



BUSINESS TRANSFORMATION ASSESSMENTS FOR HEALTHCARE

APPLICATION NOTE



Healthcare IT departments are stretched to the limit. New regulations, applications, devices and a highly demanding clientele make it hard for healthcare IT departments to prioritize existing projects, achieve long term executive objectives and take time to listen to their user community – there’s just too much work to do and not enough time to do it.

PVA’s Business Transformation Assessment (BTA) is a process that helps healthcare IT departments collect feedback from end users, prioritize their needs, align those needs with corporate objectives and build a multi-year technology roadmap to address them.

The Business Transformation Assessment (BTA) is intended to gather inputs (through interviews, group meetings, job shadowing) from stakeholders across the organization (clinical, non-clinical, executive and working-level) in order to gather a comprehensive view of the various objectives and challenges with communication. These observations are then used to create a strategic roadmap.

Driving the thinking behind the Business Transformation Assessment is Alcatel-Lucent’s Connected Hospital Reference Model. The Connected Hospital Reference Model was created using Alcatel-Lucent’s experience with hospital customers from around the world. These customers have successfully leveraged communications infrastructure to improve outcomes, increase operational effectiveness and prepare for a healthcare environment where electronic health records and imaging and medical collaboration play a significant role in their healthcare workflow. These practice areas represent a clustering of technologies, platforms and applications that address key system attributes. We use this reference model as a tool to consider the entire ecosystem of systems that leading healthcare customers require in an environment of patient-centric healthcare.

Figure 1. The Connected Hospital Reference Model

CONNECTIVITY ENABLEMENT PRACTICE	IN-BUILDING WIRELESS PRACTICE	REACHABILITY SERVICES PRACTICE	PATIENT SERVICE DESIGN PRACTICE
<p>Exploring design and deployment options for data centers, metro area networks and local area networks</p> <ul style="list-style-type: none"> • Metro area networking (optics, IP/MPLS, uWave) • Medical LANs • Data center fabric • Data center connectivity • GNOC 	<p>Navigating the wireless jungle to provide ubiquitous connectivity regardless of device or technology</p> <ul style="list-style-type: none"> • In-building full spectrum wireless assessment service • Wi-Fi deployments for healthcare • Vendor neutral DAS for carrier wireless, pagers, mobile radio 	<p>Connecting patients, care providers, family to one another in real time</p> <ul style="list-style-type: none"> • Nurse call integration with mobile phones • Telemedicine and telenursing • Mass notification • Conferencing and collaboration • Interactive whiteboards 	<p>Provide best in class patient care</p> <ul style="list-style-type: none"> • Digital signage • Multichannel contact centers • Self-serve kiosks • Patient entertainment and diagnostic systems

The attributes represented by the pillars above are:

- **Connectivity Enablement** - Modern healthcare is information-driven. Healthcare providers are making progress in building an integrated profile of patients. This data sits in systems throughout the enterprise and community including the EHR, PACs, and many other electronic systems. Providing fast, reliable and inexpensive access to these systems has become an operational necessity to support both clinical and business objectives. Best practices in Connectivity Services include considerations about how critical patient data is hosted, the capabilities of data networks to allow effective communication between clinical end points (computers, medical devices, handheld devices and the application), and other user needs throughout the enterprise including business applications and support for affiliated clinicians to access hospital

systems. There are many important considerations in Connectivity Enablement but the ability to support application fluent connectivity is crucial to efficient allocation of network resources, otherwise the system will not provide the correct priority to delay sensitive applications like access to the EHRs or voice traffic.

- **In-building Wireless** - represents a potentially powerful enabler for user adoption of EHR, improved communication and facility safety. Many facilities are greatly underestimating the density of wireless devices and their future applications. We consider two distinct wireless networks that exist within a hospital: licensed spectrum (e.g. cellular voice and data, public safety radio) and unlicensed spectrum (e.g. WiFi). These wireless networks represent public services which will be used in the hospital by patients, affiliated physicians and public safety personnel. There will be an expectation (some would argue, need) that these services will work everywhere in the healthcare facility.
- **Reachability** - is the most visible capability of this reference model to the people who work in a hospital. Reachability is at the heart of every healthcare operation. Healthcare workflow is very communication intensive: nurse to patient, nurse to doctor, doctor to family, pharmacy to doctor, etc. With the recent emphasis on the power of the EHR and digital diagnostic tools like PACS, person to person communication often gets overlooked. Normally, the final step in medical decision making hinges on clinicians having complete patient context, and this context requires person-to-person communication. Significant effort is put into reaching the right people in most hospitals. In hospitals, reaching people can be a time sensitive task which requires significant effort. Done well, reachability is a powerful productivity enhancer, allowing people to reach one another effortlessly using whatever means (IM, voice, video) are appropriate to the situation.
- **Patient Services** - focuses on the patient experience before, during and after the patient is hospitalized. Patient and family satisfaction are important factors in an increasingly consumerized healthcare market. The use of the Internet and multichannel contact centers as tools that increase convenience, access to information and better customer service are elements considered to manage the end-to-end experience of a hospital encounter. Consider the challenges of communication between caregivers, patients and their families when people are physically separated and the potential for simple communication capabilities like recorded conference bridges as an aid to improved communication. Hospital rooms have TV service based broadcast-TV-only models and could enable patient education if they leveraged IPTV service models which are being introduced by TV service providers in the patient's home. Guest Internet access is transitioning from a luxury service to a basic requirement at hospitals. As patients and their families carry more smart phones and PCs into the hospital and they become more integrated into everyone's lifestyle, hospitals will no longer be able to deny access to high bandwidth services. These tools represent an opportunity to deliver patient information and gain the support of family members in the transitional care of patients for benefits like reduced re-admittance, etc.

PVA's Business Transformation Assessment methodology is beneficial to healthcare provider IT departments because it:

- Uncovers hidden end-user requirements
- Identifies projects that support long term executive objectives
- Clearly shows the interdependency between projects

PVA delivers the solutions and expertise healthcare providers of all sizes need across the continuum of care delivery. Whether you are a hospital, a hospice, an assisted living facility, a clinic or an imaging center, PVA solutions will help you change the conversation and improve patient outcomes.

Learn more about our solutions and find out how our Business Transformation Assessment services can help you evaluate your current communications environment, uncover hidden requirements and build a roadmap to create a connected hospital with no boundaries and new opportunities.

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