HEALTHCARE APP STORES

STATUS AND OUTLOOK

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Chilmark Research is a global research and advisory firm whose sole focus is the market for healthcare IT solutions. This focus allows us to provide our clients with the most in-depth and accurate research on the critical technology and adoption trends occurring throughout the healthcare sector. Areas of current research focus include among others: Clinician Network Management, Cloud-computing Models for Healthcare, IT-enabled Accountable Care Organizations, Care Coordination, Adoption of Mobile Technology and Consumer-facing Health and Wellness Applications and Services.

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App Stores and Digital Transformation

"…this report provides the details of an example software architecture that breaks the stranglehold of current stovepipe systems and facilitates migration to a software ecosystem, with a diversity of products and apps, that fosters innovation and entrepreneurship. JASON believes that now is time to define such an architecture…."

JASON Report, *"A Robust Health Data Infrastructure", April 2013*

Five years gone, the JASON Report's critical observations are still valid. Few of its recommendations have been widely adopted. The willingness to build the software architecture JASON urges lags. Healthcare's financial incentives cause organizations to hoard, monetize, or closely control the use of data under their dominion.

But healthcare does not exist in a vacuum. In every part of the economy, digital transformation, supported by app store ecosystems, has upended old business models and created new markets. In a relatively short time, Apple's App Store and Google Play attracted over 2 million and 3.5 million apps respectively. In the healthcare industry, technology improvements offer the prospect of a similar transformation. Digital healthcare, fueled by the industry's diverse information sources, is a massive opportunity for patients, clinicians, and organizations.

Capitalizing on this opportunity will require healthcare stakeholders to think differently about how applications further clinical, financial, and administrative goals. Whether the goal is revenue growth, operational cost reduction, regulatory adherence, better patient or member experience and retention, higher quality, lower med and pharma costs, app stores can catalyze more innovation. The software architecture that JASON envisions and that can further such goals is within reach.

HEALTHCARE READINESS FOR APPS

The demand for apps from every variety of healthcare user is strong. The supply of developers ready to meet it is equally robust. But healthcare enterprises remain wary of the potential consequences of user adoption of apps. Healthcare organizations (HCO) have a natural interest in avoiding disruption to care delivery and revenue collection. Casual user adoption could introduce variability that impacts organizational efforts to manage infrastructure and applications portfolios. HCOs prefer to rely on their EHR vendors to inform and guide them about the diverse implications raised by the availability of apps. HCOs and their EHR vendors have aligned governance goals: Controlled and non-disruptive delivery of new or enhanced functionality.

Currently, EHR vendors certify that an app will play well in the HCO's IT environment. This "seal of approval" assures the HCO that the app will not impact its production environment. Individual providers typically must assess the workflow implications of an app on their own. In practical terms, this means that HCOs will need to perform a similar kind of due diligence with apps that they would undergo for any technology acquisition. End-users in such enterprises are unlikely to have the authority to download and begin using apps on an ad hoc basis. Instead, they will more likely select apps from an approved list. By contrast, smaller healthcare enterprises are less likely to impose a purchasing process for their user's choice of apps.

But apps serve very specific needs for a class of users. Their targeted functionality uses the modern, streamlined user interface (UX) prized as easier to use than those found in conventional healthcare enterprise applications. The majority of available medical apps today are free of cost and have a narrow purpose, usually providing information or instruction. The applications available on app stores are turnkey for users. The user downloads and

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installs the app on their device, at which time any integration to data sources is established.

For now, adopters are on their own making determinations about the applicability and suitability of apps for their purposes and needs. It remains to be seen whether independent certification of app content and functionality will have a place in healthcare. No clear strategy has emerged on how an organization should or could evaluate or recommend apps for specific patients, clinicians, administrators, or other users. To date, disinterested third parties such as medical professional societies, payer organizations, or policy makers have not emerged to certify, validate, or recommend apps for organizations and users. Theoretically, an independent certification body could minimize due diligence for prospective users' and organizations.

INDEPENDENT DEVELOPERS TREAD CAREFULLY

The measured approach to user adoption of apps on the part of HCOs and app store sponsors should factor into the plans of independent developers. The process of getting an app certified and available on an app store can be expensive and complicated. Small and independent developers tell us that the revenue- and technology-sharing terms offered by some EHR vendors are one-sided and presented in a take-it-or-leave-it fashion. Larger, more established developers are willing to accept such terms, reasoning that access to the EHR vendor's customer base more than compensates for the costs. Developers should also be aware that the level of sales and marketing assistance that sponsors provide app publishers can vary according to circumstances.

In general, the complexity of the certification process mirrors the complexity of the computing, clinical, and business environment of the app's target end-user. Hospital EHR vendors perform more comprehensive due diligence on potential apps than ambulatory EHR vendors. Hospital EHR vendors also have a more rigorous approach to the economics of app placement than ambulatory EHR vendors.

OPPORTUNITIES

The opportunity to address healthcare's long list of challenges with better applications is vast. Applying technology in dysfunctional industries is a well-worn path to riches, and none can match healthcare's record of waste and inefficiency. Clinical and non-clinical users as well as patients are eager to discuss their unmet needs.

The vast majority of HCOs lack the resources to develop their own applications, instead relying heavily on their EHR and other technology vendors. This large number of HCOs represents a significant potential market for independent app developers. While the recent and widespread adoption of EHRs focused attention on the need to supplement or enhance the EHR itself, it is too easy to forget that most of the healthcare workforce does not use an EHR on a day-to-day basis. The non-clinical workforce in healthcare enterprises use a variety of applications that also require modernizing enhancements and improvements as well.

Most healthcare stakeholders recognize the need to better activate and engage patients. Patients have only ever known a disjointed "customer experience" with healthcare. Ideas such as convenience, price transparency, or predictability don't enter into the average patient's expectations about their interactions with any aspect of the healthcare system. The proliferation of high-deductible health plans and rapidly increasing out-of-pocket costs could eventually create expectations for a more conventional "consumer" experience with healthcare. Whether in response to consumerization or regulation, providers and payers have ample reason to at least position themselves for application modernization in light of changing patient and member expectations.

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