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Issues, Challenges and Opportunities in Reformation of Corporate I.T. Departments

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Abstract:
Any reformation gives Businesses an opportunity to reorganize of the services, units and processes of their functions. Reformation of IT department includes restructuring of infrastructure means rethink about every process of the business. However initially few questions need to be answered about governance, communication, already available infrastructure, already available I.T. Services, requirement of I.T. services, availability of I.T. services in the area specific (geographical and technical), pricing, manpower and few more. Every business owner would want cost-cutting or proper use of the money; however, in addition to cost cutting, businesses should successfully navigate the change process by focusing on transparency and efficient & instant information. This paper expresses need assessment of reformation of IT departments, issues & challenges in reformation of IT, opportunities, hurdles and an efficient change process, which enhance productivity and reduce the cost of functions.

Keywords: Reformation, IT Department, Corporate, IT Infrastructure, Cloud Computing

1. Introduction

Reformation of I.T. department is directly proportionate with transformation of the business processes. There are several common scenarios which often lead to reformation of IT departments. Latest technologies like Cloud, big data, mobile Apps and analytics are enhancing and making more proficient businesses. For example, the human resource department may require a cell-phone based application that gather, automatically analyze and list the acceptable resumes of job applicants, which is linked with various other applications and web.[1] There are, of course, many other scenarios that can lead to reformation of IT infrastructure. Common goals can generate more revenue and cost-cutting.

Reformation of IT tenders enormous chances for the organizations and the businesses; however, it may need massive angst.[2] The management has to think from identifying opportunities and capabilities to well versed IT staff, pressures of faster processing, day-to-day uninterrupted functions, no diminishing of critical processes, pricing, change management, changes in supply chain, trained users, act on opportunities, future of organization and adopted new services of I.T., etc. One of the major issues for reformation of IT is to make available instant and effective support to the users. For trained end-users, reformation would be stress-less.[3] Actually, the I.T. team should focus on snatching new opportunities, which people should be involved in the process and who shouldn't, the change processes, development of strategy, development of various criteria, development and evaluating design alternatives tests, case studies and value of communication.[4]

2. Challenges and Opportunities

There are number of key issues which can be considered while reformation process of I.T. e.g., developing a vision that unites projects, Identifying outcomes, ability to redefine roles, changing basic organizational practices to better meet the needs, etc.[5] The team should not assume that most businesses are actively involved in reformation, but if reformation can be defined as "activities that change fundamental assumptions, practices and relationships, both within the organization, and between the organization and the outside world" and could become and essential routine activity, then many of the hurdles can be successfully removed.

Providing a single structure for many levels of interconnection, from those among devices to those among businesses, is also a key issue. Requirement is the numerous architectures for supporting systems functions, faster and secured flow of information, controlling on processes and management support systems. The user interface should be easy to use, correct and robust.[6]

Standards support is required to pass the information between the various entities of the information system. For example, workers in an industry may be working extremely tough on wrongly defined set of jobs or doing not required or redundant tasks. Mostly they will finish such tasks inefficiently. Proper use of Information technology would help identifying such tasks. Using properly I.T. process is one of the key issues.[7]

Within an industry, departments like designing, production, accounts, sales & marketing, HR, and distribution are integrated with each other. Ease of managing this integrity and physical closeness are major needs of the company to avoid gap in interaction, knowledge gathering, data processing, and identifying project status through formal and informal meetings and assessing products' status.[8]

Other challenges are amalgamation of modeling and prototyping frameworks and functions into database.[9] The query language for data manipulation should hold the fundamental grammar and semantics that describe products and processes; in other words, depiction tongue of

the products and processes should be a sublanguage of the DML. However, current data manipulation languages were developed to handle accounts and other data that can easily be cast into a RDBMS (Relational Database) model. [10]

Maintaining data reliability may be distributed. In the phase of system designing, the database should be designed not only as the key storage area of existing work flow but also as the most important medium of passing messages among the various participants, which are geographically distributed.[11]

Deciding tools, which would support the process of system engineering, should be latest, faster, IT team friendly and robust. With significant tools, software development lifecycle can have stable backbone and best methodologies.

Programming logics, that allow business process in a computer system, should be capable of writing better methods and interfaces of previous IT systems to enable domain-specific software specification. Simplification in designs, operation, and future maintenance will be desired of management. However, the logics should have power of predicting future growth and hence scalable. A good research is needed in optimization of system and understanding system operations.

Systems analysis tools for various activities like data-driven, responsibility-driven, and activity-based methodologies are required for comparing types of analyses, superior to other tools, having adequate techniques, etc. need to be considered before starting system design.

The capability to reusing software application, system artifact and final results from linked study in the development of novel software application should also think about previous investments in knowledge, efforts, infrastructure and time. [12]

Researches, which are linked with scientific tools for the work which are for sustaining the technology, included User Interfaces, Business Logics and computer hardware should be harmonized by examining relevant aspects of research, manpower performance, tutoring and teaching prerequisites, and various analogous issues, to make sure that best possible tools are available and that they can be implemented easily.

3. Basic Architecture of the IT Departments

Almost all businesses have the IT department, which is responsible for every IT related task. Functioning of most of the IT departments, may be distributed outside the department or campus or may be within campus in a single office. Reformation of the IT would provide a chance to consider various units of the organizations and also services provided both within and outer side of the IT departments to decide how they provide better services in the organization through consolidation or allotment.[13]

Following questions should be considered by the administration of the corporate thinking for IT enhancement or reformation:

- Is IT department functional responsibilities similar to those of your peers?
- How does IT staff members compare with peers of other departments?
- If your budget varies from the norm, what is the reason for this?
- Are all IT functions properly funded?
- Are IT functions paying attention on fund generation and/or better provisions of service?

We need to redefine roles of Chief Information Officer and the IT. The Chief Information Officer's situation in the corporate articulates worth of IT department and purpose to the corporate business.[14] In the IT domain, the authorized person to whom the Chief Information Officer reports is professed as a indication of IT' srationale within a business.

At the time of reformation, principally in the circumstances of broadalter, existing IT department must make sure dexterousreply to their technological needs. Using IT governance to ensure suitable engagement altitudes may facilitate make sure that all stakeholders engage with IT decision making and believe authorized to allocate IT resources to attend to their requirements.

4. Role of Staff Members of the Industry and End-User hopes

End-users, assigned to convey about tasks, act as governmental border spanners, interpreting and conveying organizational activities to the IT team. Such people should educate the user community about tactical knowledge concerns, must capable to share information about any disaster and disruption in its services, and in form to the end users about forthcoming schemes, agendas, and proposals. They have an understanding of that managers want a reliable network and efficient data retrieval capabilities to support effective business process management and data-driven decision making.[15]

End-users expect the application developed should provide all services reliable, flexible, and reduced price. In such a context, the software application must have a common understanding of self-value, responsible and should engage in IT decision making.[16]

Communications strategies including development and maintenance of e-mails, lists of customers and vendors, notices, news, information on websites and the policy of digital marketing with attaining responses from the customers. Inter-organizational communication can become simpler. They may use technology, which is inexpensive, dominant, movable, and inter-connected.

5. The Cloud Computing

Increased use of public, private and hybrid clouds, now-a-days impact one very technological force greatly on the IT department's optimal architecture.[17]

Services related to public cloud provide user friendly environment for technological interfaces to all of its stakeholders such as social media websites & mobile apps, file storage cloud space and efficiency tools without interacting with salespersons, IT experts and Users. The departments can obtain cloud services at small or no cost. Such cloud-based services can be treated as a platform and machine atheist. These services can be obtained from almost any cellular and computer (tablet) device anywhere Internet is accessible.[18]

The services which are related to private clouds are on-demand, and user friendly for any professional software applications and tools. Applying public and private clouds to offer various services e.g., virtualization, systems software, infrastructure based, platform based are certainly better which redefining IT departments.

6. Conclusion

Today's IT departments must be nimble, should engage in the decision making, can make straight services according to company's priorities, should communicate efficiently and respond to crisis. The team members should have an understanding and assessing capabilities the present context of change process from its initial point till effective implementation. Clearness, intelligence, effective communication, and inclusive behaviour are also vital components of unbeaten change process. Regardless of leading internally or by an outsider expert, performed with faster or excruciatingly slow, businesses must engage positively in reformation and restructuring IT infrastructure.

REFERENCES

[1] Bhatnag, Vivek:Study of Software Development Using Software Re-Engineering; International Journal of Engineering Trends and Applications (I J ETA)- 3-2 (2016)
[2] Mohamed,M.,Romdhani M: A new approach and tool for model refactoring, 1 (4), 117-122, (2014).
[3] Van Kempen M., Chaudron M., Kourie D., Boake A., towards proving preservation, Journal of IT developments 2(3), (2017)
[4] Eclipse, Eclipse Homepage. Available: https://www.eclipse.org/, 2016 (accessed 2019/01/21).
[5] Checkstyle.https://checkstyle.sourceforge.net/, 2016(accessed 2019/01/23).
[6] Nilesh Jadav; "How to Reverse Engineer Using Advanced Apk Tool"; 2017/03/08.
[7] Jaswinder Singh; Identification of requirements of software reengineering for JAVA projects, Proceedings of IEEE International Conference on Computing, Communication and Automation; 2017; pp 931-934;
[8] James. J. Mulcahy; "Reengineering autonomic components in legacy software systems: A case study"; 2017 Annual IEEE International Systems Conference (SysCon); Pages: 1-7; IEEE Conferences
[9] iPlasma. https://loose.upt.ro/reengineering/research/iplasma, 2016 (accessed 12 December 2018).
[10] Arcelli, F.; Tosi, C.; Zanoni, M.; Maggioni, S.: "The MARPLE project: A tool for design pattern detection and software architecture reconstruction." In: 1st International Workshop on Academic Software Development Tools and Techniques (WASDeTT-1) (2008) Google Scholar
[11] Ghulam R., Zeeshan A.: A Lightweight Approach for Detection of Code Smells, Arabian Journal for Science and Engineering, February 2017, Volume 42, Issue 2, pp. 483-506|
[12] Décor. https://www.ptidej.net/download, 2016 (accessed 2 January 2019).
[13] Cathreen G., Dr. M.Chidambaram , "EESRM: An Effective Approach to Improve the Performance of Software Re-Engineering" ISSN 0973-4562 Volume 13, Number 6 (2018) pp. 3648-3654
[14] Wallace K.R.," Safe and secure: re-engineering a software process set for the challenges of the 21st century" 9th IET International Conference on System Safety and Cyber Security (2014), 2014 page 5.2.2
[15] Aria M.; "Awareness Driven Software Applications' Reengineering"; IEEE 25th International Requirements Engineering Conference (RE); 2017; Pages 550-555;
[16] Bernhard D.; "Reengineering an industrial HMI: Approach, objectives, and challenges"; 25th International Conference on Software Analysis, Evolution and Reengineering (SANER); 2018; Pages 547-551
[17] Grace P.; "A modeling framework for business process reengineering using big data analytics and a goal-orientation" IEEE 2017 11th International Conference on Research Challenges in Information Science (RCIS); PP: 21-32
[18] OlexandrK.; "Optimization of software architecture selection for the system under design and reengineering" in the proceedings ofIEEE 14th International Conference on Advanced Trends in Radio electronics, Telecommunications and Computer Engineering (TCSET); 2018; PP: 1245-1248