

# Information system redesigning Strategies

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## Abstract

Redesigning of information system is about changing and enhancing the existing and working information system in order to get better outputs or because the system doesn't perform as intended.

**Key words:** *Management Information System, MIS, Information System, IS, Electronic Enterprise, Information Technology, IT, Business Information Systems, Electronic Enterprise, redesigning, reengineering .*

**Methodology:** Case study, System Analysis, Business Analysis, web search and books review.

## Introduction

Systems in general share seven common elements.

### Study structure

All or one of these elements will be changed in case of redesigning an existing information system. These seven elements are:

- **Boundary:** identify the elements inside and outside the system being analyzed.
- **Environment:** anything which is outside the system, including rules, assumptions, constraints etc.
- **Inputs:** resources that will be entered to the system and manipulated by it to produce information or required products
- **Outputs:** The services or products provided by the system after the system processes the inputs
- **Components:** set of activities and processes that transform input into output
- **Storage:** storage areas and media required for permanent or temporary storage of information. Sometimes in the redesign of information system, there is a need to revise the storage elements if the organization data consumes the storage area reserved.
- **Interface:** this the way how outside elements can interact with the inside elements.

Motivations for redesigning information system: Sometimes organizations need to change and enhance the existing information system. This is due to several reasons:

- **Concerns about system reliability:** when the system doesn't work as intended and the results of the output are not satisfactory then this system need to be redesigned.

- Response time: if the system takes too long to produce the required output then this system may result in missing business opportunities or loss of customers due to late decisions.
- New or improved features: there are always something new in the technology every day. Organizations that need to be at the edge of technology or want to be competitive will redesign their information system to include the new features or technologies
- System security: the most important asset of any system is data. If the system fails to secure data from intruders or malicious actions then it needs to be redesigned to discover the security holes.
- System maintainability: it is a measure of how easy and fast the system can be restored to its operational state after failure occurrence. If this measure is not available then this system need to be redesigned.

**Redesign Process:** The life cycle of information system development is usually iterative; that is the processes are repeated in a cycle until the required system is obtained. System redesign is somehow similar to original system development processes but contains additional steps.

- Identify requirements: in this first step the new requirements should be gathered and problems with the existing system must be identified.
- Analysis and redesign: new requirements are analyzed and the ways these requirements should be integrated in the system are specified. The redesign identifies the changes that will be applied to the system either in the physical or logical design
- Adjustments: it means the reconfiguration of existing system to include the changes, new requirements and improvements needed to be included in the system.
- Execution and migration: after adjustment phase, parts of the existing system may be replaced with the parts of the new system. It is then executed and monitored to identify if it succeeded to meet user requirements

**Conclusion:** redesigning is a fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in cost, quality, speed, and service.

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