Volume 2 / Issue 3 2007 - Features

Transiting Hospitals from Past to Future

Author

Rainer Harpf

aHnderwig Wetzlinger.

Like other countries in Europe, the Austrian hospital and healthcare system faces a period of rapid change, accompanied by a host of new and sometimes-unfamiliar challenges. Managers are being compelled to rethink strategy and policies as a result of changes in the healthcare environment. These, in turn, have been catalysed by market and technological developments, the pressures of an aging population, discussions on healthcare outcomes and quality of care as well as limited financial resources.

In the future, strategic management will be a sine qua non for all hospitals. This applies in particular to IT.

Obsolete, Heterogeneous Legacy

Until the year 2000, somewhat-obsolete IT systems constituted the bulk of the infrastructure ot the Carinthian hospital system. There was no master plan for IT development. As a result, many solutions evolved in isolation, making further development difficult or, in some cases, impossible.

Due to the diversity of IT sub-structures, there were neither uniform standards nor comprehensive crosshospital cooperation. The running of hospital IT systems could thus only be maintained with relatively high financial costs and not a little human ingenuity. More crucially, stability of the IT systems began to pose growing challenges, especially in the face of a steep rise in the amount of data generated.

Against this backdrop, an integrated IT strategy was defined for the first time in 2001. This covered all aspects of infrastructure, applications as well as the contours of IT organisation. It was backed up with concrete plans for action. Implementation of the new strategy began immediately.

The Current Situation, Future-Proofing

Based on the integrated IT strategy, a large number of projects have been carried out. Their aim has been to provide optimal IT support across the entire hospital activity chain and refocus on the field of medicine and healthcare delivery, in spite of growing legal and administrative demands.

These have resulted in the KABEG group becoming a modern enterprise with state-of-the-art technology.

Today, new technologies are helping to reduce process costs further while guaranteeing the fast and effective processing and management of greatly increasing amounts of data. Due to the forward-looking elements of the integrated IT strategy, such a trend is also expected to continue in the future.

Streamlining the Organisation

In the past, there were five independent IT departments at Carinthia's provincial hospitals. In 2004, a new organisation was established to more efficiently fulfil their IT requirements.

KABEG IT, as it was christened, replaced the previous orientation towards individual hospitals and specialist fields by comprehensive task assignment. An internal organisation thus came into being, providing services for all KABEG hospitals in the form of a Competence Centre. The overriding aim was to deploy existing staff and resources in the most optimal manner and guarantee scale and synergies for the internal transfer of knowhow.

IT Infrastructure and Applications

The basis for a robust and efficient information technology architecture of course lies in the IT infrastructure. In order to create a stable, secure and extensible IT infrastructure in consonance with the philosophy and practical requirements of the reformed organisation, the entire IT hardware architecture of the KABEG hospitals was renewed and modernised. In addition, its system architecture was standardised, making it possible to optimise the overall IT operation. During the process, a modern storage management was also introduced. This, on the one hand, has permitted coping with the increasing demands for data protection/security and, on the other, to seamlessly enable management of the fastgrowing volume of data itself. From the applications point of view, a standard accounting system was implemented on SAP R/3. This covers a wide range of functions, ranging from medicinal requirements and catering management to the classical areas of business operations and enterprise management. As a result, the entire process, from the requirements at the ward level up to commodity management and logistics, is now fully electronic and without interfaces.
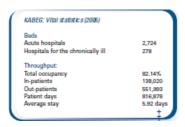
Meanwhile, a uniform Picture Archiving and Communication System (PACS) has also been introduced at all hospitals and the laboratory information software (LIS) consolidated. A new hospital information system (HIS), the core system of every healthcare provider, has also been implemented at the largest hospital, LKH Klagenfurt.

Far-reaching measures have also been undertaken in the area of telemedicine. At the moment, teleradiology, telepathology and teleconsultation are all in successful operation, alongside a Carinthian-wide central patient index. The secure electronic dispatch of medical results, coupled to an electronic image data platform, enables information to be exchanged rapidly with general practitioners. This, of course, helps reduce process costs as well as overheads such as postage, paper, visual material etc.

Looking Ahead: Building an Ultra-Modern Hospital

In terms of buildings and physical infastructure, LKH Klagenfurt is divided into so-called pavilions and extends over an area of several hectares. The result is that the organisation is decentralised, the logistics costly and the overall structures somewhat less than optimal.

By the late 1990s, it was becoming evident that the continued operation of the LKH Klagenfurt would exceed financial targets. As a result, the hospital authorities and the KABEG supervisory board began planning a new hospital. In the year 2000, a master-plan for the renewal of LKH Klagenfurt – both on the constructural and organisational sides – was agreed upon. The eventual aim is to create one of Europe's most modern health centres, whose reach would extend far beyond Austria's borders into Italy and Slovenia. The master-plan envisages health provision to the highest standards with state-of-the-art medical structures and high-efficiency operational procedures bringing forth a massive reduction in running costs.

KABEG: Vital statistics (2005)	
Beds	
Acute hospitals	2,724
Hospitals for the chronically ill	278
Throughput:	
Total occupancy	82.14%
In-patients	138,020
Out-patients	551,993
Patient days	816,878
Average stay	5.92 days

Of course, such a vision also bears directly on the operational procedures of the IT system. New processes and organisational procedures have entailed adapting and streamlining the IT structures still further. For this reason, a new integrated IT strategy was adopted at the beginning of 2007.

In such a context, our concerns have not been limited to simply rebuilding LKH Klagenfurt, but also taking account of new realities such as mounting cost pressures, limited human resources, increased demand for mobility, the Austria-wide initiative for introducing an electronic patient record (EPR) as well as the interests of the owners.

In future, it is clear that comprehensive medical care should be delivered as directly as possible to the patients - in their sick-beds, or via telemedicine to their homes – and IT will no doubt be integral to make this happen.

Integrated IT Strategy 2007

The new IT strategy is fully coordinated with business strategy. All future operational procedures in medicine and nursing care will have an immediate impact on the organisation of the IT system. For example, the introduction of medical centres also impacts on clinical and nursing care processes, given the need for streamlining procedures, shortening distances and bringing medical care to the patient.

The IT Competence Centre of KABEG will concentrate fully and purposefully on core processes and core applications, while peripheral areas will be subject to a carefully pre-planned and calibrated outsourcing system. Core areas include PACS (picture archiving and communication system), KIS (clinical information system), EPD (electronic nursing care documentation) and the LIS (laboratory information system). Also included are application support and further development of SAP R/3 . On the other hand, the Call Desk and Field Support are areas which can be outsourced.

As far as infrastructure is concerned, full and comprehensive coverage of wireless LANs, IP Telephony and Thin Clients is being introduced in all hospitals to meet demands for greater mobility. The data centres are being consolidated further, while Terminal Server technology is being applied more extensively.

In future, all applications will be made available directly at the patients' bedsite, while a robust Identity Management system will provide optimal workflow procedures notwithstanding the highest levels of data security. New technologies such as radio frequency identification (RFID) are also being introduced. So too is a driver-less transport system; controlled electronically via wireless- LAN, this is expected to result in an optimisation of logistics.

The new IT strategy extends to all hospitals of KABEG. The benefits are dual-edged. On the one hand, while uniformity and homogeneity are guaranteed across the group, smaller hospitals will profit enormously from the scale and other advantages of streamlined new organisational structures and processes.

However, in the final analysis, it is going to be implementation, which will be the cornerstone of the new IT strategy – just as it has in previous years. For this, it is essential to have good, and above all, motivated employees, both in the IT field and in the medical and nursing care areas.

Besides such IT-related considerations, it is in particular, in the field and the real world where KABEG has sought to envision and take concrete measures. These are already bearing fruit today and will make KABEG a modern, flexible and competitive enterprise on the healthcare market.

The KABEG Training Centre

In summer 1993, well before the term cross-disciplinary came into fashion at business schools, KABEG established an inter-hospital Training Centre, as part of the restructuring programme then under way.

The Training Centre provides not only holistic, cross-disciplinary training, but also specialist courses and continuing education for its staff (and occasionally, for those from other provinces in Austria). Towards this, it works in conjunction with a variety of other extra-mural healthcare bodies in Carinthia.

The Centre's over-riding aim is to maintain the quality of professional care and healthcare management at the highest possible levels, and also keep these up-to-date in an ever changing environment.

Published on : Mon, 31 Dec 2007