

# Optimize Your SAP Investment Using Pace Layering

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Many organizations that have implemented SAP adopted a "best of SAP" strategy. As they focus on differentiation and innovation capabilities, IT leaders in SAP-centric enterprises should leverage Gartner's pace-layered approach to refine and execute their application strategies to meet these needs.

## Key Challenges

- SAP-centric strategies cannot effectively support all business capabilities without compromising functionality, agility or flexibility.
- Uncontrolled provision and deployment of solutions for differentiating and innovating business capabilities result in increased IT costs and complexity.
- A Pace-Layered Application Strategy without connecting technology does not support integrated business capabilities.

## Recommendations

- Develop a Pace-Layered Application Strategy that defines how you deploy SAP solutions to support systems of record, differentiation and innovation.
- Renovate the core SAP system of record layer (if required) and implement effective, balanced governance across all layers.
- Implement an application integration strategy of connecting technology to enable the interaction of solutions across the layers and to develop solutions that provide truly differentiating capabilities.
- Adjust SAP-centric and systems-of-record-focused organization, methods, processes and tools to meet the needs of systems of differentiation and innovation.

## Introduction

Business stakeholders have grown increasingly frustrated at the lack of IT responsiveness to their emerging needs and to the "one size fits all" approach. This often leads to shadow solutions being acquired (particularly cloud-based) without IT's knowledge and outside of IT's control. The pace-layered approach of stratifying applications and application investments is a more balanced way to educate and support the business (see Note 1). IT organizations, working closely with business stakeholders, must establish a strategy for business applications that uses technology to establish sustainable differentiation and drive innovative business processes in a secure, cost-effective and properly managed environment. This is even more important as organizations seek to support their digital business strategy through differentiation.

SAP will likely remain a fundamental application strategy component in most organizations that have already deployed SAP solutions, providing standardized processes, data and information for the systems of record layer, at a minimum. A Gartner survey in 2013 showed that 91% of organizations running SAP planned to retain SAP for more than five years — and often significantly longer.<sup>1</sup> An important step in the maturity of an SAP-centric IT organization and its application strategy is the recognition that differentiation and innovation needs require consideration of SAP solutions, SAP ecosystem partner solutions, and other (non-SAP) specialist or custom-developed solutions. The transition to a pace-layered approach can represent a significant change for many organizations, especially if investment and effort have been focused primarily on SAP systems of record for a number of years.

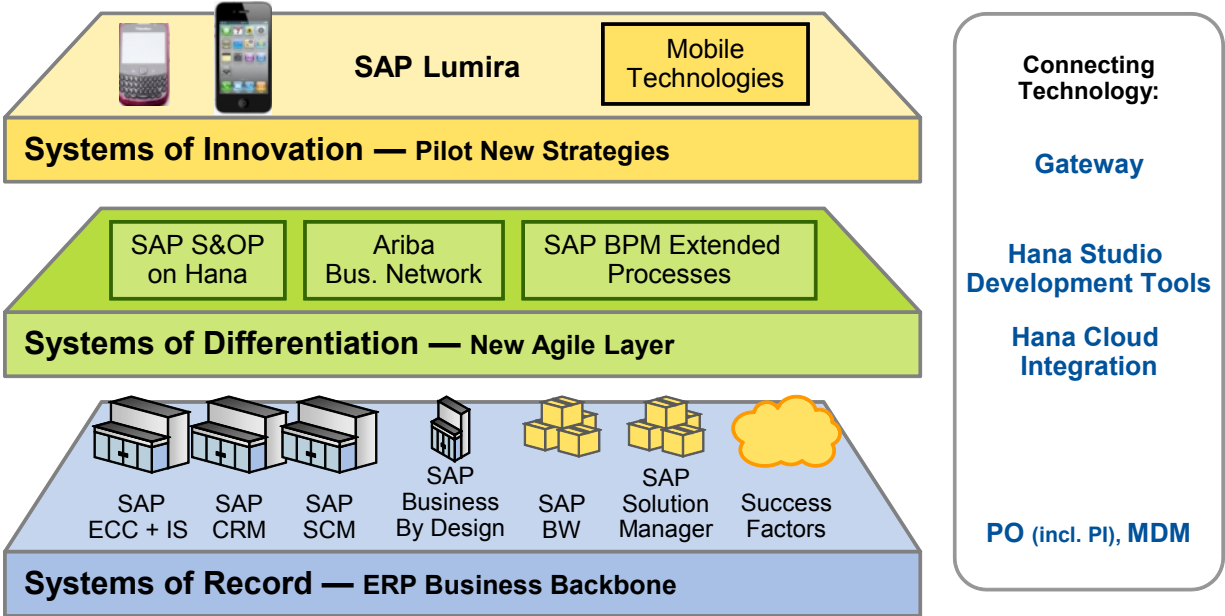
## Analysis

### Develop a Pace-Layered Application Strategy That Defines How You Deploy SAP Solutions to Support Systems of Record, Differentiation and Innovation

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SAP's strength is often seen as its comprehensive, integrated portfolio, which is a key reason why many organizations adopt a best-of-SAP strategy (where SAP solutions are the default choice to satisfy business requirements), either implicitly or explicitly (see Figure 1).

Figure 1. Example of a Traditional Pace-Layered Best-of-SAP Scenario



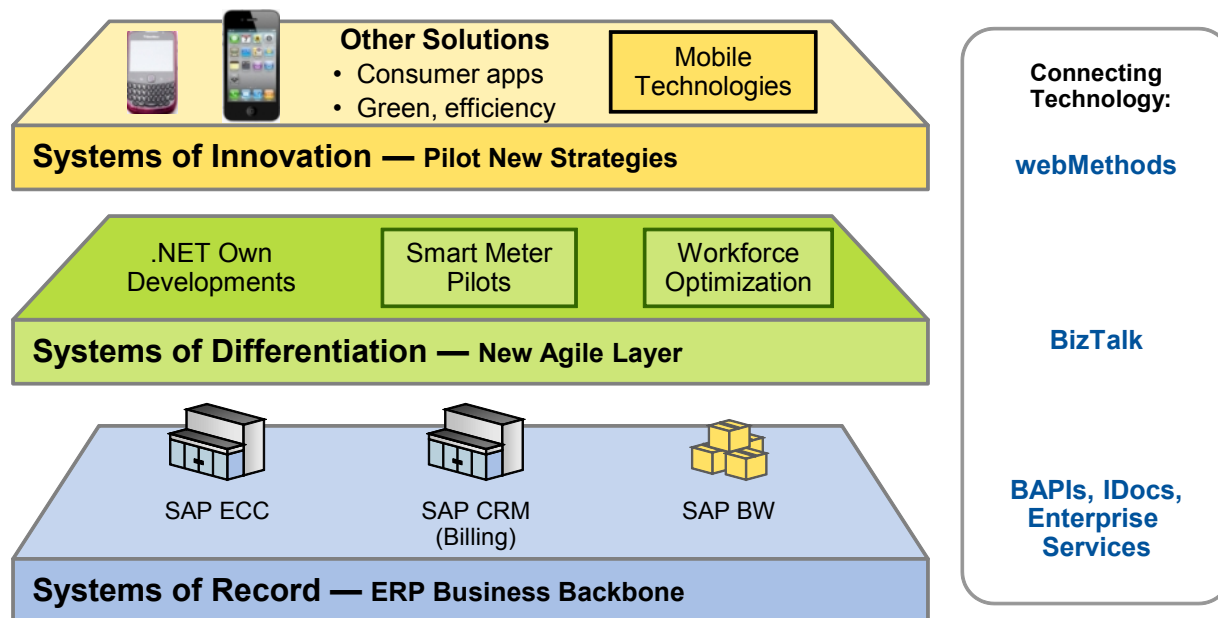
**Acronym Key:**

BOBJ	BusinessObjects	MDM	master data management
BPMS	business process management system	PI	SAP NetWeaver Process Integration
BW	Business Information Warehouse	PO	SAP NetWeaver Process Orchestration
ECC	ERP Central Component	SCM	supply chain management
		S&OP	sales and operations planning

Source: Gartner (November 2014)

**Not all organizations pursue a best-of-SAP strategy.** Many encounter problems with the complexity of the SAP licensing model, and believe that many new SAP products simply carry too high a price tag. Some organizations experience operational problems when running SAP system landscapes composed of more than 20 integrated production systems, and, subsequently, opt to pursue a best-of-breed (also known as best-in-class) strategy (see Figure 2, which shows the application environment from a specific client scenario, in the utilities industry), which limits the scope and functionality of SAP. Other organizations are moving to a hybrid SAP environment — a core SAP solution (on-premises) augmented by specialist add-on cloud solutions.

Figure 2. Example of a Pace-Layered Non-SAP-Centric Client Scenario

**Acronym Key:**

BAPI Business API

IDoc Intermediate Document

Source: Gartner (November 2014)

Two factors have emerged that greatly complicate the decision of which additional SAP solutions an organization with SAP-based core systems of record should select and implement. First, SAP's continuing acquisition strategy (e.g., SuccessFactors, Ariba, etc.) has greatly broadened its solutions portfolio. Second, SAP's in-memory computing technology is introducing many new capabilities to this portfolio, which now comprises five pillars:

- **Business applications:** SAP Business Suite powered by SAP Hana for large enterprises, SAP Business All-In-One for midsize enterprises, and SAP Business One plus SAP Business ByDesign for small or midsize enterprises. However, several modules of these solutions are being replaced by acquired cloud services, and this is likely to continue.
- **Business analytics:** SAP Business Warehouse powered by SAP Hana, SAP BusinessObjects and associated solutions, and SAP Lumira.
- **Cloud services:** A range of acquired SaaS solutions, own-developed solutions, cloud integration tools, managed cloud services for SAP Hana-based products and the SAP Hana Cloud Platform (platform as a service for partners, customers and developers to extend or integrate with SAP Solutions or build completely new applications, supporting systems of differentiation and innovation scenarios).
- **Mobile technologies:** SAP mobile applications and development tools.

- Core technologies: Centered around the SAP Hana application development and integration platform.

Current SAP customers and prospective customers are now faced with a complex array of choices resulting from the acquisitions, the new capabilities and the resulting portfolio of solutions. Choices that are made based on today's portfolio may be superseded by future acquisitions. Furthermore, the engineered integration that was inherent in the single SAP suite, and which led to the rationale for many to augment their original SAP footprint (and become SAP-centric) is no longer a given.

Most organizations with major investments in SAP are large enterprises that initially select SAP for the strength of the first SAP pillar — that is, the core business applications — especially SAP ERP from the SAP Business Suite and its associated SAP industry solutions. Having deployed these core solutions, they then need to decide whether to select and deploy additional business applications and solutions from the other four pillars that SAP offers. However, this task has become highly complex because SAP's acquisition strategy has disrupted, and will continue to disrupt, previous product road maps on which SAP customers had based their application implementation plans for the medium and long terms.

IT leaders must:

- Educate the business on the concepts of a Pace-Layered Application Strategy. The organization must determine its desired position on the axis of SAP exploitation, ranging from best of SAP to best of breed.
- Constantly monitor SAP's road map as this is likely to change as the vendor makes further acquisitions. Recognize that the rapidly expanding SAP portfolio means that individual SAP road maps change more frequently and should be viewed with great caution. It seems impossible to guarantee that the choices you make around SAP's solutions will not lead you down a dead end. Ideally, you should only consider investing in additional SAP products where there is a demonstrable business case and SAP is prepared to commit to at least a five-year development road map, plus an acceptable end-of-life maintenance period.
- Map SAP and non-SAP enterprise applications into the three pace layers to get a clear picture of today's environment.

## Renovate the Core SAP System of Record Layer (If Needed) and Implement Effective, Balanced Governance Across All Layers

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Controlled planning and execution of a Pace-Layered Application Strategy ensure that the enterprise avoids a pendulum-swing-type situation, from an implicit SAP-centric strategy to a multivendor hybrid approach, with a loss of application investment control as a result. Uncontrolled application deployment can add significantly to cost and complexity in an SAP environment through the increased demands of managing an expanded application portfolio. Complexity can be a barrier

to business agility. Governance in successful, mature SAP environments is typically rigorous and prescribed, often feeling overly bureaucratic. To foster innovation, organizations sometimes operate under more of a venture capitalist model. In this model, individuals or small teams propose an idea, a small panel considers seed funding, and the idea is then incubated, developed and released into the production environment, without the organization fully understanding the impact of the point solution on the overall application landscape, support requirements or long-term ownership costs.

A solid foundation of the SAP systems of record layer is essential to support systems of differentiation and systems of innovation, particularly where those systems must integrate with the systems of record layer. Renovation may extend from stripping back the footprint of SAP to a smaller core (e.g., replacing implemented SAP solutions with alternate solutions), or moving the core to SAP Business Suite on Hana to leverage in-memory computing, or it may mean leaving the solution alone and moving to third-party support. Renovation of the core does not necessarily mean replacement, upgrade or even changing the application suite — the necessary renovation may be confined to areas such as internal IT processes, methods, tools (e.g., SAP Solution Manager), documentation and support. If your solution was recently implemented and has been rigorously maintained, then renovation may be unnecessary.

IT leaders must:

- Assess the need for renovation of the SAP core, then develop and execute a plan to carry out the identified work to achieve it.
- Monitor and measure the operation and usage of the SAP solutions — it is surprising how parts of the solution are often not used, or at least not used effectively and efficiently.
- Complete SAP instance optimization or consolidation, if required, as such an exercise invariably results in a major project that involves significant business and IT change.
- Remove or replace customizations of SAP that do not add value. For nondifferentiating business processes and functionality, adopt standard SAP functionality and make associated business process changes.
- Use standard SAP products and SAP Enhancement Packages where they can help optimize the systems of record. Standard Business Process Analytics tools from SAP can also help improve these core business processes by exploiting off-the-shelf key performance indicators (KPIs) to identify potential errors and efficiency gains.
- Implement appropriate maintenance and development processes. Robust operational processes ensure the continued stability of the SAP systems of record layer, with more agile processes for systems of differentiation and systems of innovation.
- Develop SAP sourcing arrangements with external service providers to support this stable foundation.

- Implement effective balanced governance across all layers. The Pace-Layered Application Strategy should be the reference regarding which solutions to deploy against business capabilities. For differentiating or innovating needs, a lighter governance approach (compared with one for systems of record) can be adopted, provided adherence to the strategy is maintained.

## Implement an Application Integration Strategy of Connecting Technology to Develop Solutions That Provide Truly Differentiating Capabilities

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Many organizations in which the SAP suite (or the "suite of suites") has dominated have relied on SAP's architecture to ensure process and data integrity. Gartner has seen that even large organizations are experiencing complexity with a proliferation of point-to-point interfaces, resulting in significant testing and heightened risk of errors, with a consequent lack of agility. This is notable where integration is funded on an individual project basis, rather than for a common infrastructure for connective technology.

Heavyweight integration tools — such as SAP Process Orchestration (PO) and other non-SAP integration platforms — are best-suited to systematic integration of stable applications (e.g., SAP systems of record solutions with other non-SAP systems of record or potentially systems of differentiation). More-agile, less-complex integration tools are better choices where the integration is between SAP and dynamic systems of innovation, including cloud-based applications. For organizations strongly committed to the SAP application strategy, NetWeaver has been an obvious and compelling (commercially and from a skills perspective) technology option for integrating SAP with other applications, primarily because of the common skills used to operate SAP middleware and applications.

The NetWeaver brand has quietly been dropped in favor of Hana as the leading technology brand for SAP. Some core products retain the name (e.g., SAP NetWeaver Application Server). Important integration products such as SAP PO and SAP Business Process Management (BPM) remain, but have simply been renamed. However, SAP Hana Cloud Integration has been introduced for the lightweight style of integration for cloud services. SAP uses this product to develop standard extension packages for the integration of SAP SuccessFactors services and other acquired SaaS services with on-premises SAP Business Suite applications.

IT organizations cannot provide truly unique differentiating capabilities through SAP packaged application solutions, or even through third-party commercial off-the-shelf packages. Differentiation, by its very definition, means that most package solutions (created and deployed to many enterprises) rarely provide more than a platform to create differentiating solutions. For IT to respond as the business needs agility and speed, it must extend the platform, tools and approach to create new solutions.



Different choices are available to achieve this at the systems of differentiation layer. IT organizations that evaluate application integration solutions must balance the needs for integration of both stable and agile solutions against the challenges to achieve an economic business case to move from one integration platform to another. SAP has introduced the SAP Hana Cloud Platform as its preferred solution for a modern cloud-based development platform. It is a classic platform as a service and includes Hana Cloud Integration, identity management and single sign-on, plus SAP Fiori user interface support and mobile access. The challenge for IT is to make the most effective choices for the business.

IT leaders must:

- Develop an application integration strategy and evaluate integration approaches, including: SAP PO, SAP Hana Cloud Integration and non-SAP tools, to satisfy requirements while minimizing complexity and costs. Select connecting technologies to enable the interaction of solutions across the layers, and to maintain process and data integrity.
- Assess the potential of SAP's Hana Cloud Platform to develop solutions that support new or enhanced business capabilities (for example, global supply chain optimization). Focus on developing, together with business stakeholders, a robust business case that has a demonstrable lifetime value for investments in in-memory technologies.
- Consider using a business process management system (BPMS; such as SAP BPM, including Business Rules Management or a third-party solution) to orchestrate the workflow across applications and people to fill process gaps and provide greater differentiation).
- Evaluate SAP PO, SAP Hana Cloud Platform or a third-party tool to develop composite applications that leverage SAP systems of record capabilities, but stitch commodity functions together in a unique way.

### Adjust SAP-Centric and Systems-of-Record-Focused Organization, Methods, Processes and Tools for Systems of Differentiation and Innovation

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Where SAP has been the dominant application, IT has frequently centered its organization, skills, processes, and supporting tools and technologies on SAP, resulting in a cumbersome IT operating model. Examples include the SAP Competency Center at the heart of the application organization, significant SAP outsourcing, sophisticated waterfall-based SAP ERP-centric methods, detailed development and configuration processes, extensive testing and control mechanisms, risk avoidance, and projects planned in terms of years, not weeks. All of these can impede IT agility and responsiveness to new business requirements.

To redevelop the IT operating model for the pace-layered environment, IT leaders must:



- Examine the IT structure, skills and capabilities required to support the differentiation and innovation layers.
- Assess the impact of the new skills, capabilities and ways of working on the SAP Competency Center. The IT organization may become a large-scale, suite-based SAP organization or differentiated by the capability for areas such as cloud solutions (e.g., SuccessFactors or cloud human capital management [HCM]) and, critically, connecting technology (see Note 2) integration and development (e.g., integration platforms and BPMS tools). Staffing and sourcing are heavily influenced by the organization's position on the best-of-SAP to best-of-class axis.
- If deploying new SAP Hana-based solutions, assess the impact that these will have on system operation and administration skills, plus potentially on application development and integration skills.
- Determine changes to existing (or requirements for new) IT methods, processes and tools. This will rarely result in the elimination of certain requirements, but could result in potential additions (e.g., Scrum methods for agile custom developments, as well as retaining waterfall methods for large SAP package projects). New supporting tools may be required (e.g., an application performance monitoring tool, as well as SAP Solution Manager). Also develop a process for application and customization retirement to prevent an uncontrolled proliferation of applications.
- Address the impact of project bimodal capability (see Note 3). If this is developing (or already present) in the IT organization, then it is vital to understand the interactions and interplay of Mode 1 and Mode 2 in respect to SAP solution development and evolution.

## Evidence

<sup>1</sup> From a Gartner Research Circle survey, "The Outlook of ERP in the Enterprise," conducted in November 2013. This survey involved 396 members of the Gartner Research Circle — a managed panel of global IT and business leaders — across 13 industries. It was tested and administered, and the results analyzed by the Gartner Research Data and Analytics team. Of the respondents, 144 stated that SAP was their ERP provider.

Gartner's research analysts take thousands of inquiries from enterprises running SAP each year.

## Note 1 Application Pace Layers

Gartner defines the three application pace layers as:

- Systems of Record — Established packaged applications or homegrown legacy systems that support core transaction processing and manage the organization's critical master data. The rate of change is low, because the processes are well-established and common to most organizations, and often are subject to regulatory requirements.
- Systems of Differentiation — Applications that enable unique company processes or industry-specific capabilities. They have a medium life cycle (one to three years), but need to be reconfigured frequently to accommodate changing business practices or customer requirements.
- Systems of Innovation — New applications that are built on an ad hoc basis to address new business requirements or opportunities. These are typically short life cycle projects (up to 12 months) using departmental or outside resources and consumer-grade technologies.

## Note 2 Connecting Technology

These technologies enable the three layers in the Pace-Layered Application Strategy to interact. These connecting technologies typically are tools that tie applications together, and provide a means for organizations to extend the value of their applications and/or create new capabilities on top of current portfolios. Common technologies that come under the connecting technology banner include business intelligence (BI), corporate performance management, enterprise information management and service-oriented architecture.

## Note 3 Definition of Bimodal IT

Bimodal IT refers to having two modes of IT, each designed to develop and deliver information- and technology-intensive services in its own way. Mode 1 is traditional, emphasizing safety and accuracy. Mode 2 is nonsequential, emphasizing agility and speed. Each mode has all the people, resources, partners, structure, culture, methodologies, governance, metrics and attitudes toward value and risk that its operation requires. New investments are deployed through one of the two modes, depending on the balance of needs. When the balance changes, existing investments and operations move between the two modes. The most mature version of Mode 2, enterprise bimodal, is not just about the IT organization; it also encompasses a fast, agile mode of doing business.

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