Office of the CGDA
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To

All PCsDA/ CsDA / PIFAs/IFAs / PCAs (Fys) / CFAs(Fys)

Sub: Information Technology Systems – Planning and implementation : Roadmap for Defence Accounts Department.

Ref: This office letters of even no. dated 15.10.2015 and 02.11.2015.

This is with reference to this office ibid letters, wherein comments/suggestions on the IT Road Map for the department was requested.

In this context, it is intimated that the IT Roadmap for the department has now been finalized after due deliberations and the same is circulated herewith for information and necessary action at your end please.

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Information Technology Systems – Planning and Implementation

A Roadmap for

Defence Accounts Department

Introduction

1.   DAD was one of the pioneers in adoption and implementation of Information Technology in Government functioning. Different aspects of work were automated through software by use of best IT tools available at that point of time. Of late, the IT drive/initiatives in the department failed to keep pace with the changing IT Scenario. There is a strong need to not only play catch up but also to align our initiatives with the fast changing IT world. The need is imperative in the present scenario where government as a whole is putting renewed thrust on digitization and service delivery through IT as part of e-governance.

Broad areas in Roadmap

2.   Given the work profile of the Department, the IT initiatives to be included in the roadmap can be broadly categorised in the following areas –

      i.   DAD Personnel Management

      ii.   Office Automation for Payment and Audit function

      iii.   Ordnance Factory Accounts Offices automation

      iv.   Pension sanction and disbursement system

      v.   Dolphin system for PAOs and Pay audit system for CDA offices

      vi.   E-GPF

      vii.   E-ticketing project

      viii. E-Concurrence

      ix.   E-Procurement

      x.   E-Audit

      xi.   Infrastructure and security

      xii.   Manpower and training

      xiii   Automation in RTCs

Approach to IT Development

3.1.   Adoption of an appropriate technology is a critical element in the whole process of system development. Technology should be robust, sustainable and futuristic also. As far as adoption of technology is concerned, it will be ensured that the present systems developed in-house will be aligned to latest technologies available in respect of platform on which these have been developed and open source software is used. For system development in future, adoption of technology will be decided after considering various aspects including the platform of the Services with which the system is proposed to be linked, nature of the project under development, the advice of the consultant engaged, if any, and consultations with experts within and outside the department. IT domain experts within Department will serve as an interface with the outsourced software developers. Wherever outsourced model is chosen proper care will be taken for incorporating clauses related to AMC and hand-holding as per industry norms which is about seven years (5+2). It should also have provision of periodic security audit by authorized agency. In addition to the above, provision of transfer of Technology/ Source Code when system is switched over to in-house resources or another vendor is also to be ensured.

3.2.   Project Report should be prepared either in house or through outsourcing to define the scope of work. Business Process Re-engineering should be done to incorporate the changed processes required due to switchover to automated processes.

3.3   Security of data and systems through data centres and periodic systems audit will need to be appropriately ensured.

DAD Personnel Management System

4.1   There is an urgent need for a comprehensive ERP like package covering all activities – Pay & Allowances, TD moves, LTCs & Permanent Transfers, Training management, maintenance of Service Book, APAR initiation and finalisation, Leave etc – in respect of DAD personnel. This will be based on a Personnel Information System database wherein each individual will have a unique ID which will be valid for entire service career.

4.2   Some of the above utilities are already available in Tulip system – an in-house system developed by IT S & DC, Secunderabad on Java platform, which is presently being run on pilot basis in some Delhi offices. Other utilities will be developed by ITS&DC in a time bound manner. Meanwhile, all PCDA/CDA offices will initiate process for database creation for implementing the package.

Office Automation

5.1.   Tulip Office Automation system was on pilot run in CDA Secunderabad from 1st April 2015 and in CDA (R&D) Bangalore from 1st August 2015. The system is now stabilised in these offices and as such is now to be implemented in other Regional Controller offices and R&D offices in a time bound manner. Customisation for other functional Controllers' offices will be done after the implementation is initiated in these offices, with PCDA (N) to be taken up first. This will bring uniformity of office automation system in the department.

5.2.   Automation of work in AO, GE offices has been carried out under Project Vishwak. In BSO offices, automation has been carried out under Project Bhawan. These systems are working in isolation. These activities will be developed under Tulip to ensure an integrated working. For effective working of these systems, integration with the MES system will be required, so that basic data of contracts and assets could be ported on-line.

5.3.   Further, the office automation system (Tulip) will be linked to the compilation system so that expenditure data is ported on the latter in a seamless manner and without manual intervention.

5.4.   The OA system will also have facility to receive bills data on-line from units so that data entry is avoided. For the purpose of authenticity, this could be with digital signature. Switchover to on-line billing will need to be pursued with Services HQrs and other stakeholders.

5.5.   For dak diary purposes, new utilities which allow compression of all relevant information in a single code which could be printed on the document itself will be examined.

5.6.   OA system and Compilation system will be linked to Financial Information Systems of the Services in a manner that effective information interchange can take place.

5.7.   Software development being a continuous process, all these requirements / utilities will be incorporated in the next version of Tulip and the present version will be implemented wef 1st April 2016.

Ordnance Factory Accounts Offices Automation

6.   The need for replacing the legacy systems – Labour, Inventory and Costing – is paramount. However, development of these systems in isolation would not serve any purpose. An effective integration with the OFB system will be required, so that data analysis and MIS thereof is equally effective for both sides. Integrated development of such a system with necessary rights and responsibilities should be the right course of action. PCA (Fys) and Member Finance, OFB may take necessary actions. In-principle approval for outsourcing of consultancy services to study the present systems and advise on the further development of

appropriate systems and their linkage to the OFB system has been given. Time bound completion of this exercise is to be ensured so that actual work on system development can be initiated considering the urgency to replace the legacy systems on FP/VFP.

Pension sanction and disbursement system

7.1.   For seamless processing of pension claims, pension sanction and pension disbursement as well as future grievance handling, an integrated system with a centralized data centre on all pension matters from entitlement sanction, disbursement accounting and audit is required at this stage. With the government considering centralised pension disbursement for all defence pensioners, need for such a system with suitable databases and security systems is essential. The system has to be developed through outsourcing only due to complex integration aspects. Necessary inputs will be given by all stake-holders (Pension wing, IT wing, PSAs, PDAs, ROs). Process for engaging a consultant to study the work flow, BPR required and the process at all stake holders – Record Offices, PAOs, PSAs, PDAs, Service Centres (under CPDS) – and to advise on the integrated system has been initiated.

Dolphin System and Pay Audit system

8.1   Dolphin system for PAO working is being run in a decentralised manner with databases residing in the Servers available with the PAOs themselves. This arrangement is sub-optimal from security aspect as well as from the aspect of manpower required for managing the servers. Centralisation of PAO databases with adequate connectivity for smooth functioning through secure log-in is a better solution. Pilot run for the same is being initiated.

8.2   Further, linkage with the Services' system will need to be brought about in a time-bound manner so that required data (mainly DO II data) could be ported in the system seamlessly and rejections are avoided.

8.3   The Interactive Voice Response System (IVRS), implemented by PCDA (CC) in PAO, AMC has brought about greater satisfaction amongst PBORs, who are now getting their claims related information through an IVRS telephonic call. While other PAOs should consider implementing the system, steps should also be taken for integrating data messaging (SMS) facility with the application.

8.4   Audit of Defence Civilians Pay bills in a CDA office presently is being done in manual mode. This is a repetitive exercise and hence can be more effectively carried out through IT system. For this purpose, integration with the Client system will be required, so that monthly pay data can be received on-line. A standardised civilian pay-bill format will need to be devised for use by all units. A centralised pay system with integrated audit and direct-payment modules could also be a feasible model for respective defence civilian agencies

such as MES, DRDO, Navy civilians etc. Normalised and uniform database, audit through system, maintenance of DHR, error-free maintenance of fund accounts etc are some of the activities which could be ensured under the proposed integrated system. Effective monitoring, better customer satisfaction, elimination of DID schedules and detailed MIS will be some of the benefits which could be achieved.

8.5   Army officers' pay module at PCDA (O) will be suitably augmented, strengthened and secured to cater for implementing web based utilities related to information interchange as well as receipt of advances related claims. PCDA (O) may also suitably implement IVRS.

E-GPF

9.   Full implementation of DAD package across the department will provide for on-line maintenance of GPF accounts of DAD employees with facilities for on-line advance/withdrawal claims submission and balance inquiry. For non-DAD employees also, similar facilities could be provided with the integrated pay system. As such, in the medium term, present practice of centralised processing of GPF data may not be required. Issuance of annual CCO-9 may also be replaced with indication of GPF balances on monthly pay-slips.

E-Ticketing

10.1   Rail Travel system for the Services has been stabilised. Air Travel Module has also been developed and implemented. The system provides for cashless booking for duty related journeys for the govt employees. DRDO, OFB, Coast Guard and BRO have also been requested to start using the system, as it will allow better control and monitoring. Accordingly, infrastructure of the project will also need to be adequately augmented.

10.2   The information available in the system will be utilised to develop TA module for on-line submission of adjustment claims by individuals.

E-Concurrence

11.   Development of E-concurrence module in consultation with Service HQrs is a priority area and needs to be implemented in a time bound manner. E-concurrence of AON proposals has been implemented in IFA (Air Force) offices on IMMOLS platform. Grants other than Stores will be brought under IMMOLS system by Air Force in a phased manner, as discussed with them. This will broaden the coverage of e-concurrence. Modalities for implementation of e-concurrence in Navy on ILMS platform are under consideration. Further, system for financial concurrence on e- platform needs to be developed. For this purpose, e-procurement needs to be implemented fully. System for securely porting data between internet based e-procurement system and intranet based e-concurrence system will need to be developed. Necessary actions will be taken along with the Services HQrs for time-bound implementation of the same.

E-Procurement

12.   Ministry of Finanace has issued directions for introduction of e-procurement in a phased manner by the Govt. Departments. Accordingly, Ministry of Defence in the order of DFPDS 2015, has decided that e-procurement could be mandated for the procurement cases above Rs. 5 lakhs under the delegated powers and the ceiling should be revised to Rs. 2 lakhs after the system stabilizes. It has also provided that the e-procurement packages developed by the NIC or other sources will be introduced. The responsibility for implementation of e-procurement is with Service HQrs and CGDA. Accordingly, CGDA would jointly ensure the implementation of e-procurement as per the target dates set out in DFPDS 2015.

E-Audit

13.1   The e-audit model for submission of monthly Imprest accounts and vouchers by Air Force units to PCDA (AF) on IMMOLS platform will be studied for implementation of similar module in PCDA (Navy) on ILMS/FIS platform. E-Audit in Army also needs to be examined and a road map finalized.

13.2   E-audit of pension disbursement by banks needs to be examined. In the interim, when the PSAs are working on their stand-alone pension sanction systems, they need to take appropriate actions for timely and effective e-audit of pension disbursements (on e-scrolls received from PDAs) and also for digitisation of legacy data presently kept in the form of paper documents.

Infrastructure and security

14.1   For successful implementation of IT applications, availability of adequate hardware is a must. Controllers (PCDA/PIFA/CDA/IFA/CFA (Fys)) will plan procurement of Computers in the ratio of 1 : 1 (i.e. one computer for one individual) for all sections working on the LAN-based applications in their offices and in the ratio of 1 : 2 (i.e. one computer for two individuals) for other sections/offices. Subject to availability of funds released by HQrs office, procurement of computers will be made based on broad specification laid down by CGDA IT Division and as per due procedure. Printers and UPS should be procured for a cluster of computers so that optimal utilisation is ensured. At the same time, review of printing requirements shall be carried out and to the extent possible, documents/reports should be forwarded through email/zimbra mail.

14.2   Separate power line for computer network should be ensured for better management of servers and modems. Maintenance of assets also is to be ensured preferably through appropriate AMC.

14.3   Proper care should be taken in the placement of IT assets in view of its cost. Further, to guard against the dangers of natural calamities like floods. Servers should preferably be

kept in rooms at first floor (Wherever possible) with appropriate provision for easy evacuation. Data back-up should be taken on a daily basis and back-up should be stored / kept at a different and safe place.

14.4   For the security of IT systems, appropriate anti-virus should be installed in the LAN Server and all stand-alone machines. Proper access control systems including password policy implementation and digital signature should be ensured.

14.5   Periodic security audit of website and LAN system should be carried out. For this appropriate security audit protocols with periodicity and scope of audit will be defined by CGDA IT Division. Policies and guidelines issued by HQrs office should be followed and compliance report should be submitted on 6-monthly basis to HQrs office.

14.6   With more and more applications being designed to run in a centralised environment, the department needs a data centre of its own. To study the requirement in detail and to advise on various aspects of hardware, security, fire-control mechanisms, bandwidth etc., process to engage a consultant has been initiated.

14.7   A secure and adequate Wide Area Network (WAN) is a pre-requisite for smooth running of all WAN-based applications. CGDA WAN is in the process of upgradation with higher bandwidths and Managed Networking services with BSNL. Controllers should liaise with local BSNL for providing Optical Fibre connectivity to their offices so that WAN could be on OFC. To study the structure of WAN and ensure its security including traffic control through a gateway, consultancy services are being engaged.

Manpower and Training (IT)

15.1   There will be a general categorization of EDP resources as Developer at centralized location, Programmer (including System Administrator) having understanding of the project for maintenance/administration of the system at field locations and end-user. First two categories will be the manpower with EDP specialisation.

15.2   Development of integrated systems in collaboration with all stake-holders with appropriate and system-based backward and forward linkages will be the norm in future and as such requirement of in-house development of stand-alone IT applications will be minimised. Development of such integrated systems will be based on a comprehensive process with a DPR and assessment of Software requirement and available capability.

15.3   For maintenance of the systems in future, suitable manpower will be required who will be trained on the system by the concerned service providers/developers. If it is an outsourced model initial handholding and maintenance as per industry norms will be the responsibility of the service provider. However, in such contracts for outsourcing, a suitable provision to this extent will be added that service provider will also train the in-house manpower in a reasonable period of time. With respect to in-house projects core

development team will assist in developing master trainers in other offices wherever that application is running, who in turn will maintain/administer the project in their offices.

15.4   Basic training on computers will continue to be at the respective RTCs on regular basis. RTCs are also required to look into their IT training calendar again. They may also organize specialized training in-house or through outsourced agencies on cyber security aspects and system administrator's role, if there is a considerable demand from Controllers' assigned to the RTCs. Further, specialised training on higher IT issues – networking, security, higher languages (Java etc.) – will be planned by IT Division of HQrs office in consultation with IT S&DC and carried out through outsourcing with specialist training institutions.

15.5   With implementation of more integrated and centralised systems, requirement of System Administrators will increase. System Administrator will be responsible for the overall management of the IT system (including its database, if any) for which he is assigned the task. He will ensure that integrity of the system and database is maintained and that unauthorised access is not allowed onto the system. Suitable training will be imparted either at RTCs or under the aegis of HQrs IT & S wing as mentioned in Para 14.4 above.

15.6   Transfer Policy and Incentives for the EDP personnel are to be in accordance with the requirements of the systems on which they are working.

Automation in RTCs

16.1   The basic training database in respect of employees will be part of project 'Tulip' (DAD Package) having fields such as Basic Academic qualification, training courses attended in the service, duration of the course, institution, location etc. This database will be used by all the stakeholders for futuristic planning regarding future training requirement of the employee, training modules/ curricula, etc.

16.2   RTCs / Training establishments may automate their activities to have system generated outputs in respect of the following (i) Training calendar(ii)Faculty database(iii)Hostel Management (iv) Cost of the course (v)Feedback, so that course wise, faculty wise, MIS can be generated (vi)Online Training Modules along with suitably indexed PPTs & Course content with content search facility (The documents to be uploaded with standardized metadata across all RTCs & other training institutes).

16.3   For the above, RTCs / training establishments will study the automation package developed by CDA (IT& SDC) which contains some of the above mentioned utilities and can be further refined in consultation with RTCs/ Training establishments including Training wing of HQrs office. The system can be implemented in RTC Bangalore on Pilot basis & get updated based on feedback / inputs in a time bound manner.

16.4   Further, for facility of distant lecturers by seniors / expert faculties within the department, in RTCs / training establishment, Video Conferencing facility will be provided in one class Room of each RTCs & at major centres of DAD.

EDP nomenclature to IT&S

17.   The department has evolved in its information technology systems development and usage and now the focus and thrust is on development of integrated systems which provide for on-line and real-time processing of data/information rather than the hitherto electronic data processing procedures. As such, the nomenclature of 'EDP' needs to be replaced with 'Information Technology and Systems'. Accordingly, EDP section should be called IT&S section as they now deal more with IT management and maintenance rather than data processing.

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