

The “Innovation Without Disruption” Mission Continues

New SAP NetWeaver Features Let You Perform System Updates Without Crippling Core Processes

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Frequent interaction with customers is a key aspect of SAP's success. In fact, in its earliest days in the 1970s, SAP carried out initial development efforts in customer computer and data centers. Fast forward to today, and customers continue to have substantial influence over SAP's development decisions. Through programs such as the Customer Connection and the Customer Engagement Initiative, and meetings with user groups such as ASUG and DSAG, SAP continues to get to the heart of what its customers really need.

From a strategic level down to a feature level, SAP customers have reiterated the importance of delivering innovation without disrupting the critical business processes they have implemented in their SAP software. Core processes, such as financial and logistics processes, must run continuously, with only a few small windows allowed for performing system maintenance such as applying fixes contained in SAP support package stacks.

SAP is responding to its customers' needs. This article provides an overview of the options that SAP NetWeaver offers to help you take advantage of the latest innovations for SAP Business Suite without disrupting your business.

Paving the Way to Innovation Without Disruption: SAP Enhancement Packages

SAP enhancement packages, first introduced in 2006 as an alternative to full-scale upgrades for SAP ERP, SAP NetWeaver, and later for the entire SAP Business Suite, deliver innovation without disruption using a simple yet powerful concept: You initially import the innovation into your system in a passive way that doesn't change the original business process. Only when you activate

the respective business functions contained in the enhancement packages does the innovation become visible in the user interface (UI) and in underlying business processes.

While the enhancement package concept works well, and is still the best option when multiple innovation steps need to be consolidated, customers eventually began to communicate the need for alternative implementation methods for a number of reasons:

- The size of enhancement packages grew significantly over time, making it more challenging for customers to consume them. Initially, the enhancement packages were rather small, but starting with enhancement package releases 4, 5, and 6, they became more full-function updates, covering almost all core and industry-specific processes.
- The implementation of enhancement packages became more complex. Initially deployed as add-ons via the well-known SAINT transaction, installing enhancement packages evolved to require the Enhancement Package Installer and later the Software Update Manager. These

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Note: Enhancement packages are still necessary to consolidate the various in-advance shipments, both to reduce complexity and to maintain synchronization and compatibility between the various shipments. However, beginning with enhancement package 7 for SAP ERP, they will occur biyearly rather than yearly.

more involved installation procedures share some of the less desirable characteristics of full-blown SAP upgrades, such as downtime, and required later adaptations if customers modified the software layers included in the enhancement package delivery.

- Bundled into some enhancement packages were innovations that were not necessarily relevant to all customers. If you were looking for a more productive UI in the SAP ERP Human Capital Management (SAP ERP HCM) space, for example, you also had to apply (though not activate) all of the other changes contained in the enhancement package, which may have served a completely different customer segment.
- Over time, the number and frequency of enhancement packages increased to accommodate rapidly changing technology and to support new innovations. Rather than reinvesting resources into keeping pace with each enhancement package release, customers usually decided to simply remain at a particular release level.

Following in the Footsteps of Enhancement Packages: In-Advance Shipments

To overcome the growing complexity of the enhancement package delivery process, and to more flexibly respond to customer innovation needs, as of SAP Business Suite 7 Innovations 2011, SAP offers “in-advance shipments.”

SAP pioneered this approach with the software logistics (SL) toolset, a set of installation tools available at SAP Service Marketplace that are decoupled from the traditional application server stack. This separation allows the tools to deliver required infrastructure capabilities, such as security and downtime reduction features, independently of the huge application server stack. This enables the installation tools themselves to be continually updated without needing to wait for updates to the application server stack.

With in-advance shipments, SAP has extended this approach to application updates. Innovations to SAP ERP and SAP Business Suite that were originally designated for a particular enhancement package are now broken up into more manageable pieces and shipped to customers in advance on a quarterly basis. This approach allows customers

to import the innovations into their landscapes before the next enhancement package is shipped, enabling them to implement innovation technology in a step-by-step fashion. For example, a customer can implement the new UI in SAP ERP HCM without having to implement the entire enhancement package update for SAP ERP.

No Customer Left Behind: Downporting Innovation via Support Packages

What about customers who want to stay with their existing software release, but want to benefit from innovations available at the next enhancement package level? Let’s say a customer has recently applied enhancement package 5 for SAP ERP and isn’t ready to start thinking about applying enhancement package 6, but wants to benefit from innovations available in the newer release, such as the ability to consume a renewed UI without changing the back end. To accommodate these customers, SAP delivers innovation bundled into support packages, which are delivered on a quarterly cycle and are available from SAP Service Marketplace.

The contents of these support packages come from various sources. For example, many of the software improvements requested by customers as part of the Customer Connection program are delivered via support packages.¹ SAP also occasionally makes targeted, easy-to-implement functionality that has broad adoption available for downporting in support packages, such as user productivity features in the Floorplan Manager.

But not all innovation can be downported to lower release levels. Delivering new features in the support code can be risky because of interdependencies with existing functionality, so SAP allows it only if it does not affect customers who want just the latest fixes and not new features. SAP’s new framework for UI development opens the door to a release-independent delivery of new functions. We’ll look at this new approach next.

Release-Independent Innovation: Delivering New UI Features with HTML5 and SAPUI5

HTML5 offers the opportunity to deliver UI innovation in both new and existing SAP release versions, so that new UI features are no longer

¹ See <http://service.sap.com/customer-connection> for additional details.

beyond the reach of any customer. Using HTML5, developers can build browser-centric UIs that sit on top of existing business functionality, bringing a new UI experience to traditional applications such as SAP ERP HCM or SAP Supplier Relationship Management (SAP SRM). To enhance this process, SAP has developed a framework called the UI development toolkit for HTML5, also known as SAPUI5. This toolkit allows developers to quickly and easily create UIs based on HTML5 and JavaScript for mobile and web applications. (For an overview of the evolution of SAP's UI technology, see the online version of this article at sapinsider.wispubs.com.)

HTML5 is a proposed standard² that tries to move content that requires browser plug-ins, like rich multimedia content, videos, and SVG graphics, directly into the browser, removing the need to manage plug-ins, like Adobe Flash or Microsoft Silverlight, with their particular programming models. HTML5 offers new ways to use cascading style sheets (CSS) to build company branding right into applications. Accessibility features, based on the ARIA standard,³ are also built into the browser, and web storage provided by a local database allows you to store and access user settings and preferences directly inside the browser session.

The biggest difference between HTML5 and the currently dominant UI technology for SAP solutions, classical Web Dynpro, is how HTML pages are manipulated during application execution. With Web Dynpro, the application's design is bound to the traditional request/response pattern — user requests are rendered on the server side, meaning the actual page is computed on the server based on the application's state and typically requires a full round trip if a user hits a button or makes a change. In contrast, HTML5 offers highly interactive applications that are mainly executed on the client side via JavaScript.⁴

² HTML5 is not yet completely finalized by the W3C, but is already present in modern web browsers. The latest W3C editor's draft of the standard is available at <http://dev.w3.org/html5/spec/single-page.html>.

³ WAI-ARIA (Web Accessibility Initiative — Accessible Rich Internet Applications) is a standard for making web content and applications more accessible to people with disabilities. Learn more at www.w3.org/WAI/intro/aria.php.

⁴ While JavaScript is not new, the surrounding infrastructure has matured, allowing for JIT compiling and fast rendering, and enabling a completely new UI experience that accelerates and simplifies the learning curve for end users.

SAPUI5 consists of JavaScript and support libraries that can be used with any web container. Its deployment is highly flexible — you can deploy to Tomcat, to the Internet Communication Manager (in the ABAP stack), or to the lean Java server that forms the basis of SAP's on-demand Java development infrastructure, SAP NetWeaver Cloud.

SAPUI5 also comes with a set of tools, delivered as Eclipse plug-ins, that help you build your first HTML5 clients. A team provider plug-in allows you to store SAPUI5 artifacts in the ABAP repository, using the MIME repository and Business Server Pages as code containers, enabling you to easily append them to transport requests and move them from development to production. Since the SAPUI5 framework is independent of the hosting system, the primary way to access back-end data is to use OData feeds powered by SAP NetWeaver Gateway.⁵

SAP will use SAPUI5 to fuel many of the quarterly innovations for SAP Business Suite. For example, with SAP ERP HCM renewal, SAP has used SAPUI5 to create “landing pages” for users; these pages offer feeds, status information, collaboration capabilities, and much more.

SAPUI5 is delivered as part of the UI extensions add-on, due for release in September 2012, that can be deployed in various versions to the SAP NetWeaver stack (versions 7.31, 7.0x). SAPUI5 is also available as a trial version at SAP Developer Network at <http://bit.ly/x9rmyR>.

Summary

SAP is continuously seeking new ways to deliver innovation to its customers without disrupting their existing core business processes. Various approaches exist to deploy these innovations to the customer landscape, including full-function updates implemented via enhancement packages, jumpstart updates delivered with in-advance shipments, selected functionality shipped via the support package stack, and release-independent UI components. These options enable you to benefit from the innovation offered by SAP in the right way and at the right time for you.

For further reading, please refer to <http://service.sap.com/erp-ehp> and <http://scn.sap.com/community/enhancement-packages>. ■

⁵ See “Take Advantage of Cross-Platform, Cross-Device Access While Keeping Your Data Secure” on page 69 of this issue of *SAPinsider* (sapinsider.wispubs.com).

Note: HTML5 is not meant to replace existing frameworks such as Web Dynpro. It is a technology that runs on top of these frameworks and offers more flexible ways to integrate existing applications based on Web Dynpro ABAP and the Floorplan Manager framework, for example.