How Platform-as-a-Service Turns **Business Ideas** into **Business Innovation**

by Greg Chase, SAP

Greg Chase (greg.chase@sap.com; Twitter: @GregChase) is an enterprise software marketing executive with nearly 20 years experience in marketing, sales, and engineering with software companies. Most recently, Greg has been passionately advocating for innovation and transformation of business and IT practices through cloud computing and business process management in his role as Senior Director of Marketing at SAP.

"Innovation" has become a pervasive corporate buzzword. We often hear statements such as, "The CIO needs to be the Chief Innovation Officer" — but what does that mean? Does it mean IT is supposed to have all the good ideas, or that business users need to come to IT to figure out how to innovate? What should be the role of corporate IT in business innovation, especially when cloud computing and consumerization of IT now mean business users have the tools and services to implement ideas on their own, without IT's help?

What I've found is that IT can provide a spark, a map, a catalyst, and a medium in which the business can present problems and envision potential realizations. Part of this includes providing a technology foundation that supports the company as it works to find innovative opportunities in business trends like always-on networks, ubiquitously connected people and devices, limitless elastic computing power, and torrents of data.

One clear sign that recent technology trends have changed how IT delivers solutions is the fact that major enterprise software vendors are proclaiming that "the developer is the new king maker"[1] as they race to release cloud-based developer platforms.

How Companies Approach Innovation

Any innovation project can generally be thought of in one of two categories: developing first-mover advantages in new business practices or enhancing durable competitive differentiation. When developing a first-mover advantage, your company figures out and deploys integrations and automated business processes that

[1] RedMonk, "Developers as New Kingmakers — Global or Just US?" (2011).

will eventually become industry standards. As a result, your company can enjoy improved efficiency and agility until your competitors catch up. To enhance competitive differentiation, your company invests in automating those unique business competencies that give your company a durable lead in its target markets, thus increasing its economic advantage over its competitors.
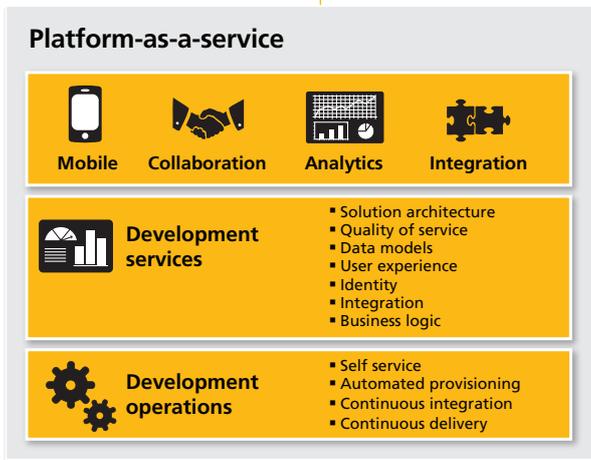
As an example, consider the procure-to-pay process. If your company sells consumer products, procurement may be merely a commodity business process for your company. In this case, it's a cost center and, while improving the effectiveness and efficiency of the process is a good thing, it may not directly contribute to your company's competitive differentiation. In this case, it may make more sense to co-innovate with partners and enjoy efficiencies from a first-mover advantage, rather than investing in coding and maintaining a new solution yourself.

If your company is a value-added supply chain aggregator, on the other hand, a more effective procure-to-pay process may be a unique advantage that does enhance your company's competitive differentiation. Perhaps increased efficiency allows you to provide higher-quality supplies to your customers faster or command better prices for your customers as a result of prompt cash payments or credit management. In this scenario, your unique requirements and the benefits to your company warrant investing in custom development.

How IT Can Support Your Approach to Innovation

IT can support a company's innovation approach in multiple ways. The first is by encouraging inventive thinking — through venues, services,

Platform-as-a-service

Mobile **Collaboration** **Analytics** **Integration**

Development services
- Solution architecture
- Quality of service
- Data models
- User experience
- Identity
- Integration
- Business logic

Development operations
- Self service
- Automated provisioning
- Continuous integration
- Continuous delivery

FIGURE 1 ▲ A platform-as-a-service is an integrated bundle of services for application developers and end users to consume custom applications while minimizing the need for operational IT

and even activities like running prototyping workshops, crowd-sourcing new ideas through so-called "hackathons," and developing a competency for design thinking.

Another way is curating enterprise assets as potential attachment points that can nourish an invention. This "corporate API" was the vision for service-oriented architecture; while technology improvements have made it a more viable model, practice has also proved that it requires governance, planning, and clear business goals to drive prioritization.

The last way to support an innovation approach is to assemble tools, frameworks, and services that allow for rapid solution development, end-user adoption, and simplified lifecycle management by IT. An important new component of this innovation "stack" is a platform-as-a-service (PaaS).

A PaaS is commonly described as the middleware between a software-as-a-service (SaaS) application and infrastructure-as-a-service (IaaS). It's also often called a "development environment in the cloud." Both are inaccurate, however — PaaS involves more than installing a Java environment in an Amazon Web Services (AWS) instance. A PaaS is an integrated bundle of security, network, storage, development, and application operations services. Most of the operational details of these services are automated or are managed for you by the service provider, while much of what remains can be managed through user-friendly APIs and operator dashboards. A properly designed PaaS provides effective support for both developers and their end-user customers while minimizing the need for operational IT (see **Figure 1**).

A PaaS is the active ingredient in a corporate innovation platform. It provides a standard environment that allows developers to craft innovative solutions with a minimum of IT overhead. Its deployment management services not only make it easy to bring custom applications live, but frequently incorporate an "app store" through which users can license other applications built on the platform service. This effectively makes your company part of a greater developer ecosystem. Finally, as a standard service, your IT department can incorporate a PaaS into the corporate API, allowing for integration of identity and security, and thus allowing developers to leverage data and functionality from other corporate IT assets.

The SAP HANA Cloud Platform: An IT Foundation for Innovation

SAP has recently announced plans for its SAP HANA Cloud PaaS. This next-generation cloud platform, based on SAP's in-memory technology, allows developers to rapidly build powerful applications that incorporate key features such as mobile access and embedded analytics while leveraging the high speed of SAP HANA. SAP HANA Cloud provides application and database services, including these recently announced offerings:

- **SAP NetWeaver Cloud** enables you to build and deploy Java-based cloud applications that provide analytics and mobile functionality and integrate with on-premise systems and cloud services. Partners can sell and deploy applications through the SAP Store when they build them using SAP NetWeaver Cloud.

- **SAP HANA One** is a production-grade deployment option for SAP HANA in the AWS cloud; it can be deployed with up to 64 gigabytes (GBs) of memory in just minutes, which manages compressed data sets as large as 250 GBs.

Each offering has an easy online sign-up process. SAP NetWeaver Cloud also provides free developer licenses, and as of this writing, SAP HANA One includes an AWS credit.

Learn More

Corporate IT can serve as fertile ground for innovation. To effectively enable this, IT should provide a technology foundation that allows the business to convert trends such as cloud computing and consumerization of IT into a competitive edge. PaaS offerings, such as SAP HANA Cloud, are built for this challenge and allow IT to do what it does especially well: standardize and scale this fertile ground, helping creative inventions of the business mature into a business innovation. Learn more at **www.sap.com/solutions/technology/cloud/overview/platform.epx**. ◻