Mobile analytics: 7 best practices
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Introduction

The end user’s personal requirements for mobile connectivity anywhere, anytime, have translated to the workplace. The combination of business intelligence (BI) and mobile technical maturity has created immediate opportunity, as well as the challenges of uncertainty. Concerns regarding privacy and security, device management, user requirements, and proliferation of data and performance have become paramount. These questions have given organizations reasons to pause, while end-user expectations are ever advancing. The benefits and opportunities abound with mobile analytics, including increasing business process efficiencies, resource accessibility and engagement. The mobile analytics frontier is quickly becoming the cutting edge for business transformation and innovation, empowering end users with real-time information in any location. The technical maturity of both BI and mobile applications has created the mobile analytics call to action.
Some of the initial challenges in the mobile device and application proliferation have caused standard misperceptions in the IT realm. The initial failures in ported systems replicating point-and-click technology created a first generation of mobile Internet and application users that were quickly disenfranchised with the technology. Widespread security and privacy concerns have translated into the corporate data realm with alarming consequences. The traditional IT device management nightmare has reached new levels with the bring-your-own-device (BYOD) culture exploding. Meanwhile, mobile providers and networks were advancing capabilities in cross-platform, multi-environment suites and evolving applications to the “deploy once, deploy everywhere” model. The underlying truth is that device and application technology advancements have surpassed the quality and capability gap, making actual BI challenges equivalent to mobile BI challenges.

### Challenges and misconceptions
- Replicating point/click technology
- Security and privacy concerns
- Mobile device performance
- Complexity of device management/BYOD
- Increasing demand of user requirements — “there’s an app for that”
- Matching device to business user role
- Managing yet another application

### Opportunities
- Anywhere, anytime accessibility
- Increased usage of existing BI consumers
- Net new BI consumers in new and different roles
- Executive/leadership accessibility
- Increased production/efficiency
- Improved customer service
- Reduced supplier costs through collaboration
- Center-led mobile solutions
It is possible to apply a best-practice methodology across mobile analytics implementation. These techniques could be applied to any mobile analytics deployment, regardless of the tool set; however, they are especially focused on deploying the prebuilt mobile capabilities and assume some of the inherent technical advantages.
Understand the role of data architecture and governance

One of the distinct advantages of mobile deployment — increasing the BI application users and usage — can also be a detriment if there are existing master data management and data governance issues. This relates back to the core BI capabilities, regardless of consumption device. If there are master data and data refresh issues that are currently active in the BI deployment, these issues will be magnified in a mobile deployment to more users. Proper mobile data governance procedures and protocols must be an extension from implementation practices and related to the business intelligence competency center (BICC) or center of excellence activities within the IT group.

Three success factors have to be considered in any BI deployment, as well as a mobile analytics implementation.

- Report functionality: If current reports are not functioning to user requirements, then the BI solution will not be successful, and neither will the mobile deployment.
- Data quality: Out-of-date and inaccurate data can limit both the success of a BI tool and the mobile extension of that tool.
- Performance: Consider the ability to generate reports quickly to meet and exceed user expectations.

In addition, policies must be in place for data access, availability and security to mobile users. Data definition standards should also be re-evaluated, considering there may be new BI users in the mobile deployment.
Mobile analytic capabilities have now become a prerequisite for enterprise analytic platforms. This has rapidly decreased mobile development time down to zero, with dashboards and reports already developed on an enterprise platform immediately available via mobile devices. This puts the pressure back on the IT department to establish security protocols and governance procedures for an entirely new spectrum of devices. How will personal device access be governed? Will mobile analytic applications require containerization via third-party applications?

Will VPN access be required, and how will that affect expectations for a single sign-on experience? Will you allow data to be saved to the device? These questions and many others need to be addressed upfront so mobile security and governance can keep pace with the rapid development from the application side.

As soon as mobile analytics is a consideration, decision processes around policy, procedure and governance need to be initiated.
Segment users and their requirements

Given the increased number of users and usage presented to BI, you must carefully consider the end-user population in terms of their roles and requirements. Once a strong understanding of the users and BI is developed, you can segment and prioritize requirements for delivery. This can include defining access to reports and functionality for certain user groups so their mobile experience is focused on exactly what they need.

While mobile analytics can show value to all levels and roles within an organization, there are four primary user groups that get the most value from mobile analytics: executives and senior management, sales personnel, field operations personnel, and project managers/R&D professionals.

- Executives and senior management regularly receive the most value out of mobile analytics, and are often some of the earliest user groups to receive this functionality. Executives can be light users of personal computers, resorting to hard copies. They must also be able to access dashboards and key metrics at a glance or on the move. The ability to make key decisions in real time, without the use of traditional access or static reports, is a primary requirement. Additionally, executives in board settings can access reports when questions arise on the fly. Board books and financial reports accessed on a tablet are valuable in the boardroom setting.

- Sales personnel, or anyone in constant contact with customers, will benefit enormously from sales and customer relationship management analytics. Access to timely information allows the sales force to increase sales through order management, upselling/cross-selling and reacting to opportunities with informed decision-making. Additionally, sales analytics can provide customer segmentation analytics — informing the sales representatives while they are in the field on customer cost-to-serve and profitability metrics, as well as pricing strategies.

- Operations personnel that need active on-the-go information regarding product inventory, processes or services delivered, or logistics are excellent candidates for mobile analytics. For example, getting real-time information or proactive alerts on inventory while on the shop floor or in cycle count situations has tremendous value.

- Project managers and R&D leaders are often in environments where traditional desktop access is limited. Whether it is in the lab or on a construction site, timely access to project analytics in the form of task management, financials and budget reporting can deliver efficiencies and informed decision-making.
Start small/start quickly

BI capabilities can be phased by function and/or user group. It is important to broker early success with users and quickly enable users that are already comfortable with mobile devices and applications. These user groups have a high degree of success. Embedding that early use within a critical business process for immediate results is a good way to create a buzz about mobile analytics and increase interest in the offering.

Most of the initial technical disruptors have stabilized regarding devices, networks and applications. Mobile BI capabilities are serving as functionality in the holistic solution instead of separate applications to be configured and managed. The maturity of the hybrid architecture reduces the risk of starting too soon, especially in targeted user groups. With the demand for mobile analytics fueled by the consumer markets, IT departments do not have the luxury of waiting for further advancements given increasing requirements.
Companies that enable mobile analytics can significantly increase usage of a BI solution. While it is important to start small and quickly, having a vision for widespread user adoption is critical for sustained success. Developing a rollout plan for user groups based on the maturity of the BI content and solution provides a plan for maximizing the use of mobile analytics. This also provides the opportunity for incremental success and milestones — creating a plan to meet the demand of business users.

It is imperative to understand target users and their preferences for adopting mobile analytics. To understand potential users and their preferences, it is important to note their existing usage of devices (e.g., tablets, smartphones, laptops, PCs, etc.). In a study conducted by Harvard Business Review in 2015, 44% of survey respondents said that mobile is a crucial part of their infrastructure. It is especially important in certain industries, as half of the employees in the utilities and technology sectors cited mobile devices and access as critical factors. In terms of the benefits of mobile devices, 64% said that “anywhere access” to corporate apps and data is the leading benefit, followed by increased productivity. Therefore, it is clear that employees are aware of the capabilities and are using mobile devices in some manner. Users typically would like to consume more information through their mobile devices, but need the proper change management and training techniques to maximize the right reports and analytics for their job. Targeted usage, in line with business processes or compliance measures, is the ideal entry point for these user groups. Also, the use of mobile alerts to invoke action can provide the immediate utility of the mobile reports, rather than waiting for a user to proactively accept ad hoc usage. Alerts not only prompt action but encourage usage and acceptance.

Develop purpose-built mobile applications

Mobile Application Designer (MAD) is a technique to tailor analytic solutions to mobile scenarios and put the development in the hands of end users. The primary standard is consumer ease of use, allowing everyday business users to create custom-tailored applications without extensive technical knowledge. MAD extends the analytic capability throughout an organization by allowing everyday users to not only customize and access their BI platforms, but by allowing them to do so at any time, at any location, on any device.

Granting widespread access of critical information that is easily tailored to a user’s experience and line of business has innate practical applications. Take the following examples into consideration:

<table>
<thead>
<tr>
<th>Subject areas</th>
<th>MAD-enabled</th>
<th>Status quo</th>
</tr>
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<tbody>
<tr>
<td>Sales and marketing</td>
<td>A marketing director could quickly access an application showing total sales and effectiveness of marketing campaigns listed by country, region and marketing team in all of South America on his tablet computer during a conference call with his constituents.</td>
<td>The same marketing director would either have had to call each office in each country to find their respective sales, or he would have had to put in a request for IT to create an application to fit his needs.</td>
</tr>
<tr>
<td>Operations</td>
<td>A plant manager can access critical information regarding operational efficiency listed by step and machine in the manufacturing process on his smartphone while physically inspecting the manufacturing line.</td>
<td>The plant manager would need to have in-depth information regarding the manufacturing process that would be very difficult to find, or a highly specified BI platform at the corporate headquarters.</td>
</tr>
<tr>
<td>HR</td>
<td>An HR manager could bring up key success and retention indicators based on degree, location and business segment directly on her tablet while on a college recruiting trip.</td>
<td>The HR manager would have needed a custom-built application far ahead of time, and to have made enough reports from that application to sufficiently service them on a campus recruiting tour.</td>
</tr>
<tr>
<td>Executive</td>
<td>A CEO could have instant access to overall firm performance, with the ability to drill down into specific performance of marketing, finance, IT, etc., on his smartphone during a meeting with the board of directors.</td>
<td>The CEO would have needed each C-suite officer from their organization (CFO, CIO, etc.) or a relevant employee to effectively respond to demanding questions made by the board of directors, or enough reports made from a prebuilt application for high-level and specific business performance analysis.</td>
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Embed mobile analytics into the business intelligence competency center

As mobile analytics become a standard consumption method of BI in an organization, it is important to include mobile capabilities in the BICC.

Key factors to consider on an ongoing, iterative basis for mobile analytics:

- Assessment and understanding of ongoing and future business requirements
- Understanding of the technical capabilities of users through continuous monitoring of the BI skill sets and enhancing the skills as required
- Standards and guidelines established and enforced to facilitate efficient and consistent operations
- Continual communication with the business to understand issues and modify as needed
- Incorporation of both business and subject matter experts and power user resources as advocates and advisers for mobile analytics solutions
- Structured release of content and capabilities through change and release management, utilizing standard and accepted communication channels
Conclusion

Analytic tools traditionally accelerate existing decision cycles, helping business leaders make more accurate and informed decisions. Mobile analytics elevates this value, bringing informed decision-making capabilities outside of the traditional office setting and on the go. Furthermore, when mobile analytics is deployed, the increased use of BI in new roles provides more information to key decision-makers, giving them an increased ability to act on identified opportunities.

By properly understanding user groups and mobile requirements and determining a rollout strategy to broker early success, companies can launch mobile analytics successfully. From there it is possible to envision widespread user adoption to realize the full potential of BI, regardless of time, place or role. Finally, integrating mobile concepts into data architecture, governance and BI centers of excellence will sustain the benefits of mobile analytics. Forward-thinking organizations are seizing the opportunity to create a competitive advantage with informed business processes and business transformation initiatives.
About the author

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John Stilwell is a principal in Grant Thornton’s Business Advisory Services practice. He is currently a national lead in Grant Thornton’s Business Technology Solutions group with a focus on Oracle Business Intelligence. He is an expert in the area of analytics and business transformation initiatives. He is a recognized national speaker and thought leader on the topics of foundation analytics, mobile analytics, scorecard and strategy management, and multidimensional reporting tools. He has more than 15 years of consulting and technology experience in a range of industries where he has provided clients with solutions, including analytics, enterprise performance management, strategic planning and strategic cost reduction.
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