



# Why information systems projects fail: Guidelines for Successful Projects

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## Introduction

Information and communication technology (ICT) plays an essential part in our life and the way we react with the external environment. Information systems are one of the ICT elements which shape our daily tasks by introducing value and quality to our daily activities. Technologies are emerging fields and are rapidly changing and the changes are moving around the globe in developed and developing countries.

Information systems are the core of today's emerging businesses. Billions of dollars are exchanged on daily basis based on automated systems and information technology. It is essential that information system projects are properly scoped and implemented successfully. According to Gheorghiu, A. (2006), a survey showed that around 70-80% of all information technology and information systems fail. Despite best practice and defined procedures and methodology applied in project management, as well as the development and the advancement in the project management field, the world is still experiencing failures in implementing information system based projects, especially in developing countries in the Middle East.

The gravity of information systems is increasing day by day around the globe, but at the same time the failure rate of information systems projects is still high.

## Why Systems or Information Technology Projects fail

Different research and studies, regarding information systems or information technology project failure show the highest risk factors that were behind the project failure. The world's statistics always publish failure rate in general, which clearly can prove for business and information technology executives that there is failure at IS projects regardless of whether it is high or low for (IS) or (IT) projects. The key objective of all the research and studies is information and communications technology awareness which can reduce or resolve failure rate for a project by using the accurate and professional techniques.

Different types of existing surveys results published by IT Cortex providing statistical information regarding the rate of failure in IS or IT projects. Following are lists of the existing surveys:

1. (2001) The Robins-Gioia survey.
2. (2001) The Conference Board survey.
3. (1997) The KPMG Canada survey.
4. (1995) The Chaos report.
5. (1995) The OASIG survey.





All Cortex statistics generally agreed on the below points regarding the failure at information systems and information technology project:

- Unsuccessful IT projects are more likely than successful projects.
- Nearly 20% of IT projects are satisfactory.
- Failure rates are much more likely in case of large size IT projects compared to small and medium size projects.

### Information Systems and Information Technology Project Common Failure factors

Information systems projects always and everywhere around the globe have a reputation for failure, i.e. unused, partially used, cancelled and many other factors. Each project differs from another even if it is for the same system because each project has its own requirements, project management, users, organisation culture, team skills and knowledge, and many other aspects that are linked directly to the organisation and not to the project itself.

Different research studies have been made which describe and summarise the most common failure factors in IS projects. Most of the results show similar failure factors but each factor can have different priorities which link to the project and the

organisation itself. Moreover, the project and organisation always have a strong relationship with each other which can shape the final outcome of the project in terms of failure or success. According to Dorsey (2000), in all the studies that have been done till now regarding Information systems, failure or success have highlighted top management support as a critical success factor in any project. Any project without full commitment from the top management, in case of problems can collapse at any time during the project life cycle.

One of the researches listed risk factors ranking wise. ComputerWeekly.com joined forces with Oxford University to carry out a research into the state of IT project management in the United Kingdom. The research was led by Sauer, (2003) fellow for information management at Templeton College, and sponsored by the French Thornton partnership. The aim of the research was to help Information technology and business executives create realistic expectations for Information technology projects and improve the performance of project management, besides developing the skills required for project management.

The most common risk factors ranking wise were one of the outcomes of the research. Table 1 opposite lists ranking wise risk factors.

Although there is a high rate of information systems project failure there are ways of enhancement and areas of improvements. Different books, research and studies give clear improvement factors that can help avoid failure in IS projects. The improvements factors were published after detailed study and investigation of different kinds of IS projects among multiple industries around the globe. The main aim of all the existing improvement factors is to reduce or resolve the failure rate at IS projects. Moreover, they help the top management and project managers to use standard best practices and move towards a technology world with minimum risk factors.

One of the research have clearly defined improvement factors regarding information systems project, Table 2 lists the factors.

The CHAOS study, which was conducted by Johnson, et al (2000) has defined a recipe for success as a CHAOS 10. Moreover, they have clearly explained that no project requires the entire 10 recipe ingredients for success, but the more factors present in a project, the more value can be added to the project. Table 3 lists the CHAOS 10 recipe ingredients for success. Each success factor has been weighted according to its influence on the project's success. The more success rate, the lower project risk.



**Table 1: Risk ranking**

**Ranking and risk**

- |  |   |
|--|---|
| 1. Lack of top management commitment                 | 11. Shortage of knowledge/skills in the project team  |
| 2. Misunderstanding of scope/objectives/requirements | 12. Improper definition of roles and responsibilities |
| 3. Lack of client/end-user commitment/involvement    | 13. Artificial deadlines                              |
| 4. Changing scope/objectives                         | 14. Specification not frozen                          |
| 5. Poor planning/estimation                          | 15. New or radically business process/task            |
| 6. Inadequate project management                     | 16. Employment of new technology                      |
| 7. Failure to manage end-users expectations          | 17. Poor control against target                       |
| 8. Conflict among stakeholders                       | 18. Number of organisational units involved           |
| 9. Change is senior management ownership             | 19. Lack of effective methodologies                   |
| 10. Lack of adequate change control                  | 20. Staff turnover                                    |
|  | 21. Multiple vendors                                  |



**Table 2: Ranking wise improvement factors**

- |  |   |
|--|---|
| Ranking and factor                                     | I. Alignment of IT project initiatives to business strategy   |
| A. Greater top management support                      | J. Greater understanding of project management on the part of top management, project boards and clients                    |
| B. More commitment from users                          | K. Greater realism in setting targets. Several respondents railed against imposed rather than planned targets and deadlines |
| C. More power and decisions making authority           | L. Establishment of a supportive project/programme office.  |
| D. Greater financial control and flexibility           |   |
| E. Greater Control over staff resources                |   |
| F. Commitment to requirements and scope once specified |   |
| G. More project management training                    |   |
| H. Commitment to a stable project management method    |   |

**Table 3: CHAOS 10 – Recipe for Success**

- |                                     |    |
|-------------------------------------|----|
| 1. Executive Support                | 18 |
| 2. User Involvement                 | 16 |
| 3. Experienced project manager      | 14 |
| 4. Clear business objectives        | 12 |
| 5. Minimised scope                  | 10 |
| 6. Standard software infrastructure | 8  |
| 7. Firm basic requirements          | 6  |
| 8. Formal methodology               | 6  |
| 9. Reliable estimates               | 5  |
| 10. Other criteria                  | 5  |



## Project Guidelines

The guidelines have developed by the author after thorough research and investigation into the information systems project failure issue and the aim of the concern guidelines was to resolve or reduce project failure rate by following the accurate guidelines in small or medium size IS projects. Twenty project guidelines have been developed for the three essential project stages, namely:

1. Prior to selecting a project
2. During the project
3. After the project execution

In reality it is not necessary for an organisation to follow all the concerned guidelines but to understand the standard steps which can be followed in a IS project. These guidelines can be used as a best practice.

Each guideline is developed to keep a project on the right track and minimise the risk before, during and after the project. The first and second project stages are the most critical which require focus and clear understanding not only from a project manager but more importantly top management.

Top management support is essential at all the stages of a project before, during, after the implementation.

Finally, the guidelines are not developed exclusively for information systems specialists, project managers and technical people. Their aim is to cover and help the entire range starting from top management through to the ordinary users in an organisation. The whole plan is to understand what is required for a successful information systems project.

Table 4, lists the twenty project guidelines summary for all the three stages before, during, and after project implementation. Guidelines 3,12, and 13 are repeated at more than one stage.

**Table 4: Twenty project summary guidelines**

	Guideline Number		
Before starting the project	1	Analyse the organisation environment using standard tools such as SWOT or PEST	
	2	Align Business with ICT Strategy	
	3	Ensure management buy-in	
	4	Ensure adequate project resources	
	5	Ensure project team have the required skills and knowledge to run the project	
	6	Clearly define scope, objectives and requirements	
	7	Break project down into manageable components	
	8	Construct the project's product to be flexible and open to future change	
	9	Make use of previous experience	
	10	Establish clear criteria for supplier selection	
	11	Carry out detailed costing and establish a feasible project budget	
	12	Maintain communication at all levels	
	13	Boost awareness inside the organisation of the project	
	During the project	14	Adopt a good project management strategy
		15	Create risk plan and monitor it
		16	Establish timetable to give users enough knowledge to accept new system
		17	Establish documentation standards and backup strategy
Repeated Guidelines 3,12 and 13			
After the project implementation	3	Ensure management buy-in	
	12	Communication at all levels is essential	
	13	Boost awareness inside the organisation of the project	
	18	Periodic reviews once project is live	
	19	Consider ongoing user training	
	20	Establish a project knowledge base	
	Repeated Guidelines 3 and 12		
	3	Ensure management buy-in	
	12	Communication at all levels is essential	

## Messages from leaders and professionals regarding the article

The culture 50 years ago in the world was totally different from that of today, which means it is still changing. So we have to keep abreast of the changes and receive what is best from the culture but at the same time refrain from what is not useful. The most important thing is that we have to follow a new culture, the culture of technology and information

*H.M.Qaboos Bin Said (2007)*

"Information technology is not a magic formula that is going to solve all our problems. But it is a powerful force that can and must be harnessed to our global mission of peace and development"

*Kofi Annan (2003)*



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