

# FASTER, BETTER & Smarter

## The power to build Rich Business Solutions

“by 2010, **60 percent of new applications will include RIA capabilities**, [...]. For software companies looking to provide better service to their customers, RIAs will provide a more strategic advantage.”

*Gartner Group*

### Sophisticated

“Combining realtime user interaction with rich user interface capabilities, Rich Internet Applications (RIA) leverage increasingly sophisticated client-side technology to enable users to interact with and compose functionality from distributed applications no matter where they are located on the network”

*Zapthink – RIA market trends and approaches*

### A means to aggregate applications

“RIAs are particularly powerful when they enable multiple applications to be used together in a seamless way”

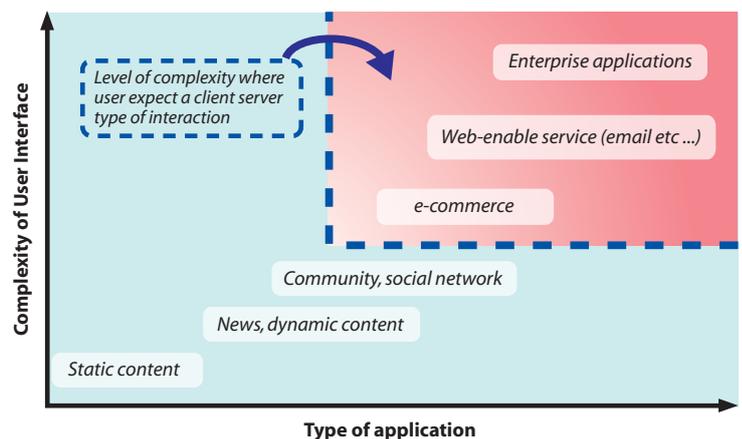
*Forrester Research*

### Windows in a browser

“I’ve seen the future of the Web, and it **looks like the past** [...] In short: **a return of the fat client, but without the fat**. Application administration remains centralized and downloads stay small. But the client-side **experience** is much **more like a Windows** application than a Web page, with data returned and windows drawn at the touch of the mouse, **not after a round-trip to the server**”

*Richard Karpinski, Interweek*

Although well suited for certain types of applications, the HTML page-by-page paradigm fails as soon as the level of complexity increases – as users have been used to and expect more interactive user interfaces in order to carry out their job.



And with web 2.0 and the phenomenon of social networking, the users' expectations are only getting higher, as they have at their disposal increasingly complex and interactive web applications outside the office.

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## The Solution: Rich Internet Applications

### What is an RIA (Rich Internet Application)?

In a nutshell, an RIA is a **web application that delivers the features and functions normally associated with desktop applications**. RIAs represent the next logical evolution of the web as they marry the flexibility and cost effectiveness of the Internet platform with the productivity, usability and efficiency of the desktop, heavy client architecture.

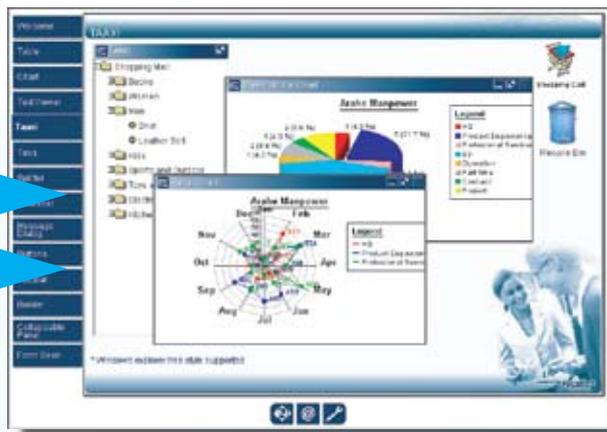
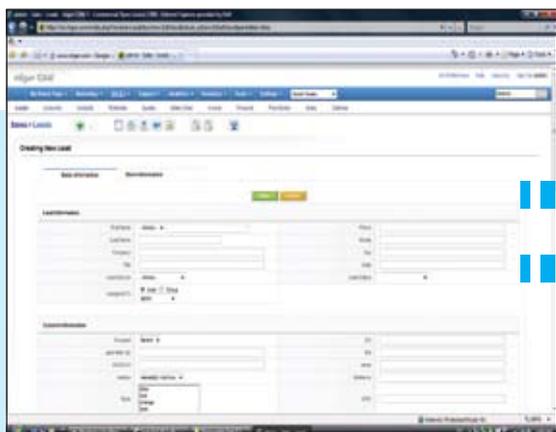
### How does it work?

Simply by executing part of the user interface in the browser, instead of using the browser just as a page renderer an RIA leverages the traditional web architecture, except that the user interface is generally assembled and executed in the browser. By doing so, it creates a "balanced computing" paradigm, where the computing power of both the server and the client are leveraged to generate the best possible user experience.

### Technically, an RIA deliver the following advantages:

- user interactions are handled on the client machine, making the application a lot more responsive
- more sophisticated user interfaces can be delivered to the user
- the number of interactions between the client browser and the server is tremendously reduced, and together with it, the server load
- bandwidth is saved because data and portions of the user interface can be cached on the client machine, and do not need to travel back and forth to and from the server for every screen of the application
- the application is more network tolerant, as the portion running in the browser is able to detect network fault and take appropriate measures to avoid data loss

### evolution from web-based paradigm to RIA



- Page-by-Page
- Linear, Sequential
- Click-n-Refresh
- Slow, Clunky
- Not Real Time

- Desktop-Like Functionality
- Multi-windows, moveable, resizable
- Drag-and Drop enabled
- Dynamic, Interactive Interface
- Real-time data manipulation and update

## Arahe's Façado RIA platform

With Arahe's Façado RIA platform, you will be able to deliver enterprise web-based solutions that are not only robust, scalable and J2EE compliant, but also driven by a client that is "rich, smart, live, interactive but still thin."

### Windows-like desktop in a browser

Façado delivers a user experience that can be described as "windows-like applications running in your browser", with multiple-windows desktop, icons, drag-n-drop, interactive charting components and much more, all within the browser environment, without requiring the installation of third-party software.

With Façado, you can focus on application usability and business productivity, which directly impact ROI, instead of force-fitting key business processes or tools into dumb HTML pages.

### Greatly reduced bandwidth usage and increased server scalability

In a Façado application, the User Interface is intelligently streamed part by part, as and when needed, to the user once per session and subsequently executes directly on the browser. Transfers between the server and the browser thereafter consist purely of data – which is many times more efficient than HTML applications. As a result, Façado reduces bandwidth utilization and server load tremendously, thus increasing the overall scalability of the application.

### Fast and persistent User Interface logic

When Façado services are loaded onto the browser, they persist until the user closes the browser. Hence the user interaction becomes very fast as the application does not require constant page refresh and updates from the web server as compared to traditional HTML applications. Gone are the frequent noticeable time-lags between 2 pages of the application and the usual page refresh that users are so used to in web applications.

### Familiar and sophisticated User Interface

The graphical User Interface (UI) delivered, similar in look-and-feel to native client-server UI, is familiar to end-users. This familiarity means less resistance to system adoption, little or no cost in user interface re-design and most importantly, greatly reduces the risk of unsuccessful deployment due to user resistance bred by awkward usage paradigm (due to HTML).

Façado allows sophisticated user interfaces to be built. Familiar client-server interfaces such as tab paradigm, multi-windows, interactive tables, charting, drag-n-drop, calendaring, live data feeds, asynchronous messaging, collaboration and lightweight business logic incorporation, not allowed on traditional HTML-based applications, are native to Façado.

### Collaborative e-business environment

Façado provides a patented framework enabling data and UI objects to be exchanged real-time between users across the network. This allows multiple users to collaborate on an application and get real-time update from each other, thus opening new avenues of possibilities for collaborative computing.

### Reduced development risk and project cost

Façado provides a rich set of pre-built components and services, integrated in a development tool called FaçadoStudio. This allows the developer to concentrate on the application business logic, thus reducing development time and project risk.

In addition, as Façado delivers a rich internet application to the users, it can handle complex business processes and does not require force-fitting processes to a rigid and sequential paradigm, as traditional web applications do. Together with the ability to build highly usable and intuitive applications, these factors represent substantial savings to any web-based application project.

# The Façado Architecture

Façado allows developers to build rich internet applications by integrating custom logic and user interface with pre-built Façado components.

Façado components, called "compolets", use three key building blocks that are based on Java and XML standards: the Façado engine, the Façado server, and Façado extensions.

The Façado engine provides the application environment with dynamic downloading capability. This capability allows functionality to be dynamically downloaded to the web browser depending on the user activities, hence, giving the users the freedom to choose and select the services required at that time.

The engine also provides event handling in a drag-n-drop tab paradigm environment, XML services, personalization, security services, internationalization, a collaboration framework and memory management (to ensure a small footprint in the browser).

The Façado extensions is a growing set of reusable components that make full use of the Façado engine platform. These components include dynamic tables and lists, tree structure widget, various calendaring components, charts, toolbars and automatic form components.

The Façado server is the server side component that provides the integration layer between the Façado user interface and the backend business logic such as web services and J2EE components.

## Façado Runtime environment architecture

Façado runtime involves the initial download of the Façado engine of about 100KB. Subsequent downloading is based on user's usage pattern and is seamlessly handled by the Façado engine.

