

Moving the new wave of technology from disruptive to productive

In thinking about the waves of technology now washing over IT departments, I remembered something from a long-ago physics class. You may recall that when multiple waves, such as sound waves or ocean waves, converge upon one another, you can get either constructive or destructive interference, depending on the timing of their arrival, their angle of incidence and their relative strengths. With constructive interference, the waves combine and gain in amplitude, and with destructive interference, they tend to cancel each other out. The question that this analogy raises is which sort of interference we will see with the waves currently rocking the IT world. We hope for constructive interference, with the whole greater than the sum of the parts, but how can we ensure that we end up with it? Before I try to answer that, let me explain why I think this is important. IT organizations are grappling with the simultaneous arrival and ongoing maturity of trends such as social networking, mobile technology and cloud computing. These trends are moving quickly into the mainstream, as shown by a couple of data points. First, according to IDC, the technologies of what it calls the "third platform of computing" generate about 20% of all IT spending today, but are growing collectively at about 18% per year. By 2020, they will account for 80% of all IT spending, IDC concludes. Second, according to Computerworld's 2012 Forecast survey, IT managers are increasingly thinking about innovation and these disruptive trends as they plan their staffing for 2012 and beyond. Some of the biggest upticks in year-over-year hiring plans relate to IT skills such as application development, including mobility; Web 2.0, including social computing; and business intelligence in preparation for big data analytics. As complex as that might sound, the key to constructive interference is deceptively simple: integration. I say "deceptively simple" because integration is required not just for each individual technology trend, but also across multiple trends, and it must be extended beyond technical integration into strategy integration, process integration and even human integration, in regards to the end-user experience. Some examples may help to illustrate the situation. Take social computing. Many organizations have seen the emergence of social silos, with multiple social computing platforms popping up across the enterprise. There might be a corporate platform for employee profiles and newsfeeds and separate platforms arising from CRM applications or even ERP applications that come with social functionality right out of the box. These social silos now need to be integrated, at least to some extent, to avoid undermining the core premise of social computing, which is that productivity gains can be achieved through an extensive and connected social network. Silos work against the necessary connectedness. Things are a bit different with mobile computing. Increasingly, enterprises have their own app stores for managing the deployment of mobile apps and provide some level of control and manageability for enterprise IT. But as mobility becomes more and more a part of the application fabric, the integration challenge is to take a full life-cycle approach to the development and deployment of mobile apps that's in line with the traditional enterprise software development life cycle. App stores solve a part of the problem, but organizations need to take a broader view and consider things like how apps can be maintained over time, and ultimately retired, and how a more rigorous approach to testing and quality assurance can be incorporated into the overall approach. In the cloud computing arena, software as a service (SaaS) is becoming a key part of the application fabric as well. Enterprises that have benefited from the SaaS model for providing services such as email and collaboration and are now looking to plug in SaaS components as a cost-effective and agile way to modernize their legacy applications. This means they can access cloud-delivered functionality that's readily available off the shelf, such as analytics and location-based services. But at the same time, they are also contemplating moving the proprietary code that constitutes their core intellectual property to the optimal deployment environment, be it a public cloud, a private cloud, a traditional data center or an outsourced model. This workload repositioning creates additional technical integration requirements, since legacy applications may become highly virtualized and reside across disparate locations. And let's not forget that all of these waves of technology are bringing a totally new end-user experience, one that's social, mobile and cloud-enabled. End users are increasingly expecting from IT the kinds of advanced functionality, simplicity and ease of use that they're well familiar with in the consumer world. Of course, this seamless end-user experience does not optimize or transform itself; it requires careful work upfront and a strategy that integrates people, process and technology across all these trends so that the complexity under the covers is never a concern for the user. To achieve this transformed user experience, it's important to design for this upfront across all application development and modernization initiatives and to leverage the trends so that they are simply tools in your arsenal to provide new levels of collaboration, interaction and service delivery. In fact, it is when strategy, process and technology integration efforts all combine for the benefit of the end-user experience that the whole will be greater than the sum of the parts and the trends will become a force multiplier for the business.