Carolyn Gretton

E-Solutions ON THE MOVE

The fast and furious adoption of smartphones and tablet computers has created a need for more mobile, flexible e-solutions across all functions of the life-sciences enterprise.

GREG MOODY
Millennium: The Takeda Oncology Company

Findings from Kalorama Information's recent report, Market for Mobile Medical Apps, valued the market for mobile medical apps at about $150 million in 2011. Despite accounting for just 1% to 2% of the entire market for mobile apps, Kalorama forecasts healthcare apps will post 25% market growth annually over the next five years, compared with 23% growth estimated for the standard apps market during the same period.

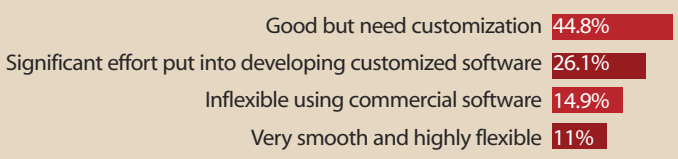
"The medical app market is growing at a faster rate than the standard app market," observes Melissa Elder, pharmaceutical analyst at Kalorama and author of the report. "They are being heavily used by professionals and welcomed by healthcare organizations seeking to make workers more productive."

Cloud computing, or elastic computing, allows access to flexible and scalable processing environments without the capital investment required to do so in house.

The growing number of healthcare professionals using these apps in everyday business activities is contributing to the market segment growing at a faster rate than some other categories of apps. However, Kalorama notes, part of the revenue growth is being driven by prices rather than volume. Despite the higher price tag for most medical apps, which average about $15 per app, the number of downloads is lower than other categories, keeping medical apps high growth-wise, but on the lower end of total dollars earned in comparison with other app areas.

Life-science processes for which smartphone apps can be developed include education,

Survey respondents describe the interfaces among the different cloud-based platforms that they currently use.



Source: Insight Pharma Reports, Cloud Computing Usage in Pharma & Biotech. For more information, visit insightpharmareports.com.

VIEWPOINTS

ANTHONY FRANKLAND
Global Head of Sales and Marketing, Cenduit

IRT Helps With Site Issues

When investigator sites use interactive response technology (IRT) to conduct the process of drug accountability, the data are immediately available in a central database. Issues with individual patient drug compliance or overall compliance at a site can be resolved more quickly than when the process is conducted manually through paper-based systems.

DANIEL CORCORAN
Executive VP, eHealthcare Solutions Premium Advertising Network

Working to Become Socially Adept

Though often seamless in execution, leveraging today's digital capabilities for a brand's marketing objectives is challenging at best, and organized chaos at worst. Today's digital opportunities are complex and require participation from various organizations with unique skill sets and expertise. Shepherding multiple stakeholders toward a unified outcome requires great planning, collaboration, and communication. Without these, individual agendas can takeover and result in the parts being misaligned with the ultimate sum of the whole.

Trending Ahead

We have the privilege, and challenge, of working with people who think beyond-the-box. Forget outside-the-box, the collaborative result of working with thought leaders is that you're faced with a constant paradox — the desire to be ahead of the market without being so far ahead that the market won't support it.

STEPHANIE BROWN
Interactive Strategy, FingerPaint Marketing

Mitigating Real-Time Expectations

With any Internet-based solution, users have an expectation of receiving information in real time. And as anyone in this industry knows, regulatory and legal review can make even near-real-time communications virtually impossible. For the same reason, ongoing optimization of pharma marketing programs —something that the leading B2C and B2B brands can affect on a daily basis — becomes time and cost prohibitive.

ERIN BYRNE
Chief Engagement Officer, ghg

Blending Behavior and Technology

Integrating e-solutions can be tricky, because the best e-solutions rarely involve technology alone. To maximize success, companies need to leverage a technology solution and blend it with the desired behavioral changes of users, as well as, ultimately, the features that drive engagement across target audiences. This can be time-consuming and expensive. However, when done strategically and methodically, with a clear goal in sight and measurement plan in place, companies can reap significant rewards that trickle down to all of their audiences that matter.

GLEN DE VRIES
President, Medidata Solutions

Understanding the Cloud

Companies should be carefully examining what's being offered out there as "cloud." Many companies are using the term when they are really only providing a Web-based solution, or hosting legacy on-premise applications in third-party data centers. Cloud solutions should provide tangible business value — allowing for enhanced productivity, lower costs, and lower risks — at the same time as lowering the implementation and maintenance burden for the organizations using them. Put another way, if scalability and reliability come up as drivers of provided or dedicated infrastructures for a given customer or installation, companies should be aware of the fact that they aren't truly buying a cloud solution, and should probably look elsewhere.

Flexibility and Integration

In clinical development, workflows and processes must be maintained within the patient-centric, scientific, and regulatory infrastructures, while supporting the flexibility a modern enterprise requires. Clinical researchers should expect — and receive — improvements in the technology they use on an on-going basis, allowing them to continue to refine their business processes as well as adapt to changing clinical scenarios. They should also be confident that legacy as well as newly minted systems can be integrated seamlessly with their cloud technology.

ROB ROBERTSON
President & CEO, MedNet Solutions

Solution Selection Criteria

With so many eClinical solution choices available today, how does one choose the "right" system? While everyone rightly examines the eClinical solution itself (functionality, ease-of-use, pricing, etc.), many underestimate the importance of the vendor organization standing behind the solution (company experience, size, financial stability, staff turnover, audit track record, etc.). Both sets of criteria are important to ensuring successful research initiatives and establishing strong long-term partnerships.

CHRIS MIDDLETON
VP, Technology, MMG

Security: First and Foremost

Cloud-based offerings are great because they are easy to acquire and access with little or no maintenance costs outside of usage fees. However, most organizations do not stop to consider the risk that they are potentially putting themselves at in terms of data security; they need to make sure their providers are not exposing their data and that the provider has adequate disaster recovery plans in place. Also, an organization needs to plan a clear "exit" strategy if they ever plan on moving their data or business functions to another provider or internally.

Integration Complications

The business of integrating software solutions is usually far more complex than most people realize, and as a result, timelines allowed for integrations are usually underestimated. Figuring out the deep level details of how data moves between systems, the format it will be in, testing, and redundancy measures are all elements that typically expand the degree of difficulty. Each integration also tends to be its own unique effort, with individual nuances that make integration turnkey solutions difficult to realistically create. Integration of systems is one area of Information Technology that is always a lot harder than it initially appears and proper planning is the best way to mitigate the timeline risks.

BORIS KUSHKULEY, PHD
President
Ogilvy CommonHealth Interactive Marketing, part of Ogilvy CommonHealth Worldwide

Privacy Protection

Security and proper handling of personally identifiable information (PII) needs to be seriously considered when moving to the cloud. Not all providers of software as a service (SaaS) are able to offer private cloud infrastructure. In the healthcare space, this is an important requirement. Scalability and accelerated deployment can be achieved without jeopardizing security and compliance.

Focus on Business Needs

Two very different areas that typically slow down the integration of e-solutions are: inconsistent user interfaces and inconsistent database sets. Though one is a design/user experience (UX) issue and the other is a database modeling/implementation, the approach to mediating them can be very similar. Start with a single-solution architecture that focuses on current business needs rather than the often inadequate design of a legacy system.

FAST FACT

TWO-THIRDS OF LIFE-SCIENCE SCIENTISTS OWN A SMARTPHONE, AND ONE-THIRD OWN A TABLET COMPUTER. 68% HAVE APPS ON THEIR PHONES. 72% REGULARLY USE A MOBILE DEVICE TO SUPPORT THEIR RESEARCH IN THE LAB.

Source: BioInformatics LLC

health management, data management, health information, and other workflow processes. Kalorama cites the conversion of major healthcare organizations to EMR systems and the breadth of medical apps available as two factors driving purchases. According to the report, not only are members of the medical community using smartphones and their applications for basic work, but they are reporting the use of smartphones to perform some of the work that would have previously been done on a desktop or laptop computer. The growing use of mobile devices and medical applications for these devices has prompted the FDA to provide more oversight in this segment, the report notes.

Taking Stock of Tablets

In a recent webcast discussing findings from a survey on mobile technology use among scientists, BioInformatics President and Co-Founder Bill Kelly observed that the life-sciences industry again finds itself on the cusp of yet another technological revolution. According to Mr. Kelly, the rate of Apple and Android device adoption has surpassed that of any consumer technology in history, with smart device adoption rates occurring 10 times faster than that of the PC revolution in the 1980s, twice as fast as adoption of the Internet in the 1990s, and three times faster than that of recent social network adoption.

"I can't overemphasize how quickly these changes are occurring," he added. "A number of industry analysts suggest that mobile devices will soon supplant desktops and webmail interfaces as the platform most people will use to send and receive email and do Internet searches. And that's in the general population; the startling news is that scientists are adopting mobile technology at an even faster pace."

According to a BioInformatics study, Mobile Marketing to Life Scientists, 70% of life scientists surveyed report using either a smartphone or tablet for their work — a rate 20% higher than that of the general population — and about 48% of scientists say they use their devices on a daily basis to support their lab work.

Life-sciences companies have made significant investments in e-marketing via websites, e-commerce, email, and social media campaigns, as well as online advertising, Mr. Kelly noted in the webcast.

"A failure to design this outreach for mobile access will dilute the impact of such a huge undertaking as scientists migrate from the more traditional channels of desktops and laptops to creating and accessing all kinds of content using their mobile devices," he said. "While it sounds odd to dub desktops and laptops as traditional, the proliferation of mobile devices is disruptive, and in a few short years will most likely become the norm for a large number of applications."

One of the report's most significant findings, according to Mr. Kelly, was that roughly one-quarter of scientists surveyed are highly interested in researching products and accessing coupons from suppliers via their handheld devices, with another one-third saying they are somewhat interested in doing this. Given this expressed interest to connect with suppliers via mobile devices, life-sciences companies can ill afford to wait and see whether mobile platforms will be a viable marketing channel. Speed of adoption will be limited only by the amount of time it takes suppliers to put a mobile strategy in place.

"Life scientists want to snap pictures of products, download coupons, scan inventory in freezer programs, and scan coupons from print publications," Mr. Kelly emphasized. "How much more receptive could the target audience be? Companies should be obtaining names of users of a life-sciences supplier's products at their organization and sharing contact information so that sales reps can get in touch with them."

According to BioInformatics, scientists are creating a significant number of mobile apps for their own use and to share with colleagues to perform functions, such as organizing notes, calculating measurements, and looking up recipes for common transactions. But to date, supplier companies are not offering a wide selection of mobile apps for scientists to download, although many suppliers are gearing up to do so in the not-too-distant future.

On the sales side, Mary Myers, director, training and development, for Eisai, says her company is rolling out the iPad and is in the process of developing programs to organize and access data.

"Tablet PCs are part of the future, along with customized applications that will provide real-time and relevant information that is easily accessed when needed," Ms. Myers says. "As we create applications and programs that continue

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to provide benefits, the sales teams will use tablets more productively, especially in the areas of metrics, communications, and education."

According to data from Manhattan Research's ePharma Physician 2012 study, pharma sales reps who use iPads in their in-person dealings with tech-savvy physicians are more likely to influence those physicians' behavior. Among those so-called ePharma physicians interacting with an iPad-wielding rep, 35% say they are more likely to request a sample, and 29% say they are more likely to consider prescribing the drug.

"We're seeing more positive signs this year that the use of iPads by reps is driving the desired engagement and behavior among physicians," notes Monique Levy, VP of research at Manhattan Research. "We're also getting more clarity on the kinds of features and content physicians want on these devices such as demos of apps they can download and KOL videos."

For her part, Ms. Myers says the tablet PC has allowed her to provide more advanced training and to tap the imaginations and ideas of Eisai's sales team members.

"There are so many possible applications available to enrich the sales team, so that continuous learning becomes a passion and not just something that only happens at POA meetings and planned training events," she explains. "We at Eisai are looking into ways to use the knowledge already available on the Web to provide apps to the field in a compliant and appropriate manner. Our goal is to embrace the technology so we can reduce our reliance on vendors and to create a true learning environment where people have immediate access to information and knowledge and not just wait for it to be delivered."

The proliferation of mobile devices is disruptive, and in a few short years will most likely become the norm for a large number of applications.

Clinical in the Cloud

Greg Moody, director, clinical informatics at Millennium: The Takeda Oncology Company, says using the cloud is a concept that can be implemented in many different ways.

"There are two areas where I believe the cloud can provide value for the execution of clinical trials," Mr. Moody says. "Cloud computing, or elastic computing, allows access to flexible and scalable processing environments without the capital investment required to do so in house. Amazon's elastic computing environment is a great example of this, where users can spin up a computing environment sized to the study.

"The second area is cloud storage," he continues. "This is particularly useful when working with data already in the public domain or collaborating with partners. Finally, many companies are embracing the cloud concepts and building flexible infrastructures using the same principles. This allows for systems to move between in-house hosted, private cloud and public cloud environments as the needs evolve."

Another key point for effective use is the ability to bring together the structured (CTMS) and unstructured (eTMF) trial information in a cohesive way to offer an integrated framework to the study teams, says Andy Lee, deputy head of clinical sciences and operations at Sanofi.

"In an eTMF streamlined process, the documents belonging to the eTMF are elaborated in the course of the study and should correspond to trial phases or milestones, he says. "Also, some other documents are collected as well as data in the CTMS. Therefore, using a single platform to collect and to manage all the documents elaborated for a study will help to streamline the overall processes and rationalize the clinical application landscape, reducing the need to additional information consolidation capabilities."

Mr. Lee says one challenge is related to the transformation of data generated into information and insights.

"The driver behind this transformation is the optimization of the R&D decision-making process in pushing a compound through the various stages of development and ultimately the benefit/risk profile of a drug," he says. "The challenge here is the integration of data resulting from the lack of unified standards — internal or external — and the siloes approach that has been used over the years, while deploying applications in an R&D organization. The solution will start from the adoption of standards reinforced with the management of metadata and master data and will grow through the adoption of architectural principles such as SOA — service-oriented architecture — that will reduce the silos of the application landscape."

Mr. Moody believes the biggest challenge faced by the industry is integration.

"We have complex systems to support our clinical trial activities and need to have those systems communicate, integrate, and operate in concert to maximize our efficiency," he says. "Standards are critical to ensuring that the systems and data flowing between them are working efficiently. If they are not then more time can be spent formatting and transforming the data than using the data for scientific inquiry." PV

BILL KELLY
BioInformatics LLC

EXPERTS

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