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Introduction
This year we celebrate the seventh anniversary of Dresner Advisory Services! Our thanks to all of you that have been with us along the way—encouraging and challenging us!

Since our founding in 2007, we have strived to offer a fresh, real-world and alternative perspective on the business intelligence (BI) market. We hope that you agree that we not only have succeeded in doing so but have continued to “raise the bar”—offering increasingly compelling research and greater value with each successive year!

To date, the Wisdom of Crowds® family of reports remains unique in that it is the only comprehensive research on BI usage and trends from the viewpoint of end users. By looking first hand at the experience of IT and business users as well as industry implementation consultants, we can better provide you, our readers, with the in-depth knowledge of the drivers of BI, where and how companies use BI, and what likely will be the next trends on the horizon.

Since we began publishing industry research reports, we have expanded from only two reports in 2010 to twelve reports in 2014. This includes Location Intelligence, Cloud BI (3rd annual), Collaborative BI (3rd annual), our flagship Wisdom of Crowds® BI Market Study (5th annual), BI Competency Center, Advanced & Predictive Analytics, Healthcare, BI Emerging Technologies (2nd annual), Embedded BI (2nd annual) and Mobile Computing / Mobile BI Market Study (6th annual).

To this end, we’ve added more resources to Dresner Advisory Services including the additions of a research director, senior editor and statistician.

For this, our sixth Mobile Computing and Mobile Business Intelligence report, we continue to evaluate how these technologies are taking hold and changing the nature of BI and work itself! Like our other thematic research reports, Mobile BI explores user perceptions and intentions and includes vendor rankings, making it a valuable tool for anyone considering investing in Mobile BI products and services.

In closing, we wish to thank our clients, research community and colleagues for helping to make 2014 a very successful year at Dresner Advisory Services!

Thanks for your support!

Best,

Howard Dresner
Chief Research Officer
Dresner Advisory Services
About Howard Dresner and Dresner Advisory Services

The DAS Embedded Business Intelligence Market Study was conceived, designed and executed by Dresner Advisory Services, LLC—an independent advisory firm—and Howard Dresner, its President, Founder and Chief Research Officer.

Howard Dresner is one of the foremost thought leaders in business intelligence and performance management, having coined the term “Business Intelligence” in 1989. He has published two books on the subject, The Performance Management Revolution – Business Results through Insight and Action (John Wiley & Sons, Nov. 2007) and Profiles in Performance – Business Intelligence Journeys and the Roadmap for Change (John Wiley & Sons, Nov. 2009). He lectures at forums around the world and is often cited by the business and trade press.

Prior to Dresner Advisory Services, Howard served as chief strategy officer at Hyperion Solutions and was a research fellow at Gartner, where he led its business intelligence research practice for 13 years.

Howard has conducted and directed numerous in-depth primary research studies over the past two decades and is an expert in analyzing these markets.

Through the Wisdom of Crowds® Business Intelligence market research reports, we engage with a global community to redefine how research is created and shared. Landmark research reports include the:

- Wisdom of Crowds® Business Intelligence Market Study (Flagship)
- Advanced and Predictive Analytics Market Study
- Business Intelligence Competency Center Market Study
- Collaborative Business Intelligence Market Study
- Cloud Business Intelligence Market Study
- Mobile Computing / Mobile Business Intelligence Market Study

Howard (www.twitter.com/howarddresner) conducts a weekly Twitter “tweetchat” on Fridays at 1:00 p.m. ET. The hashtag is #BIWisdom. During these live events the #BIWisdom “tribe” discusses a wide range of business intelligence topics.

You can find more information about Dresner Advisory Services at www.dresneradvisory.com.
About Jim Ericson

Jim Ericson is a research director with Dresner Advisory Services.

Jim has served as a consultant and journalist who studies end-user management practices and industry trending in the data and information management fields.

From 2004 to 2013 he was the editorial director at Information Management magazine (formerly DM Review), where he created architectures for user and industry coverage for hundreds of contributors across the breadth of the data and information management industry.

As lead writer he interviewed and profiled more than 100 CIOs, CTOs, and program directors in a 2010-2012 program called “25 Top Information Managers.” His related feature articles earned ASBPE national bronze and multiple Mid-Atlantic region gold and silver awards for Technical Article and for Case History feature writing.

A panelist, interviewer, blogger, community liaison, conference co-chair, and speaker in the data-management community, he also sponsored and co-hosted a weekly podcast in continuous production for more than five years.

Jim’s earlier background as senior morning news producer at NBC/Mutual Radio Networks and as managing editor of MSNBC’s first Washington, D.C. online news bureau cemented his understanding of fact-finding, topical reporting, and serving broad audiences.
Benefits of the Study
The DAS Mobile Computing / Mobile Business Intelligence Market Study provides a wealth of information and analysis, offering value to both consumers and producers of Business Intelligence technology and services.

A Consumer Guide
As an objective source of industry research, consumers use the DAS Mobile Computing / Mobile Business Intelligence Market Study to understand how their peers are leveraging and investing in Business Intelligence and related technologies.

Using our unique vendor performance measurement system, users glean key insights into mobile BI software supplier performance, enabling:

- Comparisons of current vendor performance to industry norms
- Identification and selection of new vendors

A Supplier Tool
Vendor Licensees use the DAS Mobile Computing / Mobile Business Intelligence Market Study in several important ways:

External Awareness

- Build awareness for the Business Intelligence market and supplier brand, citing DAS Mobile Computing / Mobile Business Intelligence Market Study trends and vendor performance
- Create lead and demand-generation for supplier offerings through association with DAS Mobile Computing / Mobile Business Intelligence Market Study brand, findings, webinars, etc.

Internal Planning

- Refine internal product plans and align with market priorities and realities as identified in DAS Mobile Computing / Mobile Business Intelligence Market Study
- Better understand customer priorities, concerns, and issues
- Identify competitive pressures and opportunities
Survey Method and Data Collection
As with all of our Wisdom of Crowds® Market Studies we constructed a survey instrument to collect data and used social media and crowd-sourcing techniques to recruit participants.

Data Collection
Using a unique data collection platform for Mobile Computing / Mobile Business Intelligence Market Study we were able to increase our sample year over year (fig. 1).

![Mobile Computing / Business Intelligence Market Study Data Collection 2010 - 2014](image)

**Figure 1** - Mobile computing / business intelligence market study data collection 2010 - 2014

Data Quality
We carefully scrutinized and verified all respondent entries to ensure that only qualified participants were included in the study.
Executive Summary:

- In 2014, business intelligence for the first time represents the number-two priority in mobile applications and trails only email.
- The most prioritized features for mobile BI include traditional: capabilities for viewing charts and reports, selecting data, drilling down, and monitoring KPIs and alerts are top user priorities.
- In 2014, multi-touch interface (dragging, multitasking, etc.) remained top integration priorities followed by GPS and context awareness.
- A growing requirement for mobile business intelligence is better interaction and the ability to select and drill data.
- Small organizations are the most ambitious drivers of most mobile applications including business intelligence, and rank mobile BI more highly than larger peers.
- In 2014, Apple’s iOS phones and tablets remain the top priority, followed by Android smartphones.
- Microsoft devices have gained some ground, though Apple remains the clear leader; Surface tablets are now not far behind Android as a top-three pick among vendor platforms.
- iOS use saturated and leveled off somewhat in the last two years as Google Android shares grew larger.
- Organizations still rely strongly on Apple and Google stores for most of their needs, though they want an enterprise application store and third-party consumer app providers.
- Users in the Apple and Android world prefer native downloadable applications on their devices. Among non-Apple/Android users, preference shifts toward browser access.
- A significant minority of internal developer organizations are currently building/deploying mobile apps for Apple iOS (> 40 percent), Android (30 percent) and, to some extent, Windows.
- Perceived value of mobile BI is steady and reached a new high in 2014; the audience that considers mobile BI “critical” also reached a peak.
- Latin America and Asia Pacific, where the economics and cultural adoption of mobile technologies grew most quickly, place a higher priority on mobile BI than other regions.
- Across functions and vertical industries, roles and organizations with a strong outward field presence or customer-facing presence are more likely to place a higher priority upon mobile BI.
- Preparedness for mobile BI as a core tenet of organizational culture is strongest in small organizations.
Most organizations have chosen to stick with existing in-house enterprise
applications and services for mobile BI; about one-quarter use public cloud and
less than one-quarter use private cloud structures.

- Executives remain the top consumers and targets for mobile business
intelligence, but managers are now increasingly targeted.

- Penetration of mobile business intelligence remains modest: 20 percent report no
mobile capabilities whatsoever and more than 60 percent of organizations report
10 percent or fewer users with mobile access. Forward expectations are
ambitious by comparison.

- Small organizations are most ambitious in their current mobile BI deployments
and future plans.

- A majority of respondents believe fewer than 20 percent of their users will be
“mobile BI only” by 2016.

- “Mobile-only” BI expectations are no longer increasing. We believe organizations
are taking a balanced approach to usage.

- An organizational preference for storing apps and data in servers only (and not
locally on devices) has increased in every year of our study. North America most
strongly supports this trend.
Study Demographics
As with all of our studies, we sought a rich cross-section of data across geographies, functions, organization size, and vertical industries. We believe that, unlike other industry research, we offer a more characteristic sample and better indicator of true market dynamics.

We constructed cross-tab analyses using these demographics to identify and illustrate important industry trends.

Geography
As in previous years, survey respondents reflect a wide array of geographies—including 27 percent from EMEA (22 countries) and 12 percent from APAC (8 countries). Although North America represents the largest group, it is in itself diverse—representing four Canadian provinces and a majority of U.S. states (fig. 2).

![Geographic Distribution](image-url)
Functions
The IT function represents the largest single group of respondents—nearly 40 percent of the sample. We also received strong participation from the executive management, sales and marketing, finance and other functions (fig. 3).

This distribution across functions allows analyses to compare and contrast the influence, plans, and priorities of the different departments within organizations.
**Vertical Industries**

We experienced broad vertical industry participation including technology, financial services, healthcare, and retail segments. We allow and encourage the participation of consultants—who often have deeper industry knowledge than their customer counterparts. Third-party relationships give us insight into the partner ecosystem for BI vendors (fig. 4).

![Respondents by Vertical Industry](image-url)
**Organization Size**

We achieved a balanced mix of small, medium, and large organizations (fig. 5). This year the largest organizations represent 40 percent of the sample, mid-sized organizations represent 24 percent, and the smallest organizations represent 34 percent. As in all of our studies, we observe important differences by organization size.

![Respondents by Organization Size](image)

*Figure 5 – Respondents by organization size*
Analysis and Trends

Mobile Computing
In this section we focus upon several key factors related to the broader Mobile Computing market including mobile application prioritization, mobile platform prioritization, current mobile platform usage and plans, mobile device management use / plans, and native versus Web applications.

Mobile Application Priorities
In each of our last four annual studies we asked respondents to indicate which mobile applications have the highest priority in their organizations. In 2014, mobile business intelligence for the first time represents the number-two priority among organizations sampled. Across the entire spectrum of mobile applications—including applications for personal information management, CRM, and collaboration—business intelligence now trails only email as a priority (fig. 6).

![Mobile Application Priorities 2011 - 2014](image-url)
Small organizations are the most ambitious drivers of most mobile applications, including mobile business intelligence; and small organizations rank mobile BI more highly than large counterparts. By comparison, when we examine only large organizations, business intelligence falls from the second to the third priority behind personal information management. The small organization application preference gap extends notably to collaboration frameworks, mapping, social media access, mobile payments and mobile banking (fig. 7). Generally, large organizations move more slowly than smaller counterparts and can be less tapped into user behaviors.

Figure 7 - Mobile application priorities by organization size
Mobile Platform Priorities
In this section (figs. 8, 9, 10, 11) we asked respondents about their adoption and attitudes toward mobile device platforms with different measures of usage and future plans.

In 2014 (as in 2011, 2012, and 2013), organizations tell us that Apple’s iOS devices are and remain the current top priority, followed by Android smartphones (fig. 8). Following the top three preferred platforms, the field trails off considerably. RIM use falls behind Microsoft and the remaining vendors scuffle for attention.

Figure 8 – Mobile platform priorities
We also looked at the platforms actually in use today and planned for 2014.

Once again and by a good margin, Apple iPhones and tablets head the pack followed by Android phones and tablets (fig. 9). Further, 2014 plans for Apple are slim due to saturation. Microsoft devices gained some ground: Surface tablets are now not far behind Android as a top-three pick among vendor platforms. It should be noted that a good number of BlackBerry phones remain in use, though more than half of the respondents report “no interest.”

Additional finding: Apple tablets previously held an edge over the iPhone in terms of current usage/planning, but the two are now practically even in use. This may reflect the general easing of tablet uptake compared to phones.
For a more complete perspective, we took five years of data and compared mobile platform use from 2010 to today (fig. 10). One easy observation is seen in the green area of the bar, which shows BlackBerry use over time. The red and blue areas showing iOS leveled off somewhat in the last two years as Google Android shares expanded. Also in the last two years, we see the uppermost two (green and pink) bars representing Microsoft tablets and phones gain share. While sentiment remains strongest by far with iOS and Android, Microsoft has grown relative to its competitors.

Figure 10 - Mobile platforms in use 2010 - 2014
We used this same data to compare plans over the last five years and see that, in 2010, plans for Apple iOS outpaced all others by a wide margin (fig. 11). By 2011 this shifted in favor of Google devices. From 2012 on, 40 percent of respondents indicated plans for Microsoft Surface and Windows phone devices. While plans do not always lead to action, Microsoft is in the thinking of many organizations’ respondents as an addition or alternative to other devices. In line with other findings, plans for RIM devices (BlackBerry and Playbook) have consistently declined over time.

**Figure 11 - Mobile platforms planned 2010 - 2014**
Mobile Application Purchasing
Organizations and users have consistently bought into the consumer “app” cloud store approach to search/acquire/purchase mobile applications. When we asked organizations this year where they get their applications, they told us they still rely strongly on Apple and Google stores for most of their needs (fig.12). They would like to have alternative sources in an enterprise application store and good third-party consumer app providers, though most do not have those resources at present. While short-term interest has increased, mobile operator application stores are expected to figure less into future plans.

![Mobile Application Sources](image-url)  
*Figure 12 - Mobile application sources*
Though organizations express a desire to move away from consumer app cloud stores, they have not been able to do so and consumer apps have maintained a dominant share throughout the last four years. The tendency to rely on the iOS or Android consumer store faded slightly this year compared to 2013, not so much in favor of the internal app store as toward other third parties. This equation is also driven by whether independent vendors choose to offer apps directly (i.e., via HTML5) or through iOS and Android app stores.

![App Store Preferences 2011 - 2014](image-url)

*Figure 13 – App store preferences 2011 - 2014*
Native versus WebApps

We asked respondents about their preference for native downloaded applications versus browser apps using HTML or for blended/hybrid apps “wrapped” for consumer app store distribution (fig. 14). Users in the Apple and Android world plainly prefer to have native downloadable applications on their devices. Moving upward on the chart (to non-Apple and Android platforms) the preference shifts toward browser access. The current level of app development, consistency, and familiarity with Google and especially Apple app stores amplifies this preference.

Figure 14 – Native apps versus WebApps
In-house Development of Mobile Applications

In 2013 we began asking respondents whether they were developing their own applications in house. Where they are, a significant minority of internal developer organizations in 2014 are developing for Apple iOS (> 40 percent), Android (30 percent) and, to some extent, Windows (fig. 15). Somewhat equal future plans exist for the same three platforms. There are very few plans for application development on other platforms.

Figure 15 – Mobile in-house development
Mobile Business Intelligence
In this section we focus on key factors related to mobile business intelligence including its importance to organizations, perceived benefits and limitations, cultural preparedness; back-end systems support, device integration preferences, plans for adoption; exclusive mobile use; targeted user communities, and required business intelligence features.

Importance of Mobile BI
Since 2010, when we chartered our first mobile business intelligence market study, we have seen a steady perception of value among organizations we sampled (fig. 16). In 2013, the percentage of respondents calling mobile BI “critical” or “very important” declined from 61 percent to 57 percent. In 2014, mean sentiment rebounded to a new high and the audience that considers mobile BI “critical” also reached a peak. We would describe the five-year range of change as narrow and the overall trend positive, while acknowledging that attitudes about immediacy/criticality fluctuate as organizations move from planning to deployment.

Figure 16 – Importance of mobile BI 2010 - 2014
From a geographical perspective, Latin America and Asia Pacific place a higher priority on mobile BI than other regions (fig. 17). These are the same regions where the economics and cultural adoption of mobile technologies grew most quickly. The Europe, Middle East, and Africa region also responds more positively than North America, where hard infrastructure was more prominently developed. We believe that—like the leap-frog effect of cell phones in developing nations—those without traditional BI may invest in mobile BI first.

![Importance of Mobile BI by Geography](image)

*Figure 17 - Importance of mobile BI by geography*
From a functional perspective, we find that audiences that are “nomadic” or spend more time outside the four walls of the workplace are likely to place the greatest value on mobile BI (fig. 18). Sales and executive management most reflect this demographic and are typically the strongest use drivers of mobile BI in the organization. Conversely, manufacturing, finance, and IT are more likely to prefer traditional native BI environments in processes traditionally confined to the workplace.

Figure 18 - Importance of mobile BI by function
Within specific vertical industries, those organizations likely to have a strong outward field presence or customer-facing presence are more likely to prioritize mobile BI (fig. 19). This makes sense anecdotally in our findings among audiences in real estate, retail & wholesale, and business services. The importance of mobile BI is weakest in finance and healthcare organizations, where there is more likely to be a tight leash on data outside the workplace.

Figure 19 - Importance of mobile BI by selected vertical industry
As is the case with other technology introductions, small organizations are most likely to look to mobile BI to differentiate and achieve competitive edge (fig. 20). We also see a familiar U-shaped or “ski jump” curve where importance ebbs among medium and some larger organizations before increasing again with the largest.

Figure 20 - Importance of mobile BI by organization size
Cultural Preparedness for Mobile BI
Mobile business intelligence introduces a different paradigm into the culture of users that can shift the ways they use business intelligence to be successful (fig. 21). Respondents tell us that the degree to which preparedness for mobile BI has become a core tenet of organizational culture increased slightly in 2014. Those “completely prepared” or “somewhat prepared” represent a large majority of respondents, which indicates that organizations are more comfortable with the use or prospect of mobile BI than in the past. The number of organizations completely unprepared for mobile BI is less than 10 percent and may represent a static audience.

![Cultural Preparedness for Mobile BI 2012 - 2014](image)

*Figure 21 – Cultural preparedness for mobile BI – 2012 - 2014*
Geography is another strong indicator of cultural preparedness for mobile BI (fig. 22). Latin America and Asia/Pacific organizations that led adoption of wireless protocols and other mobility uses perceive themselves to be more culturally prepared for Mobile BI than respondents in EMEA and North America.

![Figure 22 - Cultural preparedness for mobile BI by geography 2014](image-url)
The role/function that an individual plays within an organization maps to cultural preparedness as it does to other indicators for mobile BI (fig. 23). Again, users with roles that require them to be “nomadic” (outside of the office more than inside) tend to be among the most prepared and used to using mobile technology as a regular part of their jobs. Executives and sales & marketing are the most prepared; finance and IT are the least prepared.

![Cultural Preparedness for Mobile BI by Function](image)

*Figure 23 - Cultural preparedness for mobile BI by function*
Just as specific industries and roles impact cultural preparedness for mobile BI, organization size also figures in the equation (fig. 24). The smallest of organizations tend to be more mobile (nomadic), on average, than their larger counterparts. As such, the move to mobile BI seems much more natural for small versus large organizations. Together, about 80 percent of small and mid-sized organizations somewhat or completely agree they are culturally prepared for mobile BI. Again, a U-shaped curve describes weakening preparedness among mid-sized and some large organizations and a rebound among the largest.

Figure 24 - Cultural preparedness for mobile BI by organization size
Cultural preparedness across vertical industries does not follow a clear-cut trend, though it is logical to think those industries with a strong outward presence should also be the most attuned to mobile BI (fig. 25). Transportation, telecommunications, and high tech (which tends to be a universal adopter) all report high cultural preparedness. Anecdotally we know that retail has been an early adopter. As a rule we would expect that industries most exposed to change and innovation (and least regulated in their business processes) would also be the most ready for mobile BI, but we acknowledge that culture is specific to unique organizations.

![Cultural Preparedness for Mobile BI by Selected Vertical Industry](image)

*Figure 25 - Cultural preparedness for mobile BI by selected vertical industry*
Back-end Systems Support for Mobile BI

Given the enduring attention to cloud computing, we might have expected to see significant movement in the back-end systems supporting mobile BI over time, but we have not (fig. 26). While the percentages vary year over year, most organizations chose to stick with existing in-house delivery of enterprise applications and services. About one-quarter use public cloud and less than one-quarter support mobile BI with private cloud-based structures. Our main takeaway is that about three-quarters have consistently stayed with in-house systems, and we foresee a shift of uncertain duration over time.

![Back-end Systems Supporting Mobile 2011 - 2014](image)

Figure 26 – Back-end systems supporting mobile BI 2011 - 2014
Not surprisingly, the smallest enterprises are more likely to embrace public cloud than their larger counterparts and, in 2014, small-organization use of public back end services outstripped in-house infrastructure (fig. 27). Small organizations have an opportunity to try public cloud back-end systems institutionally and at low risk, a strategy that is supported by the business models of a field of vendors. Mid-sized and large organizations (and the overall sample) remain more likely to depend on enterprise standards (and existing investments) for the time being. Without compelling motivation, we anticipate this will change only slowly and incrementally over time.

![Back-end Systems Supporting Mobile BI by Organization Size](image)

*Figure 27 – Back-end systems supporting mobile BI by organization size*
Mobile BI Device Integration Requirements
Since 2012, we have asked participants to list their requirement for business intelligence integration with mobile devices (fig. 28). In 2014, multi-touch interface (dragging, multitasking etc.) remained top of mind followed by GPS and context awareness. In total, BI integration priorities increased slightly across the board with the exception of accelerometer and Google Glass technologies.

![Mobile BI Device Integration Priorities 2013 - 2014](image)

Figure 28 - Mobile BI device integration priorities 2013 - 2014
Targeted Users for Mobile Business Intelligence

As in all previous years, executives remain the top consumers and targets for mobile business intelligence (fig. 29) followed by middle managers and, to a lesser extent, line managers and individual contributors. Smaller percentages of respondents target customers and suppliers and one-quarter consider customers primary targets; but almost half say that mobile BI is “not applicable” to those constituents.

![Targeted Users for Mobile BI](image)

*Figure 29 - Targeted users for mobile BI*
Though executives have consistently been the primary target for mobile BI (Figure 30), the degree to which they are targeted has decreased in recent years while the targeting of middle managers and (to some degree) line managers increased. In that target audiences are a purposeful pursuit, we count it as good news that the use of mobile BI is beginning to filter down in organizations. With the ubiquity of mobile devices among knowledge workers and more flexible licensing options from vendors, we hope and expect that a broader BI provisioning trend will continue.

Figure 30 - Primary targets for mobile BI 2010 - 2014
We also looked at targeted users by organization size (fig. 31). These results are colored to the degree that small organizations are more dominated by executives and larger organizations are more likely to have more roles. Still, very small organizations are also the most likely to target customers. Very large organizations are more likely to empower individual contributors and professionals attached to the organization.

Figure 31 - Mobile BI target users by organization size
Mobile Business Intelligence Adoption Through 2017
In this section (figs. 32, 33, 34, 35) we look at current and planned adoption and penetration of the user base for mobile BI.

In 2014, penetration of mobile business intelligence remains fairly modest: 20 percent report no mobile capabilities whatsoever and more than 60 percent of organizations report 10 percent or fewer users with mobile access (fig. 32). Looking forward, deployment expectations are ambitious by comparison. Bullish plans are not unusual and we consider 12-month plans most reliable based on allotted budgets; but future expectations for mobile BI deployments are undeniably high.

Figure 32 - Mobile BI deployment plans through 2017
Geographical deployment plans generally follow other geographical findings: Latin America and Asia Pacific are more ambitious in current deployments and future plans than North America and EMEA (fig. 33). That said, organizations in every region plan significant increases in mobile BI deployments in the next 12 months.

**Figure 33 - Mobile BI deployment plans through 2017 by geography**
When we look at the upper two sections (light blue and orange bands) reflecting the highest levels of penetration, it becomes plain that small organizations are the most ambitious in their current mobile BI deployments and future plans (fig. 34). Fewer than half of organizations with 1-100 employees report 10 percent or lower levels of deployment today (compared to more than 70-75 percent of larger counterparts).

Figure 34 - Mobile BI deployment plans through 2017 by organization size
All business functions sampled expect significant mobile BI deployment growth over the next three years (fig. 35). Executive management, followed by sales and marketing are the largest existing and planned audiences for mobile business intelligence. By contrast, finance is the most underserved and conservative of the three groups, with limited plans going forward. The IT function is only slightly more ambitious than finance.

**Figure 35 - Mobile BI deployment plans through 2017 by function**
Exclusive Use of Business Intelligence on Mobile Devices
We asked respondents how many users will access BI exclusively through mobile devices in the next 24 months. For about 65 percent of respondents, the answer is 20 percent or fewer (fig. 36). From another perspective, close to 20 percent of respondents say 41 percent or more of their business intelligence users will be “mobile only” by 2016.

Figure 36 - Expected exclusive mobile BI usage by 2016
Expected exclusive mobile use of business intelligence has changed only slightly over time and actually declined somewhat since 2013. We believe respondents are taking a more balanced approach to BI usage habits (fig. 37). While some percentage of BI users will surely become mobile-only consumers, this is not a one-way trend. Over time, we would compare this pattern to consumer preferences for PCs, tablets, and phones.

**Figure 37 – Expected exclusive mobile use of business intelligence 2011 - 2014**
As noted elsewhere, infrastructure investments as well as BI maturity/penetration in different geographic regions influence exclusive mobile BI use. Current data tell us Latin America and Asia Pacific users are much more likely to exclusively access business intelligence applications and content via a mobile device by 2016 (fig. 38).

Figure 38 - Expected exclusive mobile use of business intelligence by 2016 by geography
Executive management and sales & marketing are the most likely functional candidates for mobile-only use of business intelligence (fig. 39). This corresponds to other findings about nomadic users and organizations with a strong external focus. Along with more high-level penetration, executive and sales & marketing audiences have significantly higher expectations of > 20 percent penetration than other roles. That said, all functional audiences expect at least some mobile-only BI users by 2016.
Small and mid-sized organizations appear to have the most optimistic plans for exclusive mobile use of business intelligence, followed by the largest of organizations (fig. 40). As with mobile business intelligence generally, the smallest organizations are most likely to support mobile-only use.

Figure 40 - Expected exclusive mobile use of BI by 2016 by organization size
Mobile Business Intelligence Features
In 2014, the most prioritized features for BI include the most traditional: capabilities for viewing charts and reports, selecting data, drilling down, and monitoring KPIs and alerts are all top user priorities (fig. 41). Mean interest is somewhat lower but still important for features including data refresh, component dashboards, guided analysis, drag and drop and offline access. Social media analysis is currently a relatively unimportant feature for mobile BI users.

![Mobile BI Feature Priorities](image)

**Figure 41 - Mobile BI feature priorities**
A trend among requirements for mobile business intelligence features has been toward better interaction (and fewer static presentations). While viewing charts is paramount, the ability to select and drill data has gathered importance (fig. 42). Demand for real-time data refresh and data/dashboard assembly has also increased. We do not expect average users to code on mobile devices anytime soon; but as requirements migrate toward dynamic capabilities, we will see more traditional BI upgrades recast for mobile devices.

Figure 42 - Mobile BI feature priorities 2010 - 2014
Priorities for mobile business intelligence features are largely consistent across roles, though specific BI apps can be tied to function. All audiences prioritize chart/report viewing and the ability to select and filter data above all else (fig. 43). Manufacturing is more interested in KPIs and refresh than drill-down navigation; sales & marketing has outsized interest in offline access, transactional integration, and social media analysis.

![Mobile BI Features by Function](image)

**Figure 43 - Mobile BI features by function**
For the most part, organizations of different size follow the overall sample average in their preference for individual features (fig. 44). Small organizations stand out in their preference for some unique features that include alerting, real-time data refresh, guided analysis, and transactional integration. Very large organizations have the most interest in data selection/filtering and alerts.

Figure 44 - Mobile BI features by organization size
Mobile versus Server Resident Business Intelligence Apps and Data

We asked respondents where (device and/or server) they believe mobile applications and data ought to reside. In a clear trend, the preference for storing apps and data in servers only (and not locally on devices) has increased in every year of our study (fig. 45). Where some organizations resist the downloading of apps and data due to security policies or concerns, others prefer central management/provisioning/access benefits, while still others are restricted by regulatory requirements (as in banking and healthcare). Regulated or not, there is an increasing tendency towards server-only storage for mobile apps and data.

Figure 45 - Mobile versus server resident BI apps and data: 2011 - 2014
North American respondents are most strongly in favor of server-only mobile BI data environments (fig. 46). Half or more of respondents in EMEA and Latin America also prefer mobile BI data server storage. Asia Pacific is the only region that supports a mixed device and server environment for mobile BI data.
The requirement for app and data residency varies significantly by vertical industry—and most certainly answers in part to regulation (fig. 47). As expected, healthcare—with tight reins on sensitive personal data—is completely unlikely to allow device storage of data, followed to a lesser extent by government. Other industries sampled are willing to support a more balanced mix of device and server environments.

Figure 47 - Mobile versus server resident BI apps and data by vertical industry
Benefits and Limitations of Mobile Business Intelligence

Each year we ask respondents to describe the benefits and limitations of mobile Business Intelligence. This year as last we organized these comments in two “word clouds.”

The top perceived benefits associated with mobile BI include anywhere-access to data, information, and business intelligence (fig. 48). Benefits have an affinity to the terms critical, business, and decisions; and they cite KPIs, sales, and other users.

Figure 48 – Word cloud - benefits associated with mobile business intelligence
The top cited limitations associated with mobile BI include security and other risk concerns, limited data volumes, technical limitations of mobile devices, and their ability to perform analysis (fig. 49).

Figure 49 – Word cloud - limitations associated with mobile business intelligence
Business Intelligence Industry Mobile Capabilities and Plans

By collecting data from 35 business intelligence vendors, we understand the current state of the market and also have a view into future industry capabilities and therefore can help user organizations plan for mobile BI with greater precision.

When we first conducted this research (2010), the majority of business intelligence vendor organizations had not yet fully comprehended the shift towards mobile BI (fig. 50). Since that time, mobile BI has become a mainstay for the industry. That said, as mobile BI features have become the norm, this requirement has lessened since 2012.

![Industry Importance of Mobile BI: 2010 - 2014](image-url)
At this point, one can be fairly comfortable that almost all business intelligence vendors offer support for Apple’s iPad tablet device, as this is the single most popular platform for mobile BI today. Very good support can also be found for Apple’s iPhone and for Google Android tablets and smartphones (fig. 54). Microsoft’s Windows 8 phone and Surface tablet are seeing improved industry support and significant plans through 2016. All other platforms, i.e., Amazon, Firefox, RIM/BlackBerry, enjoy less support.

Figure 51 - BI industry support for mobile platforms
The development and support of native applications is a complex and costly process for vendors. As such, most would prefer to use HTML5, which enjoys support across mobile platforms. However, users continue to demand a native app experience—most notably on the Apple iOS and Google Android platforms. Accordingly, industry support for native apps remains strong on these mobile devices (fig. 55). Moving forward we expect to see more apps using a hybrid approach with a native code wrapper around standard HTML5.

Figure 52 - Industry support: Native versus Web applications
Industry support for mobile device integration, maps well to user requirements with both ranking multi-touch as the first priority and location awareness as the second priority (fig. 56). However, the industry has placed a greater emphasis upon camera integration (#4 user feature) and Accelerometer integration (#7 user feature).

Figure 53 - Industry support for mobile device integration
We continue to see consistent year-over-year improvements in mobile BI feature support, with availability for most features improving versus 2013 (Figure 57). While the top six industry-supported mobile business intelligence features correspond to user requirements, there are some areas of demand-side and supply-side mismatch. For example, users place a higher priority upon alerting and dashboard assembly from components and a lower priority upon social media analysis and guided analysis.

Figure 54 - Industry support for BI features
Mobile Business Intelligence Vendor Scores and Rankings
This year we include 25 Business intelligence vendors in our mobile ratings (fig. 58). For each vendor we considered mobile platform support and integration, business intelligence features, and customer ratings. We weighted platform and feature scores using user prioritizations, with a maximum possible score of 32.5 points.

![2014 Mobile Business Intelligence Vendor Ratings](image)

Figure 55 – 2013 mobile BI vendor / product rankings

This model reflects only three dimensions of a BI vendor’s product capability and is only intended to indicate a convergence of capabilities for mobile BI. Readers are encouraged to use other tools to understand other dimensions of vendor capability, such as our Wisdom of Crowds® Business Intelligence Market Study.
Appendix: Mobile BI Survey Instrument

Mobile Business Intelligence is the ability to deliver Business Intelligence content and capabilities to mobile devices such as smartphones and tablets - extend BI to more users and making it more inclusive.

**7. Please rank the importance of the following classes of applications associated with your company’s mobile strategy**

<table>
<thead>
<tr>
<th>Application</th>
<th>Critical</th>
<th>Very Important</th>
<th>Somewhat Important</th>
<th>Not Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboration Framework</td>
<td>✔</td>
<td></td>
<td></td>
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<tr>
<td>CRM Applications Access</td>
<td></td>
<td>✔</td>
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<tr>
<td>Video Conferencing/Chat</td>
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<tr>
<td>Email</td>
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<tr>
<td>Map/Directions</td>
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<tr>
<td>Social Media Access (e.g., Twitter, LinkedIn, Facebook, Google+, Yelp)</td>
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<tr>
<td>Mobile Payments</td>
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<tr>
<td>Personal Information Management (Contacts, Calendaring &amp; Scheduling)</td>
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<tr>
<td>Business Intelligence</td>
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<tr>
<td>ERP Applications Access</td>
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<tr>
<td>Personal or Business Banking via Mobile</td>
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<tr>
<td>Other (please specify)</td>
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</tbody>
</table>

**8. Please prioritize the following mobile platforms in order of importance to your organization over the next 12 months:**

<table>
<thead>
<tr>
<th>Platform</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>6th</th>
<th>7th</th>
<th>8th</th>
<th>9th</th>
<th>10th</th>
<th>11th</th>
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</thead>
<tbody>
<tr>
<td>Amazon Fire Phone</td>
<td>✔</td>
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<td>Apple iPad Tablet</td>
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<td>Apple iPhone</td>
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<td>BlackBerry (RIM) Smartphone</td>
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<td>Firefox Mobile OS</td>
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<td>Google Android Smartphone</td>
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<td>Microsoft Surface (Windows 8 tablet)</td>
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<td>Microsoft Windows Phone 8</td>
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<td>RIM Playbook Tablet</td>
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<td>Tizen (New Samsung CS)</td>
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<td>✔</td>
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<tr>
<td>Mobile Platforms</td>
<td>In-use</td>
<td>Planned: Next 12 months</td>
<td>Planned: Next 24 months</td>
<td>No Interest</td>
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<td>Firefox Mobile OS</td>
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<td>Microsoft Windows Phone 8</td>
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</tbody>
</table>

10. For mobile applications that you will use, what degree of integration with the mobile platform is required?

<table>
<thead>
<tr>
<th>Mobile Platforms</th>
<th>Native, downloadable applications</th>
<th>Web browser access</th>
<th>Blended/hybrid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amazon Fire Phone</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>Apple iPad Tablet</td>
<td>✔</td>
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<td>Apple iPhone</td>
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<tr>
<td>Blackberry (RIM) SmartPhone</td>
<td>✔</td>
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<td>Firefox Mobile OS</td>
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<td>Google Android Smartphone</td>
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<td>Google Android Tablet</td>
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<td>Microsoft Surface (Windows 8 tablet)</td>
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<td>Microsoft Windows Phone 8</td>
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<tr>
<td>RIM Playbook Tablet</td>
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<tr>
<td>Tizen (New Samsung CS)</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>Other (please specify)</td>
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<td>✔</td>
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</tr>
</tbody>
</table>
### 11. Are you developing/building or will you develop/build mobile applications in-house? If so, please specify for which platforms.

<table>
<thead>
<tr>
<th>Platform</th>
<th>Developing/already developed today</th>
<th>Planned: Next 12 months</th>
<th>Planned: Next 24 months</th>
<th>No plans to develop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amazon Fire Phone</td>
<td>☒</td>
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<td></td>
<td></td>
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<tr>
<td>Apple iPad Tablet</td>
<td>☒</td>
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<td>Apple iPhone</td>
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<tr>
<td>BlackBerry (RIM) Smartphone</td>
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<tr>
<td>Firefox Mobile OS</td>
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<td>Google Android Smartphone</td>
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<td>Google Android Tablet</td>
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<td>Microsoft Surface (Windows 8 tablet)</td>
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<td>Microsoft Windows Phone 8</td>
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<td>RIM Playbook Tablet</td>
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<tr>
<td>Tizen (New Samsung CS)</td>
<td>☒</td>
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<tr>
<td>Other (please specify)</td>
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</tbody>
</table>

### 12. Which back-end systems will drive your mobile applications?

<table>
<thead>
<tr>
<th>System</th>
<th>Definitely</th>
<th>Probably</th>
<th>Possibly</th>
<th>Unlikely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing in-house enterprise applications and services</td>
<td>☒</td>
<td></td>
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<tr>
<td>Public Cloud-based/Software-as-a-service applications</td>
<td>☒</td>
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<td></td>
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<tr>
<td>Private Cloud-based/Software-as-a-service applications</td>
<td>☒</td>
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<tr>
<td>Other (please specify)</td>
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</tbody>
</table>

### 13. Where will employees get their applications for work use? Select all that apply.

<table>
<thead>
<tr>
<th>Source</th>
<th>Today</th>
<th>12 months</th>
<th>24 months</th>
<th>36 months</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer app cloud (iTunes, Android Playstore, etc)</td>
<td>☒</td>
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<td></td>
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<tr>
<td>Mobile operator store</td>
<td>☒</td>
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<tr>
<td>Your own enterprise app store?</td>
<td>☒</td>
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<tr>
<td>A 3rd party consumer app store?</td>
<td>☒</td>
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<tr>
<td>A 3rd party enterprise app store?</td>
<td>☒</td>
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</tr>
</tbody>
</table>
14. What is the level of importance of Mobile Business Intelligence within your IT/Business strategy?

<table>
<thead>
<tr>
<th>Importance</th>
<th>Critically Important</th>
<th>Very Important</th>
<th>Somewhat Important</th>
<th>Not Important</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

15. Please react to the following question:
"My organization is culturally well prepared to adopt and leverage Mobile Business Intelligence."

- Strongly agree
- Somewhat agree
- Somewhat disagree
- Strongly disagree

16. For Business Intelligence software on mobile devices, what level of device integration is most important to you?

<table>
<thead>
<tr>
<th>Device Integration Feature</th>
<th>Critical</th>
<th>Very Important</th>
<th>Somewhat Important</th>
<th>Not Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Near-field communication (aka Google Payments)</td>
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<tr>
<td>Multi-touch interface</td>
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<tr>
<td>Context awareness (activity recognition)</td>
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<tr>
<td>Google Glass integration</td>
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<tr>
<td>Voice command</td>
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<tr>
<td>Location awareness/GPS integration</td>
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<tr>
<td>Camera integration</td>
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<tr>
<td>Smart watch integration (e.g., Pebble, Sony)</td>
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<tr>
<td>Accelerometer</td>
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<tr>
<td>Other (please specify)</td>
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</tbody>
</table>
17. Which Business Intelligence features on mobile devices are most important to you?

<table>
<thead>
<tr>
<th>Feature</th>
<th>Critical</th>
<th>Very Important</th>
<th>Somewhat Important</th>
<th>Not Important</th>
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</thead>
<tbody>
<tr>
<td>Data selection; filtering</td>
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<tr>
<td>Off-line access</td>
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<tr>
<td>Write-back/transactional integration</td>
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<tr>
<td>KPI monitoring</td>
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<tr>
<td>Guided analysis</td>
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<tr>
<td>Dashboard assembly from components</td>
<td></td>
<td></td>
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<tr>
<td>Augmented reality</td>
<td></td>
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<tr>
<td>Alerts</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Collaborative support for group-based analysis</td>
<td></td>
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<tr>
<td>Drag and drop navigation</td>
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<tr>
<td>Drill down navigation</td>
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<tr>
<td>Real-time data refresh</td>
<td></td>
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<tr>
<td>Social media analysis (SocialBI)</td>
<td></td>
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<tr>
<td>View charts/reports</td>
<td></td>
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<tr>
<td>Other (please specify)</td>
<td></td>
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</tr>
</tbody>
</table>

18. Who will be the users of Mobile Business Intelligence in your organization and their priority for automation?

<table>
<thead>
<tr>
<th>Role</th>
<th>Primary</th>
<th>Secondary</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executives</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Middle managers</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Line managers</td>
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<tr>
<td>Individual contributors and professionals</td>
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<td></td>
<td></td>
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<tr>
<td>Customers</td>
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<td></td>
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<tr>
<td>Suppliers</td>
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<tr>
<td>Other (please specify)</td>
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</tr>
</tbody>
</table>
19. What percentage of the user population use/will use Mobile Business Intelligence applications in your organization?

<table>
<thead>
<tr>
<th>None</th>
<th>1% - 10%</th>
<th>11% - 20%</th>
<th>21% - 40%</th>
<th>41% - 60%</th>
<th>61% - 80%</th>
<th>81% or more</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Today</td>
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<td></td>
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<tr>
<td>In 12 months</td>
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<tr>
<td>In 24 months</td>
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<tr>
<td>In 36 months</td>
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</tbody>
</table>

Other comments: ________________________________

20. Mobile-based Business Intelligence will replace traditional BI within the next 2 years for what percentage of users?

- Under 19%
- 11% - 20%
- 21% - 40%
- 41% - 60%
- 61% - 80%
- 81% or more

21. Will Business Intelligence data/content reside on the mobile device and server or server alone?

- Mobile device and server
- Server only