INTERNAL AUDIT
IT Projects Audit Report
JULY 2018

Conclusion

Our audit procedures were designed to provide assurance to management and the Gavi Board on the adequacy and effectiveness of the key controls in the processes related to management of IT Projects (i.e. mission-focused systems solutions).

The role of management of IT Projects is undertaken by the Knowledge Management and Technology Solutions team (KM&TS). The IT projects are a mix of mission-focused solutions to support coverage, equity and sustainability, knowledge management initiatives, and technology infrastructure projects. Some of the key processes being undertaken by the outsource service provider include: soliciting and defining business requirements, analysis, design, software development, testing, deployment, project closure, and overall project management. From 2015 to 2017, the overall project portfolio had 37 projects. Gavi invested $5.8M in 2016 with an additional $5.4M forecast in 2017 in new and enhanced technology solutions. As per the IT outsourcing strategy agreed in 2015, Gavi paid $4.4 million in 2016 with an additional $4.1 forecast in 2017 to an outsourced service provider for delivery of projects. Other lower value projects were outsourced to other providers during this time.

Through our audit procedures, we have identified high risk issues related to the process of prioritisation of IT projects, the oversight process of IT projects including software development, the process of monitoring, control and reporting of IT project costs, value for money and the reasonableness of IT project costs and the quality assurance process.

Following this audit, management is undertaking various remedial actions to address these issues.

Key Internal Audit Issue Summary

Issue Description	Rating	Ref	Page
There is need to develop and implement a formal IT projects prioritisation process	H	1	3
The Knowledge Management & Technology Solutions team is performing incompatible functions as both IT project sponsor and project manager	H	2	4
The process of monitoring, control and reporting of IT project costs needs to be enhanced	H	3	5
The oversight process of the software development process needs to be enhanced	H	4	7
Reasonableness of IT project costs and value for money	H	5	10
The process of IT project quality management needs strengthening	H	6	12

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Summary of Key Issues Arising

Through our audit procedures, we have identified high risk issues relating to the prioritisation process of IT projects, the oversight process of IT projects and software development, the monitoring, control and reporting of IT project costs, reasonableness of IT project costs and quality assurance as summarised below.

There is need to develop and implement a formal IT projects prioritisation process.

Gavi's uses a knowledge governance model which does not have a formalised and robust IT project prioritisation matrix for evaluation and prioritisation of IT project requests. Therefore it is difficult to independently assess whether Knowledge Management & Technology Solutions (KM&TS) team is selecting and focusing on the 'right' IT projects. An enhanced assessment model may include considerations such as: contribution to strategy, potential cost savings over say the next 3-5 years, technology alignment, resource requirements, execution risk, payback period, etc.

The KM&TS team is performing incompatible functions as both IT project sponsor and project manager.

To ensure effective oversight and accountability in project management, there should be clarity of roles and responsibilities and adequate segregation of duties especially between the project sponsor champion and the project manager. Currently, in certain situations where no clear business sponsor exists or in pure infrastructure projects, KM&TS plays the dual role of project sponsor champion (i.e. determine budget, provide funding, approve project) and project manager (i.e. monitor progress, process change requests from business users, manage costs and report on these, evaluation of projects).

The process of monitoring, control and reporting of IT project costs needs to be enhanced.

Gavi lacks the industry standard financial systems necessary for project accounting. As such, KM&TS must leverage manual, error prone processes to manage project budgets. Currently, financial control is managed at a cost centre level. At that level, reasonable controls exist, however the risk of projects exceeding cost estimates is high. The following gaps were identified during the review of the process of monitoring, control and reporting of IT project costs:

- IT project budgets are not defined up front in the business cases and in ServiceNow;
- There is limited visibility on the cost out turn relative to the budget. This was neither disclosed nor reported to the business owners during project implementation for the sampled projects;
- The actual project costs reported for the closed projects in ServiceNow and to senior management were incomplete for the sampled projects;
- There is no consistent structure for reporting the projects (including costs against the budgets); and
- The accountability and oversight mechanism is not robust (e.g. there was no dual budget accountability and cost sharing between KM&TS and the business owners).

The oversight process of software development needs to be enhanced

Gavi's technology strategy focuses on outsourcing commodity skills while retaining Gavi specific technology expertise in-house. As part of this strategy, Gavi outsources commodity software development and project management functions to a third party service provider. From 2015 to 2017, the overall project portfolio had 37 projects (25 closed and 12 open). In the same period, Gavi paid $10.2 million (includes $8.5 million paid in 2016 and 2017) to the service provider while engaging other service providers for more low value specialised engagements. We identified the following gaps in the oversight process of the key outsourced processes:

- There is inadequate segregation of duties in the software development process. The entire software development process is managed by the service provider (i.e. developers, business analysts and project managers) including soliciting and defining business requirements, analysis, design, development, test, deployment, closure and enterprise architecture. The lack of adequate duty segregation in this process is not compensated for by a formalised/robust oversight process within KM&TS which may be having an impact on the cost of IT projects; and
- The role of independent technical oversight and quality assurance of IT projects is undertaken by the service provider (i.e. through a consultant based at Gavi) as opposed to someone who is independent of the service provider.

Reasonableness of IT project costs[1] and value for money

The first version of the VI Replacement project whose estimated cost in 2015 and 2016 was $300,000[2], failed to meet the critical business requirements due to lack of

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[1] IT project costs were extracted from KM&TS reports shared with senior management.

[2] Allocation of costs to individual projects did not follow a systematic and rigorous process.

Summary of Findings

effective engagement with the business owners from the outset. The project was closed without Gavi achieving the full value of the investment.

The first and second versions of the Country Dashboard project which had an estimated cost of $700,900[2] (i.e. from 2015-2017) did not meet the business requirements and were closed without Gavi achieving the full value of the investment. Version 3 of the project was still on-going at the time of the audit.

In addition, it is difficult to assess the reasonableness of the estimated amount spent on the Issue Resolution Tool and the Performance Framework project of $955,000[2] and $730,000[2] respectively (currently under deployment stage in service now). The key information related to the projects is not readily available including the budget (cost and time) and actual time spent from project start to project end except through the system of record for time tracking which has some data quality issues.

The process of project quality management needs strengthening.

The process of IT project quality management (i.e. quality planning, quality assurance and quality control) at Gavi needs to be strengthened. Review of the sampled projects revealed that the Performance Framework project was introduced into the 'live' environment before being subjected to comprehensive quality assurance and testing to ensure it meets business requirements. This resulted in a significant number of bugs being registered by the business users which increased the cost of the project.

Other Issues identified

Other medium rated issues identified during the audit are detailed in Appendix 1.

Background

In 2015, Gavi started changing its processes in order to align them with the 2016-2020 strategic vision. One of the key changes was the creation of the department of Public Engagement and Information Services which includes the Knowledge Management and Technology Solutions team (KM&TS). The KM&TS team plays the following main roles:

- Providing mission-focused solutions to support coverage, equity and sustainability;
- Providing Secretariat knowledge solutions which enable easier access to knowledge necessary for staff to do their jobs; and

- Enabling technology and operations which focuses on core infrastructure, security, and help desk solutions.

Gavi's technology strategy focuses on outsourcing commodity skills while retaining Gavi specific technology expertise in-house. As part of this strategy, in 2015 Gavi outsourced commodity software development and project management functions to a third party service provider. The third party provides multiple services to Gavi including software development, project management, and help desk solutions. From 2015 to 2017, the overall project portfolio had 37 projects (25 closed and 12 open). In the same period, Gavi paid $10.2 million to the service provider for project delivery services. During this same time, other service providers were contracted for more low value specialised work.

Audit Objective

Our audit assessed the adequacy and effectiveness of the key controls in the processes related to management of IT projects.

Audit Scope and Approach

The audit reviewed a sample of IT projects initiated and/or delivered in 2016 and 2017.

Our audit approach which is risk based included interviewing relevant Secretariat teams, reviewing documentation, performing process walkthroughs, assessing the design and operating effectiveness of key controls, substantive testing (on a sample basis) and assessing the governance and risk management processes.

Please note that the following areas were excluded from the audit scope:

- IT security;
- Software development (outsourced);
- Outsourced IT services and cloud computing;
- IT budget preparation; and
- Project accounting (Finance, fixed assets)

We will continue to work with management to ensure that these audit issues are adequately addressed and required actions undertaken.

We take this opportunity to thank the KM&TS team for their assistance during this audit.

Head, Internal Audit

Appendix 1: Detailed Findings and Recommendations

Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
1	High	**There is need to develop and implement a formal project prioritisation process** Project prioritisation is vital for any organisation in order to achieve its goals and targets. It is critical to spend time on the prioritisation and selection of projects and proposals in order to find the 'right' projects for the organisation which provide the required return on its investment. The prioritisation criteria may include considerations such as contribution to strategy, cost savings over the next say 3-5 years, resource requirements, execution risk and payback period among others. Our review and discussions with relevant stakeholders revealed that Gavi does not have a formalised and robust IT project prioritisation matrix for evaluating business requirements and change requests (there is an assumption that GAMR is performing this role for all projects across Gavi, however this cannot be evidenced). Therefore it is difficult to assess	Management may not be selecting and focusing on the IT projects which address the critical needs of Gavi	The IT project prioritisation process should be formalised. The prioritisation criteria may include considerations such as contribution to strategy, cost savings over the next say 3-5 years, resource requirements, execution risk and payback period among others.	Gavi has a planning process which outlines the proposed technology projects for the coming year. This process is built in to the Gavi budget process and is aligned with the Gavi Team Performance Management processes to ensure visibility to the priorities. This work culminates in the creation of a Business Delivery Agreement which outlines the high-level requirements and value proposition for initiatives in the coming year. In addition to this process, in June 2018, KM&TS will further strengthen this process by proposing a more continuous project approval governance board which reviews project based on business cases which demonstrate value for money. Further, KM&TS will create a matrix which will outline the key criteria for assessing project proposals business	MD, PE&IS CKO (KM&TS)	Q2/Q3 2018	Pending verification by Internal Audit.

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		whether the right projects are selected and focused on which address the critical needs of Gavi. We observed weaknesses in project planning, project governance and risk management processes when reviewing the four sampled projects.			cases to ensure value for money.			
2	High	**The KM&TS team is performing incompatible functions as both IT project sponsor champion and IT project manager** In project management, it is best practice to have clarity of roles and responsibilities and adequate segregation of duties especially between the project sponsor champion and the project manager to ensure effective oversight. Under the current set up, KM&TS plays the dual role of project sponsor champion and project manager. As the project sponsor, the KM&TS team determines the IT project budget including providing funding, and then approves the project without a formalised and robust prioritisation matrix.	The accountability and oversight process of IT projects may not be effective	1. Management should define the KM&TS team's role in project management in the IT policy and/or Standard Operating Procedures. 2. Management should consider segregating the incompatible functions being performed by the KM&TS team to address the highlighted risk regarding accountability and oversight.	KM&TS (CKO) currently performs the role of project sponsor where there is no logical business sponsor or where the projects are specifically infrastructure related. Going forward, this role will be performed by the MD, PE&IS. All other Gavi related projects will have a sponsor who sits outside of KM&TS. This will be enforced by the updated project approval governance process. KM&TS has created a policy governing business sponsorship to be approved by the Executive team.	MD, PE&IS CKO (KM&TS)	**Q2/Q3 2018**	Pending verification by Internal Audit.

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		As project manager, the KM&TS team monitors progress of projects, reviews and approves change requests from business users, manages and reports internally on project costs including progress against plan and conducts evaluation of projects (assessing how well they are managed). Given the role of KM&TS as the IT project sponsors and the lack of strong budget management at a project level and visibility with the business users (who request for the projects), the accountability and oversight mechanism regarding overall project management including evaluation of cost variance to original plan envisaged and as set out in the business case or project plan is weak.						
3	High	**The process of monitoring, control and reporting of IT Project costs needs to be enhanced** We observed the following during the review of the sampled projects: a) The project budgets were not defined up front in the business cases and in ServiceNow (i.e.	Management may not be monitoring and controlling IT projects costs effectively.	1. Ensure project budgets are defined from the outset in the business cases and in ServiceNow (i.e. under the concept and planning module - cost and effort overview).	The lack of project accounting systems at Gavi limit the ability of any team to manage project budgets. The scope of the current FIND program (financial system implementation) includes the delivery of a project accounting module which can be used to	MD, PE&IS CKO (KM&TS) MD, F&O	December 2019	

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Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
	██████	under the concept and planning module - cost and effort overview) b) The current reporting process does not provide full visibility of all the project costs and therefore not very transparent (i.e. it is difficult to assess the completeness of costs and determine the actual cost of the project. This was noted in all the sampled projects). There is limited visibility on the project budgets and actual costs. It is unclear whether the costs reported included costs other than consulting, such as internal employee costs, software purchases, license fees and other indirect costs. We confirmed with business owners interviewed that the project budgets and costs were not disclosed and reported to them during the implementation of the projects to help them understand the total cost of these projects c) The actual project costs reported for the closed projects in ServiceNow (i.e. under the concept and planning module - cost and effort overview) and to		2. Ensure that the actual project costs reported for the closed projects in ServiceNow and to senior management are complete (i.e. incorporate all the costs related to the project) 3. Management should define the project budget and cost management, control and reporting in the Standard Operating Procedures in liaison with the Finance team and ensure compliance with the procedures.	manage Secretariat project budgets. Despite the lack of organisation systems, KM&TS has put in place manual, time consuming solutions to track and report project financials. The limitations of the financial data create inconsistent visibility to project costs. Nonetheless, as described in the Business Delivery Agreements, high level project estimates are created and shared as part of the prioritisation process. It is agreed, though, that stronger project accounting is necessary. Once the FIND program installs the project accounting system, the KM&TS will work to be the first team to operationalise the new capability. In addition, earlier on, the KM&TS team will work to mitigate this risk in the short term through a set of compensating controls which would less the			

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		senior management were incomplete d) There was no consistent structure for reporting the projects (including costs against the budgets). We confirmed that different reporting structures and currencies were used in the reports shared with senior management (e.g. use of both CHF and USD, without consistent exchange rate consideration) e) The accountability and oversight mechanism was not robust (e.g. there was no dual budget accountability and cost sharing between KM&TS team and business owners. The KM&TS team was responsible for the project budgets and costs with oversight at Executive levels but not at project level.).			potential impact.			
4	High	**The oversight process of software development needs to be enhanced** Gavi's technology strategy focuses on outsourcing commodity skills while retaining Gavi specific technology expertise in-house. As part of this strategy, Gavi outsources	Gavi may not be able to effectively control IT projects costs (i.e. given that definition of business requirements,	1. Strengthen Gavi's oversight of the development process of software solutions to mitigate the highlighted risks (e.g. ensure the oversight process is undertaken by	The audit was conducted just after the 2017 KM&TS re-organisation which has addressed these findings. At the time, the positions were being recruited and as such, temporary consultants were filling the role.	MD, PE&IS CKO (KM&TS)	December 2017	Pending verification by Internal Audit.

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	 	commodity software development and project management functions to a third party service provider. From 2015 to 2017, the overall project portfolio had 37 projects (25 closed and 12 open). In the same period, Gavi paid $10.2 million (includes $8.5 million paid in 2016 and 2017) to the service provider for project delivery services. Apart from the software developers based in a Southern European country, the service provider also provides developers, business analysts and project managers that are onsite at Gavi to manage and lead Gavi's selected strategic projects. a) Through our audit procedures, we observed that Gavi's oversight of the software development process is very weak which could be having a significant impact on the cost of IT projects. The whole process of software development is managed by staff of the service provider (developers, business analysts and project managers) including soliciting and defining business requirements,	analysis, design, test and deployment is done by the service provider)	individuals who are independent of the service provider). 2. The role of the technical architect in the KM&TS team needs to be clarified to achieve its intended purpose of providing independent oversight and quality assurance	Since that time, before the end of 2017, all of the KM&TS positions have been filled with permanent staff. In addition, a new job description for the architect role further describes and clarifies the role relative to outsourcer oversight.			

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		analysis, design, development, test, deployment, closure and enterprise architecture. However, the inadequate segregation of duties in the software development process is not compensated for by a formalised and robust oversight process within KM&TS. We understand that this is due to inadequate staff capacity (i.e. availability of permanent staff to manage the technical architecture and challenge the technical options for the projects) and weak project management processes in the KM&TS team. b) The role of the technical architect in the KM&TS team needs to be clarified to achieve its intended purpose of providing independent oversight and quality assurance. At the time of the audit, this role was being performed by the outsourced service provider (through a consultant based at Gavi). This role is supposed to ensure: • The promotion of shared infrastructure and						

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		applications to reduce costs and improve information flow; • The optimisation of information management through an understanding of evolving business needs and technology capabilities; • That projects do not duplicate functionality or diverge from each other or from the business and IT strategies; and • That s/he works with the Enterprise Architect(s) to provide consensus based enterprise solutions that are scalable, adaptable and in synchronisation with the ever-changing business needs.						
5	High	**Reasonableness of IT project costs and value for money review** Through our audit procedures, we observed the following: a) The VI Replacement project, whose estimated cost in 2015	Gavi may not be receiving value for the money.	1. Ensure there is effective engagement with the business owners to agree on and refine the business requirements before	a. The VI track replacement project had two objectives. First, provide online dose calculation for the Country Portal Grant Applications and Renewals. This work was required in order to	MD, PE&IS CKO (KM&TS)	Q2/Q3 2018	Pending verification by Internal Audit.

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		and 2016 was $300,000[2], failed to meet the critical secretariat business requirements due to lack of effective engagement with the business owners from the outset. However, the project was closed without a solution for the internal Gavi users and therefore before Gavi achieved the full value of the investment. b) KM&TS had spent an estimated $151,000[2] by end of quarter 4, 2015 on the Country Dashboard project. This project was closed in December 2015 unilaterally by the project manager without engaging the business owner on whether it met the business requirements. Given that this solution was not functional, it had to be restarted as 'version 2'. The version 2 was also unilaterally declared closed in November 2017 by the new project manager after costing an additional $415,000[2] (estimate), and without formal acceptance by the business owner. Therefore version 1 and 2 of this project which cost a total of $566,000[2] (estimate) were closed without Gavi		initiating the projects to obtain buy-in. 2. Ensure project budgets are defined from the outset in the business cases and in a formal system. In addition, key information related to the projects should be readily available including actual time spent and cost.	meet the requirements of the GAMR via the country portal. Second, given the VI Track tools legacy technology limitations and inability to reuse the solution for modern solutions, a second objective, deemed nice to have, was to convert the internal team onto the new dose calculation solution and retire the legacy tool. This second objective was not achieved as the business team couldn't adapt the business process nor work within a more structured solution. The first objective was successful, though, and the solution has been functioning in production for the last 2.5 years. b. The Country Dashboard has been implemented utilising an agile, continuous delivery model which best fits analytics projects due to the continuous business discovery of metrics needed. This effort has required significant business			

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		realising the full value of this investment. The project was still on-going at the time of the audit. c) KM&TS spent $955,000[2] (estimate) on the Issue Resolution Tool and $730,000[2] (estimate) on the Performance Framework project (currently in the deployment stage in service now). However, it is difficult to assess the reasonableness of these costs given that key information related to the projects is not readily available including the budget (cost and time) and actual time spent from project start to project end.			operational change which has slowed down deployment as well as surfaced data quality challenges that required resolution prior to going live. c. KM&TS embraces continuous improvement and is focused on improving business case driven project approvals. In June 2018, KM&TS will further strengthen this process by proposing a more continuous project approval governance board which reviews projects based on business cases which demonstrate value for money and include detailed cost estimates in order to ensure Gavi's investments drive high ROI.			
6	High	**The process of IT project quality management needs strengthening** The process of IT project quality management (i.e. quality planning, quality assurance and quality control) at Gavi needs to be strengthened. We observed the following	KM&TS may deliver and deploy IT projects which do not meet the business requirements.	1. Projects (solutions) should only be introduced into the 'live' environment after they have been subjected to comprehensive quality assurance	KM&TS has worked to strengthen the quality management process. The introduction of a Change Advisory Board in 2016 is reviewing and approving all changes prior to installation in production and assesses the testing completed vs.	MD, PE&IS CKO (KM&TS)	**December 2018**	Pending verification by Internal Audit.

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	■	during the review of the sampled projects: a) The business users of the Performance Framework project confirmed that the project (solution) was introduced into the 'live' environment before it was subjected to comprehensive quality assurance and testing to ensure that it meets business needs (project deliverables were not clearly defined from the outset). This resulted in a significant number of bugs being registered by the business users which increased the cost of the project. In addition, we established that the testing of the solution was limited because of inadequate testing scripts. We also understand that the unrealistic timelines for delivering the solution to the business users was partly responsible for the project quality management issues. b) Only one person was in charge of project quality planning, assurance and control for the 37 projects (25 closed and 12 active) between 2016 and 2017. There is need to		and testing to ensure that they meets business requirements. 2. Review and approve the SOPs (align with the related IT policy) which define the project quality management process. 3. Ensure adequate resources are dedicated to the project quality management process.	the risk. This is incorporated into the IT Change Management Policy. KM&TS will create Quality Management Policy which will identify the standard operating process for project quality management and the key metrics to monitor progress.			

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	■	reassess and determine whether this is in line with the resource requirements given the critical nature of this process in quality assurance. c) There is no robust process of identifying the quality requirements. In addition, supporting documentation of how the projects met the quality requirements are not maintained (including quality plans, metrics, quality checklists and process improvement plans). d) The SOPs do not define a robust project quality management process (the SOPs were still in draft and had not been reviewed and approved).						
7	Medium	**The governance process of IT projects needs improvement** According to best practice, there should be robust governance processes in project management to ensure that the projects are delivered on time, within budget and of the right quality. Through our audit procedures: a) We could not confirm the existence of a consistent and robust overall cross-cutting	Projects may not be delivered on time, within budget and of the right quality	1. KM&TS management in liaison with Senior management should establish an effective overall cross-cutting governance process (including an IT project steering committee) for IT projects 2. There is need to implement a formal	a. Gavi has had a governance process and structure communicated and in place since 2015 which defines interactions between business-led steering committees and KM&TS delivery teams. b. There is an Architecture Review Board now in place which assesses all technology decisions for alignment to Gavi's	MD, PE&IS CKO (KM&TS)	Q2/Q3 2018	Pending verification by Internal Audit.

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		governance process that includes for instance an IT project governance committee which is responsible for the prioritisation of IT projects and the continuous monitoring of the progress of the projects to ensure they are delivered efficiently and effectively. b) We applaud KM&TS efforts to enhance knowledge management within Gavi by putting in place integrated systems. We are aware that Gavi has unique processes and therefore it may be difficult to find off-the-shelf solutions that meet the organisation's needs. However, the process of selecting the most efficient and effective way through for instance a cost-benefit analysis of the available options (i.e. whether to build/develop the solution internally using the outsourced third party software development company or buy off-the-shelf) is not well designed and is not done. This issue is further exacerbated by the fact that the oversight process of the IT projects' management as currently		process to evidence how key decisions are reached (e.g. whether to build/develop the solution internally using the outsourced third party software development company or buy off-the-shelf) including a cost-benefit analysis of the available options (bearing in mind all costs including support over the long-term).	enterprise technology strategy. Specifically, the enterprise architecture policy states the following technology principle: Reuse before Buy, Buy before Build. Statement: Re-use and integrate existing applications and solutions defined as target architecture before investing in new solutions. Use Commercial off the Shelf (COTS) before building new software. Rationale: Use of effective packaged solutions is increasing. Using tested solutions reduces risks and reduces delivery times and reduces total cost of ownership. c. In June 2018, KM&TS will further strengthen this process by proposing a more continuous project approval governance board which reviews projects based on business cases which demonstrate value for money and include detailed cost estimates in order to ensure Gavi's investments			

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		designed has weaknesses. c) We were unable to confirm the existence of a robust process of evaluating how KM&TS will maintain and support the solutions being developed in the long-term and the cost implications of this. d) We observed that the Performance Framework project had a steering committee (the Grant Application, Monitoring and Review –GAMR till 2016 when it was disbanded) in charge of prioritising among the other grant management projects while the Data Management steering committee provided oversight of the project change management (i.e. the scope and budget). Although the two committees were involved in the project, their governance roles were not clearly defined and there isn't complete documentary evidence of meeting minutes. For the other three sampled projects (i.e. Country Dashboard, Issue Resolution and VI Track replacement), we were unable to confirm the existence of			drive high ROI. The ongoing support costs will be formalized into the business case template. As part of the design of each project, consideration of using off-the-shelf software to meet the business requirements whether in part or in whole is considered. Further, any "custom development" is done using the force.com platform which removes much of the "custom" development work and focuses only on business value customisation. This approach is primarily used in Grant Management which is a business process specific to Gavi. Even then, as part of the initial work to design GAMR, a review of an off the shelf tool built by a consulting firm was conducted only to determine that it didn't meet Gavi's needs.			

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		formalised governance committees which were overseeing the projects (including documented terms of reference and meeting minutes).						
8.0	Medium	**The process of managing IT projects and related costs needs improvement** We observed the following control weaknesses regarding the role of KM&TS as the project manager: a) The process of managing or controlling changes (change requests) to the business requirements is weak (i.e. based on the sampled projects). This is critical in avoiding scope creep. b) The business users are not accountable for the changes made to the business requirements and the impact on the budget. c) The process of monitoring the overall progress of IT projects including utilisation of resources is weak d) The project evaluation review process is weak (i.e. assessing how well the project was managed). We noted this in the sampled projects which are	Management may not be monitoring and controlling IT projects and costs effectively.	1. KM&TS management should define the process of reviewing, monitoring and control of projects to ensure that all the project tasks in the project management tool are completed including supporting documents. 2. Management should conduct an assessment of whether the current project management tool is fit for purpose.	As noted above, the lack of a Project Accounting System at Gavi limits the team's ability to manage budgets with the desired amount of detail and transparency. As a new system is implemented, the team will take advantage of the system to partner with Finance and drive stronger project financial accounting. The focus will be on ensuring the right requirements are tracked upfront with formal business cases. In the future, after successfully improving initial requirements design and business cases the team can work to formalise changes. ServiceNow is only one part of the documentation used to track the projects and statuses. Complete project statuses are compiled in MS	MD, PE&IS CKO (KM&TS) MD, F&O	December 2019	

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Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		indicated as 'closed' in ServiceNow (Performance Framework & VI Track Replacement). e) There has been high turnover of project staff managing the individual projects (i.e. consultants - Business Analysts and Project Managers) which according to business users has impacted efficiency and project quality. f) The potential interdependencies among projects and the impact of them is not considered as noted in the three sampled projects (i.e. this could lead to potential efficiencies and cost savings). g) Project management standards and practices have not been designed and are being applied inconsistently. h) The required documentation maintained in ServiceNow is incomplete and reporting on progress of projects is inconsistent.			project and reviewed by KM&TS management and shared with project sponsors.			
8.1	**Medium**	**The process of monitoring and controlling IT projects needs strengthening** Project monitoring and controlling is one of the key	Management may not be monitoring and controlling IT	1. KM&TS management should define the process of reviewing, monitoring and	Project documentation is stored on the Gavi intranet. KM&TS has continued to work on improving documentation for projects	MD, PE&IS CKO (KM&TS)	**Q2/Q3 2018**	Pending verification by Internal Audit.

Appendix 1: Detailed Findings and Recommendations

Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		processes during execution of projects. This oversight process is critical as it ensures that the project is within scope, on time, within budget, of right quality, and that project risks are managed well. We identified opportunities for improvement in this process. Currently the process adopted by KM&TS management in the project management tool (ServiceNow) is not robust as there is no documentary evidence to indicate that there is an effective project monitoring and control process in place. We were unable to determine whether all the project tasks were completed, reviewed and approved by management. In addition, while reviewing the sampled projects, we observed that a majority of documents were not available in ServiceNow including the approved project charters, agreed and prioritised business requirements, detailed design specifications, approved business cases and complete meeting minutes.	projects and costs effectively.	control of projects to ensure that all the project tasks in the project management tool are completed including supporting documents. 2. Management should conduct an assessment of whether the current project management tool is fit for purpose.	as well. With the new project policy of June 2018, required project documents and templates are defined. Likewise, projects are reviewed on a bi-weekly basis for status. ServiceNow is only one part of the documentation used to track the projects and statuses. Complete project statuses are compiled in MS project and reviewed by KM&TS management and shared with project sponsors.			

Appendix 1: Detailed Findings and Recommendations

Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
9	Medium	**There is need for more clarity regarding the roles and responsibilities of the KM&TS team in project management** It is good project management practice for roles and responsibilities of various players involved to be clearly defined to enhance accountability. We observed the following when reviewing the sampled projects: a) The expected support from KM&TS team during implementation of the projects was not consistent because of lack of clarity regarding their role in this. b) We also noted that the KM&TS team does not challenge the business requirements from the business owners before initiating the projects to obtain buy-in and ensure that the business owners are aligned e.g. the VI Track replacement project.	KM&TS may undertake IT projects that do not meet business requirements	1. Clearly define the role of KM&TS in project management and communicate this to the rest of the organisation. 2. Ensure there is effective engagement with the business owners to agree on and refine the business requirements before initiating the projects to obtain buy-in.	With the approval of an enhanced project governance and approval process, the policy will highlight the standard roles and responsibilities of the team. A 'new investment' governance process was defined in 2018, positioning business owners at the onset of the process to present the case for investments including business rationale and expected RoI.	MD, PE&IS CKO (KM&TS)	Q2/Q3 2018	Pending verification by Internal Audit.
10	Medium	**The process of closing projects needs strengthening** It is good practice in project management to have a structured process of closing	IT projects may be closed before sign off and confirmation by the business	1. Formally define the project closure process in the standard operating procedures	With the approval of an enhanced project governance and approval process, the policy will highlight the standard	MD, PE&IS CKO (KM&TS)	Q2/Q3 2018	Pending verification by Internal Audit.

Appendix 1: Detailed Findings and Recommendations

Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		projects where all the project deliverables are formally transferred to the relevant stakeholders including documentation and archiving of lessons learnt. a) We observed that the process of closing the projects we sampled was neither formalised nor were the stakeholders officially informed before the projects were closed in ServiceNow. b) In addition, we observed the following: i) There was no thorough and formal review of the KM&TS project management processes after the projects were closed ii) The actual total project costs were not communicated to the project sponsors, stakeholders and senior management on completion.	owners whether they meet business requirements	(including the project closure template/checklists) 2. Formalise the process of closure of projects indicated as closed in the ServiceNow and communicate to the relevant stakeholders.	process for closing projects. With the enhanced project governance and approval process, the policy will describe the process for closing projects.			
11	Medium	**There is a need to clearly define the timelines for all IT projects** a) During the review of the sampled projects, we were unable to determine whether they were deployed and delivered on time. This is because the project timelines (i.e. planned start and end date	Projects may not be delivered on time and within budget	Management should define the standard meaning of "start and end date" of any project in the Standard Operating Procedures to avoid inconsistencies during project	With the approval of an enhanced project governance and approval process, the policy will define the start date and end date for IT projects. In accordance with the policy all projects will have	MD, PE&IS CKO (KM&TS)	Q2/Q3 2018	Pending verification by Internal Audit.

Appendix 1: Detailed Findings and Recommendations

Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		and planned deployment date) were not agreed with the business owners and defined in the project charter and business case as illustrated below: • According to the information populated in the project management tool in ServiceNow, the actual start date and end date of the VI Track replacement project was not defined even though it is shown as "closed" in ServiceNow; • The Country Dashboard project (version 1) was started on 15 Jun 2015 with a delivery date planned for 7 Jan 2016 but was closed by the Project Manager on 3 Dec 2015 (the business user was notified on 8 Dec 2015). However, the solution delivered at that date was not functional (had significant performance issues) as it did not meet the business user requirements. The project was restarted		execution. In addition, ensure that the timelines for the active projects are defined in ServiceNow.	start and end dates with timelines tracked.			

Appendix 1: Detailed Findings and Recommendations

Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		(version 2) with a new project manager on 30 Jun 2016 with a planned end date of 29 Jun 2017. According to information in ServiceNow, the project was closed on 4 May 2017, however the business sponsor confirmed that this project is still in progress (i.e. work on business analysis, development and training is ongoing); • The Issue Resolution Tool project was initiated in early 2015 but it was not until 12 May 2016 that the project was captured in ServiceNow. The planned end date was November 2016. The delivery was staged in separate releases to meet the IRC November deadline but the project was eventually closed in May 2017; six months behind schedule.						

Appendix 1: Detailed Findings and Recommendations

Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		Discussions held with the respective project managers confirmed that the timelines for the sampled projects were not clear. b) In addition, it was difficult for us to determine the progress of active projects and whether they were on track due to the absence of information on planned start and end date and planned deployment date.						
12	Medium	**The process of reporting project progress and updates to stakeholders needs strengthening** Reporting on progress of projects is an essential activity in project management. The project manager should issue regular reports on progress against budget, schedule and scope. The draft SOPs (on Project Management) require regular communication with stakeholders through emails, meetings or video/telephone conferences on the progress and issues related to the project. a) We confirmed through our audit procedures when	Key decisions regarding IT projects may not be taken on a timely basis.	1. Ensure the process of reporting on the progress of projects is formalised and evidenced by complete and documented progress reports (indicating progress against budget, schedule and scope), meeting minutes and action points in the project management tool. 2. Ensure project progress reports indicate all the costs especially of projects spread across	a. With the implementation of a new project accounting system, the team will work with Finance to formalise reporting against project budgets. b. With the implementation of a stronger project financial system, we expect to be able to better report on the complete financials for projects. c. The project financials audit trail will be in the new project accounting system and project status (e.g. data changes) will be in ServiceNow both of which provide audit trail of changes.	MD, PE&IS CKO (KM&TS) MD, F&O	December 2019	

Appendix 1: Detailed Findings and Recommendations

Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		reviewing the sampled projects that the project stakeholders were regularly informed of the progress and issues related to the projects, however this process was not formalised and could not be evidenced by complete and documented progress reports (indicating progress against budget, schedule and scope), meeting minutes and action points in the project management tool. We believe this was as a result of the weak communication plans from the outset and during project implementation. Furthermore, we believe that if there was project progress reporting and effective communication: • The VI Track Replacement project could have been stopped at the right time resulting in significant cost savings; and • The Country Dashboard project could have been better aligned with the business users'		multiple years instead of presenting the Year-to-Date costs only.				

Appendix 1: Detailed Findings and Recommendations

Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		expectations thereby avoiding the delivery of an unfinished and non-functional solution. b) We observed that the status reporting to senior management in the period from January 2016 to the date of the audit was neither consistent nor complete. In addition, reports prepared for the senior management team were updated directly in the same online document, with updates superseding past versions thereby leaving no audit trail. c) The actual projects costs were presented on a Year-to-Date basis. This gave an incomplete view of the actual total costs especially for projects spread across multiple years.						
13	**Medium**	**There is need for the IT policy and Standard Operating Procedures (SOPs) to be reviewed and approved** Project management should be based on policies and SOPs that are up to date, relevant and that have been reviewed and approved by relevant	Lack of clarity and guidelines regarding the process of IT project management	Review and approve the information technology policy and the draft SOP related to the governance processes of IT projects.	KM&TS Policies and SOP's have been updated, approved and published on the Gavi intranet.	MD, PE&IS CKO (KM&TS)	Q3 2018	Pending verification by Internal Audit.

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Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		management. However, the IT policy (Information Technology Policies Version 2.6) which was approved in June 2010 does not provide comprehensive guidance regarding IT projects governance (under clause 11). In addition, the SOPs on IT project governance (Governance organisational structure) were still in draft at the time of the audit and had not been approved by KM&TS management.						
14	Medium	**There is need for the project methodology to be documented and approved** It is good practice in project management for the establishment of a formal project methodology which predefines the set of process-based techniques that provide a road map on when, how, and what events should occur and in what order. We established through discussions with the KM&TS team that they adopted the Agile project methodology. However, there is no documentation which shows when and how the Agile	KM&TS may be using a project methodology which has not been approved and cleared for use	Ensure the project methodology is documented and approved. In addition, the project management tool should be aligned with the approved methodology.	Given the decision by the SMT in May 2018 following this audit to shift from an Agile approach to a more waterfall based approach, the methodology will need review and updating.

A new project methodology will be published. | MD, PE&IS CKO (KM&TS) | Q4 2018 | Pending verification by Internal Audit. |

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Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		methodology was adopted and how this decision was approved.						
15.0	Medium	**There is need to ensure that specific project deliverables are clearly defined and agreed between business owners and the KM&TS team from the outset** It is good practice in project management to clearly define specific project deliverables from the outset. We observed during the review of the sampled projects that specific deliverables were not clearly defined and agreed between the business owners and the KM&TS team after the scope of the projects was determined. This could be attributed to the lack of a robust project planning process during the initiation stage.	It may be difficult to control change requests to the business requirements from the business users. In addition, the deployed solution may not be accepted by the business users.	KM&TS management should design and document a robust project planning process (including Deliverables Specification template) in the standard operating procedures which enforces clear project deliverables to be defined and approved by the business users and the KM&TS team.	A new project policy will be published as part of the work to further strengthen this process by proposing a more continuous project approval governance board which reviews projects based on business cases which demonstrate value for money and include detailed cost estimates in order to ensure Gavi's investments drive high ROI. This will include required project deliverables and templates.	MD, PE&IS CKO (KM&TS)	**Q2/Q3 2018**	Pending verification by Internal Audit.
15.1	Medium	**There is need to ensure that the project charter is reviewed and approved prior to start of any project** The project charter provides a preliminary delineation of roles and responsibilities, outlines the project objectives, identifies the main stakeholders, and	The project may not be delivered on time, within budget and it may not meet business requirements (quality of deliverables).	KM&TS management should review the project charter template as part of the redesign of the project planning process and ensure that it is used in the project	A new project policy will be published as part of the work to further strengthen this process by proposing a more continuous project approval governance board which reviews projects based on business cases which demonstrate value	MD, PE&IS CKO (KM&TS)	**Q2/Q3 2018**	Pending verification by Internal Audit.

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Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		defines the authority of the project manager. It serves as a reference of authority for the future of the project. The terms of reference are usually part of the project charter as well. The project charter should include at a minimum the following: • The business need for the project which links the project to the organization's overall strategy; • The stakeholders and their initial requirements; • The objectives or quantifiable criteria that must be met for the project to be considered successful; • The definition of what is in scope (at least at a high level), as well as what is out of scope for the project; and • The constraints and key assumptions. Our review revealed that the		management.	for money and include detailed cost estimates in order to ensure Gavi's investments drive high ROI. This will include project charters as a required project deliverable and template.			

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Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		project charters of the sampled projects were drafted but were neither reviewed nor formally approved. An approved project charter should be the basis of initiating the demand for the project in the project management tool (ServiceNow) under the concept and planning module. We believe this issue is as a result of the weaknesses noted in the design of the project planning process and the weak oversight by KM&TS management of the project staff (consultants - business analyst and project managers) in ServiceNow.						
15.2	Medium	**The project planning process requires improvement** Project planning is a critical process in the project management lifecycle and should be documented. Usually the overall project plan includes sub-plans which help to manage time, costs, quality assurance, changes and tasks. We were unable to evidence a robust overall project planning process during the audit. The SOPs relating to project	The IT project planning process may not be robust leading to weaknesses in the management of time, cost, change requests and quality assurance.	Design and approve a robust project planning process in the standard operating procedures and ensure that this process is aligned with the process in the project management tool (ServiceNow). 2. Ensure that the key project	Given the decision by the SMT in May 2018 following this audit to shift from an Agile approach to a more waterfall based approach, the methodology will need review and updating. A new project methodology will be published which details the project planning.	MD, PE&IS CKO (KM&TS)	Q4 2018	Pending verification by Internal Audit.

Appendix 1: Detailed Findings and Recommendations

Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		planning are still in draft and yet to be approved. It is therefore clear that the design of the project management processes has not been prioritised by the KM&TS team. We made the following additional observations on completeness of key project information related to the concept and the planning process for the sampled projects in ServiceNow: a) There was no clear definition of the project scope and an approved project charter as highlighted above. b) There was no business case highlighting the contribution of the project to the Gavi strategy (i.e. business requirements), resource requirements, expected deliverables, constraints and execution risks. c) Preparation of the work breakdown structures (listing the project into tasks and sub-tasks) was not done. d) There was no project development schedule (listing of the foreseeable schedule of activities and detailing their sequence of implementation).		information related to the concept and the planning process of projects in ServiceNow is complete i.e. clear definition of the project scope and an approved project charter, business case, work breakdown structures, project development schedule, resource plan, budget plan, risk plan, quality plan and communication plan/communication strategy.				

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Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		e) There was no resource plan indicating project staff and timelines. f) There was no budget plan specifying the expected budgeted costs for the project. g) The risk plan/log (with possible risks) was not prepared including optional contingency plans and mitigation strategies. h) The quality plan with quality criteria to be used for evaluating the sampled projects was not prepared. i) There was no communication plan/communication strategy with relevant stakeholders.						
15.3	**Medium**	**There is need to ensure that comprehensive business cases are developed for IT projects** A business case is a formal, written document intended to provide justification for a particular project and explores all feasible approaches to a given problem and enables management to select the option that best meets the needs of the organisation. The business case identifies the business value, need, costs, risks, and how the project links with high-level strategic goals of	Management may not be able to deliver the projects on time, within budget and of quality.	Management should define the process of developing the business case in the Standard Operating Procedures (including the business case templates) and should ensure compliance with the procedures.	KM&TS will strengthen this process further by proposing a more continuous project approval governance board which reviews projects based on business cases which demonstrate value for money and include detailed cost estimates in order to ensure Gavi's investments drive high ROI. The ongoing support costs will be formalized into the business case template.	MD, PE&IS CKO (KM&TS)	**Q2/Q3 2018**	Pending verification by Internal Audit.

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Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		the organisation. It also provides the reasons for project identification and selection. a) We observed during the review of the sampled projects in ServiceNow and discussions with the respective project managers and business analysts that there were no business cases developed for these projects. There was no formal and complete business case prepared for the Country Dashboard project. The project went into the design and development phases without any formal approval of the business case (not documented). Also the VI Track and Performance Framework projects are not supported by approved business cases. In addition, there was no business case template for IT projects at the time of the audit. b) ServiceNow has high level description of the business problem, deliverables, objectives and constraints under the concept and planning module. However, the cost estimate and expected return on investment sections/fields						

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Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		were consistently not populated. The project sponsors and stakeholders confirmed that no cost-benefit analysis is done for IT projects.						
15.4	Medium	**The process of validation of IT projects and initiation is neither formalised nor documented** We understand that the current validation process in ServiceNow was designed to support the project manager and the business analyst in reviewing the demands in ServiceNow and in the preparation of business cases for approval by the senior management team. However, the business cases in ServiceNow are either incomplete or not prepared at all. The validation process is therefore weak and not formalised. We observed the following when reviewing the sampled projects: a) There is no documentary evidence of the formal validation and approval of the demand forms in ServiceNow for the Issue Resolution Tool	Lack of clear definition regarding when a project should be considered started and/or closed	A formal project management framework based on standards and best practices should be developed, approved and enforced	KM&TS will further strengthen this process by proposing a more continuous project approval governance board which reviews projects based on business cases which demonstrate value for money. Given the decision by the SMT in May 2018 following this audit to shift from an Agile approach to a more waterfall based approach, the methodology will need review and updating. A new project methodology will be published and will include detailed cost estimates in order to ensure Gavi's investments drive high ROI. The ongoing support costs will be formalised into the business case template. a. Validation of Service Now demand forms was a back-	MD, PE&IS CKO (KM&TS)	**Q4 2018**	Pending verification by Internal Audit.

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Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		(the business analyst started work on the project in Jul-Aug 2015 but the project was officially started in June 2016), VI Track and Performance Framework projects. b) The project charters were not reviewed and approved at the concept and planning stage before the project was allowed to proceed to the design phase.			office IT procedure which is not indicative of how projects were approved. b. As part of the revised project governance process, formal business cases will be required for sign-off for projects to start.			
16.0	Medium	**The process of performance management and post-implementation review needs improvement** It is good practice in project management to conduct post implementation reviews upon completion of projects. This helps to determine whether project objectives were achieved, the effectiveness of the implementation process, lessons learnt for the future, and to ensure that the organisation gets the most value from all projects. We observed the following: a) For the sampled projects, we noted that the post implementation reviews were not conducted. b) In addition, there is no	1. KM&TS may not be able to identify opportunities to improve the IT project management process. 2. The project staff (outsourced) may not be undertaking their tasks in an effective and efficient manner.	1. Conduct IT project post implementation reviews. The SOPs on this should be reviewed and approved. 2. Conduct regular performance evaluation/reviews of the project staff (consultants from the third party software development company)	As part of the methodology, the post implementation required deliverables will be defined.	MD, PE&IS CKO (KM&TS)	**December 2018**	Pending verification by Internal Audit.

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Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		documentary evidence on file to indicate whether the performance review of the project staff was conducted by KM&TS management during and after completion of the projects (i.e. of the consultants - business analyst and project managers). c) The draft SOPs (dated January 2016 and yet to be reviewed and approved) do not provide guidelines on the post-implementation review process.						
16.1	**Medium**	**Conducting project management process reviews and managing discontinued projects is neither formalised nor done** a) The process of conducting reviews of the project management process is neither formalised nor done. All the SOPs (including the ones related to project management) and the IT policy (approved in June 2010) had not been reviewed and approved by KM&TS management. b) There is no formalised process of managing discontinued IT projects.	1. KM&TS may not be able to identify opportunities to improve the IT project management process. 2. Gavi's resources (time and money) may not be applied appropriately.	1. Conduct IT project post implementation reviews. The SOPs on this should be reviewed and approved. 2. Clarify in the SOP the process of discontinuing projects	Gavi IT policies have recently been updated and published on the corporate policies page on the Gavi Intranet. With this latest review and publishing process, KM&TS policies and SOP's will be reviewed annually.	MD, PE&IS CKO (KM&TS)	**December 2018**	Pending verification by Internal Audit.

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Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
16.2		**The process of evaluation of IT projects needs to be implemented** Evaluation of projects is a critical process in the project management lifecycle. It is a systematic and objective assessment of an ongoing or completed project. The aim is to determine the relevance and level of achievement of project objectives, development effectiveness, efficiency, impact and sustainability. Project evaluation focuses on the outcomes and the impact as defined in the business case. We observed the following: a) There is no formalised process in the SOPs for evaluation of projects post implementation and after the deployment and the delivery of the developed solution b) For the sampled projects which are indicated as 'closed' in ServiceNow (i.e. the Country Dashboard project, the Issue Resolution Tool project and the VI Track replacement project), we noted that no formal process of evaluation of the projects was conducted and	1. The business objectives and benefits defined in the project business case may not be realised. 2. KM&TS may not be able to identify opportunities to improve the IT project management process.	1. KM&TS management should include a robust evaluation process in the SoPs. 2. Conduct evaluations of all closed projects.	We agree that there isn't a formal SOP for project reviews. As part of the new governance and project policy, formal project reviews are included.	MD, PE&IS CKO (KM&TS)	**December 2018**	Pending verification by Internal Audit.

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Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		reported to the project sponsors and senior management in line with project management best practice. We believe that this is partly due to weaknesses noted in the project accountability mechanism where specific project deliverables and the success criteria are not defined from the outset.						
17	Medium	**The process of defining business requirements needs to be formalised** It is good project management practice to ensure that the business requirements are verified, correct and complete (as agreed with business owners), well documented and approved. Through our audit procedures when reviewing the sampled projects, we confirmed that the business users were consulted by business analysts and/or project managers during the definition of the business requirements. However, this process was not formalised and we observed the following:	Management may not be able to deliver the projects on time, within budget and of the right quality if the defined project requirements are not correct, complete, consistent and approved.	1. Design and document a robust project planning process (including Requirements Specification template) which will help ensure that the business requirements to be defined and approved by the business users and KM&TS are correct and complete. 2. Consider introducing controls that will inject some level of stability during project implementation (e.g.	In addition to the traditional requirements management templates and processes, KM&TS has utilised a more modern prototyping as a method of eliciting requirements and designing solutions. Nonetheless, this approach does not lend itself well to the formal requirements sign-off process recommended. KM&TS will adjust its requirements management approach to utilise a more traditional written requirements template with formal sign-off prior to any development beginning. It should be noted that this may slow down some	MD, PE&IS CKO (KM&TS)	**March 2019**	

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Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		• Documentation such as meeting minutes (record of meetings was captured in various email correspondences) and how the business requirements were prioritised was not available; • The final approved business requirements that were agreed between the KM&TS team and the business owners were not available (we could not determine whether the business requirements used were correct and complete); • For the Country Dashboard, an Excel document was used to track requirements but it was neither complete (comments indicated that some of the stakeholders still had to give their		contracts of staff of the outsourced service provider should be tied to the duration of the projects)	projects. While resourcing "instability" seems to be noted as an issue, staff transition during projects is primarily a result of the performance management of consultants. The performance management is a combination of feedback and assessment by KM&TS as well as feedback from business users. We don't believe that there is an inappropriate consultant turnover issue.			

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Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		inputs) nor formally approved. Documents detailing requirements for the second version of the project were created. However, these look like meeting minutes from the discussions with business users as opposed to formal approved business requirements; • For the Performance Framework project, we were unable to establish how the significant changes to the business requirements were managed due to lack of adequate documentation (this project happened at the same time as the design of the Grant Performance Framework process by the MDS); • The project documentation was not maintained in a centralised location. In						

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Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		addition, the project management tools were not aligned e.g. change requests were captured in JIRA while other project documentation was maintained in Microsoft Office (Excel) and ServiceNow; and • The business requirements for the Country Dashboard and the Performance Framework were not stable and kept on changing because of the significant changes in the underlying processes of the projects, the lack of adequate project documentation (including hand-over notes) and the high turnover of the project staff (business analyst and project managers who were staff of the outsourced service provider and whose contracts were not tied to						

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Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		the duration of the projects).						
18	Medium	**The process of documentation, review and approval of the detailed design specifications needs strengthening** Project specifications help guide the project developers during the development of the desired solution. This document provides a comprehensive description of objectives for the development project. It contains all goals, functionality, and details required for a development team to meet the business requirements of the project. From our review of the detailed design specifications as defined in 'Confluence' (this is part of the project management tools for the team collaboration software), we observed the following: a) There was inconsistent documentation of the detailed design specifications based on the business requirements by the business analysts (e.g. for the Performance Framework project). We also noted that	The project outcome may not deliver the expected business value.	Ensure the design specifications are defined and documented consistently from the outset (including design specification template). The process should be aligned with project quality management process because the project requirements and design specifications are tools for evaluating the quality of a project.	The role of the Technical Architect which oversees architecture and delivery was created and filled in late 2017. In this role the responsibility to oversee and review technical design is described as follows: "Provides leadership to solution architect/technical lead resources on project teams to design complex solution and technical architectures and to consult with internal customers on potential solutions to meet business needs". As part of this role, we have created a technical design specification which is required for project approval to the delivery phase.	MD, PE&IS CKO (KM&TS)	**Q2/Q3 2018**	Pending verification by Internal Audit.

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Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		whereas some business analysts defined both the high level and detailed design specifications in 'Confluence', others just defined the specifications without differentiating (e.g. the functional requirements of the Grant Performance Framework were not defined) b) There was no documentary evidence (at the time of the audit) to indicate that the detailed design specifications of the VI Track replacement project were completed, reviewed and approved before the start of the development phase (they have been in draft form since February 2016) c) The detailed specifications for the Country Dashboard project were not available. We believe the issues highlighted above were instigated by the weak process of designing the design specification (including the absence of the design specification template). This has led to the weaknesses noted in the project quality management process (quality assurance and control of						

Appendix 1: Detailed Findings and Recommendations

Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		releases) and probably contributed to the high project costs.						
19	Medium	**There is need for the KM&TS team to fully optimise the use of ServiceNow in the management of IT projects to realise the value of this investment** Project management tools help in the management, monitoring and control of projects to ensure that projects undertaken deliver business value. We noted the following while reviewing the sampled projects in ServiceNow: a) The demand forms were initiated in ServiceNow without approved project charters b) The project reporting module is weak and it is difficult to extract the project reports c) The high level project overviews (including objectives and constraints) were defined for the sampled projects in ServiceNow. However, the following critical project modules and supporting documents were incomplete:	Project knowledge risk may increase due to the weak project documentation, monitoring, reporting and control.	KM&TS management should improve the project management processes (monitoring, reporting and control) in ServiceNow and ensure that the project staff (Consultants - Project Managers and Business Analysts) are using the tool. In addition, as part of the tool (ServiceNow) improvement process, management should design templates for; business case (including guidelines for defining business problem), project charter, business requirements, specifications,	KM&TS has recently completed an upgrade of the ServiceNow solution which will improve ease of use for managing and reporting on projects. With regards to the demand forms, as the process was defined demands were created prior to project charters in order to track requests which needed project charters. We agree that there is need for more definition of the standard tools to be leveraged to manage and deliver projects. KM&TS will define the standard tools to deliver and manage projects.	MD, PE&IS CKO (KM&TS)	**December 2018**	Pending verification by Internal Audit.

Appendix 1: Detailed Findings and Recommendations

Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		• The Design, Develop, Test and Deploy modules; • Under the concept and planning module, the work breakdown structures, timelines, budgets, issues, risks (these were still open for the projects indicated as closed), dependent projects, resource plans; and • The description of the business problem (under the project overview of VI Track replacement project) was not defined. This could be attributed to the lack of the business case document.		deliverables, quality plan, assurance and control and define "project start and end date" in the project guidelines.				
20	Medium	**The project management tool (ServiceNow) needs to be enhanced to support the business better** Gavi uses ServiceNow for project management (project management module) and IT Service Management (including incident, problem and change	1. The lack of project documents and activities in a central depository may impact negatively on the project	KM&TS management should improve the configuration of the tool in order to include: the project methodology, automate cost allocation rules,	a. KM&TS will review the applicability of ServiceNow in 2019. b. As noted above, the lack of a Project Accounting System at Gavi limits the team's ability to manage budgets with the desired amount of detail and	MD, PE&IS CKO (KM&TS)	**June 2019**	

Appendix 1: Detailed Findings and Recommendations

Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		management and resource management for consultants' timesheets). Our review of the project management module in ServiceNow revealed the following: a) Users experience slow performance during navigation b) The functionality of assigning tasks to the project team, automatic reminders and escalation of issues is weak c) The interactive chargeback to business units is not defined in ServiceNow d) The project costs are manually captured in the tool because of the following: • The cost allocation rules (between operational and capital expenses) are not automated. The calculation of the monthly cost of the project staff (consultants-project managers and business analysts) from the timesheet records is done in excel and the	oversight by senior management and KM&TS team. 2. The lack of transparency on project costs may lead to incorrect decisions by Management.	assignment of task to the project team, progress reporting (with percentage of completion) and also implement automatic reminders and escalation.	transparency. As a new system is implemented, the team will take advantage of the system to partner with Finance and drive stronger project financial accounting. Until then, the team will implement compensating controls which less the possible impact of this finding. Note that ServiceNow tool has not been implemented to manage tasks assigned to resources, nor for issue escalation and KM&TS does not have a chargeback model – this function of ServiceNow is not relevant.			

Appendix 1: Detailed Findings and Recommendations

Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		report compilation takes about half a day; and • Gavi's financial management system (AX 2012) is not linked with the tool.						
21	**Medium**	**There is need to formalise the process of designing deployment plans and ensure they are prepared before the solutions are deployed in the production environment** It is good project management practice for the deployment plan to be compiled by the project manager and reviewed by the entire project team prior to deployment. The timing of this activity should be linked to the project schedule. We observed the following while reviewing the sampled projects in ServiceNow: a) The process of designing deployment plans was not formalised (the SOPs had not been reviewed and approved at the time of the audit). b) There is no documentary evidence to indicate that the deployment plans were	Project deliverables may not be delivered on time.	The process of designing deployment plans should be included in the standard operating procedures (including deployment plan templates). In addition, project teams should be required to use the project management tool (ServiceNow).	KM&TS recommends that this finding be closed and re-evaluated in the next review of project management in light of the following: • The focus now is on improving requirements and business case based projects; • There is no experience where this has caused project failure; and • There is relative low risk based on compensating controls (e.g. stronger quality management).	MD, PE&IS CKO (KM&TS)	**Q3 2018**	Pending verification by Internal Audit.

Appendix 1: Detailed Findings and Recommendations

Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		developed before the solutions were deployed in the production environment. Different releases were captured in ServiceNow from JIRA but they were not supported by deployment plans.						
22	Medium	**The process of preparation and execution of test scenarios and validation of the solution releases in the production environment needs strengthening** According to the software development best practices, testing is critical to ensure the delivery of quality solutions that are acceptable to users. Gavi has outsourced its software development to a service provider. We observed the following while reviewing the sampled projects: a) The test scenarios (including user acceptance test) were not developed to aid in the evaluation of the solutions delivered (even though iterations were registered in ServiceNow). In one of the sampled projects (Country Dashboard), there was some	The solutions released into the production environment may not deliver the expected business value because of the unresolved bugs.	1. Design and document the testing processes (in line with the Quality management processes) in the Standard Operating Procedures (including User Acceptance test templates) and ensure compliance with the defined procedures 2. Enhance the oversight process of the outsourced service provider 3. Validate the solutions delivered by the outsourced service provider before releasing them into the	KM&TS will create Quality Management Policy which will identify the standard operating process for project quality management and the key metrics to monitor progress.	MD, PE&IS CKO (KM&TS)	**December 2018**	Pending verification by Internal Audit.

Appendix 1: Detailed Findings and Recommendations

Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		UAT activity performed but it only related to the vaccine launch module. The testing scenarios are influenced by the project methodology (software development) which we confirmed during the audit that it was not formalised. b) There was no validation of the solutions by the project staff before their release from the development tool (JIRA) into the production environment. c) A significant number of bugs were registered in these projects (i.e. Performance Framework, VI track replacement and the Issue Resolution Tool). Discussions held with relevant stakeholders confirmed that these issues were attributable to: • The tight project timelines; • Inadequate quality management processes; and • The capacity of the project staff.		production environment.				

Appendix 1: Detailed Findings and Recommendations

Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
23	**Low**	**There is need to enhance the accuracy and completeness of the information relating to IT projects in ServiceNow** We noted lack of consistency in the role played by the business analysts while working on the sampled projects. This did not follow a systematic engagement process and varied from project to project. In addition, some of the documents prepared by the business analysts were not available in a single repository as illustrated below: • For the Country Dashboard (version 1), the time cards in ServiceNow indicate that the business analyst booked only 12 hours against the project code, starting from 20 July 2016 and yet the developer had already started booking time on this project about one month earlier on 22 June 2016; • The Country Dashboard	KM&TS may deliver IT projects that are not in line with the business requirements.	The IT project management SOPs should define the involvement and the deliverables of the business analysts throughout the project.	Time tracking procedures have been reinforced to the team.	MD, PE&IS CKO (KM&TS)	**Q2/Q3 2018**	Pending verification by Internal Audit.

Appendix 1: Detailed Findings and Recommendations

Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		version 2 indicates that the business analyst invested more time in this project (1059 hours according to time cards). However, the work of developers was not preceded by a comprehensive process analysis and documentation phase. We understand that significant time was invested in the Issue Resolution Tool project by the business analyst from July-August 2015 even though this was not recorded in ServiceNow. Once the project was opened in ServiceNow, 1200 hours of business analyst's time were booked against the project code in parallel with 3785 hours of the developer's time; and • The VI Track replacement project was initiated						

Appendix 1: Detailed Findings and Recommendations

Issue No.	Issue rating	Issue title and description	Implication/Risk	Recommended Actions	Management comment	Action Owner	Target completion date	Status
		without a project manager. The business analysts and project managers also confirmed that the project documentation was not well maintained (their collaboration was neither formalised nor supported by meeting minutes and agreed actions).						

Appendix 2: Summary of Performance Ratings and Distribution List

Summary Performance Ratings on Areas Reviewed

For ease of follow up and to enable management to focus effectively in addressing the issues in our report, we have classified the issues arising from our review in order of significance: High, Medium and Low. In ranking the issues between 'High', 'Medium' and 'Low', we have considered the relative importance of each matter, taken in the context of both quantitative and qualitative factors, such as the relative magnitude and the nature and effect on the subject matter. This is in accordance with the Committee of Sponsoring Organisations of the Treadway Committee (COSO) guidance and the Institute of Internal Auditors standards.

Rating	Implication
High	Address a fundamental control weakness in relation to internal controls, governance and/or risk management that should be resolved as a priority
Medium	Address a control weakness in relation to internal controls, governance and/or risk management that should be resolved within a reasonable period of time
Low	Address a potential improvement opportunity in relation to internal controls, governance and/or risk management

Distribution

Title
Managing Director, Public Engagement and Information Services, Public Engagement & Information Services
Chief Knowledge Officer, Knowledge Management & Technology Solutions
Head, Enabling Technology, Knowledge Management & Technology Solutions

For Information

Title
Chief Executive Officer
Deputy Chief Executive Officer
Managing Director, Audit & Investigations
Executive Team
Director, Legal
Head, Risk