A Case Study On Inter-Organizational Systems and Power

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INTRODUCTION

The objective of this article is to show by means of a case study how attempts to develop and implement inter-organizational systems (IOS) can be perceived as power battles, reflections of interests of stakeholders and struggles for domination. The paper shows that IOS is not simply a technical and rational solution but that it involves political processes of articulating interests, building alliances and struggling over outcomes. These issues will be examined through an empirical study of a project to introduce an electronic patient file (EPF) system in The Netherlands. We will seek to expand our knowledge of how inter-organizational systems impact relations among organizations and individuals who use these systems and how such systems affect the division of power inside and between organizations. Such knowledge can be useful when applying an analysis of power during the process of the design and implementation of IOS, which can help managers to implement IOS more effectively.

BACKGROUND

Inter-organizational systems (IOS) are systems based on IT, which cross organizational boundaries and facilitate the electronic exchange of information directly between computer systems (Golden & Powell, 2004). Especially since the rise of the Internet, the implementation of inter-organizational systems has become much easier from a technical point of view. From almost any physical location it is technically possible to enter orders, to retrieve data and—by doing so—conduct business transactions between firms. According to a large number of reviewers, systems which enable such a data exchange between firms, so called inter-organizational systems, may lead to completely different business processes, organization structures and ways to collaborate and to compete. Because of the linkage of information systems to separate organizations, changes in the relationships between competing and collaborating organizations may arise. This may lead to an increase in data sharing and collaboration: technological integration will result in inter-organizational integration. Consequently, autonomy of certain stakeholders within the chain of health care will be reduced, which will be welcomed by some parties, but resisted by others (Cummings et al., 2000; Dhillon, 2003; Boonstra et al., 2005; Daniel et al., 2005).

INTER-ORGANIZATIONAL SYSTEMS TO SHARE PATIENT FILES

In The Netherlands, as in many other countries, the different providers of health care have no online access to each other's patient records. Such an access can be important in various situations, for example (Ernst & Young, 2003):

- During clinical care, medical specialists in hospitals need full insight into patient records.
- When patients leave the hospital, pharmacies and GPs need medical information from the hospital to complete their own files.
- When patients visit hospitals for outpatient care, the hospital and the pharmacist need patients' information from GPs.
- During evenings and weekends, providers of health care need access to medical records of patients.

In all these situations there is a need for reliable, complete and consistent information about the relevant medical history, allergies, drug use and other data. If one has no accurate view of this information there is a danger of error, medical complications and, some-

times, even death. A recent report of the Inspection of Health Care reported that only 7% of the evening and weekend doctors have full access to the medical files of patients. In The Netherlands, each year, more than 12,000 hospital admissions are related to undesired effects of drugs caused by wrongful drug prescriptions. In more than 700 cases this leads to the death of the patient. Examples of such errors are the prescription of conflicting medicines or errors resulting from the lack of knowledge of the medical history of patients. At the present moment, some physicians in hospitals simply ask their patients to bring all the packages of their drugs with them in order to obtain an overview of their drug use.

Because of this problem, the need to exchange patient records among GPs, pharmacies and hospitals is urgent. Nearly all experts agree that it is in the interest of society in general and patients in particular that they are treated by people who have access to one consistent medical record which covers all medical data, including information from the laboratory, radiology, pharmacy and GPs. However, it is also emphasized that such a consistent and available electronic patient file (EPF) is a very important factor in the solution to this problem, but not the only one. Other improvements can be achieved by designing and implementing better procedures of drugs provision and by improving the pharmaceutical expertise of doctors.

In different regions of the country certain parties are taking initiatives to develop an unambiguous medical patient file and make it electronically available to all relevant parties. Various stakeholders play a role in these activities, including large hospitals, pharmacies, representatives of general practitioners, nursing homes, and large insurers (Pouloudi, 1999). Moreover, vendors of software and hardware, such as suppliers of Hospital Information Systems, as well as vendors of information systems supplying general practitioners try to influence this development by offering products that facilitate providers of health care to share medical information about patients. Despite the efforts of all these parties to establish a joint medical record of patients, progress in this field is very slow and cumbersome. Not every stakeholder seems to have an equal interest in solutions that contribute to a transparent and easy exchange of information.

Figure 1 shows the most immediate stakeholders around the EPF. These immediate stakeholders are the organizations that are the prospective users of the system. The figure shows that stakeholders consist of several individuals or units that may have different perceptions of the same system.

Since there are many stakeholders who are not actual users of the system, a large number of them have a more indirect role. Patients, insurers, vendors of systems, or government agencies are all highly relevant parties which may try to influence the decision-making process around this IOS (Pouloudi et al., 1997; Hickson et al., 1986). To keep this article focused, we will mainly study the position and perceptions of the most direct stakeholders.

Figure 1. Immediate stakeholders of a proposed electronic patient file