



# REAL ESTATE TECHNOLOGY NEWS

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As Seen In

## Choosing your path: The Web-based LOS ... and beyond

One of the most important developments in mortgage origination software is the growing number of options for deploying and maintaining systems. More LOS vendors, for example, are complementing traditional installed-on-site offerings with options for vendor-hosted software or even software that's sold as a "service."

Mortgage Builder, for example, recently rounded out its options by unveiling a software-as-a-service (SaaS) LOS business model. Its customers now have three options for accessing the company's software. According to the vendor, the SaaS offering lets them pay by usage, avoid the flat fee charges that come with an application services provider (ASP) model and dodge the upfront costs that come with buying and installing software on site.

With your options for LOS deployment expanding, how do you know which path is right for you? What do you need to know about embracing these new models, including emerging developments such as Web services technology and Microsoft .NET-based software?

### Web-based systems gain ground

Web-based deployment has been growing in past years as Internet technology matured but has been given a boost by another trend: the number of veterans from larger lenders opening smaller shops.

These startups typically bring no legacy IT with them and therefore have an interesting opportunity to get started with state-of-the-art technology. The choices they make help illustrate larger directions in mortgage technology and perhaps point to future decisions awaiting other lenders.

The small and midsize startup lenders are hungry for cost-effective methods to manage front- and back-office functions. Many are signing on with providers of Web-based lending platforms to meet those goals and to ensure they can turn components on and off easily as needed.

SaaS LOS provider OpenClose has seen a huge pickup in its business from startups. In previous years, one in 10 new clients was a startup, but now half of all its new deals involve startups.

According to **Rob Pommier**, senior vice president of OpenClose, LOS systems have taken an "archaic" approach to Web enablement in the past, with software installed on the lender's servers on site and users then accessing it remotely via Citrix, a virtual private network or Terminal Server. Cheaper and easier-to-implement options are now available to help startups get a leg up on their competitors, he said.

For startups, one advantage to Web-based deployment is quicker entry into the market.

OpenClose, for example, is getting clients up and running in 30-45 days, according to Pommier, which is helped by the fact that startups don't have legacy code or data to migrate. "They need something quick they can implement because they don't want to be out of the business too long," he said.



The also want software that doesn't tie up teams of employees. Whereas lenders previously had to buy servers for \$4,000 to \$8,000, SaaS LOS systems ensure the vendor handles server requirements and IT administration.

"It's less for them to start up, and they don't have the continuing overhead of hiring two to three IT people to manage the whole process," Pommier said.

Many SaaS LOS providers also point out that they can provide highly secure (SAS-70) technology facilities and infrastructure and redundant data backup - which not many individual lenders are not equipped to handle themselves.

Although activity has been especially brisk among small and midsize lenders, OpenClose's SaaS offering is used by clients with business ranging from 10,000 loans per month to 30 loans per month.

Smaller lenders get a system they don't have to maintain in-house, Pommier said, and larger companies are considering this route because it represents the best way to get technology and information out to loan officers fast and conveniently.

### Look before you leap: Tradeoffs to Web deployment

Other LOS specialists point out that IT decision makers must be aware of the tradeoffs that come with Web-based application delivery. In particular, they say, there are performance ramifications for so-called "power users" -- i.e., those who know enough about a computer or application to make good use of advanced features.

**Tim Liston** - president of Associated Software Consultants (ASC), which offers the Java-based PowerLender LOS - argues that Web 2.0 (i.e., SaaS) versions of core business applications such as spreadsheets aren't taking off, and likely won't replace desktop applications such as Microsoft Office soon.

He pointed to a poll from April 2007 of The Register readers that indicated "online office services" were used by just 1 percent of technically adept respondents. These users do not embrace online services in great numbers, "and lenders who are considering using Web-based LOSs should consider the lessons that power users teach us about Web applications," Liston wrote in a paper titled "Web Applications or Power Users?"

"Your loan origination and processing system has several constituencies, and in choosing your LOS, you must balance their needs," he stated. "The trend has been to choose a LOS Web application to reduce your IT burden. But the downside to that is your back-office power users work less effectively than you would like."

In other words, a Web-based IT system may please a lender's IT staff, but advanced users will suffer. Liston illustrated a number of reasons why he believes Web applications fall short in cases where high-functionality software is needed. Several of those included:

1. The nature of Web browsers. Because browsers must be able to handle any kind of content on the Web,

### TIP: Consider target users when choosing an LOS deployment method

According to LOS provider MortgageFlex, the first decision to make when choosing between smart client and Web-based application deployment is knowing which type of user you're working with.

"Our feeling is — and I think it's industrywide now — power users are better off with a smart client because they can work faster and more efficiently," said CEO Lester Dominick. "More casual users are better served by a browser-based application."

In some cases, that division isn't clear. Consider loan officers, for example. Lenders might take a different approach here. Some don't want any customer data on loan officers' laptops because of security, so they make their LOs use browser-based applications. In other cases, lenders aren't as worried because their employees all work in a call center.

MortgageFlex delivers its application to a smart client, and then functions that are more customer-facing or mobile can be delivered in ASP.NET mode.



they have been weighed down with features most Web-based LOSs will never use, according to Liston. Web browsers also are designed as single-threaded applications, which means they can't use modern multi-core-processor PCs. Because desktop LOSs can be multi-threaded, they can run faster.

2. The proliferation of different Web browsers and versions has also made it hard to program an LOS Web application that is functional and interactive on more than one browser, according to Liston. "However, desktop LOS applications need not consider differences among browsers, and may offer a higher common denominator set of capabilities," he wrote.

3. Performance can drag. To make Web applications interactive, developers have to ensure Javascript source code is downloaded with every page - without this code, Liston explained, Web-based LOSs essentially revert back to static first-generation Web applications. However, Javascript incurs a time penalty in terms of download and execution time.

4. With the conveniences of centralized administration and maintenance comes the threat of having a single "point of failure."

"Typical LOS Web applications are installed on a single Web server, and if that server fails, your LOS is down. Desktop LOS applications often are installed on individual PCs having their own database," Liston wrote.

5. He also pointed out that Web-based applications represent a threat to Microsoft, which strives to maintain control of the operating system and desktop application market. Because the IT giant is hurt by Web applications, Liston wrote, it works to prevent them from becoming a threat to its core business.

"Perhaps the bottom line here, therefore, is to shake all of those romantic notions of thin clients everywhere and just think 'thinner' - i.e., shift as much back to servers as possible, and try to implement as much central management and control as you can, but accept that the pivotal applications ... will mean an ongoing software footprint on the desk for a long time to come," Liston wrote.

"There is wide agreement that delivering applications using the Internet browser is the easiest way, but there is much less agreement that browser-based

## Easing the transition to .NET

MortgageFlex executives offered several tidbits of advice on embracing .NET-based LOS technology:

**1. ".NET" doesn't always mean ".NET"** - According to MortgageFlex, lenders must take care when working with vendors claiming .NET capabilities. Most technology providers today are probably using version 1.0 or 1.1 and just wrapping older applications with it, the company said.

Insist that the vendor show you the source code, and perhaps hire a reputable consultant to help you.

**2. Training of IT staff** - This is critical not so much for .NET development but for infrastructure and security, where big challenges can await them in the form of viruses, spam, denial of service attacks, etc.

"A lot of the small and midsize companies haven't put as much effort into that as they need to," said Senior Vice President of Product Development **Craig Bechtle**. "They'll be more exposed as they move to newer technologies."

MortgageFlex also recommends understanding existing processes by flowcharting them and mapping them to determine what your best practices are.

"If I understand what my processes are today, then as I learn the system, I can understand what my opportunities are to improve it," said CEO **Lester Dominick**.

When it comes to preparedness, some shops are already building in .NET, particularly in-house applications.

MortgageFlex sends its own employees to national Microsoft conferences to get educated. That might be more expense than a lender will take on, but they should seek out local IT training.

"From a strategic standpoint, that's harder. You can get the programmers and IT staff the skill set to do work in Visual Studio. But like with workflow, that's a fundamental change in how you would run your business. That takes more of an architect-type person, which a lot of companies don't even have. It's up to vendors to educate them on what's possible and how they might do things," Dominick said.



applications can be considered best-of-breed," he continued.

"In the long run, Web applications will replace desktop applications where it is appropriate that they do so, but they will not replace all desktop applications everywhere. In particular, mission-critical back office applications that are their users' primary application, and for which they are power users, are better provided as desktop applications."

### **The next generation: The LOS and Microsoft .NET**

The next horizon for LOS technology - one that just a handful of lenders are beginning to explore but that will have ramifications for how LOS technology is deployed - is Web services-based systems, especially those built on Microsoft .NET.

In early 2007, Real Estate Technology News documented the first lender rollouts of the new .NET version of Fidelity's Empower system.

Fidelity is not alone, however. As of late January, LOS provider MortgageFlex had the source code and was doing database transformation and final tuning for the new .NET (version 3.5), three-tier version of its software. According to officials with the company, an updated database will be based on how people do business, and the system will be integrated with more services and vendors.

MortgageFlex's move to a service-oriented architecture represents not just a complete rewrite of the code, but also a full change of the architecture. In the case of MortgageFlex, the architecture change means new delivery options, too. The transition makes available a Web-based deployment option in which the company takes care of application delivery, security and data management. That's best for small and midsize lenders, the company said; larger lenders might have those skill sets and would implement the new version as they do other systems.

MortgageFlex's Residential Lending System will combine workflow, service-oriented architecture services and business rules engine to deliver a level of automation that can only come from the .NET platform, according to the company.

Specifically, it's using Microsoft's Windows Workflow Foundation.

"Everyone looks at it as buying a system and dropping workflow on top of it. We took that stand that we're going to build a system with workflow in mind from the ground up so it's fully integrated," said **Craig Bechtle**, senior vice president of product development.

The company has polled its customers, who indicated they'll use workflow at various levels because it provides intelligent automation. It opted for a "standardized" tool supplier's workflow product - rather than building something proprietary - so that other applications built on the Windows Workflow Foundation can connect easily. This release of the lending platform should help lenders integrate with accounting, customer service and imaging systems, for example.

"You're crossing platforms," **Lester Dominick**, founder and CEO of MortgageFlex, said of the transition for his company. "You're crossing applications and potentially extending that to business partners. That openness is something no one's ever had before in the mortgage industry. Everything that's been done in the past has either been proprietary or, particularly in the workflow world, has been delivered by the imaging vendors who had to find ways of moving images around."



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