

3.4 IT Audit of Computerization in the Office of the Industries Commissioner

Highlights

Industries Commissioner introduced a web-based package as total solution provider meant for ensuring proper information flow leading to increased productivity and improvement in management control and monitoring. The package was also meant to eliminate redundancy and implement paper-less correspondence between offices. The system developed has major design deficiencies which has adverse effect on the integrity and reliability of information that has been stored and processed. Thus, different modules of the package have not been integrated rendering the entire exercise of development of the software as waste.

3.4.1 Introduction

Industries Commissioner (IC), under the Principal Secretary, Industries and Mines Department, is responsible for implementation of various programmes of the Government for acceleration of the industrial development in the State.

The Commissionerate has 11 main branches at the Head Office at Gandhinagar and 24 District Industries Centres (DICs) at the District Head Quarters.

The IC introduced a web-based package, 'Industries Commissionerate-Integrated Information Technology Solution (IC-IITS)' known as 'Total Solution Provider (TSP)' developed (April 2005) by CMC Ltd., Ahmedabad (CMC) and iNDEXTb, Gandhinagar (a Government of Gujarat undertaking). This was done with the objectives of enabling proper information flow resulting in augmentation of productivity; improving management control and monitoring, enhancing fast customer services through 'Total Workflow Automation', to implement inter-office paperless correspondence, elimination of redundant efforts at various desks, ensuring full accountability for the assigned work/duty and to ensure high security with full audit trails and assured transaction integrity.

The IC-IITS was developed at a cost of Rs.37.38 lakhs (Rs.33.24 lakh- CMC and Rs.4.14 lakh-iNDEXTb) on MS-SQL Server 2000 as database in back-end with ASP.NET in front-end. The operating system used is Windows 2000. All the DICs were connected through Gujarat State Wider Area Network (GSWAN). The total expenditure incurred during 2000-06 on IT Systems, including the Software development was Rs.2.76 crore.

3.4.2 System Acquisition and Implementation

The computerisation programme was implemented by the IC in Headquarters and connected with all the 24 DICs. There were 13 modules, of which two modules, viz. Master and Administration and Small Scale Industries registration and Industries Promotion (SSI-IP) were selected for detailed check. The system developed (2003-05) and put to use (2005-06) was checked at the office of the IC and six DICs⁷² during February-July 2006.

Audit observed that due to deficiencies in testing and implementation of the computerisation the main modules of the application had either inherent design deficiencies or did not follow the business rules of the organisation.

The deficiencies noticed in audit are detailed below:

3.4.2.1 Delay in development of IC-IITS

As per the conditions of the contract, development and implementation of IC-IITS was to be completed within 14 months from the date of signing the agreement. The agreement was signed with the CMC and iNDEXTb on 17 June 2003 and 19 June 2003 respectively and the iNDEXTb completed the work on 1 February 2005 and CMC on 31 May 2005. As such iNDEXTb completed the work with a delay of over five months and CMC had delayed completion for over nine months.

As per contractual conditions, if the Service Provider fails to deliver any or all of the service within the period specified in the contract, the IC shall deduct from the contract price as penalty at the rate of 0.5 *per cent* of the work contract price per week, subject to a maximum of 10 *per cent* of the contract price for the delay. However, IC had not invoked the above provision.

3.4.2.2 Data Migration

- After creation of Computer Cell, a database was prepared for Small Scale Industries (SSI) and Medium and Large Scale Industries (MLI) for management of the affairs. However, the database was not migrated to the newly developed IC-IITS, thereby adversely affecting monitoring of the units and achievement of stated objectives. Audit observed that since IC failed to plan the migration at the stage of URS, the Developer had not provided for it.
- **Tables with no records/data** The IC-IITS has 340 tables for the database; even after a year of its implementation, no data was found or entered in 125 (37 *per cent*) tables; in rest of the tables, it contained either 'test data' or 'incomplete data' with errors. As such the system was not implemented and planned benefits not achieved.
- **Non generation of documents through IC-IITS** After implementation of IC-IITS, all the branches of the IC were provided with necessary hardware and software; the system also provides for generation of

⁷² Ahmedabad, Banaskantha, Gandhinagar, Porbandar, Rajkot, Sabarkantha

required documents. However, the branches continued to generate documents in conventional methods of assigning the work to the typing pool. This was due to unreliable and incomplete information available in the database.

3.4.2.3 Integration of the Modules

During review, it was seen that all the Modules of the system were independent and integration of the Modules was not done; in absence of which statistics/reports, etc. were required to be re-entered. Thus, the very purpose of elimination of redundant efforts at various desks was defeated. The URS provided that industrial units applying to IC and DIC can gather information about the status of their applications through the web-based system. However, it was observed that this requirement does not exist in the system.

3.4.3 Design Deficiencies

Audit observed numerous design deficiencies in the three modules (SSI-IP, SSI, and Master & Administration) which were there as a result of inadequate user involvement in the system design stages and deficient testing processes before implementation of the system. The module wise deficiencies are given below :

3.4.3.1 Deficiencies in Small Scale Industries Module

Review of the Small Scale Industries portion of the DIC module revealed the following –

- ✎ In the table for ‘Permanent SSI Registration’, the fields for ‘Investment in various fixed assets’ were provided; but no provision was made for the date of investment, which is a vital element for grant of any type of benefit to the Industrial Unit. In absence of these dates, the eligibility of any benefit on the investment can not be determined;
- ✎ Though the data provided to audit was for the period upto the end of March 2006, the inward dates noticed were 29.12.2006, 29.09.2006, 24.06.2006 and 02.05.2006. There were cases where date of commencement of production was blank (10,616 records) and there was duplication in permanent SSI Registration number (2,497 records). There was no consistency in the permanent SSI number as they were found in three, four, five and nine digits; there were eight missing number in the field ‘Permanent SSI Registration Number’. Under the field ‘Provisional Registration Number’, instead of actual number, data found was ‘Y’ in many cases;
- ✎ There were 1,354 records in the table for ‘Provisional SSI Registration’, out of which only in 37 cases, provisional SSI Numbers were given. In the field for ‘Provisional SSI Application Number’, missing numbers were found. There were cases of repetition in file number, name of applicant, address, city and provisional SSI Numbers.

There were also records, wherein the total of investment in various fixed assets did not tally;

- Provision was not made in the table for provisional SSI registration number for the applications rejected;
- There were 13,254 records in the table for 'Permanent SSI Registration', wherein 301 records were with 'zero' inward number. In two cases, date was mentioned as '06/04/200' and '01296' and in 65 records duplication in application number was noticed.

These deficiencies rendered the module to only limited usefulness and could have been rectified, had the module been properly tested before installation.

3.4.3.2 Deficiencies in Small Scale Industries registration and Industries Promotion Module (SSI-IP)

There was no provision for capturing essential details like date of inspection, name and designation of the inspecting officer and details of the inspection etc. in the absence of which the report on inspection carried out, arrears of inspection, the efficiency of the inspectors, authority of the inspection, etc. can not be generated. In the table for recording the 'details regarding interpretation of SSI policy', a field for 'Government Resolution (GR) No.' was provided; but the fields, effective date of and the authority issuing the GR were not provided without that the reference in case of need remains incomplete. In the field to record cumulative expenditure, provision was not made to record monthly expenditure; in absence of which, correctness of the cumulative expenditure can not be ascertained. Similarly, the field 'Institute Serial Number' in the Table for Recording Grants Allotment Details to the institutions carrying out promotional activities was linked with Institute Master Table without any such field.

Thus, due to incomplete and inaccurate data in the module; no meaningful report or information can be generated from it.

3.4.3.3 Master and Administration module

Master data, which is the key data of an organisation, is created for use by various tables of all the modules for references. Scrutiny of Master Tables revealed the following major deficiencies in system and documentation:

- The Master tables were not linked either due to non-existence of one of the two required master tables or due to wrong definitions of data types for common fields.
- Address was not bifurcated to incorporate important information separately like city, telephone number, PIN code, E-mail, fax number, etc. Due to this deficiency, the specific information related to address of EPC cannot be generated.

- In Master Taluka Table, entries were made in English against specification for data in Gujarati; the Gujarati entries made were illegible due to font error;
- In Master Branch Table, the Branch Codes allotted were not serially numbered; the branch names in the table were repeated;
- Duplicate entries were found in Master Table for Commodity Product in 49 records; in 15 cases, the commodity names were entered in one alphabet like K, L, P, etc.;
- In Master User Table, duplicate user names were noticed; in four cases only 'Mr.' was entered instead of full user name;
- In Code Master Table duplication in code value and code description was found in 93 cases;
- In 85 out of 139 records, the upload date was shown as 01.01.1900; in 24 cases out of 139 records checked, no data entry was made in the field "User File Name" in Master File Table.

Thus, deficiencies in the Master Table had adverse effect both on the integrity and the reliability of the data stored in the system. As such, the information generated by such a system would not be fully reliable.

3.4.4. Conclusion

Thus, even after spending Rs.2.76 crore on development of an integrated software, the organisation of the Industries Commissioner is left with a system which has major design deficiencies adversely affecting the integrity and reliability of information stored and processed therein. Moreover, non-integration of different modules defeats the very purpose of developing such a software. Running the system in the present form poses a risk to the decision making process based on the information generated by the system.

3.4.5 Recommendations

- The organisation needs to immediately rectify the deficiencies brought out by audit and for further computerisation needs to have a sound acquisition and implementation strategy before embarking on such projects.
- The database prepared earlier in respect of SSI and MLI may be migrated to IC-IITS and all the modules of IC-IITS needs to be integrated expeditiously.

