Analyst Insight

Aberdeen Group
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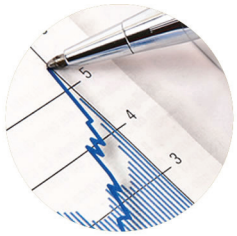
July, 2011

High-Performance Organizations Empower Employees with Real-Time Mobile Analytics

Aberdeen's December 2010 study *Mobile BI: Actionable Intelligence for the Agile Enterprise* revealed that survey respondents in aggregate were still in the early stages of mobile Business Intelligence (BI) adoption. Much of their initial focus was on providing senior executives with mobile access to management information; whereas just six months later many companies are gearing up to rapidly deploy mobile BI throughout the organization to empower their front-line workers. This Aberdeen Analyst Insight highlights the challenges ahead, and brings focus to issues that organizations need to consider in order to successfully deploy mobile analytics to their front line. These insights are drawn from data collected in December 2010 and July 2011 from 172 organizations in 23 counties currently using mobile BI. *(Please note: the terms analytics and BI are used interchangeably throughout this document.)*



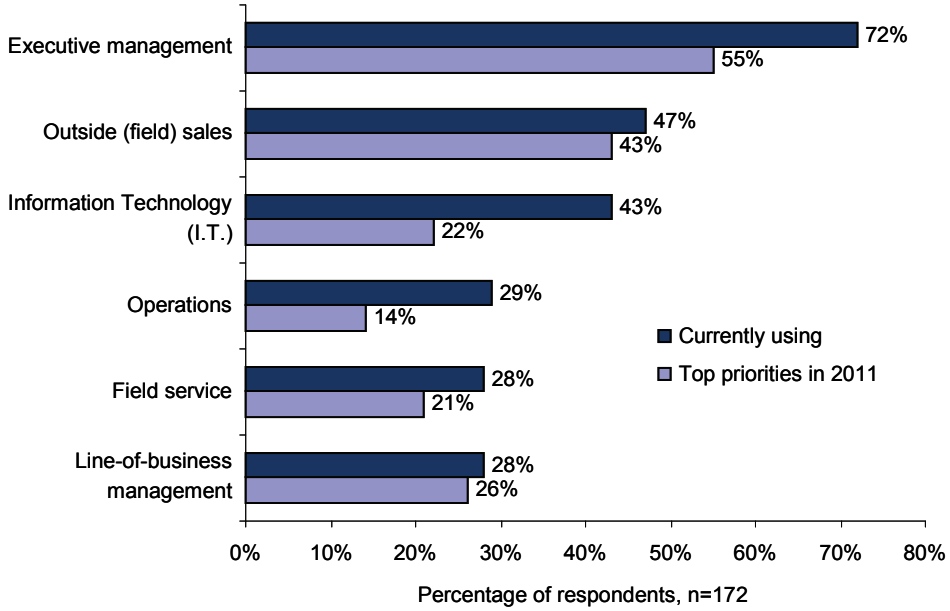
Analyst Insight

Aberdeen's Insights provide the analyst perspective of the research as drawn from an aggregated view of the research surveys, interviews, and data analysis.

Mobile Analytics Extend Beyond the Executive Suite

During 2010, mobile BI adoption was led by executive management, with almost three quarters of organizations providing executives with access to mobile business intelligence (Figure 1).

Figure 1: Mobile BI Adoption Trends



Source: Aberdeen Group, July 2011

Definition of Terms

- **Business Intelligence (BI):** the combination of processes, disciplines, organizational capabilities and technologies associated with the collection and integration of business performance data; providing access, visualization and delivery of actionable information via Key Performance Indicators (KPIs) to business decision-makers
- **Dashboard:** a BI reporting tool that graphically represents KPIs on a single screen, utilizing basic visual tools such as charts, graphs, tables, and gauges
- **Drill-down:** data details on the server are summoned on-demand from the BI client

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There was also strong adoption from both field sales and IT. Almost half of the organizations surveyed provided employees in these functions with access to mobile analytics by the end of 2010. This aligned well with a core hypothesis of our December 2010 study: that mobile analytics was starting to emerge from an experimental phase to a more purposeful and deliberate state.

Disseminating Knowledge to the Point of Decision

In recent Aberdeen BI research, the wide dissemination of knowledge throughout the organization has emerged as a hallmark of high-performance organizations. Historically however, business intelligence was often deployed exclusively to executive decision makers, the so-called "C-suite." This was necessitated by the relatively high cost of software customization demanded by deep integration with legacy enterprise applications such as Enterprise Resource Planning (ERP), Sales Force Automation (SFA), and Customer Relationship Management (CRM); as well as by a corporate culture that equated knowledge with executive power.

Simultaneously, by December 2010 the penetration of mobile devices in the enterprise forced organizations to pay attention to them; consequently, executives and IT support teams started to leverage their in-place mobile infrastructure to deploy BI more broadly. During 2011, priorities continue to evolve, with an increased emphasis on equipping field service employees and Line-of-Business (LOB) management with mobile analytics. Organizations are starting to shift their thinking in mobile analytics in order to put critical business information at "the point of decision" – 44% of top-performing organizations chose putting critical decision-making data at the fingertips of their front-line employees as their top strategy.

"We are able to easily develop and distribute mobile reports that ensure our executives and sales force are always connected to the pulse of our business."

Manoj Prashad. Vice President of Enterprise Architecture, Global Applications and Testing Life Technologies, Inc.

Different Feeds for Different Needs

However, in order for the wider deployment of mobile analytics to be successful, the divergent needs of different roles within the organization must be taken into account. In the majority of Aberdeen research studies, the initiative for a fundamental change in organizational behavior is typically a reaction to some type of external pressure or traumatic series of events. Examples often include falling sales revenue, global competition, or poor customer retention. We find that organizations typically take transformative action only when they are forced to do so by circumstances beyond their control.

However, the pressures driving the adoption of mobile business intelligence are of a different sort. There is an inherent belief that mobile BI will itself be a game-changer. As a result, across all survey respondents in aggregate, 54% identified the simple belief that mobile BI will provide competitive advantage as the most significant pressure driving mobile analytics adoption. This in itself is a sign that mobile BI projects are still in their infancy in many organizations.

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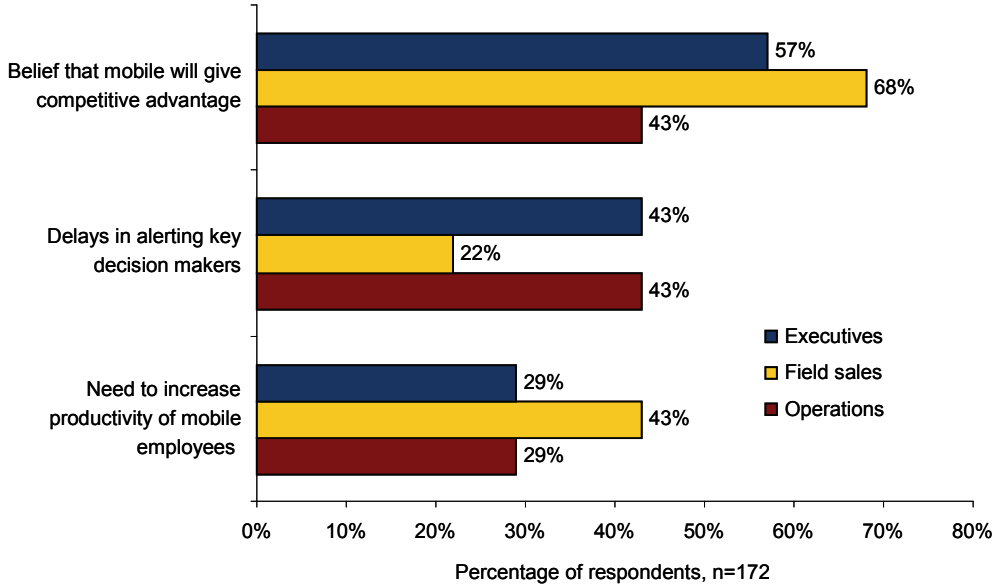
Figure 2: Different Roles have Different Needs



Source: Aberdeen Group, July 2011

Yet there are significant differences in these driving forces when examined by distinct job roles, as Figure 2 shows. For example, employees in the sales organization feel that access to management information on the move can increase their productivity. It's easy to understand why: field sales representatives are usually conducting sales calls and customer meetings throughout the day. During those meetings, if they are unable to find the information they need to resolve the customer's issues when on premises, they will spend additional time dealing with all the unresolved customer issues. However, with mobile analytics putting critical information at their fingertips while on the customer's premises, increased productivity and responsiveness is the result. The expectation is that it will increase the productivity of the sales force while it also improves customer satisfaction; in fact, 92% of top-performing organizations report that their customers are extremely or very satisfied. In contrast, senior executives and operations managers are more concerned by delays in getting access to business-critical information. It's not uncommon for both executive staff and operations to spend their workday running from one meeting to the next. If they are not at their desk, how will they gain access to the critical information that they need in a timely manner?

These divergent perspectives on the key pressures driving mobile BI adoption also correlate to differing strategies in response to those pressures. There are three strategies that predominate amongst all survey respondents. However, executives, sales staff and operational managers differ in selecting the most important strategy (Figure 3).

"It's very important for our sales people to have intelligence out in the field and to be as up-to-date as possible. Sales reps need to see close to real-time inventory levels so that when the customer places the order they can see what can ship immediately and what needs to be built."

Dan Sise, Director of Business Development, Laser Technologies

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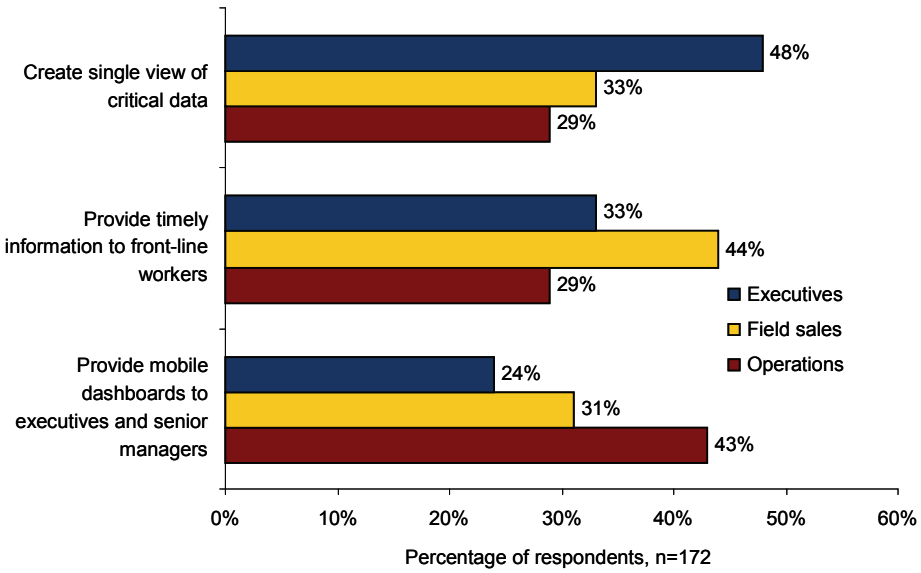
Figure 3: Divergent Strategies Depending on Role



Source: Aberdeen Group, July 2011

Executive management has historically been the first adopter of early mobile BI initiatives. Their insights from that experience have shaped their requirements for the next iteration. In part because their job role demands it, and in part because early implementations often didn't provide it, they have learned the hard way that it is essential to have a single centralized source of all business data.

At Aberdeen, we think about business analytics as being built upon three broad foundations – data collection, data assembly, and data presentation. While much attention in mobile BI is centered around sleek new devices and graphical user interfaces, some things in business analytics remain constant throughout: a fundamental principal of BI – and of IT in general – is "garbage in, garbage out". There must be only one "version of the truth".

Findings from Aberdeen's December 2010 report *Mobile BI: Actionable Intelligence for the Agile Enterprise* underscore this point. That study found that Best-in-Class organizations (see sidebar) were far more likely than other survey respondents to have a data warehouse in place (65% for Best-in-Class organizations, compared to 45% of all other survey respondents). Likewise, Best-in-Class companies are also more likely than all other companies to have data integration capabilities (64% vs. 44%), and more likely to have data cleansing capabilities (48% vs. 32%). In other words, for mobile analytics to have real significance it must be supported by a solid foundation of high-quality data. There is little value in having a mobile dashboard that does not have a robust and coherent single source of the truth underlying it.

Definition of Terms

- **Best-in-Class:** as measured across a variety of business performance metrics, the top 20% of survey respondents
- **Industry Average:** middle 50% of survey respondents
- **Drill-down:** bottom 30% of survey respondents

Best-in-Class Criteria

In Mobile BI: Actionable Intelligence for the Agile Enterprise, Aberdeen used three performance criteria to distinguish Best-in-Class companies

- Employees are able to access the information required for decision-making via mobile BI 87% of the time
- 92% of their customers report being extremely or very satisfied

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On the other hand, sales managers have relatively little prior experience with mobile BI. As a consequence, they may be less aware of the limitations of their existing management information solution. The strategic focus of this group is simply to get the relevant information into the hands of front-line workers. Forty-four percent (44%) of sales managers surveyed see the lack of timely information at their fingertips as a major impediment to their ability to execute corporate strategy.

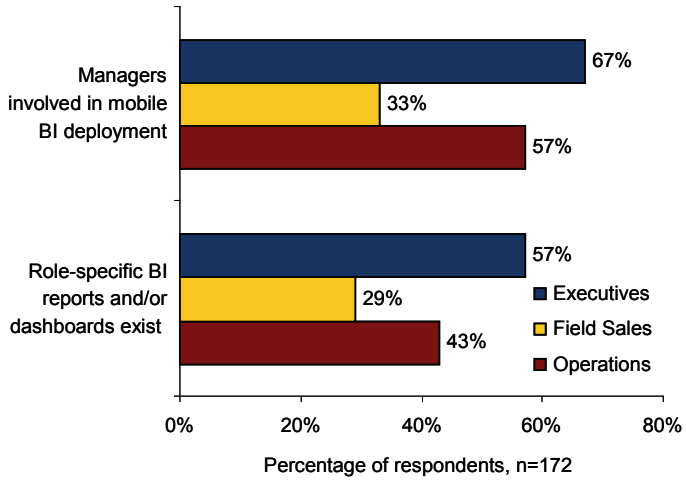
Sales reps are more concerned with discrete information about their own customers, and less with the big picture of corporate performance and strategy execution. Information on outstanding orders, shipments made, trouble tickets raised, quotas achieved, and outstanding payments are likely to meet most of the sales manager's needs.

Overall, operational managers are the least experienced of these three groups in using mobile analytics. Operational managers by their nature are likely to be concerned with information about the entire business process and workflow function. Although many operational managers have had access to dashboards, until recently they haven't had the ability to carry their business analysis tools with them as they move through the physical plant. Their need for a broad overview with high visibility to process flow disruptions and performance metrics explains the desire for access to mobile dashboards as their top strategy.

Empowering the Front-Line

Providing mobile analytics for a relatively small number of top executives is relatively straightforward; expanding the mobile footprint to a broader swath of operational managers is more demanding. Equipping sales teams with mobile BI can also introduce a range of new challenges; as shown in Figure 4, it is evident that additional steps need to be taken to improve the utility of the analytics they have at their disposal.

Figure 4: Sales Team Mobile BI Needs Not Widely Considered



Source: Aberdeen Group, July 2011

Fast Facts

- **68%** of sales managers believe mobile BI can provide them with a competitive advantage
- Yet only **29%** of sales managers have role-specific reports and/or dashboards available
- And only **24%** of sales managers have a 360º view of the customer available via mobile analytics

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Figure 4 shows that sales management is often not involved in the delivery of mobile BI projects. Without the close involvement of the relevant business users, analytics projects are less likely to be successful. For example, Aberdeen research has shown that organizations that have close collaboration between business users and IT deliver 62% of their BI projects on-time or early. Without this collaboration, the on-time project delivery rate falls to 45%. If the users are not involved, typically the IT organization is left to guess at end-user requirements. This lack of close involvement is also reflected in the lack of role-specific business intelligence assets. Only 29% of sales staff indicated that they had role-specific reports and dashboards available to them. In the long-term, serving up a generic analytics solution to a broad user population ends up satisfying few users. Although almost half of the organizations surveyed make BI available to their sales teams, it appears that the specific needs of sales team end-users have not been well incorporated.

Lack of attention to sales team needs is apparent elsewhere. For example, only 24% of sales managers reported that they had access to a 360° view of the customer from their mobile device. Meanwhile, senior executives are three-times more likely to be able to request updates to data on-demand from a mobile device than sales staff are. Likewise, half of all operational managers can get near real-time data feeds, compared to just 29% of the sales teams.

These capabilities should be equally in demand by sales teams. As an example, when an account manager meets with a customer he or she would need to access the real-time status of a shipment, not the status of the shipment when they left home that morning. Without access to near real-time data feeds or updates on-demand, the account manager cannot resolve customer issues while in the presence of the customer. Fifty-three percent (53%) of sales staff also placed automated alerts triggered by key performance indicators at the top of their wish list for mobile BI.

As a whole, most operational managers have had some success with early mobile BI deployments. It didn't take them long to discover that mobile analytics can help minimize operational disruptions, or even avoid them altogether. They reported that 45% of outages and failures avoided over the last year were circumvented due to an early warning exception alert received via a mobile device. In addition, these managers report being able to find the information they need using a mobile device 81% of the time. Yet there remains room for significant improvement for operations staff as well (Figure 5). It is notable that very few operations managers report that they have a champion for mobile BI within their business unit. Although 29% of organizations have currently deployed mobile analytics for operational managers, it is a major business priority for only 14% of operations management during 2011. With operations being such a low priority, substantial improvements in operational performance may be more challenging during 2011. That is particularly unfortunate when there are shortcomings in the existing implementations.

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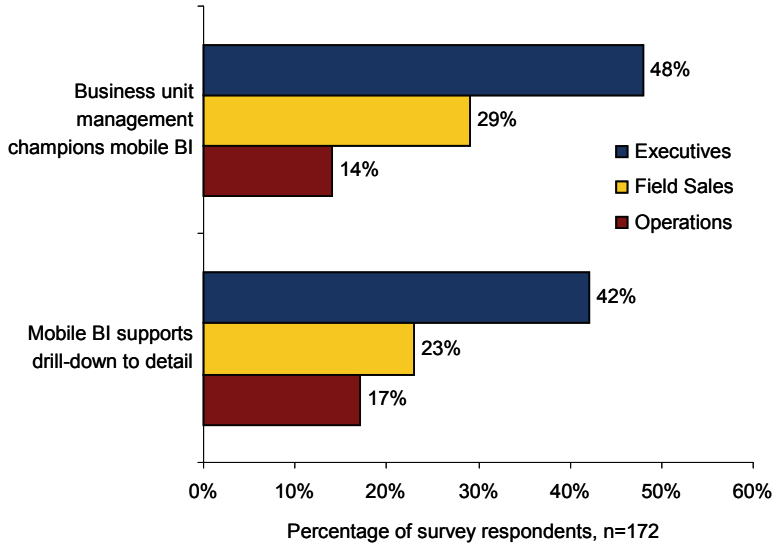
Figure 5: Mobile Operational Analytics: Room for Improvement



Source: Aberdeen Group, July 2011

For example, operational managers report a high degree of dashboard usage, with 83% of operational managers equipped with mobile dashboards. However, only 17% of these dashboards include data drill-down capabilities. This should be a fundamental requirement for operational managers. When an exception alert appears on the dashboard, the corrective action can best be understood when additional details are made available on-demand. Without drill-down, the most effective solution can be difficult to achieve in a timely fashion. The ability to drill-down and examine data enables the root cause of problems to be identified, and different courses of action to be explored.

Fast Facts

Operations Managers using mobile BI cite exception alerts received over their mobile devices as responsible for **45%** of the outages and system failures avoided over the prior 12 month period

Key Takeaways

Aberdeen's research into mobile BI has consistently shown that those organizations with the strongest mobile BI capabilities have the shortest time-to-decision, are more likely to find the information they need when they need it, and have higher levels of customer satisfaction. They empower their front-line employees with business-critical information in order to make timely decisions. However, much work remains to be done if mobile BI is to evolve successfully and be widely deployed to front-line employees.

For organizations that already have a mobile BI initiative in place, as well as those that are beginning or considering one, the following will assist in advancing both strategic and tactical plans:

- **Provide role-specific tools.** With mobile BI, one view certainly does not fit all roles. High performance organizations realize that maximizing the return on their mobile BI investments depends upon meeting the divergent business analysis needs of their primary user

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groups. For this to happen, role-specific BI assets need to be developed, refined and maintained.

- **Track productivity gains.** It is noteworthy that sales staff indicate they are under pressure to become more productive. However, only 17% of respondents from the sales function indicate that the organization can actually measure the productivity of field-based employees. This will become essential; as mobile BI moves beyond the experimental phase, organizations will need to justify their investments more convincingly. To rationalize their investments on a productivity basis, organizations will need to measure the productivity of the field force in order to establish a baseline.
- **Ensure a robust and secure mobile ecosystem.** A mobile BI initiative should not be considered without a well-implemented mobile infrastructure to deploy, manage, support and secure it. For specific recommendations, please refer to the May 2011 Aberdeen report *Enterprise Mobility Management 2011: Mobility Becomes Core IT*.

When deployed across the organization, mobile business intelligence fosters a culture of organizational agility and individual empowerment, by delivering decision-critical information for analysis wherever and whenever it's needed. This can be while at a desk, in the hall, in a conference room, in the street, in a taxi, or at the airport. It is especially effective when deployed at the customer interface, or for operational triage or exception handling.

The Best-in-Class in the study derived measurable business value from their mobile analytics capabilities that extended beyond employee empowerment: 92% also had very or extremely satisfied customers, with an average 18% increase over the prior 12 months, over twice the improvement of Industry Average and four-times the Laggards. They were also able to access the information required in order to make critical business decisions 87% of the time. This is 40% better performance than the Industry Average group and 6-times great than Laggards.

In addition to more satisfied customers and better access to information, a well-implemented mobile business analytics initiative also bestows a 'halo effect' upon both the organization and the IT team which implements it.

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