as such in the report, where relevant.

2.3.2 Consultation with the industry

At proposal and inception stage, it was foreseen to also include the industry as informants, or to reach out to the industry through a survey. Both Gavi and UNICEF SD indicated however that the industry was consulted frequently during the period prior to the evaluation, and that there was likely to be a fatigue among representatives of industry to engage once again in interviews or surveys. It was therefore jointly decided not to engage with the industry. Instead, the evaluation team was provided with some documentation from previous industry consultations in which some views of the industry could be identified [27,28]. The analysis of Market Shaping aspects in this evaluation may therefore have suffered from a limited industry perspective.

[2] MAXQDA

2.3.3 CCEOP

The CCEOP project provides an interesting example on how the MOU8 is in principle suitable to cater for additional “projects”. The integration of the CCEOP project in the MOU8 evaluation created however some challenges. The CCEOP project is still in its early stages to fully appraise the results achieved and consequently to fully appraise the VfM aspects. The complexity of the project, and the absence of a results framework and of appropriate Key Performance Indicators (KPIs) contribute to different views on progress of the project by individuals at both agencies. Quantitative data is not yet sufficiently available to perform a suitable analysis.

2.3.4 UNICEF AS PARTNER IN THE ALLIANCE

The evaluation team perceived a potential tension between the two roles of UNICEF, namely of UNICEF SD as the procurement agency for Gavi and UNICEF as co-founder of Gavi, the Vaccine Alliance, with representation in the Board. UNICEF addresses and mitigates this potential conflict of interest by refraining from voting and being present when decisions are being taken at the Board regarding UNICEF SD as a procurement agency. On the operational side, the potential tension was mentioned during interviews with some informants and related mainly to the ability of UNICEF SD to share data with Gavi. The evaluation team has mentioned it in the report when this issue was raised. This was however not further explored, as it was considered out of scope of this evaluation.

3 EVALUATION FINDINGS

3.1 OBJECTIVE 1 – EVALUATION OF UNICEF'S PERFORMANCE AS PER THE MOU8

The first of the three evaluation objectives covers the evaluation of UNICEF SD's performance as a procurement agency for vaccines, devices and cold chain equipment for Gavi, as per the MOU8.

In particular, this Section addresses the following main questions:

Evaluation questions – Objective 1
Assessment of UNICEF performance under MOU8 as procurement agency for Gavi
1.1 To what extent are the processes outlined in the MOU8 being adhered to? (Annexes 1-5)
1.2 To what extent is UNICEF meeting or making progress toward meeting the KPIs and other obligations as outlined in the MOU8?
1.3 What factors enable/d adherence to the obligations set out in the MOU, and what factors hinder/ed meeting obligations as outlined in the MOU8?
1.4 To what extent did/do UNICEF's procurement strategies align with relevant Gavi Supply and Procurement Roadmaps, or as agreed between the parties for that Designated Product: - In case a specific UNICEF strategy is not aligned with the Gavi Roadmaps, explain the reasons why? - To what extent have Gavi Roadmaps been utilised to inform UNICEF Procurement Strategies and outcomes of tenders? - Where are there efficiencies that could have been gained? - How have PRGs been used to inform and guide the procurement process?
Update of 2013 BCG Analysis on VfM focusing on efficiency and effectiveness: assess if the results and assumptions are still valid
1.5 Since the Benchmarking Study conducted in 2013, have there been any significant changes within the landscape of procurement processes and/or agencies that should be considered for vaccine supply and procurement?
1.6 Do general procurement fee trends align with UNICEF's fee for the obligations as set out in the MOU8 for the supply and procurement of vaccines and vaccine related supplies?
1.7 How has the level of complexity/requirements in UNICEF's procurement portfolio evolved? What measures has UNICEF taken to respond to these changes?
CCEOP: Desk review of existing studies to date, progress to date, and optimisation activities, across the Alliance partners with recommendations for next steps
1.8 Are the MOU8 processes and KPIs right-fitted for the CCEOP project?
1.9 Synthesis of the results of the other studies conducted (or underway) to date. How have Gavi, UNICEF and Alliance partners responded to recommendations from these studies?
1.10 Have any of the optimisations led to initial improved results, recognising this is early in the initiative? What further actions are needed?
1.11 What are the recommendations for next steps and scope for future evaluations?
1.12 Based on the existing evidence and studies to date, what is the initial assessment of, or progress toward, VfM at this stage of the CCEOP project? What should be the focus of a future in-depth VfM assessment of CCEOP?

Although the Request for Proposal (RFP) [2] and the evaluation questions specify under Objective 1 that the performance of UNICEF SD is being evaluated, the evaluation team addressed performance and adherence to processes of both agencies as discussed and agreed during the inception phase of this evaluation.

3.1.1 UNICEF PERFORMANCE

As Gavi's procurement agency, UNICEF SD has a number of obligations to fulfil as per the MOU8. Specific obligations are described in a fairly detailed manner in the MOU or in its Annexes. The main ones are presented and analysed in the following table, following the sequence of the obligations laid down in the MOU8 and its Annexes. Some additional analysis is provided in the paragraphs below while specific quantitative analysis can be found in the tables in annex 4.

Table 1 - Summary of performance analysis main MOU8 obligations (2016-2018)

Obligation / Report	Frequency	Timeliness	Completeness	Comments
Annual shipment plan agreed upon with governments	Annual	++	++	Individual shipment plans per country were not verified, performance rating based on feedback informants.
Vaccine Arrival Report (VAR)	(After every delivery)	+	++	Standard practice for all vaccine shipments (Gavi and non-Gavi funded). VARs not requested by Gavi, but reference made in Annex 1 of MOU8 and data reported in UNICEF SD's annual reports.
Cash Management Plans (CMP)	Quarterly	+	++	73% submitted in time. Average delay less than six business days.
Programme Year Completion Report (PYCR)	90 Days after completion of procurement for all programmes for the year	++	++	Only one PYCR available for 2015, issued in 2018.
Statement of Account	Annual	++	Not analysed	98% of Statements of Accounts submitted on time.
Vaccine shipment plan/report	Monthly	++	++	Submission dates and completeness could not be verified, performance rating based on feedback informants
Co-financing report	Monthly	++	++	Timeliness analysis based on dates Excel files were saved. Completeness 100%
Co-financing report	Annual	++	++	Timeliness and completeness 100%
Six-monthly report	Bi-annual	+	++	Two out of four reports submitted late, ranging from one to four business days. Completeness 100%
Annual report	Annual	++	+	Timeliness 100% Completeness >90%

Obligation / Report	Frequency	Timeliness	Completeness	Comments
Tender evaluation	Annual	-	-	Not performed consistently
Schedule maximum prices	Annual	++	++	Timeliness 100% (with more frequent updates than required)

(++) very satisfactorily (+) satisfactorily (-) not satisfactorily

3.1.1.1 Annual shipment plan agreed upon with governments

Based on the approved quantities and estimated dollar value set out in the Authorisations Schedule (AS) that UNICEF SD receives each year on the 30th of September from Gavi with agreed allocations of doses and devices, UNICEF SD initiates a dialogue with the recipient governments regarding the proposed annual shipment plan for the next year. The shipment plan is to be established within two months after receipt of the AS. UNICEF SD makes the necessary arrangements and agrees with the respective government on the shipment plan. In practice, the shipment plan for Gavi funded vaccines is part of a larger, overall shipment plan that UNICEF SD develops jointly with the respective government for all vaccines that the government procures through UNICEF SD (Gavi-funded vaccines, co-financing and other non-Gavi funded vaccines). UNICEF's vaccine forecasting sheet, which include a template for a shipment plan, is used for this purpose. Governments provide inputs according to pre-defined parameters. This is usually agreed upon around November, and the UNICEF Country Offices (CO) are heavily involved in this process. The overall shipment plans are agreed upon with the governments, and this is done within the foreseen two months. Gavi has access to the shipment plans and UNICEF SD does provide Gavi on a monthly basis with an updated shipment report in which all planned and realised shipments and deliveries for all countries are compiled (see chapter 3.1.1.5).

3.1.1.2 Vaccine Arrival Report

Reference is made to Annex 1 of the MOU8 that provides details about shipment and delivery of vaccines. As a standard practice beyond the Gavi-funded vaccines, UNICEF requests that the UNICEF Vaccine Arrival Report (VAR) form is completed and signed by the consignee and returned to UNICEF SD within three business days after delivery of the vaccines. As part of the shipping process, the VAR is a requirement as per the WHO Guidelines on International Packaging and Shipping of Vaccines. It must be completed by an authorised inspector. The VAR provides space to indicate cold chain conditions during international transport and to note problems related to the condition of vaccines at time of delivery.

The VAR is regarded and treated as a confidential UNICEF document and is therefore not shared with Gavi (unless required for audit purposes). In the qualitative overview in its annual reports [3, 4, 5, 6] to Gavi, however, UNICEF SD provides information on data extracted from the VARs for Gavi-funded vaccine shipments, with which it complies. No other specific obligations related to the VAR are included in the MOU. The evaluation team has analysed the timeliness and completeness of VARs for Gavi-funded vaccine shipments. The detailed analysis can be found in Table 18 in annex 4.

The analysis demonstrates that almost all VARs are obtained by UNICEF SD; 97% in 2016, 98% in 2017 and 99% in 2018. Over the period 2016 to 2018 a continuous improvement can be noted, both regarding the percentage VARs received and received on time. While there is still room for improving timeliness of VARs received, data for Gavi-funded shipments compare favourably with data for overall shipments (35%; including non-Gavi funded shipments).

The data extracted from the VARs and reported upon in UNICEF SD's annual reports includes the percentage of shipments with significant findings related to temperature deviations. Deviations were reported in 0.2% and 0.5% of the shipments in 2016 and 2017 respectively. This low number suggests that UNICEF SD employs an effective mechanism in managing these shipments.

3.1.1.3 Cash Management Plans and Cash Transfer Notices

For each vaccine purchased under the MOU, UNICEF SD is required to develop a Cash Management Plan (CMP) for a rolling four quarter period. The CMP is to be provided to Gavi within one week prior to the start of each quarter. It sets out the estimated expected cash flow requirements necessary to fund the purchase of vaccines and devices, and to meet the costs of freight, inspection, insurance and other approved costs as per the AS. The CMPs are used as an information and planning tool to help Gavi project cash flow requirements on a quarterly and one-year outlook basis. The evaluation team has analysed the timeliness and completeness of CMPs during MOU8 [10]. The detailed analysis can be found in Table 19 in **annex 4**.

As the analysis demonstrates, all CMPs were available for the period under review and were found to be complete. Three out of 11 CMPs were submitted too late although a progressive improvement can be noted with two late submissions in 2016, one in 2017 and none in the first three quarters of 2018. According to UNICEF SD the delays can be explained by the late approval of the Authorisation Schedule (AS) by Gavi, and that Gavi was notified about it.

In order to effectively obtain the funds to enact procurement, UNICEF SD submits a specific Cash Transfer Notice (CTN) to Gavi. It includes the country, quantity, estimated costs and reference to the relevant approval in the AS or the Country Notification Letter (CNL), after which Gavi ensures that the amount set out in the CTN is made available to UNICEF SD within 10 business days. The evaluation team has not performed a quantitative analysis on the timeliness and completeness of the CTNs (in 2017 Gavi received approximately 315 CTNs with a total number of more than 2000 individual lines). The qualitative analysis (KIIs) confirms that in general the CTNs are submitted and responded to in time.

3.1.1.4 Financial reporting

UNICEF SD is expected to provide Gavi with a Programme Year Completion Report, which includes the total cumulative expenditures for all programmes and initiatives approved for the year by country and approval code. The Programme Year Completion Report is due within 90 days after all procurement for all programmes and initiatives approved for the year has been completed and all expenditures recorded. No Programme Year Completion Report was issued in 2016 or 2017 because it is only issued when all programmes in a given Programme Year have been completed. The complexity of vaccine introductions in low income countries leads often to delays. Other important elements that influence the time it takes to close the programmes include supply constraints, reprioritisation of programmes and audit findings. The Programme Year Completion Report for 2015 was issued in 2018, within 90 days after all procurement approved for the 2015 Programme Year was completed and all expenditures recorded.

Furthermore, UNICEF SD is also expected to provide Gavi with a yearly final Statement of Account. Each Statement covers a single country, programme year and approval code, as well as materials procured and delivered to the country. The Statement is supposed to be submitted to Gavi within 30 days after the month in which the programme was closed. The evaluation team's analysis demonstrates that 98% of the Statement of Accounts is submitted in time [11].

In addition to these annual reports, UNICEF SD is required to submit a monthly report on all disbursements made from Gavi's deposit account to UNICEF SD, referring to Gavi's approval codes. The monthly report is due within 10 calendar days after the end of each month. The evaluation team received a sample of the disbursement reports for the whole of 2018 [12] and these were found to be submitted in time. No analysis could be performed on completeness.

3.1.1.5 Non-financial reporting

According to the MOU8, the following non-financial reporting is required from UNICEF SD.

Monthly vaccine shipment plan/report

Based on the annual shipment plans agreed upon with the government, UNICEF SD establishes a monthly vaccine shipment plan consolidating all Gavi-funded shipments for all countries. The shipment plan is in essence also a shipment report because it includes both the planned shipments and realised shipments and deliveries. The monthly shipment plan/report is submitted to Gavi within 10 days after the end of each month. The evaluation team did not request both agencies to track back all e-mail submissions to analyse timeliness and completeness of the reports. UNICEF SD publishes this data on its website when the report is submitted to Gavi.[3] The data published there does not allow an analysis on timeliness, but it provides sufficient and transparent insight in all Gavi funded shipments, including the co-financed shipments over a longer period of time. Based on a qualitative analysis through KIIs held with Gavi informants it appears that UNICEF SD submits and publishes the reports on time. Since the MOU does not specify the contents of the monthly shipment plan/report, no analysis could be performed on the completeness. While no substantial concerns were expressed by informants about the reported data, a number of Gavi informants stated however that some shipments tend to disappear from the report, particularly from one year to the other. UNICEF SD informants stated that this could have happened incidentally due to the manual manipulation of the Excel reporting file, and a solution was found to avoid these errors in the future, and was implemented by the end of 2018, confirmed by the evaluation team.

Monthly and annual co-financing report

Within 10 calendar days after the end of each month, UNICEF SD provides Gavi with a monthly report on co-financing. Based on the Gavi co-financing monitoring table that UNICEF SD receives from Gavi every year by the 1st of November, in which the approval status for each co-financing obligation per country and per vaccine is provided, including the country co-financing value and the co-financing doses, UNICEF performs a monthly monitoring on the status of the co-financing obligations of the countries. The timeliness of the monthly co-financing reports is analysed in Table 20 in **annex 4** and is also covered in one of the KPIs (see **chapter 3.1.2**).

The monthly co-financing reports are submitted in Excel by e-mail. Data was made available from the second quarter of 2016 (start of MOU8) up to the third quarter of 2018, except for the fourth quarter of 2017 [13], and timeliness was overall 85%. In terms of completeness of the reports, Attachment 2 (b) (i) of Annex 4 of the MOU8 establishes the format and content of the monthly report, and all reports are found to be 100% complete for the period under review. The evaluation team can not substantiate the quality of information or the level of accuracy of the data reported. Some Gavi informants suggest however that information may not always be fully up to date or correct at the time of submission of the report.

[3] https://www.unicef.org/supply/index_gavi.html

As such, the Gavi Senior Country Managers (SCM) are often in contact with the country stakeholders, including UNICEF Country Offices (CO), and may receive more up-to-date data than what is included in UNICEF SD report. UNICEF SD provides its reporting based on the latest available information at that time.

Each year by 15 January, UNICEF SD is also expected to provide an annual co-financing report. For vaccines, the report includes the same categories of information as the monthly monitoring report. For devices, the report indicates if the country procured through UNICEF SD or not. The evaluation team has found that the yearly co-financing reports were always submitted on time and were complete [13].

Six-monthly report

Six-monthly reports are provided by UNICEF SD to Gavi on or before 31 July covering the period 1 January to 30 June of the calendar year and on or before 28 February covering the period 1 July to 31 December. Reporting is in Excel and the MOU prescribes the exact content of the six-monthly report. The following information is foreseen to be included in the report:

- Vaccine group
- Vaccine type
- Formulation
- Presentation
- Doses per unit
- Supplier name
- Prices per dose (weighted average price, lowest and highest price)
- Pricing published on time on the UNICEF website
- Value of vaccines
- Quantity procured
- Quantity delivered
- Offered quantity
- Awarded quantity
- Availability to meet shipment plan
- Additional comments

Table 21 in annex 4 provides an analysis of the timely submission of the six-monthly reports.

One of the four reports for the period under review were submitted one day late, which is only a minimal delay. The report covering the second semester of 2016 was submitted three days late, which is according to UNICEF SD explained by an incorrect understanding of the respective paragraph in the MOU (due to new staff transition) that requires both an annual report and two six-monthly reports to be submitted to Gavi. In terms of completeness, the evaluation team found the reports to be fully complete [14].

Annual report

UNICEF SD is expected to submit an annual report each year by 28 February. In addition to the information required in the bi-annual report listed above in the form of a spreadsheet, the annual report also includes a qualitative overview and some additional quantitative data. The evaluation team has analysed the timeliness of the report submission and found that the two annual reports covering the time period under review (2016 and 2017) [5, 6] were submitted on time. In addition, the evaluation team analysed the completeness of the reports, which is summarised in Table 22 in annex 4.

The required information in the annual report is to a very large extent being adhered to by UNICEF SD. The evaluation team only noted a few relatively small information gaps, which are described below the table in annex 4.

Tender evaluation

Reference is made to Annex 1, Section A, paragraph 3(c) of the MOU8, which requires UNICEF SD to provide Gavi with an evaluation of the tender process, as a minimum once per tender period and maximum as annual updates. The tender evaluation covered in this paragraph of the MOU8 does not refer to the evaluation of bids received under a tender launched by UNICEF SD as such, but UNICEF SD is expected to provide Gavi with an evaluation of the full tender process after closure of each tender.

UNICEF SD informants confirmed that these tender evaluations are not submitted consistently. One of the reasons brought forward by UNICEF SD was the fact that in 2017 UNICEF's general terms and conditions were modified with the objective of alignment of terms and conditions across the UN agencies. Consequently, UNICEF SD had delays in establishing Long Term Agreements (LTAs) throughout 2017 and 2018, and these could therefore not be evaluated. It appears that this particular reporting requirement is not fully representative anymore of the engagement and exchanges between both agencies within the context of market shaping and procurement. As such, both agencies are engaged in the development of the Roadmaps, Gavi is engaged when UNICEF SD develops its Procurement Strategies and through Procurement Reference Groups for Gavi tenders, and Gavi is consulted in the award strategy. In addition, the UNICEF SD annual reports contain a considerable amount of information that would be required to report on under this particular obligation. This particular reporting requirements may therefore be subject for discussion between both agencies, also because Gavi does not appear to be requesting UNICEF SD to provide them with the tender evaluation.

Schedule of maximum unit prices

In the MOU it is also prescribed that UNICEF SD provides Gavi with an annual schedule of maximum unit prices of vaccines and devices for the following year before 30 October of each year. UNICEF SD adheres to this obligation laid down in the MOU, and even provides in some cases updates on the maximum prices for the Gavi supported vaccines and devices throughout the year [15].

3.1.1.6 Additional analysis beyond strict MOU8 obligations

The MOU8 describes in a detailed manner the contents of the annual reports that UNICEF SD is expected to submit to Gavi. Beyond the timeliness and completeness of these reports, the evaluation team also analysed a number of these results and/or outputs in detail, as per the following table:

Table 2 - Performance analysis based on UNICEF SD annual reports (2016 - 2017)

Performance	2016	2017
On-time delivery, all Gavi funded vaccines, all countries	92%	92%
Projected versus actual Weighted Average Price (WAP), average variance	-4.9% (Average) 0.0% (Median)	-0.8% (Average) 0.0% (Median)
Average freight cost, per vaccine dose	$0.022	$0.022
Forecast accuracy	-45% (Weighted Average) -42% (Median)	-23% (Weighted average) -27% (Median)

Source: UNICEF annual reports 2016 and 2017

The on-time delivery performance is defined as "delivered to the country as per the agreed shipment plan". In 2016 the total number of deliveries was 626 of which 574 arrived as per the agreed shipment plan. In 2017 the total number of deliveries was 618 and 569 of those arrived according to the agreed plan. On-time delivery has improved over time if compared with the annual report of 2015 (MOU7) [4] in which an on-time delivery performance of 84% was reported.

The evaluation team calculated the average and median variance between the projected versus the actual Weighted Average Price (WAP) of vaccines based on the data reported by UNICEF SD in its annual reports. It is to be noted that the overall variance of -4,9% reported in 2016 is mainly due to a variance of -39.5% for the Meningococcal ACYW PS-10 vaccine and -21.8% for the Rotavirus 1 vaccine.

The average freight cost per vaccine dose remained stable in 2016 and 2017, while a 25% decrease could be noted from 2015 (US$ 0.029) to 2016. In its annual report UNICEF SD states that freight forwarding services are procured through a competitive bidding process including benchmarking with international rates.

The forecast accuracy reported is the weighted average, with some outliers for both years. This concerns particularly the forecast for HPV vaccines, which shows a variance from -83% in 2015 to -94% in 2017. The significant variance is mainly due the fact that the forecast for 2016 and 2017 was still based on Gavi's strategic demand forecast version 6 from 2012 and forecast variance has consequently been high. This is also because some countries require a 'bridging year' before they move to national introduction, which was not foreseen in the initial programme design. Some countries that had completed the demonstration programme had not applied yet for national introduction. Moreover, the reduction from three to two doses as per the updated immunisation schedule in 2014 resulted in an overall decrease of the required doses [3]. The analysis is based on information reported by UNICEF SD in its annual reports [5,6]. No further analysis could be performed on the forecast accuracy for the Gavi allocated doses as per the annual AS and the final total quantities delivered to countries.

Forecasting, and forecast accuracy remains a challenging area for both agencies. More analysis and information is provided in chapter 3.2.

Beyond the formal obligations detailed in the MOU8 it should be recognised that UNICEF SD implements the MOU8 as expected and manages the vaccine procurement services well. Except some minor issues with timeliness of submissions of some reports, and the absence of consistent tender evaluation reports, UNICEF SD adheres to a very large extent to the obligations laid down in the MOU8.

3.1.2 KEY PERFORMANCE INDICATORS

The obligations outlined above are the key reporting requirements that UNICEF SD has to fulfil according to the MOU. The MOU also foresees that Gavi and UNICEF SD, within three months after signature of the MOU, would agree on a set of Key Performance Indicators (KPIs) for each of the agencies. Annually during the first quarter, Gavi and UNICEF SD would then undertake consultations to review the performance.

The following KPIs are applicable to the MOU8:

Table 3 - Key Performance Indicators applicable to the MOU8

Area	KPI	Measurement	Owner / Accountability	Frequency of monitoring
Approvals process	1. Timeliness of the Authorisation Schedule	Authorisation Schedule is sent to UNICEF SD by 30 September	Gavi	Annual
	2. Timeliness of the Country Notification	% of Country Notifications sent by 30 September (target 100%)	Gavi	Annual
	3. Accuracy of approvals	Number of substantial changes in approvals (quantities/value) resulting in a new Country Notification and an updated Authorisation Schedule	Gavi	Monthly
Reporting	4. Timeliness and completeness of MOU8 Annual Report (non-financial)	Annual Report submitted by 28 February The Annual Report is compliant with the information required in Annex 4	UNICEF SD	Annual
	5. Monthly Co-Financing Monitoring Report provided each quarter	Timeliness – submitted within 10 calendar days	UNICEF SD	Quarterly
	6. Statement of Account submitted each month	% of Statements of Account submitted within 30 days following completion/closure of the programme/initiative	UNICEF SD	Annual
	7. Monthly disbursement reports submitted each month	% of monthly disbursement reports submitted to Gavi within 10 calendar days at the end of each month.	UNICEF SD	Annual
	8. Submission of Programme Year Completion Reports	Programme Year Completion Report is submitted to Gavi within 90 days following the financial closure of all programmes and initiatives approved for that Programme Year.	UNICEF SD	Depending on availability (closure of programmes)
Availability of funds	9. Amounts made available to UNICEF SD further to CTNs	% of timely deposits (within 10 business days of receipt of CTN) from Gavi Programme Account to Deposit Account (or special sub-account, if funding request is for a firm contract)	Gavi	Quarterly
	10. Amounts made available to UNICEF SD further to funding requests of firm contracts	% of timely deposits (within 20 business days of receipt of requests) from Gavi Programme Account to Deposit Account (or special sub-account, if funding request is for a firm contract)	Gavi	Quarterly

Source: MOU8 KPIs - Gavi and UNICEF SD

The KPIs stem mainly from the improvement initiatives further to the 2013 BCG study and focus on identified challenges at both agencies. The KPIs are therefore targeting process performance, particularly on reporting, approvals and transfer of funds, rather than performance on results. Not all KPIs represent key areas for improvement under the MOU8. Some refer to reporting obligations, while others directly impact the process of MOU8 implementation the evaluation team believes that particularly the KPIs for which Gavi is responsible, represent important activities under the MOU8 that can impact the implementation of the MOU negatively if performance is not adequate and timely. The KPIs for which UNICEF SD is responsible cover exclusively the timeliness and to a certain extent the completeness of the reporting obligations. Areas for further improvement and essential deliverables are not covered by the current set of KPIs.

Currently, the performance based on the KPIs is reviewed annually through a joint process between both agencies , but consistent reporting on the KPIs on a quarterly basis as per Gavi and UNICEF SD intent [67] has not been institutionalised. Amongst others, some changes in staff at both agencies may have caused the absence of consistent monitoring and reporting.

While within the document describing the KPIs [16] reference is made to six KPIs, in reality it concerns 10. The evaluation team was provided with access to all KPI monitoring reports from the last quarter of 2016 up to the third quarter of 2018 [17]. The following results were reported:

Table 4 - Monitoring of Key Performance Indicators (2016 – 2018)

	2016	2017	2018
Authorisation Schedule is sent to UNICEF SD by 30 September	Yes	No (3 working days late)	No (3 working days late)
% of Country Notifications sent by 30 September (target 100%)	70%	95%	86%
Number of substantial changes in approvals (quantities/value) resulting in a new Country Notification and an updated Authorisation Schedule	None	Q1: 2 Q2: 1 Q3: 1 Q4: 10	Q1: 3 Q2: 2 Q3: 14
Annual Report submitted by 28 February **The Annual Report is compliant with the information required in Annex 4**	Yes [No information provided about the compliance of the report]	Yes [No information provided about the compliance of the report]	N/A
Monthly Co-Financing Monitoring Report Timeliness – submitted within 10 calendar days	Q2: 2/3 Q3: 3/3 Q4: 3/3	Q1: 3/3 Q2: 2/3 Q3: 1/3 Q4: [no data]	Q1: 3/3 Q2: 3/3 Q3: 3/3
Statement of Account submitted each month	100%	100%	100% (up to Q3)
Monthly disbursement reports submitted each month	100%	100%	100% (up to Q3)

	2016	2017	2018
Submission of Programme Year Completion Reports	No Programme Year Completion Report was issued in 2016. (only issued when all programmes have been completed)	Programme Year Completion Report was issued in 2017. (only issued when all programmes have been completed)	PYCR 2015 was issued in 2018, within 90 days after all procurement approved for the 2015 Programme Year being completed and all expenditures recorded
Amounts made available to UNICEF SD further to CTNs	No data reported	No data reported	Q1: 91% Q2: 62% Q3: 71%
Amounts made available to UNICEF SD further to funding requests of firm contracts	No data reported	No data reported	Q1: on average, CTNs disbursed 2.8 days before the due date Q2: on average, CTNs disbursed 0.1 day before the due date Q3: on average, CTNs disbursed 0.3 day before the due date

Source: Gavi and UNICEF SD KPI monitoring reports 2016, 2017 and 2018

There have been some discussions on the monitoring of the KPIs, and in particular about how the denominator on the KPI related to accuracy of approvals should be calculated. As such there does not seem to be an agreement on the 95% reported in 2017 although UNICEF SD informants confirm that the denominator was agreed upon for the last reporting period in 2018.

While the 2018 KPI monitoring report referred to the Programme Year Completion Report of 2016 that was issued in 2018, after review, it appeared that it concerned the Completion Report of 2015.

Overall, the reporting on the KPIs demonstrates that the performance of both agencies is appropriate, with some room for improvement in the timeliness of submitting the Authorisation Schedule. Recognising that three days late delay appears not substantial, the evaluation team has understood that timeliness of the Authorisation Schedule is particularly important for the implementation of the MOU and operational implications.

The KPIs stem mainly from the improvement initiatives further to the 2013 BCG study and not all of them may still be equally relevant for the activities covered by the MOU8. There have been attempts in monitoring and reporting on them, but consistent reporting on the KPIs has not been institutionalised. The selected KPIs for UNICEF SD exclusively focus on reporting requirements. While timely reporting is essential if it triggers some subsequent action, the evaluation team is of the opinion that the current selection of KPIs requires revision, and that consistent monitoring is to be institutionalised.

3.1.3 Gavi's obligations

The MOU8 (Annex 2 and Annex 4) also prescribes some obligations for Gavi to fulfil. The above KPIs already provide some insight into these obligations and how Gavi adheres to them. The approvals process with AS and CNLs will be addressed in more detail later in the report (chapter 3.2.1.1). Other obligations are presented below.

3.1.3.1 Stockpile Establishment Notification

The Gavi Board, Executive Committee or Gavi Chief Executive Officer reviews proposals for initiatives resulting in multi-year financing for stockpiles of vaccines that are globally in short supply. Those initiatives are not specific to a particular country. The Gavi Board approves a financial envelope and then Gavi notifies UNICEF of the approved funding for vaccines for the stockpile within 30 days after the approval by the Gavi Board, Executive Committee or Chief Executive Officer. This so-called Stockpile Establishment Notification will constitute a financial commitment to UNICEF to purchase the vaccines. Both Gavi and UNICEF SD provided evidence that these Notifications are effectively submitted to UNICEF SD, although the evidence provided did not allow confirming whether timelines were adhered to [18].

3.1.3.2 Quarterly reports on balances

According to the obligations of the MOU8, Gavi is also expected to provide UNICEF SD with quarterly reports of the balances of any Collateral Account(s) for which the account balance includes gains or losses on share investments, split between the balance that is committed to UNICEF for procurement commitments, and the balance that is a gain or loss on account. Gavi confirmed however that no Collateral Accounts were ever set up. It appears that the provision was made in the MOU8 in case it was needed, but the purpose did not materialise. Consequently, there is no reporting.

3.1.3.3 Acknowledgment of receipt Programme Year Completion Report

Once a Programme Year Completion Report is provided to Gavi by UNICEF SD, Gavi has the obligation to acknowledge receipt and agreement of the report within 90 days of receipt. According to UNICEF SD, and as highlighted in Table 4 above (Monitoring of sub-selection of KPIs), the Programme Year Completion Report 2015 was issued in 2018, within 90 days after all procurement approved for the 2015 Programme Year being completed and all expenditures recorded. Evidence was provided that Gavi acknowledged receipt within 90 days [19]. The Completion Report for 2016 is expected shortly since the Statement of Accounts was completed in February 2019.

3.1.3.4 Co-financing obligations

Gavi is to provide UNICEF SD by the first of November of each year with the co-financing obligations for the following year. This is done using the Gavi Co-Financing Monitoring Table. The table should indicate the approval status for each co-financing obligation, as well as the following data: WHO region, Country name, Vaccine, Co-Financing year, Country Co-Financing value, Co-Financing doses. In practice, this activity is aligned/harmonised with the AS process, in which Gavi communicates to UNICEF SD by 30 September the approved allocation of doses, devices, as well as the country's co-financing obligation [7]. This is in fact before the stipulated date of 1 November foreseen by the MOU8. The AS format does not include all the data that the MOU requests to be submitted (e.g. WHO region, etc.) but these data are reflected in the Gavi Co-Financing Monitoring Table [13].

3.1.4 OVERALL ADHERENCE TO PROCESSES

Based on the analysis performed above, the agreed processes are to a large extent being adhered to by both UNICEF SD and Gavi. Indeed, the majority of informants from both agencies confirm that the MOU is being implemented rather well. Particularly the leadership at both agencies is satisfied with the collaboration, which is perceived as a "very functional partnership". The majority of informants directly involved in the implementation of the MOU appreciated the possibility to informally engage with each other when needed.

3.1.4.1 Level of detail

The fact that the processes in the MOU8 are described in quite a detailed manner is considered by some informants an enabling factor for adherence to well-established processes. In contrast, that degree of detail in the MOU8 is by some other informants perceived as a hindering factor because of its prescriptiveness. While the MOU is a legal document and the obligations for UNICEF SD and Gavi are already to a large extent laid down in the annexes of the MOU, it contains detailed information that would be expected to be included in Standard Operating Procedures or in an implementation framework, both of which could be presented in an annex. This would allow for modification and adaptation when needed.

3.1.4.2 Familiarity with the MOU

Another enabling factor for adherence to processes of the MOU8 constitutes the staff members implementing the MOU8. The evaluation team found that particularly the UNICEF SD staff directly involved in the implementation of the MOU are well aware of the contents and processes laid down in the MOU8. Gavi staff is in general less aware of the MOU content and processes. Some Gavi management informants indicated that operational staff involved in (some aspects of) the implementation of the MOU may not have read the MOU and it may not be considered as useful to them. Indeed, the majority of Gavi informants was not familiar with the KPIs of the MOU, which questions the relevance of the KPIs or the way KPIs are being monitored. While the evaluation team recognises that the Gavi Senior Country Managers (SCM) are not expected to have a full knowledge of the detailed processes laid down in the MOU, increased understanding of the general roles and responsibilities as well as the agreed timeframes between the two agencies would certainly be beneficial, since the SCMs do play an important role at the country level and can have an important influence on programme implementation.

The fragmentation and silo-style of working within Gavi was also referred to as a hindering factor that prevents adherence to processes by informants at both agencies. As it is the case with UNICEF SD, a number of Gavi teams are (in)directly involved in the implementation of the MOU: Vaccine Implementation (VI), Health Systems and Immunisation Strengthening (HSIS), Immunisation Financing & Sustainability (IF&S), Policy & Market Shaping, Country Programmes, Finance[4], and others. As indicated, at Gavi there is no focal point for the implementation of the MOU. At UNICEF SD the Partnership Specialist and the Chief of the Vaccine Center are the main focal persons for the implementation of the MOU. In addition, the evaluation team was not made aware of existence of SOPs at Gavi to guide implementers. Gavi operational staff also indicated that the process within Gavi could be less bureaucratic. Reportedly, the UNICEF SD annual report is not shared widely among Gavi implementers of the MOU8 for confidentiality reasons.

[4] Teams listed prior to the latest reorganisation at Gavi (February 2019)

Considering the valuable information in the report, which also provides insights in the operational challenges that UNICEF SD is faced with, it could however be considered to circulate the non-confidential information to the relevant teams at Gavi.

3.1.4.3 Exceptions

Lastly, informants at both agencies referred to the exceptions to the routine process as an important hindering factor. UNICEF SD informants stated that late approvals by Gavi, particularly for campaigns for which there are several reasons that are not under Gavi's control, put the process under pressure, and that these delays are occurring more often (see also chapter 3.2.1.1). The example of the implementation of the Fragility, Emergency and Refugees (FER) policy, as well as dealing with non-Gavi countries accessing the stockpiles for outbreak responses was referred to several times. Informants stated that the policy should have provided flexibilities, but implementation remains heavy (e.g. almost same channels for approvals, etc.) (see also chapter 3.1.6.4).

Processes are to a large extent being adhered to by both UNICEF SD and Gavi. The processes in the MOU8 are described in detail, which is considered both an enabling factor for adherence to well-established processes and a hindering factor, because of a lack of flexibility in exceptional situations. Particularly the UNICEF SD stakeholders directly involved in the implementation of the MOU are well aware of the contents and processes laid down in the MOU8. At Gavi there is no focal point for the implementation of the MOU.

3.1.5 Roadmaps, Procurement Strategies and procurement Reference Groups

According to UNICEF SD and Gavi Secretariat staff interviewed and document review, the UNICEF Procurement Strategies are mostly in line with the Gavi Roadmaps and tools like the Healthy Market Framework are consistently being used. The evaluation team was not provided with quantitative evidence to confirm this. However, the UNICEF SD 2016 annual report [5] provides an example of alignment and use of Roadmaps: "*UNICEF launched a two-phase pentavalent vaccine tender during 2016 to cover the supply period 2017-2019, and was able to halve the pentavalent vaccine weighted average price (WAP) per dose […] meeting 2020 Road Map price targets […]*"

While the Gavi Roadmaps are meant to inform the longer-term market shaping objectives and the UNICEF SD Procurement Strategy is meant to guide the tender process, some UNICEF informants highlighted that the Roadmaps become increasingly more detailed and prescriptive, which may lead to challenges in UNICEF's planning. As such, some Roadmaps encompass preferred products, which may create monopolies, and makes market shaping challenging. Gavi Secretariat informants stated, however, that the level of detail may be a result of requests for clarifications from UNICEF SD. The evaluation team was provided with a limited sample of recent and previous Roadmaps for review [20, 21, 22, 23, 24, 25], but is not in a position to make an appropriate judgement on the perceived level of detail and prescriptiveness.

Usually a Roadmap is developed prior to launching a tender. For each tender UNICEF SD also develops a particular Procurement Strategy. With the longer-term market shaping Roadmaps in mind, one would expect that a Roadmap would be a guiding document for several tenders but this is not structurally the case.

The Gavi Procurement and Supply Strategy 2016-2020 already highlighted that due to resource constraints, most Roadmaps are not developed until after or coinciding with the corresponding procurement tenders [26]. Depending on the particular antigen and the market developments, some Roadmaps do cover several tenders, or only minor updates are being implemented prior to launching a new tender. Considering UNICEF SD's comments that the Roadmaps are becoming increasingly detailed and prescriptive, and that they are being updated prior to launching a tender, one could consider harmonising (some aspects of) the Roadmap and the Procurement Strategy processes, pointing at possible efficiency gains while recognising that the two products serve different purposes. It is important that both processes and documents have an added value, and duplication of efforts should be avoided.

The outcomes of the Roadmaps are important for UNICEF SD. As such, they have to be signed off by senior management, and the more detailed they are, the more time it takes to sign off on the Roadmap, especially when UNICEF SD is not in full agreement with the Roadmap. According to Gavi, Secretariat however, UNICEF SD senior management provides often detailed comments on all the sections of a Roadmap, rather than focusing on the more strategic sections of the Roadmap, which contributes to the fact that Roadmaps do become more detailed. In addition to the perception that the Roadmaps are becoming increasingly more detailed and prescriptive, the Roadmaps are mostly supplier oriented and this sometimes causes challenges for a more comprehensive market approach: several manufacturers are engaged in production of different vaccines and developments in one particular vaccine may have consequences for the others, but these are not captured clearly in the Roadmaps because they focus on a market for a single vaccine. Gavi Secretariat informants stated that they also face some challenges when its inputs are not incorporated into the UNICEF SD Procurement Strategy process, either because UNICEF SD is not in agreement or because of the delays in UNICEF's internal review timelines.

The feedback from the industry on the Roadmaps reviewed for this evaluation [27, 28] also points at some challenges. The industry requests to be more engaged in the Roadmaps, and perceives the consultations with manufacturers as a formality, with late and ad-hoc engagement in policy creation. This limits trust and consequently limits the possibility of aligning Gavi's and manufacturers' goals. Furthermore, the tone and form of communication with and about manufacturers is perceived as creating an image of a transactional supplier, versus long-term partners with common goals.

The Gavi Procurement and Supply Strategy 2016-2020 [26] highlights the need to enhance visibility for key stakeholders into the procurement process through Procurement Reference Groups (PRGs). PRGs are jointly owned by UNICEF SD and Gavi Secretariat. They jointly decide if a PRG is to be established for each procurement process and which specific remit the PRG has [21]. The added value of the PRGs is largely recognised by all stakeholders and, reportedly, PRGs are to a large extent used to guide the procurement process. The evaluation team was provided with Terms of Reference for a PRG [29], but did not get insight in meeting minutes, actions proposed by PRGs and actions implemented, to confirm the positive perception by both Gavi Secretariat and UNICEF SD on the relevance of the PRGs. However, the fact that UNICEF SD institutionalised the PRGs for non-Gavi funded commodities (called Procurement Advisory Groups) indicates that the mechanism is considered as functional, bringing added value.

Despite some different perceptions on the level of detail, prescriptiveness, supplier orientation and the added value to involve industry in the Roadmaps, there is overall alignment between the Roadmaps and the UNICEF SD Procurement Strategies. Both agencies consider Procurement Reference Groups an added value to inform and guide the procurement process.

3.1.6 UPDATE OF THE BCG ANALYSIS

At the request of the Gavi Alliance Board in December 2012, the Gavi Secretariat commissioned BCG to evaluate the Alliance's vaccine procurement activities.

The study had two main objectives:

- Benchmarking priority activities and fees versus other comparator organisations. The aim was to understand whether the effectiveness and efficiency, or "value for money", of services provided under the MoU and the budgeted price levels were in alignment with typical fees for comparable services and practices, as observed in comparator organisations.
- Identify and prioritise opportunities for improvement with recommendations for implementation. The study reviewed performance and identified potential areas for improvement with regard to provided services, in order to ensure a high value of services in terms of quality and efficiency.

The benchmarking study was conducted along four topics: value and cost performance, operational excellence, joint operating model and enablers, and specific strengths and capabilities. Overall, the outcome of the study was that UNICEF SD's procurement activities "*bring value*", and that the "*operational performance is overall good but indicates potential to improve and achieve best practice in selected areas*."

The key findings of the study [30] are summarised as follows:

- The change in the handling fee ($16M in 2013 vs. $9.3 in 2012) was aligned with the forecasted increase in activity.
- UNICEF SD's handling fee compared favourably compared to both global health and generic procurement benchmarks.
- The historical fee evolution was consistent with the trend of the activity level over a five-year period (2009-2014). The fee increase was aligned with the planned increase in procurement activity, taking into account complexity and scale.
- Gavi's handling fee as a share of UNICEF SD's budget remained stable, at about half of what the share of the procured value is.
- The financial opportunity costs related to pre-payment requirements were relevant – but were largely independent from UNICEF, as other procurement organisations typically also require it.
- Overall, robust processes and systems are in place. There is an opportunity to selectively improve to reach best practice.
- Specifically, performance can improve in metrics, data availability, on-time delivery, proactive supplier management and overall supplier relationships.
- To increase the performance of the partnership, dedicated team effort and increased collaboration are required from both parties.
- A specific co-management mechanism is recommended to oversee procurement's role and performance, based on an operational KPI system.
- Increased formality in the relationship between the two organisations, with clear and single focal-points and well-defined processes and information flows

Based on the recommendations, working groups were established in 2014 to review the process and provide recommendations for improvement in the financial and operational performance aspects. The focus was on four joint initiatives, which included:

I. optimisation of the Authorisation process;

II. simplification of the Authorisation process for devices;

III. improvement of the reporting requirements; and

IV. the operational forecast.

The recommendations and proposed processes that came out of these working groups helped inform the design and content of the current MOU8. Further information on the improvement initiatives can be found in **chapter 3.2**. Further information on the co-management mechanism and collaboration is provided in **chapter 3.3**.

For the current evaluation, the evaluation team analysed whether there have been any significant changes within the landscape of procurement processes and agencies that should be considered for vaccine supply and procurement.

3.1.6.1 Vaccine manufacturing and procurement

The vaccine manufacturing and procurement landscape changes continuously, and it has been like that for many years. In 2017, UNICEF SD procured 1.3 billion doses of vaccines with a value of $400m from manufacturers based in emerging countries [31]. In the context of sustainable procurement, UNICEF SD is moving towards integration of environmental sustainability management in vaccination programmes, and applying the three pillars of sustainable procurement (environmental, economic and social). The Gavi Procurement and Supply Strategy 2016-2020 [26] stated that the manufacturer landscape is diversifying, and so is the pipeline of new products. “Regular” issues include manufacturers withdrawing from the market or facing capacity problems to fulfil supply, as well as situations whereby forecasted demand do not materialize. For example, during the first years of the HPV program there was a focus on small scale demonstration programs. Between 2013 and 2016 the demand did in fact not materialise as it was forecasted. Despite signals from Gavi Secretariat and UNICEF SD that this was likely to change, it resulted in manufacturers being very conservative in increasing production capacity. Subsequently, when the Board approved the new policy on HPV to accelerate HPV introduction, several large countries applied for HPV support. The two manufacturers with a WHO pre-qualified product in their portfolio informed Gavi Secretariat and its partners of the short-fall in supply against the demand. One of them indicated that it would require about two years to ramp up production to meet demand projections for approved applications. This has resulted in a supply gap leading to country introductions being spread out over time.

The context in which procurement takes place is also changing considerably. Fragility situations have become more frequent, the demand has become more volatile, and UNICEF SD informants state that from the middle-and high-income countries there is an increasing demand for new vaccines.

Within the context of vaccine procurement for Gavi, a new Vaccine Investment Strategy (VIS) is being developed every five years, just ahead of the next Gavi Strategic Period. As such, the newest VIS was presented to the Board in October 2018 [32] and received conditional approval. There are six new vaccines included in the VIS and not all of them are infant related, which brings also new dynamics. As such, investment is foreseen in Rabies vaccines, which requires a different approach because it is a post-exposure prophylaxis vaccine.

Furthermore, rabies is characterised by a lack of reliable country data, as well as insufficient technical knowledge within Gavi Secretariat (not necessarily within UNICEF SD who already procures these vaccines on behalf of countries). The October 2018 report to the PPC on VIS 2018 referred to the further evolvement of Gavi's portfolio towards greater country choice regarding introductions, whereby countries more proactively identify a customised mix of highest value vaccines from the portfolio to introduce.

Changes occur continuously in the vaccine procurement landscape but UNICEF SD has a track record of dealing with these changes, therefore a change in the current set-up is not required.

3.1.6.2 Procurement agencies

Within the global landscape of procurement processes and procurement agencies in the context of Global Health Initiatives (GHIs), a number of developments can be noted since the 2013 BCG study was conducted. These developments, however, are more general and not directly linked to the vaccine procurement landscape.

Procurement agency services for two important GHIs (USAID's Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) and The Global Fund's (TGF) Pooled Procurement Mechanism (PPM)) were re-tendered once or twice since 2013, bringing some innovation to the procurement landscape and bringing new procurement agencies to the market. There are only a limited number of benchmarks since there are only a very limited number of large GHIs with substantial procurement value. For vaccine procurement at a similar scale as Gavi funded vaccines procured by UNICEF SD there are no benchmarks.

The most noteworthy development includes the USAID's GHSC-PSM (supporting PEPFAR, PMI, and the maternal and child health, and population and reproductive health programs within USAID), which is implemented by a consortium led by Chemonics. The PEPFAR work was earlier contracted to the Partnership for Supply Chain Management (PfSCM), which is currently undertaking procurement services for TGF's PPM. Except for merging programmes, USAID did not change much to the way it outsourced its procurement. There is an increased focus on managing the whole process from manufacturer to end-user through a principle of a "control tower" in which the process is cut down in steps that are all monitored and evaluated on a permanent basis.

In terms of innovation, TGF already decided in the previous contract from 2013 onwards to take its market shaping and strategic tendering for most product categories in its own hands. When it launched a new RfP, TGF requested interested parties to express interest in different parts of the supply chain, for example, procurement, logistics, warehousing, and/or data management. Procurement agencies became more administrative and supply chain executors and it entails that services of procurement agencies could be split into different categories:

- Strategic procurement (market shaping, Long-Term Agreements)
- Operational procurement and supply chain management
- Data management (monitoring, metrics, analytics)

In addition, TGF opted to give awards to two different procurement agencies. PfSCM was awarded the product categories of antiretrovirals (ARV), artemisinin-based combination therapy (ACT) and Rapid Diagnostic Tests (RDTs) while IDA Foundation was awarded the product categories of mosquito nets, drugs for opportunistic infections, condoms and medical supplies and devices.

It also allowed TGF to renegotiate fees during the contract period and having the possibility to switch categories from one procurement agency to the other.

When considering the outcomes of the BCG study of 2013, the evaluation team has not found any significant developments in the procurement agency landscape that would justify a drastic modification in the selection of a procurement agency for vaccines and devices. The BCG study stated that "*UNICEF SD has a long history of vaccine procurement, and has full visibility of GAVI and non-GAVI vaccine delivery coordination across all GAVI-eligible countries outside of the PAHO region. UNICEF SD has deep vaccine supply market understanding, and has existing relationships with all relevant manufacturers. UNICEF SD procures non-GAVI support vaccines on behalf of many countries, giving it more comprehensive visibility into supply chain status than a comparator would have*." In comparison to the seven comparator organisations, the study highlighted also that:

- *UNICEF SD's integrated solution allows UNICEF SD to act as a single point of contact for suppliers and countries regarding forecasting and operational planning. This facilitation by UNICEF SD greatly simplifies interactions with suppliers and countries versus having multiple GAVI-related procurement counterparts.*
- *The comparators offer select services along the procurement value chain. However, any alternate model in which a comparator was responsible for an isolated service would require significant coordinating effort by the GAVI Secretariat or UNICEF SD.*
- *An alternate model as such would likely require additional costs and process integration efforts in the medium term, as the comparator would have to adapt to new processes and the GAVI Secretariat or UNICEF SD would need to scale up coordination and oversight activities.*

Even though a similar benchmarking exercise with these or other comparator organisations was not foreseen under the scope of work for this current evaluation, the evaluation team has performed a rapid analysis of the current procurement agency landscape.

1. The seven comparator organisations that the BCG study analysed have remained largely the same for the purpose of benchmarking, with the exception of DHL who has according to the evaluation team not played an active procurement role for 10 years.
2. Secondly, PfSCM could have also been used as a comparator in 2013, while Missionpharma, although smaller in scale, could also have been included for benchmark purposes.
3. GHSC-SCM has in the meantime emerged as a new procurement agency consortium managing the procurement of large health programmes.
4. AECOM has been awarded a large DFID contract in 2015 for procurement of health commodities (and consequently outsourced some of these tasks to other parties).
5. Since 2013 the volume of turnover in $ of IDA Foundation increased considerably because it has taken on the procurement agency role from other organisations, and turnover of existing programmes like the Global Drug Facility (GDF), for tuberculosis medicines and laboratory supplies, also increased.
6. Furthermore, i+ Solutions has expanded its activities in local procurement and in-country distribution.

There has also been increased attention for improved performance and efficiency with possibilities for re-negotiation of the contracts. During various stakeholders' meetings like the UNAIDS/WHO and annual supplier conference organised by WHO/UNICEF in Copenhagen, it was highlighted that there has been a consistent performance improvement of the PPM of TGF for all product categories, with the On Time In Full (OTIF) deliveries increasing significantly from less than 50% to over 90%. Also USAID's GHSC-PSM reported on improved performance in OTIF [34].

Procurement agencies are increasingly required to develop Electronic Data Interchange platforms creating interfaces with manufacturers and other service providers to exchange data. Procurement agencies are more aware of the fact that if they fail to meet the performance targets in terms of OTIF but also in terms of complying with the data management requirements, it will negatively impact their rating for the next tender.

During the last years, no significant changes or other emerging organisations with similar expertise, particularly for vaccines and devices procurement, were found. However, the evaluation team believes that the above developments provide an important contextual analysis from which the following lessons can be learned.

1. In line with recent global developments, potential changes could include cutting the different steps of the supply chain and (re-) tender part of these, although it is likely that UNICEF SD will continue to have a considerable comparative advantage when it comes to international shipment of vaccines, and this may not be a suitable option for the particularities of the vaccine market.
2. As for data management, UNICEF also has a comparative advantage in this area because of its extensive country presence and involvement in EPI programmes, both for Gavi funded vaccines as for vaccines funded by other resources.
3. The experience of USAID who switched its procurement agency from PfSCM to the Chemonics consortium demonstrated also that there are important risks associated with this kind of changes, since the consortium experienced important challenges at the start. In fact, setting up a new consortium and taking up a task of this magnitude is always cumbersome. Capacity, expertise, networks and experience need often be built up from scratch.
4. In this regard, the BCG study finding on any alternate model in which a comparator would become responsible for a specific service, would require significant coordinating effort by Gavi Secretariat and UNICEF SD. There would need to be extraordinary risk mitigation measures in place and the current Gavi Secretariat capacity may not be sufficient to manage it.
5. Diversifying the future procurement landscape for Gavi might however be considered. In this regard, the current work done around Yellow Fever (YF) diagnostics may represent a learning agenda, while recognising that it represents a different market and supply chain compared with vaccines and devices. The October 2018 report to the Programme and Policy Committee (PPC) [33] on Gavi support for Laboratory Diagnostic Component of the EYE Strategy referred to an assessment conducted on behalf of Gavi that identified at least four organisations that could serve as procurement partners for YF diagnostic tests. Further assessment was done on how these and potentially other agencies operate on a range of key activities including: proven relevant experience working in Africa; experience in market shaping and achieving competitive and transparent product purchasing at a sustainable price; and capacity to deliver to the final destination in a timely manner and in accordance with national and international laws. The Gavi Secretariat has engaged in detailed discussions with potential procurement partners with comparative advantages regarding these activities. A preliminary decision on how to proceed is expected in the near future.

6. Furthermore, the Gavi Procurement and Supply Strategy 2016-2020 [26] highlighted that the expansion of scope and increased complexity of activities will require Gavi to identify and use capabilities, resources and expertise across and outside the Alliance in an increasingly large number of domains, such as modelling, negotiation, or training. Thus, other expert partners become increasingly important, and the Alliance will consider the advantages of each to determine where their comparative strengths could best be leveraged.

During the last years, no significant changes or other emerging organisations with similar expertise, particularly for vaccines and devices procurement, were found. However, the evaluation team believes that recent developments provide an important context from which lessons can be learned (e.g. engaging two or more procurement agencies, increased attention for improved performance and efficiency with possibilities for re-negotiation of the contracts and increased attention to data management and data exchange).

3.1.6.3 Procurement fees

The budget of UNICEF SD is composed of a number of different funding sources: these include institutional budget, warehouse fees, other and regular resources, procurement services handling fees and the Gavi fee [35]. The budget allocation (costing) model assigns all staff costs and non-staff costs to one of these funding sources based on a comprehensive application of the specific cost-drivers to relevant categories of staff and organisational units. The methodology also considers that staff in a number of organisational units are engaged in transactions processing and work of strategic nature, depending on position level. Much of UNICEF SD's resources are dedicated to transactional work, and an increasing portion is strategic in nature, related to managing the complexity of supply, procurement and logistics, working in partnerships, managing risks and the value-adding areas such as innovation, market influence, results-based management, real-time monitoring and optimising supply chains. In addition to UNICEF SD's staff, there are non-Gavi funded positions in UNICEF COs that support activities implemented in the context of the MOU with Gavi. At the same time, however, Gavi funds a number of UNICEF staff in UNICEF Programme Division in New York, in regional offices and in COs supporting the Gavi work, using the Targeted Country Assistance (TCA) modality through its separate Partners' Engagement Framework (PEF).

Within the context of international procurement agencies for GHIs, TGF was able to negotiate fees downwards since it became evident that the absolute fee increased considerably more than the related amount of work, which led to significant savings. As such, the fees for LLIN went down from 2.5% to 1% and for ARVs from 4.5% to 2.5% [36], with overall increased performance of the procurement agencies. Since 2005, USAID pays procurement fees to the procurement agencies based on "manpower x multiplier" (each direct manhour is multiplied by an agreed factor that includes fixed costs and a small profit, which is more commonly done in the private sector), and not based on a percentage on volumes. The advantage is that there is a direct link between the level of effort and the remuneration.

In the private sector, outsourcing of procurement and supply chain services is also common practice. In order to evaluate the VfM propositions, periodic retendering takes place to benchmark the fees.

The 2013 BCG study demonstrated that UNICEF SD's procurement activities "bring value" and that the procurement fee compares favourably to global health and generic procurement benchmarks. In 2012 when UNICEF SD proposed an increase of the fees from $12 to $16 million, questions were raised at the Gavi Board about whether UNICEF brought VfM.

Senior management representatives of Gavi were then provided with insights into how UNICEF builds its procurement fee (based on activity-based triggers) and it was found to be fair and appropriate at the time. This was conveyed to the Board members to bring them more comfort [35]. The current drivers for the Fee Trigger Model were developed jointly. There has however not been a more recent analysis of the current underlying costs to justify the procurement fee. Some stakeholders highlighted that a review of the model halfway through the MOU8 would not be desirable since the cost of developing a Trigger Model would not be justified compared to the current proposed fees that are only expected to vary marginally. There is room for the Fee Trigger Model to be reviewed but this could be at the end of MOU8, whereby considerations around reduced volumes vis-à-vis increased complexities should be made. Important complexities include:

- New vaccine introductions
- Countries transitioning
- Market dynamics (manufacturers entering and exiting the market, supply constraints, etc.)
- Increased outbreak responses
- Increased fragilities and refugee settings

However, the above complexities are not new, and UNICEF SD has a track record in dealing with these issues. UNICEF SD estimates that the current fees only just cover the level of effort while Gavi Secretariat indicates that UNICEF SD should be well resourced to carry out the activities. Complexities are currently to a certain extent captured in the Fee Trigger Model. Stakeholders are however interested whether UNICEF SD continues to provide VfM for its services, based on past and current performance. As such, questions were raised about whether efficiency gains were brought back to Gavi, and whether the increased procurement value translates directly into an increased number of full-time positions (FTEs). In fact, Gavi stakeholders envisage that more transparency will be expected on the justification of the fee paid to UNICEF SD by Gavi's Audit and Finance Committee, amongst others.

As per the MOU8, Gavi Secretariat and UNICEF SD are reviewing annually the estimates of quantities of vaccines and devices to be funded by Gavi before the 30th of September of each year with a view to apply the adjustment mechanisms for the annual fee, and agree whether the fee for that calendar year and any subsequent calendar year needs to be adjusted (either upwards or downwards) as a result.

A trend analysis of UNICEF SD's procurement fee since the BCG study was conducted in 2013, shows the following data:

Table 5 - UNICEF SD Fees 2014 - 2017

Fees	2014 $m	2015 $m	2016 $m	2017 $m	Average
UNICEF SD Percentage Fees charged	1.80%	1.81%	1.74%	2.04%	1.85%

Source: UNICEF SD annual reports 2014 - 2017

The average fee calculation of 1.85% includes the $1m returned from UNICEF SD to Gavi in the course of 2018 in respect of 2016 fees, and is significantly lower than what UNICEF SD usually charges for its procurement services (3 to 8.5% depending on the item and the country). Percentage-wise it continues to compare favourably with global health procurement benchmarks.

The evaluation team was provided with insights in the domains (triggers) of the model. Based on recommendations from an external consultancy firm, the weight for the strategic drivers was established at 60% and the weight for transactional drivers was set at 40% [35], with identical relative weight of each driver within those two categories. Any deviations are agreed during 'True ups' re-run of the model at the end of the year. The following table includes the strategic and transactional cost drivers:

Table 6 – Cost drivers Fee Trigger Model

Fee Trigger Model Driver
Strategic / Complexity Cost Drivers:
No. of vaccines
No. of presentations
No. of suppliers + vaccine
No. of countries + vaccine
No. of vaccine introductions
Transactional Cost Drivers:
No. of doses/devices
Procurement amount

UNICEF's cost structure in terms of staff costs and non-staff costs and how these cost-drivers relate to the absolute procurement fee it receives from Gavi, was not provided. Consequently, the evaluation team was not in a position to appraise the VfM of the Fee Trigger Model. With the expectation that increased scrutiny will be applied to the justification of the absolute fee, there is room a review of the Fee Trigger Model when a new MOU is to be negotiated, including assessing options for reflecting the level of effort and level of remuneration. Should the Fee Trigger Model continue to be found suitable, consideration should be given to reviewing the definition of the triggers (e.g. expected increased complexity in country and vaccine portfolio, etc.), their weight and interdependence.

TGF was able to negotiate fees downwards since it became evident that the absolute fee increased considerably more than the related amount of work, which led to significant savings. Gavi stakeholders envisage that more transparency will be expected on the justification of the fee paid to UNICEF SD. The average fee calculation of 1.85% continues to compare favourably percentage-wise with global health procurement benchmarks. There is room for a review of the current Fee Trigger Model, including assessing options for reflecting the level of effort and level of remuneration. In case the model is found to be suitable, consideration should be given to reviewing the triggers.

3.1.6.4 Level of complexity

As highlighted earlier, the complexity has evolved during the last years, with new vaccine introductions, more countries transitioning from Gavi support, increased number of fragilities, emergencies and outbreak responses, in addition to regular market dynamics with manufacturers entering and exiting the market, and manufacturers experiencing supply constraints. However, this is not new, and UNICEF SD has over time introduced measures for efficiency gains in its processes and created a system that can manage these issues.

There is an increasing share of co-financed demand from Gavi-supported countries, in particular countries in the accelerated transition phase whereby there is more reliance on country ability to self-finance [37, 38]. While co-financing is an obligation of countries, UNICEF SD notes an increase of the time needed to confirm the orders, and to receive the funds from the countries, which puts accurate forecasting and production planning with suppliers at risk and may have an impact on price achievements with an increased risk of volatility. The same applies to transitioned countries procuring through UNICEF, where financing for procurement is not always predictable and where there is a higher uncertainty around their projected demand [6].

In many countries there seems to be a lack of clarity on whether the co-financing should report on the doses or the $ value. While countries are accountable to Gavi and the Gavi Secretariat SCMs should support and accompany countries in this process, Gavi Secretariat informants stated that they also expect UNICEF COs to support the countries with the reporting and clarifying this issue.

While the number of outbreak responses is increasing, in particular the number of vaccine doses increases considerably [39]. The use of the oral cholera vaccine (OCV) stockpile for outbreak response increased from 4-5 million doses in 2014 to over 20 million doses in 2018 [32]. In its 2016 annual report [5], UNICEF SD stated that for YF vaccines “very close order follow up has been institutionalised, and some of the late deliveries are also caused by UNICEF putting temporarily on hold several routine immunisation orders due to programme prioritisation of outbreak response orders.” The responses to outbreaks also trigger other challenges. For example, even though current access to emergency stockpiles that is granted to non-Gavi countries is essentially outside the remit of MOU8, the situation with Brazil accessing the YF stockpiles has caused some particular challenges with Brazil’s reimbursement for the vaccines.

Demand forecasting in general is complex and has become more and more complex due to the new antigens and increased emergency outbreaks. There are multiple examples in which the forecast and procurement were very different (HPV, YF, OCV, meningitis, etc). In its 2017 annual report [6], UNICEF SD elaborates on how it attempts to deal with these situations: it is actively involved in the different taskforces (e.g. EYE Strategy, GTFCC OCV working group) and works with different partners to improve forecast accuracy. In addition, UNICEF SD assesses the risk in the supply market of awarding for quantities when countries have not yet confirmed their plans (i.e. for OCV). The risk of high award levels may lead to potential overproduction without buyers other than UNICEF and can result in financial loss for suppliers. As such UNICEF has made decisions in the past not to award the full amount as requested by the GTFCC for 2017 in 2017.

The increased number of outbreak responses also represents additional logistic challenges. The 2017 example of Yemen is noteworthy in this regard [6]. In the last quarter during a three-week blockage by Saudi Arabia of aid-assistance to Yemen, a charter flight, which had included Pneumococcal Conjugate Vaccine (PCV), Penta and Measles-Rubella vaccines on board and waited at Nairobi airport, was initially denied permission to enter the airspace by the Saudi Coalition. To get permission for delivering the vaccines, engagement of the highest level from UNICEF, UN and other authorities was required. Eventually UNICEF vaccines were the first to arrive in Yemen after lifting of the blockage. In the same year, an order was placed for a cholera outbreak response with the approval from the country. Once the shipment arrived in Djibouti to transit to Yemen, the Government of Yemen rejected the vaccine. Fortunately, the Cholera partnership managed under a highly coordinated and short timeline to re-schedule the vaccine destination to South Sudan, for an immediate campaign in Juba.

The FER has also added to the level of complexity of the UNICEF SD portfolio in the sense that the FER also applies to non-Gavi countries (as is the case with outbreak responses from the stockpiles), but also to more antigens than initially covered under the MOU [40].

According to UNICEF SD the FER has created particular implementation challenges for UNICEF SD. As such, there is a co-financing requirement for the FER policy, and if countries are not able to pay, funds may need to be sourced from other partners whereby UNICEF is considered the default partner for funding this part [41]. The co-financing under the FER policy part has to be administered separately, which is an administrative challenge. Up to the end of 2018, five countries benefited from the FER policy (Bangladesh, Yemen, Tanzania, Rwanda and Uganda) with a total number of 21 individual approvals (Decision Letters and/or Authorisation Schedules).

Other "regular" logistics challenges are related to long pre-inspection processes and green light requirement by certain governments before the manufacturer can deliver the vaccines to the freight forwarder [6]. Mozambique and Myanmar are examples of the countries where this leads often to delays and additional efforts by UNICEF SD, although these challenges have not increased or become more complex, and UNICEF SD has a track record of dealing with them.

UNICEF SD also notes an increase in the workload for preventive campaigns whereby country applications and Gavi approvals are often delayed while the campaign dates remain the same. While the reasons for the delays are not always under Gavi Secretariat's control, it entails important risks for programme outcomes. It furthermore results in considerable pressure on delivery times and consequently additional risks that are often assumed by manufacturers, which may eventually lead to an increase in prices to cover for these risks.

Another element mentioned to have significant impact not only on the processes of UNICEF SD, but also for Gavi and the industry are large countries with audit issues, which was the case for Nigeria. It was forced to postpone a campaign for meningococcal A vaccine, which represented 74% of all the demand and had substantial implications on the market.

While the complexity of UNICEF SD's portfolio has evolved during the last years, with new vaccine introductions, more countries transitioning from Gavi support, increased number of fragilities, emergencies and outbreak responses, in addition to regular market dynamics with manufacturers entering and exiting the market, and manufacturers experiencing supply constraints, UNICEF SD has a track record in dealing with these issues. UNICEF SD does note an increase in the workload for preventive campaigns whereby country applications and Gavi approvals are often delayed while the campaign dates remain the same.

3.1.7 CCEOP

3.1.7.1 Introduction

Gavi spends more than US$ 1 billion on vaccines every year and those volumes are still expected to increase. In 2015, a supply chain strategy was developed by Alliance partners, including WHO, UNICEF and BMGF with input from Gavi-supported countries [26]. It covers the supply chain from end to end, focusing particularly on the country level. Common challenges that were identified included old and outdated cold chain equipment and a lack of reliable data to facilitate improvement plans. The CCEOP project was established in recognition that functional cold chain equipment (CCE) is a critical precondition to safeguarding the massive increases in the value and quantity of vaccines. CCEOP was approved by the Gavi Board in June 2015 and Gavi has committed US$ 250 million for a five-year period to jointly invest with countries to purchase and install equipment that meets CCEOP platform technology requirements.

In addition, the CCEOP project includes several innovations both in terms of introduction of new equipment and in terms of introduction of a service bundle, ensuring that the equipment is effectively installed once it arrives in the countries. It also includes a specific Market Shaping component to improve availability of performing CCE and reduce prices, and ensure long term market health and competitiveness in accordance with the Alliance's Healthy Market Framework. The CCEOP project not only covers the procurement of equipment, but it also includes installation, commissioning and training at the service delivery point, and the warranty is safe guarded, which is an innovative approach to ensure that functional CCE is effectively available at health centres in often complex contexts.

UNICEF SD is Gavi's procurement agency for the CCE [42]. UNICEF SD had a track record in procuring CCE prior to the start of CCEOP, yet the CCEOP introduced a new challenge: "going the last mile" with the operationalisation of the "service bundle". A decision was made to integrate the CCEOP project into the MOU8 even though the products (including the planning/forecasting, delivery, installation, commissioning and related services) are not comparable to the regular vaccines and devices procurement, and are characterised by different in-country complexities. Gavi Secretariat considers January 2016 as the start of the project with the opening of the country portal to receive country applications. In March 2016 the MOU8 was signed and the first country application was reviewed by the IRC. Given the innovative aspects and the complex country-level context, it took more than one year to define the operational processes between the involved Alliance partners. From a procurement point of view, the project became fully operational by September 2017, which is considered the starting point of the project for UNICEF SD. With the approved Gavi funding envelope of 250 million US$ for a five-year period, and considering that 55 countries are eligible for support (56 as of 2019), a target was established for 65,000 units of CCE to be procured by the end of 2020.

The figure 1 below includes the full process from country applications up to deployment of CCE as it was designed at the onset of the project.

Figure 1 - Initial design of the CCEOP process



Source: CCEOP Industry Consultation presentation October 2018

The application, review and approval processes (steps 1-3) are in principle taking place between the country and the Gavi Secretariat, with UNICEF Country Offices (COs) and other partners providing additional support to countries during this process. The development of the Operational Deployment Plan (ODP) (step 4) is a country-owned process, but also supported by country-based partners, including UNICEF COs, and currently by UNICEF SD's Rolling Consultants (see below). Once UNICEF SD approves the ODP, it issues RFPs and evaluates manufacturer offers based upon the Costed Operational Plans (COPs) which are developed by UNICEF SD. Once the COP is approved at country level and by Gavi (step 5), the transfer of funds takes place (step 6). This includes UNICEF SD receiving funds from the CCEOP grants directly from Gavi, and from the country's co-investment part. After the transfer of funds is completed, UNICEF SD can issue purchase orders (step 7) which will allow manufacturers to proceed with the production and subsequent deployment (subject to country readiness) and start the procurement process. Additionally, depending on particular agreements, UNICEF COs support customs clearance and deployment of the equipment.

3.1.7.2 Implementation – previous and ongoing studies

Funded by BMGF, UNICEF SD contracted McKinsey consultants with a view to proactively identify and address initial implementation issues to meet the different CCEOP procurement objectives. McKinsey assisted UNICEF SD from November 2017, soon after the start of the project, up to February 2018 with an operational analysis [45], which provided insight in some initial successes:

- Driving 14 countries through a full tender process
- Leveraging increased CCEOP volume to decrease global LTA devices prices by 3.5%
- Negotiating the prices of service bundles down by as much as 20% in some countries
- Improving price transparency through publication of latest device prices
- Developing a tender approach that meets the needs of CCEOP while complying with public procurement rules

The analysis also pointed out some important challenges:

- A limited supplier landscape in number and diversity
- Cost reductions not meeting the targets
- Need to improve information flows
- Room for improvement of the process efficiency

Suggestions to address these challenges included:

- Redesigning the tendering strategy
- Streamlining tender execution
- Exploring market-side solutions

While UNICEF SD worked with McKinsey to address initial implementation issues, Gavi commissioned JSI in early 2018 to conduct a prospective evaluation to investigate changes over time in developmental processes, responses to the CCEOP interventions, and other trends affecting CCEOP implementation at both the global (market shaping) and country level (Guinea, Kenya and Pakistan). The evaluation will continue until 2020 and will assess the relevance, effectiveness, efficiency, outcomes and sustainability of the CCEOP investments. The market shaping component of the evaluation will focus on the global level CCE market shaping activities and results. The country evaluations will focus on activities and results during Phase 1 (initial support) over two years. They include (i) a baseline assessment conducted before the CCEOP distribution of equipment, (ii) a midline assessment after approximately the first year of implementation, and (iii) an end line evaluation that will assess the results to inform the next phase of CCEOP support.

Some relevant findings from the baseline assessment [43] include:

- The funding mechanism was found to respond well to country needs, and there was an alignment of resources for CCEOP between donors and partners (in Pakistan). The planning process was transparent at the national level, however in Kenya this did not extend to the county level and while this was well done down to the sub provincial level in Pakistan, district voices may not always have been heard. It was noted by some that the CCEOP application process was a lengthy and complex process.

- Information on the total cost of equipment and equipment warranties was often unclear during the equipment selection process. In addition, the roles and responsibilities of the Service Bundle Providers (SBPs) are not understood well at the sub national level and below. Among health care workers knowledge is low about how to properly read and record temperature data generated by Fridge Tags (Kenya), and according to facility managers in Pakistan, how to use the monitoring device installed with the Ice-Lined Refrigerators (ILR).
- Although CCEOP has not been fully operationalised in the countries, stakeholders anticipate several positive outcomes. Study respondents expect the new CCE to contribute to improving the overall efficiency of the system including maintaining sufficient vaccine stocks, reducing the need for preventive and corrective maintenance of equipment, and eventually improving immunisation coverage. Subsequent data collections will attempt to examine these anticipated effects as well as provide more information on sustainability of the CCEOP.

JSI's market shaping report (July 2018) [44] highlighted the following findings:

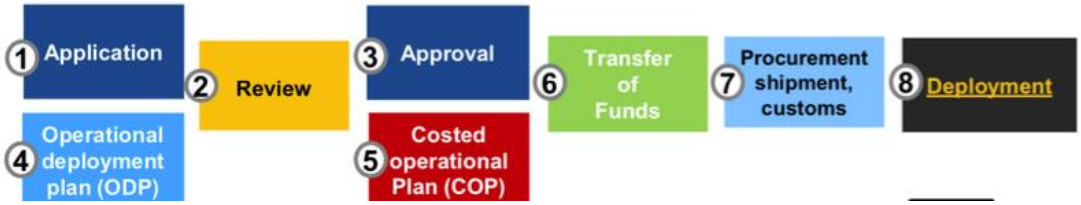
- CCEOP has significantly increased attention to the CCE market - generating high levels of country awareness of and demand for better technology from countries and rapid market response from CCE suppliers.
- Despite early achievements on product innovation and availability, progress towards price reduction targets has been less rapid. While CCE prices have decreased by 3.5% overall since the launch of CCEOP, decreases have not been consistent across all suppliers.
- Early outcomes have also revealed barriers to entry for newer suppliers who are trying to gain a foothold in a market that has historically been dominated by two manufacturers.
- Information flow and transparency among partners, countries and manufacturers have improved under CCEOP.
- With market shaping activities, it typically takes several years, if not longer, before effects on the market are fully understood. For an undertaking of the size and scope of CCEOP, it is expected that early experience and learning will lead to course correction and programmatic adjustments.

3.1.7.3 Implementation - challenges and course corrections

In addition to the challenges identified by both studies, the timeframe to achieve final deployment represented, and still represents, an important implementation challenge. Stakeholders involved in the project (including Alliance partners like CHAI, PATH and the industry) acknowledge the complexity of the project, with multiple stakeholders involved in the implementation, some tensions between project objectives, as well as the willingness of the implementers to course correct along the way. Inherent tensions in the objectives of the project exist primarily due to the need for a rapid implementation (immediate results) while at the same time aiming at price reductions. Consequently, price negotiations have led to implementation delays. Similarly, the objective to create healthy markets by increasing the number of suppliers and thereby generating competition, was constrained by the current or historic country preferences at the application and approval phases for the traditional suppliers of CCE, which has led to delays when providing options (as part of the COP process) at country level for selection of alternative suppliers. From interviews with key informants both at Gavi Secretariat and at UNICEF SD, it was confirmed that the majority of these challenges were well understood and addressed over time.

The "Tripartite Group" consisting of UNICEF SD, Gavi Secretariat and other partners, estimated the delays related to price negotiations and to the marking shaping efforts represent approximately seven to eight weeks [52]. These challenges continue to be addressed, although these tensions in the objectives of the project continue to affect the implementation timelines. The majority of the recommendations from the previous evaluations have already been implemented. As such, alterations have been made to the country application process and to the UNICEF SD tendering process. After an accelerated process flow that was approved by senior management of Gavi and UNICEF SD in August 2017, as demonstrated in the figure below, the estimated time from approval by the Independent Review Committee (IRC) up to customs clearance was targeted to be reduced from approximately the 20 months initially foreseen when the project was designed, to about seven months. As of the beginning of 2019 Gavi and UNICEF SD agreed on a new KPI, setting the target time from RFP issuance to deployment at nine months.

Figure 2 - CCEOP estimated timeline after accelerated process approved by Senior Management in August 2017



Source: CCEOP Industry Consultation presentation October 2018

Frequent consultations were held between the involved stakeholders, including with partners like CHAI, PATH and the industry, to discuss and propose solutions to the challenges. An analysis performed through the "CCEOP Milestones Tracker" in October 2018 [51], which is being updated on a weekly basis by UNICEF SD and subsequently shared with Gavi Secretariat and other partners, demonstrated that the time between IRC approval and the final ODP was 11 months. The total time between IRC approval and first deployment was still more than 21 months. There is a collective acknowledgement among key implementers at both agencies that the country level ODP process represents a key driver of the delays (see below). At the end of 2017, UNICEF SD introduced the "rolling consultant" concept to support acceleration in ODPs. Other solutions that are currently being considered include:

- Reforming the procurement approach with partial use of service bundle LTAs, presenting countries with options for the service bundle (e.g. delinking of the service bundle); and
- Introducing a third-party logistics provider model for deployment.

Against a target of POs placed for 65,000 CCEs for the full five years, the following achievements of the CCEOP project were noted:

- 30% of the PO target has been reached to date (POs placed for 20,124 units of CCE, including 11,629 placed in 2017 and 8,495 placed in 2018); at the same level of activity as in 2018 the estimated number of PO at the end of the five years will be 79%. If the 2018 output level can be reversed to the 2017 level of activity, the estimated number of POs will be more than 100% at the end of the contract. However, lower output levels at the start of a new process (e.g. from 2018 onwards, after discontinuing the fast-track procedure) is a common finding. Barring unforeseen events and considering that acceleration of the process should materialise in 2019 and 2020, it can reasonably be expected that the target can be reached by the end of the contract. This will however require an increased output level of POs placed for about 1,000 units per month or 3,000 units per quarter in the remaining period, compared to 708 units per month or 2124 units per quarter in 2018. The

Evaluation Team cannot assess whether such a higher throughput is feasible and acknowledges that PO placement has been irregular in the past [51], but has not analysed the reasons why.

- Of the total 55 eligible countries (between 2016-2018), 43 countries applied, and 41 of them have their application approved as of November 2018. The procurement process has been initiated for 36 countries, POs placed for 25 of those 36, and 13 countries (20%) have received the CCE in-country.
- More than 17, 000 units have been delivered in-country and more than 11,000 units installed.
- To date, $76M CCEOP Gavi investment and $29M CCEOP country joint investment has been disbursed to UNICEF SD (about 30% of the total Gavi budget).
- Increased CCEOP-eligible products from two to 22 and increased suppliers from two to about eight by 2018.

While progress has been made and recommendations are being implemented, the current average time between the approval of the application and the first deployment is still 21 months (in which the ODP development process represents on average 11 months). According to both Gavi and UNICEF SD, this is largely due to the time-consuming process of getting the ODP in place and approved. Despite the support provided by UNICEF COs and the rolling consultants, and the fact that by the end of 2018 the backlog of ODPs was cleared, the ODP / COP continues to represent the most important source of delay. UNICEF SD recognises that the processes for engaging countries in multiple subsequent ODP phases does require further guidance. Underlying drivers for the delay in getting ODPs approved include the fact that neither the IRC nor WHO considers the quality of the ODP when the country CCEOP applications are evaluated. Furthermore, UNICEF SD needs a sufficient quality ODP to start issuing RFPs to suppliers and depends largely on the countries since these are ultimately responsible for the ODP process. Indeed, the country is supposed to clearly define which products should be distributed to which exact geographic location. To reduce the implementation delays after the application approval, it was agreed to have minimum quality requirements in place for ODPs as a mandatory part of the application from 1 January 2018. While the expectation was that the processing time after approval would be reduced, it actually delayed the number of new applications in 2018, which have only materialised at the end of the year due to the time it has taken the countries to develop the ODPs. Gavi Secretariat is of the opinion that support provided by UNICEF COs varies from country to country and that in general the TCA funds would allow UNICEF COs to take a more proactive approach in supporting the country during the development of its ODP. Since this is not covered by the MOU8 and as such not in scope for this evaluation, it was not further explored.

Recognising the important drivers of delays prior to getting the ODPs in place, and considering that UNICEF SD can start the procurement process only once the ODPs are received and approved, the involved Alliance partners further re-assessed the timelines for the procurement process with the objective to determine areas for improvement once the procurement process had been initiated. The following table summarises the timelines during the fast-track expedited period compared to current timelines:

Table 7 - Analysis of CCEOP timelines: RFP issuance to PO placement

Process step	Expedited timelines in Q4 2017	Current constraint timelines (as of Q4 2018)
RFP response time	3 weeks	6 weeks
Tender evaluation & COP development	3-4 week	6-9 weeks
COP review & country/Gavi concurrence	1-2 week	3-5 weeks
Funds transfer	1-4 weeks	6-8 weeks
PO placement	1 week	1 week
Total timeline in weeks	9-14 weeks	21-29 weeks

Source: UNICEF SD CCEOP Industry Consultation Presentation – October 2018

In addition to the time required for the ODPs, UNICEF SD is faced with increasing tender timelines caused to a large extent by the agreed market shaping efforts to stimulate countries to opt for higher-ranking equipment in addition to the time needed for comprehensive benchmarking of pricing to reduce the prices of service bundles. As per request from manufacturers, they are also provided with more time to respond to RFPs. Although it is presented in one row in the table above, there are different timelines for review and concurrence of the COP by Gavi and by the countries. Similarly, the additional time required to transfer the funds is largely due to the delays experienced in receiving the country co-investment share of the funds.

Even though the "Tripartite Group" has recently proposed process adjustments to bring the timeline from RFP response time to PO placement down from 21-29 weeks to 20-23 weeks [52], these delays including the time required for the ODPs have raised concerns from Gavi Secretariat's perspective about the overall capacity of UNICEF SD to implement the CCEOP project. However, from UNICEF SD's perspective, much of the pain points generating this concern are derived from the adequacy of the ODP process, which is not an accountability of UNICEF SD. It points at the characteristics of a multi-partner initiative whereby multiple stakeholders, including the countries, have responsibilities in different stages of the process. For example, it takes often a considerable amount of time to get the COP finalised because governments need to sign off on them and do not always agree with the proposed options. These ODP-related challenges are currently being addressed by UNICEF SD deploying rolling consultants and through Targeted Country Assistance (TCA) provided by Gavi in the context of its Partners' Engagement Framework (PEF) whereby UNICEF COs receive funds for technical assistance.

So far, the numbers on PO placement has been an important indicator to measure performance. An analysis of the numbers on PO placement, with 11,629 placed in 2017 and 8,495 placed in 2018, suggests that the level of output decreased considerably. According to UNICEF SD however, 2017 was a fast-tracked expedited period, and in 2018 manufacturers requested more time to respond to RFPs as highlighted above. Moreover, additional time was needed for negotiations with manufacturers using the benchmarks, and more manufacturers submitted bids, which entailed a longer time to evaluate bids. Another important reason put forward by UNICEF SD is the fact that a considerable number of country tenders implemented in 2018 were low volume compared with high throughput countries that were expedited in 2017 (DRC1, Pakistan and Kenya) [51] while some of the other high throughput countries (Pakistan II, Nigeria and Ethiopia) were delayed at country level. UNICEF SD considers the project to be on track with POs in place for about 1/3 of the total foreseen POs placed in approximately 1/3 of the project time based on a start date of September 2017. Gavi Secretariat's view on progress made in this regard differs from UNICEF SD. Considering that by the end of 2018, 30% of the POs had been placed and considering that

the CCEOP project started in January 2016 the project is not considered on track. Even when a start date of January 2017 is considered[5], the project is not yet fully on track. The evaluation team acknowledges the importance of the PO placement indicator, but the broader context of the CCEOP (e.g. total tender timeline, government approval and government release of funds, in-country deployment and installation, etc.) should also be considered.

UNICEF SD recognises that the handover of tasks and responsibilities to country level (UNICEF COs and government partners) depends largely on the readiness, skills and willingness of the country counterparts to take on the tasks. This differs across countries and is part of the reason why the rolling consultant concept was introduced, and according to UNICEF SD it is beyond its original accountabilities. It is also partly addressed through the TCA provided by whereby UNICEF COs receive funds for technical assistance. Overall, UNICEF SD noted that substantial project management skills are required due to the complexity of the project, including interactions with governments; and confirmed that these skills have been included in some job descriptions.

The evaluation team notes that at the different levels (e.g. operational, management, senior management) of both agencies there are differences in perceptions of the achievements so far. According to one informant, concerns were also raised by the industry at the Board level about delays and challenges for new suppliers entering the market. The absence of an agreed results monitoring framework, including high-level result indicators leaves in fact room for varying interpretations of the current status of the project. However, despite the challenges and the delays, informants at both agencies expressed their overall satisfaction with the current results of the project, and consider the weekly update calls as very efficient and appreciate the presence of CHAI in those discussions. The efforts made by both Gavi and UNICEF SD to introduce timely course corrections based on professional advice provided by external advisers (e.g. Mc Kinsey and JSI) is commendable.

3.1.7.4 Suitability of the MOU8

The majority of the informants interviewed believe it was a suitable option to use the MOU8 as a basis for the CCEOP rather than developing/negotiating a new MOU specifically for CCEOP.

The project is still in its early phases, and, understandably, both organisations still learn by doing, leading to course corrections during implementation. Many lessons learnt are being drawn from the initial fast-tracked implementation during the start of the project.

UNICEF SD is of the opinion that copying the Authorisation process from the vaccine MOU may not have produced the intended results, and at hindsight, the design could have better matched the specific characteristics of the CCEOP projects (e.g. end-to-end processing, requirements to have the ODP in place before enacting procurement, etc.). Recognising the challenges this may represent for Gavi, efficiency gains could potentially also be achieved when multiple ODP implementation phases would be consolidated per year, rather than addressing them sequentially.

UNICEF SD adheres to the reporting requirement under the MOU8 in terms of timeliness and completeness [54, 55, 56]. The sample analysed by the evaluation team confirms that the six-monthly report includes an overview per quarter and per country of the planned deliveries and installations, compared with the actual deliveries and installations. UNICEF SD acknowledges that Gavi does not require too detailed reporting on the CCEOP project.

[5] Publicly available Gavi documents on CCEOP refer to the time period 2017-2021 for the project

The only reporting requirement which is subject for discussion is the 80:20 split or the 50:50 split (Gavi CCEOP funding versus country co-investment) that Gavi requires. According to UNICEF SD this request doubles the administrative workload.

While some KPIs are currently being reported on in the six-monthly reports, a set of specific KPIs are presently being put in place for consistent monitoring [57]. In fact, there is a mutual acknowledgement that since the inception of the CCEOP project, many of the initial assumptions on timeline, process and structure have been challenged. The proposed new set of KPIs sufficiently cover the current challenges of the programme, although they are mainly process-oriented, and no clear targets were set yet.

The limited level of country ownership was also referred to several times. In the majority of the cases the country co-investment part is coming from the Gavi Health System Strengthening (HSS) grants. Gavi informants explained that these countries had already planned to apply HSS funding for the procurement of CCE without CCEOP being in place. CCEOP therefore provides countries with an opportunity to procure more CCE than initially foreseen through the HSS grants. Even though this is more related to the design of the project, some attention will be paid to the sustainability aspect of the project (see also **3.1.7.5 VfM** below).

The evaluation team is of the opinion that the structure and the design of MOU8 provided a solid basis to integrate the CCEOP project into an Annex of MOU8. The characteristics of the CCEOP project, with initial assumptions and processes being challenged by reality, justify provisions in the Annex of the MOU8 to update and/or modify the reporting requirements, procedures and other technical or operational aspects, as and when required. As such, KPIs including targets and frequency of monitoring would ideally be part of the Annex.

3.1.7.5 Value for Money

Reference is made to Annex 1, in which the evaluation team provides a background to the VfM approach, and how it could be applied to the MOU8 or to future MOUs. The VfM approach proposed by the evaluation team was adopted from the DFID recommendations on VfM assessment of the results chain [58]. The principles of VfM are drawn from the need to optimise the impact or the value-added of a dollar ($) spent in a given project or programme. The central notion in the adopted VfM analysis is to assess if the goods and services deployed yield maximum benefits. UNICEF SD and Gavi do not track VfM indicators under the MOU. Available information and reports are not structured in a way that allows for a VfM analysis. The evaluation team has framed the following VfM analysis on its understanding of the MOU8 and on available data.

The DFID/World Bank framework uses the four E's approach, including Economy, Efficiency, Effectiveness and Equity. The evaluation team added Sustainability as a fifth dimension.

VfM Economy Indicator Analysis

UNICEF SD fees were $1.60m in 2016, after UNICEF SD returned $0.8m of the initially agreed $2.4m. The reimbursement was triggered by an acceptance that the project was behind schedule and that allocated fees in supporting the project were not fully spent. In 2017, the fees charged were $2.4m but after revision they increased to $3.6m because of an increased number of countries. The Gavi Board approved the fees in November 2017 [59].

The fees were further increased from $3.6m to $4.3m in 2018 and based on the operational forecast and information received from Gavi, UNICEF SD estimated in September 2018 that the projected increase in activities resulted in an indicative fee of $5.5m for 2019 and $4.5m in 2020 [59, 62]. UNICEF SD proposed to maintain the fee at $4.3m for 2019 and 2020, although the latest projections (June 2018) suggest a continued increase of workload or complexities (as captured by the current Fee Trigger Model) up to 2019 or 2020 (see further).

Table 8 - UNICEF SD CCEOP fees

Description	2016, $m	2017, $m	2018, $m
CCEOP Fees	$ 1.60	$ 3.60	$ 4.30

Source: UNICEF SD

The above annual fees represent 7.7% in 2017 and 7.9% in 2018, which is within the range of what UNICEF SD usually charges for its procurement services (3-8.5%). It is in fact at the upper end of the regular fees, which is in line with the regular fees UNICEF SD charges for the procurement of CCE. Indeed, in addition to the Gavi procurement fee, UNICEF SD also charges its standard 8 to 8.5% procurement fee to the 20% or 50% co-investment part that is funded by the governments (using HSS funds or other funding). It should be noted that, unlike UNICEF's standard procurement fee, the percentage of CCEOP fee also includes the service component, as well as the development of the COPs and other procurement activities that are not components of the standard procurement service fees for CCE.

The Fee Trigger Model was jointly developed at the onset of the CCEOP project without a full understanding yet of the critical lessons that were learnt as the project became more mature. It is a mutually agreed tool used to trigger a discussion on fees paid to UNICEF SD in case of a deviation of more than 10%. The primary constructs of what drives the decisions to increase or decrease the fee are based on key drivers of workload (e.g. number of Costed Operational Plans, number of suppliers, number of IRC recommended countries for approval, number of projects, number of shipments, number of PO lines for services and funds requested). The evaluation team reviewed these drivers (see below). Both organisations agreed through KIIs that these drivers reflect the reality in terms of complexities associated with the CCEOP project, and corresponding level of effort to implement it. Based on recommendations from an external consultancy firm, the weight for the strategic drivers was established at 60% and the weight for transactional drivers was set at 40%, with identical relative weight of each driver within those two categories. Any deviations are agreed during 'True ups' re-run of the model at the end of the year [60, 61].

Upon a request for additional clarifications on the Fee Trigger Model, however, UNICEF SD stated that the earlier defined drivers did reflect key structural elements of the CCEOP complexity, but the implementation experiences have now added to an improved understanding of the complexity and its implications. The Fee Trigger Model did not anticipate the multiple ODP rounds that are partly caused by Gavi cash flow requirements. Furthermore, UNICEF SD highlights that active engagement in market shaping activities, and testing and evaluation of de-bundling activities have added substantially to the workload.

Despite this mechanistic way of triggering a discussion on the fees, Gavi Secretariat has expressed concerns in terms of sufficiency of capacity bought by the fees, and this has raised questions of the number of FTE within UNICEF SD to deliver the CCEOP project. The evaluation team has no insight as to how the fees mirror the existing FTE staff in UNICEF for CCEOP. A dialogue between the two agencies may be warranted to further understand and agree to which extent the current fees cover the level of effort.

Table 9 - Fee Trigger Model CCEOP projections 2017-2021

Fee Trigger Model Driver	2017	2018	2019	2020	2021
Strategic / Complexity Cost Drivers					
No. of Costed Operational Plans	11	24	41	34	25
No. of Suppliers and Products	60	93	211	180	127
No. of IRC recommended countries for Approval	19	16	5	0	0
Transactional Cost Drivers					
No. of projects	12	36	65	69	59
No. of Shipments	7	103	103	88	71
No. of PO lines for Services	42	128	121	102	84
Funds Requested (CTNs in USD Millions)	$41.8	$49.9	$51.5	$44.2	$ 39.9

Source: CEOP Trigger Model –v3.4 (2019)

The figures provided by UNICEF in table 9 are updated projections as of June 2018 and agreed with Gavi. They differ significantly from earlier projections (version 2.3, 2018), which suggested a reduction of workload and complexity as from 2019 onwards. A review of the above projections suggest that the workload or complexities captured by both strategic and transactional drivers will continue to increase over the project timeline up to 2019 (or 2020 for the number of projects) and start reducing in 2020 (or 2021 for the number of projects). The only exception is the cost driver "Number of IRC recommended countries for Approval", which reduces to zero as of 2020 onwards. Even though UNICEF SD proposed that the fee would be maintained at $4.3m, the calculated fees from the Fee Trigger Model show higher fees for the period 2018-2020 ($4.8m, $5.5m and $4.5m respectively) compared to 2017 ($4.3m) [59, 62]. However, these calculations were made on earlier projections and may need to be updated based on the latest agreed projections (version 3.4). Based on those trends, and unless the Fee Trigger Model is being adjusted to capture additional complexities, the evaluation team agrees that the relative weight of all drivers should remain the same over the project period, with the exception of the weight for the IRC recommended countries driver. Consequently, the two remaining strategic drivers will receive a higher relative weight unless the 40/60% split is being changed. Additional complexities discussed before that are not captured in the current Fee Trigger Model include a) multiple ODP rounds as a consequence of Gavi cash flow constraints, b) Market Shaping mobilization following country preferences for specific manufacturers, and c) testing and documentation of service bundle delinking, etc.

Another aspect to consider under the economy indicators is the price of CCEs and service bundle contracts. The project has however not evolved sufficiently to conduct a trend analysis. Based on UNICEF SD reports [47, 48, 49, 50], the evaluation team has reviewed a selected number of prices for CCEs for 2017 and estimated the below weighted average prices as benchmarks for future analysis. The previous study done by McKinsey [46] proposed a projected price reduction of 10-20%. This should be analysed at the end of the project when the project has sufficiently matured since equipment is bought against Long-Term Agreements (LTAs). Both Gavi and UNICEF SD have collectively considered several strategies to reduce prices, including order pooling to maximise on discounts. The evaluation team recognises the challenges inherent to the market shaping objectives of the CCEOP project when pooling orders, but believes it is important to introduce this pooling, and review the results of it once the project ends. Gavi confirmed that inter-agency discussions are expected soon on mechanisms to help achieve price reductions.

Table 10 - CCEOP Equipment value, estimated by the evaluation team

Description of Equipment	2017
On-grid/ILR refrigerators (without freezer comp)	$ 1,002.00
On-grid/SDD refrigerators (with freezer comp)	$ 3,578.00
Temperature Monitoring Devices (30DTR)	$ 27.00
Voltage Regulators	$ 79.00

Source: UNICEF SD CCEOP report 2017

The previous studies highlighted that the prices of service bundle contracts varied significantly. A benchmarking tool for service bundle contracts was developed with support of McKinsey. The proposed benchmarks include ILR: $400-$1,350 and SDD: $650-$2,150. It is reported that the actual service bundle costs are for the large majority within this range except for some outliers such as South Sudan and the Solomon Islands. There are reported instances where service bundles have been renegotiated downwards after the country considered them to be too high (e.g. Tanzania). UNICEF SD continues to refine the benchmark model, and the proposed country archetype model based on true cost drivers. The outcome of this would need to be reviewed after implementation of the models.

VfM Efficiency Indicator Analysis

Against the back drop of fast-tracked phase in CCEOP implementation in 2017, the previous studies identified a number of project processes that were deemed inefficient, for which some limited evidence is provided below. The table below demonstrates that there is no sufficient data to make a meaningful quantitative analysis of efficiency at this stage.

Table 11 - CCEOP VfM proposed Efficiency indicators

	Efficiency Indicator	Baseline/ expedited target	Current Timelines (2018)
1	Time taken from IRC approval to a final ODP approval		11 months
2	Time taken (days) from Gavi ODP approval to PO issuance	9-14 weeks	21-29 weeks
3	Total fees paid for a particular year as a proportion of the value of CCE delivered for that year	-	-
4	Delays (in days) to get final Authorisation Schedule to UNICEF SD	-	-
5	Number of manufacturers with PQS certified products for CCEs	2	8
6	Proportional distribution of CCEs per supplier each year	-	-
7	Cumulative percentage of CCEs with PO issued each year	-	33%
8	Percentage CCEs deployed and installed each year	-	18%
9	RFP to Arrival turn-around time benchmark analysis	9 months	10 months
10	Decision Letter turn-around time benchmark analysis	1 month	-
11	Gavi funding release turnaround time analysis	1 month	-
12	Proportion of service bundle contracts below the benchmark	-	-
13	Number of service bundles negotiated to benchmarks (or lower)	-	-
14	Total potential savings achieved with each negotiation	-	-

Source: data collected from different sources

Except for indicator 1, 8, 9 and 13, all the indicators are new and have not been routinely reported on because they are not yet agreed upon. Because a full-fledged evaluation of the CCEOP project was not foreseen under this current evaluation, only a limited analysis was possible mainly because of lack of available data. Data available provided the following insight in the CCEOP implementation:

- On average it takes 11 months for the countries to complete a quality ODP (taking into consideration that ODP development was new to countries and the expectation is that subsequent ODPs will be developed and approved faster), the rationale for multiple ODP rounds may be revisited in the future with reflection on process simplification and volume savings;
- It takes one month for UNICEF SD to issue the RFP once the ODP has been confirmed, including for development of country-specific terms of reference;
- UNICEF SD runs country specific RfP and Terms of Reference development process in parallel at the end of the ODP finalisation process;
- It takes an average of 21 months from IRC approval to first deployment;
- It takes an average of 10 months from final ODP to first deployment (previous target seven months; recently agreed target nine months) and,
- It takes an average of five months to complete process from RFP issuance to PO placement.

UNICEF SD has negotiated the service bundle contracts against the results of the benchmarking tool. It is reported that the majority (75%) of the service bundle offers are within benchmarks. There is no detailed analysis on the potential savings from the negotiations, though UNICEF SD estimates this to be around 10-15% on average.

In 2018 UNICEF SD summarised the timeline constraints as was shown in Table 7, and proposed optimal timelines as per the last column in the following table:

Table 12 - Analysis of CCEOP timelines

N	Process step	Expedited timelines in Q4 2017	Current constraint timelines	Optimised timelines *(expected)
1	RFP response time	3 weeks	6 weeks	6 weeks
2	Tender evaluation & COP development	3-4 week	6-9 weeks	5-6 weeks
3	COP review & country/Gavi concurrence	1-2 week	3-5 weeks	3-4 weeks
4	Funds transfer	1-4 weeks	6-8 weeks	5-6 weeks
5	PO placement	1 week	1 week	1 week
	Total	9-14 weeks	21-29 weeks	20-23 weeks

Source: UNICEF SD CCEOP Industry Consultation Presentation – October 2018

The VfM efficiency drawn from this evidence [63] demonstrates some delays in some processes, especially compared against the fast-tracked phase. Several reasons for the delays were referred to earlier in this report. The optimal proposed targets compared to the current timelines suggest that there is still room for improvement. What is missing in both the above list of VfM indicators and UNICEF industry consultation summary, are agreed targets with which the performance can meaningfully be evaluated.

VfM Effectiveness and Cost-Effectiveness indicator analysis

The lack of a programme results framework makes it difficult to assess the broader effectiveness of the CCEOP project implementation under the MOU. The evaluation team is of the opinion that suitable outcome/impact measures would need to be developed for the CCEOP project. An example could be the potential savings made on procurement of equipment. These could be quantified, valued and compared to the level of investment made by Gavi; and be reviewed after full implementation has been achieved at country level.

VfM Equity and Sustainability indicator analysis

While within the design of the project attention was paid to supporting equity by targeting hard to reach areas (geographically), there are no indicators attached to this component to measure it in a meaningful way. As such it is difficult to assess equity in access to resources or equity in benefits from services provided. The sustainability aspect of the CCEOP project could however be reviewed. It appears that the majority of countries (except Viet Nam (national budget) and the Democratic Republic of Congo and Pakistan (World Bank funding)) are applying the Gavi HSS grants for the share of their co-investment in CCEOP. Gavi informants explained that these countries had already planned to apply HSS funding for the procurement of CCE without CCEOP being in place. CCEOP therefore provides countries with an opportunity to procure more CCE than initially foreseen through the HSS grants. While the design of the project may have foreseen the use of HSS funds for the country co-investment, and countries are benefiting from savings, it still raises concerns about future sustainability of investments at country level in the absence of external funding. In addition, the HSS grants diverted to CCEOP also have an opportunity cost. Furthermore, consideration could be given to the ecological impact of the CCEOP project.

Preliminary appraisal of Value for Money

The CCEOP project is almost on track in terms of the number of POs placed (considering a procurement start date of September 2017). In that regard, the project's progress can be judged to be reasonable on a preliminary basis and under the current circumstances, considering the challenges it experienced during the start-up phase. The evaluation team is not in a position to state with confidence whether the project delivery is sufficiently capacitated because varying qualitative perceptions of this capacity exist at both organisations. Despite the fact that both Gavi Secretariat and UNICEF SD have shared information about the Fee Trigger Model, there is no shared understanding on how the fees mirror the level of effort.

The weights of the drivers require review in the next years as there is no clear evidence for the basis of current weights. While the latest update of the current triggers suggests increasing workload or complexity up to 2019 or 2020 (for five of the six triggers), and the current Fee Trigger Model does not include all complexities, UNICEF had proposed to maintain its 2018 fee. This raises question about both the structure and the usefulness of the Fee Trigger Model. If maintained, the current model requires careful review and annual assessment and/or update in order to gain confidence by all parties. However, the added value of the current Fee Trigger Model is not clear to the evaluation team and a simplified fee calculation based on level of effort may be considered.

An attempt has been made by the evaluation team to appraise the VfM as per the proposed framework. The absence of sufficient data, and the early phase of the project make a VfM assessment challenging at this point in time.

However, based on the available (limited) evidence, the evaluation team is of the opinion that there is still room for improving VfM (including for meeting the optimal target timelines), while acknowledging that major efforts have been invested collectively to make the CCEOP process operational in a difficult context. There are perceived delays in some circumstances, some of which are measured against targets that do not mirror actual reality on the ground (e.g. ODP development). A results framework with agreed baselines and targets would facilitate a more reliable appraisal of VfM.

Challenges in sustainability of the CCEOP project post Gavi funding are identified. Except for Viet Nam, none of the benefiting countries to date have used domestic funds for co-investments. As more cohorts come in, the need for vaccines remains. Yet there is almost no country ownership yet to ensure domestic funds are availed to support the cold-chain system.

Potential scope for a future evaluation would therefore include:

- Focus on clear results framework with targets and achievements
- Evaluation of broader impact of CCEOP, focusing on the savings or benefits of such an investment
- Evaluation of the sustainability aspects
- Assessment of the Market Shaping goals and the impact

The CCE0P project faced a challenging start-up. Both agencies have different views on the current progress of the project, mainly due to absence of an agreed results monitoring framework. The project's progress can be judged to be reasonable under the current circumstances and the challenges it experienced during the start-up phase. KPIs with realistic targets need to be institutionalised. The evaluation team is of the opinion that there is still room for improving VfM for the project, while acknowledging that a major effort has been invested to make the CCEOP process operational. The efforts made by both Gavi and UNICEF SD to introduce timely course corrections based on professional advice provided by external advisers (e.g. Mc Kinsey and JSI) are commendable.

3.2 Objective 2 – Effectiveness and efficiency as a result of the improvement initiatives

Evaluation objective two covers the evaluation of the effectiveness and efficiency of the changes made to the MOU as the result of the improvement initiatives identified during the previous evaluation to achieve expected outcomes.

In particular, this Section addresses the following main questions:

Evaluation questions – Objective 2
Evaluate the effectiveness & efficiency of the changes made to the MOU as the result of the improvement initiatives
2.1 To what extent have the improvement initiatives resulting from the 2013 BCG report been implemented by Gavi and UNICEF? (e.g., forecasting, authorisation and approvals process for vaccines and devices, KPIs)
2.2 To what extent have these improvement initiatives implemented by Gavi and UNICEF yielded expected results?
2.3 Have these improvements (new processes, etc.) achieved the intended goals of increasing efficiency and effectiveness?
2.4 What challenges still remain?
2.5 To what extent are the roadmaps and the Roadmap process led by Gavi to implement them efficient, developed in a timely manner, strategically linked and addressing key topics?

3.2.1 EFFECTIVENESS AND EFFICIENCY OF THE CHANGES MADE TO THE MOU AS THE RESULT OF THE IMPROVEMENT INITIATIVES

One of the two objectives of the BCG study carried out in 2013 was to identify and prioritise opportunities for improvement with recommendations for implementations. Based on the recommendations, working groups were established in 2014 to review the process and provide recommendations for improvement in the financial and operational performance aspects. The focus was on four joint initiatives, which included:

v. optimisation of the Authorisation process;
vi. simplification of the Authorisation process for devices;
vii. improvement of the reporting requirements; and
viii. the operational forecast.

The recommendations and proposed processes that came out of these working groups helped inform the design and content of the current MOU8.

3.2.1.1 Optimisation of the Authorisation process

The improvement initiative to optimise the authorisation process has been fully implemented. It has yielded expected results and has contributed to increased efficiency and effectiveness. It is however difficult to quantify the increased efficiencies, and challenges remain.

The objective of the improvement initiative was to optimise the process and timeline through which Gavi communicates on grants (including country co-financing requirements), and authorises UNICEF SD to plan for and procure vaccines [64, 67].

The principle of the improvement initiative is that:

- Gavi needs to ensure timely communication on grants and obligations directly to grantees.
- For UNICEF SD, vaccine dose approvals need to be communicated by the end of September for the subsequent year to support overall procurement and supply planning, including with vaccine manufacturers, and allow for timely shipment planning, funds request and order placement with each country.

Initial process

Prior to the implementation of the improvement initiative, Gavi would communicate approvals and modifications to approvals on allocated doses by a Decision Letter (DL) provided to the recipient countries, and UNICEF SD would receive a copy of those DLs within five days after they had been sent to the countries, in order for UNICEF SD to proceed with sending Gavi funding requests to issue purchase orders. The DLs were often issued too late by Gavi in order for UNICEF SD to start procurement in time.

Solution

It was agreed that even when a DL could not be fully finalised because of a lack of final approvals, countries would be notified through a Country Notification Letter (CNL) in September. The CNL would be indicative as the final quantities need to be authorised by the High Level Review Panel (HLRP), which usually takes place in October.

At the same time, it was agreed that UNICEF SD would receive the Authorisation Schedule (AS) by 30 September, which gathers all allocated doses for all countries, and serves as a financial commitment to purchase vaccines and devices for the following year as set out in the schedule and as a confirmation that the necessary funds are available. Gavi provides the CNLs to the relevant countries simultaneously with providing the AS to UNICEF SD, and UNICEF SD is copied when the CNL is sent to the countries. Gavi acknowledges that UNICEF SD will not begin procurement for any country until it has received a copy of the CNL sent to the relevant government. Since the CNL is not a legally binding document between Gavi and the countries, a DL is still required.

Conclusion

Informants at both agencies generally agree that the process improved considerably with the AS in place by the 30th of September and with CNLs sent to the countries [7,8,9]. The large majority of the country renewal applications runs relatively smoothly and with minor changes which are not considered as 'substantial' requiring a modification to the AS according to the MOU.[6] According to UNICEF SD informants, only a very limited number of requests suffer from discrepancies or missing information between the AS, the CNL and the DL (on average 15 programmes per year). There are however still issues with timely availability of AS, CNLs and DLs.

Possible additional improvements

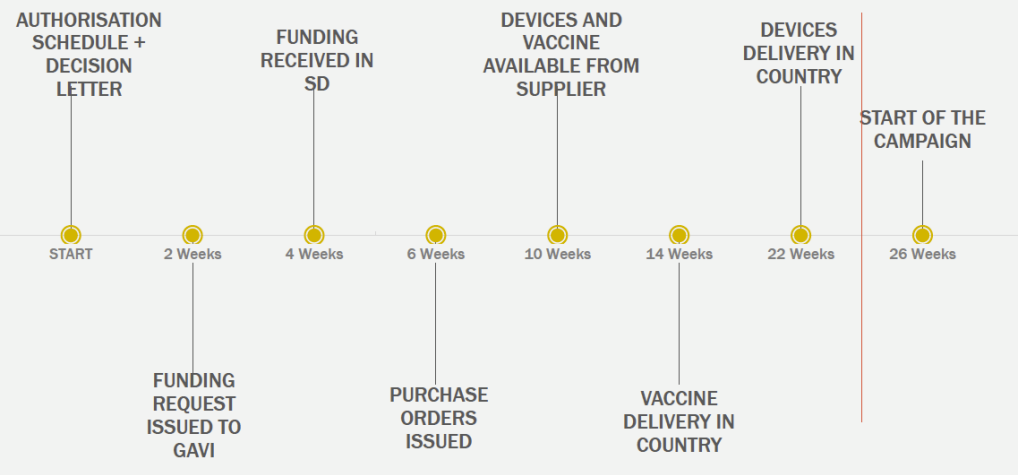
According to UNICEF SD informants the timing is in some instances still not optimal and end of September is in some particular cases considered too late in order to enact procurement on time for the subsequent year. Informants from UNICEF SD's Vaccine Introduction Unit referred in particular to PCV for which a timeframe of 20 days instead of 10 was established to process the Cash Transfer Notice. In addition, reference was made to manufacturers' annual shutdown at the end of the year, which makes a delivery by the first week of January impossible. The informants would be pleased to see a process in which the numbers are locked down jointly already in June or July, although they do recognise that the internal processes at Gavi Secretariat may not allow for this and that it would put additional pressure on governments' timelines. In addition, a multi-year (at least two years) approval or allocation for renewals would also contribute to increased efficiency although this would entail that Gavi abandons the annual vaccine monitoring that it is currently strengthening together with UNICEF SD to avoid wastage.

Remaining challenges

Specific challenges of the approval process relate to campaigns, in particular Measles and MR-campaigns. The figure below provides an example of the standard minimum timelines for forecasted campaigns for measles/MR:

[6] The word 'substantial' is not further defined in the MOU.

Figure 3 - Overview of standard minimum timelines for forecasted campaigns for Measles and MR



The approval process for routine programmes (renewals) works generally well, with the AS submitted by Gavi to UNICEF SD each year by 30 September, and with quarterly AS and ad-hoc AS that capture subsequent changes. UNICEF SD's experience is that it yet is faced with a considerable additional workload for campaigns. The approval process for new introductions and campaigns is separate from the renewals. There are three application windows throughout the year whereby countries can submit applications to Gavi. After the IRC endorses applications, the applications follow the internal approval process in Gavi. UNICEF COs and SD are generally involved and are aware of applications and planned routine introductions and campaign dates. UNICEF SD, through its COs, often provides input to countries and Gavi regarding timelines. UNICEF SD has however less insight in the approval process after the IRC endorsement. Often there is a need for the countries to provide additional clarifications to Gavi on micro-plans and budgets, which results in delays. UNICEF SD acknowledges these issues that are often also out of Gavi's control, but it leads to significant pressure on timelines when campaign dates are fixed. In some cases (e.g. measles campaign in Pakistan) the manufacturer needs to produce at risk without purchase orders in place, to enable timely availability. This has possibly an impact on the trust in the relationship with the manufacturer, which may lead to reduced flexibilities and consequently to future increases in lead times. When the application for the MenAfriVac campaign and introduction for Nigeria in 2017 was finally rejected due to audit issues after it had been endorsed by the IRC, the manufacturer had already produced batches of the vaccine that then had to be shipped to other countries. Since the demand from other countries was much smaller compared with the forecasted quantities for Nigeria, it would take a long time to consume the produced batches. It was therefore agreed between Gavi, UNICEF SD, WHO and the supplier that countries were requested to accept reduced shelf life vaccines to avoid wastage at the supplier.

In addition, UNICEF SD is facing challenges with the devices procurement and delivery for campaigns when campaign dates are fixed but approvals delayed, since devices are to be shipped by sea freight, which takes considerably longer. Sea shipments easily take eight to 12 weeks while in some cases the Gavi approvals are received only 12 weeks prior to the planned campaign dates [65].

While Gavi recognises that overall the approval process, which was developed jointly with UNICEF SD, has improved, there are still issues related to delays that have various causes:

- Increased complexity by adding an additional document (CNL) that needs to be processed and is subject to internal approval processes.

- UNICEF SD still requires a DL for new programmes that are approved by the IRC, but the (legally binding) DLs are often late.
- Each and every change is subject to a new or revised DL and/or CNL, as well as a new AS. The updated AS are either provided on a quarterly basis or ad-hoc if it concerns a substantial change.
- The whole approval process is still being done to a large extent manually at Gavi, with an increased risk for errors. Gavi informants are aware of the need to reduce "the number of hands involved in getting the paperwork done" and are similarly aware of delays in the approval process.
- Some delays are related to internal Gavi processes while others are related to clarifying issues with countries, which can take a considerable amount of time, especially for countries where audits have raised certain issues. UNICEF SD states that it is not sufficiently informed when and where these delays happen. As such, the AS may be in place while the CNL is delayed.
- The Authorisation process requires an acknowledgement from UNICEF SD towards Gavi. In case clarifications are required this process can take a considerable amount of time since it needs to go through internal UNICEF SD processes with the acknowledgment being sent by the UNICEF SD Director
- Another issue relates to communication, whereby Gavi Senior Country Managers (SCMs) may not always copy the UNICEF colleagues in the communication to countries when the CNLs and DLs are sent
- UNICEF SD informants stated that SCMs often batch the approvals together (for efficiency reasons) rather than sending immediately once these are ready. This may impact some of the urgent ones for UNICEF SD to enact procurement in time, while SCMs may not be aware of it
- Gavi management becomes involved relatively late in the approval process, after conclusion of the HLRP, which is usually after the 30th of September. Some informants perceive the HLRP as a bit artificial now that the AS is shared with UNICEF SD and that CNLs are being shared with countries, and the impression is that it mainly signs off on allocated doses. Gavi informants confirmed however that as of 2019, the HLRP review process will start happening prior to the AS deadline of 30 September.

Both agencies are interested in finding greater efficiencies in the process. The Gavi Board recognises the improvements in the approval processes but is aware of persisting challenges raised both by manufacturers (relying on forecasts) and countries (relatively late notice on the co-financing responsibility in order to capture it in time for the budgeting cycle).

3.2.1.2 Simplification of the Authorisation process for devices

The improvement initiative related to the optimisation of the authorisation process for devices has been fully implemented. It has yielded clear results and has contributed to increased efficiency and effectiveness.

UNICEF SD procures Safe Injections Equipment (SIE), including syringes and safety boxes on behalf of Gavi. The procurement of these items makes up approximately 2% of the value of Gavi procurement while it represents 53% of the total volumes.

Initial process

The SIE procurement had a high transactional workload and generated a large number of shipments to countries, with increased burden on countries due to clearing multiple shipments, and potentially raising the freight costs. This was largely triggered by the approval process for these devices related to each vaccine separately within Gavi. The procurement of devices is further complicated as it is shipped by sea, taking much longer than vaccines shipped by air, resulting in devices arriving significantly later and potentially putting programmes and campaigns at risk.

Solution

The improvement initiative consisted in streamlining the devices procurement to (i) improve operational efficiency in terms of number of deliveries and transactions, (ii) ensure timely order placement to meet program needs; (iii) addressing sea shipment lead time issues, (iv) enable demand levelling, (v) improve forecast accuracy, and (vi) ease the burden on recipient countries.

The process was simplified considerably and produced efficiency gains, but Gavi informants stated that the efficiency gains were primarily for UNICEF. There was a focus on getting country-specific approvals for all devices together, and consolidating deliveries through (i) bundling of awards and reducing the overall number of transactions through (ii) consolidating requests.

Gavi and UNICEF SD went further in optimising the processes by also implementing a new system for Gavi DL for devices: one single DL for routine devices per country and not one per vaccine approval.

Conclusion

As a result, UNICEF SD reported an overall gain in the transactional efficiency by 16% and 11% on delivery efficiency for both Gavi funded and non-Gavi funded devices. Bundling shipments from manufacturers led to cost reduction as well as to reduction in CO2 emissions.

By having a DL for devices per country rather than per vaccine approval, the transactional burden was reduced by more than 50% [65].

Remaining challenges

According to UNICEF SD the process for the procurement of devices can even be further optimised through increasing the bundled awards to 80% of the overall awarded quantities and increasing the opportunity for consolidated shipments. Additionally, UNICEF SD is targeting to have 20% of its awards to new manufacturers in UNICEF Programme Countries by 2021, further reducing CO2 emissions [65].

While Gavi acknowledges the increased efficiency and effectiveness from a procurement point of view, the bundling of devices caused additional workload for Gavi, and the majority of the work is still done manually. Particularly for the IPV programme it has created some challenges, because it is fully funded by IPV donors, and any costs related to IPV, including the costs of devices, has to be charged to these IPV donors. When the devices are bundled together with the devices for any other vaccine programme it requires some manual work to identify the IPV portion, including the involvement of different teams at Gavi. In addition, some Gavi informants highlighted that countries are now requesting to make the split visible again at country level.

3.2.1.3 Improvement of the reporting requirements

The improvement initiative related to reporting requirements was fully implemented and is largely being adhered to, however there are remaining challenges with the monitoring of KPIs and questions remain as to the exact reporting requirements for and use of reported information by both organisations.

Initial situation

Over time, UNICEF SD has received and responded to a number of additional requests for information that went beyond the scope of the reporting agreed under the previous MOU.

Solution

Discussions on the need to improve and streamline reporting under the MOU have taken place on several occasions. The improvement initiative consisted in optimising the financial and performance reporting between Gavi and UNICEF SD regarding the operational aspects of UNICEF SD's role as procurement agency. While no major changes in terms of reporting requirements were implemented, the co-financing monitoring report became a monthly report instead of a quarterly report, and a number of KPIs were developed [16].

Conclusion

The reporting generally works well and UNICEF SD adheres largely to the processes and requirements laid down in the MOU, as demonstrated in chapter 3.1. Gavi informants pointed at some (minor) reporting issues in terms of validity of the data reported. In some instances, Gavi is in direct contact with country stakeholders, including with UNICEF COs, and there may sometimes be discrepancies between what COs report to Gavi and what UNICEF SD reports. As referred above, the issue of disappearing shipments from the monthly report was solved.

Remaining challenges

Even though the number of ad-hoc requests for information has decreased since the improvement initiative was implemented, in the perception of some informants from both organisations, there is a renewed increase of requests for information. An example of an ad-hoc requests received by UNICEF SD is a request for information on co-financing while Gavi appears to receive ad-hoc requests on draft forecasts. The number of exceptions and ad-hoc requests are relatively small compared to the routine bulk of the work done for Gavi, but according to UNICEF SD informants they represent a significant level of effort to respond to, and it concerns sometimes information that UNICEF is not bound to provide according to the MOU. The MOU states that the requests have to be 'within reason', although the perception of what is reasonable may differ from one person to the other. Informants at Gavi considered the MOU as too prescriptive in this regard, consequently limiting the information that can be shared or requested. A consideration could be given to formalise requests for information that are outside of the scope of the MOU in order to maintain a record of what has been shared as some of the information needs clearance within both agencies.

Reporting needs by both parties may however need to be critically assessed. UNICEF SD informants involved in reporting question whether some of the reported data are used and likewise Gavi informants question the exact use of some of the data submitted to UNICEF SD.

There is an increasing share of co-financed demand from Gavi-supported countries, in particular countries in the accelerated transition phase whereby there is more reliance on country ability to self-finance. The work that UNICEF SD carries out under the MOU for the monitoring of countries' co-financing obligations is appreciated by management level stakeholders at both organisations. The importance of sustainability is recognised by both organisations, in particular also by Board level. Gavi needs to know what and when countries procure and whether they are accessing the agreed prices. Sometimes UNICEF SD appears to be hesitant to share data, given UNICEF policy related to partner government ownership of data. This is for example the case for measles, whereby globally it was decided that the first dose should be financed with domestic resources. Because this is not co-financing as per Gavi standards and therefore not fully covered by the MOU, UNICEF SD does not provide the data, making work more complicated for Gavi that needs the data in order to provide support for the other doses. At the same time, when setting its policies, Gavi needs to be cognizant of data limitations. Ultimately, this may not require to modify the current MOU, but mutual agreements are needed to overcome these situations.

The current reporting requirements linked to the monitoring of co-financing should however be reviewed. Some of the content in the reports may even not be fully clear to UNICEF SD why it should be reported upon, and how Gavi makes use of all the information reported. The evaluation team is of the opinion that the level of detail in the report and the level of effort required to develop the report, are too high for the real purpose.

The annual UNICEF SD reports [5, 6] are found to contain relevant information but UNICEF SD is not sure whether the use of the reported information is optimal. The reports are submitted to Gavi's Market Shaping Team while other directly involved Gavi stakeholders (e.g. Senior Programme Managers (SPMs) of the Vaccine Implementation Team) may not be fully informed about it. The strategic (market) information reported in the annual reports would also be useful for the executive teams at both organisations.

Overall, the evaluation team noted a considerable level of effort that goes into reporting. Many reports are submitted in Excel and require manipulation. Without having full insight in the functionality of UNICEF SD's Enterprise Resource Planning Software (ERP) but recognising that all Gavi-funded related procurement services data is effectively stored in UNICEF SD's ERP, it would be expected that reporting could be automated to a larger extent than what is currently being done. Gavi is presently in the process of introducing an ERP (SAP), which provides an excellent opportunity to investigate: 1) the exact needs in reporting at both sides, and 2) the level of automatization (and possible direct interfaces) of reports.

3.2.1.4 Forecasting improvement initiative

The improvement initiative related to forecasting was not fully implemented, and some challenges remain.

Initial situation

A pilot project was set up in 2014 for the improvement of the forecasts [66, 67]. At that time, different forecasts were used within the Alliance addressing different needs, including production planning with manufacturers, shipment planning with manufacturers and countries, long-term strategic forecasting, and

financial forecasting, among others. One of the recommendations of the 2013 BCG study included the need to reinforce the forecasting process, and highlighted that the different forecasts, while being used for different purposes, share some parts and processes and could benefit from more systematic linkages across the Alliance for greater optimisation. The need for joint process standards and interfaces, as well as enhancement of systems to support information sharing and interaction, was also mentioned.

The objective of the pilot project was to determine the most appropriate tool(s), processes and methodologies required to obtain an accurate and frequently shared Operational Forecast with a two to three years horizon, incorporating the most updated knowledge available across the Alliance. Based on the activities carried out under the pilot project, and based on the discussions between Gavi and UNICEF SD, it was decided to incorporate the Operational Forecast into the MOU8. Indeed, Annex 4 of MOU8 states that "*Gavi will develop an Operational Forecast for which UNICEF will provide input and feedback as well as information on volumes of actual and planned country shipments of Designated Vaccines for the current year*." The way this is currently being implemented consists of providing UNICEF SD with the AS for the next year as well as with forecasted projections for the following two years, covering a total period of three years. The projections for the first year can also include assumptions that differ from the AS when Gavi anticipates on any delays or when new vaccine introductions are not fully approved yet.

Solution

Efforts were made to improve the forecasts, and also to harmonise process and timelines between Gavi and UNICEF SD. However, the scope for further harmonisation still exists, also if forecasting serves different purposes. Within Gavi forecasts the following forecasts are generally developed:

- Strategic demand forecast to inform higher level strategic decisions (10 – 20 years)
- Forecasts as part of the Roadmap and Procurement Strategy development
- Forecasts for discussions with manufacturers
- Forecasts for policy and investment decisions
- Forecasts for countries for co-financing purposes (projections for five years)
- Authorisation Schedule for vaccine procurement (1-2 years)
- Operational forecast

The majority of these forecasts have no pre-established frequency, although some have (e.g. Authorisation Schedule, financial forecast, co-financing).

According to Gavi informants, the Operational Forecast as it was intended was essentially split into the AS and a two year forecast. The Gavi Operational Forecast is primarily produced for the purpose of informing Gavi's financial forecast. The first year in the Gavi operational forecast may not always fully align with the AS, as the forecast reflects Gavi's assumptions about additional introductions and campaigns that are expected to take place but are not approved yet. Moreover, some approved introductions and campaigns may be shifting to the second year (or later) if these are expected to be delayed. Gavi's perception is that the MOU does not clearly lay out the purpose of sharing this forecast. It may for example make sense to use it for feeding the Fee Trigger Model while it may not make sense for procurement purposes. At the Gavi level, there appear to be doubts whether the Operational Forecast shared with UNICEF SD is the right information for the right purpose. UNICEF SD confirmed that it mainly uses the Operational Forecast it receives from Gavi for the calculation of the Fee Trigger Model.

Remaining challenges

The pilot was set up in a spirit of sharing information and joint planning for the countries. Key stakeholders involved in the pilot project stated that the project was however never really finalised and was not signed off. UNICEF SD receives the annual preliminary allocations from Gavi but a joint extensive review is not systematically done. Informants at both agencies underline however that cooperation on forecasting varies, depending on the antigen and the individuals managing it. In this regard, there are efforts to check and coordinate the forecasts at an earlier stage in the process with each other (e.g. IPV), but not systematically. Both Gavi and UNICEF SD recognise that this is "unfinished business" and requires additional efforts to work together in partnership to harmonise the processes and timelines, and to make optimal use of each other's intelligence. Concerns about the robustness of the vaccine forecasting in grant renewals in recent years, triggered increased interaction between the agencies, and all informants agree that discussions on harmonisation need to continue.

While the evaluation team has not assessed in detail the pros and cons of the different forecasting processes at Gavi and at UNICEF SD, it appears that the country data that both agencies are working with is not always the same. This may be caused by the different times the country data is submitted and processed and the different methods and assumptions used by both agencies. At Gavi the timing is usually from mid-May up to end of September while at UNICEF SD it is from July up to November, which according to Gavi is too late to have any effect on final Gavi allocations that are produced during the summer period. It may also be that countries have particular reasons for submitting different data since Gavi is generally regarded as a donor while UNICEF may be more regarded as a technical partner. Particularly Gavi informants expressed some concerns about the ability or willingness of UNICEF SD to provide insights and share data. In this regard, UNICEF SD refers to certain confidentiality agreements and country ownership of data falling under the MOUs that UNICEF has put in place with country governments, which does not allow UNICEF to share data beyond the organisation.

Different views exist about the level of scrutiny that both agencies apply to the data received from countries. In recent years the Gavi management has clearly institutionalised more scrutiny on the forecast because of evidence of unused vaccines in the past due to over-forecasting. The final country allocation is the decision of Gavi and while there is usually consensus with the country, sometimes the Gavi quantities need to be enforced on the country. As such, UNICEF SD always works with the Gavi allocated doses, even though it may not be fully in agreement with the forecast underpinning the decisions.

Some informants think that having multiple forecasts may lead to improved accuracy, if informed discussion takes place between the parties; and that it is unrealistic to align everything into one harmonised forecast, because ultimately Gavi and UNICEF SD have slightly different forecasting purposes. Ideally the same data is used to feed the forecasting process, but the outcome may be different, depending on the methodology and the scrutiny that is applied. It is however important that there is mutual understanding and constructive discussions around the final country forecast as it affects vaccine availability and over- or under-supply.

The large country presence and the fact that UNICEF SD has a more holistic understanding of country needs because it also provides non-Gavi vaccines as well as vaccines to countries in transition or to non-Gavi countries, leads the evaluation team to believe that UNICEF SD disposes generally of more robust data to feed the forecasting process.

Improvement initiatives are to a considerable, albeit variable, extent implemented. Three of them – devices procurement, approval process and reporting – yielded clear results. The timeliness of the approval process still raises some concerns and some challenges remain regarding the definition of appropriate reporting needs, including the selection and monitoring of KPIs. The harmonisation of the forecasting processes is considered as "unfinished business" and requires further engagement with a view to work in partnership to make optimal use of each other's intelligence.

3.3 Objective 3 – Assessment of fit-for-purpose of the MOU

The third evaluation objective covers whether the design of the MOU is fit for purpose, in the context of key focus and investment areas of Gavi, and if the design of the MOU is fit for purpose and leverages the full scope of expertise in supply and procurement through UNICEF.

In particular, this Section addresses the following main questions:

Evaluation questions – Objective 3
Assess fit-for-purpose of MOU8 during Gavi 4.0, including if the MOU can accommodate new policies and expansion of scope of Gavi portfolio during Gavi 4.0
3.1 What recommendations for improvements or changes to the MOU should be considered at this mid-way point in the agreement? • Forecasting, including Gavi's operational forecast, UNICEF support to countries on forecasting, planning, and procurement • Co-financing and UNICEF's monitoring support • Structure/design to enable flexibility to adapt to changes and emerging needs (e.g., policy changes, procurement and market shaping needs, any VIS implications that would take effect during Gavi 4.0, and other areas to be further identified)
3.2 How enabling, efficient, and flexible is the MOU8 structure to lead to improved performance and increased efficiencies, and to accommodate a changing environment or portfolio expansion? (e.g., Fragility, Emergencies, Refugees Policy; Engagement with Countries Post-Transition).
3.3 How can communication and process streams be optimised to increase efficiency as reflected in the processes in MOU8? How do partners view the working relationship surrounding the MOU8?
Assess fit-for-purpose of MOU8 against possible scope of Gavi 5.0
3.4 What are the recommendations for improvements or changes to the MOU in consideration of the potential strategic focus areas for Gavi 5.0?
3.5 Should the Trigger Model for the Handling Fee calculation be reviewed/changed in reflection of the recommendations and/or considerations for Gavi 5.0/post-2020?

3.3.1 MOU8 during Gavi 4.0

Gavi and UNICEF SD entered into an MOU in May 2006 (MOU1), and have renewed these MOUs up to the eighth agreement (MOU8) currently in place[7]. There have been many instances and opportunities for assessing the scope of the MOU and for course corrections over time. Moreover, the recommendations and proposed processes that were proposed by the 2013 BCG study, and subsequent working groups helped inform the design and content of the current MOU8.

[7] MOU5 currently governs UNICEF SD's procurement activities for the pneumococcal vaccine under the AMC. This is not included in the scope of the evaluation

3.3.1.1 Structure and design of MOU8

The evaluation team is of the opinion that the current structure and design of the MOU is serving its purpose, and no immediate need was identified to change or modify the MOU at this point in time. The MOU provides a solid basis and is sufficiently flexible to cater for changes, emerging needs, and an expanding portfolio. This is illustrated by the inclusion of the CCEOP project in the MOU, as well as by the implementation of the FER policy. Except for a potential expansion of scope with regards to YF diagnostics, no other procurement related issues, market shaping needs or VIS implications were identified that would still take effect during Gavi 4.0 and would require modifications to the MOU8.

3.3.1.2 Expansion of scope

Regarding the FER some caution is required as to the MOU opening up to cater for more antigens and more countries than initially covered under the MOU. While the legal interpretation of the MOU appears to be providing this flexibility, it has created particular implementation challenges for UNICEF SD (e.g. challenges with new product codes, etc.). While the FER policy provides countries with increased flexibilities, in terms of operational implementation it posed several challenges:

- It requires separate approvals, including a DL.
- Rather than bundling the products and paperwork, it requires a complete separate administration.
- The co-financing requirement for the FER policy has created challenges, with countries not able (or willing) to pay. In those cases, funds may need to be sourced from other partners whereby UNICEF is considered the default partner for funding this part.
- Administering the co-financing part under the FER policy separately poses particular challenges.

Further to the experiences of the CCEOP, the potential work related to including YF diagnostics in the scope could be covered by an additional Annex to the MOU. This is in line with the preference of not engaging in negotiating a new MOU, as highlighted by the management level of both organisations. There appears to be a preference to simplify the MOU (also since it is a legal document) and cover the complexities or the additions in Annexes (as is already largely the case). This could also entail covering the process related issues and SOPs into an operational framework, annexed to the MOU.

3.3.1.3 Optimisation of communication and process streams

Many points presented in this sub-section have been discussed in more detail in previous chapters of the report.

In general informants at both agencies are satisfied with the collaboration, and informants at the operational level appreciated the possibility to informally engage with each other when needed. Gavi informants generally expressed their satisfaction about the way UNICEF SD has evolved in recent years, and became more flexible and client-oriented.

In line with the 2013 BCG recommendations, there is room to further increase the performance (efficiency and effectiveness) of the partnership, entailing improved collaboration. Considerable efforts were deployed over time to address certain issues (approvals, bundling of devices), but important “unfinished business” remains. The issues on forecasting highlighted earlier in this report deserve appropriate attention. Agreeing to which extent data can be shared between the two agencies is one of the key conditions for further harmonising the forecasting process.

Mechanisms should be institutionalised to jointly review data and/or forecasts, in order to agree on common and justified allocation of doses (and devices).

In addition to the "unfinished business" on forecasting, reporting needs by both parties also need to be critically assessed. Reporting requirements are put in place under the MOU and are largely being adhered to, but the evaluation team is of the opinion that there is a heavy weight on reporting in the MOU, and that there is room for simplification of reporting within the current requirements.

The evaluation team identified some enduring challenges in the day-to-day collaboration and communication. Both at the Gavi Secretariat and at UNICEF SD there are many people involved in different steps of the processes, and at both sides informants state that there is not sufficient insight in the mutual processes. Moreover, a dedicated focal point (operational ownership) for the MOU seems to be lacking at the Gavi Secretariat while at UNICEF SD the Partnership Specialist of the Vaccine Center fulfils this role. At both sides, but particularly at the Gavi Secretariat side it was noted that there is limited institutional memory, which is according to UNICEF SD an important reason for the increase in ad-hoc requests for data and information, either or not covered under the MOU. According to Gavi Secretariat, however, the need for different information inputs stems also from the improvements to the Gavi decision-making process. While the exceptions and ad-hoc requests are relatively minor compared to the routine bulk of the work done for Gavi, according to UNICEF SD they represent a significant level of extra effort to respond to for UNICEF SD. Some of these requests, for example, have to be channelled through UNICEF SD's Director when they are not formalised.

An important comparative advantage of UNICEF is its large country presence. In Gavi's perception there are however challenges with the involvement of UNICEF COs. Reportedly, across COs, there are differences in the readiness, skills and willingness to take on tasks related to the MOU (including CCEOP). At the same time, UNICEF CO accountabilities within the Gavi Alliance are not a part of MoU8, which is limited to managing UNICEF SD-Gavi procurement services. However, UNICEF SD acknowledges the need for stronger engagement from the COs, in general. The Gavi SCMs are also frequently present and active at country level. Communication and coordination between the various stakeholders (different departments at the Gavi Secretariat, different units at UNICEF SD, the UNICEF COs and the Gavi SCMs) could be more efficient. While recognising that the SCMs are not expected to have a full knowledge of the detailed MOU8 processes, the evaluation team is of the opinion that Gavi SCMs should be more actively engaged in the issues (and the communication) pertaining to the (implementation of) the MOU. A Gavi focal point for the implementation of the MOU would also contribute to increased communication between the different Gavi departments and teams involved with (some) aspects of the MOU. Furthermore, the role of global partnerships for some antigens is also important for increased coordination. In this regard, particular reference was made by UNICEF SD informants to the GTFCC and the Global Polio Eradication Initiative, whereby the latter plays a leading role in coordinating the key stakeholders while making use of the established Gavi mechanisms for country application and funding of vaccines.

Regular meetings and effective communication can help solving some of the above issues. While meetings happen, a detailed roles and responsibilities matrix exists and communication channels are in place, a partnership of this magnitude would benefit from institutionalising regular physical meetings to timely address implementation challenges. Institutional policies such as travel bans should not undermine efficient collaboration. Regular physical meetings could also address the perceived limited data sharing by UNICEF SD. While Gavi has noted increased willingness from UNICEF SD to share data, it depends on the cooperation of individuals.

Gavi experiences this as problematic particularly when it concerns data that is being requested by the Alliance Board in which UNICEF is also represented, rather than just by the Gavi Secretariat. In this regard, it is challenging that Gavi and UNICEF SD work and are represented in the Alliance, which has broader objectives, but their specific relationship is governed by the MOU. Indeed, there are blurred lines between being "just" Gavi's procurement agency and being an Alliance partner. While this may raise potential conflict of interest, especially for UNICEF being partner and procurement agency, UNICEF mitigates this by refraining from voting and being present when decisions are being taken at the Board regarding UNICEF SD as a procurement agency.

The improvement of processes and communication is also constrained by the fact that the partnership is still being managed to a large extent by manual data entry and reporting in Excel. The planned introduction of an ERP (SAP) by Gavi provides an opportunity for automatization of reporting. Without having full insight in the functionality of UNICEF SD's ERP, but recognising that all Gavi-funded related procurement services data is effectively stored in its ERP, it would be expected that reporting could be automated to a larger extent than what is currently being done. While the implementation of Gavi's SAP will not solve all these challenges, significant progress can be made in communication and reporting. Introducing a new ERP always poses challenges and is usually being done under time pressure, and in this regard Gavi is no exception. The evaluation team was not provided with insights into the future features of Gavi's SAP but understood that UNICEF SD shared its experiences on how its ERP was implemented, including the modules used and basic structure of the master data. Both agencies also discussed the possibility for an IT solution to be implemented to facilitate the authorisation process (e.g. DLs generated by the system and published on a website, downloadable for UNICEF SD). Given UNICEF's experience with its ERP, including setting up interfaces to facilitate information exchange in real time with logistics service providers, it provides an opportunity to address certain issues regarding exchange of information and reporting, and include it in the SAP design. In line with the implementation of SAP, there is both at UNICEF SD and at Gavi the desire to abandon the substantial e-mail communication and to move into more systematic reporting and communication.

The current structure and design of the MOU is serving its purpose, and no immediate need was identified to change or modify the MOU. The MOU provides a solid basis and is found to be sufficiently flexible to cater for changes, emerging needs, and expanding portfolio. This is illustrated by the inclusion of the CCEOP project in the MOU, as well as by the implementation of the FER policy. The evaluation team identified some challenges in the day-to-day collaboration and communication. Both at Gavi and at UNICEF SD there are many people involved at different steps of the processes. A Gavi focal point for the implementation of the MOU would contribute to improved communication. There is an identified need to make use of the opportunity of Gavi's rollout of SAP to understand how information can be better exchanged between the agencies, reducing the need to manipulate Excel reporting.

3.3.2 Potential new MOU for Gavi 5.0

The evaluation team acknowledges the solid base of the current MOU8 for a potential future MOU between Gavi and UNICEF SD for procurement services.

Simplifying the MOU, while covering the complexities and the additions in Annexes, and developing corresponding operational frameworks or SOPs, could be considered.

While not every single detail can be covered in an MOU or in Annexes, the scope and content of information sharing and timing of submitting information, data and reports should be specified and further detailed in Annexes.

The October 2018 report to the PPC on VIS 2018 referred to the further evolvement of Gavi's portfolio towards greater country choice regarding vaccine introductions, whereby countries more proactively identify a customised mix of highest value vaccines from the portfolio to introduce [32]. Given the unique characteristics of the VIS candidates it is likely that some elements of Gavi's current funding model might not align with country needs. As Gavi develops its strategy for the 2021-2025 period there will be an opportunity to revisit the policies to ensure they are fit for purpose, both for the existing portfolio and vaccines added through the VIS 2018.

The Gavi country portfolio will be considerably more challenging in the next strategic period as a number of relatively well-performing countries will have transitioned out of Gavi support. Nearly half of Gavi-supported countries (comprising 87% of under-immunised Gavi-eligible children in 2025) will be facing very challenging contexts and impediments relating to immunisation coverage and equity [68]. From the operational perspective it should be well planned, and lessons can be learned from the HPV vaccines because it concerns a different cohort, and the operational aspects have become increasingly more complex. If approved by the Gavi Board, moving towards middle-income countries also requires important considerations. It is likely to involve a higher level of transactional costs and there may also be a certain reluctance from the industry if the Alliance moves to these countries. Reference was also made to Primary Health Care as a leapfrog to Universal Health Coverage in the context of Gavi 5.0. Recent discussions in the PPC, however, highlighted that Gavi 5.0 should maintain its core focus on improving coverage and equity in its portfolio of countries and ensure continuity of existing programs.

The CCEOP and the FER policy implementation both provide important lessons learned in case the scope of the services is extended under Gavi 5.0. As such, the MOU provides a solid base for an expansion of scope, although the CCEOP provides a mixed experience. Fair consideration should be given to the expansion of scope within the context of the MOU, as well as to whether UNICEF SD is the appropriate procurement partner, depending on the commodities foreseen under the new scope of Gavi 5.0.

3.3.2.1 Fee Trigger Model

The current drivers of the Fee Trigger Model for vaccine and devices procurement are the following ones:

Table 13 - Fee Trigger Model

Fee Trigger Model Driver
Strategic / Complexity Cost Drivers:
No. of vaccines
No. of presentations
No. of suppliers + vaccine
No. of countries + vaccine
No. of vaccine introductions
Transactional Cost Drivers:
No. of doses/devices
Procurement amount

With the expectation that increased scrutiny will be applied to the justification of the absolute fee, there is room for a review of the Fee Trigger Model including assessing options for reflecting the level of effort and level of remuneration. Should the Fee Trigger Model continue to be found suitable, and both agencies prefer to apply the model for the next MOU, consideration should be given to reviewing the definition of the triggers (e.g. expected increased complexity in country and vaccine portfolio, etc.), their weight and interdependence. Important considerations include the expectation that the number of introductions and the overall volume of vaccines will reduce in the next Strategic Period, while the management of Gavi's vaccine and country portfolio is likely to become more complex, including the trend of increasing emergency outbreak response.

Rather than basing the review on existing experiences and drivers, suggestions were made to start from scratch, especially when other services could potentially be covered by another funding mechanism (e.g. PEF-TCA). Past experiences should however not be neglected and can serve as lessons learned.

For a possible extension of the CCEOP during the next MOU, the CCEOP Fee Trigger Model requires careful re-assessment, as highlighted before. The evaluation team is of the opinion that it requires simplification. Alternatively, a different model could be developed, reflecting the level of effort and level of remuneration.

The evaluation team acknowledges the solid basis of the current MOU8 for a potential future MOU between Gavi and UNICEF SD. The Gavi vaccine and country portfolio is likely to become considerably more challenging in the next strategic period. The CCEOP and the FER policy implementation both provide important lessons learned in case the scope of the services is extended under Gavi 5.0. With the expectation that increased scrutiny will be applied to the justification of the absolute fee, there is room for an in-depth review of the current Fee Trigger Model and/or for an alternative way to remunerate the level of effort provided.

4 CONCLUSIONS

4.1 ASSESSMENT OF UNICEF SD'S PERFORMANCE UNDER MOU8 AS PROCUREMENT AGENCY FOR GAVI

Beyond the formal obligations detailed in the MOU8 it should be recognised that UNICEF SD implements the MOU8 as expected, manages the vaccine procurement well, has the capacity and capability of addressing new and complex projects, and is, together with Gavi, able to course correct along the way (e.g. for CCEOP). There is indeed still scope for optimising some of the underlying processes and scope for learning under the CCEOP implementation (see **section 4.3**).

The quantitative analysis demonstrates that UNICEF SD adheres to a large extent to the obligations laid down in the MOU8 for the vaccines and devices procurement. These obligations consist exclusively of reporting requirements, described in some detail in the MOU. Gavi Secretariat also adheres to a large extent to the obligations of the MOU8 and both agencies consider the partnership as 'very functional'. Overall, the processes specified in the MOU8 are quite detailed, which is considered an enabling factor facilitating adherence as well as a hindering factor because of its prescriptiveness, according to some key informants. Exceptions to the routine process are considered a hindering factor for the smooth implementation of the MOU8 by both agencies.

The UNICEF SD staff directly involved in the implementation of the MOU are well aware of the contents and processes laid down in the MOU8. At Gavi there is no focal point for the implementation of the MOU, which may explain the more modest ownership of the MOU at Gavi. The evaluation team believes that the magnitude of the partnership would justify appointing a focal point in Gavi, which is likely to contribute to improved internal communication and ownership of the MOU, while ensuring institutional memory (see Recommendation 4 in **chapter 5.1**).

The KPIs pertaining to the MOU8 stem mainly from the improvement initiatives further to the 2013 BCG study and not all of them remain representative of the current key areas for improvement under the MOU8. KPIs for UNICEF SD exclusively focus on reporting requirements. While timely reporting is essential if it triggers some subsequent action, the current selection of KPIs could be more useful if it would address areas that require further improvement and monitoring. In addition, other KPIs could be considered that reflect better the key activities that UNICEF SD is expected to implement under the MOU (e.g. on-time deliveries, shipments with findings and/or deviations, supplier performance, WAP comparisons, forecast accuracy, etc.). Lastly, and given the challenges identified in this area, consideration could be given to including a joint KPI on forecast accuracy. Monitoring is to be consistent and to be annually and jointly reviewed by both agencies (see considerations in **chapter 5.2**).

Despite some different perceptions on the level of detail and prescriptiveness of the Gavi Roadmaps, there is overall alignment between the Roadmaps and the UNICEF SD Procurement Strategies. Recognising that the two products serve different purposes, the development process of the Roadmaps and the Procurement Strategies may require a revision with the objective to harmonise (some aspects) of the development process, avoiding duplication of efforts. (see recommendation 3 in **chapter 5.1**). Both agencies consider the Procurement Reference Groups an added value to inform and guide the procurement process.

4.2 Update of 2013 BCG Analysis on VfM focusing on efficiency and effectiveness: assess if the results and assumptions are still valid

The landscape of vaccine procurement is changing continuously but UNICEF SD has a track record of dealing with these changes. Portfolio complexity included new vaccine introductions, more countries transitioning from Gavi support, and increased number of fragilities, emergencies and outbreak responses. UNICEF SD also notes an increase in the workload for preventive campaigns whereby country applications and Gavi approvals are often delayed. Regular market dynamics concern manufacturers entering and exiting the market, and manufacturers experiencing supply constraints. During the last years, no significant changes occurred or new organisations with similar expertise emerged, particularly for vaccines and devices procurement, that would justify a shift in the current set-up. However, the evaluation team is of the opinion that important lessons can be learned from recent developments in the landscape of procurement agencies for GHIs (e.g. engaging two or more procurement agencies; increased attention for improved performance and efficiency with possibilities for re-negotiation of the contracts; and increased attention to data management and data exchange).

In addition, our analysis also highlights some developments in the procurement fees. The average fee of 1.85% that Gavi pays UNICEF SD for the vaccines and devices procurement, continues to compare favourably percentage-wise, with global health procurement benchmarks. There is room for an in-depth review of the Fee Trigger Model for a potential new MOU, whereby consideration should be given to the definition of the triggers, their weight and interdependence (see recommendation 6 in chapter 5.1). The evaluation team is of the opinion that an alternative option could be considered; a procurement fee that reflects the level of effort and the remuneration. TGF was for example able to negotiate fees downwards since it became evident that the absolute fee increased considerably more than the related amount of work, which led to significant savings. As Gavi stakeholders foresee that more transparency will be expected from the Board on the justification of the fee paid to UNICEF SD, the review of the Fee Trigger Model or the development of an alternative model requires a joint effort from Gavi and UNICEF SD.

4.3 CCEOP

The CCEOP project was established in recognition that functional CCE is a critical precondition to safeguarding the massive increases in the value and quantity of vaccines. A decision was made to integrate the CCEOP project into the MOU8 even though the products, but also the planning/forecasting, delivery, installation, commissioning and related services are not comparable at all to the regular vaccines and devices procurement, and are characterised by certain in-country complexities. The CCEOP project was indeed characterised by a challenging start-up with perceived delays, documented by the studies carried out by McKinsey and JSI. This was to a certain extent unsurprising, given the complexity of the project and some competing objectives. Particular tensions in the objectives of the project include the need for a rapid implementation (results) while at the same time focusing on price reductions, product innovations and broadening the pool of manufacturers and suppliers. While course corrections have been made, progress is documented and recommendations are being implemented, the current average time between the IRC approval of the application and the first deployment is still 21 months. According to both Gavi and UNICEF SD, this is largely due to the time-consuming process of getting the ODP in place and approved, which as per Annex five of the MOU8 is considered a country responsibility.

The absence of an agreed results monitoring framework, including high-level result indicators, leaves room for varying interpretations of the current status of the project, which is reflected by different perceptions on current performance (see Recommendation 5 in chapter 5.1).

In addition, one of the most common indicators used to measure progress so far, namely the number of POs placed, does not capture the innovative character of the project with ensuring delivery, installation and training at 'the last mile'. Considering the existing different interpretations, it underlines the importance and the need for an agreed upon results framework. The project is almost on track in terms of the number of POs placed when considering that procurement activities started in September 2017. The project's progress can be judged to be reasonable under the current circumstances, considering the challenges it experienced during the start-up phase. The evaluation team is of the opinion that the structure and the design of MOU8 provided a solid basis to integrate the CCEOP project. The characteristics of the CCEOP project, with initial assumptions and processes being challenged by reality, justify provisions in the Annex of the MOU8 to update and/or modify the reporting requirements as and when required. As such, there is a need to institutionalise the recently proposed KPIs with realistic targets. While the Fee Trigger Model provides a workable set of strategic and transactional criteria to trigger a discussion on fees (in the sense that they all affect workload to some extent), the evaluation team is not convinced about its added value in determining weights to specific criteria. The model may be too complex to help setting fee levels. Fair fees should cover the level of effort invested by UNICEF SD to implement the CCEOP. If well selected, the triggers may however help indicate how some changes affect the required level of effort. The evaluation team anticipates that the strategic driver weights would reduce over the remainder of the project timeline while the transactional weights would increase, as is suggested by the latest estimation. Economies of scale, availability of systems, country experience coupled with increased number of countries would mean that these weights are affected going forward. Based on the (limited) data available, a preliminary VfM analysis suggests that there is room for improving VfM (including for a large part to meeting the optimal target timelines), while acknowledging that a major effort has been invested to make the CCEOP process operational. The ongoing JSI evaluation will provide further insights in many of the key challenges. Building on evidence from previous evaluations will allow updating the results framework, and a joint self-reflection exercise towards the end of the MOU8 may enrich the project going forward under a next MOU (see considerations in chapter 5.2).

4.4 Improvement initiatives further to the 2013 BCG study

The four improvement initiatives (approval process, procurement of devices, reporting and forecasting) are to a considerable, albeit variable, extent implemented. Two of them, the bundling of devices and the approval process, yielded clear results. While for the majority of the country renewals and new introductions the approval process works rather well, the timelines of the approval process, particularly for campaigns, still raise some concerns. It is however unlikely that these concerns can be addressed by integrating specific procedures or (ideal) timelines in the (annexes of) the MOU. Both agencies are aware of the issues and intend to provide timely information to each other. The reporting also generally improved, although some challenges remain regarding the definition of appropriate reporting needs and the selection and consistent monitoring of KPIs (see considerations in chapter 5.2). Lastly, the harmonisation of the forecasting process between the two agencies is considered as "unfinished business" and requires additional efforts to work together in partnership to harmonise the processes, and to make optimal use of each other's intelligence (see Recommendation 1 and 2 in chapter 5.1).

4.5 MOU8 DURING THE REMAINDER OF GAVI 4.0

The current structure and design of the MOU is serving its purpose, and no immediate need was identified to change or modify the MOU. The MOU provides a solid base and is found to be sufficiently flexible to cater for changes, emerging needs, and expanding portfolio. This is illustrated by the inclusion of the CCEOP project in the MOU, as well as by the implementation of the FER policy. The evaluation team identified some challenges in the day-to-day collaboration and communication. Both at Gavi and at UNICEF SD there are many people involved at different steps of the processes. As indicated under 4.1, a Gavi Secretariat focal point for the implementation of the MOU would contribute to improved communication, collaboration, coordination and institutional memory. Furthermore, Gavi Secretariat's rollout of SAP provides a timely opportunity to assess how information can be better exchanged between the agencies and how it can be used for decision-making, reducing the need to manually extract data for reporting in Excel (see considerations in **chapter 5.2**).

4.6 POTENTIAL NEW MOU FOR GAVI 5.0

The evaluation team acknowledges the solid basis of the current MOU8 for a potential future MOU between Gavi and UNICEF SD. The Gavi country portfolio is likely to become considerably more challenging in the next strategic period. Consequently, the need for information and data may become more prominent, and in this regard it is important that both agencies agree on the scope and content of data sharing, including how to address confidentiality issues, prior to putting in place a new MOU (see Recommendation 2 in **chapter 5.1**). The CCEOP and the FER policy implementation both provide important lessons learned in case the scope of the services is extended under Gavi 5.0, and the CCEOP provides a mixed experience in this regard. While the MOU8 provides a certain level of flexibility, the annexes of a potential new MOU could cater for reporting requirements, procedures and other operational additions, as is currently the case with MOU8, but also to include provisions to update and/or modify these requirements as needed (see Recommendation 6 in **chapter 5.1**). It is also important that the selection of KPIs is relevant for the activities covered under a new MOU with a focus on areas for improvement, including process and output, and with the provision of modifying the KPIs once performance is considered adequate. Fair consideration should be given to the potential expansion of scope within the context of the MOU, as well as to whether UNICEF SD is the most appropriate procurement partner, depending on the commodities foreseen under the new scope of Gavi 5.0 and given the current functional partnership (see considerations in **chapter 5.2**). With the expectation that increased scrutiny will be applied to the justification of the absolute fee, there is room for an in-depth review of the suitability of the current Fee Trigger Model, whereby consideration should be given to reflecting the level of effort and the level of remuneration. When maintaining the mechanism of a Fee Trigger Model, the definition of the triggers, their weight and interdependence merit a critical review (see recommendation 6 in **chapter 5.1**).

5 RECOMMENDATIONS

Based on the analysis of findings in response to the evaluation questions, the evaluation team formulated five recommendations. Of these, three relate to the work done by both agencies for vaccines and devices under the current MOU8, one relates to the CCEOP project under the current MOU8, and one is related to a potential new MOU for the next Gavi strategic period. The evaluation team considers four recommendations as essential to be addressed during the implementation of MOU8, and one recommendation in preparation for a next MOU. The recommendations for the current MOU represent optimisations in the current process rather than suggesting major changes to the MOU. In addition to these five essential recommendations, a number of suggestions for consideration are provided. These are considerations that the evaluation team identified as 'nice to have' for the current MOU as well as for the next iteration of the MOU.

In our view, some recommendations require immediate action, others are formulated with a longer-term view on the partnership. This is indicated by symbols of a rabbit for immediate action and a turtle for a longer-term perspective. The symbol of the owl refers to continued vigilance to maintain a performant partnership during next MOU (Gavi 5.0).

5.1 KEY RECOMMENDATIONS

 Immediate action  Longer-term perspective  Considerations for next MOU under Gavi 5.0

Vaccines and devices		
1	**Forecasting**: Consider a better aligned and optimised forecasting process, with the objective to make optimal use of all the data available across the Alliance. Even though Gavi Secretariat and UNICEF SD have different forecasting purposes, the same data should ideally be used to feed the forecasting process. Discussions between both agencies have been initiated recently to agree on an improved process. This is a low-cost recommendation not requiring any additional resources with potentially a high return through optimised forecasting.	 Gavi & UNICEF SD
2	**Data sharing:** Gavi Secretariat and UNICEF SD should discuss and agree on the data needs of the two agencies, their use, and ability to share relevant data for optimising MOU8 implementation between the two agencies, especially country-based data on stocks of vaccines and demand forecasting. This could be done through confidentiality arrangements or other sharing mechanisms discussed and agreed by the two agencies. Implementing this recommendation will facilitate the use of the same base data for forecasting, avoiding spending time on discussion which data are more accurate, and increase accuracy of forecasting. In case confidentiality agreements are in place between UNICEF and countries that may present obstacles in sharing of data, Gavi and UNICEF should formally request the countries that the relevant data can be shared, specifying the purpose which is to the country's benefit. Alternatively, when a confidentiality agreement is signed by UNICEF with a country, permission to share specific data with Gavi could be part of the agreement. If the above solution is not feasible, UNICEF and Gavi could discuss and share specific data in closed bilateral meetings. This is a low-cost recommendation not requiring additional resources beyond some travel costs and staff time, with potentially a	 Gavi & UNICEF SD

	high return through optimised forecasting (see recommendation 1). This could also be carried over to the planning of a next MOU.	
3	**Roadmaps and Procurement Strategies:** Consider re-assessing jointly the Roadmap and Procurement Strategy development process in order to determine if it would be desirable to harmonise certain aspects of the process, what the exact needs of both agencies are, and how it could be best harmonised. There should be a focus on added value of both documents, avoiding duplication of efforts. This is a low-cost recommendation not requiring any additional resources. This can be introduced during the remainder of the current contract and/or for the next MOU.	 Gavi & UNICEF SD
4	**Focal point:** At the Gavi operational level, consider appointing a focal person for the implementation of the MOU8. The Gavi focal person would have the Partnership Specialist at UNICEF SD as its counterpart. The evaluation team considers that the Gavi focal point is ideally positioned in the VFGO or in the Vaccine Implementation unit, which is part of Gavi's new Vaccine Supply and Demand Team. The focal point could function as a link between the various teams in Gavi that are involved in aspects related to the implementation of the MOU, including supporting and monitoring adherence to SOPs as well as ensuring appropriate communication channels. The focal point would ensure a strong linkage with the SCMs, ensuring that they have timely access to required information and understand the specificities of the MOU. The Gavi MOU8 focal point does not have to be a new cadre, nor does it require a FTE as this function can be carried out by one of the existing cadres. This coordination function is estimated to require 25% FTE. The key functions of the focal point should include: • Serve as between the various teams in Gavi that are involved in aspects related to the implementation of the MOU • Support and monitor adherence to SOP by relevant Gavi teams • Ensure appropriate communication channels between Gavi and UNICEF teams • Ensure a strong linkage with the SCMs, including that that they have timely access to required information and understand the specificities of the MOU • Face-to-face meetings and regular update calls with the UNICEF focal point to discuss implementation challenges of the MOU (could take place at least twice a year)	 Gavi
CCEOP		
5	**Monitoring CCEOP implementation for optimising performance:** Consider developing a results framework with agreed baselines values and targets. This will facilitate monitoring and recording of progress, avoiding future differences in perceptions on progress. This is a low-cost recommendation that can be introduced immediately. Agreement between UNICEF and Gavi on rate of progress made will help setting or adjusting feasible targets and developing appropriate solutions where necessary. At best, the results framework is developed together with the VfM framework (see consideration 3).	 Gavi & UNICEF SD
Potential new MOU for Gavi 5.0		
6	**a. Review of legal framework:** In line with the flexibilities identified for the current MOU, consider a broad review of the structure and legal framework of the MOU, focusing on integration of the minimum required legal conditions in the main text of the MOU. Reporting requirements, procedures as well as other possible technical or	

	operational additions to the MOU should be covered in annexes (as is the case currently), but provisions should be made to update and/or modify these requirements as needed during the time the MOU is valid. **b. Review of the Fee Trigger Model** - *Vaccines and devices*: There is room for a review of the Fee Trigger Model including assessing options for reflecting the level of effort and level of remuneration. Should the Fee Trigger Model continue to be found suitable, consider reviewing the definition of the triggers (e.g. expected increased complexity in country and vaccine portfolio, etc.), their weight and interdependence. - *CCEOP:* Consider to carefully reviewing the suitability of the Fee Trigger Model for CCEOP. The added value of the current model is not fully clear and a simplified fee calculation based on level of effort may be considered.	Gavi & UNICEF SD
Suggestions for consideration - Current MOU8 and potential new MOU		
1	**Reporting needs and KPIs** **a.** Consider re-assessing the reporting needs at both agencies. Without changing the contents of the MOU8 and its annexes, the evaluation team is of the opinion that the current reporting can be simplified (scope of content, detail and frequency). Reducing the level of effort of reporting and ensuring that reported data are used for performance assessment and/or decision-making is a win-win for both agencies; and reduce some reporting costs. Considerations could be made to distinguish between reporting within the context of the MOU, and more "ad-hoc" requests from the Board. This can be introduced during the remainder of the current contract and/or for the next MOU. **b.** Consider to review the KPIs for vaccines and devices. It is important that the selection of KPIs cover processes and outputs, and focus on areas for improvement. There should be a provision to modify them once performance of a specific KPI is considered adequate. Some suggestions for KPIs include on-time deliveries, and forecast accuracy, among others. Addressing the KPIs during MOU8 implementation can help preparing the selection of KPIs for a next MOU. **c.** It is recommended for Gavi Secretariat to explore the use of a software like Power BI, which UNICEF SD also uses and provides appropriate functionalities to automate certain reporting.	 Gavi & UNICEF SD
2	**Extended services:** If other services or commodities are added to the Gavi portfolio (VIS, YF diagnostics, others), it is recommended to systematically review whether UNICEF SD would be the most appropriate procurement agency (as is the case in the current strategic partnership) and how its services could best be organised under the new MOU or whether the use of a different contract modality should be considered.	 Gavi
CCEOP		
3	**VfM Framework:** Consider reviewing and deciding on the proposed VfM framework and the proposed VfM indicators, including those on sustainability. Some of the VfM indicators can be monitored as part of the KPIs.	 Gavi & UNICEF SD

4	**Learn from experience**: Taking advantage of the ongoing work of the JSI evaluation, which will provide further insights in the key challenges and how these are being addressed, to organise a joint self-reflection exercise towards the end of the MOU8. This will allow to build on evidence from the previous evaluations as well as to update the results framework.	 Gavi & UNICEF SD

5.2 SUGGESTIONS FOR CONSIDERATION

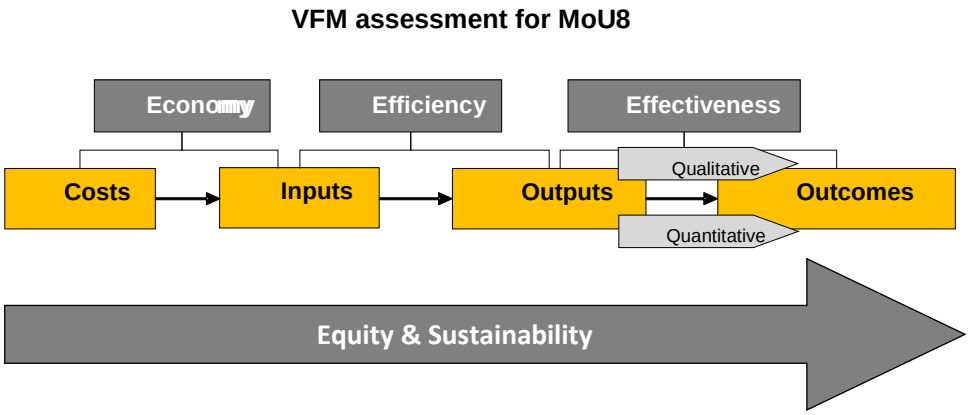
Current MOU8 and potential new MOU		
1	**Reporting needs and KPIs** **a.** Consider re-assessing the reporting needs at both agencies. Without changing the contents of the MOU8 and its annexes, the evaluation team is of the opinion that the current reporting can be simplified (scope of content, detail and frequency). For example, the requirement to report on the evaluation of a full tender process does not seem to be fully justified anymore (see Chapter 3.1.1.5). Reducing the level of effort of reporting and ensuring that reported data are used for performance assessment and/or decision-making is a win-win for both agencies; and reduce some reporting costs. Considerations could be made to distinguish between reporting within the context of the MOU, and more "ad-hoc" requests from the Board. This can be introduced during the remainder of the current contract and/or for the next MOU. **b.** Consider to review the KPIs for vaccines and devices. It is important that the selection of KPIs cover processes and outputs, and focus on areas for improvement. There should be a provision to modify them once performance of a specific KPI is considered adequate. Some suggestions for KPIs include on-time deliveries, and forecast accuracy, among others. KPIs require regular monitoring, at least annually, with a view to address those that are performing below par. KPIs that continuously perform very well can be replaced by others, reflecting areas where performance can still be improved. Preferably, the review and selection of KPIs could still be done for the current MOU8 as it does not require any changes to the current MOU8. Addressing the KPIs during MOU8 implementation can help preparing the selection of KPIs for a next MOU. Implementing this recommendation is a low-cost effort that will improve monitoring of results under the MOU. **c.** It is recommended for Gavi Secretariat to explore the use of a software like Power BI, which UNICEF SD also uses and provides appropriate functionalities to automate certain reporting. This is a low-cost recommendation facilitating internal use of data for decision-making.	 Gavi & UNICEF SD
2	**Extended services:** If other services or commodities are added to the Gavi portfolio (VIS, YF diagnostics, others), it is recommended to systematically review whether UNICEF SD would be the most appropriate procurement agency (as is the case in the current strategic partnership) and how its services could best be organised under the new MOU or whether the use of a different contract modality should be considered.	 Gavi
CCEOP		
3	**VfM Framework:** Consider reviewing and deciding on the proposed VfM framework and the proposed VfM indicators, including those on sustainability. Some of the VfM indicators can be monitored as part of the KPIs.	 Gavi & UNICEF SD

4	**Learn from experience**: Taking advantage of the ongoing work of the JSI evaluation, which will provide further insights in the key challenges and how these are being addressed, to organise a joint self-reflection exercise towards the end of the MOU8. This will allow to build on evidence from the previous evaluations as well as to update the results framework.	 Gavi & UNICEF SD

ANNEX 1 – PROPOSED FRAMEWORK FOR VALUE FOR MONEY ANALYSIS

The Value for Money (VfM) approach that the evaluation team adopted is a concept that has been developed and applied extensively in projects and programmes. The specific VFM framework used was adopted from the DFID recommendations on VfM assessment of the results chain[8]. The principles of VfM are drawn from the need to optimise the impact or added-value of a dollar ($) spent in any given project or programme. The central notion in the adopted VfM analysis is to assess if the goods and services deployed yield maximum benefits. The figure below shows the conceptual framework applied in assessing the VFM status under MOU8.

Figure 4 - Conceptual Framework Value for Money



The conceptual framework assesses not only the inputs to the project, but also how the implementation has been efficient and effective. The table below summarises the key components of the framework and frames the questions to be answered.

Table 14 - The four E's plus Cost-effectiveness for VfM

The four E's plus Cost-effectiveness				
Economy *Are the inputs (or agents) procured at the right price?*	***Efficiency*** *How well are we (or our agents) converting inputs into outputs? (Spending well)*	***Effectiveness*** *How well are the outputs from the project achieving the intended effect? (Spending wisely)*	***Equity & Sustainability*** *How fair are the benefits distributed? To what extent will the project reach marginalised groups? How sustainable is the adopted approach? (Spending fairly)*	***Cost-Effectiveness*** *What is the ultimate impact in health-related mortality and morbidity relative to the level of investment made?*

[8] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/49551/DFID-approach-value-money.pdf.

UNICEF SD and Gavi do not track VfM indicators under the MOU. Available information and reports are not structured in a way allowing a VfM analysis. Therefore the evaluation team has framed the VfM analysis on its understanding of MOU8 and what has realistically been possible in terms of data availability. Based on the above conceptual framework, the KIIs and document review, the evaluation team framed the VfM analysis around the following key concerns of MOU8:

- How sufficient are the current fees for MOU8 (both CCEOP and Vaccines)
- Does the procurement agency have sufficient capacity to deliver the desired programme?
- How efficient is the current delivery?
- Does the impact achieved warrant the level of investment when compared to other alternative competing demands in the same development sector?
- How equitable and sustainable is the adopted approach?

The subsequent sections will provide the narrative on how the VfM framework could look like in the context of MOU8.

a. Framing Economy indicators

The objective is to assess whether the inputs to the project and/or programme are obtained at the right price. The main inputs to the MOU8 are human resources, and commodities and services procured: vaccines, devices and cold chain equipment and service bundles.

Table 15 - VfM Economy Indicators

Vaccines and Devices Measures	CCEOP Measures
• Fees • Selected vaccine prices • Selected devices prices	• Fees • Selected CCE prices • Service Bundles costs

UNICEF SD receives a fee for the services rendered to Gavi. In the absence of visibility on how exactly the information of numbers of staff and skills set for each project is being applied, the proposed **fees** as proxy measures are adopted to estimate the human resources input into MOU8. A **trend analysis** of the fees can be performed and reported. In addition, **a benchmarking analysis** can be done against the alternative procurement agencies or against other procurements within UNICEF SD. These analyses can be done to **quantitatively** make a judgment on how comparable the fees are overtime and against existing alternatives. A **qualitative** review of the Fee Trigger Model can help provide justification on how sufficiently the drivers reflect the required level of effort. This qualitative analysis may include a review of **suitability** of drivers and **associated weight value judgment** for the trigger model. Another key input to the MOU8 includes the actual procurement. A **quantitative** trend analysis or benchmarking analysis can be performed for the vaccines, devices, CCEs and service bundles. These can be reported by UNICEF SD annually.

b. Framing Efficiency indicators

Efficiency measures how the inputs are converted into outputs. In the presence of proposed KPIs and existing process measures the evaluation team proposes key implementation steps that are being monitored. This evaluation identified the following key steps worth tracking under the MOU8, and this list is based current progress and proposed efforts going forward.

Table 16 - VfM Efficiency Indicators

Vaccines and Devices Measures	CCEOP Measures
• Fees paid as a proportion of the actual value of vaccines delivered for the same year. • PO turnaround time for vaccines and devices • Authorisation Schedule turnaround time analysis	• ODP turnaround time for CCEOP project • PO turnaround time for CCEOP project • Number of new market entrants for CCEs each year • Proportion of distribution of CCEs per supplier each year • Cumulative percentage of CCEs with PO issued each year. • Percentage CCEs deployed and installed each year. • RFP to Arrival turn-around time benchmark analysis • Decision Letter turn-around time benchmark analysis • Gavi funding release turnaround time analysis • Percentage of service bundle contracts below the benchmark. • Total potential savings from negotiated service bundles by UNICEF SD.

c. Framing Effectiveness and Cost Effectiveness indicators

It is important to understand how the investment is positioned to achieve the broader funding goals such as reduction in associated morbidity and mortality, coupled with the wider view around alternative use of the resources. Therefore an estimation of how the overall investment compares with alternatives in terms of cost per DALYs will benefit the VfM analysis. A cost per DALY would need to be estimated and compared against alternative investment options in the broader health sector. Unfortunately there is no baseline nor target set for this project and/or programme, therefore this may need to be estimated at the end of MOU8 and compared against WHO benchmarks/thresholds. Similarly, for CCEOP, the evaluation team is of the view that suitable outcome/impact measures would need to be developed. An example could be the potential savings made by the improvement of storage and cold-chain facilities for vaccines at country level. These could be quantified, valued and compared to the level of investment made by Gavi. The evaluation team proposes this to be done after sufficient implementation has been achieved at country level.

Table 17 - VfM Effectiveness and Cost-Effectiveness Indicators

Vaccines and Devices Measures	CCEOP Measures
• Cost per DALY	• Impact of CCEOP - Potential savings from CCEOP implementation

d. Framing Equity and Sustainability indicators.

The equity indicator measures social or distributive justice in allocation of resources. In MOU8, the CCEOP project is not designed to address these social or distributive disparities. Vaccines and devices can however be monitored for equitable implementation through the FER policy. The sustainability indicator can indirectly be monitored through a proxy measure on co-financing defaulter rates.

Another measure of equity in resource allocation is a **qualitative** description of socio-economic status of countries exempt from co-financing. Other possible indicators might include the proportion of countries using domestic resources for co-financing and/or joint investment.

Table 18 - VfM Equity and Sustainability Indicators

Vaccines and Devices Measures	CCEOP Measures
• Qualitative summary of countries benefiting from FER policy. • Proportion of countries defaulting from co-financing obligations. • Qualitative review of the SES of countries exempted from co-financing obligations. • Proportion of countries using domestic resources for co-financing.	• Proportion of countries using domestic resources for CCEOP joint-investment.

ANNEX 2 – EVALUATION OBJECTIVES AND QUESTIONS

Evaluation Questions
Objective 1: Evaluate the performance of UNICEF, as a procurement agency for vaccines, devices and cold chain equipment for Gavi, the Vaccine Alliance, as per the MOU8
Assessment of UNICEF performance under MOU8 as procurement agency for Gavi
1.1 To what extent are the processes outlined in the MOU8 being adhered to? (Annexes 1-5)
1.2 To what extent is UNICEF meeting or making progress toward meeting the KPIs and other obligations as outlined in the MOU8?
1.3 What factors enable/d adherence to the obligations set out in the MOU, and what factors hinder/ed meeting obligations as outlined in the MOU8?
1.4 To what extent did/do UNICEF's procurement strategies align with relevant Gavi Supply and Procurement Roadmaps, or as agreed between the parties for that Designated Product: - In case a specific UNICEF strategy is not aligned with the Gavi Roadmaps, explain the reasons why? - To what extent have Gavi Roadmaps been utilised to inform UNICEF Procurement Strategies and outcomes of tenders? - Where are there efficiencies that could have been gained? - How have PRGs been used to inform and guide the procurement process?
Update of 2013 BCG Analysis on VfM focusing on efficiency and effectiveness: assess if the results and assumptions are still valid
1.5 Since the Benchmarking Study conducted in 2013, have there been any significant changes within the landscape of procurement processes and/or agencies that should be considered for vaccine supply and procurement?
1.6 Do general procurement fee trends align with UNICEF's fee for the obligations as set out in the MOU8 for the supply and procurement of vaccines and vaccine related supplies?
1.7 How has the level of complexity/requirements in UNICEF's procurement portfolio evolved? What measures has UNICEF taken to respond to these changes?
CCEOP: Desk review of existing studies to date, progress to date, and optimisation activities, across the Alliance partners with recommendations for next steps
1.8 Are the MOU8 processes and KPIs right-fitted for the CCEOP project?
1.9 Synthesis of the results of the other studies conducted (or underway) to date. How have Gavi, UNICEF and Alliance partners responded to recommendations from these studies?
1.10 Have any of the optimisations led to initial improved results, recognising this is early in the initiative? What further actions are needed?
1.11 What are the recommendations for next steps and scope for future evaluations?
1.12 Based on the existing evidence and studies to date, what is the initial assessment of, or progress toward, VfM at this stage of the CCEOP project? What should be the focus of a future in-depth VfM assessment of CCEOP?
Objective 2: Evaluate effectiveness and efficiency of the changes made to the MOU as the result of the improvement initiatives identified during the previous evaluation to achieve expected outcomes
Evaluate the effectiveness & efficiency of the changes made to the MOU as the result of the improvement initiatives
2.1 To what extent have the improvement initiatives resulting from the 2013 BCG report been implemented by Gavi and UNICEF? (e.g., forecasting, authorisation and approvals process for vaccines and devices, KPIs)
2.2 To what extent have these improvement initiatives implemented by Gavi and UNICEF yielded expected results?
2.3 Have these improvements (new processes, etc.) achieved the intended goals of increasing efficiency and effectiveness?
2.4 What challenges still remain?
2.5 To what extent are the roadmaps and the Roadmap process led by Gavi to implement them efficient, developed in a timely manner, strategically linked and addressing key topics?
Objective 3: Review, in the context of key focus and investment areas of Gavi, if the design of the MOU is fit for purpose and leverages the full scope of expertise in supply and procurement through UNICEF.

Evaluation Questions
Assess fit-for-purpose of MOU8 during Gavi 4.0, including if the MOU can accommodate new policies and expansion of scope of Gavi portfolio during Gavi 4.0
3.1 What recommendations for improvements or changes to the MOU should be considered at this mid-way point in the agreement? • Forecasting, including Gavi's operational forecast, UNICEF support to countries on forecasting, planning, and procurement • Co-financing and UNICEF's monitoring support • Structure/design to enable flexibility to adapt to changes and emerging needs (e.g., policy changes, procurement and market shaping needs, any VIS implications that would take effect during Gavi 4.0, and other areas to be further identified)
3.2 How enabling, efficient, and flexible is the MOU8 structure to lead to improved performance and increased efficiencies, and to accommodate a changing environment or portfolio expansion? (e.g., Fragility, Emergencies, Refugees Policy; Engagement with Countries Post-Transition).
3.3 How can communication and process streams be optimised to increase efficiency as reflected in the processes in MOU8? How do partners view the working relationship surrounding the MOU8?
Assess fit-for-purpose of MOU8 against possible scope of Gavi 5.0
3.4 What are the recommendations for improvements or changes to the MOU in consideration of the potential strategic focus areas for Gavi 5.0?
3.5 Should the Trigger Model for the Handling Fee calculation be reviewed/changed in reflection of the recommendations and/or considerations for Gavi 5.0/post-2020?

ANNEX 3 – BIBLIOGRAPHY

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ANNEX 4 – QUANTITATIVE ANALYSIS TABLES

Table 19 - VAR analysis

VAR analysis	2016	2017	2018
Number or shipments	2,619	2,504	2,627
Number of VAR received	2,548	2,450	2,599
Percentage of VAR received	97%	98%	99%
Number of VAR received within 72 hours	936	1,031	1,416
Percentage of VAR received within 72 hours	37%	41%	56%
Average number of days to receive the VAR	21	14	-

Source: UNICEF SD annual reports 2016 and 2017 to Gavi

Table 20 - Timeliness and completeness of Cash Management Plans (2016-2018)

Quarter	Available	Timeliness	Completeness
2016			
Q1	Yes	23 March 2016 (Yes)	Yes
Q2	Yes	4 July 2016 (No)	Yes
Q3	Yes	13 Oct 2016 (No)	Yes
Q4	Yes	29 Dec 2016 (Yes)	Yes
2017			
Q1	Yes	29 March 2017 (Yes)	Yes
Q2	Yes	27 June 2017 (Yes)	Yes
Q3	Yes	10 Oct 2017 (No)	Yes
Q4	Yes	22 Dec 2017 (Yes)	Yes
2018			
Q1	Yes	26 March 2018 (Yes)	Yes
Q2	Yes	22 June 2018 (Yes)	Yes
Q3	Yes	24 Sept 2018 (Yes)	Yes
Q4	Yes	-	-

Source: UNICEF SD and Gavi reports 2016, 2017 and 2018

Table 21 - Timeliness of monthly co-financing monitoring report (2016-2018)

Month	2016	2017	2018
January	N/A	Yes	Yes
February	N/A	Yes	Yes
March	Yes	Yes	Yes
April	No	No	Yes
May	Yes	Yes	Yes

Month	2016	2017	2018
June	Yes	Yes	Yes
July	Yes	Yes	Yes
August	Yes	No	Yes
September	Yes	No	Yes
October	Yes	Yes	No
November	Yes	Yes	Yes
December	Yes	Yes	Yes
Average on-time	90%	83%	92%

Source: UNICEF SD co-financing monitoring reports 2016, 2017 and 2018

Table 22 - Timeliness of six-monthly reports (2nd semester 2016 - 1st semester 2018)

Bi-annual report	Due	Submitted
2nd semester 2016	28 Feb	3 March
1st semester 2017	31 July	1 Aug
2nd semester 2017	28 Feb	28 Feb
1st semester 2018	31 July	1 Aug

Source: UNICEF SD six-monthly reports 2016, 2017 and 2018

Table 23 - Completeness of the annual reports (2016 - 2017)

Information	2016	2017
Progress on ensuring that quality vaccines are available for consistent uninterrupted supply	+	+
Progress made on fostering an environment for innovative vaccines adapted to country needs	+	+
Communication of timely, transparent and accurate market information	+	+
Data on Gavi-funded vaccine shipments delivered to countries as confirmed through VARs received	+	+
Timeliness of shipment by UNICEF	+	+
Number and percentage of shipments with temperature deviations	+	+
Number and percentage of shipments with other significant finding or deviations that may have implication on vaccine quality	+	+
Number and percentage of shipments rejected by a government	+	+
Information on delays in vaccine being cleared through customs or delays in moving vaccines from the arrival point to central stores	+/-	+/-
Information on each delay over 45 days due to a supplier cause, including vaccine and presentation	+	+

Information	2016	2017
affected, number of days delayed and whether supply was required from another manufacturer		
Manufacturer origin: 1) highest level country of ownership or headquarters location, and 2) country of production	+	+
Price per dose: lowest, WAP, highest, if published on time	+	+
Price per course: lowest, WAP, highest, number of doses per course	+	+
Volumes offered, predictable demand, high demand in RFP, awarded, procured (based on PO placed) and delivered (based on VARs)	+	+
Value USD delivered (based on PO placement)	+	+
Summary of interruptions in supply during the reporting period greater than one month that required changes to shipment plans and/or allocations to other manufacturers	+/-	+/-
Details provided regarding quantity of each vaccine by activity type (stockpiles, campaigns and routine)	+	+
Actual and projected WAP of each vaccine for the previous year and the projected WAP for the following year	+	+
Specific Market Updates by vaccine type: explanation on the situation with regards to WAP, comment on movement of price versus previous year actual and previous year forecast, actual magnitude verses projected price movement	+/-	+/-
Security of supply: number of products offered in response to tenders (including WHO PQ and non PQ)	+	+
Obtaining best value for freight: summary analysis of freight costs by vaccine type each year	+	+
Demand forecasting: comparison of forecasted quantities, by type of vaccine and by year, with actual number of doses procured based on PO delivery date, and considering demand scenarios	+	+
Healthy Market: for each designated vaccine, a commentary on market evolution and an overview of the supply arrangements established to support the objectives	+	+
On-time delivery performance: commentary on overall on-time delivery performance by the supplier (disruptions caused, reallocation or amendment needed, causes for major or consistent delays)	+	+
AD Syringes and safety boxes: lowest / WAP / highest price, total volumes procured, total value procured	+	+
Vaccine shipments: information to flag any incidents or occurrences that fall outside of expected or normal procedures or course of events that Gavi should be aware of	+	+

(+) data available in report (+/-) most of the data available in report - Source: UNICEF SD annual reports 2016 and 2017

The following explanations are provided regarding the contents marked +/-

- *Information on delays in vaccines being cleared through customs or delays in moving vaccines from the arrival point to central stores*: The annual reports contain the information about clearance and inspection, but do not include information about delays from the arrival point to central medical stores.
- *Summary of interruptions in supply during the reporting period greater than one month that required changes to shipment plans and/or allocations to other manufacturers*: A real summary is not provided, although the reports contain information about this in the narrative text.
- *Specific Market Updates by vaccine type: explanation on the situation with regards to WAP, comment on movement of price versus previous year actual and previous year forecast, actual magnitude versus projected price movement:* The information is largely being reported on in the "Healthy Market update", although this has not all the information as per the description. Most of the required information is however included in the different narrative parts of the report.