

# **Leveraging IT and a Business Network By A Small Medical Practice**

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## **EXECUTIVE SUMMARY**

Although many medical information technologies require significant financial investment and are often out of reach of small medical practices, it is possible through careful alignment of IT and customer strategy, together with a network of strategic alliances to exploit IT effectively. In this case we present a small cardiology consultancy that has engaged in strategic planning in its attempt to leverage IT expertise to attain competitive advantage. We propose that through a network of alliances, a relatively small medical enterprise can benefit from its limited IT investment. The case study indicates the importance of a team of champions with both IT and medical knowledge and the notion of mutual benefit. We also discuss some of the issues faced by all participants in this alliance relationship.

The objectives of this case are to provide readers the opportunity to:

1. Discuss how a small medical practice can leverage skills, expertise and opportunities within a strategic alliance to enhance its competitive advantage without heavy up-front financial investments.
2. Explore how small businesses in the professional and knowledge-based industry can gain strategic advantage through IT.
3. Understand the pros and cons of strategic alliances and potential issues related to building trust, consolidating relationships among members and risk management of such alliances on an ongoing basis.
4. Think about the plausibility of business transformation by moving from one industry (specialised cardiology services) to another (medical informatics).

## **BACKGROUND**

Although specialised cardiologist was often considered a fairly exclusive profession, it was not without competition. In specialised medical consultancies, medical technology was playing an

increasingly critical role in determining the future success of their operations. Across all dimensions of health care, technology held the promise of enabling clinicians to provide more accurate diagnosis and engage more effectively in the clinical process (Achrol, 1997; Slack, 1997; van Bommel and Musen, 1997). In addition to medical technology, information technology (IT) had also become an important support for medical professionals to be more effective. IT applications in the medical field varied greatly in their diversity, with the most commonly seen being office information systems (Collen, 1995). Such systems helped to achieve effective information management in hospitals, clinics and other medical establishments. Based on the principles of management information systems, office information systems could support effective retrieval and cross-referencing of medical records including patient histories, past treatments, prescriptions among other functions. Although playing an important role, these systems often worked in isolation and were not effectively integrated with other medical and clinical technologies to support better decision-making (Slack, 1997). Additionally, significant investment in cost and effort must also be made in the purchase/development of IT infrastructure, its deployment, maintenance and administration (Charvet-Protat and Thorat, 1998; Lock, 1996; Staggers and Repko, 1996).

In general, a small medical practice<sup>1</sup> faces the challenge of many small-and-medium enterprises (SMEs): it did not have the resources or financing of a large enterprise to enable it to enjoy expansion and compete at will (Eden et al., 1997). Thus, while IT was a powerful tool, it could also be a significant burden to invest in IT and related technology when there was insufficient business volume to justify the investment. However, despite its cost, IT could be the fulcrum upon which the SME's competitive advantage was leveraged. Some examples of IT as leverage: (a) human resource: an alternative to hiring additional administrative staff was to let staff perform their own scheduling supported by commonly accessible group diaries; (b) time management: electronic questionnaires could be used to elicit information from patients prior to consultation, enabling clinicians to focus on key diagnoses and reducing the pressure of increasingly limited consultation times; (c) patient management: electronic systems could reach out to the home of the patient to further improve the clinical management process and empower the patient; and (d) customer service: there could be enhanced service to customers by clinicians, providing more timely and informative diagnoses, and access to records and information.

## SETTING THE STAGE

Coupled with the advances in medical imaging, bioinformatics and advanced diagnosis techniques (van Bommel and Musen, 1997), there was vast potential for IT to further enhance the quality of health care and deliver medical services to the patient on-demand, independent of location and time (Mitchell, 1999). In order to achieve this vision, it was essential to have a strategy to effectively integrate the various aspects of health informatics such as information management, diagnostic technology and patient management among others. Figure 1 illustrates a conceptual framework of how these components come together.

In the following sections, we present the case of a small medical practice specialising in echocardiology that had created a strategic vision that integrated health services, technology, and marketing – fuelled by the use of IT and medical technologies, coupled with an innovative and entrepreneurial mindset. By considering the medical practice as a service entity that was driven by knowledge as its primary resource, this cardiology practice had embraced an IT and also in the future a knowledge management (KM) infrastructure as a competitive tool to achieve its strategic objectives. In doing so, it had encountered challenges as a function of its size – and sought to overcome them while retaining the flexibility and advantages of being a small enterprise.

## CASE DESCRIPTION

Eastern Cardiology Services (ECS)<sup>2</sup> was established in 1997 by Dr. Jeff Curtin, a cardiology specialist with expertise in the subspecialty of echocardiography. After working in the U.S. for over

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