



WEB 2.0 TECHNOLOGY IN BANKING INDUSTRY: OPPORTUNITIES AND CHALLENGES

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Abstract

Web 2 technology in banking is the wave of the future. It provides enormous benefits to Banks and consumers in terms of the ease and cost of transactions. Across the world, Banking industry is rolling out a broad array of initiatives that place bold bets on web 2.0 technologies including wikis, blogs, mobile apps, and social media, which they expect will fundamentally change how they attract and retain customers. Web 2.0 is the next step in the evolution of the Internet and While banks may take comfort in their incumbent advantage, technologically-enabled non-bank challengers have been ramping up their capabilities in a significantly faster pace and are notably stronger today, challenging the privileged access and relationships traditional transaction banks currently enjoy with their customers.



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Fast-moving digital technologies, unrestricted mobile access and vibrant social media have a profound impact on banks' online strategy with many are developing interactive tools that help customers analyze their spending habits and strengthen their money management skills while some are mobilizing the power of social networks to build their brands and entice consumers to share personal information. Web 2.0 technology is set around this theme of fulfilling the growing digital needs of digitally savvy generation of coming age. Web 2.0 technology holds great potential, to expand product variety and customization, accelerate service delivery, tap new pools of revenue and deepen customer relationships that boost retention and profitability.

But to a large degree the digital pioneers—as well as banks that have yet to cross the digital Rubicon. It is time for banking to come to terms with Web 2.0 and take advantage of the many opportunities it offer.

This paper attempts to understand the concept of web 2.0 technology in banking industry as well as study the benefits web 2 technology from perspective of banks as well as consumers .Further this paper discusses the challenges and opportunities associated with the web 2 technology adoption in banking industry.

Introduction

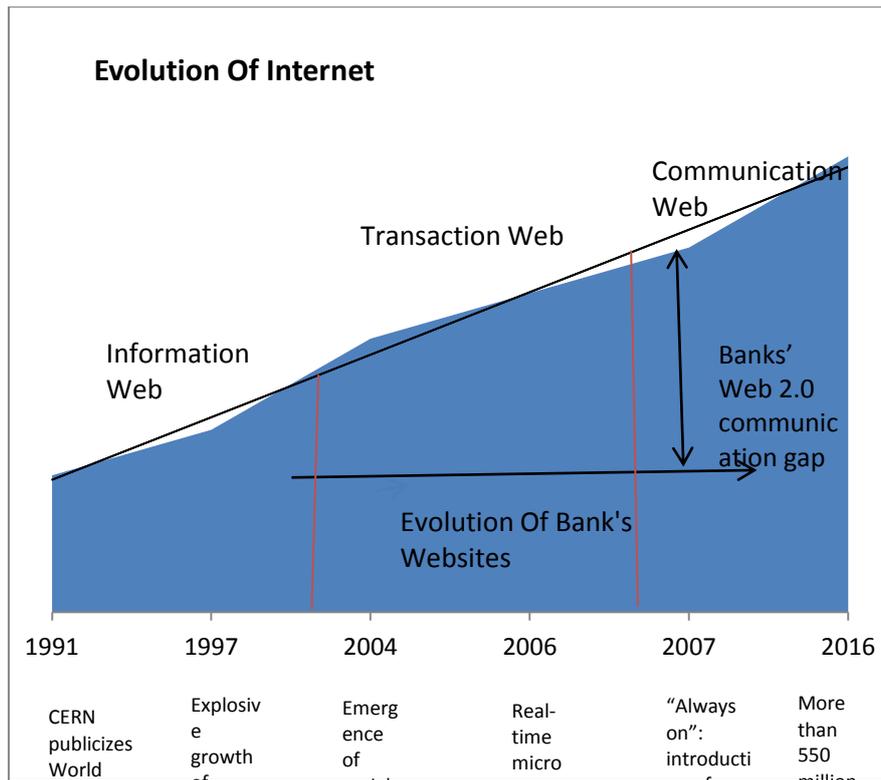
The World Wide Web (commonly known as the web) is not tantamount with the internet but is the most prominent part of the internet that can be defined as a techno-social system to interact humans based on technological networks. The notion of the techno-social system refers to a system that enhances human cognition, communication, and co-operation;

According to Tim Berners-Lee the first implementation of the web, representing the Web 1.0, could be considered as the “read-only web.” In other words, the early web allowed users to search for information and read it. There was very little in the way of user interaction or content contribution.

The lack of active interaction of common users with the web lead to the birth of Web 2.0. Web 2.0, or the “read-write” web has the ability to contribute content and interact with other web users. This interaction and contribution has dramatically changed the landscape of the web . Web 3.0 as the web can be considered to be the next phase, where a maze of applications works together homogeneously by unified data formats across web. It defines a mix of technologies to structure data to be interpreted by machines themselves.

Web 2.0

The term web 2.0 was recognized in 2004 by Dale Dougherty, vice-president of O'Reilly Media, in a conference brainstorming session between O'Reilly and Media Live International. It refers to second generation of the World Wide Web that is focused on the ability for people to communicate, collaborate and share information online. Web 2.0 is also recognized by tools like Wikis, Mash ups, blogs, widgets, RSS surveys and polls, offering an enhanced way to share information and with an enhanced stress on collaboration and usability. From being recipients of information, customers became active contributors to portal content Web 2.0 is also known the wisdom web, people-centric web, participative web, and read-write web. Web 2.0 is not only a new version of web 1.0; Flexible web design, creative reuse, updates, collaborative content creation and modification were facilitated through web 2.0. The characteristics of Web 2.0 include rich user experience, user participation, user interactivity, dynamic content and scalability.

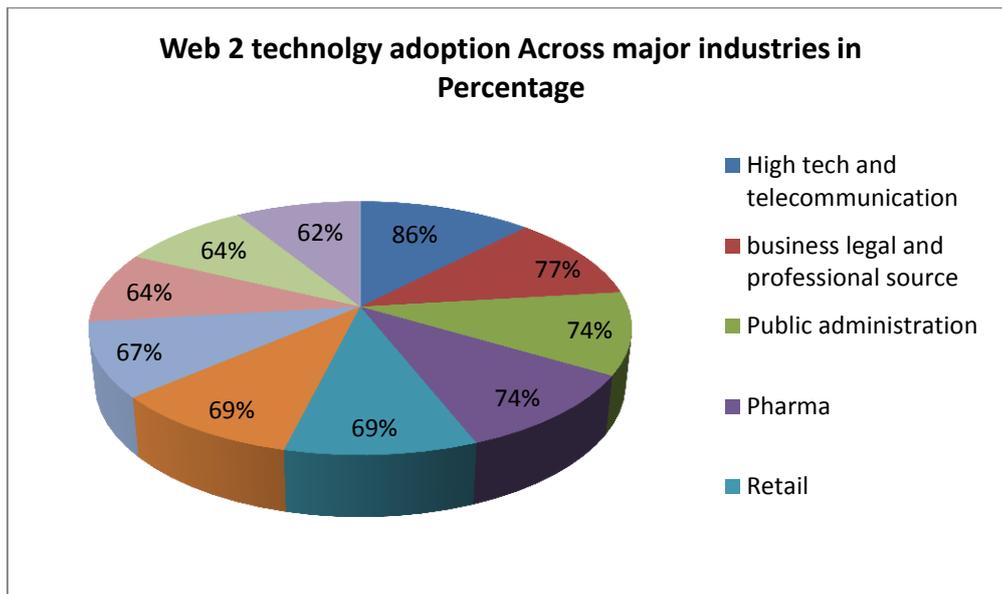


Source: Strategy and Analysis

Web 2.0 Technologies and Banking Industry

We are now living in an era of digitization, inhabited by the digital natives of Generations Y and Z. Generation Y witness the constant presence of computers at home and access to over 250 cable television channels. On the other hand, Generation Z enjoys high access to internet technology from birth and is even more accustomed to it .

Expectations of customers have changed with the technological advancements in Internet and telecommunications Facebook, for instance, has acquired more than 550 million users, 200 million of them on mobile devices. Other sites and services, such as Twitter, LinkedIn, and Xing, are also very popular ,in fact, a number of industries have already successfully incorporated Web 2.0 into their distribution models: Web 2.0 can contribute in a big way as Banking industry moves towards a “Customer- Inside” culture where customers can collaboratively contribute with banks to create products and services to meet their expectations. Banks, thus can attract more customers and improve customer loyalty. Wide range of tools and techniques that emerges with Web 2.0 is being used across industry Verticals for multiple purposes. Widgets, RSS, wikis, mash ups, blogs, surveys and polls are the most commonly used Web 2.0 tools by organizations.



Source: “How social Technology are extending the organization” Mckinsey Quartely

Blogs

A weblog is a web page that serves as a publicly accessible personal or group journal for an individual or a group.” Blogs are tagged, and thereby categorized, and visitors can make comments on a blog entry, thus establishing communication, exchanging ideas and opinions between bloggers and their readers. Offering the readers to make comments on blog entries, the blogger is permanently open to communication, which is one of the most significant aspects of blogging culture. It can be used by institutions to create a public awareness about a new services and products being rolled out to their customers. Blogs are an aggressive approach to lead generation by writing top-notch online content, For instance California Bank & Trust has a great weekly blog covering a wide span of business banking topics, such as cyber security, risk management, energy savings, and vendor management. Another instance is of First Bank & Trust which publishes their Banking & Financial Education blog on a variety of banking topics, with a distinct spin toward business and commercial banking

Wikis

Leuf and Cunningham (2001), defined a wiki as “...freely expandable collection of interlinked web pages, a hypertext system for storing and modifying information - a database, where each page is easily edited by any user with a forms-capable web browser client” Wikis can be used by banks to build up a knowledge portal, to create awareness on banking concepts. Wikis can be helpful in idea sharing among the different banks. Wikis provide research and insight from biggest assets hat is team members of any bank. The added value is

that the end users are familiarized, and they are best suited to develop and edit content. Most internet users would know and have used Wikipedia, which is an excellent example open source collaboration to create knowledge. Members may contribute and edit an idea or comment regarding products and services, and these ideas are subsequently passed on to product managers and/or management for consideration.

RSS (Really simple syndication)

Rich Site Summary; often called Really Simple Syndication uses a folks of standard web **feed** formats to publish frequently updated information: blog entries, news headlines, audio, video. It provides a much convenient way to customers and bankers to remain updated with latest information and news without having to browse the Web page.

Social Networking

Social media tools are gaining popularity and are increasingly used in regular operations of many banks .Social media can be used by entrepreneurs to create a bank which uses the technology to overcome the cost and complexity of traditional banking, while increasing customer trust through an online community. for instance Wells Fargo in the U.S. is an early adopter of social networking sites like Face book and Twitter to connect to its customers.

Mashup

The term mash-up refers to a new breed of Web-based applications created by programmers to mix at least two different services from disparate, and even competing, Web sites. The main characteristics of a mashup are combination, visualization, and aggregation. A mash-up, for example, could overlay traffic data from one source on the Internet over Google maps. Banks can use mashup to provide branch / ATM locator services via Internet or mobile. Mashups can be used to show a comparison of the services or rates provided by multiple Banks for home loans or deposits, allowing customers to choose the best available option for them.

Widgets

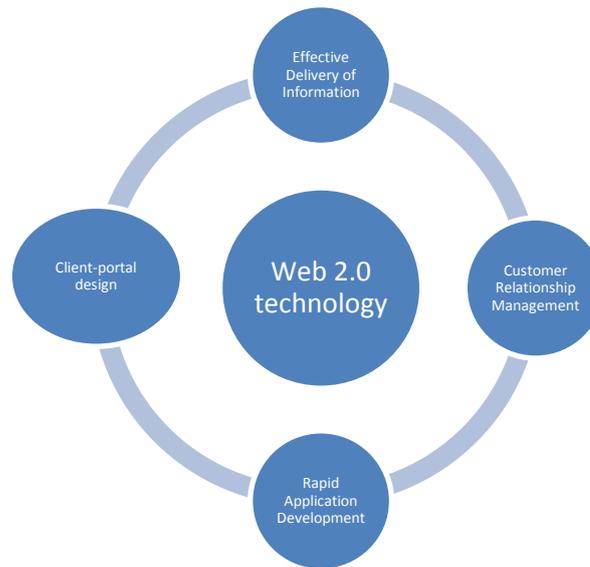
Widgets are small application with limited functionality that can be installed and executed within a web page by an end user. A widget is transient or auxiliary application, meaning that it just occupies a portion of a webpage and does something useful with information fetched from other websites and displayed in place. Other terms used to describe web widgets include: port let, web part, gadget, badge, module, snippet and flake. Widgets are typically created in DHTML or Adobe Flash. It can be designed to display account balances, mini statements and provide funds transfer / bill payment capabilities.

Opportunities of Web 2.0 technology

1. Better

Client-portal

design



Most Banks still have fairly basic HTML-style client portals. Technologies like AJAX, Adobe (San Jose, Calif.) Flash and Microsoft, Windows Presentation Foundation (WPF) allows developers to build much better sites that engage the client more effectively. The slightly less obvious application is in business software where Web 2.0 concepts might allow firms to better collaborate internally and externally [with business partners] on knowledge management and problem resolution. Several new components can be added into the server side and the browser side. On the server side, the Channel Handler should support communication with the browser through the XML or JSON data formats. With the two kinds of structured data, the request and response between the server and client will have more content and meaning. Also, there would be some interesting possibilities for augmenting the traditional support From wikis.

2. Fast Delivery of Information to customers, partners and employees

Internet banking has replaced 80% of the counter transactions in some commercial banks. Web 2.0 technologies can play a major role in building customers' confidence in their banks, simplifying the process of conducting transactions and finding information, and helping customers understand complex financial products. In some cases, banks are releasing some of the resources consumed by branches and redirecting them to provide technology-intensive services to customers. Web 2 technology enabled banking system can be effective in delivering information more responsive, compelling and effective than ever before. Web 2.0 has the potential to impact all facets of Banking industry, from customer self-service to process management dashboards.. In a customer-facing scenario, the key advantage is to

differentiate brand and deliver engaging customer experiences online with the ultimate goal of increasing adoption of online services. In other scenarios, the primary benefit is to accelerate and improve decision-making by delivering information that is both intuitive and visually rich.

3. Customer Relation management:

CRM applications are slow to absorb the extensible abilities of Web 2.0 technologies internally and especially externally. It will take time for Web 2.0 technologies to be integrated with and extended from existing CRM technologies. Banks are working to improve how they engage customers online during the product research and selection phase. There are plentiful examples of Web applications which provide product selectors, retirement calculators and guided advice that are helping institutions to differentiate themselves online. For different customers, different personalized Internet banking transaction and marketing platforms can be displayed. Customers can freely customize the information and financial services that interest them. According to a customer's personalized Internet banking layout, banks can identify clearly the potential demands to achieve cross-channel selling and comprehend target marketing and customer-oriented marketing. A number of Banks can be seen using rich Internet applications as the front end to automating key customer-centric processes, such as account opening and loan origination. For instance Fidor Bank, a German startup, deploys technologies like blogs, forums, an active presence on social networking sites to communicate with customers. Fidor also offers them such services as e-wallets, which enable fast and secure account access and electronic transactions, and a bonus program for those who participate actively in its community functions. These front ends are available to be used by employees as well as by customers, and help to guide the users through the process in a step-by-step manner, helping to eliminate confusion and reduce errors.

4. Rapid application Development

Mashup and related technology is gradually replacing more traditional RAD technology. As more and more components, application programming interfaces, and widgets are published, more RAD progress will be made. Based on the Widget standard, Web 2.0-based Internet banking can conveniently integrate many third-party services, such as Google Maps, Yahoo Stocks, weather forecasts, financial news, and so on. These services can be combined together into a mashup application which provides customers with value-added services and enhances the user experience. Most Internet banking nowadays has only a single window and needs a full-screen refresh when a function is requested. If a customer encounters an Internet "traffic jam" when operating one service, he may be unable to visit other banking services.

The Web 2.0 based can , supports multi-service windows For example users can open several service windows at the same time, and each window supports asynchronous concurrent operation.

Challenges for web 2 technology



1. Fear of change.

IT departments of many banks are eager to use these tools and develop and deploy new software, but business isn't yet driving the projects. Apart from internal Web 2.0 tools (e.g., blogs and wikis) there are major adoption challenges with other web 2.0 tools like RSS, Mashups, Folkonomies. Perhaps due to their consumer-to-consumer origins, social networking sites, blogs are more common in banking institutions than others. Another major challenge arises due to employees who are already working in banks as a good portion of the intellectual property of a firm resides in the older, more senior staff that is often hesitant to pick up and use new technology. They also resist the adoption of web 2.0 tools in banks.

2. Where to invest

Since a Web 2.0 project is very difficult to define in terms of specific business objectives. the higher management of bank , are often hesitate of investing money in Web 2.0 as it may or may not pay big dividends There are no obvious corporate successes to replicate and no easy way to calculate payback. So any venture into a Web 2.0 project is going to be exploratory. A

correct mixture of web 2.0 tools to be deployed in banks is often a big challenge for the management as it has to be a right mix for the right bank. Apart from this , providing training to the staff members about web 2.0 application is also a costly affair , which not only requires handsome amount to be invested yet time also.

3.Security Privacy and Legal Challenges

The fact that Web 2.0 relies on users contributing all of the data certainly does raise some issues. Web 2.0 technology also fuels the broad area of information warfare. Just as cyber bullying is a nasty trend in the consumer world, anonymous blogging can hurt business, images, and brands. This may be driven by a need to protect intellectual property, trade secrets, personally identifiable information, or other sensitive information. Putting that information into the hands of a third party is certainly not uncommon. Having the third party place that information into a shared storage environment is somewhat less common. Having that information available on the Internet requires a significant investment in security controls and monitoring. Of concern is that many of the Web 2.0 applications contain no provision for monitoring content or traffic to ensure that sensitive information is not being transmitted inappropriately. If any firm, in any industry, decides to let its employee's blog publicly, they need to first consider the risks and create careful policies. Blogging has become common in the technology industry, and every major technology firm that communicates this way, does have well-crafted blogging policies in place.

2. Connectivity to the Internet

For the desk-bound office worker, Web 2.0 applications may be very helpful. Most banks have "always-on" connectivity to the Internet with high bandwidth. The gap is for mobile workers who rely on consumer grade cable or DSL connections that may lack the bandwidth and uptime of office colleagues. High-speed Internet offerings in hotels and retail establishments cannot be trusted, with help desks incapable of resolving connectivity issues. For mobile workers relying on Web 2.0 applications to make a living, lack of connectivity means they are unable to work. This remains a significant barrier to full adoption of Web 2.0 application.

Summary

Web 2.0 comes with many opportunities and with time, what is certain, is that Web 2.0 will have a marked impact on the banking industry and possess the capability to lift banking services and offerings to great heights. The customer will be the biggest beneficiary of this transformation in terms of improved access to the right products, improved visibility of associated costs and increased options to compare lenders to make optimal decisions.

Banking institutions can also yield from Web 2.0, by being able to utilize efficient channel capabilities, reduce advertising costs and build the right customer base in line with their individual strategies. With Web 2.0, banking data will transform to a tightly-coupled system that enables greater exchange of information between banks and customers.

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