CRITICAL SUCCESS FACTORS OF IT ENABLED ORGANIZATIONAL CHANGE IN HIERARCHICAL GOVERNMENT ORGANIZATIONS: LIAS Case

Bahadir K. Akcam[1], Aydin Nusret Guclu [2], Ahmet Guler [3,] Hakan Hekim[4] and Gokhan Ogunc[5]

[1] Assistant Professor, Western New England University, College of Business, Springfield, Massachusetts, USA
E-mail: bahadir.akcam@wne.edu

[2] *Assistant Professor, Middle East Technical University, Informatics Institute, Ankara, Turkey, Toros University, Electrical-Electronics Engineering Department, Mersin, Turkey*
E-mail: guclu@ii.metu.edu.tr

[3] *Police Superintendent, Turkish National Police, Department of Education & Training Ankara, Turkey*
E-mail: ahmguler@egm.gov.tr

[4] *Program Manager, Diyarbakir Police Department, Community Supported Policing Unit, Diyarbakir, Turkey*
E-mail: hhekim@egm.gov.tr

[5] *Forensic Ballistics Expert, Turkish National Police, Department of Criminal Police Laboratories Ankara, Turkey. E-mail: gokhan.ogunc@kpl.gov.tr*

ABSTRACT

The purpose of this article is to describe critical success factors of an information technology (IT) enabled organizational change initiative in a hierarchical government organization in Turkey. In a longitudinal field study setting, participatory action research methodology was adopted to understand the dynamics of the change initiative in the organization. Authors participated in the various stages of the change process between 1998 and 2004. Government agencies in Turkey in a growing economy have certain characteristics that should be considered in an IT enabled organizational change project. This article discusses these characteristics based on the research case focusing on major organizational problems and strengths, critical success factors and organizational change results.

Keywords: *IT Enabled Organizational Change, Hierarchical Organizations, IT Project Management*

1.   INTRODUCTION

Organizations have been seeking complex changes either supported or enabled by IT since the early days of IT use. Technology by itself does not deliver desired organizational change results without any changes in organizational culture, structure or processes (Benjamin & Levinson, 1993). When the organizational culture, structure and processes have distinct characteristics like the ones in government, IT enabled organizational change dynamics have also different critical success factors.

The purpose of this article is to describe critical success factors of an information technology (IT) enabled change initiative in a hierarchical government organization in Turkey. In a longitudinal field study setting, participatory action research was adopted to understand the dynamics of an IT enabled organizational change initiative in the organization. Authors participated in the various stages of the change process between 1998 and 2004.

A project team consisted of organizational change proponents used a workflow management system called LIAS (Laboratory Workflow Management System, in Turkish) to change organizational practices to improve effectiveness and efficiency in the organization. This article reports the lessons learned from this initiatives after four successive cycles of attempts to transform the organization.

2.　LITERATURE REVIEW

Our literature review focused on two major issues; (1) characteristics of IT enabled organizational change and (2) critical success factors.

2.1.　Characteristics of IT Enabled Organizational Change

IT enabled organizational change is different than general change processes (Benjamin & Levinson, 1993) and has its own characteristics. These characteristics are opportunity for radical change, process change, organization-wide change, knowledge and power shift, and new skill set.

Opportunity for Radical Change: Revolutionary power of IT has been recognized since the early days of IT use in organizations (Zuboff, 1988). IT disrupts the organizational structures and enables dramatically different organizational processes by making the data accessible by all levels of organization (Benjamin & Levinson, 1993). These opportunities started new radical organizational change initiatives such as business process reengineering (BPR) and Business Process Innovation (BPI). Redesigning business processes with the help of IT was the focus of these initiatives (Davenport & Short, 1990; Hammer, 1990). While many successful results were reported, an overwhelmingly high failure rate around 70% (Hammer & Champy, 1993) led the serious discussions of limitations of BPR and radical change capability of IT.

Process Change: IT enabled organizational change initiatives eliminate, change or empower tasks within organizational processes based on the newly designed information flow. Changes in organizational processes trigger changes in organization structure, strategy, and people (Kettinger, Teng, & Guha, 1997).

Organization-wide Change: Many organizations have functional structure where processes are being managed within functional departments. Functional organization design brings a lot of limitations in information sharing (Keegan, 1974). Redesigning business processes based on information flow requires significant changes in functional organizational structures (Benjamin & Levinson, 1993).

Knowledge and Power Shift: Organizations with limited use of IT benefit from IT enabled organizational changes by replacing their structured and repetitive tasks with IT applications. This change helps organizations to improve task performance by redirecting important time and energy from knowledge workers. This change generates shifts in knowledge and power in organizations with the redefinition of organizational roles (Foster & Flynn, 1984).

Need for a New Skill Set: Introduction of IT affects the skills and competencies of employees (Markus & Robey, 1988). New organizational roles come with new skill set requirements. The change in organizational role is not limited to administrative staff whose structured and repetitive tasks can be replaced with IT. Knowledge workers with unique expertise, experience and decision making capability focus on their core capabilities and deliver more innovative results (Benjamin & Levinson, 1993).

2.2.　Critical Success Factors

Organizational change literature identified several critical success factors in IT enabled organizational change initiatives. These factors are cultural climate, management support, stakeholder commitment, champions, systematic process for change, energy level for change and size of the change effort.

Cultural Climate: Organizational and country specific cultural climate influences IT-enabled organizational change projects (M. G. Martinsons, Davison, & Martinsons, 2009). Individualism, self-reliance, willingness to accept risk and propensity for change were characteristics of American business that reengineering initiatives took advantage of them (Hammer & Champy, 1993). Martinsons et al. (2009) concludes that IT-enabled organizational change projects should fit the implementation culture in order to be successful.

Management Support: While organizational change is everybody's responsibility in an organization (Markus & Benjamin, 1997), management support and leadership have been acknowledged as one of the most critical success factors in the literature (Benjamin & Levinson, 1993; Gibson, 2004). Executive support has been identified as the most important success factor in IT projects (The Standish Group International, Inc., 2001).

Stakeholder commitment: IT projects can include many stakeholders including end users, clients, managers, and contractors. Project stakeholders play a critical role in project execution (Karlsen, 2002).

Champions: Champions come among managers who take risks to promote their personal vision to implement IT in their organizations (Beath, 1991). Champions have capabilities such as ability to provide funding and key resources and influence critical stakeholders (Benjamin & Levinson, 1993).

Systematic process for change: Organizations should develop systematic processes to manage change initiatives by describing the relevant tasks in details and by providing a common frame for reference and vocabulary (Benjamin & Levinson, 1993).

Energy level for change: Organization should have enough believers in need for change to support and participate in the change process. While some of this energy should come from the top management as discussed above to commit the necessary resources for change, some of the energy should come from other ranks within the organization with the expectation that this process will satisfy their personal or group needs (Benjamin & Levinson, 1993).

Size of the change effort: The scope of change is very critical in terms of getting enough resources to succeed (Benjamin & Levinson, 1993).

3. METHODOLOGY

3.1. Participatory Action Research

As an established research method in organizational studies (Cummings & Worley, 2008, p. 8; Van Eynde & Bledsoe, 1990, p. 27), participatory action research (Lewin, 1947; Warmington, 1979) was adopted to better explore the interactions between an organizational change team and rest of the organization in a research setting with a lot of limitations. These limitations are listed in the 'Researcher Involvement' section below. Given the acknowledged need to make information systems (IS) research more relevant to practice, action research is seen a potential way to improve practical relevance of IS research (Baskerville & Myers, 2004). In this case, researchers aimed to solve human resource, workflow, and standards related problems of the organization through an IS application. During the problem analysis, system development and implementation cycles, researchers studied the change process simultaneously (Babüroglu & Ravn, 1992).

3.2. Primary Goals

Primary goal of the LIAS project is to develop a workflow management system based on an organizational change plan to improve organization's efficiency and effectiveness by managing information, processes, changing roles and responsibilities accordingly, and changing organization's structure.

3.3. Research Setting (Structure)

The organization is a hierarchical organization with a strict command and control structure despite its highly scientific and technical nature. It is a department under a larger organization in charge of national security. The organization offers forensic services to other departments in the same organization and other government organizations in the country. It has 10 regional offices with around 500 employees in Turkey. It has an excellent reputation among its beneficiaries.

Although it is part of a hierarchical organization, the staff comprised professionals from different backgrounds and officially employees were classified as 'ranked officers' versus 'civilians' as per the participants' terminology. Differences in background and employee classifications created a serious role and responsibility conflicts which were being handled on case by case basis without applying any generally published and accepted standards. Since the top management was fully controlled by the ranked officers, hierarchy among employees was an important part of the organizational culture. While employees who were within the ranking system had specific characteristics in obedience culture, civilians were also demanding roles in the ranking system. Employee turnover was significantly higher in civilians than ranking officers.

3.4. Population and Sample

Most of the study was done in Ankara, Turkey at the organization's headquarters. Regional laboratories had very limited participation in the change process. Around 150 employees from all departments in headquarters participated in the organizational change process. In all project cycles, four departments specifically played a critical role given the centrality of their provided services to customers.

3.5. Research Process

The action research was run for four cycles in this research. While the first cycle focused on raising awareness in the organization, the following cycles attempted to establish standards and implement it based the workflow system. The implementation attempts failed in the second and third cycles, but the organization developed capability and experienced in IT enabled change practice. The last attempt successfully delivered many of the desired results. The following table (Table 1) explains the corresponding problems, actions, results and lessons learned in each action research cycles.

Table 1 – Project Cycles in the Research Setting

Action Research Cycles	Problems	Actions	Results	Lessons Learned
1st cycle: 1998-1999 Management Awareness and Support	Employee dissatisfaction No mission, vision, strategic goal definitions No future plans	Inform management Direct management Discuss with employees	Got the top management support Gained active supporters	Management is reactive not proactive Strong leadership is needed Employees are hopeless
2nd cycle: 2000 Prototype Development	Lack of knowledge of organizational needs	Develop prototype Implement prototype	Developed Prototype Implemented in only one section and couldn't be implemented in other sections	Lack of capacity in system development Needs a dedicated development and implementation team
3rd cycle: 2001 First version development	Lack of employee interest in developing a new system Strong resistance to use an workflow application	Establish a Learning Group Describe the current reality Develop the first version Implement the first version Hire subcontractors for system development	Implemented the first version Parallel run systems (IT and paper based) Some departments gave up using IT system referring doubled (redundant) amount of work Successfully identified major problems	Most employees are not interested in development and change unless there is a clear advantage generated Hiring contractors with not only IT but also organizational change skills is essential Employees do not have a clear idea about processes
4th cycle: 2002-2003 Second version development	Strong employee resistance to change and workflow system No standards in business processes	Take the lead in a dramatic change of organization processes (as the Learning Group) Establish Quality Control Group to develop, control and enforce new processes Hire consultants in management and systems development Hire subcontractors in systems development Keep Learning Group motivated Develop the second version Implement the second version by eliminated the paper based system Change the workflow and organizational structure	Role and responsibility changed Radical change in workflow steps Eliminated units and a newly established central unit	Management is not ready to make radical changes in organizational structure Not fast enough change to sustain the motivation among change champions

3.6.   Data Sources

Internal communication between departments starting from 1998, publications of organizational development, quality control and IT teams between 2000 and 2004, and IS development documents in 2000 and 2003, a brainstorm session with representatives from all regional offices in 2003, interviews with 10 employees in Ankara (Akcam, 2001), an employee survey measuring employee perception of IS success factors in 2008 (Ogunc, 2008) were the main data sources in the research project.

3.7.   Validity and Reliability of Research

Several measures suggested by methodology literature on case study (Gibbert, Ruigrok, & Wicki, 2008) were taken to ensure the reliability of our research. As part of the data collection stage, different data collection techniques and data sources were used to *triangulate*. Interviews, survey, group discussion, secondary analysis of official communications and reports were the main data collection methods in the research. Our description of the case is intended to provide a *clear chain of evidence* to allow readers to reconstruct our journey from initial research goals to final conclusions. *Pattern matching* technique was an important part of our data analysis to investigate the similarities and differences in the hierarchical government organization context. Many findings emerged from our data have matched project management and information systems success literature. These reported findings in the literature were mainly from research done in private sector and in developed countries. In order to better explore the context, we also investigated the IS success literature on government setting in Turkey (Guclu, 2011; Guclu & Bilgen, 2010; Heeks, 2002). As a single case study, our research does not claim any statistical generalization of findings (Yin, 1994, p. 31). We expect that our study will become part of an analytical generalization research in its context (Eisenhardt, 1989; Eisenhardt & Graebner, 2007).

3.8.   Researcher Involvement

Researchers involved in the research as part of the project management team. Action research method enabled collection of data in an organizational setting with a lot of limitations. The first research limitation comes from security issues in accessing the research field. As a forensic laboratory, researchers are normally subject to many limitations in accessing the research field and interacting with subjects. As part of the project team in this research, researchers were able to access the research field and have interactions with subjects without these limitations. The second limitation comes from the subjects' fear of publicly sharing their thoughts due to potential implications coming from their superiors and peers. Although many subjects were happy to share their thoughts off record with the project team, almost none were enthusiastic about putting them on paper in surveys or recording interviews even ensured with privacy clauses. Another data collection limitation was some participants' resistance to change. These participants were resisting the implementation of the system and they were not hesitating to give wrong feedbacks to stop or impede the implementation. Implementing commonly used qualitative and quantitative research methods would be challenging in this setting. Action research was more appropriate method since the emphasis was more on the practitioners' action than their accounts of events (Avison, Lau, Myers, & Nielsen, 1999, p. 96).

4.   FINDINGS

4.1.   Starting the Organizational Change

Organizational change initiative started in the IT department with a personal vision to solve organizational problems. This approach is consistent with principles of learning organizations (Senge, 1990) where personal vision and accurate description of current reality are the starting points in change initiatives (Senge et al., 1999). IT department as the source of IT enabled change initiatives is also a common case in organizations (Davenport & Stoddard, 1994; M. G. Martinsons et al., 2009). In the LIAS case, the personal vision was shared with the top management to get their support. After getting support of top management, shared vision was an important part of discussions in recruiting more employees into the change initiative. Announcing project goals, expected results, reasons behind changes, and measurement of achievement is critical in establishing a shared vision among employees.

4.2.   Organizational Characteristics

4.2.1.   Major Organizational Problems

No clear definition of mission, vision, strategic goals and standards: Organizational duties were listed in the related regulations. However the organization did not have a clear definition of mission, vision, strategic goals and standards in 1998. The IT team was worried about making serious investments without having any clear strategic vision for the organization. It was also hard to motivate employees and share a vision without setting these fundamental definitions.

Unclear and conflicting roles and responsibilities: Organization roles were not designed based on the work processes and service outputs. Existing definition of roles and related titles were not reflecting responsibilities of employees. There were two groups of employees in the organization. In vivo codes of these employees were 'officials' and 'civilians'. Officials were hired from the hierarchical ranking system of the security organization mostly graduated from same university managed by the organization. They had a distinct hierarchical culture like the ones in military. Civilians on the other hand were hired to work in departments where officials cannot work due to their lack of education. Civilians were appointed to several different positions including the managerial ones. Civilian managers were managing personnel from official background, although civilians were ranked under the lowest ranked official title. These conflicts were mostly unresolved or somewhat handled case by case.

No performance measurement / subjective evaluations: Employees were doing forensic analyses to provide forensic reports. All these tasks and outputs could be measurable, but there was no performance measurement system available in the organization. Officials were promoted based on preset rules by the main organization. Civilians were promoted based on the managerial decisions. Getting a managerial position was considered a promotion. Given the limited management openings for both officials and civilians, promotion had been a major source of conflict among employees. Although so much attention was given to promotion, most employees were not favoring establishment of an effective performance measurement system.

Retention rate: Retention rate was low among civilian employees. After tasting the hierarchical structure in a no personal career path work environment, many civilian employees preferred to leave the organization through transfer to other government agencies or private companies. The organization was becoming an important step stone for these employees by having them gain experience on the most advanced equipment available in country. Initially ranked officials were leaving the organization because of the unavailability of management positions. This trend later turned to requests for transfer to other government agencies or international posts available in United Nations and NATO.

Disturbed but Somewhat Satisfied Employee Body: Employee satisfaction was linked to benefits coming from being a manager but not being a better expert. This situation was deeply impacting the organizational culture and the quality of service offered. However competing organizations were having deeper problems and lack of serious competition and comparison between these organizations was preventing to deal with these problems at higher government levels. As a result of this twisted organizational system, many employees were not happy about the organizational system, salary and management. But giving the economic crises at that time in the country, they were somewhat satisfied about working in guaranteed government positions. Officials were also happy to have better working conditions working in other departments. Many employees were hesitant to take responsibility to push for organizational change and many others preferred the status quo and resisted change.

4.2.2.   Major Organizational Strengths

Management Structure Isolated from Instabilities: An important distinct characteristic of the organization was its isolation from political and economic instabilities in the country. Its scientific nature and its service obligations to other government agencies were important factors in protecting the organization from frequent changes in management structure along with political changes. Managers had to be appointed among experts within the organization. This was bringing an important stability in programs and projects in terms of working with the committed managers for longer periods.

Scientific Nature: The organization has been proving forensic services by using scientific methods and techniques. These methods and techniques require specific level of quality control for accurate results. Ideal level of quality control highly depends on effective information management in this setting.

Good Reputation and Proud of Service: Despite some deficiencies, the organization has far better capabilities than other similar organizations and offer best service to other government agencies. The organization has a very good reputation among these agencies and many members of the organization proud of this status. As a government organization, it has also in a very rare situation that three other organizations were offering similar services to similar government agencies. It was creating a sense of competition among these organizations.

Strong Budget: An important advantage of the organization was its strong budget. The organization always had privileges in budget system due to its strategic role. Strong budget enabled the organization to make necessary investments in the change initiatives in terms of getting IT hardware, software and related services. This was not the case most of the time in other departments under the main organization or in many other government organizations.

4.3.   Critical Success Factors

Change in Business Landscape: Although there were many organizational system related problems, convincing managers for change was a hard task given the positive image of the organization among peer departments and its customers. Managerial and employee resistance to change was broken with the change in the business landscape of the organization. First, the *European Union bid of Turkey* made the parliament change the country's forensic investigation related rules and regulations. Demand for forensic services was increased as a result of this change from other government agencies. Second change came from the *competition*. Government agencies providing similar services started to make changes and claim to become more successful organizations. This motivated the managers to make changes too. Third change came from *technology*. E-government became an important topic in improving government services. Prime ministry and related ministry issued several memorandums to encourage government organizations to improve their organizational processes with IT. Fourth change came from *quality initiatives* in other government organizations including the main organization. These initiatives became management fad and most of the time did not end up with dramatic changes in government agencies. But the fad helped many change proponents to lay foundation for future changes in organizations as in this case. The last change in business landscape came from *international change initiatives in forensic field*. Structured education of employees, standardizing processes, and ensuring quality and control were hot topics in international area where the organization envisioned itself as one of the best forensic laboratories in the world.

All these issues were raised by the learning group in the organization before they became popular in the country. But most managers and many employees resisted these ideas at that time. After pressure came through regulation changes, competition, political directives, and management fads, many managers were supportive of the organizational change initiative in the organization.

Learning Group / Champions: Selecting dedicated and above average team members is very critical for an efficient and effective project team. Members of project team should agree on the problem definition, solutions and principles. Individual and group dynamics behind being a champion for change has very distinct characteristics in government cases. In the LIAS case, despite champions were taking risks and putting effort in change initiatives, their expected benefits focused on organizational and societal levels rather than individual gains. However the champions were mostly criticized by many employees for trying to gain individual benefits using the change initiative. The champions were trying to raise bar for employees and all the champions were capable to pass this bar. Struggle between change proponents and other employees resulted with personal attacks and poisonous environment for champions. Most of the champions left the organization even they succeed to implement the IT system and managed to make a substantial change in the organization. Keeping champions motivated and an acceptable timeframe for change are critical components of successful use of champions in change initiatives.

Project Management: An experienced project manager or a project management team is an important part of the success. Effective and efficient management of resources and critical decision making to address problems and pitfalls in the change process are very important in a setting with limited funds and unstable organization politics. Project's priority should be social process of change rather than the technical one. Realistic expectation should be set for the change and project team should avoid from miracle solutions. Communication is a critical component of project management. Strategic communication is critical in change projects where necessary information should be shared with stakeholders to keep them in the loop. Sharing the whole picture may lead chaos among stakeholders who may misinterpret the process and expected results.

Top Management Support and Leadership: Even the change requests came from bottom to up in the LIAS case, top management approach to change was a very critical success factor in the initiative. Management style

deeply impacted the speed of change in the organization. Although most top managers supported the change initiative, only few of them showed leadership by making the initiative a priority and motivating their employees for change. Top management support without leadership moved change initiative focus on the struggle between champions and employees. Top management support with leadership moved the change initiative focus on the organizational problems. Top management leadership should be demonstrated by having more visibility in organizational change activities than the project team. Top management with self-expectations is also part of the recipe for success. These managers can see the potential benefits and they are eager to share the organizational change success with their managers, politicians, and public.

Budget and External Resources: Having enough budgets was an important enabler in getting necessary resources hardware, software, and experts to enable change. Consultants played a critical role in filling the knowledge and experience gap in the organization on change management and systems development. The champions were enthusiastic about change, but they were not expert or experienced in change. Having experienced consultants and a developer team whose focus is not IT but organizational change is an important success factor in these projects.

Reliable Information System: IS success literature identifies critical success factors as system quality, information quality, use, user satisfaction, perceived usefulness, and perceived ease of use in defining the individual use of system and organizational impact (Delone & McLean, 2003; DeLone & McLean, 1992; Venkatesh & Davis, 2000). All these factors played a critical role in the LIAS case too. But among these factors having a reliable information system was very critical in successful implementation of change. The project team decided to opt out paper based system and only had the workflow management system to ensure the changed workflow would be adopted by employees. Any disruption in the system service would result with disruption in organizational services. Project opponents would use these disruptions to stop implementation and go back to old processes.

Changing Laws and Regulations: An important block came from the organization's inability to push new laws and regulations to support the envisioned organizational structure and processes. There were many different laws and regulations regulating the hiring, promotion, and education of all government employees. Making any change in these laws or making an exception for the organization was impossible in the political climate at that time. Lack of these changes negatively impacted the organizational change initiative.

Employee Body: It is far easier to make changes on organizational physical assets such as buildings and computers than its employees. Improving employee qualification is an important challenge in change initiatives. While firing is not an option to hire employees with necessary qualifications, LIAS case also proved that training in short amount of time was not effective in improving employee qualification. A long term training program could also not be successful given the lack of employee motivation to improve themselves. Employees without motivation and who are happy with existing system can easily impede organizational change initiatives. Risk averse nature of many employees limited their involvement in the change project to avoid any confrontation with their peers and supervisors. Lack of skills at all levels of organization mainly in management was also becoming a main problem in implementing advanced change initiatives given the vision of becoming one of the best in the world.

4.4. Organizational Change Results

The organizational change results are categorized based on Davenport's (1993) definition of enabler IT.
- Automation Impacts: Eliminated human labor from administrative processes
  - Eliminated manual data collection processes such as statistics preparation, official notification and confirmation manual tasks
  - Eliminated manual paper based communication circulation
  - Eliminated administrative units under each section and had a central administrative unit with fewer employees (25 employees to 10 employees)
- Informational Impacts: Collected, controlled and enabled access to information
  - Collected process and product information first time
  - Enabled online access to all process and product information
- Sequential Impacts: Changed sequence of the workflow

- Tracking and Control Impacts: Enabled monitor and control of processes and products
- Analytical Impacts: Collecting information on workload at individual, unit and organizational level provided decision support for resource allocation.
- Geographical Impacts: Enabled information sharing between units and regional laboratories.
- Integrative Impacts: Integrated processes between functional units based on established standards.
- Disintermediation: Eliminated roles tied to eliminated processes and tasks.

5. CONCLUSION

Change is inevitable for all organizations. If a private organization cannot stay competitive by renewing itself, it will simply go out of business. If a government organization cannot offer public service in certain quality, it may still survive for a long period of time, but society suffers from the organization's mistakes. Recent initiatives in public management are questioning the effective use of public funds and proposing better allocation of funds based on organizational performance. Public financial management and control law numbered 5018 can be seen as part of this movement in Turkey. Making changes in government organizations is not easy and critical success factors listed in this study should be addressed effectively. We explored these factors based on a comparatively successful LIAS case. This case also contributes the relevant literature in addressing political, economic, social, and cultural developing country characteristics which are fundamentally different than developed countries (Guclu, 2011, p. 67).

As a workflow management system LIAS was used to enable organizational change and achieved some degree of success. The organization initially had problems common to other government agencies such as no clear definition of mission, vision, strategic goals, and standards, unclear and conflicting roles and responsibilities, no performance measurement, retention rate, and disturbed but somewhat satisfied employee body. But the organization had some distinct strength; its management structure was isolated from instabilities in political arena of the country, it had a scientific nature, good reputation and strong budget. It was challenging to motivate managers and employees to address the problems by making dramatic changes in the organization under these conditions.

Our analysis of the change imitative resulted with several critical success factors. The most important success factor was the change in business landscape. Changing laws and regulations, increasing competition coming from other government agencies, increasing information technology use in government organizations, quality initiatives becoming fad among government managers, and changes in the international forensic arena were important forces in the business landscape. Having qualified enthusiastic employees ready for making changes in the organization was an important trigger in the change initiatives. These employees formed a coherent project group to push organizational change based on project management practices. Top management was always supportive of change, but they did not always take the leadership of change by making critical organization wide decisions. The change initiative should give motivating reasons to top management to become one of the leaders of change and share the organizational change results with their managers, politicians and public. Strong budget helped the organization to get necessary resources including the expertise on change management and system development. All these factors helped the organization to implement a complicated workflow system perceived as the best in the world in its field. But organization failed to make radical changes in its organizational structure due to two major factors: inability to change laws and regulations and inability to change its employee body. Although the system was successfully improved many processes by eliminating tasks and corresponding positions, organizational structure stayed same. At this point, top management couldn't push for a change in laws and regulations to have a new organization structure. Employee body was another obstacle to reach its vision of becoming one of the bests in the world. Top management did not have necessary tools such as providing bonuses for success to motivate employees. The management failed to implement an effective reward and punishment mechanism within the available tools.

IT enabled organizational change enabled organization to eliminate human labor from administrative processes, collect, control and access information, change sequence of the workflow, monitor and control processes and products, provide information for managerial decision making, share information between units and other organizations, integrate processes between functional units, and eliminate roles tied to redundant processes and tasks.

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