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An Essential Guide

Integrating CRM and ERP in the Cloud: Strategies for Getting It Right

With ERP finally moving to the cloud, companies are looking for ways to integrate their existing cloud CRM applications with cloud ERP. Before starting on an integration project, learn how to make the business case for integrating cloud CRM applications with cloud ERP and get the latest on security and compliance considerations when integrating systems.

TechTarget

For CRM and ERP, a Place in the Cloud

Just about everything has drifted to the cloud. Even staunchly on-premises ERP has started to budge, prompting businesses that haven't taken the leap to consider it for cost control and customer service.

Sure enough, as SearchCRM.com contributor Chris Maxcer learned, integrating CRM with ERP can help save money and improve customer experience if done right. Companies want a full view of their customers, and connecting their CRM and ERP applications in the cloud can create that tableau, according to industry watchers. They examine the business case for cloud integration of CRM and ERP—reviewing questions about departmental barriers, data memory, staffing and operations.

Maxcer also examines how companies can prepare for cloud integration. Analysts examine the importance of data integrity and the need for error-free data for a smooth process. They also look in detail at requirements for a security and compliance review when integrating, the pluses and minuses of automation and the wisdom of hiring a vendor with experience.

Lauren Gibbons Paul closes the handbook with a useful step-by-step guide on how to integrate ERP. It's no surprise that one analyst advises companies to first examine just how big the integration will be and sit down with all the players in preparing a roadmap. The analyst also recommends charting a vision and strategy from every business perspective, fully examining the architecture behind the data, and cleansing the data before integration.

Albert McKeon,
Associate Site and News Editor, SearchCRM.com

Integrating Cloud ERP and CRM? Showing How It Can Pay Off

CRM SYSTEMS WERE some of the earliest business systems to head to the cloud. Now as ERP systems are increasingly being moved off-site, the next step for customers is integrating cloud CRM and ERP applications, industry observers say.

Why is that integration so natural? It's not because both these sets of enterprise applications can be delivered by the cloud. No, it all comes back to business demands—the cloud is just a delivery mechanism of choice because of cost advantages, even though it can pose some unique challenges to integration.

The next step for customers is integrating cloud CRM and ERP applications.

According to China Martens, an analyst for Forrester Research Inc. in Cambridge, Mass., companies are seeking more insight into their business operations as more employees are accessing data from CRM and ERP applications.

Companies want a full picture of their customers, one that's generated from CRM—particularly sales, marketing and customer engagement services—and ERP, which includes the financial status of customer accounts, supply chain information and even warehouse management data. All of this contains useful information for engaging with customers.

"There's more interest in making end-to-end business processes more efficient," Martens said. "Some of those processes—for instance, order to cash—begin in sales/CRM and end up in ERP/finance. The same is true of project management, where the initial project quote starts in CRM and ends up with the billing and invoice in ERP."

REMOVING BARRIERS

One of the biggest benefits of cloud-based services is the ability to roll out application access to employees anywhere at any time, as well as take advantage of new functionality that cloud-based providers can often deliver more quickly than is possible with in-house CRM and ERP systems. The key word here is speed.

"The value of integrating CRM and ERP is in how it increases the pace at which you can do business," said Mark Walker, vice president of technical services for Scribe Software in Manchester, N.H. "By taking down barriers between applications, you enable people to do a better job for customers by putting the right information in front of them at the right time."

For example, Walker explained, "Would a company find it valuable to enable their sales team to see the invoice history of their customers right in their CRM system? Sales representatives can see what customers purchased, what they paid and their buying patterns, which opens the door to cross-selling opportunities."

CRM systems may typically have a place to keep track of the customer's credit information, such as the credit status, payment terms and credit limit.

Similarly, Walker said, CRM systems may typically have a place to keep track of the customer's credit information, such as the credit status, payment terms and credit limit. Just as often it's accounting or ERP that's the system of record for this information, but the accounting team does not have time to rekey the credit information into the CRM system.

BUILDING THE BUSINESS CASE

An integration effort will provide benefits, but those benefits may not deliver a positive return to the business, said Chris Wynder, an analyst for Info-Tech Research Group Inc. in London, Ontario.

"Individual companies need to decide if the benefits are great enough to balance the pain."

While you start with benefits to build a business case, they have to be connected to risk and cost, Wynder said, and that can be more difficult to ascertain with cloud applications, which aren't as easy to customize as on-premises versions of the same applications.

"If you have complex compliance needs for your financial data, which is stored in your ERP, can those compliance rules be replicated on your CRM?" Wynder said. "For an on-premise solution you can customize the integration between the two applications to respect the security settings of the more stringent app. It's not clear whether that is always possible for cloud versions."

CALCULATING COSTS

While pricing plans for cloud-based applications are sometimes clear and easy to figure out, pricing integration is more difficult. Usually, though, Wynder said you can break down your cost concerns into three areas of further study, each of which comes with a set of questions businesses should ask:

- **Implementation.** Can a company integrate the pointer indicating memory location of data from each app? Is the CRM and ERP data labeled in such a way that it can be automatically rationalized? "ERP data integration is difficult, and when attempting to move legacy data into newer systems, it is often time-consuming and incomplete," Wynder added.

- **Operations.** To get value out of the integration, what else does a business need? Does it need a full business intelligence system? Will it need additional infrastructure or cloud services to manage and store the data? "These kind of [new] costs need to be scoped at the beginning of the project," Wynder said.

- **People.** Does the company have the end users to make use of the integration? Does it need to hire analysts? Who now has control of the system—

sales? finance? someone else? In addition, Wynder said, a business case must be important enough to the enterprise that the end users stay engaged throughout the project.

ELEVATING INTEGRATION

There's one more thing necessary for integration, according to Benoit Lheureux, a vice president of research for Gartner Inc. in Stamford, Conn., and that's giving the project the respect it's due.

In the rush to use cloud-based applications, Lheureux said, companies have treated cloud-cloud or cloud-on-premises integration as a "second citizen" requirement, often choosing the cloud app and then addressing security and availability before even imagining integration.

"Integration is a big deal," he said. "Integration comes up in almost all cloud-related projects, and if not done well—or at all—it has a high impact on the overall success of your cloud project." —*Chris Maxcer*

Preparing CRM Data for Integration Isn't a Rush Job

Once company elders buy the business case for integrating cloud-based CRM and ERP cloud systems, the hard work and heavy lifting is far from over.

A company must now ask how it can begin prepping its CRM data for integration with its ERP data.

The good news is it's not nearly as difficult as in the past.

"We've seen cloud integration come a long way in the past few years, and it's no longer as much of a systems integration challenge as it used to be," according to Rebecca Wettemann, analyst at Nucleus Research in Boston. "In fact, we see many of the systems integration firms using tool kits and repeatable adapters to make integration much more stable and repeatable."

Still, there's more to an integration plan than using a tool kit.

"Understanding how timely and accurate your data is, is also important to successful integration," Wettemann said. "Risks of cloud integration, like any integration project, is that if the data's bad or unscrubbed, you can negatively impact overall adoption and credibility of the applications. If you're exposing salespeople to inventory data that's not up to date or putting bad sales forecast data into inventory planning, it can be very disruptive."

REVIEW SECURITY AND COMPLIANCE

What comes after determining CRM and ERP data is clean?

"Determine the systems of record for your primary business objects—customers, products, pricing—and configure your other systems to consume data from the system of record," according to David Smith, a principal consultant for Centerstance in Portland, Ore. "Chances are that you'll need a data conversion effort."

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For an ERP Integration, Communication and Planning Are Key

According to Benoit Lheureux, an analyst at Gartner Inc. in Stamford, Conn., when it comes time to integrate a cloud-to-cloud solution, business and IT leaders need to be aware that many common integration tasks still need to be executed properly—and will require some of their involvement. For example, Lheureux explained, the integration will usually require an initial load of master data from an ERP app to a cloud-based CRM app. Next you'll need adapters to interface between your middleware communication protocols and use application programming interfaces (APIs) so your cloud-based apps can pass data to each other.

And then there are security issues, which can govern how a business can move its data between applications.

"The bottom line is that any time you integrate two applications that have different security rules, you will need to test that the appropriate access rights are still intact," said Chris Wynder, an analyst for Info-Tech Research Group in London, Ontario. "An ERP application that has customer data in it has specific regulations, and if you can't customize the access settings of your cloud CRM application, you could breach compliance regulations."

Also, a business may need to bring in its legal and compliance department to help sort out security and compliance requirements before data becomes exposed to the wrong people.

AUTOMATION ANYONE?

Part of the reason customers move to cloud-based systems is they don't have in-house resources to manage data and the infrastructure required to hold it safely and securely.

This leads companies to question whether automated tools and specialized integration firms can bridge the gap between cloud CRM and cloud ERP.

The answer, it turns out, is as varied as the type of clouds in the sky.

"What we do see today is that many integration vendors offer some sort of prebuilt integration templates or maps for popular CRM-ERP combinations to help reduce the time to implementation and help the customer get faster time to value for their integration project," said Mark Walker, vice president

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of technical services for Scribe Software in Manchester, N.H.

"Some are more complete and automated—you simply have to configure the source and target to get started—and others are less complete and might require more customization," Walker said. "The thing to remember is that every business has unique business processes, so integration will never be truly fully automated."

Regardless of the category of cloud integration service, organizations looking to integrate existing CRM and ERP in the cloud should look first for experience.

For commonly used combinations of cloud services, there is a higher likelihood that a company will be able to tap into a template or use a time-saving tool for CRM-ERP integrations.

Gartner's Lheureux pointed out that synchronizing order master data between, say, Salesforce.com and an on-premises SAP or Oracle system—there are many examples of prebuilt integration systems. These are sometimes referred to as packaged integrating processes or cloud streams.

GETTING SPECIALIZED

Integration challenges increase the profiles of cloud services brokerages that help organizations use, maintain and integrate cloud services from multiple providers. Regardless of the category of cloud integration service, organizations looking to integrate existing CRM and ERP in the cloud should look first for experience.

According to Info-Tech's Wynder, ERP is by its very nature a complex application with many potential stumbling blocks on the path to integration.

"ERP modules can range from order processing to managing professional development. Many ERP consultants specialize in a single vendor's product so they can have the depth of knowledge to integrate the different ERP modules—and many of these third parties can integrate the same vendor's CRM," Wynder said.

Companies that use different vendors to integrate ERP and CRM should review the ERP vendor's partner list. It will include the names of vendor parties and resellers that perform the needed implementations.

But, Wynder added, when integrating between separate vendors, ease of integration depends on the APIs available and the partnerships for each vendor. "If your CRM vendor has a standing partnership with an ERP vendor, it's quite likely that you can easily find the expertise to integrate the two products." —*Chris Maxcer*

For an ERP Integration, Communication and Planning Are Key

Many factors can drive a manufacturer's need for ERP integration with a third-party application.

Considerations include the need to create a supplier management program or the motivation to improve inventory management across the supply chain.

Process-oriented initiatives often require cross-platform data, making integration necessary.

But when it comes to ERP integration wish lists, CRM takes the top spot, according to Joshua Greenbaum, a consultant at Enterprise Application Consulting in Berkeley, Calif.

"CRM is the single most important application that you can deeply integrate. CRM owns the customer record. Everyone in the organization needs a reference point to the customer—sales, marketing, procurement, accounts payable, even product design," Greenbaum said.

According to Gerardo Ramon, process manager and practice lead for SAP process integration at itelligence, a Cincinnati systems integrator, an ERP systems integration project needs to follow certain steps, whether it's an on-premises application such as Siebel or one hosted in the cloud, like Salesforce.com. Here are the steps:

1. Discuss at a high level the depth of ERP integration you will need. The basic question: How big is the integration problem?

First, sit down with your systems integrator, independent consultant, ERP vendor, IT leadership, business sponsor—anyone and everyone who could possibly be involved—and determine the type of integration to be implemented.

Will you use middleware or an enterprise application integration platform? Do the two vendors have enough experience working together to take the project and run with it? If one of the applications has a service-oriented architecture foundation, will you be able to use Web services for easier integration? If you will have to hard-wire a connection between a legacy application and another application, will internal or external people do the coding? Beyond the technical integration questions, the team should also consider people and process-integration issues.

2. Chart your ERP integration vision and strategy from a scope, technology, capabilities, timeline, personnel and budgetary perspective. It is important to identify at this early stage the challenges that you might face down the road, Ramon said. Integration is still expensive, even with tools and techniques that speed up the process. As with all large projects, it is better to prepare a timeline showing tangible chunks of progress instead of the proverbial Big Bang.

3. Develop the architecture. A number of key questions arise here. Where are the points of integration? Where do legacy apps play a role? How will you connect with them? How will you synchronize the data? How will you clean and prepare the data to get ready for the integration? Are you integrating on-premises software with Software as a Service, and if so, what does that mean?

The integration team must also ask two more questions about the architecture:

One, does the integrated application require real-time or near-real-time data? Many processes are event-driven as opposed to real-time; for example, a sales rep places an order, and the warehouse fulfills the order. Event-driven monitoring demands more control than monitoring of real-time events.

Two, will the application pass a high volume of data continuously (that is, synchronously), or is it more of an asynchronous batch process? Asynchronous event notification allows the application to constantly monitor events (such as inventory updates) without monopolizing system resources, while preserving throughput. Synchronous events require more bandwidth and will therefore affect the integration architecture. For example, a real-time synchronous application such as e-commerce will need real-time logon capability and account verification, which would typically require linking to the CRM system to access customer master data.

4. Do the data cleansing and mapping in tandem, if possible, to save time. Data cleansing is generally the domain of IT and tends to take much longer than anticipated, though extract, transform and load tools can help speed the process. Data mapping, meanwhile, must be led by business users who have deep understanding of the business processes involved.

"You need a business process owner to define the process and the master data types you will use," Ramon said.

With this step complete, the stage is set for the applications to be connected according to your chosen architecture. —*Lauren Gibbons Pau*

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