

hfm

healthcare financial management association www.hfma.org

FEATURE STORY

Jim Quist
Brian Robertson



taking a new look at the hosted applications model

Although it offers many advantages, implementing hosted application solutions is not necessarily for every organization. The pros and cons need to be weighed carefully.

AT A GLANCE

Deciding whether to adopt a hosted applications model for your organization?

- > Advantages—rapid time to value, no hardware and software maintenance responsibilities, reduced IT staff support burden
- > Disadvantages—reliance on the Internet to deliver applications, concerns about security, and limited customization options with some vendors

Faced with limited capital, rapid developments in technology, and the need for secure, efficient data management, many healthcare organizations are turning to hosted application vendor solutions. Use of hosted applications is a growing trend in the healthcare IT market, in large part because healthcare organizations are beginning to embrace the “on-demand” business model, which delivers software as a service over the Internet. The on-demand, hosted solution offers healthcare organizations an instantly available technology platform that provides an alternative to customary “on-premise” client-server or web-based applications that are installed on-site at hospitals and health systems. This next generation of business software comes with the promise of lower cost of ownership, rapid time to value, and low-risk implementation.

What Is a Hosted Applications Vendor?

A “hosted applications vendor” distributes and manages software-based services and solutions from a central data center. Usually, the vendor hosts the software application and the customer accesses it through the Internet or a virtual private network. Customers need only a web browser to connect to a virtual location to gain access to their specific application or software needs. The customer pays a set fee, often on a monthly subscription basis, for access to the service. Other hosted applications vendors may charge on a fixed per-user rental basis or a per-transaction fee. The vendor is responsible for software and hardware upgrades, maintenance, and integration of multiple applications into a common set of user-friendly interfaces.

A hosted applications vendor may deliver software and applications on demand, which means it was designed from the ground up to be hosted and delivered as a service over the Internet. This revolutionary business model radically changes software develop-

Hosted applications can reduce cost of ownership up to 30 percent.

ment and deployment because the vendor writes and manages only one version of software code for a single platform and configuration, and deploys it to all its customers simultaneously over the Internet. This is a radically different approach from client-server technology, where user IT departments maintain on-premise software and upgrades for numerous configurations and customer environments, or from application service providers who take client-server software technology and simply host it in an off-site data center while making it accessible over the web.

A new breed of hosted applications vendors offers Internet-based applications, technologies, and services specifically tailored to healthcare enterprises. These include healthcare provider and consumer portals, personalized dashboards tailored for the specific needs of providers and management, clinical information and knowledge databases, remote physician office connectivity, and financial electronic data interchange. Some examples of hosted applications include:

- > *Financial management support*: eligibility, referral, and authorization processing; claims submission and status, decision intelligence, and revenue cycle analytics
- > *Clinical reference*: medical dictionaries, encyclopedias, medical databases, drug and health information for consumers
- > *Clinical results*: patient-related clinical information, laboratory results
- > *Clinical ordering*: laboratory tests, pharmacy prescriptions, drug interaction and contraindication monitoring
- > *Health plan benefits*: comparisons, physician directories, enrollment information

What Are the Benefits of Hosted Applications?

The hosted applications model offers cost-conscious healthcare organizations access to high-level,

professional expertise; the ability to deploy new technologies much more rapidly with fewer problems; the ability to shift the IT burden and maintenance to the service provider; and opportunities to take advantage of the latest applications and technology. Following are some benefits of using hosted applications.

Rapid time to value/faster implementation of new solutions.

Hosted applications vendors offer hospitals access to high-end applications with reduced implementation time. Complex on-premise implementations can take months or years to complete in-house, while a high-quality hosted applications vendor can minimize downtime during implementation and typically ensure a seamless change. The vendor can also provide upgrades more frequently and at less cost.

No maintenance. Hardware and software system administration is substantially reduced, and the vendor assumes maintenance responsibilities for the applications and server.

Reduced IT staff support. Hosted applications vendors provide expertise, relieving the shortage of skilled IT staff and allowing internal IT departments to focus on implementing new applications and providing in-house support—a boon for organizations with a shortage of IT personnel. However, the hospital still maintains control over the local network and workstations.

Cost predictability. The hosted applications model eliminates the need to purchase the application licenses and avoids the cost and labor associated with developing, operating, and supporting in-house solutions. Because the hosted applications vendor charges a set fee, costs for the hosting services are stable and can be projected over the life of the contract.

Lower cost of ownership. The services vendor purchases and maintains servers and provides all IT administration related to the server, including backup, technical support, database utilities, and maintenance. Costs for upgrades are integrated into the monthly or per-use fee. According to Gartner Inc., a provider of research and analysis on the global IT industry, hosted applications can reduce

cost of ownership up to 30 percent by lowering hardware, labor, and support costs.

More current functionality. Service providers can update and enhance the software much more rapidly than in the on-premise model. Most on-demand service providers produce many releases per year, compared with one per year at best from the on-premise model. The cumulative effect of these updates over several years, and the lack of cost to the customer to incorporate these upgrades along with adherence to changing business rules and regulatory compliance, can be staggering.

Access to data. Authorized users can log on to the network and access data from any location, including hospital, remote clinics, or home. Remote access requires an Internet connection and a personal computer, as well as password and other security measures.

Integration of existing legacy systems. It's not unusual for a hospital to have numerous types of legacy information systems—core applications and mainframes that do the bulk of the data collection and transaction processing. High-quality hosted applications vendors can integrate data from different legacy systems into usable information, aggregating the data in ways that legacy systems cannot. Depending on the application, hosted applications may extend the life of legacy systems by providing extended access to legacy data.

Who Benefits Most from Using Hosted Applications?

Healthcare organizations that benefit the most from adopting the hosted applications model are those whose business strategies require highly specialized skills to design, integrate, deploy, host, and maintain complex applications.

FINDING THE RIGHT HOSTED APPLICATIONS VENDOR FOR YOUR ORGANIZATION

All hosted applications vendors are not created equal. Some may be very good companies, but they may not be able to deliver the information management solutions that your organization needs. Others may promise more than they can deliver. By asking the right questions, you can help to identify a vendor that meets your needs. Here are some questions to ask of potential hosted applications providers:

□ Cost

- > Does the vendor use a subscription or pay-per-use pricing model?
- > How often are prices increased?
- > Are there additional costs for services not included in the base rate?

□ Contract

- > Does the company offer different options for contract length? If so, what are they?
- > What is the average length of contract for existing customers?
- > What happens if you choose to discontinue the services? How will data be returned? Does the vendor offer an option to convert to a client-server application?

□ Technology

- > Is the application architecture based on real workflow and designed from the ground up to be Internet-based, or did the vendor take a legacy application and simply web-enable it?
- > How frequently are applications upgraded?
- > How scalable are the solutions?
- > What is the user interface like? Is it intuitive and friendly, or will it require extensive training of hospital staff?

□ Safety

- > How frequently are data backed up? Does the vendor have a disaster recovery plan?
- > What happens if the vendor's building burns down, a tornado strikes, or some other unexpected event wreaks havoc with the software and data?
- > What is the reliability record of the network?

□ Security

- > Are data encrypted when they are sent back to the customer?
- > Do customers use the Internet or a virtual private network to access data? If they use the Internet, how is information protected?
- > What measures are in place to prevent unauthorized users from accessing data?
- > Have personnel been trained to protect health information? (HIPAA requires business partners to train their employees in the privacy and security requirements of the act.)

□ Support

- > How many people are available for IT service and support?
- > How high is vendor staff turnover? After the initial setup, is support provided on-site or only remotely?
- > Who provides training for hospital personnel?

□ Longevity and Experience

- > How long has the company been serving the healthcare industry? Is the company financially stable? What about partners that are part of the support system?
- > What is the company's sales record for the past year?

Organizations with limited IT resources. As a general rule of thumb, hospitals with an IT staff of fewer than 10, or those having difficulty retaining highly trained IT staff, benefit the most from hosted information management solutions.

Organizations with limited capital availability. A primary advantage of the hosted applications model is the reduction in upfront capital requirements and long-term capital investment, which are substantially lower than in a traditional on-premise model. Because investment in a server is not required and existing hardware can usually be used, hardware expenses are lower. Applications are provided on a monthly or fee-per-use service, and software and server upgrades are included in the service contract.

Organizations with outdated hardware. The facility that hasn't upgraded its hardware for three years or longer may benefit from using a hosted applications model. Most processing is done at the vendor site, which allows hospitals to use relatively less powerful workstations or laptops and extends their useful life.

What Are the Disadvantages of Hosted Applications?

Although hosted vendor solutions can provide many benefits to hospitals, the model is not a magic bullet. There are several factors to consider when evaluating the use of hosted applications.

Internet connectivity. Hosted applications rely on the Internet to deliver applications, which means that access to services depends on a fast, reliable connection such as a T1, cable modem, or digital subscriber line. Although high-speed Internet access is spreading rapidly, it is not available in all geographical areas. A phone connection can be used if a DSL or T1 line goes down, but this slower option is best used as a backup. Rural hospitals and providers, or those in urban/rural interface areas, may not be able to take advantage of hosted application offerings without installing their own secure, direct line. Although high-speed access may not be available in some communities, broadband access is spreading rapidly: The Federal Communications Commission reported a 42 percent jump in broadband access during 2003.

Limited customization. For the hosted applications vendor, the easiest to implement and least costly offering is a one-size-fits-all solution. Many vendors offer a standardized package with only limited customization options. However, leading on-demand hosted applications vendors offer massively scalable, highly customizable solutions that can be configured to the hospital's unique specifications.

Security concerns. A frequently cited and justifiable concern about the use of hosted applications is the security risk associated with transmitting data over the Internet. Leading vendors take several measures to protect the security and privacy of sensitive financial and clinical data, consistent with best practices in the banking industry. Most use a virtual private network. Data are encrypted (made unintelligible to unauthorized users) while traveling to and from each site; they are then decrypted at the vendor host server to meet HIPAA requirements in areas covering administrative issues, physical safeguards, technical security services and mechanisms, and electronic signature standards. In addition, firewalls at both ends of the connection help to protect both the hospital's and the vendor's networks. Access is allowed only to users with a registered log-in, a password, and a dynamic security code generated by a keychain-like device.

Hospitals with more extreme security requirements may opt to have their own physical network, making the hosted applications security as good as the rest of the enterprise, but at a significant added cost. With advanced security technologies such as these, the risk of unauthorized access to the data is minimized. However, no technology is foolproof—including a server on the floor of a billing office.

How Do I Determine Whether a Hosted Applications Model Is the Right Choice?

The hosted applications model is a viable one for many, but not all, hospitals. Management should consider their unique needs and resources when deciding whether to implement a hosted solutions model. Following are some things to consider:

Capital availability. Does the hospital have enough capital to invest in new hardware, software, and ongoing IT expenses? If capital availability is limited, using a hosted vendor solution may be a good option.

IT resources. How large is the hospital's in-house IT staff? What is the staff's level of expertise? Are the staff members able to keep up with the latest technology? If the hospital's IT staff is already stretched thin, a hosted applications vendor can provide support without wresting total control from senior IT management. Unlike traditional outsourcing, the hosted vendor solution does not involve the transfer of assets and accountability from internal IT management to a contracted third party. Hosted applications vendors work with the organization's senior IT management to develop solutions and free up time.

Flexibility. How much flexibility does the healthcare organization need? The hosted applications model offers greater flexibility than a client server. Typically, an initial service contract is one to three years. This allows the hospital to determine whether a vendor is able to meet its needs without making a huge investment of capital. Each vendor will probably stipulate a minimum time of commitment, spelled out in the contract.

Summary

The healthcare finance industry is plagued with costly paper-intensive processes, large transaction-processing databases, lack of standardization, and disparate information systems. The hosted applications vendor model can help address these inefficiencies by utilizing the Internet to get mission-critical information to users on a 24/7 basis, with a much more rapid time to value compared with on-premise solutions. The hosted model can provide an affordable way for healthcare organizations to quickly implement cutting-edge technology, lessen strain on IT staff, and leverage

information already in legacy systems. Hospitals with limited capital resources, stretched IT staff, and a need for flexible information management solutions may benefit the most from adopting the on-demand hosted applications model. ●

About the authors



Jim Quist is CEO, MedeFinance, Emeryville, Calif. Questions or comments about this article may be sent to him at jquist@medefinance.com.



Brian Robertson is senior vice president, MedeFinance, Emeryville, Calif., and a member of HFMA's Northern California Chapter.

GLOSSARY OF RELATED TERMS

Broadband: A transmission capability having a bandwidth sufficient to carry multiple voice, video, or data channels simultaneously.

Client-server: The relationship between two computer programs in which one program (the client) makes a service request from another program (the server), which fulfills the request.

Consumer portal: An online source of customer communication by which customers can access and share reliable and up-to-date information and documents provided by a company or organization.

DSL: Digital subscriber line; a medium for transferring data over regular phone lines that can be used to connect to the Internet.

Hub: A hardware device used to network multiple computers together.

ISDN: Integrated services digital network; a data transfer technology that enables wide-bandwidth digital transmission over the public telephone network.

T1 line: High-speed digital connection capable of transmitting data at a rate of approximately 1.5 million bits per second. It is large enough to send and receive very large text files, graphics, sounds, and databases instantaneously, and is the fastest speed commonly used to connect networks to the Internet.

Virtual private network: Uses the open, distributed infrastructure of the Internet to transmit data between corporate sites; provides a more active form of security by either encrypting or encapsulating data for transmission through an unsecured network.

Web-based: Operating over the World Wide Web, or Internet.