Connecting Your Business to the Multichannel Customer with freedomone and IBM Worklight

Redguides
for Business Leaders

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- Learn how freedomone can help you engage your multichannel customers

- Understand the business value of creating content aware apps

- Understand the freedomone and IBM Worklight architecture

Executive overview

Many businesses are facing communication challenges that are caused by the explosive growth of digital channels available to their customers. The choice of channels that is available to customers ranges from mobile devices to social networks. A cohesive business strategy to engage customers in moments of opportunity must include technology assets that enable the company to communicate interactively and contextually with today's multichannel customer.

The challenges related to digital consumerism can be summed up as follows:

► Today's multichannel customer maintains 8 - 12 digital channels, such as email access, social network aliases, and various mobile endpoints. Mobile endpoints include such technologies as mobile apps, Short Message Service (SMS), voice mail, and near field communication (NFC).

► Businesses are not equipped to communicate interactively and simultaneously on all available digital channels, in real time.

► Today's customers rarely have the choice of selecting their preferred communication channel based on correspondence and service delivery offered by your business.

► Businesses are not equipped to:

    – Enable cohesive cross-channel communication while maintaining the appropriate context within the services that are offered to their customers.

    – Integrate the multichannel digital values with enterprise and existing systems to meet strategic objectives.

    – Capture the rich communication data to help them better understand their customers' behavior.

freedomone is an integrated communication platform that connects your business to the multichannel customer. It integrates with your enterprise systems, connects with your customers' preferred digital channels, and captures all relevant data that enables your business to leap forward. IBM® Worklight provides an open, comprehensive, and advanced mobile application platform that helps you to efficiently develop, run, and manage hybrid and basic applications. With the combination of these two solutions, you can give your customers the ability to choose how they interact with your business.

This IBM Redguide™ publication is for C-level executives who are responsible for marketing and IT. This guide demonstrates how freedomone and IBM Worklight connect your business to the multichannel customer. The guide explains how the combination and integration of

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these robust solutions can help enhance your value proposition, today, and for the future. This guide provides information about how you can achieve the following goals:

► Interact in real time with your multichannel customers.

► Integrate your business systems with all available digital channels.

► Engage your customers with their preferred communication channels or communication options.

► Create and maintain rich context-aware customer experiences.

► Capitalize on your analytics investments by using rich data values.

Business challenges

Businesses have to increase their entry points to satisfy their technically enabled and savvy customers. This disruptive force is making companies do business differently:

► Mobile and social networks are radically changing the way that businesses engage with their customers.

Your customer is now mobile and socially connected. Therefore, your business needs to engage in new and interactive ways and must reach customers according to where they might be in their engagement cycle. This new paradigm is driven by grass roots consumerism of mobile networks and social networks and directly affects a customer's mind share and wallet.

This disruption's principle driver is the multichannel customer who has adopted smart technology. Today's customer maintains an average of 8 - 12 channels by which they communicate and engage with each other, business, governments, and organizations.

Your multichannel customers are more informed, technology savvy, and inquisitive. For example, they can quickly and accurately compare offerings and make fundamental changes in the typical buying cycles. They are also powerful as they influence more rapidly the adoption of products and services that are provided. They determine how businesses engage with them, according to their preferred channel of communication.

According to our research, the average customer maintains three email accounts, three social network aliases, and one smartphone that connects them to five extra channels. The additional channels can include mobile apps, mobile sites, push notification, SMS, and voice mail. In addition, most customers will eventually own a connected tablet of some type, increasing the multiplicity of devices and future channels by which they might engage with your business. Mobility is being reshaped. It will no longer be a matter of device preference, but about people, in particular, people who keep moving from one digital channel to another.

In essence, the combination of mobile and social networking is changing the business-to-consumer (B2C) landscape at an unrivaled pace. The combination of these two innovations drives new types of entrepreneurial behaviors, new business models, and handicaps. The established corporations that take too long to understand and evolve to meet these new customer behaviors might miss out on these customer demands.

► Mobile and social networks have radically disrupted the way businesses and their IT organizations deal with their operations.

Adapting to such a significant paradigm shift has means that stable ecosystems with mature IT governance and structured data management operations are yet again jeopardized. This time the disruption comes from IT consumerism.

This latest trend, more often than not, involves the following factors:

– Rapid development cycles with limited security
– Lack of system integration considerations
– Little thought to proper data management

Data management is key as businesses struggle to deal with structured and unstructured data sources that hold a gold mine of information about customer trends.

The inherent issues of this impact are the high cost of development, integration, deployment, and maintenance related to a diverse market of operating systems, devices, protocols, and sheer lack of standards. Monetizing ongoing investments (in relation to mobile networks, social networks, and multichannel engagements) is becoming more "art than science." And as much as executives want to differentiate their value proposition, the common question across all industries is: "How and when can I make money and track the return on my investment?"

The need for enterprise grade solutions is apparent. The key strategy becomes incorporating speed, agility, integrity, security, and reach to multiple operating systems. Extending your reach to the multiplicity of digital channels accessed by all types of devices is a critical success factor when engaging today's customers as they interact, socialize, and ultimately buy.

No doubt, this challenge is a current and remarkable one. Thankfully, the latest technology leaps provided by IBM Worklight and freedomone equip business leaders with the right tools to adapt and ultimately regain their customers' mind share and, consequently, their portion of the market.

Business value of freedomone, a multichannel communication platform

The freedomone communication platform enables complete transaction cycles across all channels and with total transparency. This platform meets the needs of your multichannel customer. It was developed on IBM WebSphere® Application Server and uses IBM DB2®. freedomone is fully integrated with IBM Worklight and provides the extended digital reach that is required to engage with today's multichannel customer.

The freedomone platform's distinctive value is its powerful capability of engaging customers in interactive context-aware, multichannel, and cross-channel communications. This solution empowers your customers with the option to map their preferred digital channel to your products and services, which is key to winning their business.

For example, with freedomone, customers can choose how, when, and where their communication occurs such as in the following ways:

► Your promotional messaging is directed to your customers' email or social network channels.

► Transactional engagements are directed contextually to their mobile app.

► All personal identity-related notifications can be directed by SMS or push notification.

In essence, this solution provides your customers with the freedom of choice and propels your value proposition well above the competitive landscape.

What is context awareness and what does it mean to your future business? The freedomone context awareness technological values come from two distinct sources:

► The data and historical values of your customers' behavior
► Mobile device sensors and connectors

Your customers' history of communication interactions and triggers that are related to moments of engagement are key to understanding their behavior, buying patterns, and the overall way they communicate with your business. The freedomone platform empowers your business to capture, maintain, and analyze this data, while democratizing the subscription experience for your customer *who has a choice*. In fact, you can also offer customers the freedom to select the appropriate digital channel by which they want to engage with your business.

By taking advantage of data from mobile device connectors and sensors, such as geolocation, barcode data, near field communication (NFC), and augmented reality, you can use this approach to capture your customers' behavior through interaction on multiple channels. freedomone empowers your business to create unique experiences that are tailored to increase each customer's satisfaction and buying ratio.

This patented solution also provides interactive bidirectional communication across all channels, which fully engages your business and your customers in distinct moments of opportunity.

Every customer engagement has various levels of priority, urgency, and interest for each customer. The freedomone solution caters to this important variable.

The combination of data sources helps your business fine-tune its new client service initiatives as you seek to offer a new customer experience and consequently increase your market share.

About the freedomone platform

freedomone is an integrated communication platform that connects your business to the multichannel customer. It integrates with your enterprise systems (shown in Figure 1), connects with your customers' preferred digital channels, and captures all relevant data that enables your business to leap forward.
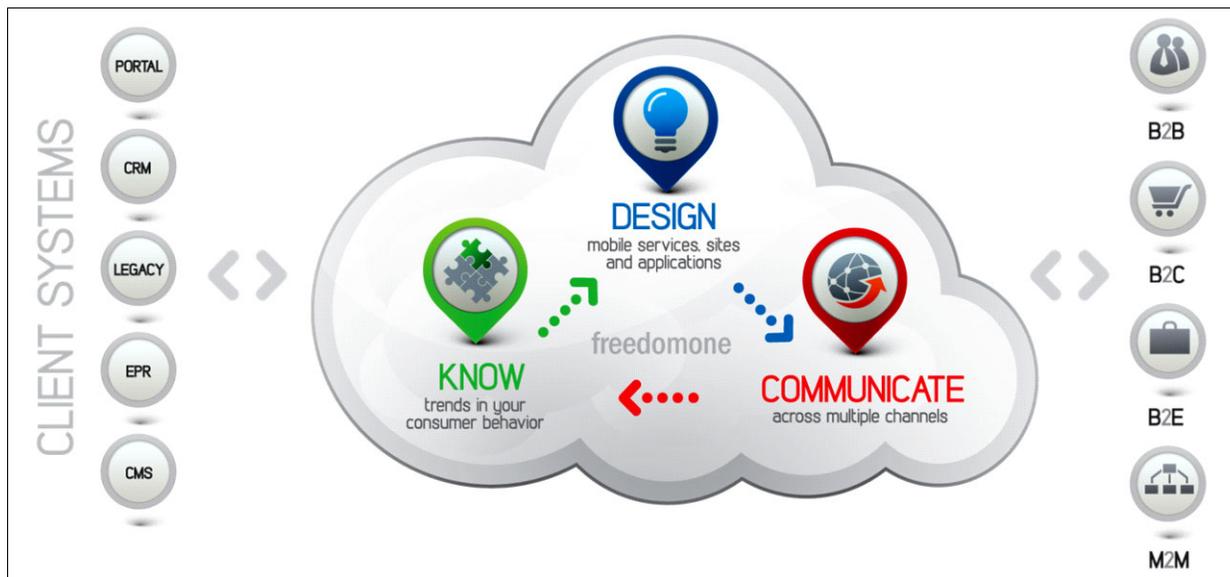

Figure 1   freedomone interacting with your business environment

As shown in Figure 1 on page 4, freedomone consists of the following main components:

► Design
► Communicate
► Know

The Design component

The Design component enables your business to map an interactive process, with the goal of connecting your valued products and services to your customers' preferred communication channel. This component is inspired by business process management concepts. By using workflow design tools, your business can quickly design, develop, and deploy services to multiple digital channels, including full integration with IBM Worklight mobile applications and mobile sites.

Figure 2 shows an example of a fraud notification workflow design that is integrated with IBM Worklight.
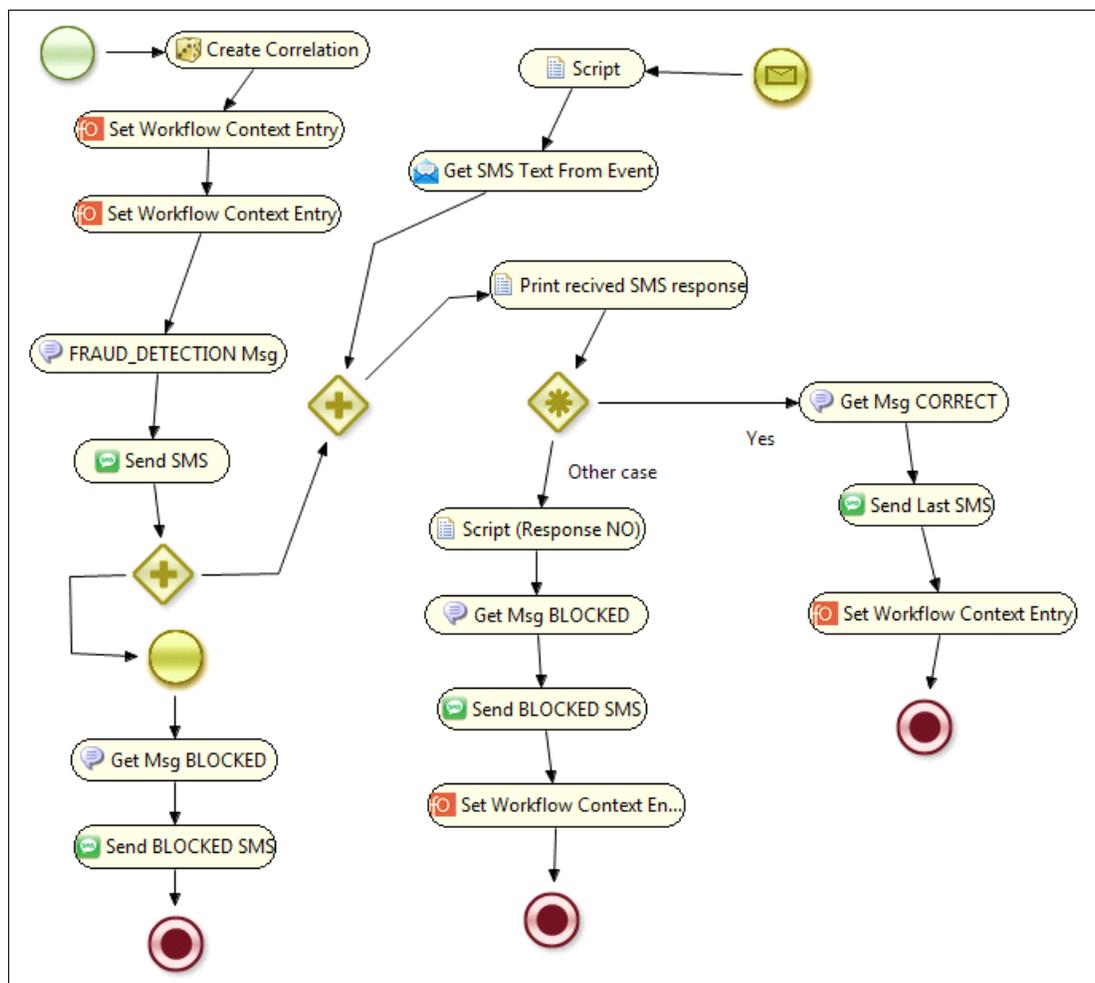

Figure 2   Fraud notification workflow design

The freedomone Design Studio provides a complete workflow design management suite that is tailored for multichannel and cross-channel enablement. It includes the following assets:

► Workflow Editor
► Version management

- ► Storage
- ► Orchestration
- ► Correlation
- ► Persistence
- ► Tracking and monitoring
- ► Integrated development environment (IDE)

    The IDE supports the creation of custom developed applications.

Initiating and maintaining bidirectional conversations with your customer involves using the freedomone platform to correlate events with business rules, push alerts, and notifications, interacting on the appropriate channels. For example, your company interacts bidirectionally with the customer and delivers the right message at the right time.

The Communicate component

The Communicate component runs the multichannel and cross-channel delivery of your interactive process. Its principle purpose is to connect your business to the following channels (selected by your customer):

- ► Mobile applications (including IBM Worklight apps)
- ► Mobile sites
- ► Email
- ► SMS for text messaging
- ► Push notifications
- ► NFC
- ► Social networks (such as Facebook, Twitter, and LinkedIn)
- ► Interactive voice response (IVR)
- ► Internet Protocol (IP) telephony
- ► Machine-to-machine interaction

    Machines include interactive kiosks, automatic teller machines (ATM), WiFi tags, and radio frequency identification (RFID).

The freedomone subscriber interface is fully customizable to meet your expectations in rendering a unique customer experience.

Figure 3 shows a sample of what you might consider in terms of options to increase and maintain adoption. This sample is a generic view that you can customize to your business model.

Above and beyond enabling multichannel and cross channel interactions, the value of the Communicate component is to render the appropriate context according to your customers' engagement cycle, in real time.

In addition to your design process that allows reach multiple endpoints, freedomone provides rich customer experiences by using customer preferences and historical values stored in each customer's profile management system.

The combination of data captured by our solution and events triggered by smartphones and tablets enable freedomone to engage your customer with rich and interactive experiences that differentiate your offering. In addition, changing your customer experience creates new values and opportunities to increase their loyalty factor as you cater to their evolving lifestyle.

Figure 3   freedomone subscriber interface

The Know component

Data is the source point for understanding your customers and their behavior. By using the freedomone solution, you can capture all the details related to how they interact and communicate with your business.

Measuring your marketing campaigns effectively might help you determine budgetary and strategic investments on the digital channels. It might also help you identify how best to connect your business to your customers. In fact, with all the data captured from the detailed process records and each customer's communication behavior, freedomone provides your business with a 360-degree view of your customers' interactions and allows you to engage according to their intent.

Data for analytics

With the richness of data provided by the Communicate component, your business can capture the preferences and patterns that your customers choose when interacting with your business. In addition, freedomone provides data values that are related to market segments, location, smartphone and tablet asset utilization, and patterns by customer selection criteria. Variables that are most often selected, such as channel engagement, time of day, threshold values, and event triggers, offer a unique view of your customers' behavior with regards to your offering and services.

Powered by the process detail record (PDR) of the Design component, freedomone provides accurate and measurable data per workflow usage at every step of your process. By capturing the customers' intent at specific points of engagement combined with time-sensitive data, your business can adjust its services according to their response pattern. By using this approach, your business can remain agile and optimize the return on investment regarding specific promotions, campaigns, and overall customer service.

The freedomone solution provides intuitive interfaces for business users who need answers from basic data set to rich data sets that help them tailor better services and provide unique customer experiences.

Operational data management

The freedomone solution offers a structured approach and well-designed interfaces to monitor real-time communication activities. This important asset provides tools to monitor relevant information such as the overall subscriber activity (Figure 4) at any point in time. Workflow management and health status that are based on specific services can be tracked. With freedomone, your business can stop, restart, and operate your services with administration rights assigned accordingly.
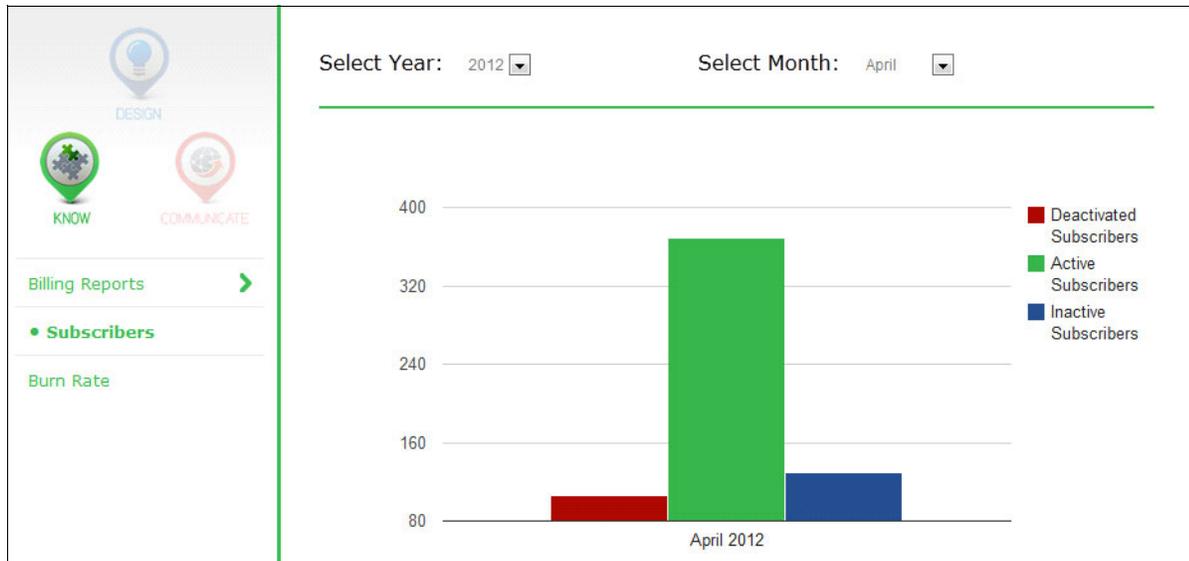

Figure 4   Subscriber status view

Support can be determined and applied according to the priority of services that are rendered. freedomone provides the right tools and ease of access to data so that your IT organization can deliver world-class service.

The freedomone and IBM Worklight integrated value proposition

freedomone and IBM Worklight run on the foundation of IBM WebSphere Application Server and IBM DB2. The integrated solution takes advantage of the reliability, security, and scalability that is provided by this foundation. The foundation also provides developers and system administrators with functions that are critical to rapid adoption by your key operations. In addition, using the IBM foundation software provides simple integration with other IBM middleware. Connecting IBM WebSphere Enterprise Service Bus, IBM WebSphere Operational Decision Management, and using the speed of IBM PureApplication™ Systems provides your business with a lower cost of ownership and ease of implementation and integration.

IBM Worklight provides an open, comprehensive, and advanced mobile application platform to help you to efficiently develop, run, and manage Hypertext Markup Language version 5 (HTML5), and hybrid and native applications.

IBM Worklight simplifies the application development lifecycle across devices by providing standards-based technologies and tools, mobile optimized middleware, enterprise-level security, and integrated management and analytics. Worklight Studio, a visual development environment, accelerates development, testing, and delivery of your mobile applications. It uses open technologies such as HTML5, Apache Cordova, and JavaScript, and uses such JavaScript frameworks as Dojo, jQuery, and Sencha Touch.

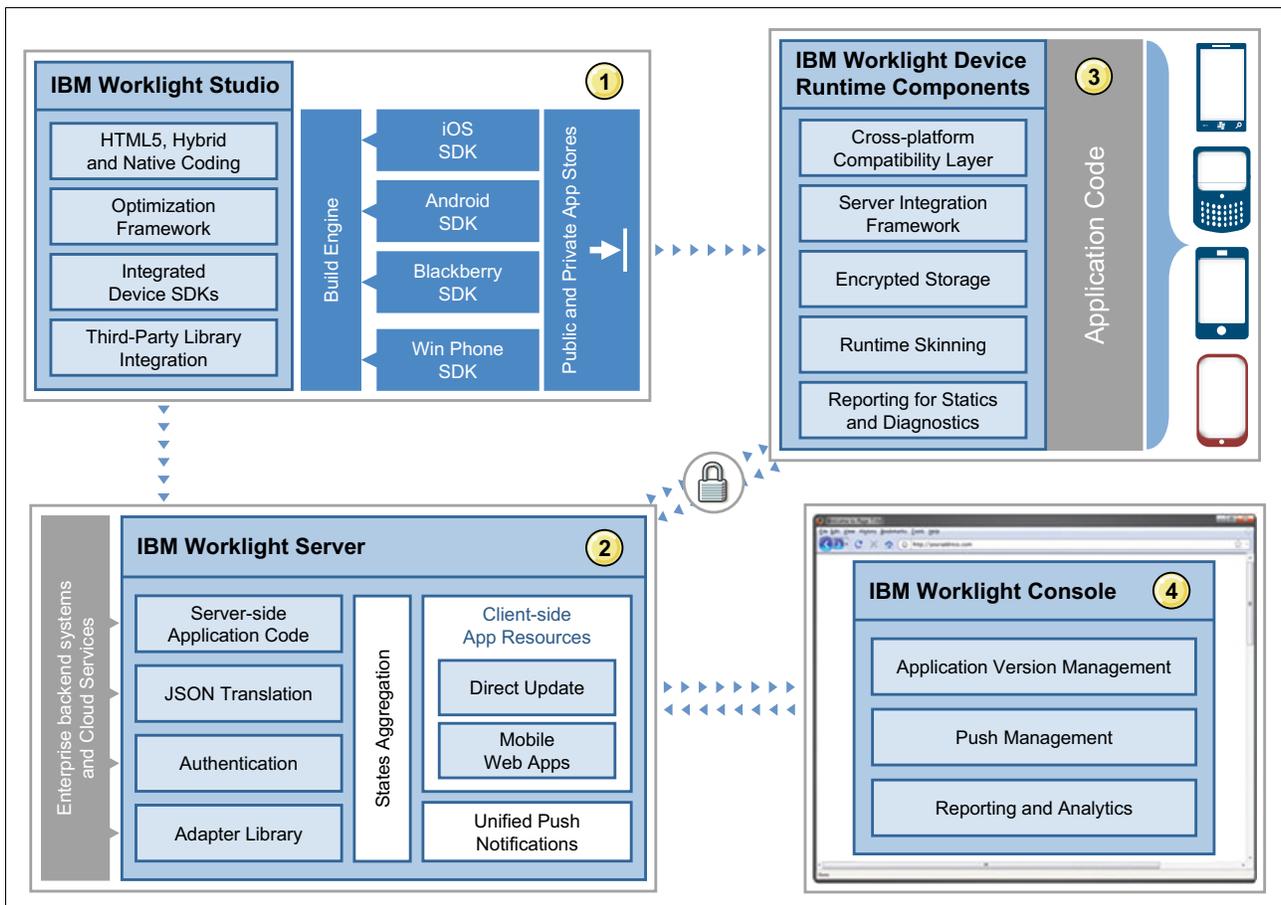Figure 5 shows the four key components of the Worklight platform.

Figure 5   IBM Worklight components

IBM Worklight has the following components:

► IBM Worklight Studio (component 1 in Figure 5 on page 9)

Worklight Studio is an Eclipse-based IDE that you can use to perform all the coding and integration tasks that are required to develop a fully operational application. It includes an intuitive structure so that you can maximize code sharing and define custom behavior and styles that match the target environment.

► IBM Worklight Server (component 2 in Figure 5 on page 9)

Worklight Server seamlessly integrates into the enterprise environment, using its resources and infrastructure. It includes a security framework, data extraction, and manipulation constructs; direct update of web and hybrid apps; analytics capability; and operational management functions. Worklight Server runs as a dedicated application on a Java Platform Enterprise Edition (Java EE) application server, such as WebSphere Application Server.

► IBM Worklight Device Runtime Components (component 3 in Figure 5 on page 9)

Worklight Device Runtime Components provide client-side runtime code that embeds server functionality within the target environment of deployed apps.

► IBM Worklight Console (component 4 in Figure 5 on page 9)

Worklight Console plays a critical role in management of the mobile organization, from managing deployed applications, adapters, and push notifications to collecting and analyzing user statistics.

The integration of IBM Worklight with freedomone brings multichannel and context aware communications to the next level. freedomone provides your customers with event triggers that come from SMS, email, or social network coordinates. By using the Worklight platform, you can build mobile applications that incorporate those events. Integrating the two solutions extends your reach across multiple channels and preserves the context of the customer experience.

For example, a customer might select email notifications for billing. By using the context of this pending transaction stored in freedomone, the customer is invited to open a mobile application, which is developed by using Worklight, to immediately choose a payment option.

The multichannel approach also helps you to take advantage of a secondary channel of authentication. Your business might want to reduce the risks that are related to identity phishing and potential fraud by using freedomone to initiate a double verification process. For example, you might alert a customer by using SMS if a potential fraudulent transaction occurs. Then, you might prompt them to authenticate with a unique personal identification number (PIN) by using the mobile application. This type of value-add communication increases the trust level with your customer and improves your repeat business ratio.
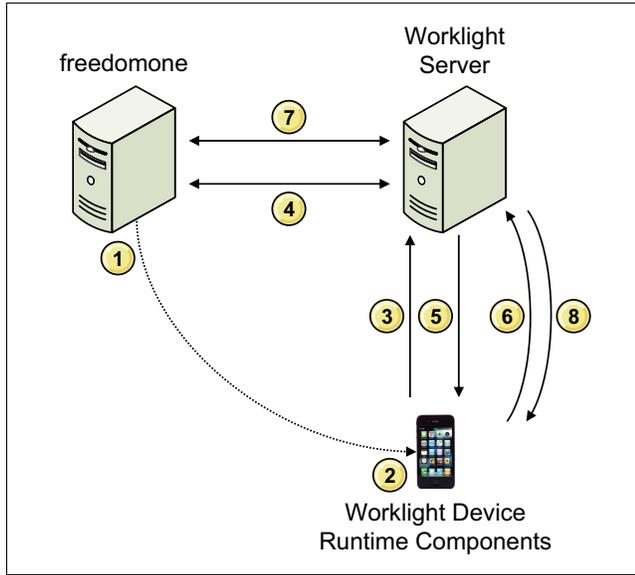
Figure 6 illustrates this scenario.

Figure 6   freedomone and IBM Worklight scenario

The scenario shown in Figure 6 illustrates of the following activities:

1. The freedomone platform sends an SMS fraud alert to a customer's mobile phone.

2. The customer opens the banking application (developed by using Worklight).

3. The mobile application contacts the Worklight Server.

4. The Worklight Server retrieves the user's context from freedomone.

5. The context is delivered to the mobile application, which uses it to display the disputed transaction to the customer.

6. The customer indicates that the transaction is legitimate.

7. The customer response is returned through the Worklight Server to the freedomone platform, and the alert is resolved.

8. The customer is notified that the transaction was processed.

The use of two different channels (SMS and the mobile application) increases the probability that a customer's identity is secure. This example adds value and security for customers. In fact, it represents the potential when considering new ways of communicating and engaging with your customers.

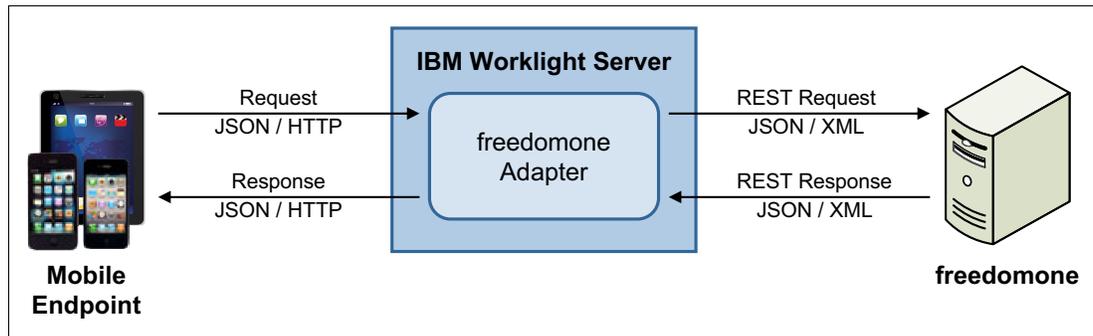Figure 7 shows a high-level architectural overview of the combined freedomone and IBM Worklight solution.

Figure 7   freedomone and IBM Worklight high-level architecture

The architecture uses the Worklight adapter framework to integrate with the freedomone server. The freedomone adapter is started from the mobile application by using the same mechanism that is used for all Worklight adapter communications.

When a request is received from the user, the Worklight Server passes the request to the adapter, which in turn calls the appropriate Representational State Transfer (REST)-based service that is running on the freedomone server. The first invocation occurs during the user authentication process and retrieves the user's existing freedomone context. All subsequent calls are specific to the current context scenario.

Summary

Through the combination of freedomone and IBM Worklight, enterprises can now deliver context-aware mobile applications. Worklight apps become smarter with intelligence from the freedomone platform. These smarter apps can detect who the user is and any other interactions that user has engaged in across multiple communication channels. This information enables customized content to meet users' needs. For example, an app can offer a coupon to a shopper if that shopper was recently on a retailer's website but failed to purchase anything. An app might prompt a user to complete a survey based on a recent telephone exchange. The app can tailor the user experience based on users' prior communications across other channels.

The joint solution also enables Worklight to participate in a broader enterprise notification solution where users can choose to be notified through their mobile app or through other channels such as email or SMS.

Other resources for more information

To learn more about the freedomone and IBM solutions, see the following references:

► freedomone

   http://www.freedomonemobile.com

► IBM Worklight

   http://www.ibm.com/software/mobile-solutions/worklight/

The team who wrote this guide

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