

Experimental Archiving System in College of Science at Al-Nahrain University

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Abstract

In this paper, a practical experiment of archiving the administrative mail that imported and exported to the college of science at Al-Nahrain University has been designed and implemented. Two stages have been adopted: planning and implementation. The planning stage includes all the analysis and design details. While, the implementation includes steps of installing the archiving software, connecting system components, and starting the electronic archive. Some crises have appeared at each stage of implementation, in which the work team is responsible of studying the problem and suggesting the proper solutions to overcome these crises.

Keywords: Archiving system, Crisis, Disaster, Crisis Management, Project Management, Crisis coordination.

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1. Introduction

Project management is the application of knowledge, skills, and methodologies to successfully complete projects. A project is deemed successful if it meets or exceeds specifications, keeps stakeholders satisfied, and balances scope, time, cost, and quality requirements. Adopting standardized processes for executing project management promotes lower project costs by accomplishing more work with fewer resources. Project management monitoring processes then facilitate prioritization, forecasting, and identification of areas requiring early corrective actions by comparing actual project schedule and cost information with their planned values.



Figure (1) Project Management Stages

2. Crisis Management

The word "crisis" or "disaster" indicates an alarming situation and may be used to refer to emergencies, critical events, terrorist attacks, technical accidents and alike events having adverse impact. The EU has adopted a definition for a disaster, it "means any situation which has or may have a severe impact on people, the environment, or property, including cultural heritage."

Crisis management is the process by which an organization deals with a disruptive and unexpected event that threatens to harm the organization or its stakeholders. The study of crisis management originated with large-scale industrial and environmental disasters in

the 1980s. It is considered to be the most important process in [public relations](#).

Crisis coordination is the process undertaken by organizations and individuals aiming to reduce the impacts communities experience from exposure to hazards during real world incidents.

2.1 [Types of crisis](#)

- [Natural disaster](#)
- [Technological crisis](#)
- [Crisis of malevolence](#)
- [Crisis of organizational misdeeds](#)
- [Crises of skewed management values](#)
- [Crisis of deception](#)
- [Crisis of management misconduct](#)
- [Workplace violence](#)

Proper use of information in crises and manage it can be crucial in decision making. The information may come from different resources so they need to be integrated and filtered.

There is no guarantee when the crisis can happen. Everything from wars, system crash, political or economic disasters can lead to a crisis. Institutions all over the world need to integrate information technology into their business strategy. Through advanced solutions like Customer Relationship Management and Enterprise Resource Planning.

2.2 Guidelines for establishing good crisis management plans

- Identify an individual from workforce to take over crisis management role as a manager.
- Initiate frequent training and refresher courses on handling crises.
- Form a crisis team to work under the leadership of a crisis manager.
- Planning responses and crisis management processes for various potential crises is highly recommended.

- Initiate systems that can effectively monitor or detect foreseeable crises signals early enough in order to tackle the situation before it gets out of hand.
- Identify the ground person to be notified immediately when a crisis occurs. Apart from a crisis manager, there must be a coordinating person among employees who possess first-hand news on a looming crisis.
- Regular testing of the crisis management process and emergency equipment and updating them frequently or as needed.



Figure (2) Crisis Management Steps

3. Literature Review

There is a great deal of focus was granted to project and crises management. Numerous approaches were developed in order to achieve more efficient techniques for serving applications in the field of interest. In the following, the most significant literatures are mentioned in details:

- The role of information technology in crisis management was addressed by from two different perspectives. First, how we can use ICT to support the work of the international community in crisis areas and second, how we can support the recovery of local government in post-conflict countries with information technology.

- contributes to the field of crisis management and shows that the growing usage of information technology in businesses demands focus. Preparation and planning is the first step in avoiding a crisis from happening.
- Social Media has proved to be a great enabler in rapid dissemination of information during a disaster. The most prominent feature of a crisis is unpredictability.[3]has proposed a configurable monitoring system to track near real time tweets describing fire events. The system emphasizes the fire related words in a defined region. And they were then put through a text classifier to determine if they were related to an already known fire occurrence.
- A survey displays A-Z past studies related to the crisis management and information technology.
- discusses the economy of Kurdistan after the fanatic ISIS civilian army attacked Mosul in Iraq at 2014 and displays solutions.

4. Motivation and goal

As a result of the absence of an organized archive according to the quality standards in our college, there was a constant threat of danger involving the loss of some official administrative mails when distributed to the departments of the college, which makes the college enter into a temporary crisis when the confirmation of a previous answer did not return the original administrative mail, which makes the college management work hard to prepare the answer within the specified period and the hurry up may lead to errors in the answer, which gave a strong motivation for the college to go to electronic archive.

The goal was to use professional software that archives the incoming official administrative mails to the college of science by registering its essential information, by which the administrative mails can be stored and retrieved by simple search. Archiving system also includes the outgoing administrative mails from the college of science according to the essential information of the administrative mail and store all its attachments, which facilitates the

process of following up of the answer of the administrative mail, furthermore, we can evaluate the college administration work and diagnose the weaknesses to be treated. The perfect application to such a software will prepare the college to move to an advanced position in applying the software of information technology in order to apply electronic government.

5. Practical experiment

To ensure not to fall in mistakes, the college of science used a professional software designed by a specialized company in computer software. The college agreed with Al-Wusool Co. to use the test copy of a network- based archiving system was designed to a governmental institution to archive the incoming and outgoing administrative mails in order to start the electronic government in the future. The college of science took some steps to be prepared for the new system and to get into the first stage of the project, planning then execution. Next, a detailed explanation to the procedures of the college at each stage:

5.1 Planning Stage

To ensure ideal implementation for any project, the planning stage and requirement specify is an essential step. At first, due to the network nature of the software, the college connected all the other departments and terminals in the college with the computer science department and supplied them with suitable laptops. The server room also supplied with high quality air-conditioning devices work alternately at least for 20 hours a day to ensure cold environment in the server room that is $3 \times 4 \text{ m}^2$, which is good enough against the heat that comes out from the server computer that is about 1 Ton per hour.

The college agreed with the company to qualify and prepare the staff that will work on the archiving terminals as data entry or system administrator. This was done by several workshops to identify the importance of the project and how to work on it. At the same time, the college hold seminars for the network staff from the computer science department teachers to form the committee responsible for

administration and supervision for the server during applying the system. The committee consisted of five members, the researcher for this paper was one of them and the responsible for the server work and maintenance.

5.2 Implementation Stage

The college of science received a test copy of the archiving system designed by Al-Wusoolcompany that was for six users and was installed on six terminals three of them were at the computer science, chemistry, and physics departments, two were at the administration and the scientific affairs departments, and the last one was at the dean bureau to archive the incoming administrative mails for the college with their attachments and notes of the dean on them and numbers and dates of these administrative mails. A high quality scanner device was connected to the sixth laptop in the dean office that scans 200 sheets in a minute to archive in a small time comparing to the amount of the incoming administrative mails.

The software was first run on the server computer at 23 of January, 2015 and started to run after on the other terminals, computer science, chemistry, and physics departments, the two administration and scientific affairs departments by the network from the source, the dean bureau.

The first experiment was successful to some extent, all the terminals were active and worked harmonically based on the instructions given by us, the administration committee to the employees responsible for the data entry at the terminals. There were signs of satisfying and accepting to the system from the administration of the college due to the optimism for the organizing of the work and keeping the incoming and outgoing administrative mails electronically archived which made the search and follow up very easy.

6. Results and Analysis

Every new system comes with a resistance from people that refuses to change. It was good to see the resistance to changing from paper to the electronic archiving system getting less and less especially after the employees started to see the benefits of the system in search and following up the answers for the incoming administrative mails. After three months of working hard, all the indicators of performance got high because of getting used on the system in archiving all the administrative mails. This was obvious for us as a team when we periodically wrote the monthly reports about performance percentage for each terminal which indicates the dependability of that terminal on the archiving system and to which extent this terminal uses the available tools. In our reports, it was obvious that the archive includes all the administrative mails and the attachments with no loss and it was easy to search using the keywords of the mails subjects. This tool gives the ability to search in the archive to extract all the mail that includes a specific keyword that could be searched for by the user.

By April, a problem started to appear. Power failures occurred from time to time during the academic year, which forced the terminals users to postpone their work until the return of electricity. The electric generator of the college was prepared to produce electricity but it was not stable all the time, which resulted another problem; server computer failure. The college administration decided then to supply the server computer and each terminal with UPS devices. Continuous hard work of the server almost ended the batteries of the UPS which put the college administration in a real crisis since it is not easy to buy a new UPS device or new batteries for the old UPS, also buying fuel for the electrical generator is expensive. All of this led to weak performance in April and May, when the problem of electricity started to get more serious and the electronic archiving was getting worse with no practical solutions. The college administration decided to get more financial income from the scientific laboratories and increase the number of self-funding studies. This resulted a little bit increased income, which was not enough to buy new UPS devices with high standards.

By July and August, the electricity problem got worse in Baghdad and the blackouts continued for most of the work hours that led to stop working on the electronic archiving project on 12 of August, 2015. It was supposed to work again on the system when this problem disappear on winter. But, the crisis of the archiving system reached a peak after stopping using the system.

At the middle of September, the college administration called for a meeting for all the staff of the archiving system to indicate all the obstacles and hard situations that was facing the system. After discussion, it was agreed to approach the higher authorities to provide material support to complete the project requirements as it is one of the pioneering projects in this field and it is part of the first building blocks of the e-governance project, The re-activation of the electronic archiving system was started again on September 16, 2015. The blackouts of the power outage was limited in part, which encouraged to work again in order to make the project succeed.

On December, 4, 2015, the project of electronic archiving was stopped due to the absence of project management and it was not possible to proceed to maintain the continuity of the work that was needed to follow up and develop the same continuous users. Figure (1) shows the performance indicator of the electronic archiving system in the six terminals of the College of Science.

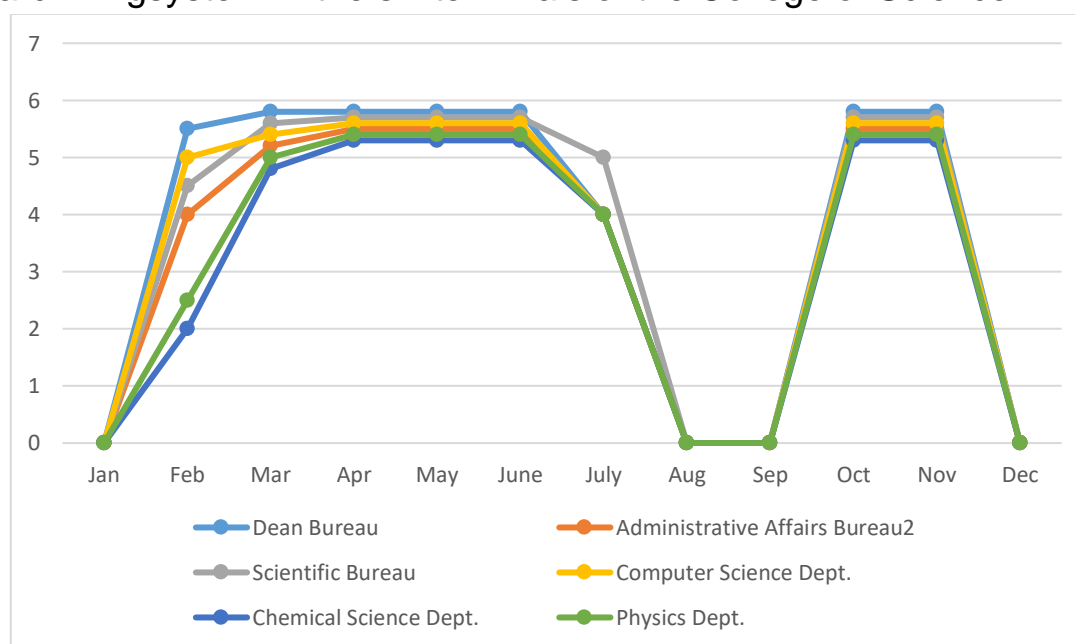


Figure (3) Performance Indication for the six users of archiving system

By analyzing the behavior of each party in the network, we find that the management of the project was determined and keen to use the software of archiving, where it appears that the performance of the Office of the Dean, the scientific affairs department and the Department of Computer Science have exceeded the use of the program since the first period of the project, We also find that the Department of Physics and Chemistry were a bit late as the Department of Physics presented the relatively weak department of chemistry.

In general, the performance rates at all the terminals were complete for the period of work except for the break-out period of July and August. This indicates the success of the project during the experimental period of the work which was about 12 months long which was enough to touch the achievements and assesses the challenges that were included through analytical studies and the decision to abandon the project and stop the work was not the result of weak performance or lack of program, but for other reasons related to weak communication with the administration of the college. This confirms the success of the team in completing and following up the process of electronic archiving during the period of operation of the program and that the team had studied carefully the failure factors of the project and suggested solutions to overcome them professionally.

The experience proved that the failure of the project was due to the first planning stage. The individual experience of a single college in establishing a pioneer project was wrong and it was better for the college to raise the project proposal to the university chancellors council to apply it throughout the ministry of higher education to ensure the flow of cash for the continuity of work which will enable it to overcome the progress challenges facing the progress of the project.

7. Recommendations

Through the real experience that aimed to setting up the electronic archiving system at the College of Science –Al-Nahrain University, the team faced real crises and difficult challenges that led the project

to failure. It was concluded that the institutional development should be built from the top of the administrative ladder within the organizational structure of any institution. The pioneer projects should start first at the top of the hierarchy, at the ministry headquarters and then begin to spread to the parts of the institution closest to the center of the pyramid until reaching all parts of the institution, in order to reach the project to the stage of success while the contrary will lead the project to fail as a result of crises can't be resolved, where we found that not all crises can be controlled or overcome.

8. Conclusion

At the beginning of the 21st, the different institutions found themselves forced to develop their systems to face the different kinds of crises. War crisis, political crisis, addiction crisis, terrorism crisis or any other kind, can threat institutions or even societies. Dealing with crisis using scientific procedures and well organized methods is a crucial concept that can even lead to predict the crisis. Information plays an essential rule in humanitarian assistance when it can improve the effectiveness of the work. Over the last decades, IT responded to an increasing number of conflicts, crises, and disasters. In this research, I submitted the electronic archiving system that was adopted at the College of Science, Al-Nahrain University (since I was a member of the team working on the system) as an example of the type of crisis that leads to failure and stop work. Proposals for the adoption of such projects in the future were indicated.

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