Overview of Web 2.0

Overview and Business Value of Web 2.0
Agenda

- Basics of Web 2.0
  - Overview
  - Economic trends
  - Community / social trends
  - Technology

- Why Web 2.0?
  - Business Value
  - Enterprise 2.0 Solution Patterns
  - Sample Business Scenarios

- Enterprise Modernization and Web 2.0
  - Identifying opportunities for your existing assets
History

- *Web 2.0* was first coined by O'Reilly Media in 2003.
- It was then popularized by the first Web 2.0 conference in 2004.
- According to Tim O'Reilly, "Web 2.0 is the **business revolution** in the computer industry caused by the move to the **internet as platform**, and an attempt to understand the rules for success on that new platform."
Google Definition

Web 2.0 is a term often applied to a perceived ongoing transition of the World Wide Web from a collection of websites to a full-fledged computing platform serving web applications to end users.

Ultimately Web 2.0 services are expected to replace desktop computing applications for many purposes.
Definition of Web 2.0

Web 2.0 is a term describing the trend in the use of World Wide Web technology and web design that aims to enhance creativity, information sharing, and, most notably, collaboration among users. These concepts have led to the development and evolution of web-based communities and hosted services, such as social-networking sites, wikis, blogs, and folksonomies.

“Web 2.0 is a set of economic, social, and technology trends that collectively form the basis for the next generation of the Internet ... characterized by user participation, openness, and network effects.”

- O’Reilly Radar
What is Web 2.0?

- An important trend in delivering software applications

- An enabler for richer web applications
  - New business models
  - Peer-to-peer user participation
  - New technologies
  - Interactive filtering, presentation, data entry

- A combination of core technology components
  - Rich user experience (maps, grids, animation, D&D, etc)
  - Loose-coupling, composite applications via reuse and “mash-ups”
  - Standards (SOAP, REST, JSON, Atom, etc)
What is Web 2.0?

Source: http://hinchcliffe.org/img/web1vsweb2.png

<table>
<thead>
<tr>
<th>Web 1.0</th>
<th>Web 2.0</th>
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Web 2.0 Application Characteristics

- Rich user experience
- Minimal page transitions
- Data retrieved via REST or SOAP service calls
- Client-side validation
- Status feedback to user
Blogs and Wikis

- Blogs and Wikis represent common Web 2.0 style applications.
Blogs

- **What**
  - Short for “Web Log”
  - Personal Publishing System
  - User-generated website with journal style entries
  - Displayed in a reverse chronological order
  - Commentary or news on one or more particular topics

- **Why**
  - Allow one or more authors to easily post information/articles for others to view
  - Receive feedback via comments
  - Easily syndicated through feeds
  - Facilitate communication to customers
  - Excellent venue for sharing information and creating connections
Wikis

- **What**
  - From "wiki/wiki," Hawaiian for "quick"
  - Collaborative authoring environment
  - Non-linear in nature

- **Why**
  - Allows people to easily and collaboratively create, edit, share pages of information
  - Leverages the wisdom of crowds
  - Promotes a sense of community
  - Ideal for sharing info within teams that are large, compartmentalized, or geographically dispersed
  - Low cost/low effort solution
  - All changed content tracked – no information lost
Tagging

Think of a tag as a simple category name. People can categorize their posts, photos and videos with any tag that makes sense.

This concept is also called ‘folksonomy’ because it is a taxonomy emerging from us common folks instead of being handed down by an information architect or librarian.

When masses of people tag masses of content, patterns emerge.

Source: http://www.flickr.com/photos/allbiscuit/36618199/
Mashups

Combine content from more than one source into an integrated experience

Google Map

Hotel information — separate database

Directions — come from somewhere else

Send to a phone — Additional functionality

Why?
- Rapid application development
- Reuse existing services
- Avoid reinventing the wheel
- Empowers users
Web 2.0 technologies highlight the next pendulum swing between client and server function.

Client

Server

Mainframe computing
“Dumb” green screen clients
Omnipotent big mainframe servers

Client-server computing
“Smart” Personal Computer clients
Simple file and database servers

Web (1.0) computing
Light Web Browser clients
Rich application and database servers

Web 2.0 computing
Rich Internet Application clients
Lighter application and database servers
# Technology Attributes of Web 2.0

## Rich User Experience
- **AJAX** incorporating: XHTML and CSS, DOM, XML and XSLT, XMLHttpRequest and JavaScript allowing information to be mashed up into new interactive portals.

## Lightweight Programming Model
- **XML or JSON data over HTTP**, in a lightweight approach sometimes referred to as **REST** (Representational State Transfer) as an alternative to SOAP.

## Info-ware
- "**DATA is the new HTML.**" Database management is a core competency of Web 2.0 companies.

## Feeds
- **RSS/ATOM** allows someone to link not just to a page, but to subscribe to it, with notification every time that page changes.

## Perpetual Beta
- Users must be treated as co-developers, in a reflection of open source development practices. The open source dictum, "release early and release often"
EGL – Real Estate
Why Web 2.0 is Important

“More than 40 percent -- or 2.8 million – of small and medium businesses (SMBs) in the U.S. are already using Web 2.0 applications.” AMI Report: “2006-2007 Small and Medium Sized Business (SMB) Global IT and Telecom Forecasting Model”

“Few enterprises realize how to implement the full range of [web 2.0] capabilities to succeed”
Gartner Report

“Why should you care? Because power is shifting from institutions to communities, your company is at risk”. Forrester, 2006

“Enterprises have been ringing our phones off the hook to ask us about Web 2.0,” Rod Smith, IBM VP for emerging IBM technologies

“Business social software market will be nearly $1 billion strong this year and over $3.3 billion by 2011” Dion Hinchcliffe, ZDNet – Enterprise 2.0 Blog October 22nd, 2007
Why Web 2.0 for the Enterprise?

- **Web 2.0 is**
  - Creating new markets
  - Lowering competitive barriers
  - Encouraging creativity to come from anywhere
  - Tapping into the wisdom of the crowds
  - Enhancing communications and making information more impactful

- **What does it mean for the enterprise?**
  - Greater collaboration and innovation across the value chain
  - Increased levels of customer intimacy
  - Simplification of complex IT and business infrastructure
  - Business model flexibility to capitalize on new market opportunities

*It’s fast becoming a Web 2.0 business world, but innovation never goes out of style.*

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**According to Gartner:**

By 2008, the majority of Global 1000 companies will have adopted several technology-related aspects of Web 2.0.

Missing out on the non-technology aspects of Web 2.0 means that many organizations will also miss out on some of the positive business benefits.
New Business Opportunities

- **For example...**
  - Leverage Web 2.0 in your business critical applications
  - Investigate customization, integration and services opportunities in rolling out web 2.0-based community collaboration environments.
  - Unleashing previously inaccessible information

- **Benefits to your customers:**
  - Instant business value through rapid new product deployment, with reduced costs
  - Reduction in time to market opens new business opportunities
  - Reducing costs through customer self-service
  - Unlocking valuable business data opens new business opportunities
  - Extracting value by collecting and sharing the wisdom in the organization
Enterprise Web 2.0 Business Scenarios

1. Improve access to information for Customer Relationship Management
2. Improve information and reporting for financial analysts
3. Insurance policy / risk / claims assessment (Insurance)
4. Exposure of business events from operational systems (Banking)
5. Provide front office wealth-management staff with a complete client and portfolio view (Banking)
6. Improved decision making and response to emerging situations (Public Sector, Finance)
7. Improve visualisation of complex data (Petrochemical, Life Sciences)
8. Stimulate product and service innovation with partners (Finance, Telecommunications, Travel)
9. Offer services through additional channels, using Mashups to bring Web services to portable devices
10. Focus marketing at individuals by engaging with consumers through social networking (Retail, Banking, Insurance, IT)
11. Seed creation of customer communities by encouraging them to share opinion and expertise (Retail, Banking, Insurance, Travel, Healthcare, IT)
12. Syndicate information services as feeds and widgets (Financial Markets, Real Estate)
13. Aggregation of legacy interfaces

New opportunities for value creation are emerging based on innovative technologies such as Web 2.0, social computing, virtual worlds, and more
Scenario: Improve access to information for Customer Relationship Management and customer service

- **Industry**
  - All

- **Drivers**
  - Customer Relationship Management Systems can be highly case-based
  - Relationship management requires knowledge of customer interaction and history typically across multiple systems
  - Leverage knowledge more effectively across a number of interactions over a number of customers and use collaborative intelligence to understand emerging patterns

- **Content Sources**
  - User interfaces and services of operational systems and applications
  - Third party content e.g. market news
  - User interfaces of applications from business partners whose products may be incorporated in combined offerings

- **Audience**
  - Customer relationship management, call-centre staff

- **Solution**
  - Enterprise Mashups

- **Proposed Solution**
  - Rich user interface and windowing system reproduce desktop experience
  - Key shortcuts and customization for expert users
  - Alert mechanism for requesting supervisor help
  - Technologies: EGL RUI, AJAX used for retrieval and update of customer data, Integrated with ESB
Scenario: Policy / Claims / Risk assessment

- **Industry**
  - Insurance

- **Business Drivers**
  - Some policy or claim requests require intelligent analysis and decision making
  - Particularly true in commercial sectors where many cases highly individual – e.g. a request to insure a new yachting marina off the west coast of Scotland
  - Analysis requires a wide variety of data from multiple sources, e.g. maps, weather, other insured properties, demographics, news

- **Content Sources**
  - Operational systems information (policies, contact history, claims)
  - Other Internal Information (product configuration, risk control)
  - External Information (electoral roll, companies house, partner systems)

- **Audience**
  - Policy assessors

- **Solution Pattern**
  - Enterprise Mashups

Information from policy and risk databases mashed together with external weather and news information including alerts.
Value of Existing Applications

- Existing applications are among the most valuable assets a company owns
  - Fully functional applications that run the business today
  - Significant investments over the years
  - Fine-tuned for dependable optimal performance
  - Run within fine-tuned reliable, robust, scalable IT infrastructure and platforms

- Accessed via character / text based terminals
  - Non-intuitive, difficult to navigate user interfaces
  - Difficult to integrate in modern business processes

- 5X less expensive to reuse existing applications than to write new applications from scratch

- Reusing proven, time-tested applications can result in significantly lower risk and faster time to market

30 million lines of code could be worth $3 billion!
Modernization with Web 2.0

- Build a new Web front-end for your existing order entry application, but continue to use your proven business logic.
- Create a self-service portal that provides your customers with details about past and current orders.
- Mashup information from multiple CRM systems.
- Reuse existing COBOL business logic to perform a calculation.
- Expose a portion of customer data locked away in a green screen application to another team in your organization.
- Integrate Reuse what you already have!