

## Chapter 51

# The Design and Implementation of Paperless Medical System (PMS) for Offshore Operating Company: A Structured Approach

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### **ABSTRACT**

*Application software development has always been viewed as a massive challenge by companies that view IT services as a support function rather than a core function. The term “core” here implies that IT plays an enabler role to facilitate technology and services that support users to meet set business objectives in an efficient way. Furthermore, IT development is perceived by many managers as a burden; hence, they prefer the fast track implementation of specialized packages to deliver the majority of service levels over the long wait for systems to be built in-house, even though the latter option is more advantageous in the long run, as it offers a much better fit to all user requirements. With this dilemma in mind, this case is an example of how an in-house development solution was implemented. The case touches on positive and negative aspects of the decision to build the application and covers a range of issues encountered during every phase of the development life cycle.*

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## **CASE STUDY OBJECTIVES**

This case study highlights issues and challenges pertaining to the different phases of the “System Development Life Cycle—SDLC,” with emphasis on the cultural constraints and limitations encountered at each phase.

The case study aims at providing the audience with examples on how cultural and regional factors could affect the SDLC regardless of the technology and methodology used.

## **SETTING THE STAGE**

The company is multi-site organization with operational sites distributed over a wide geographical area. It employs thousands of employees and contractors, with working conditions being risky in most of the company’s locations. Medical Services is a unit of the company that serves employees and contractors in all locations on 24 by 7 basis.

The assignment of Medical resources to the project was mostly based on availability since the welfare of patients was an objective that could not be compromised under all conditions.

## **BACKGROUND OF THE BUSINESS REQUIREMENTS**

The Medical Services unit of the company required a system that would enable its Medical Officers to offer the expected service levels to all employees and contractors with emphasis on aspects such as personal health, particularly for employees suffering from “chronic diseases” and “allergies” as well as hazards caused by the nature of the job or job location.

Due to the fact that the system was to be developed in-house, a number of project pre-requisites were not completely adhered to. One such critical pre-requisite was the “Project Charter,” where the project team accepted to start the project from the point when the project plan was prepared.

The system was expected to deliver the following:

1. A simple user interface with minimum use of the keyboard by all users.
2. A seamless user workflow, which triggered users to do their role automatically.
3. A colored graphical representation of patient queues and service queues (service here being laboratory, x-ray, pharmacy, etc.).
4. An easy to use reporting facilities based on user privileges.
5. A monitoring and control tool for privileged staff members providing them with a bird’s eye view of the status at the different sites.

## **Different Views**

Stakeholders had different views pertaining to the requirement, the involvement of others, the overall objectives, and the points that could be scored from such a case. There were other parameters relating to risks involved and stakeholders were striving to isolate themselves from risks such as failure to deliver. The section below addresses the different views applying the Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis technique and, understandably, one could argue that this case is based on an internal implementation; hence, SWOT would be rather restricted with limitations applicable to the organization. This is true but SWOT was used to establish some common grounds for the different view of the stakeholders. This common ground enabled the project manager oversee some of the hurdles that would be encountered with different flavors (depending on the stakeholder’s view).

## **IT Management Point of View**

That project was a golden opportunity for IT management to assign a few graduates to the project. This would give these graduates the opportunity to enhance their skills in a number of areas such

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