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5 Best Practices for Mobile Business Intelligence

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Mobile business intelligence is fundamentally different than traditional business intelligence. The devices are different (tablets instead of desktops), the needs are different (get details for this customer standing here, not all customers) and the attention span of your audience is different (on the go, probably distracted.)

But the potential benefits are huge. For one, you can stop making decisions without the benefit of data. Mobile business intelligence can be woven much more closely into where work is getting done: hallway conversations, stand-up meetings, executive briefings, and discussions with customers and partners. To assume that everyone is at their desk or with their PC when they need data is to limit the potential of business intelligence.

Another major benefit is to spread business intelligence more widely throughout your organization. This can help you create a culture of data-driven decision making. Some figures show that only 8% of the people in most organizations are using business intelligence¹. That's a huge failure for business intelligence initiatives with a mandate to push information out to the entire organization.

Mobile offers the possibility of finally spreading BI throughout the organization. A recent survey by Howard Dresner confirms the growing adoption of mobile business intelligence. "The vast majority (>70%) of respondents indicated that less than 10% of users currently have access to Mobile BI capabilities. However, their optimistic outlook for the next two years is striking – with over 30% suggesting that usage will increase to between 11 – 20% and over 30% indicating usage over 21% in the next year." Mobile Business Intelligence Market Study, September 2010, Dresner Advisory Services, LLC. www.mobile-bi.study.com

For those considering mobile BI or already going mobile with BI, here are five best practices for distributing information with a mobile audience in mind.

- Avoid dashboard proliferation
- Write to a smaller form factor
- Consider an audience on the go
- Account for new mobile scenarios
- Leverage mobile's natural process of collaboration

¹TDWI, cited at <http://www.datamartist.com/business-intelligence-adoption-low-and-falling>

Avoid dashboard proliferation.

Mobile BI is about more than throwing the same old dashboards up in a tablet. The trick is to adapt, not recreate the wheel. Ultimately, you'll want to use many of the same dashboards on the go and at your desk in slightly different ways.

Avoid the trap of dashboard proliferation. Don't recreate each of your core dashboards for every different device. Rather, take an "author-once, distribute everywhere" approach: plan to create your dashboards once or adapt existing dashboards, and make them available on all relevant devices.

To adopt this best practice, look for a business intelligence solution that supports author-once, distribute everywhere dashboards. For example, the software must detect different devices and provide touch-optimization for mobile devices. If your solution requires you to build a new dashboard for mobile usage, you'll never be able to reap the benefits of reuse. By adapting, rather than recreating your dashboards, you can save yourself a lot of time and maintenance headaches.



Figure 1: With an author-once solution, interactivity is optimized for touch automatically. You should not have to author a separate version of each dashboard for mobile use.

Write to a smaller form factor.

The display size of tablets, while more generous than a phone, is smaller than what people have at their desk. This difference in form-factor has a big effect on how people use business intelligence.

It's a question of using your space well. There is plenty of room to show off dashboards on a smaller screen. Here are some tips for publishing content in the constrained space of a tablet:

- Put your most important view at the top left. It's where your users' eyes will naturally start.
- Limit your dashboard to 2-4 main views. Overcrowding the screen will make the dashboard much less usable on the go.
- Be stingy with legends and filters. Eliminate all but the most necessary filters. And do you really need a color legend if your colors are labeled within the view?
- Bigger is better. Use large marks to make sure people can select them with their fingers. Use large font sizes so that people can read explanations and titles.

Figure 2:
The original version of this sales dashboard included 5 views and 5 filters.



Figure 3:
The mobile version has been simplified to 3 views and three filters. The most important view, daily sales, is large and at the top. The two views removed from the dashboard are included as tabs, so the information is still accessible.



Consider an audience on the go.

Another major difference between publishing analytics for mobile versus desktop use is that you can't assume people have time to dig in. Your users will most likely be browsing for high-level takeaways or trying to find a very specific piece of information.

As you evaluate your dashboards with mobile users in mind, make these small but important changes:

- Allow drill-down: your dashboards should be launching-off points for getting more specific data. Make sure your tool provides the ability to drill down into different slices of data so people can follow their natural train of thought. For example, a report on productivity and customer satisfaction across call centers should allow you to drill into shifts and employees at a specific call center. Otherwise, you won't be able to diagnose problems while doing call center reviews.
- Offer filters appropriate to on-the-go employees: Authoring a view for a support person who will be visiting customers? Add a customer search filter instead of forcing him to browse by industry or location to find a customer. But don't overdo it: providing exactly the right set of filters, no more and no less, will help your employees make better use of mobile BI.
- Provide content search: Getting the right information in a dashboard is important, but none of that matters unless you can find the right dashboard in the first place. Most organizations have dozens, if not hundreds of reports. Make it easy for users to search for different content by project, publisher, date, name and other facets.

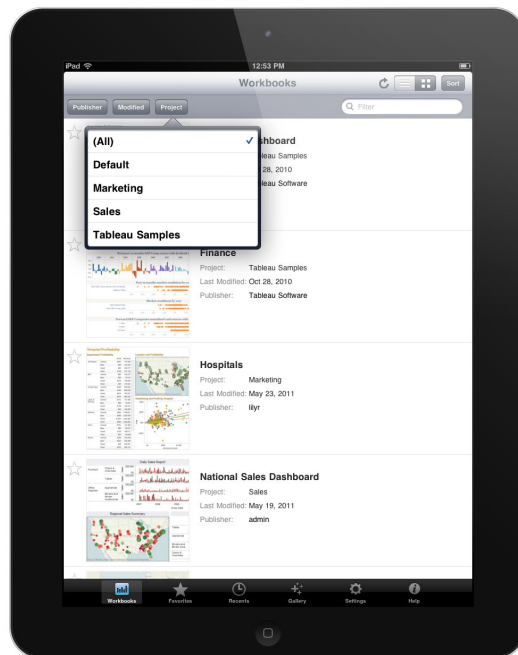


Figure 4:
Where was that dashboard again? Fast, effective content search is a critical part of mobile BI.

Finally, consider whether your users will need training: if they must learn a brand new interaction paradigm to engage with your mobile content, you'll see lower adoption and reap fewer of the benefits of mobile.



Account for new mobile scenarios.

While we've been emphasizing an author-once, distribute everywhere approach to mobile business intelligence, occasionally there will be a big payoff in designing new views specifically for the mobile environment. As you roll out your mobile strategy, ask: "Are my existing dashboards sufficient? Do they provide the kind of information that someone would need as they're walking around and interacting with colleagues, customers, partners, patients?"

For example, consider creating a dashboard for support people to use on-site with customers that has information about the customer account, parts availability, and schedules all on one dashboard. Or, build a line-of-business dashboard that contains all key metrics. This makes it easy for executives to rapidly get answers about key business trends in the middle of long planning sessions.

To discover potentially valuable new way of presenting information for your consumers,

- Ask them what is the hardest part of their job.
- Ask them what information is hardest to get and when they need it.
- Follow one person for a day and observe her as she goes through her regular routine. Notice the times when she needs information and see how much information she's able to get.

Leverage mobile's natural process of collaboration.

Mobile applications are naturally social. They are used in meetings, at customer sites and in operations centers. Tablets are particularly social: they are convenient to carry around, they start up instantly and they are easy to hand back and forth.

Take advantage of this with your mobile business intelligence applications.

- Provide interactive filtering, sorting, panning, and zooming so that users can walk through data live over the course of a meeting.
- Allow commenting on views so that questions and observations aren't lost.
- Make sure your solution is fast enough that it can keep up with the pace of a discussion. People will move ahead without the necessary information if the dashboard fails to load quickly.

Finally, make sure that your mobile business intelligence supports all of your data security and authentication. While mobile business intelligence provides great opportunities for collaboration, it also has the potential for security breaches if you do not make sure the right protocols are in place.



Conclusion

Mobile business intelligence may finally fulfill the promise of a 30-year old industry: to provide information when and where it's needed. But to make the most of mobile, you need a strategy that leverages your existing BI assets while adapting them for a mobile environment.

Best practices include:

- Author once, distribute everywhere
- Write to a smaller form factor
- Know your audience is on the go
- Account for new scenarios enabled by mobile technology
- Take advantage of the collaborative nature of mobile technology

Each is critical to the success of a mobile business intelligence project. Together, these best practices will help you move thoughtfully into the mobile age. But they are only the beginning; collaboration, information and security will continue to evolve as we unchain business intelligence from the desk.

About Tableau Software

Tableau Software, a privately held company in Seattle WA, builds software that delivers fast analytics and visualization to everyday businesspeople. Our mission is simple: help people see and understand data. Tableau's award-winning products integrate data exploration and visualization to make analytics fast, easy and fun. They include Tableau Desktop, Tableau Server and Tableau Public.

We understand the needs of businesspeople, non-technical and technical alike, when it comes to retrieving and analyzing large volumes of data. As a result, Tableau has already attracted over 65,000 licensed users in companies from one-person businesses to the world's largest organizations. For a free trial, visit <http://www.tableausoftware.com/trial>.

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