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WebSphere Multichannel Bank Transformation Toolkit

Front office and multi-channel strategy - Overview



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This presentation is about the IBM Front Office and Multi-channel Strategy. And the product named WebSphere® Multichannel Bank Transformation Toolkit.

Agenda

- A big picture: Multi-channel
- Web 2.0 and next-generation internet banking
- Rich client and integrated desktop
- Multi-channel integration
- Development tools



This is the agenda of the presentation.

At first, show the one slide about BTT Value Proposition and multi-channel transformation diagram. This diagram will give you direct feeling about the question: what is the multi-channel transformation, and how can BTT help banking customer to build channel applications .

The BTT Multichannel focused on: Centralized Channel Application Platform, User-Experience Centric, and Cross-Channel integration.

The following sections are about BTT detailed function components: Web2.0 based next generation internet banking, Rich Client based Sales and Service Integrated Desktop, and Multichannel integration capability.

Final one is BTT development tools.

BTT is the center of multi-channel solutions



This is the diagram about relationship between bank end-user and channel applications around BTT platform.

Financial institutions are diversifying their offerings and adapting their products and services to ensure that they are able to respond to future market challenges and support changing business operations in an increasingly competitive environment.

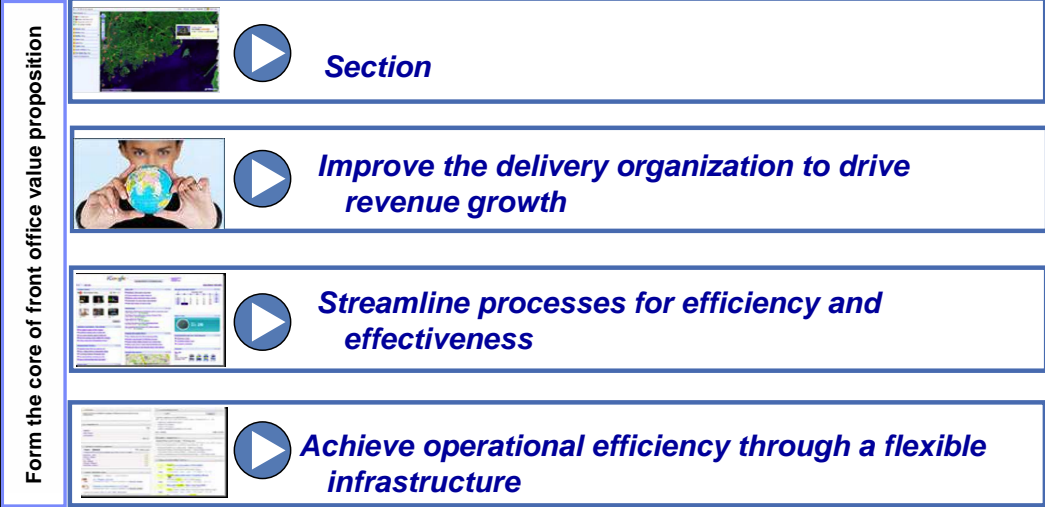
The traditional channel application is becoming obsolete. Many existing channel application systems such as teller, internet banking are based on old technologies. These systems are no longer adequate or appropriate for the challenges of the new environment.

Compared with another technologies, such as JSF, Spring Open Source or competitors, the advanced value of BTT is that BTT based channel applications focus on User Behavior and experience, not IT infrastructure only. For example, BTT based Internet Banking using Web 2.0 technology that provides fully personalized services and transactions, it is not "transaction platform" only, but "marketing platform" or "customer requirement/interaction platform"

Delivering on four key business objectives is critical to taking the front office to the next level

Key factors in the front office

Form the core of front office value proposition



- Section**
- Improve the delivery organization to drive revenue growth**
- Streamline processes for efficiency and effectiveness**
- Achieve operational efficiency through a flexible infrastructure**

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Front Office is becoming more and more important for banks because Front Office is the first “contact point” between users and banks. Delivering on four key business objectives is critical to taking the front office to the next level. That are:

1) **Create a powerful customer experience**

It is said that in the future, “Experience is everything”. User Experience is the first direct feeling and contact between user and banking services.

2) **Improve the delivery organization to drive revenue growth**

To increase financial institutions profit, there are always two approaches. The first one is to Reduce Cost. Pre-defined business package and excellent development tool may help on that; another one is Increase Revenue. The revenue comes from User Loyalty, User Satisfaction, Target Marketing Delivery Capability... these require the banks to think about front office infrastructure and value carefully.

3) **Streamline processes for efficiency and effectiveness**

Process Integration does not mean “Service Integration” in backend only (SOA covers that), but “Desktop Integration” and “User Experience Integration” on Front Office.

4) **Achieve operational efficiency through a flexible infrastructure**

When you consider channel applications, think about “Channel Platform” rather than “application or package”. Centralized channel applications can also help to reduce the new channel application implementation effort or new finance service delivery cross channels.

Section

Web 2.0 and next-generation internet banking

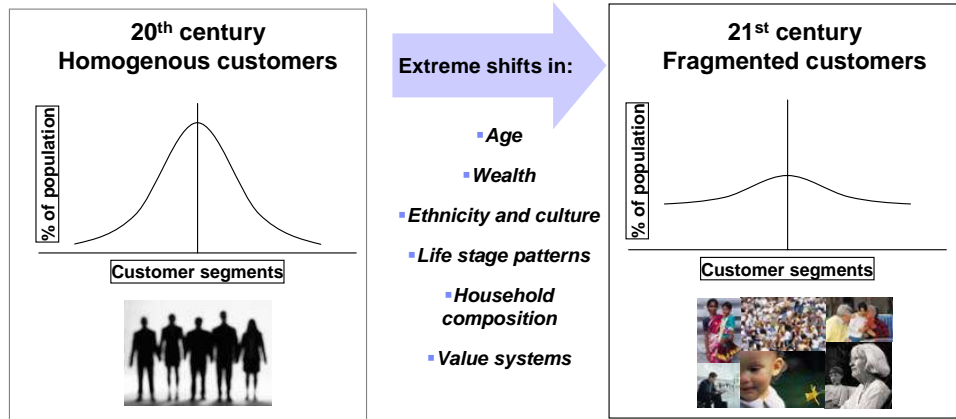


This section covers the detailed value proposition of BTT: **Web 2.0 and next-generation internet banking**

Customer value drivers are fragmenting – demographics, value systems..

Mass customization becomes essential

Customer value drivers fragment



Source: IBM Institute for Business Value



"Norms" become increasingly rare; companies must delve deeper to understand the needs and purchasing drivers of customer micro-segments.

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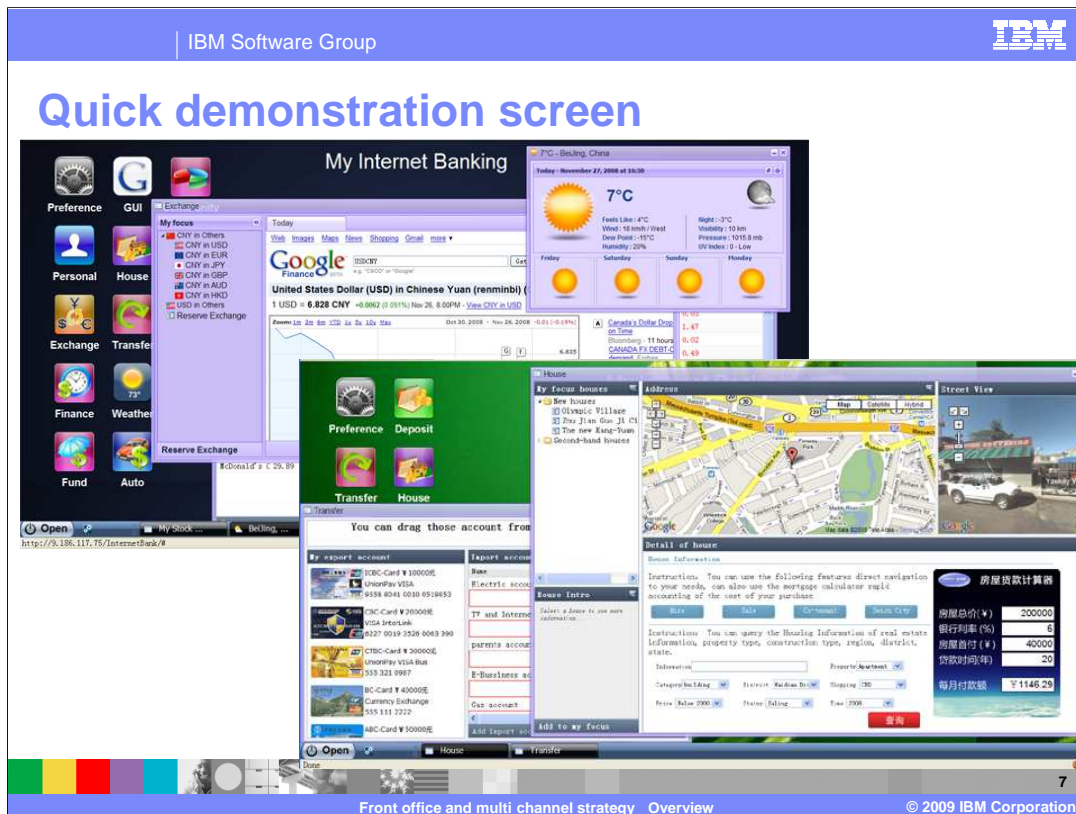
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It is clear to see that modern society is becoming more fragmented.

Different people express different requirements according to age, wealth, culture, and risk preference. "Norms" become increasingly rare; companies must delve deeper to understand the needs and purchasing drivers of customer micro-segments.

But the financial institutions started fairly late. Its business model has always been production-oriented or risk--oriented. This model is manifested in two ways: first, the management of cost is the focus. Banks have always been devoted to scale economy. They have reduced the cost to the lowest and controlled the risk strictly by risk management. Second, banks have divided business according to their own needs rather than market demand.

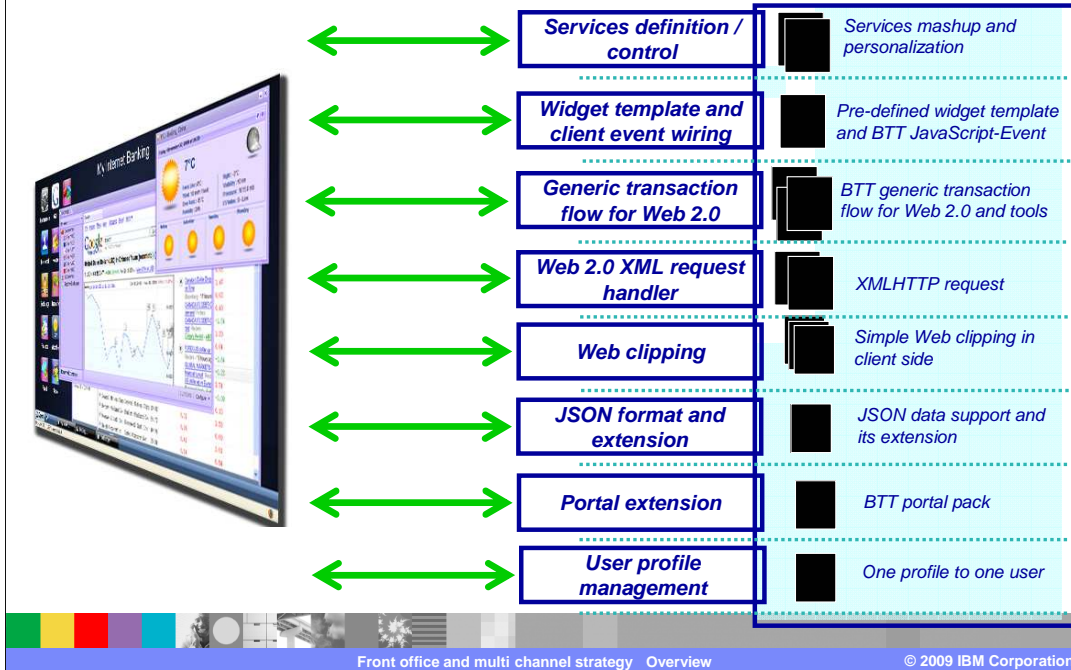


This is the quick screen capture of BTT Web2.0 based next generation internet banking. It has a different user experience. It can be personalized and it can serve as a marketing platform.

BTT provides a set of features and mechanisms that support the Web 2.0 service-based On-Demand Workplace. You can use BTT Web 2.0 On-Demand Workplace to implement home-banking applications. It can also be used in commercial environments, including tellers, call centers, and branch sales environments. The BTT Web 2.0 Internet Bank sample is a demonstration for the applications based on the Web 2.0 On-Demand Workplace.

BTT Web 2.0 On-Demand Workplace is a service-based framework, on which you can customize your workplace. On BTT Web 2.0 On-Demand Workplace, unlike on the traditional banking applications such as Internet Banking, you can customize your working area, subscribe the services that you are interested in and use the services in your workplace. You can even change the theme of your workplace, the location, height of the widget, the title of the tab and so on. Thereby, based on BTT Web 2.0 On-Demand Workplace, the application is customer-oriented, with better using experience, and more customer satisfaction.

The new BTT internet banking offers... Functions



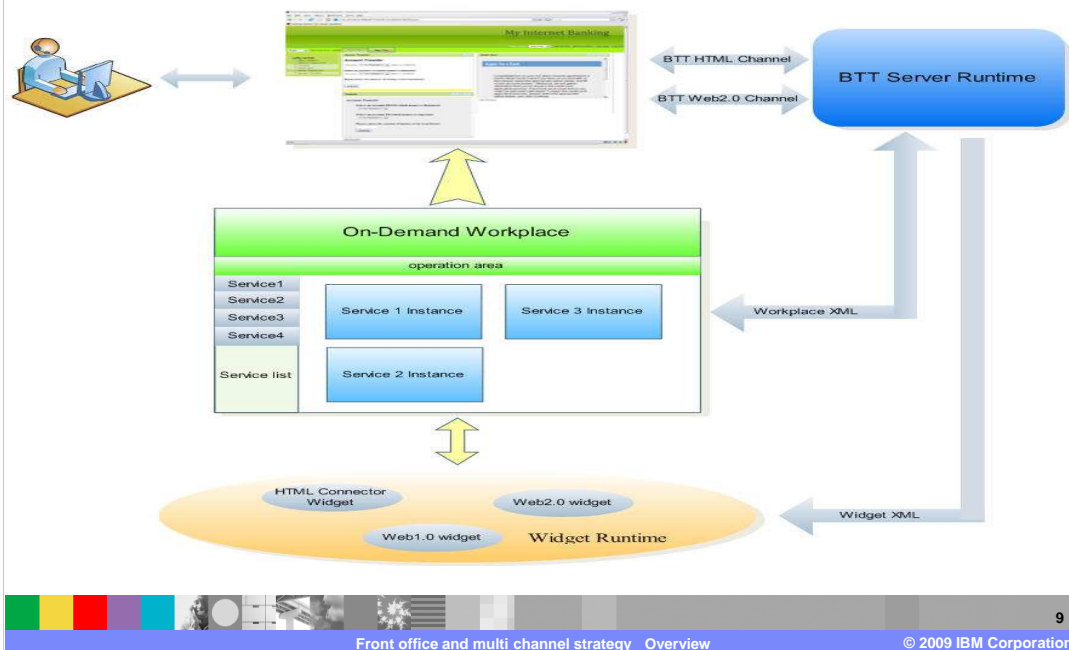
The BTT Web 2.0 On-Demand Workplace is a platform on which you can publish, integrate, manage, and use the services.

There are two types of the Web2.0 components in BTT version 6.1.2, Client Side and Server Side.

The Client Side contains a full set of Personalized Internet Banking Package, which is based on HTML, DHTML, JavaScript and CSS, illustrates User Experience, Personalized Layout, User Contribution and multiple Widget Container Templates (such as iWidgets, Google Gadget and Web1.0 Compatible Widget and so on).

On the Server Side, BTT Web 2.0 Channel is used to process the XML request from the client and JSON based request data.

BTT Web 2.0 infrastructure



In this structure, the On-Demand Workplace mainly contains the service list. The service list contains the services that can be chosen by users, the service instances that provide the concrete services, and the operation area which contains some workplace operations. The Widget Runtime is the widget operation environment and internally supports the On-Demand Workplace.

The Workplace and Widget Runtime fetch requires XML configuration from the server side, such as widget definition. Users can use the Workplace to save some configuration on the server side in XML format, including the UI layout, some widget parameters and so on. So each user can own his or her personal workplace.

The application on the server is implemented with BTT and provides some banking services. Workplace can be accessed through the BTT channels. Users can experience the transaction services on the Workplace. The widgets are the units that encapsulate corresponding functions provided in the On-Demand Workplace. The services in the service list are implemented based on these widgets. Users can extend the transactions on the basis of the widget as they require.

Section

Rich client and integrated desktop

This section is about BTT rich client and integration desktop

BTT integrated workplace

An INTEGRATED DESKTOP

▪ A composite application is an assembly of several application components that, together address the business needs of specific roles of a bank (teller, contact center officer, platform branch user, branch manager,...) in an integrated way.

▪ Workplace applications help maintain context between business process, collaboration content and people.

Based on Eclipse or Lotus® Expeditor



Composite application

Role based perspective

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The Eclipse Rich Client Platform (RCP) supports the development of applications with a rich graphical user interface.

You can use the BTT Rich Client Infrastructure to build teller systems quickly based on RCP or IBM Lotus Expeditor. It can reproduce most of the functions in teller systems and enable them in the new Rich Client environment. It is easy to integrate with the transaction panels which are developed by Standard Widget Toolkit (SWT) Visual Beans. Its incompact architecture is fit for integrating and communicating with other applications in RCP.

BTT Rich Client Infrastructure offers pre-build components to save your effort on developing teller systems. These components include automatically generated navigation tree, quick launch bar, working area, xml based perspective definition and so on. It especially offers a unique and friendly property broker support for both Rich Client and Lotus Expeditor, which simplifies property broker usage. You can use this service to interact with other kind of applications.

BTT Rich Client Infrastructure provides a way to migrate the BTT 4.3 Swing based teller system to the Rich Client teller system with little effort. You can also migrate Swing, ActiveX®, Web, or SWT based applications to the integrated desktop.

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BTT integrated desktop offers.... Features

Integrated workplace
(legacy client application integration for VB, Swing, browser..., financial devices support)

Composite application
(Event/Data sharing, role-based perspective)

Rich client programming model
(data definition, format, event, client operation / step, navigator flow.....)

Rich client fast development tools
(XML UI editor, visual editor, fast deployment.....)

Integrated workplace
(legacy client application integration for VB, Swing, browser..., financial devices support)

Composite application
(Event/Data sharing, role-based perspective)

Rich client programming model
(data definition, format, event, client operation / step, navigator flow.....)

Rich client fast development tools
(XML UI editor, visual editor, fast deployment.....)

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The rich client infrastructure provides these functions:

Navigation tree to launch activities

Navigation items can bind to activities, and when you click a navigation item, the related activities are launched.

Customized layout

Rich client infrastructure offers a pre-build perspective. You can specify the layout elements by writing an XML definition file, and then add the URL of this file to the extension point.

Multiple application integration support

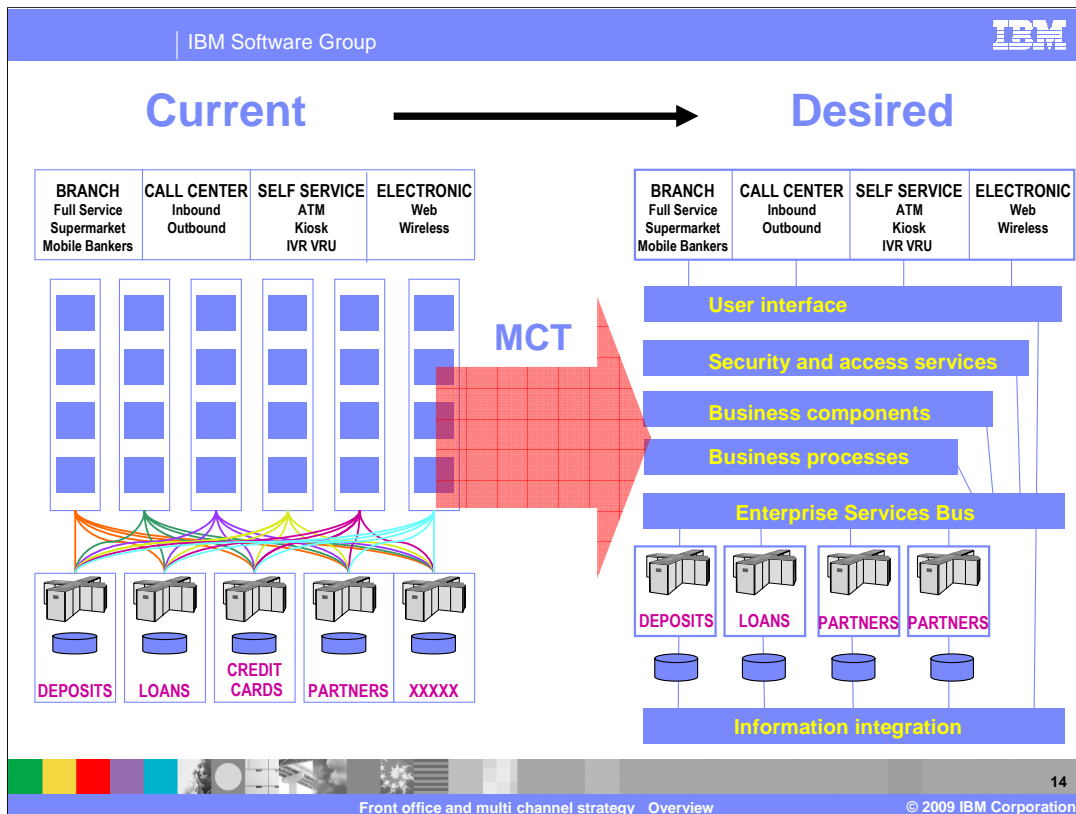
Rich client infrastructure offers a series of pre-build activities, so you can launch Swing, SWT, ActiveX, or Web based applications easily. You can also extend the pre-build activities to customize them for local applications.

Rich client platform and Lotus Expeditor property broker service

You can use the property broker service component that the rich client infrastructure offers to communicate with other applications.

Global context sharing and rich client class loader

BTT context supports global data sharing. You can easily store your data into a context and get it anywhere from the context tree.



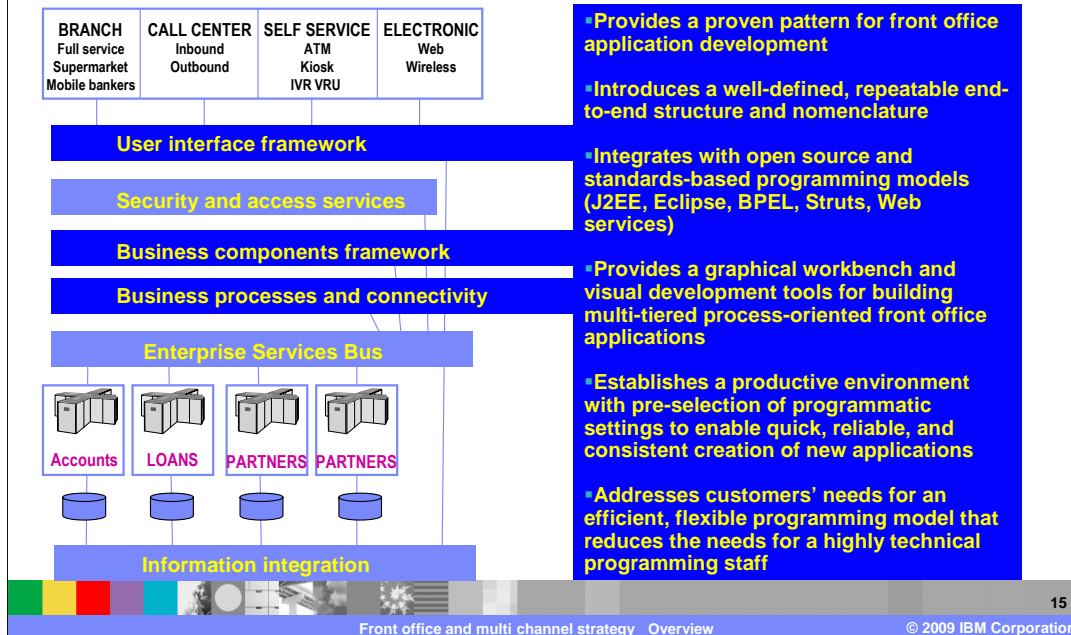
The target architecture is illustrated on the right side– change the isolated channel applications to vertical.

The centralized user interface is used to handle all channel requests, no matter if it is HTTP, JMS or sockets, and the request data format could be XML, HTML, or SOAP. And then convert different channel request and data to Security and Access Services, Re-usable Business Components and Business Processes. Enterprise Service Bus under the multi-channel is used to integrate backend services by SOA reference architecture.

Built upon a multi-channel integration architecture, the business components and processes can be re-used across channel applications. This can reduce the transaction implementation effort greatly, particularly for transactions that are almost same for all channels. For example, “Account Query” transactions in internet banking, Mobile banking and Teller are almost same.

If bank decides to delivery new financial products or transactions across all channels, the effective and efficiency based on centralized platform is clearly far better than an isolated architecture.

Bank Transformation Toolkit: A Multi-Channel framework for reusing business components



BTT as a proven multi-channel framework is designed for building up all channel applications based on same programming model and knowledge.

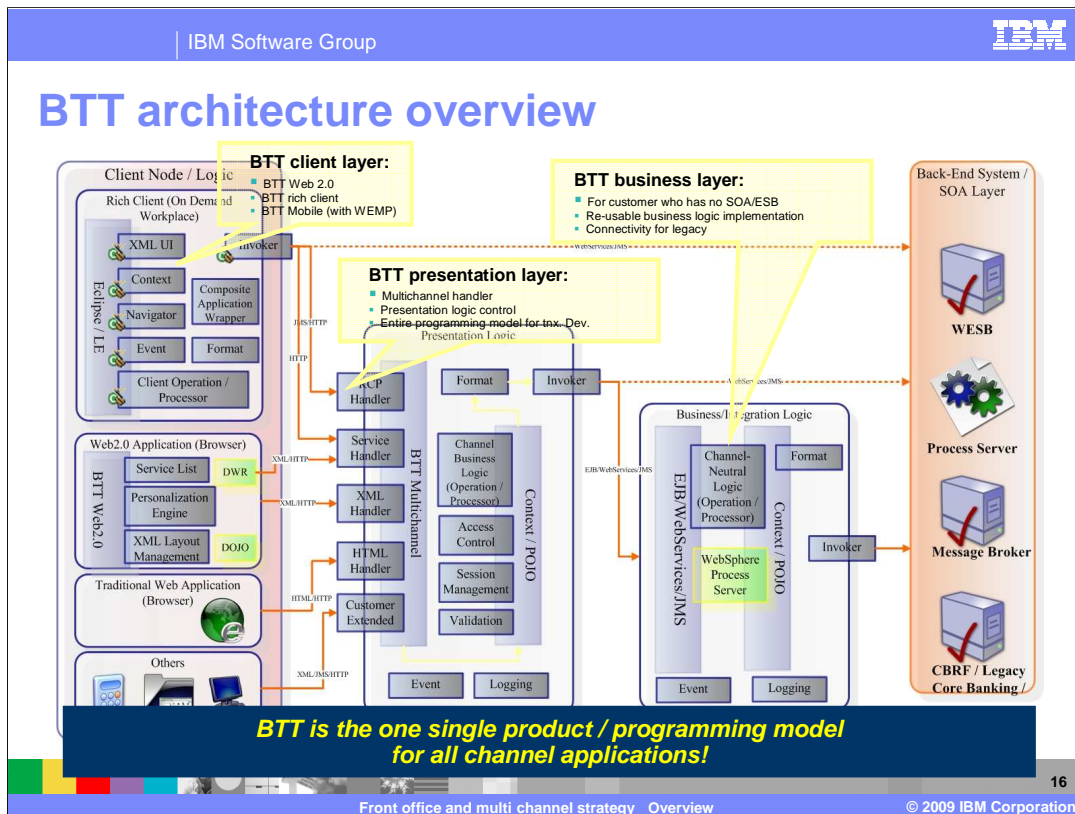
It provides a proven pattern for front office application development.

It introduces a well-defined, repeatable end-to-end structure and nomenclature.

It integrates with open source and standards-based programming models like J2EE, Eclipse, BPEL, Struts, and Web services.

It provides a graphical workbench and visual development tools for building multi-tiered process-oriented front office applications.

It establishes a productive environment with pre-selection of programmatic settings to enable quick, reliable, and consistent creation of new applications, and it addresses customers' needs for an efficient, flexible programming model that reduces the needs for a highly technical programming staff.



This is the BTT components architecture overview.

There are three major layers:

1) Client

A client in the three-tier architecture contains little logic. The logic it has is usually presentation logic or logic required locally to do such things as accessing financial devices or validating entered data. The code to run the client logic is downloaded on an on-demand basis, and therefore does not reside on the client, but on a Web server.

2) Channel aware logic layer

The BTT channel logic layer provides all the options to run BTT logic related with different channel applications in the application server from applications running in disparate client environments.

The entry points to the application server are different based on the type of client device and the communication protocol being used by the client application. Each of these entry points relates to a specific request handler, which is able to manage channel-specific considerations.

3) Enterprise Layer

Enterprise Server is separated into two parts: SOA fundamentals and Back end server

Section

Development tools



BTT provides several tools that support the development of applications. All the tools are plug-ins of Rational® Application Developer.

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Application wizard

- Create BTT business application step by step
- Create BTT multi-channel sample project
- Deploy the BTT multi-channel sample

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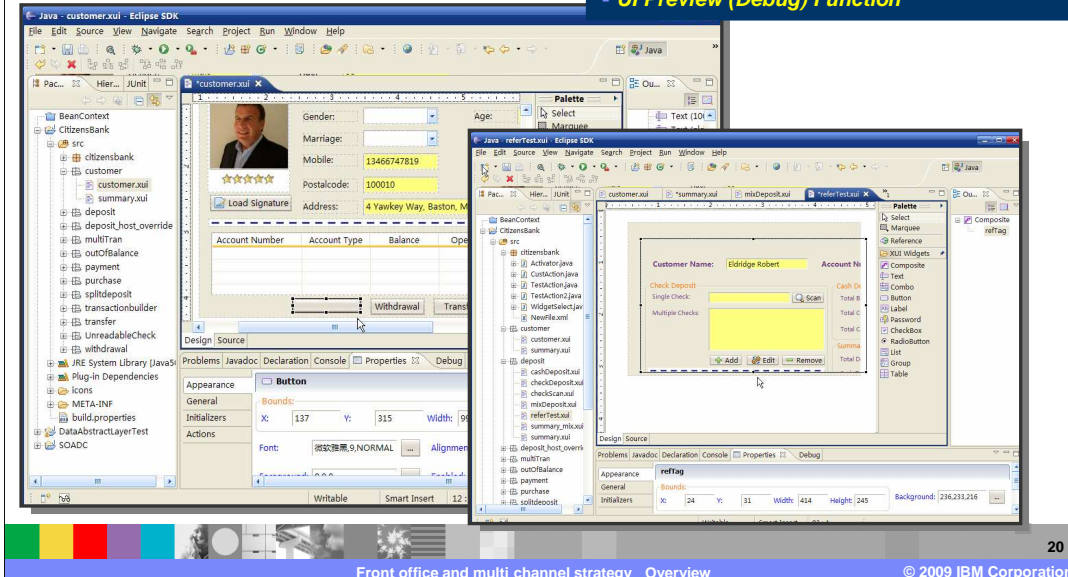
The application wizard provides a quick way to create BTT applications.

The application wizard is a plug-in tool with which you can create full BTT project skeleton. The skeleton includes some necessary elements of creating a BTT Application, such as jar, configuration files, JavaScript, servlet, and the relationship of BTT Enterprise Application Project.

The application wizard also provides BTT sample wizard to create BTT sample which could help you understand the BTT architecture.

BTT RCP XML UI editor

- **WYSWYG**
- **Visualize development BTT RCP based UI**
- **XML UI Editor itself is extensible to support customer's specific requirements.**
- **UI Preview (Debug) Function**



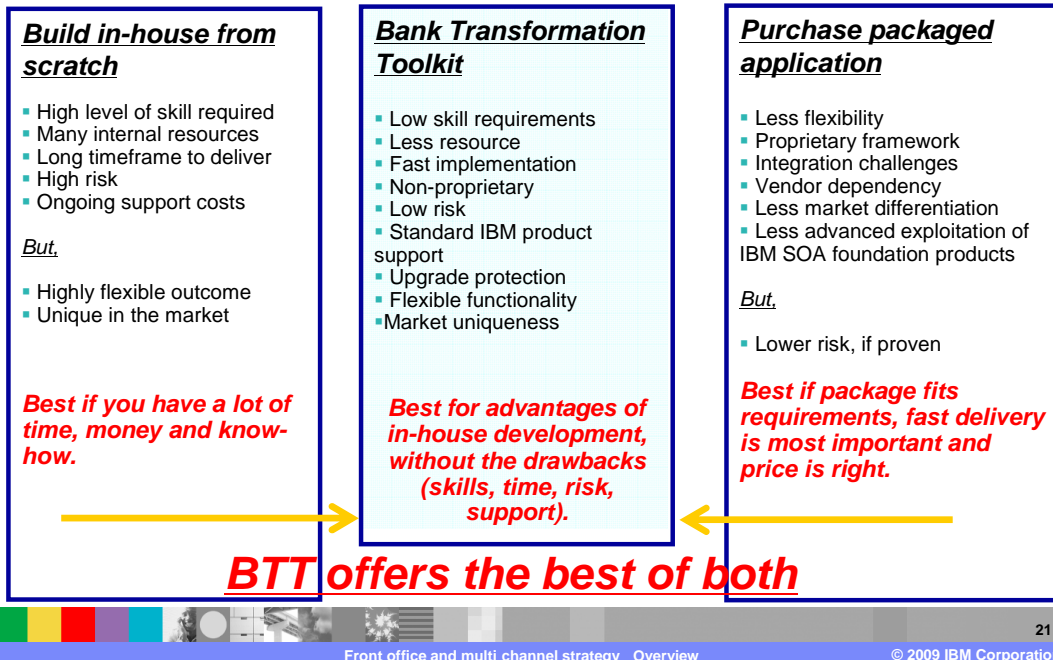
To simplify the user interface (UI) design, both XML UI Engine and XML UI Editor are provided as new components in BTT version 6.1.2.

XUI Editor is a WYSWYG (What You See is What You Get) tool that creates BTT XML based transaction UI files. This tool makes it easy to design the widget layout by dragging out and putting different widgets from palette to the design panel. The XML based file whose extension is XUI can be created for XML UI Engine to use.

UI Editor provides the following functions:

- **Creating new XUI file**
- **Designing WYSWYG UI**
- **Using shortcut keys**
- **Using ruler and Guides**
- **More...**

Buy, build or BTT ? - That is the question



Buy, build or BTT? That is the question.

All customers will ask themselves this question when they decide to build up channel applications, no matter it's internet banking, teller, call center or mobile banking.

Compare the pros and cons of Buy and Build,

The disadvantages of **Build in-house from scratch** are: High level of skill required / Many internal resources / Long timeframe to deliver / High risk / Ongoing support costs

But obviously that would bring the value to customer about : Highly flexible outcome / Unique in the market

Build from scratch is suitable if customer has a lot of time, money and know-how.

“**Purchase packaged application**” seems more reasonable, that could bring the value of low risk (if proven), but several troubles such as Less flexibility / Proprietary framework / Integration challenges / Vendor dependency / Less market differentiation / Less advanced exploitation of IBM SOA foundation products

It is best if the package fits specific requirements, fast delivery is most important and price is right.

So, BTT offers the best of Both!

It delivers the advantages of in-house development without the drawbacks such as required skills, time, risk, and the need for in-house support.

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