Hospital IT Transformation

How Rural and Community Hospitals Can Identify and Implement New Information Technology Solutions That Align with Business Objectives

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ABSTRACT

Across the country, community hospital leaders see technology as a tool to improve healthcare delivery – especially in rural markets. In fact, technology is proving to be an important tool to enhance quality patient care and improve the financial performance of rural and community hospitals. Unfortunately, the investments required to update and optimize IT can be an ongoing challenge due to limited resources and expertise.

This white paper provides a roadmap for IT transformation, from assessing a hospital's needs to building a framework for IT solutions that support both clinical care and financial success.

Technology Solutions Must Meet Hospital Needs

Clinical Excellence

Strategic IT Solutions

Business Objectives

Cyber Security

INTRODUCTION

A digital transformation is occurring in healthcare that will allow smart devices to monitor patients, hospital-level care to occur at home and physician-directed robotics to deliver precision medicine. Meanwhile, community hospital CEOs with limited budgets must weigh the benefits of direct investments in patient care areas with potential spending on IT infrastructure. Their top concerns include cyber security threats, physician-driven technology needs and replacing outdated technology.

The challenge at hand requires a new mindset. The leaders of tomorrow's successful community hospitals must evaluate and implement technology solutions that support the organization's clinical excellence, business objectives and security requirements.

CEOs need a roadmap for IT infrastructure investment that establishes a solid foundation for the future while also enhancing care quality, operational efficiency and financial performance today.

BUILD A STRONG FOUNDATION

For a hospital, the value chain includes all the direct and support activities required to move a patient from initial admission through the organization and ultimately to a healthy discharge to their home or a post acute facility.

It's helpful to think of how IT supports a hospital's value chain because this approach keeps patient care at the center of the conversation. It also helps CEOs evaluate potential IT investments by considering how they support the organization's primary purpose. Information technology can be used to enhance a hospital's value chain by improving patient care while also improving organizational efficiency and financial performance.

A pyramid is a helpful visual for the IT value chain because it depicts how investments benefit patient care and operational performance. It also shows how components build on each other allowing top-level solutions to generate a positive financial contribution for the hospital.

IT Value Chain

Filter potential IT investments by considering how they will enhance patient care by improving safety, efficiency, comfort, precision and quality while also reducing cost.

Technology enhances patient care quality and improves financial performance.

Cloud technology improves compliance, reduces capital investments and improves processes.

Tools and automation enhance IT operations, cyber security and end-user experience.

IT as an Asset (ROI)

IT Enhances Operational Efficiency

Infrastructure Establishes Foundation
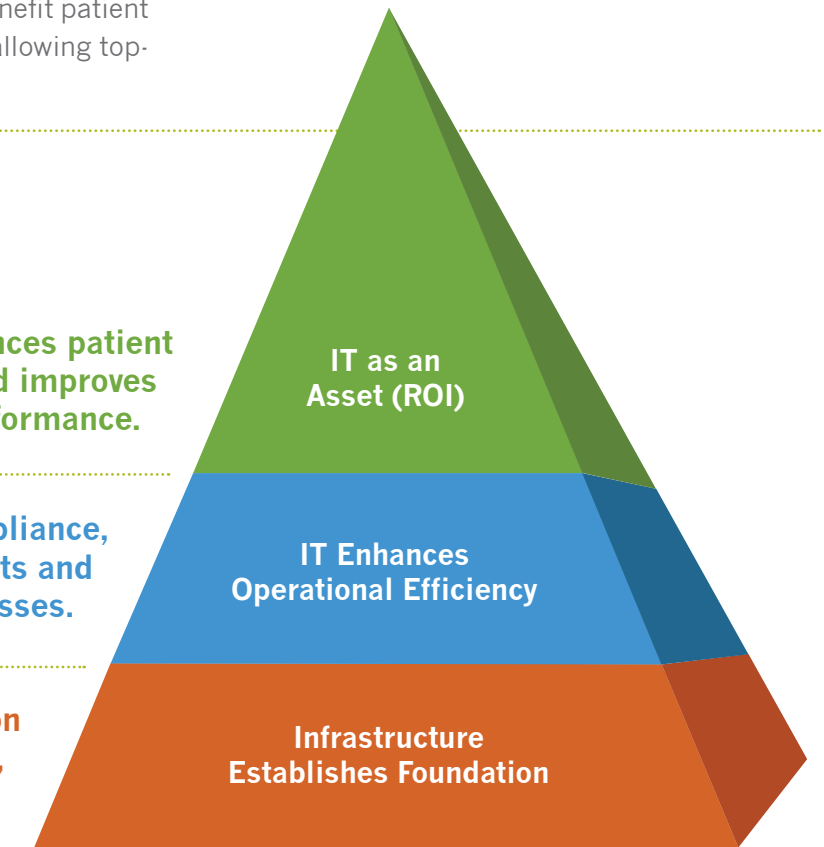
The Evolution – and Elevation – of Information Technology

Too often in the past, hospitals have gotten stuck with expensive, underutilized digital tools because one-off requests were granted without considering larger organizational goals.

It's time to change the approach to IT investing. CEOs must partner with IT to find the best solutions for the organization from a cost, care and risk perspective.

While strategy-driven IT transformation will look different for every hospital, IT solutions that are obsolete or outdated—such as on premise servers, desktop computing and legacy systems—often top the list of upgrades because this 'tech debt' can stand in the way of:

- ☑ **Offering new services**
- ☑ **Streamlining operations through automation and standardization**
- ☑ **Maintaining the highest level of data security**
- ☑ **Providing optimal customer care and service**

New IT solutions can improve finances in many ways:

Robotic or speedier billing and claims processing	Improved budgeting, forecasting and reporting capabilities	Decreased requirement for in-house IT staff to maintain modernized systems	Automation of repetitive manual tasks	Data analytics capabilities to guide decision making

THE BUSINESS CASE FOR INFORMATION TECHNOLOGY TRANSFORMATION

Even rural and community hospitals have a compelling business case for retiring and replacing legacy systems and other outmoded IT solutions.
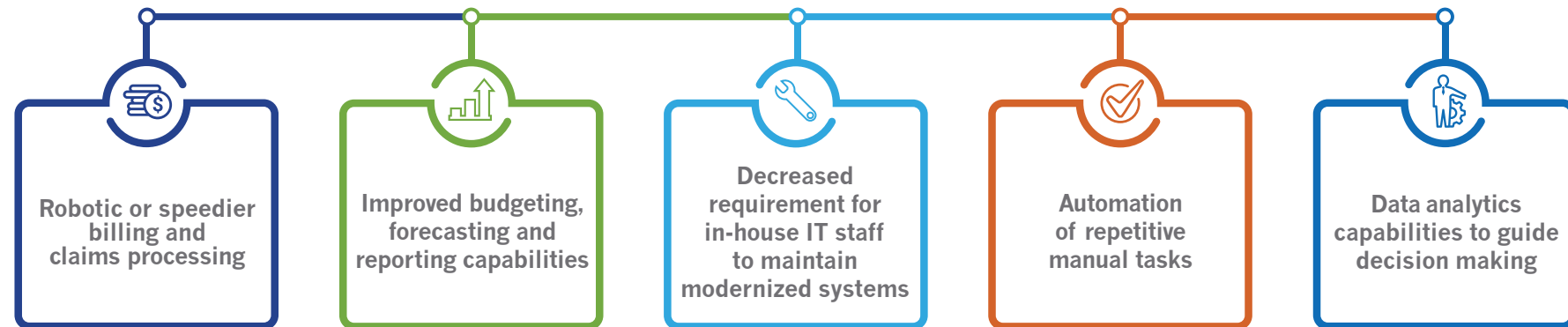
Cost savings and revenue enhancement

There are many reasons why legacy systems create financial challenges. First, they are expensive to operate. Many legacy systems don't have a modern user-friendly interface (front-end).

Often experienced specialists are required to run and maintain them. Additionally, traditional data centers and on-premise hosting requires ongoing capital investments as more and more servers are needed to accommodate growing storage requirements.

A shift to a cloud-based IT infrastructure can expedite IT transformation, reduce costs and help ensure continued strategic alignment. The move reduces overhead by shifting IT costs from a capital investment to an operational expense. It can also provide flexibility and capacity for one-off projects, with servers being spun up and down, as needed.

The New Role of IT Leaders

Forward-thinking community hospital CEOs are giving information technology leaders a voice in strategic planning sessions. The purpose is to evaluate how technology solutions can help advance organizational goals. Indeed, the business case for retiring and replacing legacy systems and other outmoded IT solutions is straightforward and compelling.

Return on Investment

The costs associated with running outdated IT keep rising. Moving away from legacy systems and shifting to a cloud-based model produce several areas of savings and revenue enhancement. Additionally, strategic IT investments support patient care and experience.

Benefits of IT Transformation include:

- ☑ **Reduced expense of servers, maintenance, software licenses, backups, and hardware upgrades.**
- ☑ **Ability to shift IT financing from an ever-escalating capital investment to an operational expense.**
- ☑ **Revenue enhancement opportunities include streamlining billing and claims processing; improving budgeting, forecasting and reporting capabilities; automating repetitive manual tasks; and bringing data analytics to bear on organizational decisions.**
- ☑ **Modern IT solutions offer analytics that drive decisions around patient care and population health.**
- ☑ **IT solutions help hospitals stay competitive by improving patient engagement and experience. For example, patient demand is growing for telehealth services and other digital technologies, including electronic health record access, remote patient monitoring, wearables and patient portals for appointment scheduling and bill paying.**
- ☑ **Increasingly, patient engagement requires consolidation of data from disparate sources, from various providers' charts to health-monitoring wearables.**
- ☑ **Employees benefit from new systems that are more intuitive, easy to use and accessible from any location.**

IT TRANSFORMATION ROADMAP

The first step is clarifying your IT needs, through the lens of business goals and strategy.

By identifying the organization's requirements upfront, technology selections will better serve the organization. For example, rural and community hospitals need to leverage standard technologies to meet current needs and growth projections rather than deploying scarce resources to be on the cutting edge of IT.

PLANNING

2. Understand your current IT environment.
- Diagram your current network configuration
- Document your current patching and backup status
- Identify extraneous or obsolete technologies
- Conduct cloud-readiness scans
- Consider a third-party IT assessment to assist
- Avoid and eliminate "sacred cows" of technology that are no longer serving the organization's needs.

1. Assemble your transformation team.
- A successful IT transformation starts with leadership support and engagement
- Create a team and a timeline to plan and carry out IT transformation initiatives – successful implementation can take anywhere from six to 36 months
- Assess your staffing needs to implement IT transformation
- Identify external resources needed for planning and implementation

3. Define IT transformation requirements.
- Identify specific organizational needs and goals
- Define the minimum IT requirement needed to meet those goals
- Determine metrics for measuring success following implementation
- After specific plans are established, review and adjust budget and timeline to meet the goals

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A strategic approach considers the full cost of any IT upgrade. Some transformations require additions or changes to existing IT infrastructure, processes, personnel and even organizational structure to support the new technology, while other transformations are possible with minimal changes and disruptions.

IMPLEMENTATION

5. Provide training to end users.
- Core training at the onset reinforced with side-by-side training during rollout
- The right vendor will include hands-on training in their pricing
- Experienced consultants not affiliated with the vendor can provide more robust training, if necessary

6. Hold teams accountable.
- Report results regularly
- Formally commend goal attainment
- Celebrate milestone wins along the way

EVALUATION

4. Transform your people and processes, not just your technology.
- Identify organizational culture and underlying processes that need to change
- Design and communicate new processes to gain insights ahead of implementation
- Consider whether a consultant is needed to facilitate change management
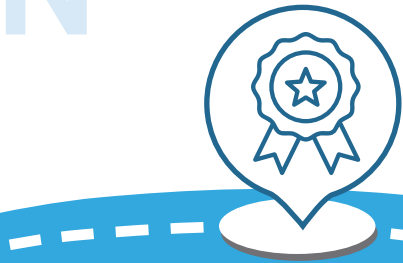
7. Evaluate measurable success indicators.
- Use success metrics to determine how IT transformation meets original business objectives
- Document and address any unexpected outcomes

VETTING PROSPECTIVE IT VENDORS

It's vital that any prospective solutions provider supports your strategic objectives. These questions can help rural and community hospitals evaluate potential vendors.

1. Has the vendor worked with similarly sized healthcare providers and on projects of comparable scope? Can they provide references?

2. Do they possess a solid understanding of your technologies and strategic direction?

3. What technical certifications do their staff hold?

4. Do they offer a trial period and end user training?

5. Do they clearly define the contract term, covered services, service levels and responsibilities?

6. Do they offer migration process/transition services with their technology stack?

7. Will they migrate necessary data or systems for you?

8. Do they provide around-the-clock support?

9. What is the guaranteed uptime?

10. How often are system patches applied? Is this an automated process?

UNIQUE SKILLS REQUIRED FOR RURAL AND COMMUNITY HOSPITAL IT CONSULTANTS

Because there are federal programs to help defray the costs of telecommunications and IT infrastructure for rural healthcare providers, it's imperative to work with a right-sized, mission-aligned organization that will match your hospital's needs with affordable services and solutions. This includes leveraging any Federal Communications Commission (FCC) or United States Department of Agriculture (USDA) resources that might be available to defray costs for certain projects.

Consider the consultant's knowledge about the FCC's Universal Service Administrative Company (USAC) and its Rural Health Care Support funding for telecommunications and broadband funding, and how they help with funding verification and allocation.

Other important questions for IT consultants include:

1. Are they willing to help with USDA/USAC funding verification and proper allocation?

2. Do they possess a solid understanding of your technologies, program requirements and strategic direction?

3. How do they educate customers on program requirements and changes?

4. Do they provide transparent and easy-to-understand reporting and invoicing?

5. Do they have any agreements with service providers or equipment vendors that benefit them financially outside of the fees they charge your organization?

6. Will they provide a list of clients and allow you to contact them?

SECURITY CONCERNS AND CLOUD SOLUTIONS

A rise in data breaches coincides with increased transmissions of protected health information (PHI) and other sensitive data through mobile devices and email, as well as to third-party service providers.

Security breaches and data losses become a threat when vendors stop supporting legacy systems, which are not able to receive security patches and operating system upgrades. Implementing new IT solutions that enable automation can reduce security and privacy concerns and free up IT personnel to work on other security architecture improvements.

Healthcare consistently exceeds other industries when it comes to data breach expenses. Cloud computing is gaining acceptance as a cost-effective and scalable way to mitigate risk.

The shift was supported with the 2013 HIPAA Omnibus final rule, which provided regulatory protections to hospitals that increased their confidence in cloud solutions. More recently, a study reported in Health IT Security in November 2021 suggested that cloud adoption by healthcare providers may help prevent data breaches and ransomware attacks. Confidence in cloud solutions continues as a proliferation of service providers specializing in healthcare offer HIPAA-compliant platforms and HIPAA business associate agreements (BAAs).

> **Cybersecurity is not an IT issue; it poses risk to the entire healthcare organization.**

CASE STUDY: Cloud Solution Yields Sky-High Savings

Like many small rural hospitals, Freestone Medical Center in Fairfield, Texas, relied on an on-premise IT infrastructure to handle its data-processing, Internet and telecommunications systems. Spiraling maintenance costs — including hardware replacement and software license renewals — had amounted to hundreds of thousands of dollars per year when the hospital resolved to address the infrastructure's inefficiency. Compounding its costliness, managing and monitoring the system took up the better part of the IT director's workday.

The hospital considered its options and went with a cloud-computing environment to replace its legacy system. CHC Consulting, which provides management services to the hospital, has extensive experience in deploying cloud-based systems and worked with the IT director to identify and implement the right cloud solution. The project gained approval and financing once stakeholders were educated on the benefits of cloud-based systems: virtually eliminate capital expenditures for IT server infrastructure; considerably reduce IT operating costs; improve data security and business continuity; enhance patient care; optimize clinical and business functions; and provide new opportunities for growth.

Leveraging its partnerships with cloud services providers, CHC Consulting helped the hospital develop a roadmap for moving a wide range of the hospital's functions to the cloud, which led to significant financial and operational improvements and also freed up the IT director to focus on more strategic IT issues.

Eliminate capital expenditures for IT server infrastructure

Reduce IT operating costs

Improve data security and business continuity

Enhance patient care

Optimize clinical and business functions

Provide new opportunities for growth

CONCLUSION

Running clinical and administrative processes on outdated infrastructure, platforms and applications has become increasingly costly and cumbersome for hospitals. Although rural and community hospitals face financial hardship, long-term sustainability isn't achievable using outdated IT. On the cusp of healthcare's digital transformation, even resource-constrained rural and community hospitals face the imperative of adopting new digital strategies and tools that support their clinical and financial success. These hospitals must be prudent to ensure IT solutions are strategic, cost effective, efficient and affordable.

IT transformation doesn't happen overnight, but hospitals in need of expert guidance will find that an experienced partner can help them create a roadmap to success and accompany them every step of the way.

Contact CHC today to envision or embark upon your IT transformation.

☑ **CHC Consulting offers a comprehensive suite of IT solutions, which we'll customize to support your hospital's specific business objectives.**

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