

Mobile Inspection: A Toolkit for Replacing Paper-based Inspections

SYBASE iANYWHERE

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FEATURES AT-A-GLANCE

- Quick and easy generation of mobile questionnaires and surveys with the forms builder
- Automated mobile data transmission
- Out-of-the box inspection workflow
- On-device data validation and extensible business logic
- Mobile access to critical supporting reference material
- Support for PDAs, tablet PCs or laptops
- Real-time assignment of work orders
- Support for barcode scanners, cameras, printers and GPS radios
- Open integration with existing back-end systems
- Integration with analytics and reporting with a mobile dashboard interface

INTRODUCTION

The case for extending enterprise applications to frontline workers is compelling, and by now, broadly accepted. Mobile solutions can generate substantial cost savings and competitive advantages in addition to increasing the return-on-investment (ROI) of existing systems. For example, by mobilizing and automating a paper-based system, a company can dramatically reduce data entry errors, improve data quality and real-time analytic capabilities, and of course, improve worker productivity.

In virtually every industry and job category, employees have been freed from the constraints of wired offices by a host of ever more powerful mobile devices, software and infrastructure solutions. This allows them to interact with customers and colleagues anytime, anywhere, from any device. It empowers them to seize opportunities and gather critical business information on the spot - to be more efficient, accurate, productive and competitive. It provides the tools they need to help advance the mission and strategies of their organizations.

Following on successful initiatives, such as mobilizing personal information systems and email, many organizations moved on to mobilize specific line of business applications with sales force and field service mobilization projects. These initiatives have proven their value, enabling organizations to be more competitive, productive and profitable.

Now, another type of mobile solution is delivering similarly impressive benefits across a broad range of industries including hospitality, retailing, transportation, public works, energy, utilities, public safety, manufacturing, construction and healthcare. That solution is mobile inspection.

Mobile inspection reduces inspection errors, speeds information flow and improves inspector productivity and data quality. By providing field forces with automated, real-time solutions for performing inspections, asset tracking, loss prevention, and safety and environmental audit tasks, mobile inspection helps organizations not only automate paper-based processes, but increase customer satisfaction and enhance brand equity.

This white paper describes the Sybase iAnywhere mobile inspection toolkit, including features, benefits and real-world examples in which mobile inspection solutions from Sybase iAnywhere have proven their considerable value.

IT'S TIME TO GET RID OF THE PENCILS AND PAPER

Many organizations are now looking at automating their inspection processes, which have traditionally been paper-based, inefficient and error-prone activities. This is a business area in which organizations stand to increase productivity, accuracy and enterprise visibility that in many cases can do more than increase profitability - automated inspections can actually prevent accidents and save lives.

Consider these examples:

- Hotels conduct numerous types of inspections on a regular basis. These include routine quality control inspections of rooms from both housekeeping and maintenance perspectives as well as food safety inspections in their various restaurants, snack shops and bars. Additionally, various governmental agencies mandate periodic inspections of fire and emergency safety systems and equipment.
- Retail businesses conduct store inspections to comply with health and safety regulations, as well as internal quality standards designed to ensure safe, convenient and satisfying shopping experiences for customers. They also conduct point-of-sale detailing to ensure merchandise availability and quality presentation as well as in-store customer surveys.
- Local and regional public works and public safety authorities conduct regular inspections of construction and environmental sites to gather data on worker safety, adherence to building codes, compliance with zoning, environmental regulations and more.
- Hospitals, laboratories and other healthcare institutions conduct inspections to ensure proper sanitation practices are followed, to assess accuracy of diagnostic, monitoring and treatment equipment, review dispensing of medications, and document and evaluate overall standards of care.

This summary, though by no means exhaustive, provides a quick picture of the variety and regularity of inspections across a number of industries.

Amazingly enough, while some organizations have embraced mobile technology to conduct their inspections, many others still use manual, error-prone, pencil and paper processes. Not only are these paper-based processes inefficient, but the inspectors normally do not have convenient access to previous inspection data or to current regulations and corporate guidelines in order to ensure process compliance.

The consequences of error-prone, paper-based processes can range from non-compliance with regulations that subject organizations to various corrective actions and potential fines, to legal liability, customer dissatisfaction and the tarnishing of hard earned corporate reputations.

The mobile inspection toolkit from Sybase iAnywhere has been created to help organizations avoid these adverse consequences by ensuring that their business practices and standards are consistently maintained.

MOBILE INSPECTION

Mobile inspection leverages Sybase iAnywhere's extensive experience and success in creating and implementing mobility solutions - including mobile inspection - in a variety of industries and IT environments. The solution is built on the industry-leading Information Anywhere platform to deliver a robust, scalable and secure enterprise mobile inspection solution and to provide an underlying mobile infrastructure that ensures the mobile inspection application can be fully integrated into the organization's overall IT enterprise. When implementing a mobile solution the last thing any organization wants to do is create disparate, siloed applications - mobile or otherwise - that will most certainly have to be integrated, or replaced at a later date.

The mobile inspection toolkit provides the comprehensive, closed loop functionality businesses need in order to meet their specific inspection requirements.

Figure 1 illustrates how the toolkit enables inspectors and others involved in the inspection process to leverage all relevant information, streamline data capture and instantly close the loop across the organization to improve enterprise visibility and analytic capabilities.

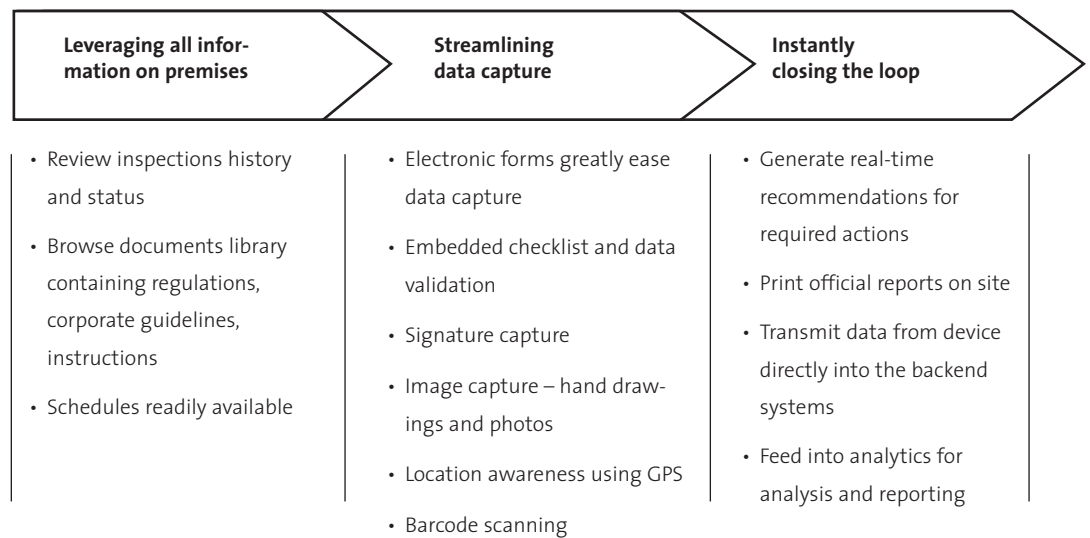


Figure 1: The mobile inspection toolkit provides comprehensive, closed-loop functionality.



Mobile inspection application on a PDA showing standard question and answer types generated using the forms builder.

The core of the solution is the **mobile inspection toolkit**. This toolkit can be used as-is, or can be customized to meet specific needs. The toolkit includes:

- **Mobile Inspection Application**
Runs on a PDA, tablet PC or laptop, supporting inspection workflow and electronic forms data capture.
- **Mobile Inspection Dashboard**
Allows real time viewing of key performance indicators (KPI) such as inspection progress, scores and inspector productivity, enabling managers to make timely decisions and take appropriate corrective action.
- **Administrative Console**
Enables system administration, maintaining information about inspectors, sites, work orders and results. Includes a Forms Builder tool allowing non-technical users to build, maintain and deploy inspection forms.
- **Wireless Alerts and Dispatch Monitor**
Monitors wireless alerts and real-time requests for inspection order re-assignment and manages the complexity of mobile message delivery in today's disconnected wireless environments.
- **iAnywhere Middleware**
Manages data synchronization, mobile application updates, device security and integration with back-end systems. This is key to avoiding the inevitable headaches of isolated, single point solutions.

Using this inclusive toolkit, companies can expeditiously develop and deploy tailored mobile inspection solutions based on industry leading, real-world proven technology that minimizes risk while helping enhance ROI. (see figure 2)

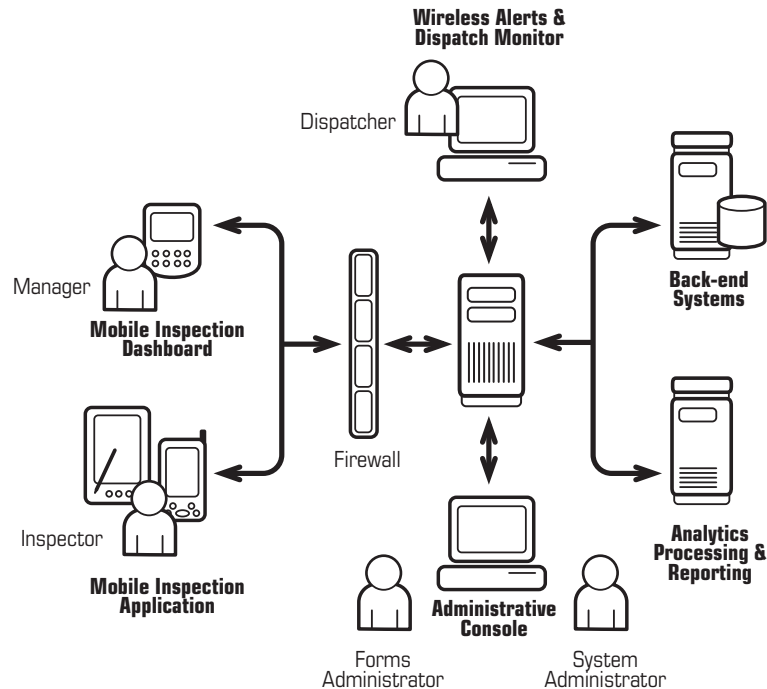
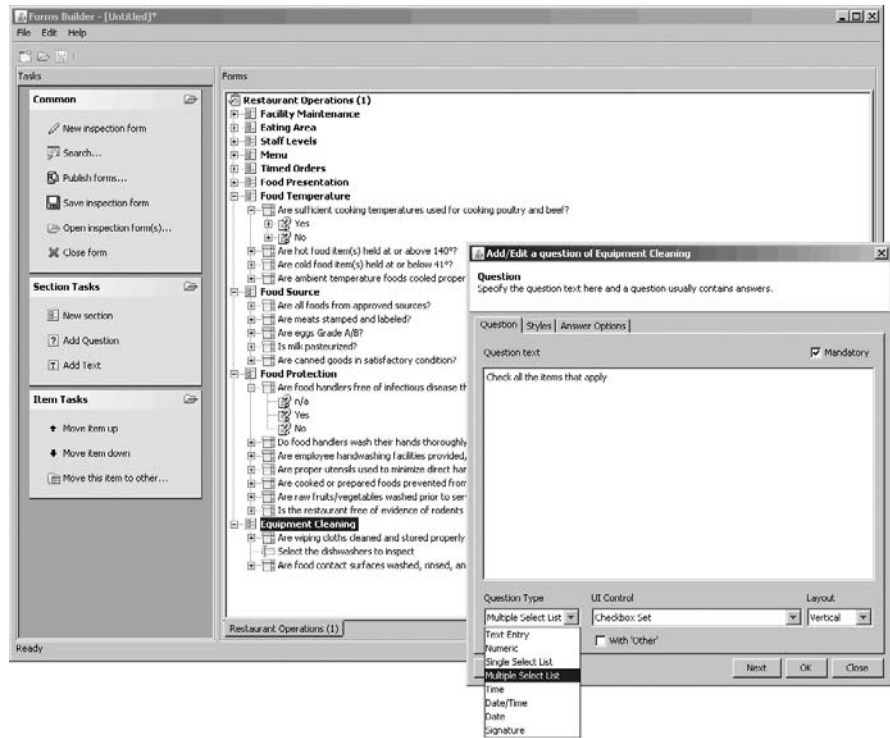


Figure 2: Representative mobile inspection architecture created using the mobile inspection toolkit



Mobile inspection application on a PDA showing a customized question type designed for timing service operations.



Forms builder tool for quick and easy generation of questionnaires and surveys by line-of-business administrators.

A FEATURE RICH, BENEFIT PACKED SOLUTION

The Mobile Inspection solution delivers significant and measurable benefits that improve customer satisfaction and improve brand image. These benefits include increased data quality, and increased inspector and operational efficiencies and effectiveness.

The following chart provides an at-a-glance list of the solution's features and benefits:

FEATURES	BENEFITS
<ul style="list-style-type: none"> • Mobile Inspection Application 	<ul style="list-style-type: none"> • Improves customer service by ensuring that customer interactions meet or exceed your corporate standards for quality. • Improves health and safety by validating compliance with standards and regulations.
<ul style="list-style-type: none"> • Manager's KPI Dashboard 	<ul style="list-style-type: none"> • Allows real time viewing of key performance indicators (KPI) such as inspection progress, productivity and results. • Enables managers to make timely decisions and take appropriate corrective action.
<ul style="list-style-type: none"> • Electronic Transmission of Mobile Data 	<ul style="list-style-type: none"> • Reduces or eliminates the need for field inspectors to travel to the office to pick up work lists and deliver inspection results, lowering transportation and facility costs. • Frees up time to conduct more inspections each day.

"What we sought was something rare when it comes to a lot of technology expenditure - a direct and tangible return. And that's what we have achieved thanks to Sybase iAnywhere. Our consultants are now saving time, executing a process that they understand, in a way that was just the most obvious approach to take, using technology to move and manipulate data. The consultant handles the information once and then it is processed in many ways elsewhere in the business, enabling them to spend their energy on other value-added activities. This helps us to focus on Quality, Service and Cleanliness, and therefore to continually improve our customers' experience when they visit a restaurant."

— Keith Frimley, UK IS Business Relationship Manager, McDonald's UK

FEATURES	BENEFITS
<ul style="list-style-type: none"> • Mobile Device Data Validation 	<ul style="list-style-type: none"> • Increases data accuracy by validating input against business rules during the inspection process thus reducing the likelihood of data errors and costs associated with correcting them.
<ul style="list-style-type: none"> • Electronic Access to Critical Reference Material in the Field 	<ul style="list-style-type: none"> • Provides electronic access to inspection history, regulations, operations manuals, corporate guidelines and inspection instructions in the field to ensure process compliance. • Eliminates the need to lug around large binders and other paper documents.
<ul style="list-style-type: none"> • Wireless Assignment of Inspection Orders 	<ul style="list-style-type: none"> • Allows real time assignment of inspection orders from the office to the field inspectors eliminating communication lags and minimizing operational delays.
<ul style="list-style-type: none"> • Integration with Back Office Systems 	<ul style="list-style-type: none"> • Provides a standards-based architecture to integrate inspection data with existing back-end systems thus eliminating data entry costs and increasing data quality.

SNAPSHOTS OF SUCCESS

McDonald's Improves Operational Effectiveness

McDonald's is the world's leading food service retailer with more than 30,000 local restaurants serving nearly 50 million people in more than 119 countries each day.

The company has a team of operational consultants whose role it is to ensure that its restaurants consistently meet its standards of service and customer care. Traditionally this was achieved through lengthy restaurant assessments relying on the consultants manually compiling detailed paper reports, which then had to be entered into company systems.

McDonald's replaced its paper-based inspection process in the UK with a mobile inspection solution built on Sybase iAnywhere technology.

Among the results it achieved:

- A time saving of almost 3 hours in the restaurant assessment process per operational consultant
- Cost savings of over £140,000 pounds per year
- Timely and easy access to historical inspection information
- Ability of operational consultants to spend more time analyzing trends with restaurant owners to create action plans to drive and support continuous improvement

“Sybase iAnywhere’s enterprise customers have benefited from:

- The ability to push and synchronize information on mobile devices,
- Remote management, provisioning and security for mobile devices, and
- The ease of use of the systems for both IT administrators and end users.

Customers also expressed the strong value proposition of the integrated mobility components within the Information Anywhere suite. The Information Anywhere suite provides users with a platform offering wireless email/PIM, security, device management and application enablement. This enables users to deploy and manage their mobility solutions more effectively without using point solutions from various vendors.”

— From “Understanding the Benefits of Mobility in Enterprises”
© Frost & Sullivan 2006

20th Century Fox Home Entertainment Slashes Data Entry, Increases Sales

20th Century Fox Home Entertainment International markets and distributes videos and DVDs of its parent company’s film and television titles through retailers worldwide.

75 sales advisors servicing up to 3,000 retail locations per week are responsible for ensuring that stores display point-of-sale materials and the video/DVD titles properly to drive sales, while maintaining adequate stock on hand and facilitating product returns. Until recently, the advisors employed a time-consuming, pen-and-paper system that resulted in data errors and delays in responding to inventory replenishment and returns.

The company deployed a Sybase iAnywhere-powered mobile inspection solution employing Windows Mobile-based PDAs with add-on barcode scanners and digital cameras, connecting via Bluetooth-enabled GPRS phones. Within just a few months of deploying the mobile system, the company began realizing dramatic results including:

- 10 percent increase in DVD and video sales
- On-shelf availability improvement of five percent
- Stock replenishment time decrease of three days to one
- Savings of 150 man-hours of data entry per month

South Florida Water Management District Improves Inspection Efficiency and Accuracy

The South Florida Water Management District (SFWMD) is a regional, governmental agency that oversees the water resources in the southern half of the state. Serving a population of more than six million residents, the agency provides flood control and water supply protection to residents living and working in cities or on farms within this region, and is working to restore and manage ecosystems from the Kissimmee River to the Everglades and Florida Bay.

To perform the many tasks required to achieve its mission, SFWMD employs 41 field staff professionals, all of whom inspect numerous environmental and construction sites each day. As they visit these sites, they gather data critical to the management and protection of the region’s water supply. Historically, the inspectors have recorded the data on paper forms, which they then manually entered into the agency’s database when they returned to their offices. This paper-based process was not just inefficient - taking inspectors out of the field for as much as an hour each day - but often inaccurate due to mistakes that were made as the handwritten data was keyed into the agency’s database.

By implementing a Sybase iAnywhere created and powered mobile inspection system, SFWMD has achieved impressive results including:

- Elimination of manual data re-entry, saving each field inspector approximately one hour per day
- Dramatic improvement in information accuracy - to 99 percent
- Annual cost reduction of more than \$70,000

SYBASE IANYWHERE: EXPERIENCED, PROVEN, RELIABLE

Sybase iAnywhere enables success at the front lines of business. The company holds worldwide market leadership positions in mobile and embedded databases, mobile management and security, mobile middleware and synchronization, and Bluetooth® and infrared protocol technologies. Tens of millions of mobile devices and over 20,000 customers and partners rely on the company’s “Always Available” technologies, including SQL Anywhere and its Information Anywhere suite.

Sybase iAnywhere has a proven track record in the deployment of highly effective mobile inspection systems across major industry sectors including hospitality, retailing, transportation, public works, energy, utilities, public safety, manufacturing, construction and healthcare. Organizations can leverage existing frameworks and best practices and Sybase iAnywhere's seasoned team of mobility experts to develop and deploy company-specific, integrated mobile inspection solutions that will produce significant, positive business benefits.

Moreover, Sybase iAnywhere is experienced and comfortable working directly with customers' IT teams as well as delivering through our partners. Sybase iAnywhere has developed strong, complementary relationships with world-class partners in the mobile market to ensure you have access to the most comprehensive skills, technologies and services through every phase of your mobile inspection project.

ON FURTHER INSPECTION, THE BENEFITS ARE UNDENIABLE

The case for mobilizing business-critical applications is compelling and no longer a source of debate. Organizations that have developed and deployed their mobile applications using Sybase iAnywhere technology have realized significant benefits including:

- Enhanced customer service
- Improved health and safety compliance
- Increased worker productivity
- Lowered facility costs
- Reduced data errors
- Better operational decisions based on timely information
- Protected brand equity

Find out how mobile inspection can benefit your organization.

To learn more please contact us at ianywhere_services@ianywhere.com or visit <http://www.ianywhere.com/inspections>

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