Chapter 3: Review on Implementation of Integrated Pay Roll and Accounting System in Indian Railways

3.1 Introduction

In 2000, Indian Railways (IR) developed and implemented two applications, Pay Roll and Independent Modules (PRIME) and Advanced Financial and Railway Expenditure Management System (AFRES). PRIME dealt with payments, recoveries, leave account, provident fund, pension and other activities of all railway employees and also interfaced with AFRES sharing common database and information exchange. AFRES covered the financial management areas like bill passing, book keeping, costing, fuel, assets, inspections, budget & finance, cash and pay etc. These systems were running independent in headquarters, divisions and workshops. These applications were re-engineered and named as "Integrated Payroll and Accounting System" (IPAS).

IPAS was developed by Centre for Railway Information System (CRIS) as a web-based application using centralized architecture with single application and single database. It enables preparation, processing, bill passing and accounting of salary, allowances, loans etc. It has a provision to exercise budgetary control besides preparation of account current and appropriation accounts and other financial statements. IPAS was planned to integrate with various other legacy IT applications which operate in IR such as Crew Management System (CMS), Integrated Material Management System (iMMS), Indian Railways E-Procurement System (IREPS) etc.

IPAS was implemented to provide real time access to financial transaction data in addition to bringing financial and fiscal discipline. The integrity, completeness and consistency of data in IPAS plays a pivotal role in generating several Management Information System (MIS) reports for decision making.

IPAS was developed and implemented in phases. Initially, it was developed and implemented in ECoR in 2008. After ECoR, the application was implemented in four Zonal Railways[31] (ZR) during 2011-15. Thereafter, it was rolled out in the remaining 11 ZRs in 2016. For implementation of IPAS, CRIS has spent ₹ 45.31 crore as on 31 March 2020. IPAS comprises of 20 modules and 64 sub-modules. The process flow depicting the interrelation of the modules is shown in *Appendix-A.*

3.2 Background

The implementation of IPAS was partial. Many modules/sub-modules of IPAS were not fully implemented. Deficiencies were observed in data validation, application level control and availability of required rules and provisions of codes and manuals of IR in IPAS to generate desired output. A committee of Principal Financial Advisers (PFAs) had recommended 20 measures for strengthening of internal checking mechanism

---

[31]   *NR, NER, NWR and ER.*

(important recommendations shown in ***Appendix E***). Railway Board (RB) instructed[32] (August 2018) PFAs of all ZRs to examine the recommendations and take necessary action for implementation of the same. Some of the recommendations, such as, duration of validity of OTP, activation of suspense and leave modules in IPAS, sanitization of master data etc. were not complied in some ZRs.

A fraud in Accounts Department of NFR involving ₹ 4.33 crore was reported to RB. The fraud took place due to unfettered access to IPAS by the staff concerned. Apart from this, requisite checks and balances as laid down in Indian Railways code for the accounts department were not followed. In yet another case in SCR, a fraud involving ₹ 2.20 crore was detected where 27 fake pharma bills were passed by an Accounts Assistant.

In this background, this review was taken up to assess the status of implementation and management of IPAS. Audit also sought to obtain reasonable assurance as to the adequacy of the IPAS application in delivering the desired outcome. Audit also focused on the efficiency and effectiveness of IPAS in addressing various business process rules inbuilt into IPAS. Analytical review coupled with substantive testing using Computer Assisted Audit Techniques tools namely Interactive Data Extraction Analysis (IDEA) and MS Excel was conducted to assess the reliability of the data processed and produced by the system.

The scope of audit covered test check and analysis of data (updated as on 31 March 2020) in IPAS. Details of sample selection in respect of Bill Units (BU), Spending Units (SU), vouchers, pension cases etc. are shown in ***Appendix - B***.
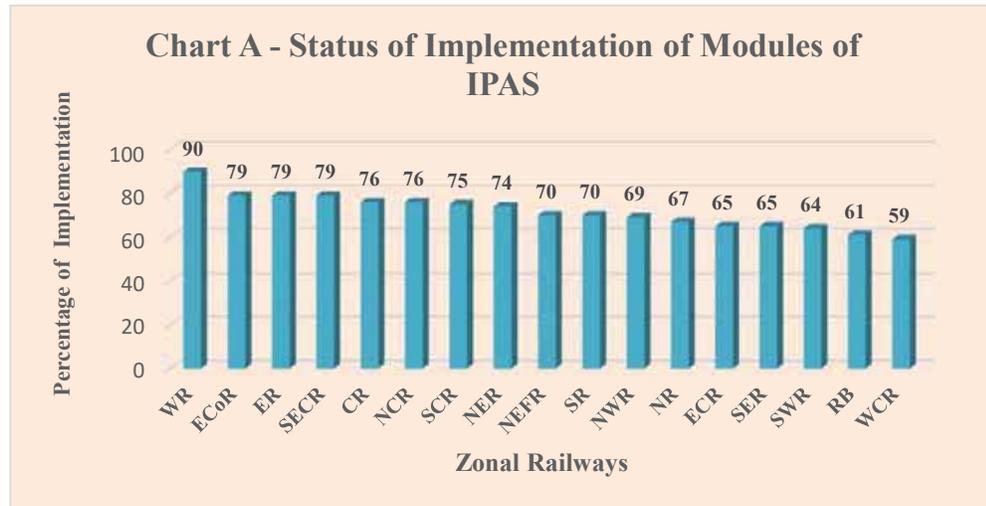
3.3 Status of implementation of IPAS

Integrated Pay Roll and Accounting System (IPAS) was intended to bring uniformity in collection, processing, storage, accounting of personnel and financial information across all ZRs. Based on functionality, the various modules of IPAS basically perform two functions – pay roll and accounts. Pay roll functions are performed through modules like pay roll, cadre, electricity, quarters, loans and advances etc. Accounts functions are performed through modules, such as, books, budget, pension, suspense, stores accounts etc.

Successful implementation of different sub-modules is of paramount importance for efficient functioning of their main modules. Functioning of main modules are also interlinked to one another. The extent of implementation of one module affects the deliverables of the other due to absence of seamless flow of data among these modules. Effectiveness of modules primarily depends on the complete and correct porting of data from legacy systems, proper validation checks and in-built business process rules in IPAS. The different modules and their sub- module are shown in the ***Appendix – C.***

---

[32] *RBA No.92/2018 Letter No.2018/ACII(CC)/IPAS/37/9 dated 27.8.2018.*

The overall status of implementation in percentage worked out as the ratio of the product of number of accounting units and number of modules implemented to the product of total number of units of the zone and total number of modules, in ZRs as on 31 March 2020 is shown in the **Chart- A** below:

Audit test checked implementation of various modules and sub-modules of IPAS in 173 Accounting Units (AU) of ZRs. It revealed that the modules, such as, quarter, electricity, incentive and traffic were not implemented in many AUs of ZRs. Similarly, book of sanction, leave and running allowance sub-modules etc. were also not implemented in some ZRs as shown in *Appendix E and Annexure-8.*

Ministry of Railways (MoR) stated (June 2021) that the implementation of all modules was being monitored. Ministry also stated that the cadre and leave sub-modules were being implemented through a separate application "Human Resource Management System' (HRMS). Ministry did not explain the reasons for rolling out separate HRMS using the same database instead of implementing cadre and leave sub-modules available in the existing IPAS application. This had resulted in duplication of works besides wasteful expenditure in developing those modules for IPAS. Ministry's remarks were also silent on the slow implementation of other modules such as quarter, electricity and traffic. The reply of the Ministry is, therefore, not acceptable.

Audit Findings

The aspects related to Integrated Pay Roll and Accounting System were reviewed in Railway Board and Zonal Railways. The audit findings emerging on analysis of data are discussed in the succeeding paragraphs.

3.4 Partial implementation of modules of IPAS

One of the objective of implementation of IPAS was to achieve automation of processes through seamless flow of data among inter-related modules and sub-modules. Due to partial implementation of some modules, such as, quarters and electricity,

G-suspense, loans, traffic etc., IR failed in achieving the desired objective of automation. Even the modules implemented so far were not integrated properly, thus diluting the purpose of development of the system.

Review of the status of implementation of modules revealed that quarter, electricity and traffic modules were not fully implemented in any ZRs. The status of implementation of some other modules is shown in *Chart-B* below:
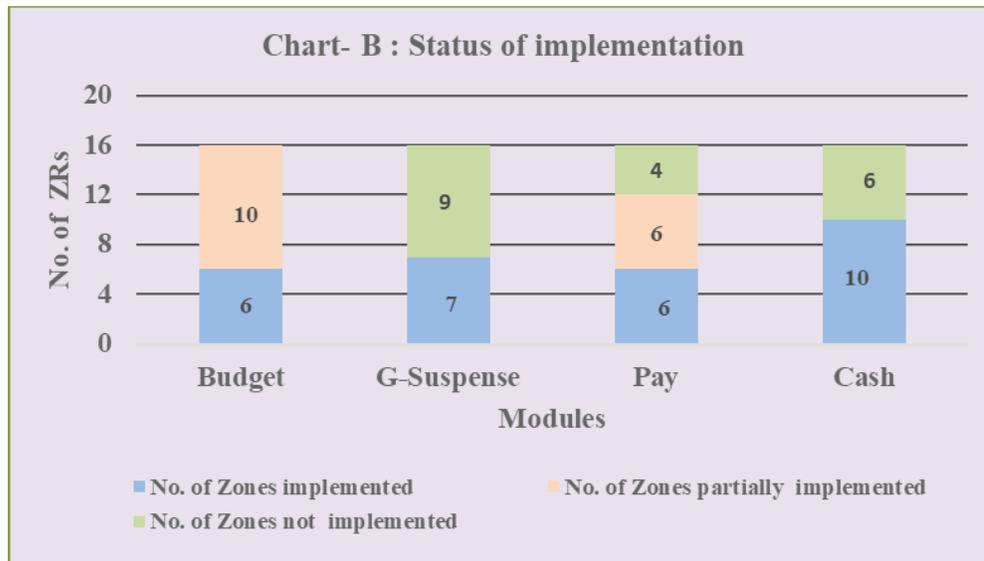
3.4.1 Impact of partial implementation

Audit observed that due to partial implementation of modules and also non-linking with other modules, manual feeding of data is continued for processing desired output. This had resulted in deficiencies[33] in the system generated reports and irregular payment to employees as indicated below:

Audit Findings	Reply of Ministry of Railways (MoR) (June 2021)	Further Audit Comments
Quarters, Electricity and Loan Modules		
i. Short recovery / irregular recovery of License Fees of ₹ 11.01 crore[34] in six ZRs. ii. Excess payment of ₹ 4.50 lakh[35] towards HRA to employees who were allotted quarters. iii. The calculation of recovery of principal and interest was being done manually.	Ministry stated that leave, loan, quarter and electricity modules are being developed in HRMS which would share data with IPAS.	Ministry did not explain the reasons for rolling out separate HRMS when these modules were already available in the existing IPAS application.

---

[33] *Details indicated in Appendix-E.*
[34] *ECR- ₹ 11.87 lakh, NWR - ₹ 3.49 lakh, NER- ₹ 2.43 crore, NCR- ₹ 5.83 crore, SCR - ₹ 2.44 Crore and WCR - ₹ 16.38 lakh.*
[35] *CR- ₹ 0.97 lakh and NR - ₹ 3.53 lakh.*

Audit Findings	Reply of Ministry of Railways (MoR) (June 2021)	Further Audit Comments
Budget Module		
There were deficiencies in the reports generated in the module like 'NIL' values for budget proportion in budget control statement. The statement did not depict the correct variation between budget provision and the actual expenditure incurred. The figures of actual expenditure is being shown as variation. The actual expenditure shown under the budget control statement revenue report did not match with the corresponding figures in Revenue Allocation Register (RAR) report. This has resulted in dependency on other applications/manual records for budget monitoring.	MoR stated that budget monitoring is being done through IPAS. MoR further stated that RAR and budget control statement data were fetched from IPAS tables only and no variation was detected.	Audit, however, observed that budget module was not linked to bill passing. Module in eight ZRs[36] for ensuring availability of funds for passing of bills and the function of ascertaining budget availability was performed manually. The contention of the Ministry of Railways is not tenable as the verification of records revealed mismatch between RAR and budget control statement.
G-Suspense Module		
In ER, discrepancies were noticed between half yearly review report and summary report generated by the system. The half-yearly review report on suspense balance and summary report under G-Suspense module were incomplete and contradicted with each other.	MoR admitted the audit observations.	No comments.
Traffic Module		
IPAS has not been interfaced with the PRS/ FOIS /UTS / PMS applications for earnings. Goods balance sheet is being generated electronically by the goods sheds and sidings in different applications other than IPAS.	Traffic module is being implemented separately as a part of Traffic Accounts Management System (TAMS) Module.	Ministry did not explain the reasons for implementing TAMS, when this module is available in the existing IPAS application. This had resulted in duplication of works besides wasteful expenditure in developing this module for IPAS.

---

[36] *ER, CR, ECoR, ECR, NCR, SCR, SECR and SR.*

Audit Findings	Reply of Ministry of Railways (MoR) (June 2021)	Further Audit Comments
Pay Module		
Manual register is being maintained in zonal headquarters for cash payment.	MoR stated that after implementation of Centralized Integrated Payment Solution (CIPS), pay module has become obsolete.	The expenditure incurred, for development of pay module in IPAS, thus proved infructuous.
Cash (Misc. Cash Receipt) and Cash (Station) Modules		
Deficiencies, such as, duplicate cheque number, erroneous closing balance as observed in ER on analysis of data of cash (MCR) module are shown in *Appendix-E*.	MoR stated that 11 ZRs had implemented the module.	The reply of the Ministry did not address the issues pointed out by audit.

3.4.1.1 Non linking of leave module with pay roll module

Due to non-linking of leave module with pay roll module, audit observed that there was a mismatch between the leave shown in the leave cum absentee statement, irregular grant of increment and excess payment of productivity linked bonus as indicated in *Appendix-E.*

MoR stated (June 2021) that the leave module in IPAS was provided to facilitate salary preparation through entry of absentee statement for the month which affects pay and allowances. It further stated that the complete leave module including sanction of leave to its updating in service record would be a part of HRMS.

The contention of the Ministry was not tenable. As per the IPAS user manual, the purpose of software was to capture employee data to process payroll, maintain loan and leave record and generation of various bills etc. Due to non-implementation of leave module/ non feeding of leave particulars in the module, instances of irregular increment, overpayment in bonus/ transport allowance, HRA etc. were noticed. Instead of integrating the leave records in IPAS, creation of another application called HRMS was not in line with the spirit of the IPAS. Moreover, the reply of the Ministry was general in nature and not specific to audit observations.

3.4.1.2 Integration of IPAS with other IT applications of IR

Apart from IPAS, various other applications such as Crew Management System (CMS), Indian Railways E-procurement System (IREPS), Integrated Material Management System (iMMS) etc. are in operation in IR. These applications were envisaged to be integrated with IPAS for seamless flow of data for accuracy and elimination of manual intervention for feeding of data from one system to another.

Audit, however, observed that IPAS was integrated with CMS and IREPS in 13 ZRs[37] and 10 ZRs[38] respectively. It was also observed that although CMS had been linked with IPAS, manual feeding of data is being done for calculation of kilometerage allowance.

Audit further observed that iMMS was not fully integrated with IPAS. Recoveries towards liquidated damages, security deposit and rejection of stores etc. were being made through manual intervention.

3.5 Management of quality of data in IPAS

Efficiency and effectiveness of any IT system depends on the efficiency in managing the quality of data, which should *inter-alia*, include clean and consistent database free from redundancy and availability of requisite criteria for data processing. Effective User Management ensures data integrity and makes the system reliable.

Audit observed that the output of IPAS lacked reliability. Manual interventions were resorted due to erroneous porting of legacy data, weak validation controls and absence of relevant provisions governing the data processing as discussed below:

3.5.1 Erroneous or partial porting of legacy data into IPAS

In December 2015, CRIS issued Guidelines for Implementation of IPAS. As per the guidelines, ZRs were required to migrate legacy data from their existing systems (AFRES and PRIME) to IPAS tables. The responsibility for correctness of migrated data rests with CRIS and ZRs. It was, however, observed that the legacy data were either not correctly ported or ported partially into IPAS. As a result, following deficiencies[39] were noticed in different modules:

Audit findings	Reply of Ministry of Railways (June 2021)	Further audit comments
Cadre Module		
i. Date of Appointment of 2,072 employees were not rectified even after the system was made live. ii. The date of retirement of 1,15,578 employees were shown before completion of 60 years of age.	IPAS has another field cessation date, which is being used for employees of various categories (such as apprentice, contractual, redeployed), where employees retirement is prior to 60 years.	The reply of the Ministry was not specific to the instances pointed out by audit and therefore, is not acceptable.

---

[37] *CR (except Mumbai Division), ECR, ER, NCR, NER (except two diesel lobbies in Izzatnagar), NFR (except Rangapara North), NR (Except Ferozpur Division), NWR, SECR, SER, SR (only in two Divisions) WCR and WR.*

[38] *CR, ER, NCR, NR, NWR, SECR, WCR, SWR, SR, WR and RB.*

[39] *Details indicated in Appendix-E.*

Audit findings	Reply of Ministry of Railways (June 2021)	Further audit comments
Provident Fund Module		
There was a mismatch of balances between IPAS data and PF ledger.	MoR admitted that these might be old cases on account of legacy data and initial stage of implementation when bills were passed through PF module of PRIME and in case of transferred employees due to delay in accounting of journal vouchers during transfer- in and transfer- out.	No comments.
Books Module		
The balances shown in capital and revenue ledger reports were not reliable and accuracy not guaranteed. Block Account was not functional in many ZRs. There was difference between annual reports generated by the system and manually compiled block account. As a result, intended objective of preparation of final account current using revenue and capital ledger accounts was defeated.	No remarks from the Ministry.	No comments.
E-Suspense Module		
i. Debt head report sub-module was not functional in any ZR. ii. Monthly ledger reports in respect of loans and advances (HBA and PC advance) revealed that that there were negative opening balances in 837 cases. iii. There was discrepancies between actual figures in suspense balance and IPAS report.	MoR stated that the annual financial statement is being prepared through IPAS. It further added that the suggestions of audit are taken for development and testing.	No comments.

3.5.2 Weak data validation control

The data validation control in IPAS was not adequately effective. This had led to data inconsistency in IPAS and irregular transactions. The reports generated through IPAS were not reliable due to its erroneous database. Deficiencies[40] observed on analysis of different modules are mentioned below:

Audit findings	Reply of Ministry of Railways (June 2021)	Further audit comments
Provident Fund Module		
i. In nine ZRs, 1,802 employees had negative balances of ₹ 50.21 crore. ii. 169 employees who had negative PF balance of ₹ 8.57 lakh retired during April 2016. PF balance was, however, carried forward even after their retirement. iii. 384 employees withdrew ₹ 10.69 crore more than the credit available in their PF accounts. Excess payment of ₹ 1.5 crore from PF to 58 employees of NFR at the time of final settlement. iv. Recovery of PF subscription from employees governed under NPS and vice-versa.	MoR admitted that the negative PF balance was due to non-closure of PF account during 2016-17 and 2017-18. MoR also stated PF module does not allow withdrawal of more than the balance available in PF ledger. Ministry further added that the necessary validation had been incorporated in the system.	MoR did not provide specific reply to the instances pointed out by audit. These instances indicate that the existing validation control was not adequately effective and also indicate the failure of the system which railways rely on.
National Pension System (NPS) Module		
i. 5,058 employees under NPS category were allotted PF numbers. An amount of ₹ 4.38 crore of interest was credited into PF ledger accounts of 14,424 employees who were covered under NPS. ii. In respect of 14,529 employees both PRAN and PF numbers were allotted. 6,081 employees were availing of the facility of both PF and NPS as on 31 March 2019 and an amount of ₹ 26.59 crore stood as PF balance of these employees.	No remarks from the Ministry.	No comments.

---

[40] *Details indicated in Appendix-E.*

Cadre Module		
i. Employee Number was not unique in some ZRs ii. Existence of duplicate PAN, Aadhar and PRAN as per 'Exception Report' as indicated in *Appendix-D*. iii. Date of birth was shown as after the date of retirement.	MoR stated that the audit observations were not based on data related to serving employees. It further stated that IPAS has a strong validation for processing of salary.	Audit observations were based on serving employees. The reply of the Ministry did not address the audit findings.
Leave Module		
i. 96 employees availed 838 days of leave during the period which was prior to their date of joining railway service. ii. Leave accounts of 557 employees were credited with Leave after their retirements. iii. 22 Employees had negative balance in their leave account.	MoR stated that the complete leave module including sanction of leave to its updating in service record would be a part of HRMS.	Ministry's reply did not explain the reasons for not implementing leave module in IPAS.

3.5.3 Absence of extant provisions in IPAS for data processing

Efficiency of an IT application depends upon the availability of extant provisions governing the processing of input in delivery of the desired output. Audit, however, observed that the relevant codal provisions were not built into IPAS. This had led to several instances of deficiencies[41] in different modules as discussed below:

Audit findings	**Reply of Ministry of Railways (June 2021)**	**Further audit comments**
Pay Roll Module		
No provision in IPAS - i. For reduction in pay or postponement of increments based on disciplinary action. ii. To govern the admissibility of various allowances, such as, children education allowance, transport allowance, night duty allowance, national holiday allowance, nursing allowance, and recovery of interest on advances to employees.	MoR stated that IPAS was meant to prepare salary bills based on entry of leave etc. in leave module. It also stated that the bill clerks of the bill units concerned enter the admissible allowances employees as per extant guidelines and the module then calculates the amount payable to employees.	The instances of overpayment indicate lack of supervision and effective input control. The absence of requisite provisions in IPAS to prevent manual intervention defeated the objective of automation of the process.

---

[41] *Details indicated in Appendix-E.*

Audit findings	Reply of Ministry of Railways (June 2021)	Further audit comments
	It further added that the necessary validations for auto calculation may be provided in IPAS only after complete implementation of leave module in HRMS and its integration with IPAS.	
Provident Fund Module		
i. Depiction of PF balances of 165 employees, who had retired from service one to nine years ago. ii. No provision for auto settlement of PF. There was delay up to 82 months from the dates of retirement of 623 employees in settlement of PF in NR. Similar instances were also observed in NCR. There was delay upto 13 months from the dates of retirement of 19 employees in settlement of PF.	MoR admitted (June 2021) the audit contention for necessary action. Ministry also stated that there is no auto settlement provision in PF. It further added that the delay was due to delay in processing of settlement cases.	The contention of the Ministry was not acceptable. The PF module of IPAS should provide for requisite business process rules for all possible eventualities to facilitate automation of process of settlement of PF. Absence of auto settlement provisions defeated the purpose of implementing PF module in IPAS. Delay in settlement of PF also invites a cost to IR in the form of interest payment.
Incentive Module		
Irregular/excess payment of incentive to the tune of ₹ 37.28 lakh.	MoR stated that there was no excess payment of incentives. It further added that the incentive was paid on the basis of pay level and not on grade pay.	The contention of MoR was not tenable. From the system generated statement for the pay period March 2019, it was observed that the calculation of incentive and categorization were made on the basis of grade pay and basic.

Audit findings	Reply of Ministry of Railways (June 2021)	Further audit comments
Books Module		
i. The system was not adequately equipped with extant provisions for acceptance of correct Head of Allocation (HOA). 565 cases of adoption of invalid/ incorrect HOA were noticed in some of the ZRs. ii. System lacked provisions for automated reconciliation of cheques with bank scroll. Reconciliation of cheques and bills with bank scroll was being done manually.	MoR admitted that IPAS should be uniform across all ZRs.	No comments.
Bill Passing Module		
i. The module does not contain provisions for statutory deductions, such as income tax, welfare cess, and Liquidated Damages (LD). ii. Several instances of incorrect flagging of Input Tax Credit (ITC) were noticed. In two ZRs, interest of ₹ 9.35 crore was paid due to incorrect flagging of ITC.	Admitting the audit observation, Ministry stated that the provision for option of mode of submission of SD, amount of SD and auto deduction / updation of SD recovered in the form of Metadata in IPAS is under process. Ministry also admitted that there had been some gaps due to many changes in the rules, guidelines and tax bracket of different items.	The reply of the Ministry was general in nature and did not address the discrepancies pointed out by audit.
Leave Module		
i. There was no provision for debiting the encashed leave in leave account of employee concerned and the same was being done manually. ii. In CR, leave encashment of ₹ 5.93 lakh to 33 employees was made twice within the same block period. iii. The leave module has no provision for crediting un-availed joining time.	MoR stated that the complete leave module including sanction of leave to its updating in service record would be a part of HRMS.	Ministry's reply prove the redundancy of Leave module in IPAS. Further, the reply of the Ministry did not address the audit observations.

3.5.4   User management in IPAS

Scrutiny of user management revealed that the user IDs were created with invalid employee number and for employees belonging to other ZRs. Further, the recommendation of CRIS regarding use of digital signature for bill passing functionality of IPAS was not uniformly complied across ZRs as indicated in *Appendix-E*.

MoR stated (June 2021) that the use of digital signature was tested in RB and the same was not implemented in ZRs as bills/invoices are received physically in accounts departments and they need to be signed physically. It further stated that the two systems might create confusion and therefore, not proliferated to other units till bills are digitally signed by the executive are available for arranging payment.

In this connection, it is stated that the MoR should have done complete automation of work flow processes, both at the RB and ZRs level, to achieve the objectives of automation of different functionalities of IPAS.

3.5.5   Continuous upgradation of IPAS

Audit observed that CRIS has complied with 35[42] out of 85 change requests[43] which were pending as on 31 March 2020 as indicated in *Annexure –9 &9A.* The delay in compliance of 26 out of 32 change requests ranged between 101 days and 833 days. Out of the remaining 50 pending issues, delays in respect of 26 cases ranged between 208 days and 774 days. In respect of 10 issues, CRIS stated that there was already provisions in IPAS to deal with such issues. For seven issues, details were not available at CRIS. There were 12 more cases which were pending with the nodal railways for periods ranging from 244 days to 1112 days as shown in *Annexure – 10.*

The above instances indicate that neither the RB nor the ZRs actively pursued issues involved in upgradation of IPAS. This had adverse impact on efficient operations of IPAS.

MoR stated (June 2021) that nodal railway for specific modules had been nominated for improvement of functionalities and trouble shooting in IPAS. Ministry further added that continuous modification/validations are being carried out.

The reply of the Ministry did not address the audit observations and is, therefore, not acceptable.

3.6   Conclusion

Indian Railways rolled out IPAS with a view to bringing a common centralized platform and following similar automation processes across Zonal Railways (ZRs). None of the ZRs fully implemented all modules and sub-modules of IPAS. There was a lack

---

[42]   *Includes three closed cases as shown in Annexure 9A.*
[43]   *A brief of monitoring mechanism is indicated in Appendix-E.*

of inter-linking among the modules/sub-modules. As a result, the application is far from being stabilized even after five years of its implementation. Some of the modules, such as, cadre, loan, quarters, electricity etc., which were developed for implementing through IPAS, were, however, removed from IPAS for implementing through a new application, named as HRMS. This indicated lack of judicious planning of MoR, resulting in duplication of works and wasteful expenditure in developing these modules using the same database. Macro planning elements of computerization in this fashion need further examination including the role of CRIS.

Two very significant objectives of IPAS were to implement budgetary control and to generate appropriation accounts. Audit observed that budget compilation and manual reconciliation continued outside IPAS as also, generation of appropriation accounts.

Ineffective change management had an adverse impact on the operational efficiency of IPAS. Lack of seamless flow of data and partial integration of IPAS with other IT applications in operations had often necessitated manual intervention for data capturing and report generation. There was an inordinate delay at RB level and CRIS in addressing the issues flagged by the ZRs for upgradation of the system.

Incomplete and incorrect porting of legacy data led to data inconsistency of IPAS, such as, joining date, employee number, PRAN number for NPS employees, mismatch of provident fund balances etc. The reports generated from IPAS were not reliable due to its erroneous database. Indian Railways, therefore, continued to rely on physical records.

Deficiency in validation control led to several instances of acceptance of erroneous data by IPAS. Indian Railways failed in effective utilization of the provisions of generation of 'Exception Reports' for sanitization of data inconsistency in IPAS.

Provisions laid down in codes and manuals of Indian Railways and instructions/guidelines of RB issued from time to time were not adequately incorporated in IPAS. This had resulted in excess or irregular payment of pay and allowances to employees.

Summary of Audit findings
• **Delayed upgradation and partial implementation resulted in underutilisation of the system.**
• **Weak data validation and wrong porting resulted in inheriting of erroneous data.**
• **Non-following of government provisions resulted in wrong output from modules.**

3.7 Recommendations

Ministry of Railways may consider to-

i. *Frame strategic IT plan at macro level instead of ad-hoc development of applications.*

ii. *Expedite sanitization of database and porting of legacy data into IPAS with requisite validation controls.*

iii. *Introduce appropriate business rules in all modules and sub-modules for effective functioning of IPAS.*

iv. *Fix responsibility for improper management of IPAS.*

v. *Formulate time bound effective action plan to improve efficiency of CRIS in management and continuous upgradation of IPAS by developing internal expertise for continuity.*

New Delhi   **(DOLLY CHAKRABARTY)**
Dated: 2 3 NOV 2021   **Deputy Comptroller and Auditor General**

Countersigned

New Delhi   **(GIRISH CHANDRA MURMU)**
Dated: 2 5 NOV 2021   **Comptroller and Auditor General of India**