

A NEW ROLE FOR THE IT DEPARTMENT IN GREEK HOSPITALS

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Abstract

Low ICT penetration in public Greek hospitals represents a significant barrier in delivering high quality and cost effective healthcare services. The Greek Ministry of Health and Welfare adopted a six-year strategic plan for the promotion of Information Society in the Healthcare Sector with the ambition to overcome this barrier. Taking into account, the shortage of qualified IT staff, the inherent complexity of Hospital Information Systems and the difficulty to keep up with ICT advancements, outsourcing hospital's IT functions seems to be the only viable solution. In this context, the role of hospital's IT department needs to be redefined towards strategic information systems planning and control rather than systems support. This paper describes the current situation of hospitals' IT departments and presents a proposed organizational scheme in order to meet the needs of an evolving healthcare environment.

Introduction

Information and Communication Technologies (ICT) provide a unique opportunity for a more efficient delivery of high quality and cost effective healthcare services. Healthcare sector has lagged behind other sectors in its use of ICT for many reasons (e.g. complex nature of medical data). The Greek Ministry of Health and Welfare adopted a six-year strategic plan for the promotion of Information Society in the Healthcare Sector with the ambition to overcome the low ICT penetration in public Greek hospitals [Vagelatos et al., 2002].

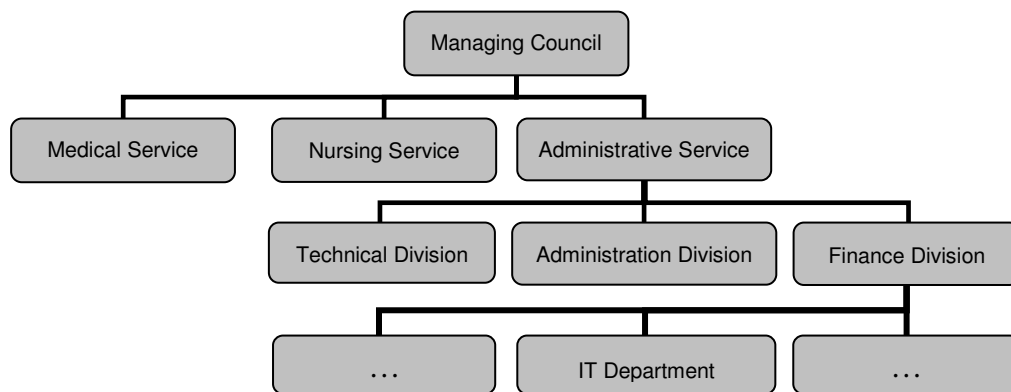
The difficulty to keep up with ICT advancements coupled with the shortage of qualified Information Technology (IT) staff in the Greek state hospitals and the inherent complexity of Hospital Information Systems (HIS) drives more outsourcing in the IT area [Zacharilla, 1999]. In this context, the current role of hospital's IT department needs to be redefined towards strategic information systems planning and control rather than systems support [Johansson et al., 2001, Hagland, 2000]. Hence, there is a need for a radical organizational change in the hospital's structure and a reorganization of IT department's internal structure in order to reflect the importance of IT in improving hospital's overall operation and services. This paper describes the current organizational structure and responsibilities of the Greek state

hospitals' IT department and presents a new organizational scheme and role for the IT department in order to meet the needs of an evolving healthcare environment.

Greek State Hospitals' IT Department

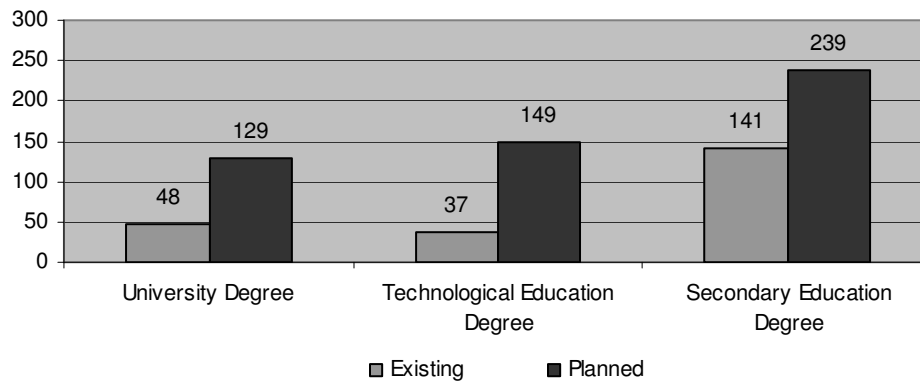
Currently, the IT department of a general Greek state hospital reports to the Finance Division of the Administrative Service as it is shown in Figure 1 and its role is confined to provide “traditional” IT services (i.e. network and systems support). The IT department's current position in the hospital's organization chart introduces a lot of bureaucracy and limits its involvement in the decision making process. Its responsibilities are constrained to daily bureaucratic and time consuming procedures, supporting and maintaining legacy systems and even offering data entry and secretarial services.

Figure 1: Organization chart of a typical Greek state hospital



In addition, most of the Greek state hospitals IT departments today are understaffed, as it was revealed from the survey conducted in 2001 by Research Academic Computer Technology Institute (R.A.C.T.I. was the Technical Consultant of the Greek Ministry of Health and Welfare – GMOHAW regarding IT for the period from 1997 till 2002). The survey showed that in 112 state hospitals (in a total of 132), there were only 48 IT employees with a university degree, 37 employees with a technological education degree and 141 with a secondary education degree, as shown in Figure2 [Vagelatos et al., 2002]. Moreover, it was evident that there was a poor proportion of, in many cases, underskilled IT staff to the total volume of hospitals' potential IT users (15,000 physicians, 25,000 nursing personnel and almost 14,000 administrative staff).

Figure 2: IT human resources distribution by educational background



In the above business framework, issues of high importance such as those introduced by the inherent complexity of HIS, the IT professional's need to keep up with ICT advancements and the urgent demand for extensive user training and support are easily overlooked. Moreover, the most important drawback of the current situation is an IT department that it is unable to manage change and respond in today's major challenge of planning and delivering a coherent e-health strategy in hospital's business environment.

The Greek Health Care System's Reform

A major reform in the Greek healthcare sector has started since 2000 aiming at the overall improvement of the National Healthcare System [Theodorou, 2002]. A fundamental change in the administration of the National Healthcare System (NHS) was the creation of 17 autonomous health districts each one supervising all healthcare organizations (i.e. hospitals, health centers) that reside within its boundaries.

Recognising the important role of IT in reform's success GMOHAW set forth a six – year strategic IT plan (conducted by R.A.C.T.I and accepted at April 2001) in order to improve the National Healthcare Information Infrastructure and to promote e-health within the Greek NHS. Shortage of qualified IT professionals within the Greek Healthcare System was a key problem to be settled towards the implementation phase. Outsourcing certain IT functions [58-61, Sarivougioukas, J., Vagelatos, A., 2002], which is already under serious consideration, seems to be a viable solution but it has to be followed by a significant reorganization of the IT department as well as the reshaping of its role in order to be able to cope with the new demands.

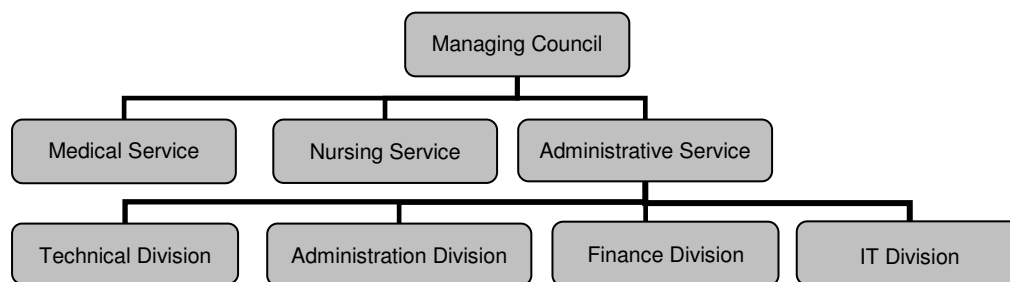
A new Role of the Hospitals' IT Department

Considering the situation, as was described in the previous sections, it is obvious that radical organizational change in hospital's structure is needed, regarding the IT department. This change should reflect the

importance of IT in improving hospital's operation and services, "promoting" the Chief Information Officer (CIO) as one of the key decision makers in hospital's business hierarchy and also the "transformation" of the current IT department towards planning, management and control of HIS rather than user support and equipment maintenance [Hagland, 2000].

In the above context, the IT department should constitute a separate division under hospital's Administrative Service as shown in Figure 3. This will be an important step that will enhance the CIO's ability to communicate strategic IT plans directly with hospital's management and also receiving immediate feedback about any plans altering current business processes supported by Information Systems. It could also eliminate common deficiencies such as inadequate budget allocation for information system support, lack of active participation in hospital personnel training programs and/or non-informed management decisions due to poor knowledge of ICT potentials and limitations.

Figure 3: Proposed organization chart regarding the IT Division of typical Greek state hospital



Other changes in hospital-wide level mainly imposed from current ICT trends should also be considered. Technological advancements should lead to a shift of responsibilities towards the IT division (i.e in most Greek hospitals telephony and PBX support is a responsibility of the Technical Division. Taking into account network technologies convergence this obviously should not be the case in the near future). In addition, a major reorganization should take place at the internal structure of the IT division. The new internal structure should reflect the advanced role and importance of the division, the nature of ICT services provided, as well as the required staff skills and responsibilities to meet the new demands [State of Iowa, 2000].

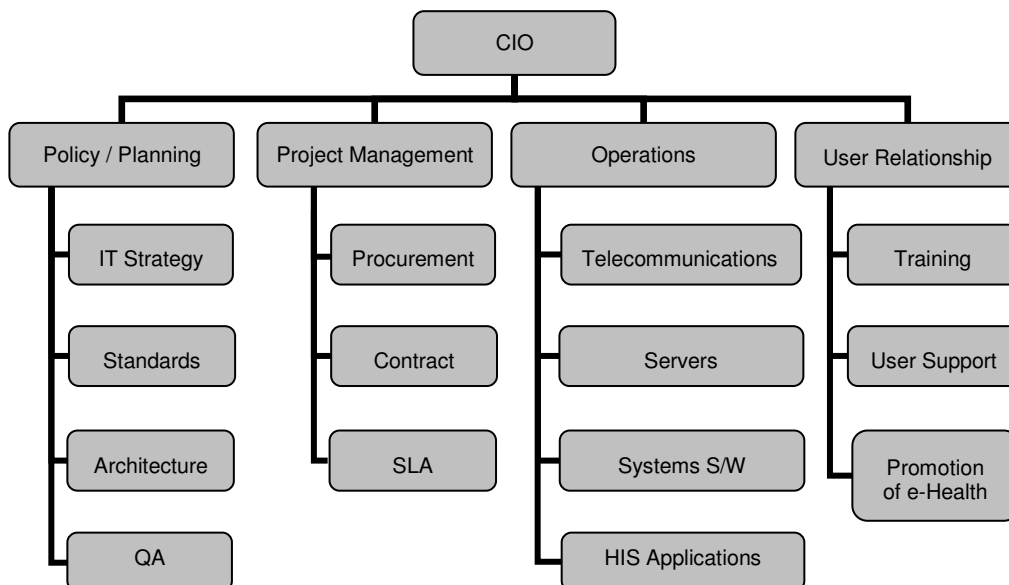
The proposed IT division internal structure may comprise the following organizational units as shown in Figure 4:

- *Policy and Planning Department*, which should be responsible of hospital's IT policy and strategic planning. The main purpose of the department is the continuous alignment of Hospital's IT strategy regarding architecture, security (especially in relation to Greek legislation for the protection of Sensitive Personal Data), standards and guidelines and IT procurement services. The

department should also provide Quality Assurance services to the IT Division for all IT-related projects

- *Project Management Department*, responsible for IT projects management as well as contract and SLA management services.
- *Operations Department*, which should be responsible for the provision of IT services regarding the hospitals IT infrastructure (telecommunications, server systems and centrally managed hospital applications).
- *Users Relationship Management Department*, which should be responsible for bridging the gap between end-users and IT providing training services, application support and continues promotion of the role of IT in hospital.

Figure 4: Proposed IT division internal organization



This proposal should be considered as a “core” structure. Variations can occur depending of hospital’s size, nature and other special circumstances (i.e. it would be very useful for University Hospitals to have a separate department for IT Innovation responsible to explore the use of IT via short pilots to test viability of the integration of new technologies in hospitals business functions). Another aspect to be considered, within the proposed framework, is the establishment of an appropriate Human Resources recruitment and retention policy in order to properly address the necessary IT professional skills shift [e-Europe GoDigital, 2002].

Conclusions

Healthcare organizations move into the new century and face the challenges of e-business, systems integration and strategic business planning. In turn, current role of IT departments is forced to change in order to tackle the healthcare’s evolving roles. In order to meet this

objective, a new role for the Greek hospitals' IT department is presented in this paper. The proposed scheme comprises organizational change in hospital's structure and reorganization of the IT department's internal structure in order to reflect its advanced role and importance.

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