INTERACTIVE DATA VISUALIZATION: THE IT PERSPECTIVE

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➔ **Peter Krensky,** Research Analyst,
Analytics & Business Intelligence

Report Highlights

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Pressures on IT personnel supporting interactivity	**Governance for data discovery**	**Cross-functional teams for rollout and training**	**Data management tools**

This Research Report examines the challenges, strategies, and technological capabilities of IT personnel supporting users of interactive data visualization tools.

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> Aberdeen surveyed 109 individuals in IT roles involved with business analytics, 49 of whom support interactive data visualization tools.

The View from Behind the Curtain

Recent Aberdeen Group research has gone through the strategies and key technologies surrounding interactive data visualization, as well as the quantifiable benefits derived from successful implementation. While the most exciting aspects of interactive data visualization may occur on the screens of users, it is always valuable to glance behind the scenes. Aberdeen surveyed 109 individuals in IT roles involved with business analytics, 49 of whom support interactive data visualization tools. This report offers the IT perspective on visual data discovery and highlights the differing practices and capabilities necessitated by interactivity.

## The Pressures of Interactivity

Supporting interactive visuals and data discovery presents specific pressures (Figure 1). A top concern of interactive visualization IT is that analytical decisions are based on inaccurate or incomplete data (cited by 31% of respondents). As stewards of business data, IT personnel are responsible for making comprehensive and definitive information available for visual discovery. Data that paints an incomplete or skewed picture is misleading at best and potentially disastrous for interactive visualization users. IT must work to improve overall data quality and help users interact with meaningful information.

The other top pressure haunting interactive visualization IT is fragmented and siloed information (31%). IT personnel see deep, disconnected wells of data throughout the organization which hinder discovery and collaboration. Users engaging interactive visuals within a data silo will only get a sliver of the complete business picture. Breaking down these silos is a top strategy for

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IT departments supporting interactive visualization (see sidebar).

Figure 1: Pressures on IT Supporting Interactive Visualization

n=109
Source: Aberdeen Group, July 2014
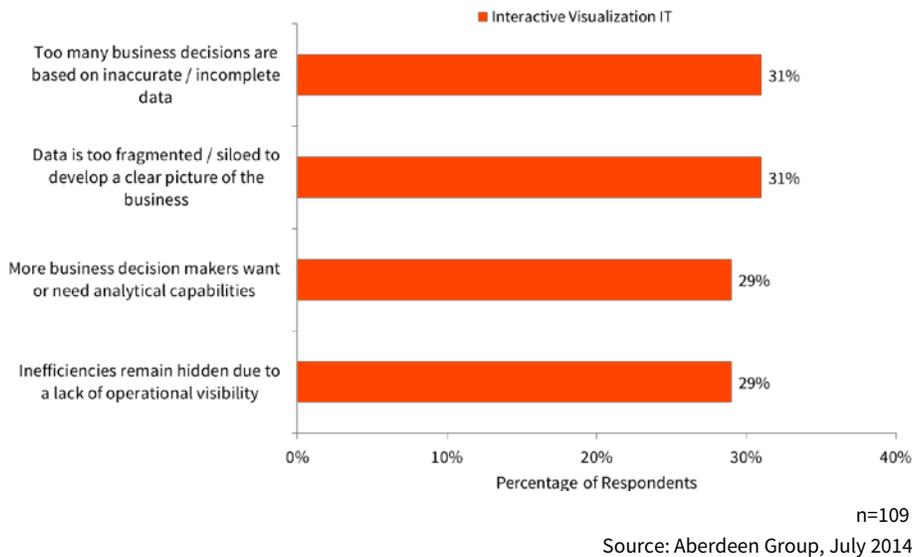
Interactive visualization IT personnel can become victims of their own success. Twenty-nine percent (29%) cited additional decision makers wanting additional capabilities as another top pressure. As decision makers interact with visuals and evangelize their analytical success stories, more individuals within the organization will clamor for the same capabilities. Greater demand means more users to support for IT. Finally, 29% of interactive visualization IT personnel feel the pressure of inefficiencies remaining hidden due to a lack of operational visibility. These individuals work to draw more operational data into interactive visuals so that decision makers can discover broken processes and unnecessary costs.

Governing Data and Managing Implementation

Interactive visualization is meant to help users discover new data and explore new angles towards insight. That level of

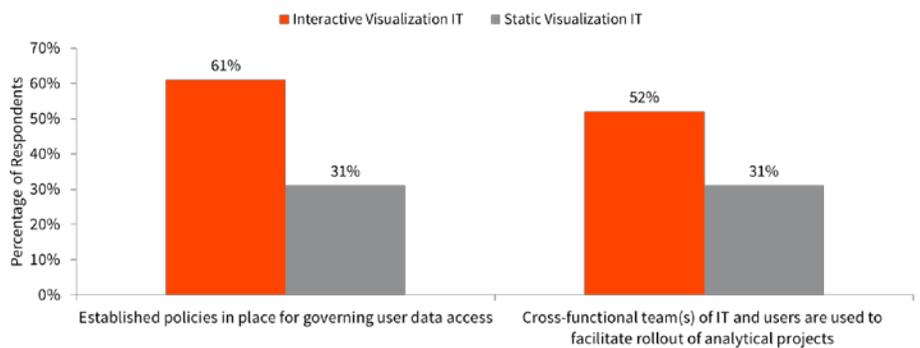Interactive visualization IT personnel reported their top strategies around analytics:

- Deliver analytical capabilities to more operational business functions (43% of respondents)
- Enable users to be more self-sufficient with BI capabilities (39%)
- Improve cross-departmental collaboration by breaking down information silos (35%)
- Create a long-term strategy or roadmap for managing the influx of data (24%)

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According to Aberdeen's Analytical Mind Map, interactive visualization IT personnel are 45% more likely than static visualization IT personnel to be creators of analysis.

analytical freedom benefits from IT guidance and support (Figure 2). Organizations with interactive visualization capabilities are nearly twice as likely as those with static visualization to establish policies for governing data access. Interactive visualization IT personnel take the vast data volumes they oversee and create processes and structures to guide information down the proper channels. IT departments with strong governance policies and capabilities will be more successful in getting the right information into the right hands for analysis. Solid governance also ensures compliance with internal policies and any pertinent regulations. Responsibility for security and data privacy falls on IT, and interactivity increases the need to remain legally protected as users explore new data sources. Limiting access also allows IT to filter out irrelevant information for users. Aberdeen's _Collaborative Data Governance: Peeling the Red tape off Data Discovery_ offers additional insights on the value of governance and IT's role.

Figure 2: Governance and User-IT Collaboration

n=109
Source: Aberdeen Group, July 2014

Interactive visualization IT personnel averaged a 26% increase in searchable / discoverable data over the past year.

Fifty-two percent (52%) of interactive visualization IT use cross-functional teams of IT and users to facilitate the rollout of analytical projects, compared to 31% of static visualization IT. This facilitation can include implementation, planning, training, and webinars to boost employee buy-in and adoption of

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analytical solutions. These teams also help develop and maintain open lines of communication between users and the IT department. Collaboration between users and IT fosters understanding. IT can better understand users' needs and provide superior support. Users can understand the demands of IT, such as governance, compliance, or responsibilities outside of data and analytics.

If You Give IT a Cookie…

IT personnel are more than willing to take on the challenges of visual data discovery, but they may want a little something for the trouble (Figure 3). Interactive visualization IT personnel are 45% more likely than static visualization IT to have data management and data quality tools. Data management tools make it easier for interactive visualization IT to corral multiple data sources and offer users more robust possibilities for exploration. Fastidious data management also ensures that all users can find and leverage the same data. IT personnel using these tools to support interactive visualization strive for the brass ring of data management: a single version of the truth. Data quality tools address the top IT pressure of incomplete or inaccurate data feeding analysis. These tools help IT spot problem data before it misinforms users.

IT staff are more than willing to take on the challenges of visual data discovery, but they want a little something for the trouble.

Interactive visualization IT personnel named sales as their most productive internal collaboration partner, whereas static visualization IT personnel named operations.

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Figure 3: Additional Analytical Technologies
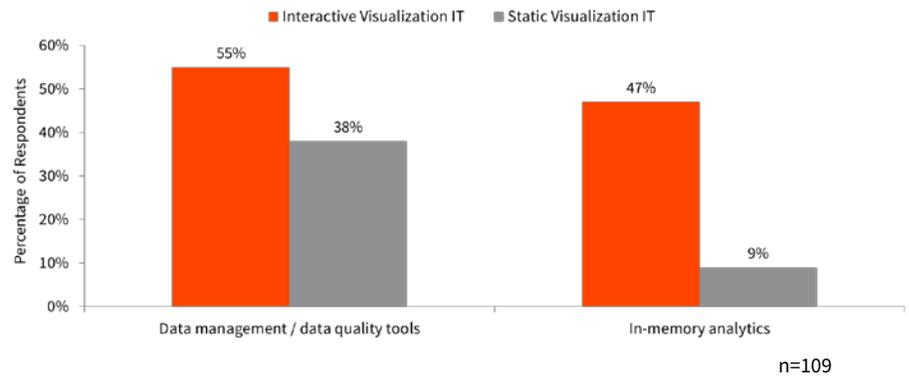
n=109
Source: Aberdeen Group, July 2014

"In-Memory Analytics: So Much Data, so Little Time"

Aberdeen's past interactive data visualization research has shown that technology adoption begets additional technology investments. Roughly half of IT personnel supporting interactive visualization reported adoption of in-memory analytics at their organization. Only 9% of IT folks supporting static visuals can say the same. IT working with in-memory technology saves users from having to wait while data is pulled from disk storage. In-memory complements interactivity, as data sits at the ready, waiting to be quickly discovered. Aberdeen's report, *In-Memory Analytics: So Much Data, so Little Time*, found that 66% of in-memory analytics users are satisfied with the speed of information delivery.

Key Takeaways

Interactive data visualization drives numerous analytical improvements throughout the organization and opens up untold possibilities for data discovery. All of these desirable results are not possible without IT personnel to keep data flowing and users happy. Examining the challenges, strategies, and capabilities of interactive visualization IT provides insights to achieve superior analytics and data management:

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➜ **IT personnel are worried about low quality data and information silos.** Thirty-one percent (31%) of interactive visualization IT personnel are concerned that inaccurate or incomplete data is informing business decisions. The same percentage regards the threat of fragmented information and data silos obscuring analysis as a top pressure. These IT personnel must also deal with more and more decision makers clamoring for analytical capabilities and the ongoing need to improve operational visibility.

➜ **Interactive visualization IT employ intelligent governance and implementation practices.** The freedom of visual data discovery benefits from IT guidance and support. Interactive visualization IT are nearly twice as likely as static visualization IT to have established data governance policies. Data governance gets the right information into the right hands and ensures compliance. Interactive visualizers are also 68% more likely to use cross-functional teams of IT and users to facilitate the rollout of analytical projects.

➜ **Technology begets technology.** Those organizations that have invested in interactive visualization tools often invest in other tools to make IT's lives a little easier. Interactive visualization IT personnel are 45% more likely than static visualization IT to have data management and data quality tools. They are also over five times as likely to have in-memory analytics.

Pay attention to the folks working behind the scenes; their insights can be just as valuable as the ones they help users generate.

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Related Research
Interactive Data Visualization: The Age of "Look but don't Touch" is Over; May 2014	*Interactive Data Visualization: Strategies and Key Technologies*; March 2014
Collaborative Data Governance: Peeling the Red Tape off Data Discovery; May 2014	*Analytics Trends 2013: The IT Perspective*; April 2013
In-Memory Analytics: So Much Data, so Little Time; April 2014	

Author: Peter Krensky, Research Analyst, Analytics & Business Intelligence (peter.krensky@aberdeen.com)

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