Chapter XXI

The Clinical Information System:
A Case of Misleading Design Decisions

Gurpreet Dhillon
Cranfield School of Management, UK

ABSTRACT

The case study described in this chapter concerns the introduction of a new computer based integrated Clinical Information System (CIS) into a British National Health Services Trust-the Sunrise Trust. At the time of the study most of the system modules had been developed and were being tested largely for technical aspects. The system was being introduced during a period when the organization was experiencing significant changes. It was an environment where new structures were being created and the existing ones changed. Indeed, the case study was selected primarily because of these factors. The analysis of these structures, formal and informal, provides insight into the management of information systems. Various stakeholders in the Hospital Trust felt that a computer based information system would facilitate the change process. However the analysis and design of the system posed its own problems. The system turned out to be inflexible with respect to the core health care delivery process. It was also non-responsive to the needs of the key stakeholders. Analysis of the case shows that clearly the formal methods adopted by the system analysts fell short of determining the rapid changes required for care. In particular this was an important issue, since the context of the British National Health Services posed pressures on individual trusts to be cost

effective. This resulted in long term patients being moved out into the community. However, this richness in the context was overlooked by the analysts. They developed "logical" models of the system, which ended up in being "tidy pictures of reality" and were prescriptive and utterly inflexible. Structured Systems Analysis and Design Method (SSADM) was used as a modelling tool, which amplified the rational view of decision making and information technology (IT) applications (for more details on SSADM see Downs et al., 1988). The interpretations identified in the case show a clear mis-match between the formal models and perceptions of the system users who inevitably reflect a more informal and pragmatic approach to their own organizational realities. The analysis of the case poses a number of interesting issues. It questions the relationship between the complexity of the social relations and systems design. Furthermore it brings to the fore the paradoxical viewpoints of different stakeholders and the emergent concerns for a system analyst. The chapter also identifies the impact of an "over-formalized" information system on the integrity of an organization. In doing so it evaluates the nature and significance of social power structures in systems analysis, design and implementation.

BACKGROUND

In order to gain an understanding of the wider context of organizational events and actions, it is necessary to evaluate the environment of the Trust. This is because organizational processes, structures and information systems have largely been determined by the wider contextual changes in the British NHS.

The changes in the organization of the British NHS prompted by the Griffiths report of 1983 and the Community Care Act (1990), have inspired the NHS Management Executive and the individual Hospital Trusts to reassess their information needs. These have, to a very large extent, been determined by the introduction of general management principles. Apart from matters of firm leadership and corporate structure, the question of controlling the cost and quality of the service came to the fore. This also meant that the new managers had to know what they were doing and also to have more power and control over the resources. Crucial to improved organizational performance was the need for better NHS information.

There was however a problem in judging organizational performance. Though most of the managers had the best motives, few understood the "product" itself. Consequently there was a lopsided emphasis on maintaining the efficiency of the health care delivery process as opposed to quality considerations. The health service therefore saw an increased demand for information. As Scrivens (1987) notes:

The greed of the NHS for information has grown rapidly in the last decade because of increased pressures from the central government to increase the accountability of the service in its use of public money, to rationalize its resource allocation procedures and to maximize value for money. Recent changes in the management style of the NHS towards general management have increased further the desire for more information about the running of the health care service. The information needs of the NHS are closely related to its concerns about limited resources, increased demand for services and a lack of management in the past. (147)

13 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/clinical-information-system/6297

Related Content

Operational Risk Management in Third Party Logistics (3PL)
Diego Fernando Manotas-Duque, Juan Carlos Osorio-Gómezand Leonardo Rivera (2018).
Global Business Expansion: Concepts, Methodologies, Tools, and Applications (pp. 676-698).
www.irma-international.org/chapter/operational-risk-management-in-third-party-logistics-3pl/202241

International Cooperation in Development: The Need for a Multidimensional Normative Approach
Henk Jochemsenand Corné J. Rademaker (2019). *The Normative Nature of Social Practices and Ethics in Professional Environments (pp. 250-276).*
www.irma-international.org/chapter/international-cooperation-in-development/225316

Creating an IO Capable Organization: Mapping the Mindset
Bjørn-Emil Madsen, Lisbeth Hanssonand Jan Eivind Danielsen (2013). *Integrated Operations in the Oil and Gas Industry: Sustainability and Capability Development (pp. 40-58).*
www.irma-international.org/chapter/creating-capable-organization/68708

Optimizing Series Repairable Systems with Imperfect Repair
Mohammed Hajeeh (2011). *International Journal of Operations Research and Information Systems (pp. 92-102).*
www.irma-international.org/article/optimizing-series-repairable-systems-imperfect/53471

The Impact of Culture on Workplace Conflict in the Caribbean
Susan Scott (2012). *Cultural Variations and Business Performance: Contemporary Globalism (pp. 292-306).*
www.irma-international.org/chapter/impact-culture-workplace-conflict-caribbean/63923