

Visualization

Set Your Analytics Users Free

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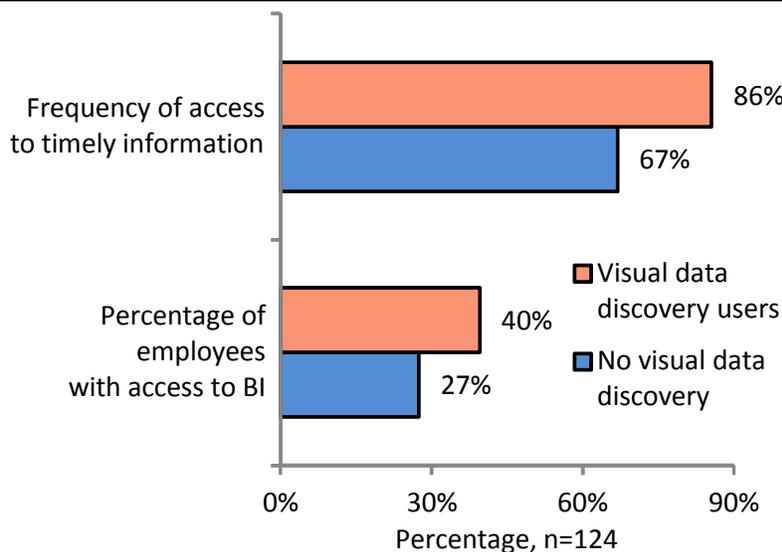
Visualization: Set Your Analytics Users Free

Visual data discovery tools (see sidebar definition) are a relatively new addition to the spectrum of business intelligence solutions. Data collected by the Aberdeen Group in February 2012 (*Picture this: Self-Service BI through Data Discovery & Visualization*), found that employees in organizations that used visual data discovery were more likely to find the information they need, when they need it. In addition, these same companies were able to scale their use of scarce IT skills more effectively. This new research — based on data collected in May 2013 from 29 organizations using visual data discovery and 95 that were not — reinforces those findings. In addition, Aberdeen's research demonstrates that visual data discovery can help to usher in a different approach to analytics, an approach that is far more user driven.

Enhancing Productivity with Visual Data Discovery

As Figure 1 shows, managers in organizations using visual data discovery tools are 28% more likely than their peers that use just managed reporting and dashboards (see sidebar) to find timely information (86% vs. 67%).

Figure 1: Superior Performance of Organizations using VDD



Source: Aberdeen Group, May 2013

This is fundamental, providing a real opportunity to gain competitive advantage. When visual data discovery tools are used as part of a BI portfolio, almost one-third more business decisions can be based on facts,

Analyst Insight

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

BI Definitions

This Analyst Insight discusses three different styles of BI:

- ✓ **Managed reporting:** Information is often presented as tables of numbers, perhaps with the occasional chart. User interaction is limited or non-existent. Changes or enhancements must often be made by the IT organization.
- ✓ **Dashboards:** Presents information both numerically and graphically. The ability to interact with data — using “drill-down”, for example — is common. Usually, IT skills are heavily involved in the completion of dashboard projects.
- ✓ **Visual data discovery:** A rich, highly interactive, visual tool is provided to business users to allow them to manipulate and explore information directly. Although corporate IT is still involved, a large part of the responsibility for creating and accessing different views of the data falls on the business community.

not gut feel. In addition, analytics can be used more widely throughout the business. Organizations that use visual data discovery are able to get analytics into the hands of 48% more of their employees, compared to those companies that just depend on other forms of business intelligence (40% vs. 27%). One of the main factors enabling this greater adoption is that analytics users are more likely to be self-sufficient in their use of BI tools. That is, they are less reliant on skilled IT professionals to help them find the information they need, create new reports or visualizations, or to modify existing BI assets to meet changing business needs. At organizations that use visual data discovery tools, 48% of BI users are able to find the information they need without the help of IT staff, all or most of the time. Where visual data discovery is not used, only 23% of BI users operate with this degree of independence.

The more widespread use of self-service analytics is a direct driver of more widespread analytics adoption. When users are mostly self-sufficient in their use of BI, skilled IT staff can spend more time rolling analytics out to more employees, instead of spending time supporting existing users. For example, organizations that use visual data discovery tools are able to support 449 analytics users for every full-time equivalent (FTE) employee with IT skills working in a BI support role. Organizations that lack visual data discovery tools have only 248 analytics users for every supporting FTE.

Free At Last, Free At Last...

The right technology can help to make business managers more self-sufficient in their use of analytics technologies. However, technology alone is never enough. Management expectations and learned organizational behavior often provide formidable barriers to worthwhile change. As Figure 2 shows, a number of cultural factors are important to consider if organizations are to take full advantage of visual data discovery tools. Seventy-four percent (74%) of organizations that use visual data discovery empower users to make changes to their analytics environment as they feel necessary. Fewer than half (48%) of the organizations that do not use visual data discovery permit this degree of freedom. Sure enough, part of that difference may be due to the choice of BI solution. For example, the BI tool used may not allow end-users to make changes to the presentation of information — or it may just be too hard for non-technical staff to make those changes.

But, even if analytics users are provided with BI technology that allows them to make changes independently, self-service analytics still may not take root and thrive. Perhaps the head of the BI technical team is concerned that their team will shrink if modifying reports and visualizations is taken up by business users, instead of being purely an IT responsibility? Alternatively, business managers may believe that BI is “technical” — and so not something that they should be concerned with, or responsible for. Either way, attitudes like these can inhibit timely decision-making. As noted earlier, managers at companies that use visual data discovery tools are 28% more likely to find timely information than their peers who do not. The ability for

Getting to Timely Information

The most important measure of business intelligence success is this: **How frequently are managers able to find the information they need in time to impact their decisions?** Survey respondents were asked how often they could achieve this, on average. For example, 100% would mean every single time, 50% would mean half the time, and 0% would mean that managers were never able to find the information they needed, when they needed it.

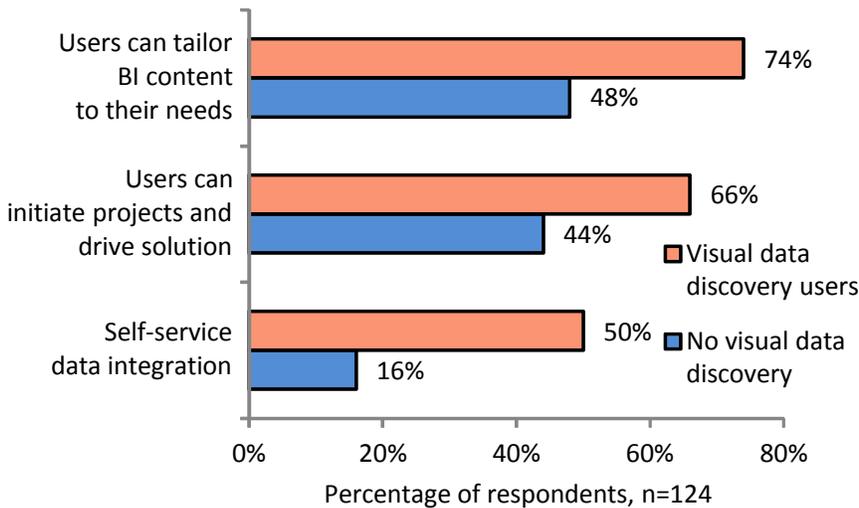
Performance here is partly dependent on the BI technology used*:

- ✓ **Managed reports only:** Managers in organizations that are dependent solely on managed reports are able to find timely information **62%** of the time.
- ✓ **Managed reports and dashboards:** Managers in organizations that use both managed reports and dashboards are able to find timely information **74%** of the time.
- ✓ **Managed reports, dashboards, and visual data discovery:** Managers in organizations that use managed reports, dashboards, and visual data discovery are able to find timely information **86%** of the time.

* No organizations that took part in Aberdeen’s survey used either dashboards or visual data discovery tools without managed reporting.

business users to act independently, to manipulate data, and find the answers to unanticipated questions is a significant factor in their ability to find the information they need in time to impact their decisions.

Figure 2: Promoting Cultural Change in the Use of Analytics



Source: Aberdeen Group, May 2013

Allowing analytics users to take responsibility for changing existing BI assets is a significant step. However, organizations that use visual data discovery are 50% more likely than others to allow business managers to initiate and drive new analytics projects (66% vs. 44%) too. This is noteworthy. In the early days of business intelligence, management information was delivered largely in the form of static reports that did not facilitate any interaction. Projects were often driven by corporate IT. *I've referred to this as the Ford Model T era of BI: Any color you want as long as it's black — any report you want as long as corporate IT has already built it.* But, over half of survey respondents are already using a more flexible project management approach to meet the needs of business users. Fifty-three percent (53%) of organizations use an incremental and iterative approach to BI projects to help ensure that requirements are correctly identified and met. From here, it's a logical next step to put users more firmly in the driver's seat for new projects.

Many analytics projects are dependent on data integration — bringing data from more than one source together to create more complete, or deeper, insight. Historically, this part of BI projects has been undertaken by corporate IT staff — and with good reason. First, a strong understanding of the conceptual relationships between various corporate data sources was necessary. Second, a detailed understanding of the meaning and use of each data item was needed. Third, deep technical skills were often required to perform the data integration necessary. But, what would happen if a business manager needed to integrate some personal or departmental management data — a customer survey, for example — with corporately

Collaborative Decisions

Sometimes, more than timely information is needed to make timely decisions. Decisions may be collaborative in nature, requiring several people to understand information and agree on corrective action. **Managers at companies that use visual data discovery tools are over 3-times more likely than others to be able to annotate and share a report or chart (68% vs. 21%).**

Understanding Data Potential

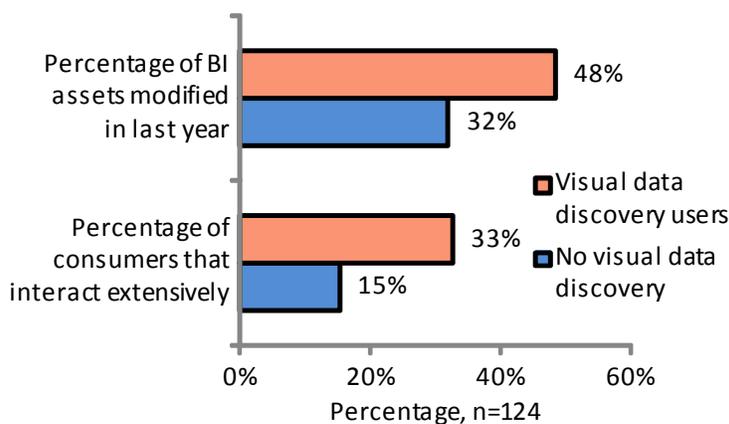
Survey respondents noted that the number of data sources accessible through business intelligence had grown by an average of 47% in the last 12 months. With such explosive growth, how are analytics users able to discover which new data sources are best to meet their needs? The self-service capabilities promoted by visual data discover may provide one answer. **Fifty percent (50%) of the organizations using visual data discovery solutions noted that they could easily assess the potential of new data sources for analytics.** Only 8% of the companies reliant on managed reporting and dashboards reported a similar ease of data exploration.

managed data assets? In the traditional BI world, they would have needed to request help from skilled IT staff to achieve this. And, through nobody's fault, they may have to wait so long for that work to be completed that it is no longer valuable. For example, prior Aberdeen research from November 2011 ([Agile BI: Complementing Traditional BI to Address the Shrinking Decision-Window](#)) found that corporate IT departments have an average BI project backlog of 143 days. In such situations, it may make sense to enable business users to perform simple integration tasks themselves, using appropriate tools. This step can help to ensure that managers are able to get the insights they need, when they need them. As Figure 2 shows, half (50%) of businesses using visual data discovery enable business users to integrate their own local data in some form. Only 16% of other companies allow this.

Towards a New Era of Analytics

At this point, we have the foundation in place to start to change the dynamic of business intelligence (Figure 3). Where visual data discovery is used, managers that consume BI content are over twice as likely as their peers to interact extensively with the information presented to them (33% vs. 15%). That interaction enables those managers to find answers to unexpected questions that arise through the day-to-day turmoil that is business as usual for many companies. More than that, it can allow managers to ask questions “for fun” — questions which they had never even thought of before, but are triggered by insights they get from exploring data.

Figure 3: Changing the Dynamics of Analytics



Source: Aberdeen Group, May 2013

With this in mind, it is perhaps not surprising that these same organizations modified 50% more of their existing BI reports and charts than their peers in the last 12 months (48% vs. 32%). This speaks to the flexibility that such solutions — and attitudes — can introduce. That flexibility is priceless when it is often so difficult for users to fully describe their analytics needs at the outset of a project. Of course, such flexibility also helps the analytics

Supporting Analytic Pioneers

Companies can help to support their more adventurous analytics users as they create their own reports, dashboards, and visualizations — or integrate their own data. **Fifty-four percent (54%) of the companies using visual data discovery decentralize their IT support skills and embed them within business units.** Only 34% of firms using just managed reporting or dashboards take this approach.

Locating supporting expertise close to analytics users can help ensure data quality too. Allowing analytics users to integrate their own local data with corporate data can create concerns about data quality. For example, what happens if an analytics user does not know that the “Customer ID” field used in the customer relationship management (CRM) application is not the same as the “Customer ID” field used in their customer satisfaction survey? Incorrect analysis and conclusions may result. To guard against this, **69% of organizations ensure that self-service data integration is evaluated for quality by IT professionals.**

solution adapt to address changing business needs. And notably, more of those changes were made by business users themselves without help from corporate IT (60%), compared to those organizations that do not use visual data discovery (52%).

Key Takeaways

Visual data discovery solutions are still early in the adoption cycle — only 22% of survey respondents currently use this class of analytics solution. However, a number of significant benefits and best practices are starting to emerge:

- **More timely access to information for more people.** In organizations that use visual data discovery, managers are almost 30% more likely to find information in time to support their decisions, compared to managers in organizations that only have managed reporting and/or dashboards. In addition, business intelligence is used more widely throughout the company. This is partly because analytics users operate more self-sufficiently without needing constant help from skilled IT staff, allowing scarce IT skills to be leveraged more effectively.
- **Changing mindset matters.** While visual data discovery solutions can facilitate change, the right attitude and management expectations are still an essential part of the equation. Almost three-quarters (74%) of the organizations using visual data discovery enable business users to customize and tailor their solution to better meet their needs. That can help to ensure that individual managers receive the right information at the right time. But, while customization may be technically possible, individual managers still need to take responsibility for making it happen.
- **Changing the dynamic of analytics delivery.** If a solution is sufficiently flexible and easy to use, analytics users can take a more central role in prototyping and building solutions, without help from corporate IT. Although definitely further along the analytics self-service spectrum, 66% of companies using visual data discovery have started to progress this far. Evidence supporting this evolution in thinking and behavior is found in the high number of changes made to existing BI assets in the last year (48%), with 60% of those changes being made by business users directly without IT help. In addition, organizations using visual data discovery solutions equipped 48% of their BI users with these tools. In the previous agile BI survey from April 2012, only 40% of users had access to this class of analytics.

The reward for changing the approach to analytics is self-evident — more people with more timely access to management information. This more dynamic, self-service approach to analytics is starting to challenge pre-conceived ideas of the business intelligence lifecycle.

Survey Demographics

The demographics of the 29 firms that already use visual data discovery were:

- √ **Headquarters:** North America (65%); Europe (28%); Asia / Pacific (7%)
- √ **Headcount:** Large (more than 1,000 employees) – 20%; midsize (between 101 and 1,000 employees) – 36%; small (100 employees or less) – 44%
- √ **Annual Revenue:** Large (greater than \$1bn) – 16%; midsize (between \$50m and \$1bn) – 32%; small (Under \$50m) – 52%
- √ **Industry:** IT consulting / services – 26%; software – 19%; automotive – 4%; computer equipment – 4%; construction – 4%; financial services – 4%; medical devices – 4%; industrial products – 4%; insurance – 4%; pharmaceuticals – 4%; retail – 4%; travel / hospitality – 4%; utilities – 4%; wholesale / distribution – 4%; other – 7%

Of the remaining respondents, 35 planned to introduce visual data discovery within the next 12 months, with another 32 planning to introduce this type of solution after that.

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Related Research

[Agile Analytics: Staying Afloat on the Rising Tide of Information Needs](#); June 2013

[Software-as-a-Service Helps Deliver Satisfied Analytics Users](#); May 2013

[Decisions on the Move: Mobile BI 2013](#); April 2013

[A Simple Cost Justification for Self-Service Analytics](#); February 2013

[Packaged Analytics: The Gift that Keeps on Giving](#); January 2013

[BI Without Tears: Analytics without Coding](#); October 2012

[The Grinning CFO: How to Get a Return on BI Projects in Less Than 4 Months](#); October 2012

[Operational Intelligence: Exorcising the Devil in the Details](#); October 2012

[Pervasive Cloud BI: Analyst, Advocate, Problem-Solver - All in One](#); September 2012

[Agile or Fragile? Your Analytics, Your Choice](#); July 2012

[Managing the TCO of BI: The Path to ROI is Paved with Adoption](#); May 2012

[High Performance Organizations Empower Employees with Real-Time Mobile Analytics](#); April 2012

[Picture this: Self-Service BI through Data Discovery & Visualization](#); February 2012

[SaaS BI: The Compelling Economics of Cloud-based Analytics](#); February 2012

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