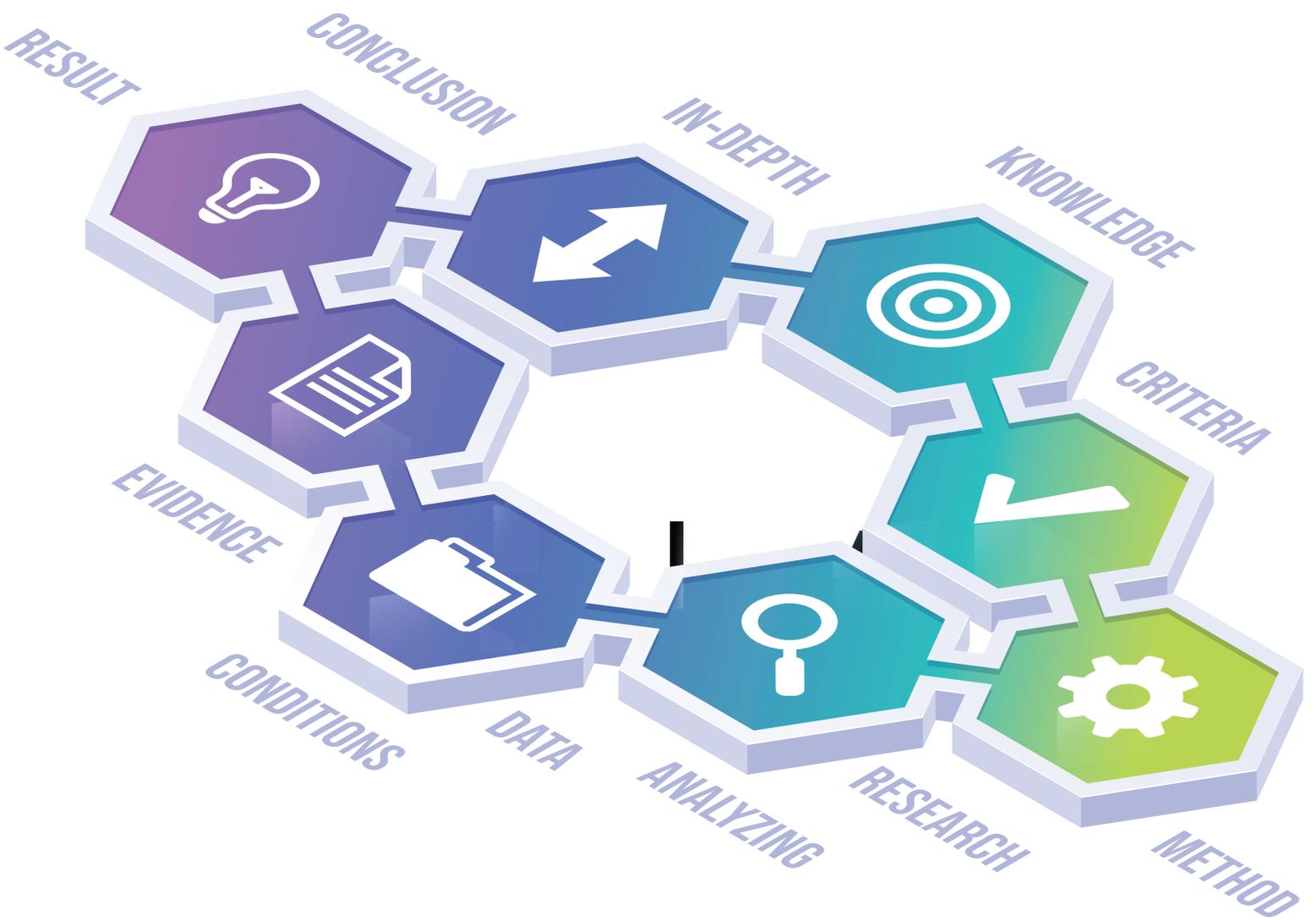# Chapter VI
Conclusions and Recommendations

Chapter 6

Conclusion And Recommendations

Conclusion

Project Management

The Project was yet to implement all the planned business processes into the K2 Application and as a result several processes still remained outside the K2 Application. There was non-revision of financial codes, non-undertaking of the business process re-engineering *etc*., which led to continued reliance and dependency on the manual operations. The capability to support the implementation of the Indian Government Accounting Standards remained limited as the associated business rules were not made part of the application. The MSA was originally entered into adopting a Waterfall Model of Application Development with specified milestones for delivering Application in two phases, the project completely deviated from the agreed development model and timelines rendering the contract redundant. The department failed to safeguard the project from vendor lock-in scenario due to which the O&M contract was further extended as per the SI's terms and conditions. The O&M was extended without considering the delay in development and roll out of modules. Though the deployment of SLA monitoring tools were an important component of a technology project, the vendor did not deploy the tools yet. The quality of the service delivered by the SI was, thus, not measurable. The agreement was not revised to accommodate the extension of time. The department deployed the project without subjecting it to third party audit and testing.

Project Implementation

The K2 was yet to build the capability for tracking expenditure through the years as the expenditure tracking module was not operational. Tracking funds drawn on grant-in-aid bills and grants drawn on payee receipts bills were not facilitated as there was no provision of utilisation certificates. The Go-live dates and delivery expectations in the original agreement were materially altered and the department did not freeze the time and cost needed for completion of the Project. Inaccuracies in MIS reports generation, input errors arising out of insufficient application controls *etc*., were also observed. The modules deployed were deficient as several envisaged processes were yet to be rolled out. Inordinate delay in implementation necessitated continued parallel operation of K1 resulting in capturing of financial data in two separate silos with no interconnectivity thus, limiting the capability of the K2 to provide comprehensive financial information to the top management to support their

decision making. Instances of Application producing inconsistent information through reports undermined the reliability of the outputs.

Project Security

The security weaknesses noticed in the Application have the potential to expose critical financial information to inappropriate access and therefore, poses the risk of compromising the confidentiality and integrity of the information. Though online exchange of data with encryption and digital signing was introduced, the procedures for establishing the non-repudiation was not in place. Absence of sanction order information, sub-voucher information coupled with deficient DSC implementation renders the vouchers created under the K2 incomplete and insufficient to replace the manual transmission of vouchers. The Project continued to employ manual workarounds and back end inputs exposing the Application to associated risks of data integrity and reliability. Lack of timelines for processing of the bills, re-processing of the failed payments, *etc.*, affected the efficiency of Application System.

Monitoring and Evaluation

Efficient allocation of budgetary resources and their monitoring were impaired as the activities related to re-appropriations, surrender of funds *etc.*, were handled through manual processes. The K2 was not capable for an end to end monitoring of amounts drawn from public funds to its final utilisation. There were gaps in submission of final expenditure details for the amounts drawn in the nature of advances through bills. Instances of processing of payments multiple times, non-accounting of payments, *etc.*, were observed pointing to inadequate reconciliation procedures. The Master Data around which the Project operations are conducted were not completely captured and kept updated. Monitoring of the Project at the Government level lacked vigour as evidenced by the lack of periodical timely review of the project by the empowered committee during the crucial period of project implementation.

Thus, the K2 Project proposed as an improvement over K1 with ambitious objectives, was yet to be fully developed and deployed. The implementation of K2 continued to be a challenging ongoing activity for the department even after 10 years of its initiation. The Application was yet to mature into an Integrated Financial Management System infused with capabilities of supporting various functions in the Government financial sector.

Recommendations

The following recommendations are made:

State Government:

❑ *The Government should expedite the revision of the financial codes to reflect the changes in financial processing practices brought out by the K2 Application and also to facilitate the electronic transmission of vouchers.*

❑ *The Government may ensure that K2 provides appropriate IGAS functionalities for facilitating the compliance to IGAS.*

❑ *The Government may develop suitable guidelines for software development projects by incorporating the learnings from the failures of the contract management of K2.*

❑ *The Government may adopt best practices related to configuration management, strategic control, identity management, source code ownership, etc.*

❑ *The Government should ensure the completion of the integration processes with important applications like e-Procurement, HRMS etc., to derive the envisaged benefits.*

❑ *The Government should prescribe closure procedures for software development projects to secure the proper delivery and mutual acceptance of the project deliverables.*

❑ *The Government may specify/adopt Government of India guidelines regarding the implementation of periodic security and application performance audits.*

Project Director:

❑ *K2 should finalise and test an exit management plan to assess their readiness to operate the K2 independent of the vendors by 2024. It should review its position about its capability to independently select a replacement partner after the completion of the O&M period and address any areas of dependency for ensuring its strategic position at the time of extension of O&M period during 2024.*

❑ *Migration of data from K1 to K2 should take place in a time bound manner, so that an integrated database can be built.*

❑ *Feedback and closure mechanism should be established for monitoring the timely and effective resolution of complaints received.*

❑ *K2 may build functionalities capable of providing trend analysis and dynamic reporting leveraging the power of historical data captured.*

❑ *A report for DDOs for closely monitoring the status of reprocessing of failed payments may be provided. Timelines may also be prescribed for reprocessing of the failed payment bills.*

❑ *The policies/guidelines are duly approved to serve as an authorised document to be used in K2 project implementation.*

❑ *Security audit covering all components of the K2 infrastructure may be undertaken on priority basis. Such audits should also be made applicable for new/amended functionalities to ensure that updated versions of the application are released into the production environment only after audit.*

❑ *K2 may consider preparing strategic plan to demonstrate and document the direction of the project that evolves with changing technology landscape.*

❑ *K2 may establish the envisaged team of experts covering the application, database and security for gaining the intended level of control over the Application implementation.*

❑ *K2 may provide functionalities to monitor timely and effective use of grants by providing a functionality for monitoring the submission of utilisation certificates.*

Bengaluru
The 18 March 2022
(S. Shanthi Priya)
Principal Accountant General (Audit-I)
Karnataka

Countersigned

New Delhi
The 21 March 2022
(Girish Chandra Murmu)
Comptroller and Auditor General of India