

The Always Available Business

*How frontline employees can drive
your competitive edge*

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Introduction

For many companies, the ability to provide mobile and remote access to enterprise applications, email, and Web content has become a strategic business imperative. Increasingly, today's companies recognize that it is their mobile and remote workers—sales and field service reps, on-site consultants and managers, branch and retail personnel—who are the most immediate link to customers and market conditions. They are the workers on the “front lines”.

This frontline workforce presents a tremendous opportunity for businesses to increase productivity and reduce costs by revamping slow, error-prone paper-based processes around emerging mobile and remote technologies. As shrinking margins make quality customer service more elusive, companies can differentiate themselves from their competitors by empowering frontline staff to provide well-informed, highly responsive service. It is this ability to arm frontline employees with the tools and knowledge they need to be successful—and at the same time capture critical business information in real-time from the frontlines and route it to decision makers instantly—that characterizes the Always Available Business.

To enable the Always Available Business, a new breed of “Always Available” frontline computing solutions has emerged. These solutions provide mobile and remote workers with access to critical enterprise information and applications anywhere, any time, whether they are connected to a “live” network or not. Always Available solutions adhere to the idea that end-users should be able to access what they need without having to worry about underlying networks, protocols, security procedures, input and output modalities, and technology standards. Therefore, the Always Available concept encompasses an advanced, highly flexible, and adaptable approach to mobile and remote application development, deployment, and management.

Always Available solutions are in contrast to network-dependent technologies, which rely on wired or wireless access for mobile and remote workers at all times. While such “always on” capability may be necessary for some business professionals with a constant need for real-time data, the vast majority of frontline employees can benefit from seamless on- and offline data access, without ever having to worry about their connection status. At the same time, Always Available solutions also differ markedly from technologies that impose usability and workflow limitations on frontline workers. By delivering advanced device and user management capabilities, as well as flexible user interface functions, Always Available deliver the performance frontline workers demand.

This paper will outline the business advantages and success metrics of Always Available computing, and provide some representative examples of Always Available capability at work in real world frontline environments.

Key Business Advantage: Business Continuity

The most important competitive advantage of the Always Available approach is business continuity. By enabling end-users to access mission-critical data and applications anywhere, anytime, Always Available solutions eliminate downtime and empower users with accurate and timely information and business tools. As a result, they dramatically increase end-user productivity, improve the quality of decisions mobile business professionals can make, and enable a more continuous and even flow of information between the business frontlines and backend systems and databases.

Britannia Airways provides a clear example of how automating frontline workers with Always Available solutions contributes to business continuity. Each of Britannia's 2,300 flight attendants are equipped with Casio EG800 PDAs with on-device email, rosters, health and safety information, and duty-free point of sales applications. Flight attendants can sell duty-free goods while in the air, then transmit their orders to the back-office when their flight lands. By eliminating 50 tedious and error-prone paper processes that formerly clogged up the sales process, and simultaneously introducing new and sophisticated data capture and reporting capabilities, Britannia has achieved enviable business continuity while saving £50,000 annually in fuel costs, £437,000 on administration and £500,000 a year in paper costs.

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As the Britannia example demonstrates, Always Available solutions can enable business continuity in ways both large and small. By eliminating the need for a ubiquitous wireless connection, for example, Always Available technologies reduce downtime by extending the battery life of client devices, because a power-hungry modem is only used for periodic synchronization. If the wireless connection is dropped during synchronization, data is not lost, and does not need to be re-entered, as is the case with WAP or Web-hosted applications that require a constant network connection.

Business continuity can also be achieved by reducing or eliminating downtime, for example, through effective frontline systems management. Because no application or system configuration is ever bug-free, Always Available applications are updated, patched, and recovered remotely. Frontline users are seldom IT experts, so Always Available applications are administered without the need for their involvement, much less any shipping of CDs, downloading of patches, or traveling IT staff.

These advantages become extremely important at the point of deployment, as implementing a successful mobile solution most often involves redesigning a business process, rather than simply transferring paper forms to a mobile device. Because the new solution is critical to many aspects of business workflow, it becomes a necessity to the mobile worker, just as an office-bound worker comes to rely on his or her desktop PC. Therefore, to reap the tremendous benefits of a mobile computing solution, the solution must work, whenever and wherever it is needed. If the application crashes, data isn't up to date, or devices aren't working, then sales calls, deliveries, and inspections don't happen and business continuity cannot be achieved.

Always Available solutions deliver the following key capabilities to ensure business continuity:

Always Available Personal Productivity

Using instant, anytime, anywhere access to email, calendar, contacts, and tasks, frontline workers can improve business continuity by staying in touch, no matter where they are or what they're doing. Flexible synchronization options provide timely access to email and personal information wirelessly when a network is available, or using a PC-connected cradle for "sync and go" flexibility.

On-Device Data

The ability to store application data on the mobile device means that frontline workers can be productive even when network access is poor, or not available at all. Anyone who uses a cell phone knows that wireless networks don't cover many areas outside major metropolitan centers, but even in the heart of a city, dropped calls are common, and there are areas with poor coverage. Because it is almost certain that mobile workers will be without network access at some point during the workday, an Always Available solution will ensure that work can continue without interruption.

Optimized Synchronization Technology

Complementing on-device data, intelligent data synchronization enables workers to access information and queue up transactions offline, then send and receive data when it is required, or a network connection becomes available. Synchronization enables the exchange of new information in a timely manner, and minimizes the amount of data that needs to be sent over the network, reducing communications costs while increasing application and battery performance.

Leveraging advanced synchronization technology, an Always Available mobile computing solution such as iAnywhere's SQL Anywhere can, for example, ensure superior business continuity by eliminating the re-entry of data after a dropped connection. SQL Anywhere ensures that the integrity of transactions is not lost as data is exchanged between the mobile device and the central database.

Advanced Security

Security can be built in at multiple points in an Always Available application to protect sensitive data and ensure that security breaches don't undermine the benefits of the application and result in application downtime. User authentication can be enforced at the operating system level, when the devices powers up, and before synchronization or other application functions. Next, the database file itself can be protected by strong encryption. Since wireless communications often involve the transmission of potentially sensitive information over public networks, the stream of data can be encrypted during synchronization.

Built-In Device, User, and Application Management

An Always Available solution provides for business continuity by ensuring the security of privileged data outside of an organization's secure environment, so that improved productivity and convenience don't come at the expense of data integrity and user privacy. An Always Available solution includes systems management technology optimized for frontline devices to keep systems running, devices secure, and applications up to date, thereby ensuring the benefits of business continuity remain constant. The ideal Always Available solution will provide systems management for a broad range of device types, including laptops and tablets, handhelds, Pocket PCs, smart phones, POS systems, and remote desktops and servers.

Key Success Factor: End User Adoption

As with any computing solution, end-user adoption of mobile and remote technologies is critical to a successful implementation. The front lines offer up their own set of unique challenges to adoption: Frontline technology is more difficult to support, the environment (e.g., network, security, etc.) is less controllable, and users are on the go. And yet applications operating in frontline environments need to perform according to the expectations of users accustomed to the response times of desktop applications. There can be no productivity benefits or reduction in costs if frontline users revert to obsolete systems because the new system is too difficult to use, or is not operational long enough to be useful. The application must be accessible, usable, and relevant to their day-to-day job functions.

An excellent example of how Always Available technology can drive user adoption is provided by global pharmaceutical giant Novartis. In the UK, Novartis' 450 medical representatives have been equipped not only with mobile and remote laptops and PDAs, but also with iAnywhere's Afaría software, which handles inventory management, software distribution, and content delivery for the remote reps, even providing customization of interfaces to match the skill level of each mobile user. As a result of streamlined systems management, Novartis frontline workers have access to the same information and support as their office-based counterparts. This has reduced training costs and enabled rapid adoption of the system throughout the country. Novartis is so pleased with the fast adoption and smooth operation of its frontline solution that the company plans to roll out mobile technology to more than 30,000 users over the next few years.

Part of the success of the Novartis implementation has been the company's focus on ease of use, a critical ingredient to user adoption. Unfortunately, ease of use for mobile and remote technologies is often complicated by small screen sizes, reduced memory and lower processing capacity. As a result, the platform on which the application is created must be flexible enough to support a rich user interface, including pull-down menus, automatic population of fields, and intuitive navigation that maximizes the capabilities of devices such as PDAs and smartphones. User adoption can also be improved by creating applications based on open standards and broad operating system support so the application will function on the device most appropriate for the user's workflow, or simply the device the user prefers.

Always Available solutions deliver the following key capabilities to ensure end user adoption:

User-Centric Productivity Tools

The must-have killer app of the desktop—email—is also a common choice among many companies as the first mobile application to be deployed, as well as the most popular among employees. Most frontline workers today are familiar with viewing and replying to email messages, scheduling meetings in their calendar, and looking up and editing contact information electronically. Moving these systems to a frontline environment does not require additional education on the merits of mobile access to email, or the benefits it provides to the mobile worker.

The ideal frontline personal productivity solution should enable Always Available access to email and PIM data on multiple devices and operating systems, adding to the frontline user's comfort with the application. iAnywhere's award-winning Pylon products, for example, deliver email and PIM across a variety of client devices and support both Microsoft Exchange and Lotus Notes workgroup environments. In addition, they allow for synchronization of information on both wired and wireless networks. This gives end-users the ability to synchronize their data over

the network that is most convenient for them, and allows IT organizations to provide wireless network access only to those who have the need for constant data updates.

Ease of Use and High Performance with Local Data

By delivering small footprint data stores for mobile computing devices with limited hardware resources, an Always Available mobile computing solution can contribute significantly to end-user satisfaction and adoption. The local data store can support the same kinds queries that workers are accustomed to making on their desktop devices, making data retrieval more dynamic and enabling better application performance, especially with large data sets or data-intensive applications. Applications can access the on-device data rapidly and return answers back to users fast, thereby satisfying end-users accustomed to lightning-quick desktop applications.

Intuitive Web Interfaces

In many mobile and remote environments, the ideal Always Available solution will encompass familiar Web interfaces that include intuitive hyperlinks and navigation, making expensive and time-intensive user training practically unnecessary. iAnywhere's M-Business Anywhere platform, for example, enables developers to deliver highly intuitive, Web-based mobile applications to frontline workers who use a variety of mobile devices. Anyone who has ever used a browser can automatically start using an M-Business Anywhere application, and multiple applications can be delivered with a consistent user interface. User interfaces can also be customized for dozens or hundreds of users quickly and easily. Increasingly, organizations that place a premium on end-user adoption are looking to such Web-based interfaces as a key way to reduce deployment costs and ensure user satisfaction at the same time.

Natural Language for Extreme Ease of Use

Another way to drive user adoption and increase end-user satisfaction is through the use of Natural Language interface technologies. These technologies enable frontline end-users to ask for the data and functions they want in their own words, in any language, and through any modality, including voice, SMS, MMS, text, Web, or iMode. As a result, end-users don't have to worry about formulating a query correctly or wading through complex menus and pull-downs.

Cross-Platform Support

Since truly functional Always Available applications support a wide range of mobile devices, they enable frontline workers to use the device that best suits their tasks or personal preferences. This includes both the platform, such as Palm, Microsoft, Symbian, or RIM, as well as the device type that may include specialized features. Using a device with the appropriate peripherals (e.g. barcode scanner, card swipe), and ruggedness optimally supports end user workflow and requires fewer repairs.

Fresh Software All of the Time

As can be seen by the Novartis example, Always Available systems management improves user adoption by avoiding the frustration associated with out-of-date or bug-riddled versions of applications. Further, management takes place behind the scenes, without the user's involvement, and without impeding the tasks the user may be carrying out using the device. iAnywhere's Afaria products, for example, enable application developers and systems managers to provide Always Available applications by ensuring optimal device and operating configuration, applying patches and updates without the need for frontline user involvement, and limiting user participation in frontline security to memorizing a password.

Key Business Metric: Return On Investment

It's hardly a secret that today's computing solutions—mobile and otherwise—must deliver measurable ROI to justify the investment of time and money for their deployment. For Always Available computing, ROI consists of both tangible and intangible benefits that boost revenues and increase worker productivity, while minimizing the total cost of ownership (TCO) for mobile computing solutions. Although frontline applications carry costs of their own, applications based on the Always Available approach minimize the cost to develop, deploy, and maintain these solutions over time. At the same time, Always Available solutions can help ensure compliance with

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important state, federal, and industry regulations, thereby driving ROI by delivering compliance in an effective and cost-efficient manner.

Tangible cost reductions can be realized through employee retention, reduced data collection/entry costs, increased information accuracy, and reduced inventory costs. On the revenue side, growth is achievable through increased frontline and management effectiveness, process optimization, and increased customer value.

Olan Mills, a leading photography studio in the southeastern U.S., provides a strong example of how Always Available frontline technology can drive and enhance ROI, both for the new frontline investment and for previous, existing systems investments. Olan Mills implemented a mobile sales force automation (SFA) solution utilizing salesforce.com and iAnywhere's Mobile Sales product. Because it works well on the devices the users prefer, and because it leverages an existing SFA system with a familiar Web-based look and feel, Olan Mills was able to roll out the system to 150 sales reps in only a few weeks and with almost no training required, and begin achieving measurable ROI for the system within the first month. Now, thanks to the new system, Olan Mills reps are seeing as much as 50% increase in revenues.

ROI can also be achieved by adding new value to traditional business processes. For example, a highly functional Always Available solution can help turn delivery drivers into market researchers capable of collecting inventory and competitive data. Field service agents, armed with the latest product data at their fingertips, can turn service calls into opportunities for follow-on sales of additional products and services. In Olan Mills' case, an Always Available solution enabled the company to turn its field representatives into better-armed customer service managers, capable of not only handling more deals, but also providing more meaningful service with each customer interaction.

Always Available solutions deliver the following key capabilities to ensure ROI:

Development and Deployment Flexibility

Always Available applications provide a high level of development flexibility, enabling developers to use the languages and tools they already know to enhance ROI for the mobile deployment. Companies can avoid retraining developers or hiring new ones in order to create the frontline application they require. Heterogeneous synchronization technology enables companies to preserve their existing investments in enterprise databases, application servers, and other legacy systems. For example, SQL Anywhere eases integration of its databases with a wide variety of third party databases, application servers, common enterprise applications and more, reducing development time and cost.

Portable and Easy to Maintain

Always Available applications based on open standards enable developers to use the skills and tools they already know—enabling companies to leverage existing expertise and shorten development times. In addition, device and network portability creates tremendous cost savings by enabling mobile professionals to use the devices they already have, as well as future-proofing the application for new devices that may be adopted. At the same time, the use of standards enables developers to create cross-platform applications for smart phones, hybrid devices, laptops, and tablet PCs by writing the code once, then deploying to all of these devices in a few simple steps.

Further enhancing ROI, Always Available applications are easy and inexpensive to maintain, since changes are made only on the server. Application updates appear automatically to users the next time they cradle their device or access the server wirelessly, eliminating the need for shipping CDs with updates, or worse, dispatching highly-paid IT personnel to do on-site software upgrades.

Asset Management and Tracking

The productive Always Available solution also simplifies the difficult task of tracking hardware or software seat licenses, thereby reducing management and maintenance costs for frontline deployments. Discovering all hardware and registered software can help save money, and identifying unapproved software on a device might prevent a destructive virus or hacker. Discovery of handheld devices is a critical security issue because they are so easily lost or stolen, along with confidential client or corporate information and passwords stored on the device.

Summary

By delivering business continuity, end-user adoption, and measurable ROI, Always Available frontline computing solutions enable companies to “go mobile” with confidence, leveraging the best technologies available today. While frontline computing can often present a daunting challenge encompassing numerous devices, networks, and security issues, IT managers can look to the Always Available approach as the industry’s best and most field-proven solution.

About iAnywhere

iAnywhere enables success at the frontlines of business, and holds worldwide market leadership positions in mobile and embedded databases, mobile management and security, and mobile middleware. iAnywhere’s unique “Always Available” computing model provides online and offline access to the information and applications users need, when and where they need it most. Millions of subscribers, 15,000 customers and 1,000 partners rely on the company’s award-winning technologies, including SQL Anywhere®, Afaria®, and the AvantGo® mobile Internet service. iAnywhere is a subsidiary of Sybase, Inc. (NYSE: SY). Visit www.iAnywhere.com for more information.

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