Point of View

Consumerization of IT: It’s not going away. Make it work by preparing now.

Consumerization of IT: The Tidal Wave of Devices and Apps is Here

The media trumpets it. Major technology manufacturers promote it. Employees clamor for it. Analysts describe it as one of the biggest trends impacting organizations.

What is “it”? The Consumerization of IT.

Avanade describes “consumerization” as a market trend in which technology first adopted in the consumer space enters the workplace. And this form of technology populism is sweeping organizations globally as employees take on a greater role in technology choices to do their jobs.

While often described as the use of personal smartphones and tablets in the workplace, it’s much more than that. Consumerization goes beyond devices to include the software and services that employees use in their personal and, now, professional lives, such as Facebook, Twitter and LinkedIn®.

And it includes the anytime-anywhere access, self-service, and “pay by the drink” benefits found in cloud services.

An Avanade survey of global C-level executives and IT decision-makers also reveals what Consumerization isn’t: It isn’t being resisted by most businesses. It isn’t underfunded — our research showed that most companies spend 25 percent of their budgets in managing various aspects of technology that support consumerization, and plan to spend more. It isn’t a recruiting or retention tool for Millennials, say executive respondents. It isn’t just for checking personal email and social networks while at work. It isn’t just about devices from Apple. And, at least today, it isn’t necessarily as secure as it should be.

Consumerization is being driven by the need to work in new ways. All of the long-noted workplace trends—virtual offices and teams without fixed locations or hours, greater collaboration between customers and trusted suppliers, globalization—all contribute to the Consumerization trend.

Consumerization of IT isn’t being driven by new workers, but by the need to work in new ways
Consumerization is gathering momentum largely because of these new requirements. The increasing specialization and hierarchy of employees in many workplaces is a related factor; the technologies provided to employees often haven’t kept up with this aspect of the changing workplace.

Getting it Right: Enterprise Pain is Real

If the drivers of Consumerization are becoming clear, many companies are still unsure of the best strategies to manage the trend. A lot is at stake, and the challenges are numerous.

For each new device type that’s introduced into the enterprise, and for each additional device carried by each employee, IT costs rise. How much they rise depends in part on a company’s policies: Who buys the devices, and who’s responsible for managing them? How is security—including data privacy, compliance and risk-management concerns—ensured employee-owned devices? Many companies lack or are only now formulating the governance policies to accommodate Consumerization and only now beginning to determine these costs.

Think of the potential pitfalls getting to that goal. Many consumer devices can’t access business applications, for reasons of security and technical incompatibilities. Many business applications are written to support a single device and operating system. Rewriting each application several times for the various devices that Consumerization can introduce into the workplace requires a massive upfront investment—and then a massive continuing expense to manage a fragmented application platform.

The Upside: Why Embrace Consumerization?

If the obstacles are daunting, many companies regard the potential benefits as worth the investment.

By addressing the technology needs of the increasingly virtual, increasingly global workplace, Consumerization has the potential to empower employees to work more productively—and on more meaningful, strategic work. It has the potential to foster faster, fuller collaboration within and across teams, even across enterprise borders, enhancing competitive advantage.

Healthcare providers, for example, are realizing the benefits of Consumerization. A physician may be with her family on a Sunday afternoon when the condition of one of her hospitalized patients deteriorates. When the physician can review the patient’s chart and MRIs, participate in a video consult with colleagues and alter treatment plans—all through whatever device is at hand, whether it’s a laptop, phone or tablet—the result is a better clinical outcome.

Hospitals don’t necessarily measure results in higher revenues, but media companies do. Equipped with tablets and access to backend line-of-business applications, a sales team can make shorter sales visits that are more persuasive and efficient, designing, submitting and scheduling ads all from the client’s office. Increased sales efficiency yields increased revenues. And when senior managers and executives analyze aggregated sales in near real-time using their consumer devices and backend business intelligence, they can optimize sales resources and address problems proactively.

As mentioned, devices are one piece of the Consumerization puzzle. Applications, locations, and security are the other pieces that complete the picture. Today, devices, applications, worker locations and security are often managed independently (See Figure 1.) That must change if enterprises are to provide any required business application to the right user on any authorized device at any location.
Avanade helped one media company, for example, introduce tablets to on-camera news staff and journalists, adding an element of show business to their newscasts giving on-air personnel a new tool that’s part teleprompter, part polling device, and part news feed. Use of the tablets has spread organically through the organization, with backend operations, such as sales, using the devices to more readily close and book sales contracts.

**Consumerization: the Role of IT**

If enterprises must assume that they need to support a broader array of computing devices—and Avanade believes that they do—that raises some questions: What is the role of IT in this increasingly diverse world? How can it provide computing services in a flexible way—without unleashing an unmanaged, and ultimately unmanageable, computing environment?

The short answer is that IT needs to adopt what Avanade calls “curated computing, tailored for users.” This requires a shift from IT’s traditional emphasis on devices—acquiring, configuring, deploying, maintaining and ultimately disposing of them—and toward an emphasis on users and application enablement.

In this model, IT “curates,” or focuses on understanding and managing its users, locations and applications, rather than its devices. If it’s successful at this, it can deliver the right resources to the right users at the right time, regardless of their locations. Users get a continuity of experience across devices. See Figure 2.

The devices themselves become far less important in this model. IT is likely to come to think of them as “just hardware.” The answers to questions around which devices are used, who buys them and who manages them become less important, too.

**Continuity of Experience Across Devices in Action**

To see this approach in action, recall the healthcare example earlier. Several hours after altering the treatment plan, the physician is in her home office, using her laptop to get updates on the data she viewed previously on her phone. Now the application and data presentation is optimized for the laptop screen, keyboard and mouse. The physician decides to go to the hospital, taking her tablet as she goes.

The physician visits her patient in Intensive Care, docking the tablet in the patient’s room. That activates a 27” LED smart-display on the wall, which now dynamically presents the patient’s data optimized for the large screen. The docking station includes new input devices—a digital pen and medical monitoring device—through which the physician records and interacts with the data while examining the patient.

She undocks the tablet and joins the anxious family in the waiting room. The user interface switches back from the LED screen to the tablet as she does so. She sits down with the family, explaining the patient’s condition and using MRI images on the tablet to illustrate her points. She passes the tablet to the patient’s husband, who holds the images in his hands, studying them while the physician discusses treatment options.

Later, the physician uses her tablet to write up a new prescription order for the patient. The hospital’s backend systems transmit the order to the pharmacy. While it’s being filled and delivered to the nurses’ station, the systems send a notification to the phone of the patient’s assigned nurse, who picks up the medication from the station, scans its barcode with her phone and then scans the patient’s barcode, to help prevent error and to create an audit trail. The new medication is successful and
contributes to the patient’s recovery.

**Worker Segmentation Model**

The healthcare example spanned different types of workers (the physician, the nurse, the family), different applications (document sharing, web conferencing, scanning, workflow processing) and different devices (tablets, smartphones, docking stations, smart-displays). One key to making “curated computing” work is to categorize the types of workers in the enterprise, the applications they need and the optimal devices for each group to use for each application.

The goal isn’t to provide everything to everyone everywhere – that would be far too costly. But devising a segmentation model that identifies the relationships among these elements is a crucial step in setting IT priorities for creating IT services, optimizing applications for access on target devices and rolling out solutions to specific workers—all in harmony with broader corporate needs and strategies.

**Enterprise Application Access: The Avanade Four-Part Framework**

In most enterprises today, people have insufficient access to the majority of important business applications on many of the devices they want to use. Enabling access is one of the keys to maximizing the benefit from Consumerization, because maximizing access to applications yields agility and productivity.

**How to achieve it?** The Avanade approach to Consumerization addresses this potential challenge with a four-part framework of flexible options for extending today’s applications to the mobile world, based on the needs and priorities established through the segmentation model.

Option One: The simplest option is to use desktop-designed web apps, unaltered, on mobile devices. It’s far from ideal and some web apps don’t support mobile browsers. For those that do, the user interfaces won’t be optimized for the mobile experience and enhancements such as plug-ins will be lost. But many organizations use this approach for applications that are far from strategic or that are used infrequently by only a few workers.

Option Two: Optimizing a desktop-designed web app for the mobile web calls for some investment but results in an improved user interface and greater functionality across mobile device types. This option reflects one of the most strategic approaches that organizations can take to provide cross-platform, cross-device access. While HTML5 is promoted as the ultimate solution for cross-browser compatibility and universal access, there’s steps that enterprises can take today towards achieving the same objective, which is discussed below.

Option Three: Remoting. Avanade is an industry leader in helping companies to expose their desktop-based applications on mobile devices without the need for modification. Its approach: presentation virtualization or remoting, in which the application runs on backend servers and is presented on the mobile device. Because the approach doesn’t require rewriting the application or running it anywhere other than within the corporate firewall, it is fast, inexpensive and secure. Lose a phone or tablet and you don’t put your data at risk, because it never left the enterprise.

For the right industry scenarios and the right worker segments, remoting provides an excellent option for accessing enterprise applications.

But because the presentation on the mobile device is tethered across the Internet to the enterprise datacenter, latency can be high. Working in offline or disconnected mode isn’t possible so targeting remoting at the optimal worker segments is key.

Option Four: These drawbacks disappear when the application is rewritten as a native application. This is where a lot of attention is placed in the device-centric consumer marketplace. User interfaces can be optimized for the specific target device. There’s no limit to the mobile features—touch, camera and GPS, for example—that can be adopted. Native apps, however, pose a unique set of economic challenges for the

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enterprise. CIOs must ask themselves tough questions:
• Do I develop for one native platform or do I embrace consumerization and support multiple platforms?
• Do I really want to write the same application multiple times requiring multiple development teams and skillsets?
• How much will it cost me to maintain and support applications across multiple mobile platforms?

And finally, what about the mobile platforms that are emerging – these markets can change quickly? The build and support costs for native apps will be quite high but for truly strategic applications, the investment may be a small price for the value it returns.

**New and Emerging:** In addition to the approaches and technology solutions discussed, new and emerging options are on the horizon. One of these is hybrid approach based on remoting and native redevelopment: Avanade is helping its customers to remote their desktop applications to mobile devices, while taking advantage of distinctly mobile features that were never written into the original applications. These applications bring single app multi-platform support while also providing many of the native app benefits such as touch-optimization, GPS and camera support. It’s a “write once, use repeatedly” approach that helps to maximize ROI.

**How Avanade Can Help**
Avanade helps enterprise customers “assume for diversity” and take a broad view across device types. The company helps organizations transform their IT organizations to be optimized for a consumer-centric world; develop strategies and governance to support bring-your-own and buy-your-own device approaches; enable services and applications to be easily consumed across the wide array of platforms and devices; implement security and management across the spectrum of devices and applications; and enable business workers to be highly effective in this new mobile, multi-device model brought on by the Consumerization of IT.