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Dear Dr. Antončič,

Thank you for your letter no. 5201-1/99-13 dated 10th July 2000, which was received on 4th October 2000, regarding your invitation to the third Performance Auditing Seminar on 14th May 2001 in Slovenia.

Kindly find enclosed the country paper of the State of Qatar prepared by Mr. Faleh Hassan Alkaisi.

My best wishes and regards.

Sincerely Yours,

Abdul Rahman Bin Hammam Al-Abdulla
President of the State Audit Bureau
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Y2K¹ Projects in Government Bodies

(Country Paper)

By
Faleh Hassan Alkaisi²

Introduction

Qatar is a peninsula, 11,437 sq. kms in area, that projects from the Arabian mainland. It is approximately 160 kms in length and 80 kms in width, at its widest point. The total population of Qatar is presently somewhere over 600,000. The present number is made up of about 25% of Qatari nationals, with the rest being expatriates.

State of Qatar has performed many IT projects to gain the advantages of computers. Ministries and governmental organizations are heavily relying on IT systems to handle daily works and activities. Within the last decade, public services, education, industry and other sectors have changed rapidly. In Qatar, computer applications have been used for billing, salaries, personnel, accounting, and many other IT and control systems. Investments in IT are major in many aspects, which are affecting the public.

For the last two years, Y2K Projects were carried out in several governmental organizations to assure that problems related to year 2000 and the change of millennium will not affect IT systems. Those projects have been executed in such ways to meet a particular date namely 1st January 2000. Auditors have launched series

¹ Y2K = Year 2000

² M.Sc. in Computer Science, Head of Computer Department in State Audit Bureau – Qatar

of procedures to check and control the expenditure related to these projects, which show that costs have increased as a result of non-related Y2K issues.

Discussions on Y2K projects have started among professionals worldwide, showing that Y2K issues were unjustly magnified. However, concrete judgements, on all implemented projects, should depend on facts. And for that, pre-audit and post-audit need to be carried out to a certain depth that includes great technical and scientific efforts, which could be hard, costly or ineffective.

An evaluation study has been carried out and led to comprehensive conclusions and it focuses on some Y2K projects as test vehicles. Other studies could be carried out, in the future, on certain projects with common environments or exceeding schedules or budgets.

Y2K Problem

The government has recognized that problems may occur in many systems, as some computer companies announce that their products are not Y2K compliant or suffer from bugs related to Y2K. Media, on the other hand, started one of the biggest campaigns showing the danger of non-compliant computer systems. Chairpersons were aware of the problem, particularly in the hidden parts of IT systems. Moreover, assurances given by computer departments or professional staff were not enough for many decision-makers. It is believed that contractors and professional companies should be in charge and responsible for any problem, which occurs due to the change

of the date. For that, it has been decided that the Y2K problem must be investigated and solved to prevent systems malfunctioning or failures.

Approach

On May 1998, the Planning Council has established a committee, called HCY2K³. This committee has announced the following countermeasures:

1. A comprehensive plan, with a limited timetable, will be made to develop and create an environment for testing all the modified systems, which are made to solve the problem of Y2K in all ministries and governmental organizations.
2. Make all the necessary precautions for any errors in the test to assure the continuity of work on and after 1st January 2000 and 29th February 2000, and that all modifications, replacements and upgrade will be made and tested late 1999.
3. HCY2K asked all ministries and governmental organizations to send detailed reports quarterly, for supervision and assistance, as of June 1998.
4. Plans of Y2K projects, should take into consideration, all modifications, replacements and upgrades, and should be ended by July 1999.

Planning and Methodology

HCY2K published a number of procedures and recommendations, which include the following:

- The highest authority in ministries and governmental organizations head Y2K projects. Internal committees, within ministries or governmental organizations, should be formed and report directly to their authorities and HCY2K in the Planning Council. The representatives of ministries or governmental organizations in HCY2K or equivalent should chair the internal committees.
- A project manager should head Y2K project team with members from relevant departments, including a member from Finance department, reporting to the internal committee.
- This team should be vested with sufficient authority to ensure Y2K project deadline can be met and it is fully responsible for the identification and implementation of Y2K compliance.
- Sufficient contingency budget should be dedicated for the modifications of Y2K in the fiscal year 1998/1999.

Plans should consider all systems such as communications, security and alarm systems, telephones, faxes, air-conditioning and ventilation systems, power supply

³ HCY2K = The High Committee of Year 2000 Problem

systems and systems which are relying on micro-chips. HCY2K also propose the following steps, to implement Y2K projects properly and to meet the deadline:

1. The assessments step, includes obtaining all the available systems and record them in a database to verify the data with the concerned departments. This step will also identify areas of non-compliance to Y2K and determine options to achieve compliance and develop initial cost and estimate resources for each option.
2. Planning consists of the development of an action plan depending on the results of the assessment step, which includes a list of tasks and a schedule to estimate the required resources and costs. Moreover, risks can be identified, in this step, and contingency plans can be made. At this point, findings can be presented to HCY2K to obtain the approval to proceed.
3. Executing the plan, is the main step to replace, modify or upgrade the non-compliant systems and test them. Adjustment of the plan may be made according to the results of the test and should be reported.
4. Contingency plan is necessary to develop back up or an alternate plan to achieve compliance, particularly for high impact systems. Key indicators and thresholds for activating contingency plan should be identified and invoked as necessary.

State Audit Bureau⁴ Role

SAB has the authority to audit all expenditure and financial activities of auditees. On the other hand, pre-audits allow SAB to check and give its opinion on all tenders and contracts with cost higher than 140,000 US dollars. It was understandable that Y2K projects need to be implemented and tested within the time limit. However, SAB was aware that ignoring any tenders' regulations will weaken the internal controls and the normal tenders' procedures. Moreover, SAB has found that only ministries and governmental organizations, which are centrally financed, are included with HCY2K. Other government organizations, which are independent financially, were excluded.

SAB focused on and was concerned about, ignoring the recommendations, which have been distributed by HCY2K. A contingency budget has been given to HCY2K to cover the costs of Y2K projects. The total amount was 11 million U.S. dollars. Although, auditors have launched a series of procedures to check and control the expenditure related to those projects, as part of pre-audit procedures, it is believed that costs can be decreased and expenditures are paid for different reasons, not related to Y2K issue.

⁴ SAB = The State Audit Bureau.

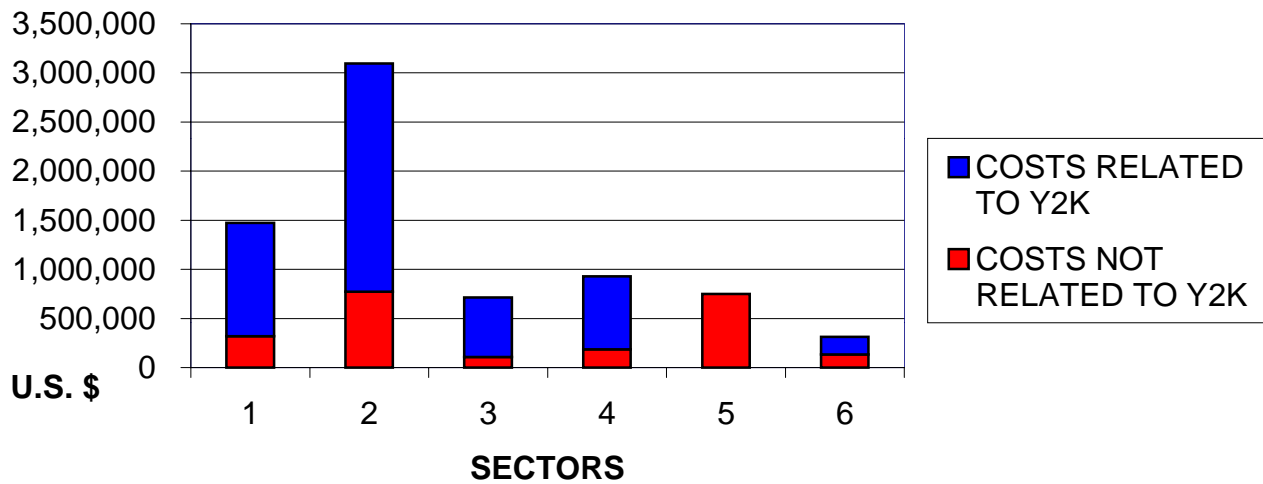
Evaluation Study of Y2K Projects

Results of Y2K plans are highlighted by March 2000. The budget of Y2K, which was originally in the fiscal year 1998/1999, has been shifted to fiscal year 1999/2000. Factually, the planned date, July 1999, has not been met. Although, no problems were traced on 1st January 2000 and 29th February 2000, HCY2K was still working on, the so called, new Y2K projects. At this time, doubts have been raised in SAB, therefore, a decision was taken to form an audit team to study and evaluate the expenditures of HCY2K. The team has started auditing all the financial activities and professional studies related to Y2K project. Hardware and software specifications were also verified according to the priority needs of each ministry or governmental body. The main findings are summarized in the followed table and diagram.

Y2K PROJECTS COSTS IN U. S. DOLLARS

No.	SECTOR	BUDGET	TOTAL EXPENDTURE	HW & SW COSTS	WAGES	COSTS RELATED TO Y2K	COSTS NOT RELATED TO Y2K
1	Public Services	2,838,663.29	1,474,495.34	951,311.15	1,917.81	1,153,734.52	320,760.82
2	Health Care	3,408,316.99	3,096,368.96	2,922,533.34	173,835.62	2,324,320.47	772,048.49
3	Education	1,314,294.52	712,641.10	586,586.30	126,054.79	603,888.22	108,752.88
4	Government Affairs	1,544,065.75	927,936.71	635,546.58	292,390.14	742,852.60	185,084.11
5	National Security	933,653.70	748,431.78	748,431.78	0.00	0.00	748,431.78
6	Others	461,103.01	311,950.47	311,950.47	0.00	177,203.29	134,747.18
	TOTAL	10,500,097.26	7,271,824.36	6,156,359.62	594,198.36	5,001,999.10	2,269,825.26

COST OF Y2K PROJECTS IN U.S. DOLLARS



The team has also found, that some of the payments are made to purchase items not related to Y2K issues. Reasons of over costs can be related to the following:

- ◆ Some computer departments' try to purchase the most advanced hardware and software available in the markets, to obtain more computing speed and capacity using direct purchase orders rather than tenders and their legal procedures.
- ◆ Software and hardware companies tried to make more profits by replacing software and hardware rather than modifying or upgrading the existing software and hardware.
- ◆ Lack of knowledge on Y2K issues and ways of solving IT problems at the management and executive levels. Replacements, therefore, became the most popular solution to several ministries and governmental organizations.

- ◆ Lack of funds, due to budget constraints, with permission of spending on Y2K problem only, which forced some governmental organizations to spend budget funds, on new or unrelated projects. Some of those projects were planned to be a natural renewal of old systems, for reasons other than Y2K problems.

- ◆ Inappropriate schedules in the implementation stage, after February 2000, made SAB raise questions about the feasibility of Y2K projects in some ministries and governmental organizations.

Conclusion

The year 2000 challenge was a serious business issue and not an information technology problem. The audit team tried hard to manage the audit process and cover the entire activities in a very short time.

The information, which has been gathered was carefully analyzed and fully checked. All HCY2K minutes and notes were read, and any hesitation faced by the audit team, about the purchased items, was counted in favor of solving Y2K problem.

As a unique result, 31% of the funds have been spent on issues not related to Y2K problem, whereas 69% were used to solve the problem, as illustrated in the following diagram. The audit team was satisfied with these results and SAB objectives were met.

PERCENTAGE OF COSTS CLASSIFIED ACCORDING TO
ITS RELATION WITH YEAR 2000

