

Duet Enterprise by Microsoft and SAP Unlocks User-Centric ERP With SharePoint

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We analyze the SAP-Microsoft Duet Enterprise product and how it can fit into an enterprise's ERP strategy. IT leaders deploying or enhancing an existing SAP environment should use this research to help identify how to best use Duet Enterprise.

Key Findings

- Duet Enterprise is completely different from prior versions: Duet Enterprise contains the frameworks and services that facilitate the use of SAP Enterprise Services in Microsoft Office and SharePoint environments. Duet 1.5 and 1.0, predecessors to Duet Enterprise, are sets of prepackaged scenarios for using SAP services in Office and SharePoint.
- SharePoint as a development platform, not content management or collaboration: While SharePoint is commonly thought of as a content management or collaboration environment, Duet Enterprise is more about getting SAP data into SharePoint for use as a lightweight development platform.
- Duet enables user-centric agile development: Duet Enterprise will enable enterprises to develop agile, user-friendly, SAP-driven applications in two to four weeks without the need for expensive and scarce Advanced Business Application Programming (ABAP) developers, which is a driver for some early adopters we have spoken to. To do this, business analysts must use the concept of pace layers to identify requirements that are good candidates for Duet versus those that require changes to back-end SAP workflows.

Recommendations

- Early-adopter-style user organizations that have a substantial Microsoft user environment should begin evaluating Duet Enterprise as part of a user-centric ERP strategy.
- IT leaders sponsoring a Duet project should:
- Couple Duet Enterprise technology with a user-centric agile development methodology in the context of a pace layering strategy to support continuous innovation in the business.
- Use Duet Enterprise to equip a user experience "tiger" team, addressing the top 10 user frustration points with SAP.
- Focus on the software development kit (SDK) in Duet Enterprise.
- Take steps to avoid fragmentation of master data and processes.

WHAT YOU NEED TO KNOW

ERP commercial products and methodologies have evolved to serve the needs of power users quite well. Gartner finds, instead, that the primary challenge for ERP leaders is to make ERP relevant to casual users and business executives — outside of the core group of power users. ERP leaders can either try to make people more ERP-centric or make the ERP initiative more user-centric: Gartner advises a user-centric ERP strategy. Two common ways to make an ERP more user-centric are to surface ERP data and functionality into user experience environments that are more familiar to casual users, and to enable rapid or agile iterative development in an isolated agile layer that brings ERP functionality to today's business problems within weeks, not the months-long effort typically required by ERP development.

While prior versions of Duet failed to deliver for most users, the latest release of Duet Enterprise contains tools that finally enable ERP teams to deliver SAP data and processes to users in SharePoint environments (or other Office environments) in a user-centric development model. Initial limited reports from customers and system integrators are positive and confirm that Duet Enterprise can deliver in the limited-scale deployments being used, but Gartner is continuing to look for more data before concluding that it is ready for enterprise-scale deployments.

To get the full benefits from Duet and prevent fragmentation of information and process in an ERP environment, ERP leaders must couple the tool of Duet Enterprise with the agile and user-centric development methodologies explained in this research (see Note 1).

ANALYSIS

Duet Enterprise contains three main elements:

- Duet Enterprise Gateway Services Repository** — This is a set of lightweight stateless services that serves SAP processes and information in a service repository consumable by SharePoint and Office. Data can either be dynamically referenced through services or replicated to the SharePoint side. It should be noted that, while this service repository draws from the Enterprise Services Repository in SAP, this service repository is not the same, as the services have been flattened and made stateless so that they can be more intuitively accessed by developers with a Microsoft skill set without extensive knowledge of SAP or ABAP. This is the basis for the service repository that has become the Gateway offering from SAP.
- Duet Enterprise Business Connectivity Services (BCS)** — This is a set of Microsoft connectors and accelerators that transfers security services through single sign-on and information services.
- Duet Enterprise Content Accelerators** — This is a set of prebuilt user interface elements, reports and workflows to access selected data in SAP from SharePoint. While some of this is usable out of the box with configuration, this should be viewed more as a development accelerator or demo functionality, not prebuilt ready-to-use functionality for mainstream users.

Duet 1.5 is a prior-version set of prebuilt scenarios for access to very specific elements of SAP functionality from Office. The scenarios in Duet 1.5 have not proved interesting to end users, and users should completely separate their review of Duet 1.5 from Duet Enterprise.

Use Duet Enterprise to Reduce End-User Frustration

Duet Enterprise should be viewed as a way to extend SAP data and processes to infrequent users of the SAP environment. Despite widespread complaints about SAP, Gartner research has found through survey data that power users working within stable business processes like the SAP experience. The dissatisfaction comes from casual users forced into the SAP GUI environment. As such, ERP leaders shouldn't focus on trying to replace or rebuild SAP GUI screens that are already working well for power users. Rather, the focus should be on enabling infrequent users a more user-centric experience.

User-centric ERP isn't just about creating "eye candy;" it doesn't just mean taking the same SAP screens and putting them on a screen with a better color scheme. User-centric is about being responsive, and creating exactly what is needed in the context of the user. For infrequent users, it means building a user experience with an engineering requirement for zero training. To respond to user frustration around infrequent user experience issues, ERP leaders considering Duet should:

- Build a user experience tiger team.
- Develop a user experience frustration heat map through end-user surveys and/or observational studies.
- Have a goal that the tiger team will alleviate the top 10 user experience frustrations with SAP within one year through Duet (or alternative user experience tools).

- Employ user-centric design methodologies to ensure that you don't wind up with another set of equally nonresponsive user experiences.

Use Duet Enterprise and Pace Layers to Enable Agile User-Centric ERP Development

For business leaders, the frustration with SAP often comes from the long cycle times required for changes to the ERP. The issue is that IT takes four to six months, at best, to respond to continuously changing business needs. Business leaders want IT that supports continuous innovation on the cycle time of the business. By creating a layer outside of SAP that can be changed independently of the SAP life cycle, the ERP can be more responsive to the needs of the business.

While it is possible to deploy Duet within traditional centralized SAP management, to get the full benefit of this product, it is important to create a model for change that is outside of the centralized SAP functions, and to create a pace layer that Gartner refers to as a System of Innovation. Given early discussions with users either working with or contemplating Duet for agile development, we have gathered the key elements of this model:

- **Resources directly allocated to specific business leaders** — Given the size of the development teams needed to create projects in Duet/SharePoint, an ERP leader can effectively allocate independent teams of one or two resources to support innovation directly with the sales leader or the operations leader, for example.
- **Agile Duet Enterprise development team physically sits with the business** — The agile Duet development team needs to physically sit next to the business so that they are in the flow of the business leader, and can understand and iterate with the constantly changing priorities of the business.
- **No business case hurdle** — The business wants the ERP to support continuous innovation, not “continuous improvement.” Business needs are constantly changing, and the business is continuously pursuing new ideas that may or may not pan out — don't make the business prove it upfront. Often, business cases are used to bludgeon new ideas to death, and they are impediments to supporting continuous innovation, especially small, incremental change projects.
- **Two- to four-week development cycles (or faster)** — You do not want long Duet development cycles. These aren't full SAP implementations; they are ways to rapidly respond to business needs. If projects will take longer than this, they need to go through regular development cycles, or be broken apart into concrete deliverables.
- **Say no to anything that requires modification to SAP workflows** — The agile Duet development team needs to be careful when working with the business so that they steer the business away from approaches and architectures that require changes to SAP workflows. If the team is not able to stay outside SAP, they will likely forfeit their development cycle speed.
- **Harvest agile innovations for broad deployment and industrialization** — One issue with Duet is that enabling the creation of business functionality outside the core SAP environment may undermine the central nature of SAP in maintaining customer data, product data or common business processes. Enterprises will need to compensate for this by regularly harvesting the innovations created at the edge of the business and evaluating them for inclusion in companywide standard processes and information flows.

Product Strategy

Duet Enterprise aims to create a mechanism for building user-centric business applications with Microsoft Office and SharePoint, on a layer above the core business applications, that is easy to use by casual users and can take advantage of agile development.

Strengths

- **Extends SAP beyond traditional deployment environments** — Duet Enterprise enables enterprises that are frustrated with SAP GUI or Web Dynpro to use alternative surfaces for user experience.
- **Agile development cycles** — By creating a layer above SAP capable of being managed outside of centralized SAP practices, applications and changes can be deployed in two to four weeks, not months. But in order to accomplish this, enterprises will need more than technology; they will also need the agile methodologies described above.
- **Easy to use** — By using Microsoft front-end technology and employing a zero-training engineering goal, enterprises can alleviate user frustrations with SAP.
- **Reduces demands on the SAP skills base** — Enabling the use of developers with Microsoft skill sets will reduce the strain from typically limited SAP developer resources.
- **System integrators** — System integrators — notably Avanade, Accenture and Capgemini — have built resources to support users.
- **Microsoft and SAP support** — This product has high-level support from both SAP and Microsoft, but this commitment could waver if the product does not find traction on its third iteration.

Challenges

- **Fragmentation of master data and processes** — One of the main reasons why enterprises buy SAP is because they want a standard way of doing business and a central repository for data. By introducing a layer of innovation above the ERP, the data centrality of ERP could be undermined. SAP's message is that it preserves process integrity in orchestration of business processes across multiple environments through service interfaces. However, execution on this message is only "half-baked" at this point, as there is no clear way for process integrity to be maintained. Users should impose strong master data management principles, and employ harvesting of business processes, as noted above.
- **Unproven product** — Even though the product has undergone extensive testing, it currently has a limited user base that has only gone into limited production environments. Gartner is still monitoring for end-user experience with scalability, usability and other technology issues that may arise.
- **Little use of Duet Enterprise in core SAP products and small independent software vendor (ISV) ecosystems** — SAP product developers are not using Duet to create packaged scenarios of core SAP products with Microsoft front ends. Microsoft has built a substantial amount of SharePoint content for its own internal use, but this is not commercially available. Additionally, there is only a small ISV ecosystem at this point, so users should expect to create almost all the content on their own.
- **Cost** — This adds another layer of cost to SAP development that many people will want to avoid. If your enterprise is only going to have limited use of SharePoint or Office, you should consider alternatives, such as building the services in SharePoint yourself, or one of the alternatives outlined below.
- **Customizations may inhibit usefulness** — Users with custom objects or other custom elements may find the Duet service repository of little use because their customizations break the bridge to the services. All users should inspect the service repository to determine how much remediation of customization will need to be done to enable useful services. SAP is promising generator technology in Gateway to resolve some of these issues.
- **Related product strategies still being formulated** — How Duet Enterprise interacts with SAP and Microsoft's content management and business intelligence (BI) strategies are still being formulated.

Competitive Analysis

Since Duet Enterprise is targeted primarily at existing SAP users with Microsoft development requirements or competencies, there are few direct competitors for the product.

There are some smaller competitors, such as Winshuttle and Sitrion, that provide some capabilities around connecting SAP to Microsoft environments. These vendors may differentiate themselves by focusing on building a simpler service repository or prebuilt content. Additionally, some users may choose to create these SAP-to-Microsoft connections on their own.

There are also some competing user experience technologies inside of SAP to address user-centric design: Web Dynpro, Enterprise Portal, PDF Forms and Flex. While there is some overlap with the PDF forms positioning, these are really different capabilities, and users could see a mix of all these technologies in their user experience portfolio.

SAP's mobile plans, especially the hinted-at Gateway product, could prove competitive from the perspective of user-centric design elements; however, with the commonality of the service repository, we see convergence among these technologies over time, rather than competition.

Consider This Product When

You are an SAP shop with Microsoft skills, that needs:

- Tools for creating user-centric, zero-training experiences with enterprise data and processes from SAP
- A toolkit to enable Agile innovation in front of the ERP
- A way to reduce contention for ABAP resources

Consider Alternatives When

- SAP Business All-in-One customers: This product is not positioned for these customers at this time.
- Customized: You have heavily customized SAP.
- Regulated processes: In industries such as pharmaceuticals, it may not be possible or desirable to support process engineering outside of SAP.
- Limited use: If you foresee only limited use of SAP data in Microsoft environments, you may be better off with a competitive product, or creating the service bridge on your own.

Note 1. Basis for Research

This research is based on two full-day reviews of Duet and its strategies with both Microsoft and SAP product experts, as well as ongoing teleconferences updating Gartner on Duet's progress. In addition, Gartner has interviewed four users of Duet Enterprise and three system integrators working with the product, and has conducted numerous discussions with clients considering the product. Since there are few actual customers at this point, we will continue to monitor progress and speak with new customers as they go live.

Company Information

SAP

Headquarters: Walldorf, Germany

www.sap.com

Founded: 1972

Ownership: Public

Employees: 51,500 (as of 31 December 2008)

Financial Data: Fiscal-year 2008 total revenue: €11.57 billion