Revisiting Web 2.0

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INTRODUCTION

Though well over a decade old now, the term Web 2.0 was intended to capture a wave of technologies that indicate advancement beyond the original Web 1.0, which was dominated by tightly controlled, relatively static websites. As such, Web 2.0 represents a set of technologies that enable high levels of interactivity and participation via the internet. It is an umbrella term that describes a variety of dynamic and community-based web initiatives that place value on the power of distributed knowledge, leverage data, and provide users with rich multimedia experiences (O'Reilly, 2005). Web 2.0 technologies have given rise to the dominance of social media which over 65% of U.S. adults use (Perrin, 2015). Furthermore, Web 2.0 technologies are now inherent throughout the modern web, but are also increasingly embedded throughout the milieu of digital technology, including mobile platforms and cloud services. Web 2.0 technologies and their associated changes in internet usage enable new forms of data collection and data analytics, including social network analysis and social media analytics (Chen, Chiang, & Storey, 2012). As a result, it is useful to revisit the core technological components of the Web 2.0 wave and to consider how these elements have become embedded throughout modern business applications and how the technologies can add value for consumers and businesses. Cutting edge firms can leverage such technologies to create integrated solutions that improve their relationships with customers and enrich customer experiences.

Many businesses create additional value for users and customers by leveraging the voluntary participation of users through interactive technologies. For example, Amazon offers extensive product support through an interactive set of tools supporting customer interactions. Customers can leave product reviews for their past purchases. However, Amazon also provides a question and answer system, wherein prospective customers can ask questions about a product and previous buyers are able to respond, with the answers posted on the product listing page. The application of interactive technologies enables Amazon to create value without extensive organizational labor, but instead harnesses the power of their existing customer base to create valuable content.

Businesses continue to capitalize on this set of technologies in a variety of ways. Many companies leverage interactive technologies by capturing customer data and leveraging it to generate instantaneous, custom-tailored customer experiences (Bodoff & Ho, 2015). For example, Netflix aggregates and analyzes subscriber movie preferences in order to provide accurate movie recommendations. Similarly, Pandora, the internet music service, creates customized radio stations for individuals based on their expressed preferences. However, Pandora also mines user data to customize targeted advertising to each user (Singer, 2014). Furthermore, businesses can leverage Web 2.0 technologies in order to dynamically cooperate with customers and partners in efforts to generate new design innovations (Roberts & Dinger, 2016; Roberts & Grover, 2012; Wong, Peko, Sundaram,

& Piramuthu, 2015). Both online and traditional businesses must understand how to navigate and capitalize on the changing internet terrain to stay competitive in the Web 2.0 era.

BACKGROUND

Web 2.0 thinking emphasizes the distributed and interactive nature of information technologies. Therefore, the core concept of a web page is altered to allow for quick and efficient interaction from users. This mindset is represented in the way that users can create, remove or edit informational content on wikis, comment on blogs or content aggregation sites like Reddit, or drive the content of media-sharing sites like YouTube. The distributed nature of Web 2.0 technologies allows many users to create and participate while needing little technical knowledge.

Characteristics of Web 2.0

Web 2.0 technologies can be identified by a number of common characteristics. These technologies generally capitalize on the ability of website users to actively participate, including the capacity to dynamically contribute content and network with other users. Web 2.0 initiatives are dynamic in nature, enabling constant change and updates. Also, Web 2.0 technologies regularly include social networking elements which enable users to form connections with one another. Finally, these endeavors are noted for their reliance on the distributed contributions of many participants.

Distributed Contributions

The primary driver behind Web 2.0 technologies are the ability of firms to harness the value of distributed contributions from many users. Wikis inherently rely on the contributions and efforts of many users. The intent of wikis is to represent a culmination of the knowledge of all participating users. Media platform sites like YouTube, Instagram, Tumblr and Flickr entirely consist of user

contributions. Facebook has opened up its software platform so that users can create and contribute original applications (developers.facebook.com). Similarly, Apple has enabled a wide range of developers to create new and innovative applications for the iOS ecosystem (developer.apple.com) as has Google with the Android ecosystem (developer.android.com). The ability to harness the distributed contributions of many participants plays a significant role in a firm's ability to generate value from these initiatives.

Dynamic Nature

The dynamic nature of Web 2.0 technologies is driven by their ability to be quickly changed. A core design element of wikis is the ability to add, remove or change content quickly. On social networking sites, users are able to add, modify and remove content ease. Content platforms like Twitter, Instagram, and Vine thrive on the speed of content creation and sharing. By focusing on a small piece of content, users can rapidly create and share content, such as a 140 character post, an image, or a 6 second video, respectively. The speed of movement can be a double-edge sword, as it enables companies to quickly interact with customers to resolve problems, or for upset users to share stories of bad customer service that go viral. For example, a United Airlines customer created a YouTube video to share how the airline broke his guitar and would not reimburse any of the damages, and a $1,200 guitar ended up costing the airline far more in bad publicity (Sawhney, 2009). In another case, a Comcast customer service representative would not simply comply with a customer's request to cancel their service. The customer recorded the call and posted it online on SoundCloud, where it went viral with bad publicity for Comcast (Diamond, 2015).

Rich Media

Rich media is a common characteristic of Web 2.0 technologies. Many online sites and app platforms are compiled solely of user-generated

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