# St. Luke's University Health Network:
## Strategic Use of Health Information Technology

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## EXECUTIVE SUMMARY

*The VP and CIO of St. Luke's University Health Network wants to ensure that IT is a partner with the business in enabling new health care delivery models while controlling rapidly increasing costs. They face the challenge of maintaining existing resources while keeping up with rapid advances in information technology that provide opportunities to transform health care delivery. The VP/CIO wants to insure that new applications are in line with the strategic objectives of the health network. Instituting appropriate project management and governance strategies are critical to achieving this goal as is educating the business users on the role of information systems in health care today.*

*Keywords:* *Business Case, Governance, Health Information Technology (Health IT), Information Technology Strategy (IT Strategy), Project Management*

## ORGANIZATIONAL BACKGROUND

St. Luke's University Health Network is a regional network of hospitals, physicians and other related organizations providing health care in eight counties in eastern Pennsylvania and one county in western New Jersey. It was originally founded in 1872 to care for the workers at the steel foundries in Bethlehem, Pennsylvania. The network today is comprised of:

- Five hospitals,
- Visiting Nurses Association,
- Hospice (inpatient and outpatient),
- Retail Pharmacy,
- Outpatient clinics (more than 150),
- Physician ambulatory practice sites (more than 80),
- Nursing school,
- Medical school (in collaboration with Temple University School of Medicine).

More detail about these facilities is listed in Appendix A. The network changed its name from St. Luke's Hospital and Health Network in February 2012 to reflect its emphasis on educating new health professionals. The medical school began training its first group of students in 2011 and is the first and only regional medical school campus in the Lehigh Valley. The network recently also opened its newest hospital,

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a 256,000 square foot, full service medical facility on November 14, 2011.

The network annually handles more than 42,000 admissions and 150,000 emergency room visits. The region's second largest employer, St Luke's employs more than 7000 people, with 1200 volunteers and 1200 physicians on the medical staff. The network is dedicated to providing patients and visitors with excellent quality clinical care delivered with outstanding customer service. Appendix B summarizes their strategic focus which has five key elements: people and relationships, simplicity, integrity, quality, and cost. They have received several recent recognitions including top 50 cardio hospital from Thomson Reuters and Pennsylvania Commission on Cancer Outstanding Achievement Award.

Appendix C (Figure 1) shows their organization structure.

## SETTING THE STAGE

### Health Information Technology (HIT)

Health IT has the potential to fundamentally transform almost every aspect of health services (Agarwal, Gao, DesRoches, & Jha, 2010). The importance of health IT for improving care quality and safety was established in the Institute of Medicine's report "Crossing the Quality Chasm" (Committee on the Quality of Health Care in America, 2001). The U.S. government has provided strong support for broad diffusion of health IT. In 2004 the Office of the National Coordinator for Health Information Technology (ONC) was created within the U.S. Department of Health and Human Services to support creation of standards with the goal of a national health information infrastructure. In 2009 the Health Information Technology for Economic and Clinical Health (HITECH) Act provided $2 billion to facilitate adoption and meaningful use of heath IT and designated $27 billion to the Center for Medicare and Medicaid Services to distribute incentive payments for HIT adoption (Health Research Institute, 2009).

Electronic health records, health information exchange, business intelligence, collaboration tools, and consumer health applications offer competitive opportunities. Yet adoption has been very slow. For example, in 2009, it was estimated that less than 10% of office based practices were utilizing fully functional electronic records systems with 20% using a basic system (Hsiao et al., 2009). In 2009, less than 12% of hospitals had adopted either basic or comprehensive electronic records (Jha, DesRoches, Kralovec, & Joshi, 2010). Health information exchange is only taking place in a tiny fraction of communities in the U.S., and even those efforts exchange only a subset of patient data (Adler-Milstein & Bates, 2010).

Adoption of these systems require significant business transformation, requiring health networks to ensure that they are appropriately aligning their IT and business strategies. The majority of health IT initiatives involve or require change in organizational processes and structures or in the roles of individuals or services provided by the organization (Glaser & Salzberg, 2011). Relationships, communication patterns, and culture may also require significant change.

New technologies such as cloud computing and mobile applications provide new possibilities for information management and application. Other emerging trends in healthcare information technology including biometrics, RFID, tablet computers, virtualization, and artificial intelligence will need to be critically appraised (Hoyt, Cruz, & Trotter, 2010). Health networks must evaluate these new opportunities while managing existing infrastructures to ensure high quality and cost effective care. Many of these technologies are high cost, and compete with many other business opportunities such as expanding services or upgrading facilities.

Healthcare administration has been slow to adopt health and business IT solutions in healthcare, primarily due to challenges with return on investment. Traditionally, healthcare