



E-Governance Initiatives in Government Departments

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ABSTRACT

The advent of IT has made the Government vision clear – computerize a to z of its functioning, thereby making the working transparent and paperless in phased manner. However it appears that I.T. industry is not focused on the issues involved in the process while the Govt. agencies do not have the expertise in guiding & integrating the efforts so that duplicity in efforts for data warehousing are avoided and data sharing could be made easy, simple and user friendly to all concerned through a click of mouse. The possible reason could be the rivalry amongst different key players and zealous marketing by their executives, each trying to make his product more attractive often resulting in bulkier, complicated, costlier and myopic packages. In addition, the lack of domain expertise in the IT industry, the hesitation amongst the existing software experts in improving their exposure to the working and requirements of different government departments and the reluctance to hire any domain experts of the specific professional line for obtaining help in conceiving, designing and development of the application software could be additional reasons for the often ineffective deliverance of the objectives by a number of these even reputed firms for software which are being developed at present. Case studies of various Government Departments could be very interesting in this context. There are examples when six years elapsed, still the application software developed by premier multinational software company is giving hiccups to the departmental users, as most of them treat the software as a liability rather than help in their work.

Keyword: E-governance, Transparency

1. Ground Realities

System Study & SRS was not completed with perfections and logics of data entry screens were not designed in line with prevailing formats of data available. Data entry & editing functions could not be made user friendly. Software was constructed as if there was some urgency to complete the task without even conceiving it and therefore it became so difficult to use by end users. Firm miserably failed in reworking the software to suit available data formats and flow of information's. Final acceptance of this application software was granted module wise by the key sectional head of the department, considering that it may deliver the desired results when integrated version of the software shall roll out, though the software was

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not providing even 10% of desired functionalities. The Nodal Officers (I/c of various functions) were shown functionalities of various modules by the firm, and they gave few remarks which were incorporated by the firm and this stage was considered acceptance of the module by the firm, knowing fully well that departmental officers are not experts of the software logistics part to be deployed to make the software user friendly. Few major changes and nice to have features acceptable to firm were not incorporated and revised schedule of completion was not submitted by the firm. Consultant wrongly advised the department to procure many 50 servers, where as in the 1st phase only one server was sufficient and for other locations for testing purposes a PC also could have worked as a server. With the result these servers in a lot have gone obsolete in a lot.

Department paid a handsome amount to the consultant for system studies for computerization project but there is no set procedure in any government department to get cross examined the quality of work done by a consultant. Services of firm towards hardware warranty, guaranty has been poor throughout and workmanship in installing and laying the networking equipments has been sub standard as this work was sublet by the principal firm to small contractors. Firm did not provide even one full time engineer on full time basis for hardware and software support.

2. Why Computerization Project Delayed & Failed?

2.1 - Due to support not provided by Firm

- Data Entry Screens provided in application software totally mismatched with available form of data.
- Taking out reports output – to check the data being fed, in simple permutations and combinations are not inbuilt in the application software.
- Local unit of firm is not willing to follow the sprits of turnkey concept.
- Firm could not proved the online functionality of even a single activity of any module at even one location with certain cut off date level of data entries, however the firm claims that application software delivered by them is world class and the problem lies with the department as it could not provide data to feed into it.
- Firm deliberately not provided the application software at all the specified locations in spite of repeated requests as the firm wanted to be paid first, whereas department wanted to prove the application software at least on one location.
- Firm has no domain experience of developing software of this kind and the firm tried to do it with fresh engineering graduates?
- Firm is claiming that software is ready in all respect whereas the source codes of the software have not been free zed and changes in .dll files etc are still taking place in bulk on day-to-day basis.
- Team of software engineers deployed is raw and no domain expert is hired to properly guide them.
- Firm under AMC / Warranty support, did not consider it mandatory to provide anti virus support. HP makes PC's & Servers were to be provided with antivirus as per tender documents but they manipulated it and put the blame on the department.
- Firm has not stationed a permanent full time software and hardware engineer for trouble shooting and firms engineers does not carry with them required set of standard software/ drivers for printer / modem & other accessories for reinstallations whenever required.
- Firm is not providing spare hardware locks for ISM Hindi bilingual software and this bilingual software is not working on new machines on technical reasons as it does not support XP operating system.
- Preventive maintenance has never been planned by the firm resulting in damages of heads of our various DMP's. We have never got getting monthly/quarterly or half yearly or even yearly working status of hardware's in spite of repeated requests since last over two years.

2.2 Due to support not provided by Department

- End Users and Nodal Officers were not taking the ownership and were not willing to fill the altogether new and tedious data formats for data entries in the various modules developed by firm.
- Team of data entry operators deployed by the department is not capable to correctly enter the data. This work needs to be offloaded to firm who are developing the application software so that there is absolutely no shifting of responsibility. Alternatively M/S NIC or any agency to whom NIC could take responsibility, could have been offloaded the 1st five yrs data entry and project support role and they in turn could provide one programmer level input over 10 operators or one programmer per location. This could have put some technical pressure on software developing firm to improve the design, as the department was not able to provide the required in house technical input.
- Computers procured under computerization project are not used exclusively for data input in the modules.
- Dept. needs to deploy the best of its manpower (Operator, Clerk, and Officer) at each location to overcome the threshold momentum.
- Each officer was not provided a computer and training to use it. For stenos/clerks computer typing skills @ 30 words /minute could be made mandatory for their annual increments.

3. Vision Statement

3.1 Needs to be followed by Department

- Each EE level officer be given a mandatory task of filling & updating hard copy of PMB (Project Management Book) duly numbered issued by next higher officer for each and every project entrusted to him. He shall arrange to offload the responsibility of entering daily & monthly progress data into it. This is to ensure data security as in computerized data base risk of data being corrupted or getting replaced cant not be fully ruled out, as in original PMB, standing instructions shall be there not to rub or put white ink or over write the data, but to simply cut it with very thin line so that earlier entries remain visible. Further provision shall also be there to maintain the following ten page online web driven PMB so that senior officers can view the physical & financial progress, cost and time overruns, auto generated pictorials, incumbencies of officers on the project, rates & quantities in technically sanctioned estimate vis-à-vis actual being executed etc.
- Each divisional level officer be given a monthly task that he shall bring at least one of its functionality (pay generation, physical / financial progress reporting, monthly accounts etc) online with current cut off date level of data entries in the software module pertaining to his section.
- Each zonal level officer may adhere the practice that he shall ensure at least one of its functionality (pay generation, physical / financial progress reporting, monthly accounts etc) online with current level of data entries in the software module pertaining to his section. e.g. zonal / divisional level officer may give a cut off date down the line that budget allotments letters shall not be signed unless they are generated through concerned software module and likewise Finance Controller must not release CCL letters unless they are generated through application software and with certain cut off date Staff Officer should transfer or promote at least class I officer with incumbency and ACR data provided through the concerned module. Like wise divisional officer I/C of complaints court cases may use the software module in the phased (report output wise target) manner.
- Department may provide at least 1% of its budget in computerization and all the expenses of the department in the head of computerization should be centrally monitored. Any order placed by any wing of the department must have prior concurrence with central computer cell of the department.
- Permanent firmly grouted surveying pillars can be provided along side of the road and existing

road surface levels be recorded by a total station and made part of road inventory in the sql database. Alternatively the same exercise could be better done with global positing system (GPS) through the satellite as the road side surveying pegs can not be easily maintained as permanent structures as due to chances of their settling down into earth may disturb the levels taken.

- REI-Heads a software developed by Research Engineers Inc of USA and available in India may be used to feed the road levels and automatically calculate the existing road undulations quantities or quantum of earth work or GSB / WMM / Bituminous work done before processing the payments this software is also capable for designing super elevations and rotaries / crossings.
- Autocad2007 & StaddPro2007 could be extensively used for designing various structures and if this exercise is done through consultants than department should keep a clause in the agreement of getting its soft copies and providing a mandatory training session to give the departmental officers an opportunity to learn the technique.
- Primavera project management software / MS Project2007 training & certification could be made mandatory for grating a selection scale to any engineer in the department so that quality of departmental engineers be enhanced and cost / time over runs in the construction projects may be checked automatically because of inbuilt strength of project management software.
- eProcurement/e-Tendering features needs to be inbuilt in departmental website. Also “New Board” or flash your messages, e-Upload or e-Download any Performa or Report from any location protected with an user pass word is the need of the hour.
- At least 10% of each cadre could be gradually converted into qualified I.T. literate cadre by keeping a special condition in recruitment polices that retirement / future vacancies shall be filled with this a backlog quota.
- Turn Key aspect is to be made acceptable to the firm i.e. software developing agency should be entrusted the mandatory requirement that they need to honestly full fill entire masters data of the department (one time fixed data) and transaction (the day to day variable data) entries job for proving the respective functionalities up to current cut off date level of operation and than carrying it forward for three months continuously ONLINE on at least one location.

3.2 Needs not be overlooked as central approach by Software Firm.

- Different platforms e,g Oracle, Sql Server etc are being used by different software agencies for data base creations for different government departments. The operating system and database platform is needed to be the same so that database of one department could easily speak/communicate or merged with another database. I.T. development works in isolation shall lead to the same tedious file system from which we just can not retrieve any information by click of mouse.
- Table structuring and coding for key common information’s like State, Commissionaires, District, Tehsils, Blocks, village, habitations, MLA/MP constituencies, Roads, Rivers, Canals, Drains, Important Locations/Land Marks, Emp-Id, Designations, Department, Schemes, Works_Ids etc are being designed with entirely non integrate able manner by various software agencies.
- There is duplicity of efforts as work done by one government agency and even one wing of a department is not in sharable form for the other department or other wing of the same department.
- A lot of money could be saved in digitization of maps, road, buildings, rivers, canals, Important Locations/Land Marks etc if centralized vision is applied among software developers and government departments, if work done through one agency are shared by other agency through coordination among government departments.
- NIC who is conceived and operating with this very purpose is needed to be made a nodal agency from where any of the government department should be in a position to seek advice and get the soft copies of quantum of work already done to expedite the very objective of e-Governance.

3.3 What has been overlooked or not being followed as central approach by various engineering and management institute?

- Study of MS Project and then Primavera project management software is to be made a compulsory subject at graduate and postgraduate level.
- Study of at least one statistical software's e.g. SPSS etc which help forecast future trends with sample periodic data in traffic populations/education/marketing/price index etc is to be made a compulsory subject at graduate and postgraduate level.
- Study of one data base platform i.e. Oracle/MS Sql etc with exposure of Visual Basic to provide the basic understanding of back end and front end in any application software, is to be made a compulsory subject at graduate and postgraduate level.

Above exposure as above may drastically help deliver far better results when a young engineering or management postgraduate joins any organization from the day one.

4. Key Recommendations for Government Departments

- Department needs to Appoint Steering Committee for computerization consisting:
Level-1
 - Director N.I.C
 - Zonal Head of Firm who has been entrusted the application software job.
 - GM of Firm entrusted with data entry with system administration support etc.
 - Project Coordinator Computerization Project of the Department (needs to be a computer literate)Level-2
 - Head Of Department
 - Prof & Head CSE Dept IITK
- Computerization Project must always be awarded on TURN KEY BASIS to a single firm and this spirit in totality needs to be followed for successful implementation.
- Consultant's recommendations must be got cross-examined by NIC or concerned government agency where the recommendations of similar nature have been successfully implemented in the recent past on all India basis.
- Appointment of 'Change Savvy' dedicated computerization core team consisting: -
 - Zonal / Divisional Officer.
 - One independent PC set with each class one officer in 1st Phase and thereafter one independent PC set with each officer in 2nd Phase.
 - One Data Base Administrator/Programmer with one Computer Operator with each Superintending Engineer and above in 1st Phase and thereafter One Data Base Computer Operator with each Assistant Engineer and above for 2nd Phase.
 - Data Base Administrator/Programmer and Computer Operator should be hired from reputed organization like NIC or from any reputed firm to which NIC can take responsibility, with the condition that data feeding, correctness, security and removing snags & bugs in software shall be their responsibility.
 - A five-member team (class one officer, class two officer, technical diploma holder, section officer, computer operator) of the concerned office should be constituted and Superintending level officers be made accountable for monthly progress.
- For stenographers/clerks computer typing skills @ 30 words/minute could be made mandatory for their annual increments.
- For officers computer literacy up to DOACC "O" level or one year working on computers could be made mandatory prior to their foreign training, field postings or time scale or promotion.

- Availability of at least 1% of Budget for Computerization. (can be funded from world bank).
- At least 10% of each cadre could be gradually converted into qualified I.T. literate cadre by keeping a special condition in future recruitment policies that retirement/ employee's deaths resulting vacancies be filled with this backlog in mind.
- Immediate enhancement of static website to dynamic web portal. Application Software needs to be web enabled in totality.
- All the consultancy Study Reports, Outputs, DPR and SRS must be submitted to department in soft copies as general trend of accepting only hard copies is not in the interest of the department. Also presentations on final contents to seek comments from various stakeholders could be arranged before accepting the recommendations.
- All the executives keep their data in a digitized "Project Management Book" from which any update could be merged into departmental database and vice versa.

5. Key Recommendations for Software Industry

- Appointment of Steering Committee for computerization under the umbrella of NIC for each government department must be acceptable to them.
- I.T. Consultants must agree that Computerization Project be awarded on TURN KEY BASIS and this spirit in totality be followed till successful implementation.
- Software Developers must appoint a domain expert to execute the computerization project.
- Operating System and Platform for database etc and Table structuring and coding for key common information's like State, Commissionaires, District, Tehsils, Blocks, village, habitations, MLA/MP constituencies, Roads, Rivers, Canals, Drains, Important Locations/Land Marks, Emp-Id, Designations, Department, Schemes, Works_Ids etc could be coordinated by the NIC on all India Basis.
- Software Engineers must never try to cut short the system study or SRS phase as this milestone is key to ultimate satisfaction to end user, successful implementation & usefulness.
- Software Engineers must always be open & receptive for various suggestions & feedback given by the client during construction & even during acceptance and implementation phase.
- Software Developers should not shift the responsibility on client and must accept the fact that in a government department, officers are either over busy or have insufficient drive for work, therefore software engineers deployed by the firm must have clear instruction that during pilot initial data entry phase, for proving online current level functionalities at minimum one location, they must follow in totality the Turn Key Theory.
- One software engineer and one hardware engineer must always be available at the disposal of the department on full time basis.
- Firm executing turn key computerization project must ensure that anti virus support, missing hardware locks for standard software's like ISM hindi fonts, and immediate replacement of even out of warranty, worn out items is part of their job and in now way out of scope of their agreement.
- Key executives of the concerned reputed I.T. Firm must not offload the entire responsibility down the line and must periodically study the features being provided to client as it has been felt that even simple logistics are not tested and statement are given by key executives of these firms that software has the world class standards.
- Time study aspects to save time in switching from one screen to another screen while entering data should not be overlooked.
- Taking out reports output -to check the data in desired permutations and combinations must be inbuilt in the application software.

6. Concluding Remarks

Corruption prevailing in the our set up needs to be rooted out in totality and it can be very easily done by bringing transparency through e-Governance i.e. data bank driven e-Administration. We must believe in the conviction that if any project is failing then its principle cause is the lack of innovative & creative vision in top management. Now with use of latest data driven customized software/I.T. tools it is so easy to conceive or get designed a management information system which could provide complete transparency through e-GOVERNESS. This in turn shall provide timely alarms to check not only pilferages but expected time and cost over runs in advance vis-à-vis this type of arrangement shall keep us vigilant over the lapses in the quality control measures. e-Governance can provide a top down approach of accountability i.e. no departmental head must excuse to say, that he was not knowing what is happening down the lines. e-Governance can help build a system where a good employee do not have to depend on the mercy of his boss, as results generated through computerized database can prove his worth without any canvassing, and in turn the bad worker shall not be able to hide his misdeeds by hook or crook. However we are still not even half way of our efforts, as both the key executives of government department and that of I.T. industry are not sincerely integrating & sharing the work done so far. This is the need of hour that we learn from our past bad experiences, and put before I.T literate people such case studies so that we could save time and integrate the efforts for common objectives.

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