

FIFTEENTH KERALA LEGISLATIVE ASSEMBLY

**COMMITTEE
ON
PUBLIC ACCOUNTS
(2021-2023)**

**THIRTY THIRD REPORT
(Presented On 10th August,2023)**



**SECRETARIAT OF THE KERALA LEGISLATURE
THIRUVANANTHAPURAM
2023**

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On

Paragraphs relating to Industries & Information Technology
Department contained in the Report of the Comptroller
and Auditor General of India for the year ended 31st
March 2014 (General and Social Sector)

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COMMITTEE ON PUBLIC ACCOUNTS

(2021-2023)

Composition

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Shri P. S. Selvarajan , Joint Secretary

Shri Jomy K. Joseph, Deputy Secretary

Smt. Mable Antony, Under Secretary.

INTRODUCTION

I, the Chairman, Committee on Public Accounts, having been authorised by the Committee to present this Report, on their behalf present the 33rd Report on paragraphs relating to Industries & Information Technology Department contained in the Report of the Comptroller and Auditor General of India for the year ended 31st March 2014 (General and Social Sector).

The Report of the Comptroller and Auditor General of India for the year ended 31st March 2014 (General and Social Sector) was laid on the Table of the House on 23rd March 2015.

The Committee considered and finalised this Report at the meeting held on 12th July, 2023.

The Committee place on records their appreciation of the assistance rendered to them by the Accountant General in the examination of the Audit Report.

Thiruvananthapuram,
10th August, 2023.

SUNNY JOSEPH,
Chairman,
Committee on Public Accounts.

REPORT

INDUSTRIES AND INFORMATION TECHNOLOGY DEPARTMENT

[Audit paragraphs 4.1 to 4.16 contained in the Report of the Comptroller and Auditor General of India for the year ended 31 March 2014 (General and Social Sector)]

Information System Audit of 'FRIENDS, an e-Governance initiative of Government of Kerala'

Highlights

'FRIENDS', a key mission mode e-Governance (G2C) initiative of Government of Kerala, is a joint venture of the Department of Information Technology (IT) and Local Self Government Institutions (LSGI). This was started as a pilot project (FRIENDS Janasevanakendram), a single window integrated remittance centre, to facilitate residents to pay their utility bills, tax and other dues to Government without any extra cost at Thiruvananthapuram district in the year 2000. It was rolled out to the remaining 13 districts of Kerala in the next year 2001. The deficiencies noticed in planning, system design, organisational and management controls are given below:

The application was developed without preparing User Requirement Specification (URS). Even though envisaged to be an automated system, non-adherence to database normalisation principles, poor system design and inadequate capturing of vital data necessitated manual intervention, which led to control failures and embezzlement of money.

(Paragraphs 4.9.1, 4.9.2 & 4.9.3)

There were persistent delays in remittance of money collected from the FRIENDS Centres to Bank. The accumulated amount of money kept out of public exchequer was ₹15.21 crore and ₹11 crore at Ernakulam and Kozhikode Centres respectively. The total accumulated amount of money out of public exchequer from all the Centres was ₹136.02 crore.

(Paragraphs 4.9.3.1, 4.9.3.2 & 4.9.3.3)

Non-constitution of IT steering committee led to design of the system without proper vision and focus. The application was not upgraded in line with the technological advancements in the external environment.

(Paragraph 4.10.1.1)

No norms were fixed for the time required for completing a transaction resulting in large variation in the number of transaction of bills by various Service Officers.

(Paragraph 4.10.3)

Absence of change control mechanism resulted in discrepancies in the system generated reports and erroneous debit of ₹10.74 lakh from FRIENDS accounts. Similarly, another change made in the application without test run resulted in variation as high as ₹1.82 crore in different system generated reports.

(Paragraph 4.10.5)

System could not achieve the goal of providing single window remittance centre to the public due to lack of timely managerial interventions and coordination with participating agencies.

(Paragraph 4.13)

4.1 Introduction

FRIENDS (Fast Reliable Instant Efficient Network for Disbursement of Services), a key mission mode e-Governance (G2C) initiative of Government of Kerala and a joint venture of the Department of Information Technology (IT) and Local Self Government Institutions (LSGI), was started as a pilot project in the year 2000 in Thiruvananthapuram district (FRIENDS Janasevanakendram). This application provided facilities to the residents of Kerala State to pay their utility bills, tax and other dues to Government through a single window integrated remittance centre, without any extra cost. It was rolled out to the remaining 13 districts of Kerala by 2001.

The IT Department is responsible for running the Project in the space provided free of rent by LSGIs. Departments of Revenue, Motor Vehicles, Electrical Inspectorates, Civil Supplies, Kerala Police and agencies like KSEB⁵⁷, Kerala Water Authority⁵⁸, BSNL⁵⁹, Kerala State Cultural Activists Welfare Fund Board and Universities of Kerala and Calicut and Mahatma Gandhi University are the participating Departments/Agencies. Among these Departments/Agencies, except BSNL, all others provide their staff members on working arrangements and the expenditure towards their pay and allowances are met by the parent Departments/Agencies concerned. As BSNL does not provide staff members, they pay commission⁶⁰ to the Project for collection pertaining to BSNL bills.

The application software titled FRIENDS developed by Centre for Development of Imaging Technology (C-DIT⁶¹) in client server architecture was deployed as local area network application software and put to use from 2000.

Subsequently, a centralised web based re-engineered software titled FRIENDS Re-engineered Enterprise Enabled System (FREES), developed by National Informatics Centre (NIC) on JAVA platform, was launched in 2010 in Thiruvananthapuram district and rolled out to all other districts by March 2013. FREES package runs with the operating system Red Hat Enterprise Linux Server

57 Kerala State Electricity Board Ltd is a public sector agency under the Government of Kerala that generates and distributes the electricity supply in the State

58 Kerala Water Authority was established on 1 April 1984 as an autonomous body of Government of Kerala by converting the erstwhile Public Health Engineering Department, for the development and regulation of water supply and waste water collection and disposal in the State of Kerala

59 Bharat Sanchar Nigam Limited (BSNL), incorporated on 15 September 2000, took over the business of providing of telecom services and network management from the erstwhile Central Government Departments of Telecom Services and Telecom Operations

60 Commission of ₹5 per each BSNL Mobile/CDMA phone bill and ₹6 per each BSNL Landline phone bill

61 Centre for Development of Imaging Technology (C-DIT) established in 1988 by Government of Kerala with a vision to ensure advancement of research, development and training in imaging technology

Release 5.8. PostgreSQLPlus Standard Server 9.2 is used in database servers, JBoss EAP 5.1 in application servers and Apache 2.2.3 in web servers. The system is hosted in the State Data Centre-2 at Thiruvananthapuram and connectivity to seven out of fourteen Janasevanakendrams is established through BSNL leased line, six through KSWAN⁶² and the remaining one uses both the KSWAN and BSNL leased line. Hardware included 6 Intel Xeon servers and 2 AMD Opteron servers for the centralised web-based application (2 web servers, 3 application servers, 2 database servers and 1 test server).

4.2 Organisational Setup

Kerala State Information Technology Mission (IT Mission), an Autonomous Body under the Government of Kerala, is the implementing and monitoring agency of FRIENDS project. This project is managed by Director of IT Mission, who is assisted by Mission Coordinator (FRIENDS), who in turn coordinates activities of all the Centres.

There are fourteen FRIENDS Janasevakendrams, one each in every district headquarter. These Centres are supervised by two Project Managers (PM), who are in charge of each shift. The State Bank of Travancore deputes personnel to collect money from all Centres and credits in FRIENDS Pooling account. In variation to other Centres, Janasevanakendram Thiruvananthapuram has one Central Accounts Manager (CAM). As the application is not equipped with the provision for real time/online communication with the bank data, CAM is entrusted with the responsibility of reconciling the amount reflected in the Pooling account with that of the FREES application.

⁶² Kerala State Wide Area Network (KSWAN) is envisaged to be the core common network infrastructure for e-governance and the State Information Infrastructure, connecting all the 14 districts including 152 Block Headquarters.

4.3 FREES data flow and cash flow

Chart 4.1

Chart showing the cash flow and data flow



(1) Residents pay bills in various FRIENDS centres.

(2) Service Officers access central server for bill transaction. Where real-time server connectivity is established, central server fetches data from Participants' servers and update the participants' servers with transaction details.

- (3) Collection details are sent to Participants, which are offline, for updating at their end.
- (4) Bank personnel collect money and deposit in FRIENDS Pooling A/c.
- (5) CAM accesses FREES data and reconciles with Bank data and authorises electronic fund transfer.
- (6) Government account and the participating bank accounts, as the case may be, are credited by debiting the Pooling A/c.

(Source: Information obtained from the IT Mission Headquarters)

4.4 Audit objectives

The objectives of the information system audit are to assess whether:

- The objective of FRIENDS/FREES to facilitate residents to remit taxes and other utility payments due to Government through a single window payment system has been achieved;
- Collection of dues by the participating departments has improved by partnering with FRIENDS/FREES and
- The system design and the controls provide assurance that the interests of residents and participating departments are protected.

4.5 Sources of audit criteria

- System Requirement Specification (SRS) and Project documentation.
- Minutes and Decisions of the Governing Body and Circulars issued by the Government and IT Mission.
- IT Policy, 2012 of Government of Kerala.

- Best international practices adopted in IT projects contemplated in Guidelines issued by INTOSAI⁶³ (Information System Security Review Methodology) and ASOSAI⁶⁴ (Information System Security Review Methodology) for Information System Audit.

4.6 Scope of audit

Audit analysed the implementation of re-engineered application FREES for the period from June 2010 to March 2014. Audit also analysed the FRIENDS system to assess whether the lacunae in the old system have been addressed in the new application FREES.

4.7 Audit methodology

Audit was conducted during October 2013 to January 2014, and from June to July 2014. An entry conference was held with the Secretary to Government, Information Technology on 4 October 2013. In addition to the IT Mission in Thiruvananthapuram, audit team visited Janasevanakendrams in Thiruvananthapuram, Idukki, Ernakulam, Malappuram, Kozhikode and Kannur for verification of the working of the system and held interviews, on the basis of questionnaire prepared for the purpose, with end-users to assess the usefulness and user- friendliness of the software. A beneficiary survey⁶⁵ was also conducted with residents to assess the level of services rendered by the project, and the satisfaction of the residents about this project.

An exit conference was held (9 December 2014) with the Principal Secretary to Government (IT), wherein the audit findings were discussed. Views of the State Government and their replies have been incorporated in the report suitably.

63 The International Organisation of Supreme Audit Institutions (INTOSAI) operates as an umbrella organisation for the government audit community. It provides an institutionalised framework for supreme audit institutions to promote development and transfer of knowledge, improve government auditing worldwide and enhance professional capacities, standing and influence of member SAIs in their respective countries

64 ASOSAI (Asian Organization of Supreme Audit Institutions) is one of the Regional Groups of the International Organization of Supreme Audit Institutions (INTOSAI)

65 The questionnaire prepared for the survey is given in **Appendix 4.1** and the result of survey in **Appendix 4.2**. Relevant portions of the result of survey have also been included along with audit comments

4.8 Acknowledgement

Audit would like to acknowledge the cooperation extended by the Principal Secretary to Government (IT), Chairman and Director of IT Mission, officers and staff, and the heads of Janasevanakendrams visited by audit team.

Audit Findings

4.9 Poor System design

4.9.1 User Requirement Specification (URS) and System Requirement Specification (SRS)

The properly documented User Requirement Specifications (URS) obtained from users and System Requirement Specifications (SRS) by the software development team ensure that the needs of the users of the system have been taken care of and the software developed meets the business requirements. However, Audit noticed that User Requirement Specifications were not prepared. System Requirement Specifications for the re-engineered application FREES was thus prepared without obtaining the requirement of all stakeholders. In the absence of URS, Audit was unable to assess the achievement of intended benefits of the project.

4.9.2 Lack of system automation

Even though FREES is a centralised web based application, Audit noticed manual interventions in the processes, which could have been avoided with proper system design. These issues pertained to the core functionalities of the application which led to serious control failures. The issues identified in test check are given below:

- Audit noticed that the money remitted in various FRIENDS Centres was being collected by the banking personnel deputed by concerned bank branches. The collected amount is transferred to the respective account of FRIENDS Project (i.e. Pooling account maintained at State Bank of

Travancore, Thiruvananthapuram). In the absence of proper planning, the system was not automated to ensure electronic data interchange⁶⁶ with the FRIENDS Centre and the bank, instead the CAM was given the responsibility to reconcile the FRIENDS Pooling Account data with that of FREES application manually, which is avoidable.

- BSNL paid commission to the project for collection pertaining to each BSNL bill. The system did not make provision for transferring the net amount to BSNL after deducting the commission due from BSNL automatically. Instead the whole amount was transferred to BSNL, who worked out the commission and this amount was credited to an account exclusively maintained for this purpose by each of the FRIENDS Centres. The money in this account was subsequently credited to Government account and to Akshaya District Project Office. This procedure was not only inefficient, but also prone to misuse and embezzlement. Audit data analysis revealed an embezzlement of ₹ 3.53 lakh in Kozhikode Centre from this account by drawing personal cheques, which could have been avoided with proper system design.

4.9.3 Non-adherence to database normalisation principles and improper designing of tables

Database Normalisation is the process of organising the fields and tables of a relational database to minimise redundancy. Normalisation usually involves dividing large tables into smaller (and less redundant) tables and defining relations between them. Audit noticed that database normalisation principles were not followed and there were deficiencies in designing of tables as detailed below:

- The primary transaction table named 'Collection_Master' contained 1,08,76,286 records as on 8 April 2014 and audit analysis has revealed that of these, 97,32,401 records related to the financial year (FY) 2013-14, 9,72,051 records related to the FY 2012-13, 13,107 records pertained to the FY 2011-12 and 758 records related to the FY 2010-11. Storing of

66 Electronic data interchange (EDI) is an electronic communication system that provides standards for exchanging data via any electronic means. By adhering to the same standard, two different entities can electronically exchange documents (such as purchase orders, invoices, shipping notices, and many others)

these records in the respective tables/databases for each of the past financial years as historical data, could have increased the processing speed.

- The transaction table was used to store bill collection details (Collection_Master) that automatically captured the date and time of collection in one of its fields (Updated_On), with which the collection pertaining to each day and shift were identified. There was another table (Bank_Remittance) to store particulars about crediting of the collected money into the bank account. Instead of storing the date of collection, 'Bank_Remittance' table had two fields to store 'collection-from-date' and 'collection-to-date'. Audit observed that due to this design deficiency, relationship between these two tables could not be established.
- Similarly, Payment_To_Departments table stores payments to participating departments/agencies. Here also direct relation of this table was not established with the collection table so as to enable generation of reports of date-wise payments to departments concerned.

Due to the deficiencies in the design of tables as mentioned above, meaningful MIS reports for monitoring the timely remittance of money collected from FRIENDS Centres to the banks and to the participating departments could not be generated. This along with lack of proper system automation (as mentioned in paragraph 4.9.2) resulted in instances of embezzlement and delay in remittance to bank as detailed below.

4.9.3.1 Embezzlement of cash - FRIENDS application

In the erstwhile FRIENDS application, Project Manager in Ernakulam embezzled an amount of ₹15.99 lakh relating to the collection of 18 August 2012. The FRIENDS application did not have provision for capturing details of date of remittance into bank, which was one of the reasons due to which the embezzlement could not be detected. It was detected only after BSNL made a formal representation to the Director of IT Mission on non-receipt of the amount due to them. This amount has not been remitted till date (December 2014) and the

notional interest at the rate of 18 per cent⁶⁷ per annum on account of this would work out to ₹6.96 lakh as on 1 January 2015.

Audit noticed that, during this period, a whistle-blower was repeatedly reporting to the IT Mission about the suspected fraudulent activities of the Project Manager in the Centre. The whistle-blower sent six intimations⁶⁸ to the IT Mission during the period from March to October 2012. All of these letters were ignored and actions not initiated until BSNL made the complaint.

Audit also noticed that the Project Manager deliberately defaulted in depositing the collected money into the bank by providing misleading information to the bank. During the period from January to October 2011 there were defaults in remitting cash once or twice a month, which increased to 16 defaults in a month (October 2012).

Audit analysis relating to Ernakulam Centre for the period from January 2011 to March 2013 revealed that in 163 instances there were delays in remitting cash to bank. Audit analysis further revealed that during this period not only the frequency of non-remittances increased, but also the number of days the money retained by the Project Manager (PM) also increased. In four instances, the money retained by the PM ranged from 35 days to 287 days as shown in Table 4.1.

Table 4.1: Details of remittances of cash into bank, where the delay exceeded one month

Collection date	Remittance date	Amount (₹ in lakh)	Delay in days
28-5-12	12-3-13	9.36	287
27-9-12	12-3-13	27.14	165
21-10-12	27-12-12	3.52	66
23-4-12	29-5-12	13.05	35

(Source: Analysis of data obtained from FRIENDS Centre, Ernakulam)

67 Penal interest is generally charged at the rate of 18 per cent per annum.

68 E-mails dated 20 Mar 2012, 29 Mar 2012, 23 Apr 2012 and letters dated 10 Oct 2012, 27 Oct 2012 and 30 Oct 2012

From November 2012, the money kept out of public exchequer was as high as ₹87.33 lakh with an average of ₹33.98 lakh per day. Data analysis revealed that owing to delay in bank remittances from the above 163 instances, the accumulated amount of money kept out of public exchequer was ₹15.21 crore in Ernakulam Centre alone with consequent notional loss of interest.

The Government stated (November 2014) that disciplinary and criminal procedures were initiated against the erring Project Manager. Actions were also initiated to recover the short remittance from the offender. The reply is not tenable in audit as the project has quantified the embezzled amount as only ₹15.99 lakh and has not addressed the issue of rectifying the deficiencies in the system. Some of the systemic issues, which caused the embezzlement, are still present in the newly developed and implemented re-engineered application FREES.

4.9.3.2 Embezzlement of cash –FREES application

The re-engineered application FREES was launched with the aim to facilitate central monitoring and to manage the daily collection at all the Centres effectively. However, Audit observed that in view of the system deficiencies referred to in the paragraphs 4.9.1, 4.9.2 and 4.9.3, delays in remittance of cash to bank continued, which has resulted in embezzlement of cash at Kozhikode Centre.

Consequent on the media report on embezzlement of cash at Ernakulam Centre and having learnt about the delay in remittance of cash at Kozhikode Centre, the Inspection Wing of the Finance Department of Government of Kerala made a surprise visit to Kozhikode Centre on 8 November 2013. The physical verification of cash at the Centre revealed cash deficit of ₹1.01 lakh, which has not been remitted till date (December 2014).

Audit data analysis revealed that there were 157 instances of delay in remittance of cash into bank during the period since the installation of FREES (16 January 2013) in Kozhikode Centre till the Project Manager was booked on 8 November 2013. The delays ranged up to 9 days. During this period, from the above 157 instances, the accumulated amount of money kept out of public exchequer was ₹11 crore with consequent notional loss of interest.

The Government stated (November 2014) that criminal procedures were initiated against the erring Project Manager. The reply is not tenable in audit in view of the fact that the reply is silent on mitigating the risk by resolving system deficiencies, which cause these embezzlements.

4.9.3.3 Delay in remittances into bank

Analysis of FREES application data revealed delays in remittances of money collected to bank in 2,749 instances. The delay ranged from one to 30 days. Owing to delay in bank remittance, the accumulated amount of money kept out of public exchequer from all the Centres was found to be ₹136.02 crore⁶⁹ with consequent notional loss of interest till the end of financial year 2013-2014. Audit cannot rule out the possibility of embezzlement of cash/utilizing Government money for private use during these periods.

4.9.4 System deficiencies resulting in data loss

Data loss is an error condition in information system in which information is destroyed by failures or neglect in storage, transmission, or processing. Analysis by audit has revealed system deficiencies resulting in data loss and the examples are given below:

- One user identified by the code “SSK” did not log in to the system on 12 May 2013 as per the login table, whereas the same user collected money on the same date as seen from the collection table.
- As per the data available in the login table, the user “SKA” logged in to the system on 22 March 2010 only during the period from 09:20:45 to 09:26:07, 09:26:20 to 09:38:40 and from 14:26:21 to 14:29:36. However, as per the data available in the collection table, the same user collected 43 bills at 09:39:13, 09:47:48, 09:54:06, etc. Data analysis revealed 304 such cases establishing data loss.

⁶⁹ This amount includes ₹11 crore referred to in the previous paragraph

- There were 2684 instances, where those logged in were not seen logged out on the same day.

Loss of data while saving records is a serious risk in an information system, which requires to be addressed immediately.

4.9.5 Non-creation of essential master table

A good database needs to be designed to ensure minimum level of mistakes at the time of data entry. One of the methods to achieve this objective is by designing master tables and transaction tables with a master-detail relationship between master table and transaction table. The master table will work as a lookup table from which proper data values can be picked up in the user interface for restricting junk values to be stored in the tables. Correctness of data in the master and standing files is of vital importance and critical to the processing and reporting of financial and operational data as the information on master files can affect many related transactions and must therefore be adequately protected.

There is a table to store user credentials of every staff member. Data in the designation field of this table is entered/updated by each of the Project Manager whenever a change takes place. As the designation field is an element required for grouping in generation of various MIS reports, uniqueness of data in the field is vital. To ensure unique capturing of data in the field, the designers could have created a table for designation, in which the values were to be stored at the design stage and authenticated at the requisite level. The designation field of user table could be designed as a list box⁷⁰ linked to the designation table. Audit noticed that in its absence, the designation of Service Officer was repeated several times with different spellings (like ‘Service Officer’, ‘serviceofficer’, ‘so’, ‘SERVICEOFFICER’, ‘ServiceOfficer’, etc.) causing inaccuracies in MIS report generation.

4.9.6 Deficiency in user interface

In the case of Municipal Corporations, where real time connectivity is available (referred to as ‘web-driven’ mode in the application), when a bill is produced to a Service Officer (SO) for effecting payment, the SO has to input key

⁷⁰ A list box is a graphical control widget that allows the user to select one or more items from a list contained within a static, multiple line text box

information, like consumer number, bill number, bill date, district, ward/section/sub section, etc., to fetch the actual bill amount from the server. If responses from the server are not received within a reasonable time owing to high network traffic or unmanageable server hits, the SO has the option to switch to ‘customer-driven’ mode that would enable him to input the billed amount from the bill. However, Audit noticed that on such occasions, when the SO switched to customer-driven mode, the already entered data was deleted compelling the user to enter the data again.

4.10 Control activities

4.10.1 Managerial Controls

4.10.1.1 Absence of IT steering committee

IT steering committee typically performs the following roles and fulfills these responsibilities:

- Develops policy, develops an operating charter formalizing these roles and responsibilities
- Develops and maintains a set of project “Vision and Goals”.
- Manages scope, cost and the project and champions business process improvement
- Coordinates with related projects and programs and obtains support from stakeholders.

However, Audit has observed that the Government of Kerala has not constituted an IT steering committee denying the valuable benefit such a committee could have provided to this project. Being an IT system, there should be constant upgrade of the application in line with the technological advancements. If not, the system will become outdated and lose relevance. In the case of FRIENDS, even basic enhancements like provision for accepting payments through credit/debit cards could not be incorporated into the application. Though there were instances of multiple embezzlements and delayed remittances due to system design deficiencies, concrete action was not taken to address the noticed system deficiencies, which caused such irregularities.

Automated emails and mobile messaging services for enabling real time managerial monitoring of delay in bank remittances and transfer credit to stakeholders concerned were not made use of. Real time assessment of server downtime, network traffic, server hits, time taken for each transaction, etc., by utilisation of metadata⁷¹ was not considered. All these point to failure of managerial oversight, which could have been addressed, if an IT steering Committee was in place.

4.10.1.2 Absence of post implementation review

A Post Implementation Review (PIR) is an activity that is carried out after a new business system has been implemented. The objectives of PIR are to assess the system functionality, performance, and cost versus benefits and to assess the effectiveness of the life-cycle development activities that produced the system. The review results can be used to strengthen the system as well as system development procedures and re-engineering. But, Audit noticed that the Management had not conducted any post implementation review of this application.

There was no provision in the erstwhile FRIENDS application to store the details of remitting the collected amounts into banks and their final transfer to the accounts of concerned stakeholders. These deficiencies prevented the top Management from exercising managerial controls. The lacunae in the system paved the way for embezzlement of cash. The deficiency continued to exist in the re-engineered application FREES also.

The Government stated (November 2014) that instructions were issued to the CAM to inform the Management about the delay in remittance on a daily basis. The reply is not tenable in audit in view of the fact that instead of adopting manual monitoring mechanism, the system should provide facilities to generate required MIS reports for enabling centralised monitoring by the Management as envisaged by the re-engineered application software.

4.10.1.3 Revoking of validation controls

Designing of tables without properly relating 'Collection_Master' table with

71 Metadata is 'data about data'. The main purpose of metadata is to facilitate in the discovery of relevant information. Metadata also helps organize electronic resources, provide digital identification, and helps support archiving and preservation of the resource.

‘Bank_Remittance’ table was pointed out in paragraph 4.9.3. Audit noticed revoking of validation controls leading to duplication in dates stored in the table relating to bank remittances. Insufficient validation controls resulted in generating challans again in respect of deposit to banks, which were already generated. Thus overlapping dates caused duplicate values in generation of reports. Data analysis brought to light 2,068 duplicate values in ‘collection-from-date’ and 2,067 duplicate values in ‘collection-to-date’ rendering the data useless for any MIS reports.

4.10.2 Delay in collection of cash by designated bank

As per the MoU signed with banks, the banks were to depute personnel to collect money relating to the second shift of the previous day and first shift of the day from all the Centres at 2.00 PM on every bank working day (except Saturday, on which the collection relating to the second shift of the previous day would be collected at 11.00 AM) thereby permitting the money collected on Saturday and Sunday to be kept out of the public exchequer. Moreover, during the test check, Audit noticed that in the month of October 2013, out of the 24 bank working days, money was collected only on 16 days from Thiruvananthapuram and Kozhikode Centres. However, no communications were sent to banks either by Project Managers of the respective Centres or by the IT Mission, which indicated lack of managerial controls by the organization.

4.10.3 Human resource management

Human Resource Management (HRM) is the strategic and coherent approach to the management of an organization’s most valued assets who individually and collectively are responsible for the effective and proper functioning of IT system.

FRIENDS Centres are supervised by two Project Managers (PM) deputed from participating Departments/Agencies. Service Officers (SO) deputed from participating Departments/Agencies on working arrangement in each District

Centre are entrusted with the responsibility of bill collection. Audit observed the following lapses in HRM.

- No qualifications were prescribed for the selection of personnel for the project.
- Responsibilities entrusted were not in line with their qualifications and seniority. As no additional remunerations were offered for higher responsibilities of Project Managers, senior staff members were reluctant to accept responsibilities and juniors were posted as Project Managers, who were unable to exercise supervisory controls over seniors.
- Adequate training was not imparted due to which the staff had to struggle with their work. Training to staff members was imparted only at the launch of erstwhile application FRIENDS (2000-01) and at the installation time of the re-engineered application FREES (2010-11). Audit noticed that in all the six Centres visited, only 22 out of 75 existing PMs and SOs have received training.
- No norms were fixed by the IT Mission for the time taken in processing a bill and hence wide variations existed in average number of bills processed by different SOs. Data analysis for the financial year 2013-14 revealed that variation in average number of transactions per shift made by various SOs in all the Centres was up to three times as shown in Appendix III(Appendix 4.3) Audit analysis also revealed frequent long interval between two consecutive transactions made by the SOs, whose average transactions were low, whereas continuous transactions were seen in respect of others in the same Centre on the same day. Some of the illustrative cases are shown in Table 4.2.

Table 4.2: Interval between two consecutive transactions

Alappuzha Centre (User 'ANK')		Kollam Centre (User 'BNG')	
Transaction Time	Interval (H:M)	Transaction Time	Interval (H:M)
15-5-2013 14:35:25		6-1-2013 11:13:49	
15-5-2013 18:41:43	4:06	6-1-2013 12:54:34	1:40
22-11-2013 13:07:25		13-1-2013 09:30:57	
22-11-2013 17:43:03	4:35	13-1-2013 10:30:08	0:59
		13-1-2013 11:58:04	1:27
3-1-2014 10:20:43			
3-1-2014 12:44:45	2:24	20-1-2013 12:02:56	
		20-1-2013 13:20:25	1:17
3-1-2014 12:50:13			
3-1-2014 17:57:46	5:07		

(Source: Analysis of data obtained from IT Mission Headquarters)

The Government stated (November 2014) that due to manpower shortage, volunteering senior staff members are given charge of Project Managers. The reply is not tenable in audit, because considering the importance and money value involved in each centre, only qualified persons should be selected as Project Managers.

4.10.4 Lack of documentation and version control

Adequate documentation is one of the essential elements in any application development. Appropriate control over software versions requires sufficient documentation to ensure accuracy in data processing, especially in centralised data processing through web where financial data transfer is involved.

Audit noticed that no version numbers were marked in the application. There was no formal/documented system of complaint booking. Instead, whenever any bugs were noticed, users were lodging their complaints through telephone calls to database administrators. After making changes in the application on the basis of these telephone calls, patches⁷² would be installed in the real time system without documentation, adequate test run, obtaining approval at the requisite level and marking the software with a version number. The consequences are pointed out in paragraph 4.10.5.

4.10.5 Absence of change control mechanism

Proper Change Control Mechanism ensures that all changes to system configurations are authorised, tested, documented, controlled, the systems operate as intended and that there is an adequate audit trail of changes. Change control mechanism reduces the possibility of introducing unnecessary changes in the system without foresight, which could introduce flaws into the system or undo changes made by other users of software. Instances of changes introduced which compromised the objectives of the project are detailed below:

- In test check, Audit observed that changes introduced in the application without adequate testing resulted in erroneous addition of an amount upto ₹0.65 lakh in the daily account due to be transferred to the head of accounts relating to e-District from the FRIENDS accounts. The mistakes continued to occur during the period from 9 January to 7 February 2012 before it was identified by the Project resulting in wrong debit of ₹10.74 lakh from FRIENDS accounts.
- Similarly Audit also observed that the system generated counter-wise collection reports and bank/treasury summary reports did not match after introducing an untested change. This resulted in confusion, because the amount collected from the counters and the amount to be remitted to bank did not tally. The difference between the two accounts ranged from a low of ₹ 17.91 lakh in Kollam Centre to a high of ₹1.82 crore in Ernakulam Centre.

⁷² A patch is a piece of software designed to update a computer program or its supporting data, to fix or improve it. This includes fixing security vulnerabilities and other bugs, and improving the usability or performance.

The details of mismatch found in seven Centres are shown in Table 4.3.

Table 4.3: Details of discrepancies between the amounts as per counter wise collection reports and bank/treasury summary reports

Sl. No.	Name of Friends Centre	Amount as per counter wise collection report (₹)	Amount as per bank/treasury summary report (₹)	Difference (₹)
1.	Palakkad	3,17,961	57,23,298	54,05,337
2.	Kollam	1,05,357	18,96,426	17,91,069
3.	Malappuram	1,27,324	22,91,832	21,64,508
4.	Pathanamthitta	2,92,853	52,71,354	49,78,501
5.	Thiruvananthapuram	4,46,052	80,28,936	75,82,874
6.	Alappuzha	2,67,105	23,38,542	20,71,437
7.	Ernakulam	10,69,864	1,92,57,552	1,81,87,688

(Source: Figures obtained from the respective FRIENDS Centres)

The Government stated (November 2014) that ₹10.74 lakh was re- credited to FRIENDS pooling account. The reply is not tenable in audit since the project has not addressed the issue of introducing appropriate change control mechanism to avoid recurrence of such incidents.

4.11 IT Security

4.11.1 Lack of information security control

Confidentiality, integrity and availability are to be the core principles of information security. Installation of antivirus software⁷³ helps in reducing threat to data caused by virus attacks. Audit observed the following lapses in this regard:

- The Project did not have an IT Security Officer.
- No mechanism was available for recording and reporting security incidents.

⁷³ Antivirus software is computer software used to prevent, detect, remove malicious software and to provide protection from other computer threats

- IT Security instructions were not circulated periodically to staff.
- USB⁷⁴ ports were not disabled in four Centres⁷⁵.
- Licensed versions of antivirus packages were not installed in any Centre. Freeware antivirus packages were being used in Thiruvananthapuram and Ernakulam Centres, but both these Centres were not updating virus definition files. Systems were seen infected with virus in Malappuram Centre, which was not using antivirus packages. In Ernakulam Centre, virus infection caused non-performance of the system for one day.
- Periodic changes of passwords were not ensured. Data analysis revealed that 366 users had never changed their passwords.
- No instructions were issued on password policy specifying the structure and length of password, changing of passwords, secrecy to be maintained, etc.
- In three out of six Centres visited, user-ids and passwords of Project Managers were shared with others defeating the very purpose of logical access controls.

4.11.2 Failure in deactivating user-ids of retired/transferred employees

Best IT practices demand that in the case of retirement or transfer of employees, the system administrator should immediately deactivate user accounts to prevent unauthorised access to the system. However, Audit noticed that in all the Centres visited, the active user-ids exceeded the total number of the existing personnel as shown in Table 4.4.

⁷⁴ Universal Serial Bus (USB) is an industry standard developed in the mid-1990s that defines the cables, connectors and communications protocols used in a bus for connection, communication, and power supply between computers and electronic devices. USB drives are observed to be highly prone to transmission of virus.

⁷⁵ Idukki, Ernakulam, Kozhikode and Kannur

Table 4.4: Comparison of existing active user-ids against the existing personnel

Sl. No.	FRIENDS Centre	Number of active user-ids	Number of existing personnel
1.	Thiruvananthapuram	97	29
2.	Idukki	11	8
3.	Ernakulam	37	13
4.	Malappuram	25	15
5.	Kozhikode	18	13
6.	Kannur	27	15

(Source: Analysis of data obtained from the respective FRIENDS Centres)

Being a web based system, such control deficiencies could provide an opportunity for misuse by unscrupulous persons.

The Government stated (November 2014) that actions were initiated to disable the user-ids in respect of past employees and 323 login accounts have already been terminated. Audit is of the view that continued monitoring is required in this regard.

4.11.3 Inadequate segregation of duties

Segregation of duties ensures that the data stored is authenticated at various levels of supervisory officers. Inadequacies in this would increase the risk of errors being made and remaining undetected, fraud and the adoption of inappropriate working practices.

Project Managers had the exclusive responsibility to open and close shifts in the application by privileges granted to them in the system. Generation of challan for remitting money into bank and confirmation of transfer credit of the same to the

FRIENDS Pooling account were also the exclusive duties of Project Managers. But in all Centres visited, Audit noticed that these duties were performed by either System Administrators or Service Officers defeating the very purpose of segregation of duty.

4.11.4 Risk to IT assets

Audit observed that Idukki centre had several shortcomings in the facilities and the infrastructure provided posed risks to IT assets as discussed below:

- The Centre is functioning from a dilapidated building, that could not be closed as shown in picture below. There is only one security guard looking after the centre with no substitute arrangements when he is on leave.



Picture depicts view of Idukki Centre, where the steel shutter cannot be closed. The shutter channel is blocked with wooden logs to prevent collapsing of the damaged steel shutter. Inset picture displays a wooden log used as blockade.

- The Centre deviated from the established procedure of remitting the daily collection in the bank. Even when a single day's collection was as high as ₹9.55 lakh during the period, the bank did not send their staff to collect the cash. Since the cash could not be kept in the Centre due to safety reasons, the staff members were compelled to carry the cash home and bring it back on the next day.

The deviations noticed in other Centres are as follows:

- Scrap was dumped over UPS and battery posing a fire risk and the abandoned computers and other unused hardware were not disposed off in 2 out of 6 Centres visited by audit team as shown in picture below. In two Centres the air conditioners were not working properly.



Picture shows dumping of scrap over the UPS, battery and near the counters in Thiruvananthapuram and Malappuram Centres.

The Government stated (November 2014) that the scrap had since been disposed of from Centres in Thiruvananthapuram, Kollam, Pathanamthitta, Malappuram, Kannur and Kottayam and instructions had been issued to other Centres for disposal.

4.12 Business continuity and disaster recovery planning

Business continuity planning (BCP) is working out how to stay in business in the event of a disruption. Audit noticed that appropriate business continuity plan and disaster recovery planning have not been formulated.

4.12.1 Inadequate backup facilities

Backup refers to copying and archiving of computer data so that it may be used to restore the original after a disaster and also to restore files after they have been accidentally deleted or corrupted. Offsite storage of backup data would ensure resuming the business with minimum time lag in the event of a disaster like fire, flood, etc.

While appreciating the measures adopted for ensuring backup, Audit observed that the project had not ensured offsite storage of backup. Instead the backup was stored in the same location, where servers were placed. All the servers and tape cartridges were kept on the ground floor adding high risk to the data.

4.12.2 Flaws in the terms of annual maintenance contract (AMC)

Business Continuity Plan should also ensure that an entity's business operation is not interrupted owing to power failures and hardware failures. Entering into agreements with AMC providers would ensure minimum interruption to the business. However, Audit noticed several flaws in the terms of contract and lack of control over the AMC provider adversely affecting business continuity, as indicated below.

- No hardware downtime reports were obtained from AMC provider, though fortnightly report was stipulated in the terms of the contract.

- There was no clause relating to levy of penalty in the event of failure in providing timely services.
- Though the latest time to attend a fault call was stated to be 24 hours, no time limit was fixed for rectification other than a passive statement ‘in the earliest possible time’.
- Though preventive maintenance was stipulated to be done once in three months, no registers were maintained to monitor the preventive maintenance.
- No preventive maintenance was reported to be done except in Malappuram Centre.
- Hardware status/fault registers were not maintained in three out of six Centres visited. In Thiruvananthapuram and Malappuram Centres they were maintained only up to April 2010. In Kozhikode Centre, the dates of rectifications were not entered.
- In Thiruvananthapuram Centre, in one of the cases, the delay in rectification was 18 days and in another the delay was 15 days during the period test checked (2008-2010). In 56 per cent of cases, the delay could not be ascertained as dates of rectifications were not entered.

4.13 Failures in realisation of a single window remittance system

Being a bill remitting centre, resident friendly measures would have ensured retention of customers and thus enabling the project to achieve its stated objective of becoming a single window integrated remittance centre. To enhance customer experience, the IT systems should have evolved to keep up with the technological advances in the external environment. But due to lack of vision and proper planning, this could not be achieved. Audit noticed following deficiencies in this regard:

- There was no provision for accepting payments from residents through credit and debit cards.
- There was no provision for accepting cheques from Government departments and autonomous bodies/corporations. Audit data analysis revealed that there were 865 cash transactions that exceeded ₹1 lakh and that a single cash transaction was as high as ₹12.43 lakh.
- There were withdrawals of services like payment of land tax, building tax, luxury tax, lease rent and fees for services rendered by Revenue Department. Data analysis revealed 85.79 per cent of drop in bills relating to the Revenue Department.

Transactions of bills relating to KSEB (32.15 per cent) constituted one of the major business of the project. However, the number of transactions in respect of KSEB fell from 11.36 lakh to 6.7 lakh during the period from 2006-07 to 2013-14, even though direct connectivity to KSEB server was established in the FREES system from 2010 onwards.

The reasons, which contributed to the reduction, were as follows:

- KSEB did not permit FRIENDS Centres to accept power bills with fine after the pay-by-date for no meaningful reasons;
- FRIENDS Centres were not provided with provisional module to accept payments, when billing data was not uploaded in KSEB server;
- Network problems owing to high network traffic and unmanageable server hits were pointed out in paragraph 4.9.6. During a test check conducted in Ernakulam and Kozhikode Centres for the period from December 2013 to March 2014, Audit noticed KSEB server downtime recorded at these Centres ranged from 20 minutes to 10 hours per day as shown in Table 4.5.

Table 4.5: Details of KSEB server downtime in two Centres

Ernakulam				Kozhikode			
Date	From	To	Duration (H:M)	Date	From	To	Duration (H:M)
5-12-2013	2:05 PM	3:30 PM	1:25	20-1-2014	4:00 PM	7:00 PM	3:00
6-12-2013	9:30AM	10:00 AM	0:30	30-1-2014	9:20 AM	9:45AM	0:25
18-12-2013	10:50AM	2:00 PM	3:10	3-2-2014	12:00 PM	7:00 PM	7:00
30-12-2013	12:40PM	2:00 PM	1:20	4-2-2014	11:40A M	7:00 PM	7:20
17-1-2014	1:00 PM	2:00 PM	1:00	4-3-2014	9:00 AM	9:45AM	0:45
25-1-2014	11:00AM	7:00 PM	8:00	5-3-2014	9:00 AM	9:30AM	0:30
27-1-2014	9:00AM	7:00 PM	10:00	19-3-2014	2:50 PM	7:00 PM	4:10
28-1-2014	9:00AM	7:00 PM	10:00	21-3-2014	10:50 AM	7:00 PM	8:10

(Source: Analysis of data obtained from the respective FRIENDS Centres)

FRIENDS project was envisaged as a single window system, where the residents can pay all their utility bills at a single location. The system should be available at all times and there should not be any occasion, where the public has to return without paying their bills. However in the beneficiary survey conducted, 84 per cent of the public remarked that they had to return without remitting their bills. This happened due to the deficiencies mentioned above and thus the objective of providing single window payment system could not be achieved.

The Government stated (November 2014) that owing to network failures, especially relating to KSEB and Motor Vehicles Department, timely services could not be provided to residents. The issues regarding real time data fetching is also being taken up with KSEB. The reply is not tenable in audit, because many of the deficiencies mentioned above could have been rectified by timely intervention and coordination with the participating departments.

4.14 Non-realisation of objectives by participating departments

The participating departments envisaged faster receipt of their dues and reduction in cost of collection from this project. However, Audit noticed that these objectives of the participating departments were not achieved due to the following reasons:

- There was persistent delay in remitting the collected money to participating departments as detailed in paragraphs 4.9.3.1, 4.9.3.2 and 4.9.3.3.
- The MoU with the bank allowed for collection of money pertaining to Saturdays and Sundays only on Monday thus delaying the payments to participating agencies.
- The money embezzled has still not been paid to the participating agencies even after two years.
- In the absence of appropriate supervision and proper norms for work load, there was underutilisation of staff, who were deputed from the participating departments.
- The absence of MIS reports due to improper system design made the monitoring of timely payments to participating departments extremely difficult. Thus due to lacunae in the system design and its implementation, the participating departments could not realise the full benefits of the FRIENDS/FREES project.

4.15 Conclusion

The main objective of the project was to facilitate residents to remit taxes and other utility payments through a single window system. But, poor system design and lack of proper integration with participating departments led to the failure in achieving this prime objective. The project suffered due to the absence of an IT Steering Committee, which is responsible for developing and maintaining vision and goal of the project, developing an operating charter for formalising the roles and responsibilities and providing guidance to help the system evolve with the

changing environment. Current customer requirements, like provision for accepting payments through credit and debit cards were not incorporated into the newly developed FREES application. This has resulted in reduction in number of residents using this facility.

The system was incapable of generating adequate MIS reports for proper monitoring and assessing early warning signals. Unnecessary manual interventions were required in the process, which could have been easily avoided by appropriate system automation. Withdrawal of services and unsolved issues relating to KSEB and other agencies indicate lack of timely managerial intervention and coordination with participating departments.

These deficiencies in the system have resulted in defeating the main objectives of

- facilitating the residents to pay their taxes and utility bills through a single window system and
- facilitating the participating departments to receive their dues effectively and efficiently.

This has also resulted in embezzlement of cash and delayed deposit of money in to the respective account due to poor system design and control failures.

4.16 Recommendations

- IT Mission should rectify the deficiencies and develop the system in tune with the changing environment like establishing required relationship among different data tables, enabling acceptance of debit and credit cards, etc.
- The State Government should ensure regular collection from FRIENDS Centres by the banks and modify the MoU so that money collected every day is remitted to the bank on the same day.
- All the issues pertaining to the participating departments should be resolved through proper coordination.
- Explore the option of adding new services and resumption of services already withdrawn so that FRIENDS becomes a single window system of remittance in true sense.

- Annual maintenance contract should be finalised incorporating penal provisions for delay in rectification.

[Notes received from the Government on the above audit paragraph is included as Appendix II]

Excerpts from Committee's discussion with departmental officials

1. The committee enquired about the details regarding the audit paragraphs. To which the Additional Chief Secretary, Electronics and Information Technology department replied that the department had furnished the reply on audit objections to the Accountant General during that period and submitted to the Hon'ble committee also. He stated that the Paragraphs 4.9.1, 4.9.2 and 4.9.3 were basically pertaining to the lack of Control System in the Software of FRIENDS Janasevanakendram which leads to embezzlement. The Additional Chief Secretary, Electronics and Information Technology Department made a brief description of the Project. He informed that it was started in the year 2000 at Thiruvananthapuram district as a pilot project, a single window integrated remittance centre to facilitate the residents in paying their utility bills, tax and other dues to Government without any extra cost and it was rolled out to the remaining 13 districts of Kerala in the next year 2001. It was started in Government buildings or in the space provided free of rent by Local Self Government Institutions. The entire activity was one of the earliest effort of the State governments in India to launch an automatic system for the direct payment or single payment of all the dues to the Government and this system was developed over years. The audit was carried out for the period 2012-13, and the Accountant General had pointed out that the deficiencies in the Software led to embezzlement. Though the objection was not matching, the department agrees that it was not a fully covered system at that point of time. There were deficiencies in the system. It was developed from a FREES(Friends Re-engineered Enterprise Enabled System) Software and was developed by a local developer under the guidance of the NIC and Kerala State IT Mission. So there were deficiencies in the software. The embezzlement did not occur as a result of the software. There was no online mechanism in the system of FRIENDS on those days, and the consumers used to visit the FRIENDS centre and deposit money in cash and that cash was to be transferred to the bank account, and from the bank

account the money was transferred to different organizations. He added that now-a-days the entire system is very different, because after 2014, Akshaya centres were started and the facility of direct net payment, credit card payment and other various platforms were also available. So the payment made by the consumer is transferred directly to the department that actually owes the money. So the embezzlement had nothing to do with the system developed. The money was taken directly and was transferred to the department directly; there was no scope for retaining the money with the staff. Embezzlement would happen only if the money was deposited after two or three days. There was standing instructions to deposit the money within 24 hours in the State Bank of Travancore. The FRIENDS centres would work on Sundays and the collection on that days would be higher but it could not be deposited in the bank on Sundays. Instances were found in the districts of Ernakulam and Kozhikode, where the Project Managers retained the money for a long time. Subsequently it was detected and action was taken against them and they were placed under suspension. The staffs of FRIENDS Centres are from various organizations on deputation basis. Actions were taken against them to recover the amount. The entire e-Governance system was started changing after 2008-09; after AG's observation, FRIENDS software was also improved but online payment was done through Akshaya centre from 2014-15 onwards. The department agreed to the AG's observation that the software was not fully integrated, but the software developed was tested by the KSITM(Kerala State IT Mission) officials as well as NIC and the software was performing very well. One or two instances of embezzlement happened but the system alone was not responsible for that. It was a human criminal action which happened without an automated system of collection, which happened earlier and is still happening even today in some departments, he added.

2. The committee enquired whether the FRIENDS Centres were still working. To which the Additional Chief Secretary, Electronics and Information Technology Department replied that the government had decided to close down the FRIENDS Centres and the file was under the consideration of the government. He added that the FRIENDS Centres utility system was almost over due to the appearance of Akshaya centres and the CSC(Common Service Centre) of Government of India. Online payments have started in almost all the departments.

From the last year onwards more than 600 government services have online facilities. Treasury had started an online payment system with 57 banks, KSEB and KWA had developed their own online system, and LSGD had started online facilities in all Panchayats.

3. The committee enquired whether there were any customers who currently rely on the FRIENDS Centres. To which the Additional Chief Secretary, Electronics and Information Technology Department replied that only a very small number of customers rely on FRIENDS Centres and that a very meagre amount was collected through these centres. He added that one or two people who do not have any credit cards or account numbers are still paying the amount in cash. All other transactions in the FRIENDS Centres are online.

4. The committee observed that FRIENDS Centres are an initiative that has been started so that payments can be made on Sundays as well. Its defects are solved one by one and automation is done. The committee inquired about an alternative payment option regarding the customers who cannot pay through online. To which the Additional Chief Secretary, Electronics and Information Technology Department replied that now a days all people have the facility of online payment. Those who do not have such facility can rely on Akshaya Centres. Akshaya Centres are currently functioning within every 200 metres in Kerala. Therefore, the number of people going to FRIENDS Centres is relatively moderate at present.

5. The committee enquired about the existing number of FRIENDS Centres currently in the State. The Additional Chief Secretary, Electronics and Information Technology Department replied that every district has one FRIENDS Centre. Then the committee enquired about staff deployment at the FRIENDS Centre. To which the Additional Chief Secretary, Electronics and Information Technology Department replied that employees are appointed on the basis of working arrangements. When the committee enquired about the reverting back of employees to their parent department after the winding up of the FRIENDS Centre, the Additional Chief Secretary, Electronics and Information Technology Department replied in the affirmative and added that it had also been decided that deputation would not be allowed this year.

6. The committee noticed that the most important objection of the Accountant General is the occurrence of embezzlement and the Committee enquired whether the said amount had been realized and also enquired about the laundering of money. The Additional Chief Secretary, Electronics and Information Technology Department replied that embezzlement of cash was not first pointed out by A.G; It was first found out by a surprise inspection led by the officials of KSITM, which came to know about the fraudulent actions in the FRIENDS Centres in Ernakulam and Kozhikode districts. He added that with criminal proceedings against them, the respective district collectors have taken action to recover the amount. He assured that a detailed statement regarding the recovery of the amount so far could be submitted before the Honb'le committee on the same day by 5 pm. The same has since been received by the Committee.

7. The committee enquired about the current status of criminal proceedings against the accused and the person who was coordinating the prosecution process. To which the Additional Chief Secretary, Electronics and Information Technology Department replied that it was coordinated by the police and he promised that the current status could be informed to the Committee that day itself.

8. The committee commented on the embezzlement of more than ₹ 18 lakh which had been mentioned in the Audit Report, even though there exists a simple payment system and enquired about the reason for this. To which the Additional Chief Secretary, Department of Electronics and Information Technology replied that it was the Audit report for the year 2014, and at that time, online payment system was not accessible to everyone. ₹18 lakh was not just one customer's money. FRIENDS Centres also operated on bank holidays including Sundays. The Cash collected on holidays should be credited to SBI on the next working day itself, but the project managers of the FRIENDS Centres in Ernakulam and Kozhikode districts kept the money without depositing it in the bank. That was the reason for the non remittance of ₹ 18 lakh. He added that, as per the existing standing order, money reaching the account of SBI should be sent to the concerned departments along with the statement within 24 hours.

9. The committee enquired about the issue related to BSNL mentioned in the AG's findings. To which the Senior Deputy Accountant General informed the

committee that BSNL bills could be paid through the FRIENDS Centre and from the amount received from the BSNL customer, a fixed amount was to be deducted as commission for the FRIENDS Centre, but instead of taking the commission, they transferred the full amount to the bank. The Additional Chief Secretary, Electronics and Information Technology Department replied that since the FRIENDS Centre did not deduct service charges from the BSNL bill amount, the entire amount went to SBT account. The balance amount, after deducting the commission amount was to be paid to the SBT. The audit report pointed out that owing to this process, the income due, to the FRIENDS was reduced and the BSNL received the full amount.

10. When enquired about the details regarding the audit paragraph 4.11.4 the Additional Chief Secretary, Electronics and Information Technology Department replied that, the government had sanctioned an amount of ₹5 lakh each to the respective District Collectors for setting up FRIENDS Centres in all the districts. He was the Wayanad District Collector then and the sanctioned amount could be utilised effectively for setting up a FRIENDS Center in Wayanad district. He added that a part of the Civil Station was modified and furnished with AC and office furniture at a cost of only ₹3.5 lakh, but in some districts even the required building for the said center was not available. In Thiruvananthapuram district, the FRIENDS Centre was started in the Corporation building and in Idukki district, no other place was available for it to function except the civil station building and there were no customers except the civil station officials even during the day time; that was the reason for starting the centre near the market place. A dilapidated building was acquired for this Centre. It was informed that the District Panchayat would allocate funds to improve the condition of the building but it did not receive the fund till date. From the income of the FRIENDS Centre, P.W.D. had done some repair works and the FRIENDS Centre which was doing well in the initial stage had gradually seen fewer and fewer customers.

11. The committee further pointed out that the issue that happened in 2001 was mentioned in the Audit Report for the year ended 2014 and the same matter came before the committee in 2022. The FRIENDS Centres worked very well in the beginning, but today they have very few customers and as people are using online systems for transactions, FRIENDS Centres have become less important.

12. The witness, the Additional Chief Secretary, Department of Electronics and Information Technology informed the committee that all the objections raised by the Accountant General in its report, for the year 2014 had been rectified. As pointed out by the Accountant General in its report, the security issues and the defects incorporated into the software were immediately resolved. In addition to this, the objection regarding the absence of a steering committee had also been rectified.

13. The committee commented that no norms were fixed for the time required for completing a transaction, resulting in large variations in the number of transactions of bills by various Service Officers and required an explanation regarding this. To which the Additional Chief Secretary, Electronics and Information Technology Department replied that the Department would say that there were no norms but there were norms fixed as per the available resources and that were not followed by the people in the FRIENDS Centre. There was a standing instruction that the money had to be remitted within 24 hours.

14. The committee further noticed that System could not achieve the goal of providing single - window remittance centre to the public due to the lack of timely managerial interventions and non-coordination with participating agencies and sought an explanation regarding this. Then the Additional chief Secretary, Electronics and Information Technology Department, replied that as per the Government Order issued in 2002, FRIENDS Centre was never intended to be a single - window system and somebody should have read that Government Order in such a way that the FRIENDS Centre was envisaged as a place where people could go in one building, with 10 counters. If a consumer has to pay BSNL bill, Power Bill, Sales Tax etc. and State Government department's services, then those services would be made and payment would also be collected. BSNL was the only Central Government agency that agreed to join in this system and it was done with the help of BSNL. The question arises at this point, since it was never envisaged that this would become a single window system. Today, FRIENDS Centre is a single - window system. Akshaya Centres are also operated as a single - window system. He explained that every Government Order has got a first paragraph which is beautifully written in English words with very high - sounding phrases and that

the C&AG might be took into consideration the first paragraph. But in its second paragraph, which gave a detailed specification/operational part of it, might have been missed to be read. In the first paragraph it was said that there would be single window, but in the second paragraph, the single window was not mentioned.

15. When the Committee enquired about the details of the government order mentioned in the first paragraph, the Additional Chief Secretary, Electronics and Information Technology Department replied that in the first paragraph of the Government Order includes very beautiful English words but the second Paragraph was the operational part of the G.O. and the Operational part only is relevant in a G.O. He added that Government never intended FRIENDS as a single - window system, nor the Government did so. The Government attempted to create many departments' payment facilities through this Centre, the department created their service facility for departments that had agreed to co-operate with this venture.

16. The Senior Deputy Accountant General opined that land tax, building tax, luxury tax, lease rent and fees for services rendered by Revenue Department were the important services provided through the FRIENDS Centre. But later, all these were withdrawn. During the initial days of the centre, people faced difficulties as there were no facilities to accept debit cards, credit cards or cheques as pointed out by the Accountant General.

17. To which the Additional Chief Secretary, Department of Electronics and Information Technology replied that the FRIENDS Centre had lost its relevance. At the initial stage the center had no such facility to accept credit cards.

18. To a query of the Committee, the Additional Chief Secretary, Electronics and Information Technology Department replied that he had taken all the relevant documents regarding this and that the reply given before the Committee was the actual fact and there was no need to conceal any information from the committee. The committee commented that it could form an opinion in this regard after getting the reply from the department. To which the Additional Chief Secretary, Department of Electronics and Information Technology promised that a detailed reply would be submitted before 5 p.m, on that day itself.

19. When the committee enquired whether any embezzlement had happened after the Accountant General's observation, the Additional Chief Secretary, Electronics and Information Technology Department replied that no embezzlement had happened after that. To the Committee's query about the non-remittance of cash, the Additional Chief Secretary, Department of Electronics and Information Technology replied that according to the Kerala Financial Code of 1956, if any department receives money from the public in any manner, the said amount should not be withheld for more than 24 hours. If that day is a public holiday, it must be closed before 10 a.m. on the next working day. This is a standing order and everyone knows about it. Moreover, superior officers were responsible for inspecting all the offices and if they checked each day's transactions properly, such irregularities could be ruled out, he added. The biggest policy of the government today is zero cash transactions. Now 66 % of KSEB and 59 % of Kerala Water Authority's cash collections are through online.

20. To the Committee's query regarding the whistle-blower about the fraudulent activities, the Additional Chief Secretary, Department of Electronics and Information Technology replied that it might have happened either deliberately or due to the ignorance of somebody in the IT Mission. He added that C&AG's observation on this was based on a document available in his office or through email or any other means. He assured that, an Officer who ignored such mails conveniently could have been removed from the office and such a person should not work in the office after that.

21. The committee suggested that it would finalise the matter after receiving the report from the department to which the Additional Chief Secretary, Department of Electronics and Information Technology replied that they would submit the report very soon.

[Note received from the Government on the additional information sought by the Committee is included as Appendix II]

Excerpts from the Committee's discussion with departmental officials

22. The Committee accepted the reply furnished by the department.

Conclusion/Recommendation

23. The Committee directs the department to submit the final report about the action taken against the erring Project Managers regarding the embezzlement of cash at Ernakulam and Kozhikode 'FRIENDS' Centres.

24. The Committee understands that the winding up process of FRIENDS Centre is being carried out by the department and the concerned file is under the consideration of the government. Therefore the Committee wants to know whether any decision has been taken in this regard and if so, detailed report should be submitted to the Committee at the earliest.

Thiruvananthapuram,
10th August, 2023.

SUNNY JOSEPH,
Chairman,
Committee on Public Accounts.

APPENDIX I**SUMMARY OF MAIN CONCLUSION/RECOMMENDATION**

Sl. No.	Para No.	Department Concerned	Conclusion/Recommendation
1	23	Electronics and Information Technology	The Committee directs the department to submit the final report about the action taken against the erring Project Managers regarding the embezzlement of cash at Ernakulam and Kozhikode 'FRIENDS' Centres.
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APPENDIX I

SUMMARY OF MAIN CONCLUSION/RECOMMENDATION

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**STATEMENT OF REMEDIAL MEASURES TAKEN ON THE AUDIT PARAGRAPHS CONTAINED IN THE REPORT OF COMPTROLLER
AND AUDITOR GENERAL OF INDIA (GENERAL AND SOCIAL SECTOR) FOR THE YEAR ENDED MARCH 2014
Information Technology Department**

SL. NO.	PARAGRAPH NO.	AUDIT OBSERVATION	REMEDIAL MEASURES TAKEN BY GOVERNMENT
1	4.9.1, 4.9.2 & 4.9.3	<p>The application was developed without preparing User Requirement Specifications (URS). Even though envisaged to be an automated system, non adherence to database normalisation principles, poor system design and inadequate capturing of vital data necessitated manual intervention, which led to control failures and embezzlement of money.</p> <p align="center"><u>Paragraph 4.9.1</u> <u>User Requirement Specification (URS) and System Requirement Specification (SRS)</u></p> <p>The properly documented User Requirement Specifications (URS) obtained from users and System Requirement Specification (SRS) by the software development team ensure that the needs of the users of the system have been taken care of and the software developed meets the business requirements. However, Audit noticed that User Requirement Specifications were not prepared. System Requirement Specifications for the re-engineered application FREES was thus prepared without obtaining the requirement of all stakeholders. In the absence of URS, Audit was unable to assess the achievement of intended benefits of the project.</p> <p align="center"><u>Paragraph 4.9.2</u> <u>Lack of System Automation</u></p> <p>Even though FREES is a centralised web based application, Audit noticed manual interventions in the processes, which could have been avoided with proper system design. These</p>	<p align="center"><u>Paragraph 4.9.1</u> <u>User Requirement Specification (URS) and System Requirement Specification (SRS)</u></p> <p>It may be seen that FREES software was envisaged as an upgradation/re-engineering of the then existed software in FRIENDS. Thus, in order to prepare the SRS by the developer, a detailed write-up in the existed software were shared with them. The SRS prepared thereon by the developer had been vetted by Kerala State IT Mission (KSITM). Thereafter, several modifications were incorporated to refine the software to attain its present level.</p> <p align="center"><u>Paragraph 4.9.2</u> <u>Lack of System Automation</u></p> <p>Since the amount is received from the citizens only in cash mode in the FRIENDS centres, the respective bank branches collect the physical cash from FRIENDS Centres on a daily basis and credits to the FRIENDS pooling account next day. There is a reconciliation method for the Central Accounts Manager to ensure that the amount collected in the FRIENDS Centres are remitted to the pooling account. Further, transferring of amount to the respective organisations having its own bank accounts (BSNL, KWA, KSEB, etc.) is being done electronically from the pooling account. As there was no facility for online transfer to treasury, transfer of amount belonging to Government</p>

Departments are transferred to treasury using authorisation letter to the treasury branch of SBI.

From October 2013, FREES application was integrated with e-District application and enabled the utility payment services for Akshaya/Citizen portal users and a payment gateway was incorporated with NDNL for making payments online. The necessary payment settlement/reconciliation is also carried out through FRIENDS pooling account to the concerned department accounts. For automating the reconciliation facility and fund disbursement to the participating departments from the side of the central accounts manager as suggested by the AG, KSITM has informed that they have taken steps for evaluating the options for integrating payment settlement with bank, online. As the e-Treasury project got launched recently, KSITM has taken steps to integrate the same for real-time online transfer and settlement. Efforts are also being made to eliminate the manual intervention by the Central Accounts manager for reconciliation.

Issues pertained to the core functionalities of the application which led to serious control failures. The issues identified in test check are given below:

Audit noticed that the money remitted in various FRIENDS Centres was being collected by the banking personnel deputed by concerned bank branches. The collected amount is transferred to the respective account of FRIENDS Project (ie. Pooling account maintained at State Bank of Travancore, Thiruvananthapuram). In the absence of proper planning, the system was not automated to ensure electronic data interchange with the FRIENDS Centre and the bank, instead the CAM was given the responsibility to reconcile the FRIENDS Pooling Account data with that of FREES application manually, which is avoidable.

BSNL paid commission to the project for collection pertaining to each BSNL bill. The system did not make provision for transferring the net amount to BSNL after deducting the commission due from BSNL automatically. Instead the whole amount was transferred to BSNL, who worked out the commission and this amount was credited to an account exclusively maintained for this purpose by each of the FRIENDS Centres. The money in this account was subsequently credited to Government account and to Akshaya District Project Office. This procedure was not only inefficient, but also prone to misuse and embezzlement. Audit data analysis revealed an embezzlement of ₹ 3.53 lakh in Kozhikode Centre from this account by drawing personal cheques, which could have been avoided with proper system design.

Paragraph 4.9.3

Non-adherence to database normalisation principles and improper designing of tables

Database Normalisation is the process of organising the fields and tables of relational database to minimise redundancy. Normalisation usually involved large tables into smaller (and less redundant) tables and defining relations between them. Audit noticed that database normalisation principles were not followed and there were deficiencies in designing of tables as detailed below:

- The primary transaction table named "Collection_Master" contained 1,08,76,286 records as on 8 April 2014 and audit analysts has revealed that of these, 97,32,401 records related to the financial year (FY) 2013-14, 9,72,051 records related to the FY 2012-13, 13,107 records pertained to the FY 2011-12 and 758 records related to the F/Y 2010-11. Storing of these records in the respective tables/databases for each of the past financial years as historical data, could have increased the processing speed.
- The transaction table was used to store bill collection details (collection_Master) that automatically captured the date and time of collection in one of its fields (Updated_On) with which the collection pertaining to each day an shift were identified. There was another table (Bank_Remittance) to store particulars about crediting of the collected money into the bank account. Instead of storing the date of collection "Bank_Remittance" table had two fields to store "collection-from-date" and "collection-to-date". Audit observed that due to this design deficiency relationship between these two tables could not be established.
- Similarly, Payment_To_Departments table stores payment to participating departments/agencies. Here

Paragraph 4.9.3

Non-Adherence to database normalisation principles and improper designing of tables

The project is in complete adherence to the database normalisation principles. The database tables have been split year-wise for improving the performance of the master table, which is being carried out at the end of every year by the Database Administrator.

The collection from date and collection to date fields are maintained in bank remittance table, as this is a functional requirement. The FRIENDS Centres work on Sundays too. Money cannot be remitted in bank on such holidays. Hence, there are times when the collection of a period of 2 or more days has to be remitted together.

Details of reconciliation and payment made to the departments are maintained in the system. A provision is also maintained to generate MIS reports and also to monitor the remittance of money collected from FRIENDS Centres.

also direct relation of this table was not established with the collection table so as to enable generation of reports of date-wise payments to departments concerned.

Due to the deficiencies in the design of tables as mentioned above, meaningful MIS reports for monitoring the timely remittance of money collected from FRIENDS Centres to the banks and to the participating departments could not be generated. This along with lack of proper system automation (as mentioned in paragraph 4.9.2) resulted in instances of embezzlement and delay in remittance to bank as detailed below.

2	4.9.3.1, 4.9.3.2 & 4.9.3.3	<p align="center">Paragraph 4.9.3.1 <u>Embezzlement of cash - FRIENDS application</u></p> <p>In the erstwhile FRIENDS application, Project Manager in Ernakulam embezzled an amount of ₹ 15.99 lakh relating to the collection of 18 August 2012. The FRIENDS application did not have provision for capturing details of date of remittance into bank, which was one of the reasons due to which the embezzlement could not be detected. It was detected only after BSNL made a formal representation to the Director of IT Mission on non-receipt of the amount due to them. The amount has not been remitted till date (December 2014) and the notional interest at the rate of 18 per cent per annum on amount of this would work out to ₹ 6.96 lakh as on 1 January 2015.</p> <p>Audit noticed that, during this period, a whistle-blower was repeatedly reporting to the IT Mission about the suspected fraudulent activities of the Project Manager in the Centre. The whistle-blower sent six intimations 68 to the IT Mission during the period from March to October 2012. All of these letters were ignored and actions not initiated until BSNL made the complaint.</p> <p>Audit also noticed that the Project Manager deliberately defaulted in depositing the collected money into the bank by providing misleading information to the bank. During the period from January to October 2011 there were defaults in remitting cash once or twice a month, which increased to 16 defaults in a month (October 2012).</p> <p>Audit analysis relating to Ernakulam Centre for the period from January 2011 to March 2013 revealed that in 163 instances there were delays in remitting cash to bank. Audit analysis further revealed that during this period not only the frequency of non-remitances increased, but also the number of days the money retained by the project Manager (PM) also increased. In four instances, the money retained by the PM ranged from 35 days to 287 days as shown in Table 4.1.</p> <p>Table 4.1: Details of remittances of cash into bank, where</p>	<p align="center">Para 4.9.3.1 <u>Embezzlement of cash - FRIENDS application</u> Para 4.9.3.2 <u>Embezzlement of Cash - FREES applications Para 4.9.3.3</u> <u>Delay in remittances into bank</u></p> <p>KSITM was noticed that the expenditure of the FRIENDS, Ernakulam was running without obtaining imprest money every month as is done at other centres. Hence, a team from KSITM visited FRIENDS Janasevanakendram, Ernakulam on 18.01.2013 to conduct an enquiry in to this and identify the reason for delay in submitting the expenditure statement for claiming imprest money from KSITM since they received a complaint from AO, BSNL, Ernakulam too. Based on this complaint the team inspected available records kept in the office and found irregularities in collection register, bank remittance records, and collection reports.</p> <p>It was found that the Project Manager is the person in charge and the one responsible for the misappropriation/mismanagement of funds in FRIENDS Janasevanakendram, Ernakulam. The earlier decentralized model was fully dependent on the Project Manager's report and in this case, the Project Manager has used this for his own advantage.</p> <p>Shri. Sasi S, Section Officer from MG University who worked as Project Manager in FRIENDS Janasevanakendram, Ernakulam has been suspended for misappropriation of funds. The next Project Manager, FRIENDS Ernakulam filed a police complaint on 02.04.2013 against the former Project Manager Shri. Sasi S. Based on the complaint, Police had arrested the accused and released on bail. Necessary instructions were already given to MG University to take necessary steps for recovering the amount of short remittance. KSITM has also given necessary instruction to</p>
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the delay exceeded one month.				the Central Accounts Manager to report belated remittance on time.
Collection date	Remittance Date	Amount (₹ in lakh)	Delay in days	
28/05/12	12/03/13	9.36	287	
27/09/12	12/03/13	27.14	165	
21/10/12	27/12/12	3.52	66	
23/04/12	29/05/12	13.05	35	
<p>(Source: Analysis of data obtained from FRIENDS Centre, Enakulam.)</p> <p>From November 2012, the money kept out of public exchequer was a high as ₹87.33 lakh with an average of ₹ 33.98 lakh per day. Data analysis revealed that owing to delay in bank remittances from the above 163 instances, the accumulated amount of money kept out of public exchequer was ₹ 15.21 crore in Enakulam Centre alone with consequent national loss of interest.</p> <p>The Government stated (November 2014) that disciplinary and criminal procedures were initiated against the erring Project Manager. Actions were also initiated to recover the short remittance from the offender. The reply is not tenable in audit as the project has quantified the embezzled amount at only ₹ 15.99 lakh and has not addressed the issue of rectifying the deficiencies in the system. Some of the systemic issues, which caused the embezzlement are still present in the newly developed and implemented re-engineered application FREES.</p> <p>Paragraph 4.9.3.2 Embezzlement of cash-FREES application</p> <p>The re-engineered application FREES was launched with the aim to facilitate central monitoring and to manage the daily collection at all the Centres effectively. However, audit observed that in view of the system deficiencies referred to in the paragraphs 4.9.1, 4.9.2 and 4.9.3, delays in remittance of cash to bank contained, which has resulted in</p>				<p>As per the Financial Audit conducted in FRIENDS Enakulam, the participating agencies informed a short remittance of Rs. 18,73,511/-. KSITM has forwarded letter to the District Collector Enakulam to initiate a revenue recovery process against Shri. Sasi S. The M.G. University has also issued a memo to Shri.Sasi S to remit the shortage amount as per Government's instruction.</p> <p>A similar case of fund misappropriation was reported at FRIENDS Kozhikode and an inspection and fund audit was conducted at the centre based on the direction of District Collector, Kozhikode. Based on the findings of the inspection conducted by the Finance Inspection wing (NT), Govt. Secretariat at the Centre on 08/11/2013, Shri. P.Rajagopalan, the then Project Manager, FRIENDS Janasevanakendram, Kozhikode was suspended by the Secretary, Kozhikode Corporation w.e.f. 13/11/2013. The next Project Manager of FRIENDS, Kozhikode filed a petition against Sri.P.Rajagopalan at Kasaba police Station, Kozhikode on 25/06/2014. The case was handed over to Vigilance and the enquiry is going on. KSITM also forwarded a letter to the District Collector, Kozhikode to initiate a revenue recovery process against Sri. P.Rajagopalan. The Secretary, Kozhikode Corporation has also requested to initiate disciplinary action against Shri.Rajagopalan.</p> <p>As the follow-up actions, presently, surprise inspections are being made by the KSITM officials to the FRIENDS Centres to ensure that there is no misappropriation of funds. Also, follow-up from the state level is done on a daily basis to ensure that the collected amount is remitted to the bank on a daily basis. If there is any delay found for even a single day for remittance of cash, explanation is sought.</p>

	<p>embezzlement of cash at Kozhikode Centre.</p> <p>Consequent on the media report on embezzlement of cash at Ernakulam Centre and having learnt about the delay in remittance of cash at Kozhikode Centre, the Inspection Wing of the Finance Department of Government of Kerala made a surprise visit to Kozhikode Centre on 8 November 2013. The physical verification of cash at the centre revealed cash deficit of ₹ 1.01 lakh, which has not been remitted till date (December 2014).</p> <p>Audit data analysis revealed that there were 157 instances of delay in remittance of cash into bank during the period since the installation of FREES (16 January 2013) in Kozhikode Centre till the Project Manager was booked on 8 November 2013. The delays ranged up to 9 days. During this period, from the above 157 instances, the accumulated amount of money kept out of public exchequer was ₹ 11 crore with consequent notional loss of interest.</p> <p>The Government stated (November 2014) that criminal procedures were initiated against the erring Project Manager. The reply is not tenable in audit in view of the fact that the reply is silent on mitigating the risk by resolving system deficiencies, which cause these embezzlements.</p> <p><u>Paragraph 4.9.3.3</u></p> <p><u>Delay in remittances into bank.</u></p> <p>Analysis of FREES application data revealed delays in remittances of money collected to bank in 2,749 instances. The delay ranged from one to 30 days. Owing to delay in bank remittance, the accumulated amount of money kept out of public exchequer from all the Centres was found to be ₹ 136.02 crore with consequent national loss of interest till the end of financial year 2013-14. Audit cannot rule out the possibility of embezzlement of cash/utilizing Government money for private use during these periods.</p>	<p>from the FRIENDS Centre Manager and appropriate action is taken. KSITM together with NIC, the developer of software will have initiated steps to identifying the causes of embezzlement and to mitigate the deficiencies.</p>
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3	<p>Non-constitution of IT steering committee led to design of the system without proper vision and focus. The application was not upgraded in line with the technological advancements in the external environment.</p> <p>Paragaph 4.10.1.1</p> <p>Absence of IT Steering Committee.</p> <p>IT steering Committee typically performs the following roles and fulfills these responsibilities:</p> <ul style="list-style-type: none"> • Develops policy, develops an operating charter formalizing these roles and responsibilities. • Develops and maintains a set of project "Vision and Goals". • Manages scope, cost and the project and champions business process improvement. • Coordinates with related projects and programs and obtains support from stakeholders. <p>However, Audit has observed that the Government of Kerala has not constituted an IT steering committee denying the valuable benefit such a committee could have provided to this project. Being an IT system, there should be constant upgrade of the application in line with the technological advancements. If not, the system will become outdated and lose relevance. In the case of FRIENDS, even basic enhancements like provision for accepting payments through credit/debit cards could not be incorporated into the application. Though there were instances of multiple embezzlements and delayed remittances due to system design deficiencies, concrete action was not taken to address the noticed system deficiencies, which caused such irregularities.</p> <p>Automated emails and mobile messaging services for enabling real time managerial monitoring of delay in bake remittance and transfer credit to stakeholders concerned were not made use of. Real time assessment of server</p>	<p>Paragaph 4.10.1.1</p> <p>Absence of IT steering committee</p> <p>As per an agreement with NIC, clause C 11, it is mentioned that a core committee consisting of members from both KSITM and NIC should be constituted to oversee the function of the FRIENDS and to review the activities. As per this, a committee was constituted with the following members:</p> <ol style="list-style-type: none"> a. Head e-governance, KSITM b. Manager (BD), KSITM c. Two Members from NIC <p>It was observed by KSITM that over the years since the members of the committee moved out and new members joined, there was lack of coordination which resulted in improper interaction between the committee members. Hence, now meetings are conducted on a fortnightly or monthly basis to discuss the performance of FRIENDS centres and the issues to be resolved, if any. <u>KSITM has informed that they will initiate necessary steps to enable automated sms/e-mail intimation for the delay in bank remittance to the concerned authorities in the FREES application.</u></p> <p>FREES application is developed using state-of-the-art open source technology. It is developed in J2EE platform. JBOSS application server, PostgreSQL RDBMS, SPRING framework, Hibernate, etc. are used and the server's OS is RHEL. The JBOSS application servers are clustered and PostgreSQL database is stream replicated (Master/Slave) and reports are generated from the slave database. Apache web servers are used on a load balancing environment. The system has been built by taking care of the standards of interoperability, and scalability. The system is</p>
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		downtime, network traffic, server hits, time taken for each transaction etc., by utilisation of metadata was not considered. All these point to failure of managerial oversight, which could have been addressed, if an IT steering Committee was in place.	integrated with e-district project to make available the payment services available through the FRIENDS centres, online also, through e-district portal.
4	4.10.3	<p>No norms were fixed for the time required for completing a transaction resulting in large variation in the number of transaction of bills by various Service Officers.</p> <p>Paragraph 4.10.3 <u>Human resource management</u></p> <p>Human resource Management (HRM) is the strategic and coherent approach to the management of an organization's most valued assets who individually and collectively are responsible for the effective and proper functioning of IT system.</p> <p>FRIENDS Centres are supervised by two Project managers (PM) deputed from participating Departments/Agencies. Service Officers (SO) deputed from participating Departments/Agencies on working arrangement in each District Centre are entrusted with the responsibility of bill collection. Audit observed the following lapses in HRM.</p> <ul style="list-style-type: none"> No qualifications were prescribed for the selection of personnel for the project. Responsibilities entrusted were not in line with their qualifications and seniority. As no additional remunerations were offered for higher responsibilities of Project Managers, senior staff members were reluctant to accept responsibilities and juniors were posted as Project Managers, who were unable to exercise supervisory controls over seniors. Adequate training was not imparted due to which the staff had to struggle with their work. Training to staff members was imparted only at the launch of erstwhile application FRIENDS (2000-01) and at the installation time of the re-engineered application FREES (2010-11). Audit noticed that in all the six Centres visited, only 22 	<p><u>Paragraph 4.10.3</u> <u>Human Resource management</u></p> <p>Usually a transaction at a counter takes an average of four to five minutes as it is a transaction by cash. But at times, it varies. For services like University, MVD etc, the Service Officers takes more time to verify the documents. Hence, it is difficult to fix a stipulated time for completing a transaction. Also all the service officers at all the counters collect all kinds of utility bills. They might not have adequate knowledge on the transactions of other departments which again turns a reason for more time required per transaction.</p> <p>It is informed that KSITM will take necessary steps to conduct adequate training to the staff that joins FRIENDS Centres henceforth.</p>

	<p>out of 75 existing PMs and Sos have received training.</p> <p>No norms were fixed by the IT Mission for the time taken in processing a bill and hence wide variations existed in average number of bills processed by different SOs. Data analysis for the financial year 2013-14 revealed that variation in average number of transaction per shift made by various Sos in all the Centres was up to three times as shown in Appendix 4.3. Audit analysis also revealed frequent long interval between two consecutive transactions made by the SOs, whose average transactions were low, whereas continuous transactions were seen in respect of others in the same Centre on the same day. Some of the illustrative cases are shown in Table. 4.2.</p>	
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Table 4.2: Interval between two consecutive transactions

Alappuzha Centre(User 'ANK')		Kollam Centre (User BNG)	
Transaction Time	Interval (H:M)	Transaction Time	Interval (H:M)
15.05.2013 14:35:25		06.01.2013 11:13:49	
15.05.2013 18:41:43	4:06	06.01.2013 12:54:34	1:40
22.11.2013 13:07:25		13.01.2013 09:30:57	
22.11.2013 17:44:03	4:35	13.01.2013 10:30:08	0:59
03.01.2014 10:20:43		13.01.2013 11:58:04	1:27
03.01.2014 12:44:45	2:24	20.01.2013 12:02:56	
		20.01.2013 13:20:25	1:17
03.01.2014 12:50:13			
03.01.2014 17:57:46	5:07		

(Source: Analysis of data obtained from IT Mission Headquarters)

The Government stated (November 2014) that due to manpower shortage, volunteering senior staff members are given charge of Project Managers. The reply is not tenable in audit, because considering the importance and money value involved in each centre, only qualified persons should be selected as Project Managers.

5	4.10.5	<p>Absence of change control mechanism resulted in discrepancies in the system generated reports and erroneous debit of ₹ 10.74 lakh from FRIENDS accounts. Similarly, another change made in the application without test run resulted in variation as high as ₹ 1.82 crore in different system generation reports.</p> <p><u>Paragraph 4.10.5</u> <u>Absence of change control mechanism</u></p> <p>Proper change Control Mechanism ensures that all changes to system configurations are authorised, tested, documented, controlled, the systems operate as intended and that there is an adequate audit trail of changes. Change control mechanism reduces the possibility of introducing unnecessary changes in the system without foresight, which could introduce flaws into the system or undo changes made by other users of software. Instances of changes introduced which compromised the objectives of the project are detailed below:</p> <p>In test check, Audit observed that changes introduced in the application without adequate testing resulted in erroneous addition of an amount upto ₹ 0.65 lakh in the daily account due to be transferred to the head of accounts relating to e-District from the FRIENDS accounts. The mistakes continued to occur during the period from 9 January to 7 February 2012 before it was identified by the Project resulting in wrong debit of ₹ 10.74 lakh from FRIENDS accounts.</p> <ul style="list-style-type: none"> Similarly Audit also observed that the system generated counter-wise collection reports and bank/treasury summary reports did not match after introducing an untested change. This resulted in confusion, because the amount collected from the counters and the amount to be remitted to bank did not tally. The difference between the two accounts ranged from a low of ₹ 17.91 lakh in Kollam Centre to a high of ₹ 1.82 crore in Ernakulam Centre. The details of mismatch found in seven Centres are shown in Table. 4.3. 	<p><u>Paragraph 4.10.5</u> <u>Absence of change control mechanism</u></p> <p>Due diligence is taken to ensure that there is proper reflection of data in the FREES application. Also, a formal change control procedure is maintained for effecting any changes in the FREES software. Official communication is sent from KSITM to NIC, if there are any changes in the FREES application are to be made.</p> <p>The facts of the information mentioned in the report are below;</p> <p>The Central Accounts Manager of FREES forwarded a mail on 07/02/2012 and informed that, as per the bank and Treasury Transfer statement generated from FREES, an amount of ₹ 65,040/- was repeatedly added in KSITM E-District account from 09/01/2012 onwards due to some software error. Cheque making was done correctly. But when the data made through FREES was updated, the amount stood pending.</p> <p>On a scrutiny of accounts, it was observed that some excess amount was deposited to KSITM e-District account No.67139904207. NIC informed that some of the AKSHAYA entrepreneurs are not adhering to the guidelines issued for the remittance of fund to the Central Pooling Account. Hence NIC had to manually correct the mistake. It was observed that due to the mistake in setting the date field, the fund transferred to the pooling account to the e-District account was showing mistakes from 09.01.2012. As a result, an amount of ₹ 10,73,460/- was forwarded to the e-District account in excess of the actual amount to be transferred during the period from 09.01.2012 to 07.02.2012.</p> <p>Based on this, immediate communication was sent from KSITM to NIC to resolve the issue and as a follow-up</p>
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Table 4.3: Details of discrepancies between the amounts as per counter wise collection reports and bank/ treasury summary reports.

Sl. No.	Name of Friends Centre	Amount as per counter wise collection report (₹)	Amount as per bank/treasury summary report (₹)	Difference (₹)
1	Palakkad	3,17,961	57,23,298	54,05,337
2	Kollam	1,05,357	18,96,426	17,91,069
3	Malappuram	1,27,324	22,91,832	21,64,508
4	Pathanamthitta	2,92,853	52,71,354	49,78,501
5	Thiruvananthapuram	4,46,052	80,28,936	75,82,874
6	Alappuzha	2,67,105	23,38,542	20,71,437
7	Ernakulam	10,69,864	1,92,57,552	1,81,87,688

(Source: Figures obtained from the respective FRIENDS Centres)

The Government Stated (November 2014) that ₹ 10.74 lakh was re-credited to FRIENDS pooling account. The reply is not tenable in audit since the project has not addressed the issue of introducing appropriate change control mechanism to avoid recurrence of such incidents.

activity meeting was conducted on 08.02.2012 at KSITM. In the meeting, NIC informed that they had corrected the mistake and decided to instruct FRIENDS, Thiruvananthapuram to stop further transfer of amount to E-District bank account until further instruction from KSITM. The issue was solved and the payment was settled.

6	4.13	<p>System could not achieve the goal of providing single window remittance centre to the public due to lack of timely managerial interventions and coordination with participating agencies.</p> <p>Paragraph 4.13 <u>Failures in realisation of a single window remittance system.</u> Being a bill remitting centre, resident friendly measures would have ensured retention of customers and thus enabling the project to achieve its stated objective of becoming a single window integrated remittance centre. To enhance customer experience, the IT systems should have evolved to keep up with the technological advances in the external environment. But due to lack of vision and proper planning, this could not be achieved. Audit noticed following deficiencies in this regard:</p> <ul style="list-style-type: none"> • There was no provision for accepting payments from residents through credit and debit cards. • There was no provision for accepting cheques from Government departments and autonomous bodies/corporations. Audit data analysis revealed that there were 865 cash transactions that exceeded ₹ 1 lakh and that a single cash transaction was as high as ₹ 12.43 lakh. • There were withdrawals of services like payment of land tax, building tax, luxury tax, lease rent and fees for services rendered by Revenue Department. Data analysis revealed 85.79 per cent of drop in bills relating to the Revenue Department. <p>Transactions of bills relating to KSEB (32.15 per cent) constituted one of the major business of the project. However, the number of transactions in respect of KSEB fell from 11.36 lakh to 6.7 lakh during the period from 2006-07 to 2013-14, even though direct connectivity to KSEB server was established in the FREES system from 2010 onwards. The reasons, which contributed to the reduction, were as follows:</p>	<p>Paragraph 4.13 <u>Failure in realisation of a Single window remittance system</u></p> <p>Vide G.O. (MS) No: 1/2001/ITD dated 20.01.2001; Government had accorded sanction to the District Collectors to identify two project managers, preferably with an engineering background from Government departments on a working arrangement basis. Government decided that in all the 13 district headquarters, staff for manning the Integrated Service Centres shall be sourced on working arrangements from the participating departments. Each participating department namely Land Revenue, Civil Supplies, Motor Vehicles, KSEB, KWA, as well as the concerned Corporation/Municipality and the concerned University shall make available five officers (essentially at the clerical and junior management levels) on a working arrangement basis in each district. Hence at the beginning there were enough staff to manage all the counters at all the centres and hence the workflow was smooth. But, when the departments started their own online portals, opening more counters at their own premises, dearth of staff to enlargement of activities, decreasing foot falls at FRIENDS Centres, the participating departments are reluctant to deploy staffs to FRIENDS Centres, and this resulted in shutting down of centres and long queues.</p> <p>Coordination with participating departments:</p> <p>The service delivery at FRIENDS Centres are dependent on external factors such as uptime of departmental servers, network etc., which are outside the purview of the FREES system. Due to network failure and also in cases like the department servers going down, there are at times not able to provide certain online services for the departments like KSEB, MVD, Culture Welfare Board and KWA to the</p>
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	<ul style="list-style-type: none"> • KSEB did not permit FRIENDS Centres to accept power bills with fine after the pay-by-date for no meaningful reasons; • FRIENDS Centres were not provided with provisional moulds to accept payments, when billing data was not uploaded in KSEB server; • Network problems owing to high network traffic and unmanageable server hits were pointed out in paragraph. 4.9.6. During a test check conducted in Ernakulam and Kozhikode Centres for the period from December 2013 to March 2014, Audit noticed KSEB server downtime recorded at these Centres ranged from 20 minutes to 10 hours per day as shown in Table.4.5. 	<p>customers through FRIENDS Centres. If there are any issues of this sort, KSITM had always promptly responded to highlight these issues to the concerned departmental heads and has always been instrumental in ensuring that these issues are resolved on time. Once these external issues were resolved, the services are made available at the FRIENDS centres without any delay.</p> <p>Acceptance of cheques and DDs:</p> <p>At present there is no provision for accepting payments from customers through cheque and DD and also there are no facility for accepting the payments through Debit and Credit cards. For accepting Cheques and DDs, additional staffs are required to ensure prompt and timely remittance and reconciliation. The cash remitted by customers are transferred to the accounts of respective departments through online facility. But KSITM has informed that discussions are initiated to provide the facilities of using debit/credit cards at the FRIENDS centres for the beneficiaries.</p>
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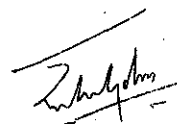
Table 4.5: Details of KSEP server downtime in two Centres

Ernakulam				Kozhikode			
Date	From	To	Duration (H.M)	Date	From	To	Duration (H.M)
05/12/2013	2.05 PM	3.30 PM	1:25	20/01/2014	4.00 PM	7:00 PM	3:00
06/12/2013	9.30 AM	10.00 AM	0.30	30/01/2014	9.20 AM	9.45 AM	0.25
18/12/2013	10.50 AM	2.00 PM	3:10	03/02/2014	12.00 PM	7.00 PM	7.00
30/12/2013	12.40 PM	2.00 PM	1:20	04/02/2014	11.40 AM	7.00 PM	7.20
17/01/2014	1.00 PM	2.00 PM	1.00	04/03/2014	9.00 AM	9.45 AM	0.45
25/01/2014	11.00 AM	7.00 PM	8.00	05/03/2014	9.00 AM	9.30 AM	0.30
27/01/2014	9.00 AM	7.00 PM	10.00	19/03/2014	2.50 PM	7.00 PM	4.10
28/01/2014	9.00 AM	7.00 PM	10.00	21/03/2014	10.50 AM	7.00 PM	8.10

(Source: Analysis of data obtained from the respective FRIENDS Centres)

FRIENDS Projects was envisaged as a single window system, where the residents can pay all their utility bills at a single location. The system should be available at all times and there should not be any occasion, where the public has to return without paying their bills. However in the beneficiary

	<p>survey conducted, 84 per cent of the public remarked that they had to return without remitting their bills. This happened due to the deficiencies mentioned above and thus the objective of providing single window payment system could not be achieved.</p> <p>The Government stated (November 2014) that owing to network failures, especially relating to KSEB and Motor Vehicles Department, timely services could not be provided to residents. The issues regarding real time data fetching is also being taken up with KSEB. The reply is not tenable in audit, because many of the deficiencies mentioned above could have been rectified by timely intervention and coordination with the participating departments.</p>	
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 Information Technology Department
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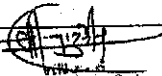
**STATEMENT OF REMEDIAL MEASURES TAKEN ON THE AUDIT PARAGRAPHS CONTAINED IN THE REPORT OF THE
COMPTROLLER AND AUDITOR GENERAL OF INDIA (GENERAL AND SOCIAL SECTOR) FOR THE YEAR ENDED ON 31st
MARCH 2014.**

ELECTRONICS & INFORMATION TECHNOLOGY DEPARTMENT

SL. NO.	PARAGRAH NO.	AUDIT OBSERVATION	REMEDIAL MEASURES TAKEN BY GOVERNMENT
1	4.9.4	<p><u>System deficiencies resulting in data loss</u></p> <p>Data loss is an error condition in information system in which information is destroyed by failures or neglect in storage, transmission, or processing. Analysis by audit has revealed system deficiencies resulting in data loss and the examples are given below:</p> <ul style="list-style-type: none"> one user identified by the code "SSK" did not log in to the system on 12 May 2013 as per the login table, whereas the same user collected money on the same date as seen from the collection table. As per the data available in the login table, the user "SKA" logged in to the system on 22 March 2010 only during the period from 09:20:45 to 09:26:07, 09:26:20 to 09:38:40 and from 14:26:21 to 14:29:36. However, as per the data available in the collection table, the same user collected 43 bills at 09:39:13, 09:47:48, 09:54:06 etc. Data analysis revealed 304 such cases establishing data loss. There were 2684 instances, where those logged in were not seen logged out on the same day. <p>Loss of data while saving records is a serious risk in an information system, which requires to be addressed immediately.</p>	<p><u>System deficiencies resulting in data loss</u></p> <p>Loss of Login data on 12.05.2013</p> <p>Kerala State IT Mission has traced out the issue regarding the non-availability of data for the user SSK in friends.login table on 12th May 2013 and it is found that this was caused by a technical issue on server side. During the date of occurrence of the issue stated above, e-District and FREES database were deployed in same server and the servers were located in SDC. Due to the database load related issues in e-District, FREES database temporarily shifted to the Application II server on 01/05/2013. On the root cause analysis it was identified that no space was left on the disk drive due to the unexpected growth (12GB) of JB Boss log file in application server 2 which also contain the FREES database. As a result database updates were not done".</p> <p>There was no loss of collection data and only loss of log data. The collected amounts were reconciled with Bank data and</p>

			<p>transferred to corresponding departments. No issue reported from departments regarding missing collections.</p> <p><u>Remedial Measures Taken:</u></p> <p>Dedicated Database servers (Master and Slave) allocated for FREES Database. No such issue reported thereafter</p> <p>● <u>Data Collection other than Login Period:</u></p> <p>During March 2010, System was in the trial run/testing phase FREES was launched in FRIENDS Thiruvananthapuram only on 24.06.2010.</p> <p>● <u>Logged in without Logout:</u></p> <p>This issue was during the testing phase</p> <p><u>Remedial Measures Taken:-</u></p> <p>Handled session timeout event and browser closing events before Pilot launching. Checked Login history and it is found that all records in the 'logins' table have both login time & logout time since 2015.</p>
2	4.9.5	<p><u>Non -Creation of essential master table.</u></p> <p>A good database needs to be designed to ensure minimum level of mistakes at the time of data entry. One of the methods to achieve this objective is by designing master tables and transaction tables with a master – detail relationship between master table and transaction table. The master table will work as a</p>	<p><u>Non creation of essential master table.</u></p> <p>Designation field is used to store user designation. Since FRIENDS staffs are deputed from different Departments/PSUs, it is not easy to populate all the likely</p>

		<p>lookup table from which proper data values can be picked up in the user interface for restricting junk values to be stored in the tables. Correctness of data in the master and standing files is of vital importance and critical to the processing and reporting of financial and operational data as the information on master files can affect many related transactions and must therefore be adequately protected.</p> <p>There is a table to store user credentials of every staff member. Data in the designation field of this table is entered/updated by each of the Project Manager whenever a change takes place. As the designation field is an element required for grouping in generation of various MIS reports, uniqueness of data in the field is vital. To ensure unique capturing of data in the field, the designers could have created a table for designation, in which the values were to be stored at the design stage and authenticated at the requisite level. The designation field of user table could be designed as a list box²⁰ linked to the designation table. Audit noticed that in its absence, the designation of Service Officer was repeated several times with different spellings (like 'Service Officer', 'serviceofficer', 'so', 'SERVICEOFFICER', 'ServiceOfficer', etc.) causing inaccuracies in MIS report generation.</p>	<p>designations. So it is designed to be a text field. Actual Roles and services are given against the user authentication, which can be selected only from a list box.</p>
3	4.9.6	<p><u>Deficiency in user interface</u></p> <p>In the case of Municipal Corporations, where real time connectivity is available (referred to as 'web-driven' mode in the application), when a bill is produced to a Service Officer (SO) for effecting payment, the SO has to input key information, like consumer number, bill number, bill date, district, ward/section/sub section, etc., to fetch the actual bill amount from the server. If responses from the server are not received within a reasonable time owing to high network traffic or unmanageable server hits, the SO has the option to switch to 'customer-driven' mode that would enable him to input the billed amount from the bill. However, Audit noticed that on such occasions, when the SO switched to customer-driven mode, the already entered data was deleted compelling the user to enter the data again.</p>	<p><u>Deficiency in user Interface</u></p> <p>Municipal Corporation data was not being retrieved in every cases and there were cases of incorrect retrieval. Once the Service Officer decides to take customer driven mode, he should not continue the transaction with old incorrect data. To avoid this, data will be cleared when he changes the mode. This was one of the request at the Testing phase.</p>


 The Secretary to Govt.
 Public Works Department
 Government of Karnataka

**STATEMENT OF REMEDIAL MEASURES TAKEN ON THE AUDIT PARAGRAPHS CONTAINED IN THE REPORT OF
COMPTROLLER AND AUDITOR GENERAL OF INDIA (GENERAL AND SOCIAL SECTOR)
FOR THE YEAR ENDED MARCH 2014
Electronics & Information Technology Department**

1	4.10.1.2	<p style="text-align: center;"><u>Paragraph 4.10.1.2 Absence of post implementation review</u></p> <p>A post implementation Review (PIR) is an activity that is carried out after a new business system has been implemented. The objectives of PIR are to assess the system functionality, performance, and cost versus benefits and to assess the effectiveness of the life-cycle development activities that produced the system. The review results can be used to strengthen the system as well as system development procedures and re-engineering. But, Audit noticed that the Management had not conducted any post implementation review of this application.</p> <p>There was no provision in the erstwhile FRIENDS application to store the details of remitting the collected amounts into banks and their final transfer to the accounts of concerned stakeholders. These deficiencies prevented the top Management from exercising managerial controls. The lacunae in the system paved the way for embezzlement of cash. The deficiency continued to exist in the re-engineered application FREES also.</p> <p>The Government stated (November 2014) that instructions were issued to the CAM to inform the Management about the delay in remittance on a daily basis. The reply is not tenable in audit in view of the fact that instead of adopting manual monitoring mechanism, the system should provide facilities to generate required MIS reports for enabling centralised monitoring by the Management as envisaged by the re-engineered application software.</p>	<p>New PC's and Printers have been deployed to FRIENDS Centres and Server Hardware upgraded for better performance. Since participating departments have their own online payment system, periodic review on FREES application have been conducted. However any noticable defects are rectified time to time.</p>
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2	4.10.1.3	<p><u>Paragraph 4.10.1.3 Revoking of validation controls</u></p> <p>Designing of tables without properly relating 'Collection_Master' table with 'Bank_Remittance' table was pointed out in paragraph 4.9.3. Audit noticed revoking of validation controls leading to duplication in dates stored in the table relating to bank remittances. Insufficient validation controls resulted in generating challans again in respect of deposit to banks, which were already generated. Thus overlapping dates caused duplicate values in generation of reports. Data analysis brought to light 2,068 duplicate values in 'collection-from-date' and 2,067 duplicate values in 'collection-to-date' rendering the data useless for any MIS reports.</p>	<p>The from date and to date collection fields are maintained in bank remittance table, as a part of functional requirement. Duplicate challan generation issue is rectified.</p>
3	4.11.1	<p><u>Paragraph 4.11.1 Lack of information security control</u></p> <p>Confidentiality, integrity and availability are to be the core principles of information security. Installation of antivirus software helps in reducing threat to data caused by virus attacks. Audit observed the following lapses in this regard:</p> <ul style="list-style-type: none"> • The Project did not have an IT Security Officer. • No mechanism was available for recording and reporting security incidents. • IT Security instructions were not circulated periodically to staff. • USB ports were not disabled in four Centres. • Licensed versions of antivirus packages were not installed in any Centre. Freeware antivirus packages were being used in Thiruvananthapuram and Emakulam Centres, but both these Centres were not updating virus definition files. Systems were seen infected with virus in Malappuram Centre, which was not using antivirus packages. In Emakulam Centre, virus infection caused non-performance of the system for one days. 	<p>KSITM have exclusive Database Administrators and System Administrator for continuous monitoring of transactions. Due to shortage of manpower from participating departments, it is unable to provide exclusive officer for IT Security of FRIENDS. However KSITM-CERT-K (Cyber Emergency Response Team of Kerala) has been formed under KSITM and which will be inducted in for any eventualities. Strict instructions had been given to the FRIENDS centres not to share the login credentials. Instructions have been given to the centres to disable the USB ports in the provided system.</p>

		<ul style="list-style-type: none"> Periodic changes of passwords were not ensured. Data analysis revealed that 366 users had never changed their passwords. No instructions were issued on password policy specifying the structure and length of password, changing of passwords, secrecy to be maintained, etc. In three out of six Centres visited, user-ids and passwords of Project Managers were shared with others defeating the very purpose of logical access controls. 																													
4	4.11.2	<p><u>Paragraph 4.11.2 Failure in deactivating user-ids of retired/transferred employees</u></p> <p>Best IT practices demand that in the case of retirement or transfer of employees, the system administrator should immediately deactivate user accounts to prevent unauthorised access to the system. However, Audit noticed that in all the Centres visited, the active user-ids exceeded the total number of the existing personnel as shown in Table 4.4</p> <p>Table 4.4 : Comparison of existing active user-ids against the existing personnel</p> <table> <tr> <th>Sl No.</th><th>FRIENDS Centre</th><th>Number of active user-ids</th><th>Number of existing personnel</th></tr> <tr> <td>1</td><td>Thiruvananthapuram</td><td>97</td><td>29</td></tr> <tr> <td>2</td><td>Idukki</td><td>11</td><td>8</td></tr> <tr> <td>3</td><td>Ernakulam</td><td>37</td><td>13</td></tr> <tr> <td>4</td><td>Malappuram</td><td>25</td><td>15</td></tr> <tr> <td>5</td><td>Kozhikode</td><td>18</td><td>13</td></tr> <tr> <td>6</td><td>Kannur</td><td>27</td><td>15</td></tr> </table> <p>(Source: Analysis of data from the respective FRIENDS Centres)</p> <p>Being a web based system, such control deficiencies could provide an opportunity for misuse by unscrupulous persons.</p>	Sl No.	FRIENDS Centre	Number of active user-ids	Number of existing personnel	1	Thiruvananthapuram	97	29	2	Idukki	11	8	3	Ernakulam	37	13	4	Malappuram	25	15	5	Kozhikode	18	13	6	Kannur	27	15	<p>Necessary instructions had been given to all the FRIENDS Centres to deactivate the user ids of retired/transferred employees and the same been executed at all FRIENDS Centres. Moreover the user ids of retired or transferred project managers /System Administrators had been blocked.</p>
Sl No.	FRIENDS Centre	Number of active user-ids	Number of existing personnel																												
1	Thiruvananthapuram	97	29																												
2	Idukki	11	8																												
3	Ernakulam	37	13																												
4	Malappuram	25	15																												
5	Kozhikode	18	13																												
6	Kannur	27	15																												

		The Government stated (November 2014) that action were initiated to disavow the user-ids in respect of past employees and 323 login accounts have already been terminated. Audit of the view that continued monitoring is required in this regard.	
5	4.11.3	<p><u>Paragraph 4.11.3 Inadequate segregation of duties</u></p> <p>Segregation of duties ensures that the data store is authenticated at various levels of supervisory officers. Inadequate in this would increase the risk of errors being made and remaining undetected, fraud and the adoption of inappropriate working practices. Project Managers had the exclusive responsibility to open and close shifts in the application by privileges granted to them in the system. Generation of challan for remitting money into bank and confirmation of transfer credit of the same to the FRIENDS Pooling account were also the exclusive duties of Project managers. But in all Centres visited, Audit noticed that these duties were performed by either System Administrators or Service Officers defeating the very purpose of segregation of duty.</p>	All the Project managers have the responsibility of open and close the application by privileges granted to them. Few instances due to emergency, the Project managers are assigned the responsibility to open and close the application to the System Administrator but not on regular basis. However the Service Officers have not given any permission.
6	4.11.4	<p><u>Paragraph 4.11.4 Risk to IT assets</u></p> <p>Audit observed that Idukki centre had several shortcomings in the facilities and the infrastructure provided posed risks to IT assets as discussed below:</p> <ul style="list-style-type: none"> The Centre is functioning from a dilapidated building, that could not be closed as shown in picture below. There is only one security guard looking after the centre with no substitute arrangements when he is on leave. The Centre deviated from the established procedure of remitting the daily collection in the bank. Even when a single day's collection was as high as ₹9.55 Lakh during the period, the bank did not send their staff to collect the cash. Since the cash should not be kept in the Centre due to safety 	Necessary instructions had been given to FRIENDS Centres to dispose the scrap and now the problem has been rectified.

		<p>reasons, the staff members were compelled to carry the cash home and bring it back on the next day.</p> <p>The deviation noticed in other Centres are as follows:</p> <ul style="list-style-type: none"> Scrap was dumped over UPS and battery posing a fire risk and the abandoned computers and other unused hardware were not disposed off in 2 out of 6 Centres visited by audit team as shown in picture below. In two Centres the air conditioners were not working properly. <p>The Government stated (November 2014) that the scrap had since been disposed of from the Centres in Thiruvananthapuram, Kollam, pathanamthitta, Malappuram, Kannur and Kottayam and instructions had been issued to other Centres for disposal.</p>	
7	4.12.,4.12.1 &4.12.2	<p><u>Paragraph 4.12 Business continuity and disaster recovery planning</u></p> <p>Business continuity planning (BCP) is working out how to stay in business in the event of a disruption. Audit noticed that appropriate business continuity plan and disaster recovery planning have not been formulated.</p> <p><u>Paragraph 4.12.1 Inadequate backup facilities</u></p> <p>Backup refers to copying and archiving of computer data so that it may be used to restore the original after a disaster and also to restore files after they have been accidentally deleted or corrupted. Offsite storage of backup data would ensure resuming the business with minimum time lag in the event of a disaster like fire, flood, etc.</p> <p>While appreciating the measures adopted for ensuring backup, Audit observed that the project had not ensured offside storage of backup. Instead the backup was stored in the same location, where servers were placed. All the servers and tape cartridges were kept on the ground floor adding high risks to the data.</p>	<p>FRIENDS is following backup policy of State Government. To ensure the safety of data the database is configured to the SAN partition. Backup of the database are taken daily and stored in separate file system. In addition to the backups available in the file system, daily data backup are taken to the LTO4 tapes. The integrity of the data inside tapes are tested by restoring the data from the tape once in two months. Necessary provisions are made to recover data during any adverse event.</p>

Paragraph 4.12.2 Flaws in the terms of annual maintenance contract (AMC)

Business Continuity plan should also ensure that an entity's business operation is not interrupted owing to power failures and hardware failures. Entering into agreements with AMC providers would ensure minimum interruption to the business. However, Audit noticed several flaws in the terms of contract and lack of control over the AMC provided adversely affecting business continuity, as indicated below.

- No hardware downtime reports were obtained from AMC provider, though fortnightly report was stipulated in the terms of the contract.
- There was no clause relating to levy of penalty in the event of failure in providing timely services.
- Though the latest time to attend a fault call was stated to be 24 hours, no time limit was fixed for rectification other than a passive statement in the earliest possible time.
- Though preventive maintenance was stipulated to be done once in three months, no registers were maintained to monitor the preventive maintenance.
- No preventive maintenance was reported to be done except in Malappuram Centre.
- Hardware status/fault registers were not maintained in three out of six Centres visited. In Thiruvananthapuram and Malappuram Centres they were maintained only up to April 2010. In Kozhikode Centre, the dates of rectifications were not entered.
- In Thiruvananthapuram Centre, in one of the cases, the delay in rectification was 18 days and in another the delay was 15 days during the period test checked (2008-2010). In 56 per cent of cases, the delay could not be ascertained as dates of rectifications were not entered.

Since the cost of AMC is high due to the old age equipments, new PC's and Printers with 5 year warranty had been purchased to avoid AMC.

8	4.14	<p><u>Paragraph 4.14 Non-realisation of objectives by participating departments</u></p> <p>The participating departments envisaged faster receipt of their dues and reduction in cost of collection from this project. However, Audit noticed that these objectives of the participating departments were not achieved due to the following reasons:</p> <ul style="list-style-type: none"> • There was persistent delay in remitting the collected money to participating departments as detailed in paragraphs 4.9.3.1, 4.9.3.2 and 4.9.3.3 • The MoU with the bank allowed for collection of money pertaining to Saturdays and Sundays only on Monday thus delaying the payments to participating agencies. • The money embezzled has still not been paid to the participating agencies even after two years. • In the absence of appropriate supervision and proper norms for workload, there was underutilisation of staff, who were deputed from the participating departments. <p>The absence of MIS reports due to improper system design made the monitoring of timely payments to participating departments extremely difficult. Thus due to lacunae in the system design and its implementation, the participating departments could not realise the full benefits of the FRIENDS / FREES project</p>	<p>In the present system, the transactions done from the FRIENDS are settle with the department on the next day (T+1) and Akshaya transactions are settle on the second day (T+2). A provision had been provided to the Central Accounts Manager to report the daily delay in remittance.</p>
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[illegible]

ഇലക്ട്രോണിക്സ് & വിവര സാങ്കേതിക വിദ്യ വകുപ്പ്

ഫ്രണ്ട്സിലെ സാമ്പത്തിക തിരിമറി സംബന്ധിച്ച ഓഡിറ്റ് റിപ്പോർട്ടിന്മേൽ പബ്ലിക് അക്കൗണ്ട്സ് കമ്മിറ്റി (2021-23) 22-06-2022 ന് കൂടിയ യോഗത്തിൽ ആരാഞ്ഞ അധികവിവരം.

1) ശ്രീ. രാജഗോപാലൻ നായർ കോഴിക്കോട് ഫ്രണ്ട്സ് ജന സേവന കേന്ദ്രം പ്രോജക്ട് മാനേജർ ആയി ചുമതല വഹിച്ചു വരവെ ഫിനാൻസ് ഇൻസ്പെക്ഷൻ വിങ് 13/11/2013 ന് നടത്തിയ മിന്നൽ പരിശോധന സമയത്തു തിരിമറി നടത്തിയതായി കണ്ടെത്തിയ മുഴുവൻ തുകയും (Rs. 19,74,322/-) 13/11/2013 -ാം തീയതി തന്നെ SBT യുടെ ഊവനിങ് ബ്രാഞ്ചിൽ തിരിച്ചടച്ചിട്ടുള്ളതായി കണ്ടെത്തിയതിനാൽ തുക തിരിച്ച പിടിക്കേണ്ടതില്ലെന്ന് ടിയാൾക്കെതിരെ രജിസ്റ്റർ ചെയ്ത VC 11/2015/NRK നമ്പർ കേസിന്റെ വസ്തുതാ റിപ്പോർട്ടിൽ വിജിലൻസ് ഡയറക്ടർ വ്യക്തമാക്കിയിട്ടുണ്ട്.

ശ്രീ.പി. രാജഗോപാലൻ നായരെ അഴിമതി നിരോധന നിയമത്തിലെ 13(1) (C) r/w 13(2) വകുപ്പുകൾ പ്രകാരവും ഇൻഡ്യൻ ശിക്ഷാ നിയമത്തിലെ 409 വകുപ്പ് പ്രകാരവും വിചാരണ ചെയ്യുവാൻ തീരുമാനിച്ചിട്ടുള്ളതായും ബന്ധപ്പെട്ട വകുപ്പ് മേധാവിയീൽ നിന്നും വിചാരണാനുമതി വാങ്ങി പ്രതിക്കെതിരായ കുറ്റപത്രം കോടതി മുമ്പാകെ സമർപ്പിക്കുവാൻ അന്വേഷണ ഉദ്യോഗസ്ഥന് വിജിലൻസ് ഡയറക്ടർ നിർദ്ദേശം നൽകുകയും തുടർന്ന് 15/06/2022 തീയതിയിലെ CVC-11/2015/NRK 5327/2015/NRK കത്ത് പ്രകാരം കോഴിക്കോട്, ഉത്തരമേഖല, വിജിലൻസ് ആൻറ് ആന്റ് കറപ്ഷൻ ബ്യൂറോ വിഭാഗം, ശ്രീ.പി. രാജഗോപാലൻ നായർക്കെതിരെ കുറ്റപത്രം സമർപ്പിക്കുന്നതിനുള്ള അനുമതിയും വിചാരണയ്ക്കുള്ള അനുമതിയും ഐ.ടി.മിഷൻ ഡയറക്ടറോട് തേടിയിരിക്കുകയാണ്.

2) സാമ്പത്തിക തിരിമറിയുമായി ബന്ധപ്പെട്ട് എറണാകുളം ഫ്രണ്ട്സ് ജനസേവനകേന്ദ്രം പ്രോജക്ട് മാനേജർ ആയിരുന്ന ശ്രീ.ശശി.എസ് -ൽ നിന്ന് Rs. 40,89,652/- രൂപയാണ് തിരിച്ചു പിടിക്കാൻ ഉള്ളത്. തുക തിരിച്ചു പിടിക്കുന്നതിന് ടിയാൾക്കെതിരെ ഓൺലൈൻ റവന്യൂ റിക്കവറിക്കുള്ള നടപടി കേരള സ്റ്റേറ്റ് ഐടി മിഷൻ ആരംഭിച്ചിട്ടുണ്ട്. ടിയാൾക്കെതിരെ വിജിലൻസ് ആന്റ് ആന്റ് കറപ്ഷൻ ബ്യൂറോ, സെൻട്രൽ റേഞ്ച് എറണാകുളം VC/19/2015/CRE നമ്പർ വിജിലൻസ് കേസ് നിലവിലുണ്ട്.



BISHWANATH SINHA IAS

Additional Chief Secretary

Responsible I.T, P.E, HR, Planning & Economic Affairs Dept.
Government Secretariat, Thiruvananthapuram.

APPENDIX III

Appendices From Audit Report

Appendix 4.1

FRIENDS Beneficiary Survey Questionnaire

(Reference: Paragraph 4.7; Page 69)

Name :

Sex and age :

Male/Female

18-30/30-60/>60

Address/District :

1	How often do you visit FRIENDS centre?	Twice a month or more Once a month Once in two months Once in three months or less
2	Generally how much time are you required to wait before the service is delivered to you?	Less than 5 minutes 5 to 15 minutes 15 to 30 minutes More than 30 minutes
3	Were there occasions you had to return without remitting bills because of long queue/network connectivity problems at centre? If so the range of delay:	Never Delay of 10 minutes or less per transaction Delay of 10 to 60 minutes per transaction Unavailability of connectivity for hours
4	Were there occasions when you went for remitting a bill you were informed that the bill could not be remitted since the bill details were not available in the system and requested you to visit again later?	Never 3 times or less in a year 3 to 6 times a year More than 6 times a year
5	If the answer to the above question number 4 is affirmative, generally which are such bills?	KSEB BSNL Both KSEB & BSNL Others
6	Were there occasions when you remitted a bill at FRIENDS centre and the Department/Board levied fine on the ground that the receipt amount reached them late?	Never Once Twice More than twice
7	Have you come across errors in the receipt?	Never Once Twice More than twice
8	Do you have an internet connection at home?	Yes No
9	Will you prefer a facility for remitting utility bills through internet utilising net banking/credit card/debit card to the existing system of remitting cash at FRIENDS Centres?	Yes No
10	How do you rate the behaviour of counter staff?	Highly pleasing Pleasing Indifferent Rude
11	How do you rate the overall services delivered by FRIENDS	Very good Good Satisfactory Not satisfactory

Signature of Beneficiary

Appendix 4.2

Result of Beneficiary Survey

(Reference: Paragraph 4.7; Page 69)

Sl. No.	Description	Result
1	Number of participants	500 (100 each from Thiruvananthapuram, Ernakulam, Malappuram, Kozhikode and Kannur districts).
2	Districts surveyed	Thiruvananthapuram, Ernakulam, Malappuram, Kozhikode and Kannur
3	Representation of Male & Female	Male constituted 75 per cent and female were 25 per cent
4	Age class	The majority surveyed (55 per cent) was in the age group of 30 – 60. Senior citizens (Above 60 years) were 27 per cent and the remaining 18 per cent constituted the age group of 18 – 30.
5	Frequency of visiting FRIENDS	While 37 per cent visit FRIENDS Centres twice a month or more, 30 per cent visit once a month, 25 per cent visit once in two months and 8 per cent visit only four times a year or less.
6	Waiting time for service delivery	22 per cent people were of the opinion that they needed to wait only for 5 minutes or less. 14 per cent stated they had to wait upto 15 minutes. While 59 per cent stated they had to wait upto 30 minutes. The remaining 5 per cent had to wait above 30 minutes.
7	Network delay	16 per cent of the people were of the opinion that they did not face delay for remitting bills. The remaining 84 per cent experienced delay and had to return without remitting bills due to unavailability of connectivity.
8	Want of timely updating of billing data by participating agencies	73 per cent experienced absence of billing details in the system. Of the above, 89 per cent had problems with KSEB bills, 3 per cent with BSNL, 3 per cent with both KSEB and BSNL and 5 per cent had problem with other bills (Water bills).
9	Levying of penalty from consumers for late transfer of collection details to the respective agencies.	7 per cent had problems caused by delay in furnishing collection particulars by FRIENDS.
10	Errors in receipts	Only 3 per cent reported errors in receipts issued.
11	Home internet facility	48 per cent of the people surveyed had internet connectivity at home.
12	Provision for payment through the internet	While 14 per cent welcomed provision for payment through internet, 86 per cent wanted services through FRIENDS Centres.
13	Behaviour of counter staff	99 per cent rated the behaviour of counter staff as highly pleasing or pleasing.
14	Overall services by FRIENDS	68 per cent rated the overall services as very good or good.

Appendix 4.3

Details of variations in the average transactions per Centre per shift

(Reference: Paragraph 4.10.3; Page 76)

Sl. No.	TRIPATHI Centres	Average No. of bills processed per Centre per shift	No. of existing Chapters	Average No. of bills processed by the person whose contribution was the lowest	Average No. of bills processed by the person whose contribution was the highest
1	Thiruvananthapuram	753	13	53	131
2	Kollam	222	4	44	100
3	Pathanamthitta	162	6	14	52
4	Alappuza	183	7	24	64
5	Kottayam	177	4	22	73
6	Idukki	53	2	22	30
7	Ernakulam	445	6	37	136
8	Thrissur	379	6	64	98
9	Palakkad	347	7	20	76
10	Malappuram	245	6	39	80
11	Kozhikode	377	5	61	120
12	Waynad	47	3	14	29
13	Kannur	239	6	23	71
14	Kasaragod	191	4	35	71