

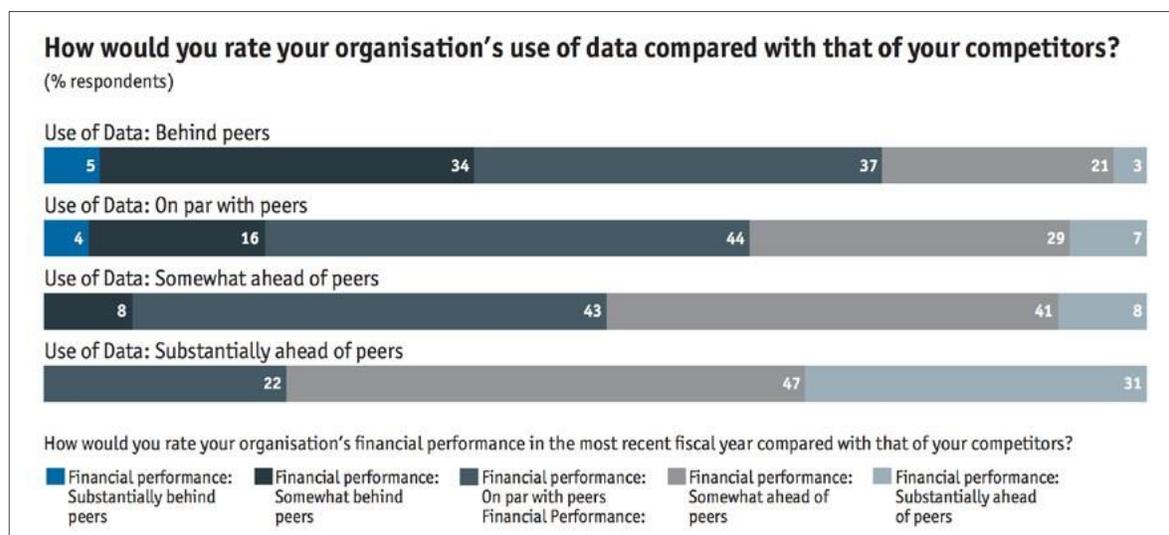
The Modern Approach to Business Intelligence

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Understanding data is critical to making the right decisions and staying ahead of the competition.

Your organization has plenty of data, and you understand the nuances of your marketplace. But traditional approaches to business intelligence are too slow, inflexible, and expensive. You need an approach to business intelligence that is governed and scales yet allows your business users to ask and answer their own questions with data.

The benefits of making decisions with data are well-documented. A recent Economist Intelligence Unit survey found that 43 percent of senior executives believe data is “extremely important” to strategic decision-making.



The survey also found that organizations using data “substantially ahead of their peers” were three times as likely to have “financial performance substantially ahead of their peers.” But despite the abundance of evidence, traditional approaches to business intelligence (BI) often fail to unlock the power of data. BI software, specifically, is too often complicated, inflexible, and slow.

This report outlines seven key attributes of the modern approach to business intelligence that will help you quickly see, understand, and share analytics. Whether you're working with data in spreadsheets, warehouses, or across disparate data sets, consider these attributes when evaluating software tools to empower your entire organization—from executives to analysts, to IT, across departments and geographic locations, in the office and on the go.

1. Speed
2. Visual Data Discovery
3. Connect to Any Data
4. Real-time Collaboration
5. Comprehensive Governance
6. Scalability
7. Mobile

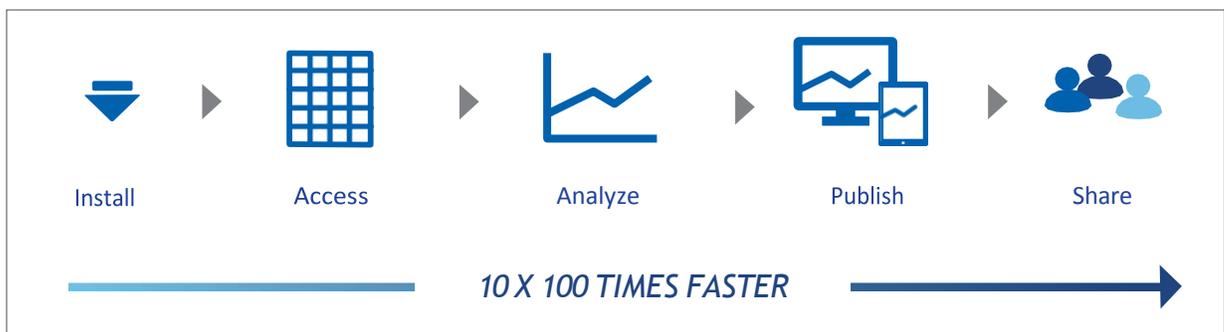


1. Speed

The traditional approach to business intelligence isolates analytics within a specialized reporting team. But this hinders companies from making critical decisions at the speed of business.

The modern approach gives you the ability to see and understand data at the speed of thought. You can ask and answer questions as fast as you think of them, even when working with massive and diverse data sets.

For your data to have an impact, the insight-to-decision process must be swift. The modern approach saves you time on every step of your workflow, from installing the software to accessing complex data sets, publishing interactive dashboards, and sharing across your organization.



Speed at every stage. Compared to traditional business intelligence, modern business intelligence is 10 to 100 times faster at every step.

Where traditional systems can take months to implement, the modern approach takes as little as a few hours. It allows you to easily combine data sets from different parts of the business on the fly. It also gives you the choice of using in-memory capabilities to speed up data sources and live connections to leverage fast data infrastructures.

“Static reports could take us two weeks to put together, in terms of getting all the data and then visualizing it all, and also running the analysis and then delivering that. Now we can do that in a couple of hours.”

—MICHAEL CONROY, TEMPERO



[Watch more of Michael's story](#) 

Consider how fast you can ask questions and draw insight from your business intelligence solution:

Quick to Install, Maintain, and Upgrade

Does your BI solution require weeks or months to deploy or change? Modern BI tools can be installed in a matter of hours or days, and is simple for your IT team to maintain and upgrade.

Reports and Dashboards in Minutes

Does creating or modifying reports or dashboards require a reporting team? Is this team inundated with more requests than it can handle? Modern BI solutions don't require a specialized team to create reports. Instead, they let you create your own dashboards in minutes, freeing reporting teams to work on strategic projects.

Simple Onboarding and Training

Does your BI solution require weeks of training before new users can analyze data and publish dashboards? Do users have access to on-demand training? Modern BI tools focus on ease of use, making new-user onboarding both simple and fast. On-demand courses and robust online guides are built into the solution to help answer any questions that arise.

Tempero, a social media management company serving brands like Sony and BBC, adopted the modern approach to quickly build and share interactive dashboards externally with its clients.

Michael Conroy, Tempero's head of insight and innovation, says old methods of BI slowed down the business. "Tempero delivered data to clients in static reports and PowerPoints that were hundreds of slides long," says Michael, adding that these reports took up to two weeks to create.

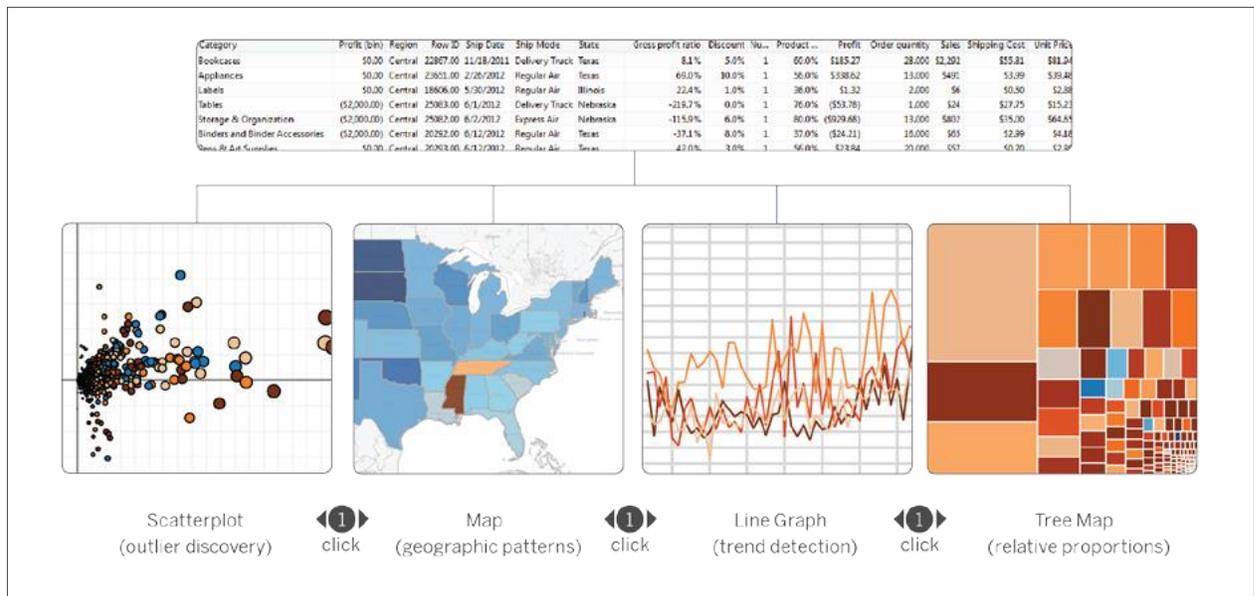
In place of slides, Tempero now creates and shares interactive dashboards directly with clients—a task that takes "a couple of hours," says Michael. This new process has allowed Tempero to deepen its relationship with clients. "They log on and have a look at the views that we've created for them," says Michael. And what results, he says, is "something that's more of a conversation around the data."

2. Visual Data Discovery

Visualizations reveal insights hiding in raw data, but without the right tools, they can be slow and difficult to build. A spreadsheet requires you to analyze data in rows and columns, choose a subset to present, then create a chart from that sub-table. Traditional tools also rely on wizards and text-based commands to arduously build charts.

In contrast, modern BI tools skip those steps. They help you easily create visual representations of your data with simple drag and drop actions. Modern BI is founded upon the principals of visual analysis, allowing you to easily spot anomalies, outliers, and trends in your data without needing to sort through pages of spreadsheets.

The modern approach also enables self-service analytics. Users can take full advantage of their visual discoveries by asking more questions, drilling down into the data, and ultimately generating shareable dashboards. At the core is a partnership between business and IT. IT designs the data architecture and enables the security and access control. Business people serve themselves the analytics and dashboards they need, when they need them. The result is a secure environment overseen by IT that supports not only an organization's data integrity but also empowers people to answer critical questions.



A well-crafted visualization makes the light bulb go off. *The modern approach to business intelligence skips the steps required in traditional BI and creates visual representations of data right away, giving you visual options and immediate feedback.*

Consider how easily you can ask questions and draw insight from your business intelligence solution:

Easy-to-use Interfaces

Is your BI software easy to understand? Does it have an intuitive user interface? Are business users empowered to ask and answer their own questions with simple, visual results? Is sharing insights as easy as exporting image files for a PowerPoint or publishing interactive dashboards to the web?

Interactive Discovery and Collaboration

Does your software enable dashboard users to perform basic analytical tasks such as filtering views, adjusting parameters, and creating calculations? Can you share visualizations via integrated, cloud-hosted services? Can users explore underlying details in seconds, without the need for special scripting or advanced database knowledge?

Easily Accessed and Combined Data Sources

Can your software connect to all forms of data, from text and Excel files to cloud and enterprise-grade databases, with a few clicks? Can the software blend data from different sources using only a common field and display it in a single view? Can your business users achieve these tasks without individualized support from IT?

Built-in Visual Best Practices

Does your BI solution help you find the right views to examine your data? Modern solutions aid your analysis by serving up visuals guided by proven best practices. Need to spot a trend? Modern BI will suggest a scatter plot populated with your data.

Interested in geographic distribution? Modern BI builds a map colored by your data without requiring any specialty files, plug-ins, or geocoding. These aids keep the focus on data and help you stay in the flow of analysis.

3. Connect to Any Data

Data is growing in every way—in volume and in the variety of data stores. Traditional BI made the assumption that data could, and should, be moved into consolidated enterprise stacks. But that’s not the reality for most organizations, which continue to have different databases in different places.

Modern BI accommodates diverse data sets, enabling people to easily combine massive amounts of data from different systems and all parts of a business. This solution works with data of any size, even petabytes. It works with unstructured or raw data. It works with spreadsheets and text files that exist in businesses everywhere. And most importantly, it does not require you to move your data to a new home before you can analyze it.

Similarly, modern BI lets you blend different relational, semi-structured, and raw data sources in real-time without expensive upfront integration costs. It also supports careful management of your data sources, allowing administrators to control and scale metadata that provides a single source of the truth for everyone. The end result: Users can explore the data without needing to know the details of how the data is stored.

Consider the following performance factors when evaluating your business intelligence solution’s ability to manage and benefit from any kind of data:

Augmented Data

Does the software allow users to bring in data from outside the company on-the-fly—like demographics and market research—to augment corporate data?

Fast Analytics with In-memory or Live Connections

Does the software provide fast query performance, either via its own fast in-memory software or by directly connecting to fast data stores?

“We have Excel files and text files that we work with. We’re connecting to Salesforce. Really the sky’s the limit ... as long as you have data, you can build it.”

— DAVID ANDRADE, MERKLE



[Watch more of David's story](#) 

Leveraged IT Investments

Does the software let users work with the existing data infrastructure already in place, freeing your IT team from creating more cubes, “universes,” and standalone marts? Does it support data security by allowing users to work with data where it’s supposed to be rather than copying it into unmanaged and unsecured spreadsheets?

Big Data and Cloud Warehouses

Is the software compatible with new database formats for raw, unstructured, and semi-structured big data? Does it easily connect to petabyte-scale data warehouses hosted in the cloud, like Amazon Redshift, Microsoft HDInsights, and Google BigQuery?

Architecture-agnostic

Does your BI software work well with both centralized and decentralized data architectures and vendors? Does the software support the increasing proliferation of mobile devices and applications? Does it offer a hybrid solution that is compatible with data regardless of how it is stored?

Merkle is a customer relationship marketing company with an international client list including Dell, Bank of America, and Johnson & Johnson. The company analyzes huge amounts of data on a daily basis. “We deal with all sorts of data. We do big data, we do medium data, we do small data. We do all the data,” says David Andrade, Merkle’s senior business intelligence analyst.

Merkle also deals with a diverse array of data types, from SQL Server to Salesforce, to Excel. That’s why it was crucial for Merkle to find a BI tool that’s analytically powerful regardless of data type. “Any one of those data pieces could be just as important as the other,” says David.

With a modern BI tool, David and his team are no longer limited by issues of data compatibility. Instead, they’re free to focus on the analytics. “I can say, ‘All right, well, I want to take this thing from this data source, that thing from that data source and just blend the two together,’” says David. “Really, the sky’s the limit. As long as you have data, you can build it.”

4. Real-Time Collaboration

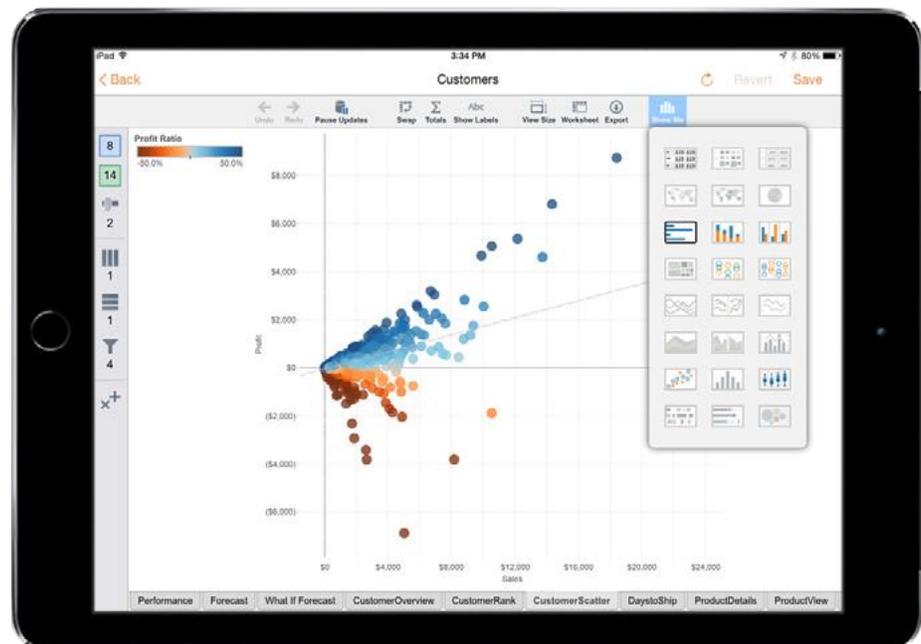
Traditional approaches to BI get in the way of collaboration. Prepared reports don't answer all your questions, and you often find yourself discussing problems rather than solutions. Moreover, reports often capture a snapshot in time that quickly becomes out-of-date, making real-time collaboration difficult.

Why not interact with data, live, during your meeting? With modern BI, you can filter, sort, discuss, and transform data on the fly. You can modify and update dashboards immediately with simple drag-and-drop interactions. You are not limited by the software's level of sophistication. Even sharing is made simple with live dashboards viewed in a web browser or embedded in cloud applications like Salesforce or SharePoint.

Consider whether your business intelligence solution empowers you to easily collaborate in real-time:

Natively Mobile

You make decisions in meetings, on site with customers, and on the go. Does your BI solution allow analytical insights to happen anywhere and everywhere? Does it offer a cloud-hosted version and native mobile apps?



Publish and share on the web. *Interact and edit analytics from your tablet, browser, or mobile device.*

Shared and Extensible Metadata

Modern BI tools provide your organization with centrally-managed data sources and a metadata layer that creates a single source of the truth. They also enable users to add their own calculations, create new groups, sets, and parameters, organize data into hierarchies, and modify aliases. With metadata that just works, users can easily share data sources and collaborate in real-time.

Centralized Data

The modern approach to BI also provides a data server as a central location to manage all published data sources. Modern BI empowers you to change permissions, add tags, and manage extract refreshes in one convenient location. Updated data sources become available immediately, allowing organizations to save time and effort traditionally spent on data updates.

5. Comprehensive Governance

Data is only useful when it's accessible. All organizations must strike a balance between data access and security. They must set their data architecture and adapt it as the business changes. Furthermore, organizations must determine what and how analytics are productionalized from in-process “sandbox” environments.

The traditional approach enforces strict lockdowns on data and reports, only allowing access by specialized reporting groups. This process results in lackluster adoption of analytics and decisions that are rarely data-driven. In contrast, the modern approach allows IT to set the rules and guidelines without limiting what business users can create. Where traditional BI restricts access to data, the modern approach views data governance as an important step in creating a safe and trusted environment for self-service analytics, leading to accurate, available, and audited dashboards and reports.

Consider how your business intelligence solution ensures that your data is accurate, available, and audited:

Accurate

Self-service analysis is meaningless unless users can trust that the data comes from an approved source and is up to date. Does your BI solution create a strong partnership with IT to ensure that data, whether from extracts or live connections, is 100-percent accurate?

Available and Secure

Unlike analysts who have access to all data, many users can only interact with top-level views that limit access to underlying data. Does your BI solution honor these distinctions with dashboards that automatically authenticate and provide the appropriate level of detail based on a user's privileges to the data source?

“We want to enable the business to move at the speed it needs to move to be competitive in the market. But at the same time, we also want to make sure our data is secure.”

— WENDY GRADEK, EMC



[Watch more of Wendy's story](#) 

Audited

Most organizational data has some level of confidentiality.

Does your software provide role- and group-based security options that allow business users to securely create and publish their work?

Does it ensure that comprehensive security controls and a complete trail of user access (often a legal requirement) are available at all times?

EMC helps businesses around the globe make the move to cloud computing while balancing security needs. Wendy Gradek, EMC's senior manager of BI and analytics, embraces the modern approach to BI to build fruitful collaborations between business users and IT. “We want to enable the business to move at the speed it needs to move to be competitive in the market. But at the same time, we also want to make sure our data is secure.”

“To have something successful, it really starts by having teams together at the table. And that's the business, that's BI and analytics, and that's IT, working together,” says Wendy. Modern BI enables her team to access the data they need to answer their own questions while keeping close ties to IT experts who maintain accurate data sources. “We have this business problem we need to solve,” says Wendy, adding that the modern approach helps her team respond with “something rapid, accurate, and sustainable.”

6. Scalability

Organizations typically want to pilot analytics projects with a handful of users, then scale up over time. However, traditional BI tools are complicated to configure and maintain, making it difficult to quickly scale up a deployment. Even worse, adding functionality often requires additional licensing fees. The result is too much, too soon. Organizations buy large minimum-configuration licenses to meet unproven needs, and much of the software goes unused.

Modern BI tools allow you to start small and scale at your own pace. Whether today's need is one business analyst with one data source or 10,000 field representatives on tablets accessing reports from the road, the modern solution supports all stages of an organization's analytical evolution.

Consider the following aspects of scalability when evaluating a business intelligence solution:

Powerful at Any Scale

Can you easily add users and features to quickly scale and customize to your organization's specific needs? From one person with a single license achieving immediate results, to an entire organization sharing dashboards, data sources, and security commitments, modern BI tools should be powerful at all scales.

Easy to Maintain and Upgrade

Is your software easy for IT to manage and upgrade?

The laborious process of installation and maintenance common in traditional approaches causes organizations to upgrade late or not at all. The modern approach focuses on simplicity in all phases of deployment, allowing businesses to capitalize on the latest improvements in technology.

SaaS, IaaS, and the Cloud

The modern solution offers the flexibility to deploy software in a way that fits your exact needs. Need extremely fast set-up with no infrastructure and maintenance requirements? Take advantage of software as a service (SaaS) options that allow you to quickly leverage software on fully managed servers that scale infinitely.

Need more control, but still want the scalability of the cloud?

Leverage infrastructure as a service (IaaS) options that allow you to deploy software in highly-scalable virtual environments while maintaining full control over networking services like firewalls and internal security protocols.

Licensing as Choice, Not Limitation

If on-premise software is a must, a balance of choice and simplicity is essential. When specific users are viewing and interacting with analytics, can you use a named-user licensing models that offers accessibility without the need for hardware considerations?

When users are more fluid and guest access is a must, can you choose hardware-based licensing that is tailored to your exact configuration needs?

7. Mobile

Old approaches to business intelligence involved long waits. Reports could take days, if not weeks, to go from initial request to final delivery. Adapting reports to mobile devices like tablets and smartphones extended that wait time even further. Analytical queries needed to be pre-asked; questions arising on-site or in the field couldn't be answered for days. Without exception, analytics stopped when you left your desk.

Mobile access is now a central function of the modern approach to BI. Smartphone and tablet compatibility is baked into the software from day one, offering the ability to view, interact, and share analytics regardless of device. The result is business intelligence that is woven into where work actually happens: hallway conversations, stand-up meetings, executive briefings, and discussions with customers and partners. To assume that everyone is at a desk when they need data is to limit the potential of business intelligence.

Consider how your business intelligence software incorporates mobile analytics:

Mobile From the Start

More and more people are working from home or traveling as a major part of their job. From CEOs to salespeople, having quick, reliable access to data is a requirement, not a luxury. Is mobile baked into your BI solution from the start so that it “just works,” with no need to create parallel systems or custom workflows?

Powerful, Tailored Features

Modern BI is not simply a shrunken desktop experience; it has features specifically tailored to small form factors. Can your BI solution quickly locate dashboard on your mobile device? Are your visualizations legible and easy to interact with? Can you filter, drill down, or add entirely new data to your visualization with mobile editing?

“[Our executives] are out in the markets, they’re out with customers. So if they have questions, instead of them having to pull up an Excel spreadsheet or some kind of document, they go straight to their iPad, pull up a dashboard, and answer the questions right then and there.”

— SHAWN CRENSHAW,
COCA-COLA BOTTLING COMPANY



[Watch more of Shawn’s story](#) 

Optimized for Touch

Forget right-click and control+z. Mobile interactions are fundamentally different from those on a desktop. Does your mobile solution allow you to interact with desktop-authored dashboards using touchscreen gestures like taps, flicks, and pinches?

At **Coca-Cola Bottling Company** (CCBC), where nearly all Coke in the southeastern US is bottled, traditional BI tools were stunting company growth. Sales people were often stuck in the office looking at metrics, crunching numbers, and generating reports when the needed to be in the field, selling their product. Similarly, executives traveling for business were often left without current data or useful dashboards.

Recognizing these challenges, the company set out to build a mobile, data-driven sales team and purchased iPads loaded with mobile BI software for employees in the field. Shawn Crenshaw, CCBC’s senior business analyst, now creates analytical solutions “with mobility in mind, so that everything we’ve built is efficient enough that somebody can get to it in two clicks, and they can make a decision right then and there.” CCBC’s executives are also benefiting from the modern approach to mobile BI. “If they have questions, instead of them having to pull up an Excel spreadsheet or some kind of document, they go straight to their iPad, pull up a dashboard and answer the questions right then and there,” says Shawn.

“Before it was always numbers in rows and columns. Now I’m eager to see when I do a new analysis, because it’s so much easier to actually see the trends, the story, and the power the data brings.”

— MARTA MAGNUSZEWSKA,
ALLSTATE INSURANCE

The Bottom Line

Organizations expect more from business intelligence. Where old models required you to conform to fixed software requirements, the new model amplifies your business by molding to the way you think, work, and act. Regardless of industry and size, enterprise, public-sector, and startup organizations alike are embracing a culture of analytics that is the hallmark of a modern approach to business intelligence.

The bottom line is simple. You know how to run your business, and data should empower your every move. When considering a BI solution that supports you and your organization, remember to evaluate seven key areas of impact:

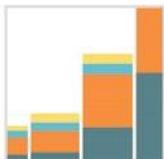
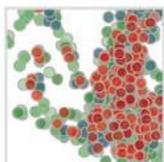
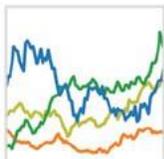
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- Mobile

The modern approach is about connecting you with your data. Marta Magnuszewska of Allstate Insurance saw a day-and-night difference in her job when her company adopted modern business intelligence. “Before, it was always numbers in rows and columns. Now I’m eager to see when I do a new analysis, because it’s so much easier to actually see the trends, the story, and the power the data brings,” she says.

With the power of data at your fingertips, what will you achieve?

About Tableau

Tableau Software helps people see and understand data. Offering a revolutionary new approach to business intelligence, Tableau allows you to quickly connect, visualize, and share data with a seamless experience from the PC to the iPad. Create and publish dashboards and share them with colleagues, partners, or customers—no programming skills required. See how Tableau can help your organization by starting your free trial at tableau.com/trial.



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