Mobile Business Intelligence

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ABSTRACT

Demand for business intelligence (BI) applications continues to grow at a rapid pace. Business intelligence via mobile devices is the latest frontier to drive demand among organizations interested in BI applications. However, mobile BI is still in its infancy. There are many opportunities to advance the way users use and interact with BI applications using mobile BI. Nevertheless, there are many challenges and issues that still require attention to attain mobile BI success. This paper highlights the state of mobile BI solutions and strategies to consider during a mobile BI implementation. It also discusses the challenges and opportunities mobile BI presents to organizations.

Keywords: Business Intelligence (BI), BI Platforms, BI Security, Mobile BI Dashboards, Mobile BI Data Visualization, Mobile BI Devices, Mobile Business Intelligence

INTRODUCTION

With today’s Business Intelligence (BI) tools, businesses can move quickly and begin analyzing data rather than waiting for Information Technology (IT) to run complex reports. Access to this shared information helps users substantiate decisions that would otherwise be based solely on intuition and biased opinions (Kelly, 2010). These tools have evolved from narrowly focused queries and reports to enterprise-wide platforms (Shaw, 2011). This resulting single source offers not only current, but also historical and predictive views of operations. In addition to this evolution to enterprise-wide platforms, self-service techniques have emerged and acquisitions have led to consolidation of the BI market. As a result, the major players in the sector range from a dwindling supply of pure-play vendors to enterprise software suppliers that include IBM, Microsoft, Oracle, and SAP (Shaw, 2011).

While the ability to deliver analytical data and company metrics on mobile devices was being developed, it was not very popular in the eyes of C-level executives, being viewed as an expense whose value did not justify the additional costs. These costs, and a combination of social and technical barriers, led to sporadic adoption of mobile devices (Smalltree, 2007).
Limited bandwidth and technical incompatibilities further suppressed adoption. However, BI vendors are now releasing improved mobile applications which help organizations respond to critical issues faster by giving managers the ability to view and distribute information and to interact within a business intelligence application (Smalltree, 2007; Wise, 2009). Moreover, enabling mobile BI accelerates executive decision making, improves and augments customer service, increases operational productivity, streamlines business processes, mitigates risks and governs business processes and assets (Laurent, 2009).

Mobile is regarded as the next great frontier in the progression of business intelligence technologies. Recent reports from Dresner Advisory Services show that 70% of respondents expect a quarter of their user base to use BI exclusively through mobile devices within two years and 25% expect half of their user base to use BI exclusively during this time (Valentine, 2011). The report, which included an evaluation of perceptions and plans on mobile business intelligence in nearly 200 organizations, further states that mobile business intelligence use has increased in 2011 over 2010, and usage plans for 24 months out, such as new platform entries, evolved BI software offerings, and increased user experience and deployments, are more ambitious than the previous year (Dresner Advisory Services, LLC, 2010). Gartner further estimated that by 2013 “33% of BI functionality will be consumed via handheld devices” (Gartner, 2011), and in 2011 InformationWeek placed mobile BI as the number two trend to watch (Howson, 2011). Providing further evidence is the fact almost every vendor is aggressively marketing some form of mobile BI solution (Henschen, 2010). The growing interest in mobile BI means that in the future it will not simply represent a growing facet of BI, but will become the main form of delivery for business analytics and the focal point of the entire industry (James, 2011).

Platform development has kept pace with mobile BI solution development. The Apple iPad was found to be the predominant platform trailed by the BlackBerry (Dresner Advisory Services, LLC, 2010). This is a shift from 2010 when the iPhone was dominant. iPad adoptions have resulted in significant deployments for mobile BI, with modest increases in the iPhone and decreased usage of BlackBerry and Windows’ phones as platforms. This increasing iPad use in mobile deployments will require CIOs across a diversity of industries to develop appropriate data security infrastructures and procedures to address the explosion in remote data access—a trend that will surely intensify as users adopt Apple’s newest iPad (James, 2011).

MOBILE BI IN BUSINESS

In 2001, Jim Craig, vice president and CIO of Cooper Communities, a land and time-share developer, pioneered the development of a mobile BI prototype for his Kyocera Smartphone. The device was large, its black-and-white screen was small, and the basic concept of BI was still new. Also, the lack of executive support hampered industry-wide adoption of mobile BI at Cooper Communities and industry-wide. Despite the lack of enthusiasm, Craig believed that delivering analytical data and company metrics on mobile devices could help the business. Therefore, his team developed a mobile-friendly Web interface for their homegrown BI system. When mobile technology was enhanced in 2003 with more colorful and functional devices, his system was deployed quickly and successfully (Smalltree, 2007).

Since Craig’s early efforts, a number of factors have led to the increased implementation of mobile BI. First, by 2010 the amount of digital information created and replicated hit an astounding 1.2 zettabytes (a zettabyte is one trillion gigabytes, enough data to fill a stack of DVDs reaching from Earth to the moon and back). That number is expected to approach 35 zettabytes by 2020 -- which would equate to a stack of DVDs reaching halfway to Mars. Second, the workforce has become more at ease with technology, says Christian Chabot, CEO of Tableau Software, which makes a type of data visualization technology. Tableau’s year-
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