

Unlocking Analytic Insights

Bring your focus back to
better decisions, not just
better visualizations



Many analytics and business intelligence tools today reduce analytics to a visualization exercise.

What's more, they give scant attention to the aspects of analytics that matter most in enterprise settings: data access, governance, and scalability. And while they tout ease of use or advanced technologies, many tools leave out vital collaborative and practical functionality.

Today's challenges require more than self-service applications that only produce descriptive visualizations based on limited data. Yet when self-service tools focus on data visualization, they

minimize the importance of data governance and data integrity in enterprise settings. This limits our ability to gain true insights from our data and make meaningful business decisions.

In this white paper, we examine how visualizations came to be the predominant aspect of many BI tools. We then detail the four ways Pyramid Analytics has focused on a holistic analytics approach to help organizations make better decisions based on accurate, complete data.

Introduction

Over the last two decades, there have been dramatic changes in the ways organizations “do” analytics and business intelligence. This can be seen in the classic pendulum diagram below. In the early 2000s, most BI implementations were IT-driven enterprise analytic platforms. They tended to be large and centrally managed by IT.

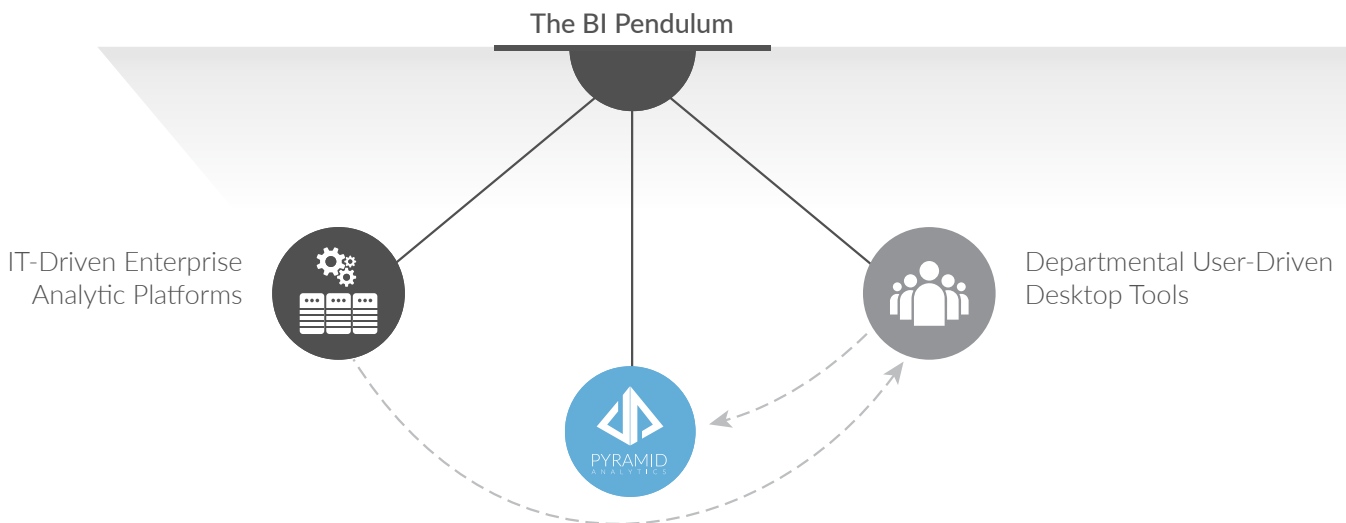
Over the last two decades, there have been dramatic changes in the ways organizations “do” analytics and business intelligence.

While all promised some degree of self-service reporting and analytics capabilities, they mostly failed to deliver true utility to end users in timescales acceptable to the business. In fact, users needed to be a BI developer with a requisite amount of skill to get the best out of these platforms. Business users were often frustrated trying

to extract data out of organizational data warehouses and data marts, as they were defined then. They were ultimately at the mercy of IT to do it for them.

Near the end of the 2000s, the market’s pendulum swung away from centralized deployments to departmental user-driven desktop tools. Business users could access solutions on the internet, pay a set price, download and install them on their desktop, connect some data sources, and start doing analysis and data visualization on their own right away—without IT’s knowledge.

The darling of this class of products let users readily create charts, maps, gauges and data grids far beyond what Microsoft Excel could do. While the applications didn’t offer sophisticated analysis or collaborative functionality, they gave end users newfound independence and freedom to create an array of visualizations. Now, anyone could come to meetings with attractive charts and reports to support their business or paint a view of the business.



Introduction

While powerful—and liberating for end users—these desktop solutions had a dirty little secret. Since they were desktop-based, business users no longer had to rely on IT to provide data, reports and resources for them. They could pull data from wherever they could find it (Excel, web data generated from department-specific tools, etc.) and plug it into their analytics application.

Collaborating and sharing this new wealth of visualizations across the business was a challenge. The desktop tool approach was simply not designed to support the sharing of information across multiple users, departments, and locations. The unfortunate result was the proliferation of data silos—a data warehouse on every desktop. Far worse, from a business perspective, decisions ran the risk of being made on incomplete data, despite what the visualizations were telling them.

Seeing that ungoverned self-service analytics could lead to major issues if left unchecked, technology leaders began to re-insert themselves back into the analytics conversation. As the pendulum moved back to the middle in 2014 or 2015, leading analyst firm Gartner Group introduced the idea of governed data discovery. (Gartner has since renamed this idea modern enterprise analytics and BI platforms.)

This shift reflected a prevailing need for balance. Organizations wanted data innovation, flexibility, and agility for end users without sacrificing governance,

management, reusability, and control.

Pyramid Analytics occupied this middle ground long before the pendulum started its swing back to the middle. We had developed a platform that merged the security, governance, and scalability of traditional platforms with the flexibility and agility of desktop tools.

In many ways Pyramid anticipated the need for balance: it was designed from the start as an enterprise-grade, server-based application that could be used by end-users in a self-service capacity. And while we featured the same visualization capabilities of the desktop darlings, governance and centralized control remained a core part of the platform.

Many of the desktop tools, reacting to this move back to the middle, began retrofitting their applications with server-based technologies and capabilities. However, their primary focus on visualizations left them ill-equipped to handle the demands of a fast-changing, ever-expanding data environment. They were too late for the game. At Pyramid Analytics, we were already taking analytics beyond visualization to deliver insights in four crucial ways:

Going Beyond Visualization

- 1 **Balance Self-Service with Centralized Management**
- 2 **Connect End-Users to the Appropriate Data**
- 3 **Provide End-to-End Analytics to Deliver Insights Across the Enterprise**
- 4 **Bring Advanced Analytic Capabilities to Everyday Users**

Pyramid Analytics occupied this middle ground long before the pendulum started its swing back to the middle.

1

Balance Self-Service with Centralized Management

We have always believed in the sanctity of data. It is the foundation for good decisions. Data integrity requires a BI environment that balances self-service analytics with centralized management and governance. Why? Because data silos are the invariable result of ungoverned analytics. Without accurate, up-to-date sources that are properly prepared for analysis, business users may miss the big picture.

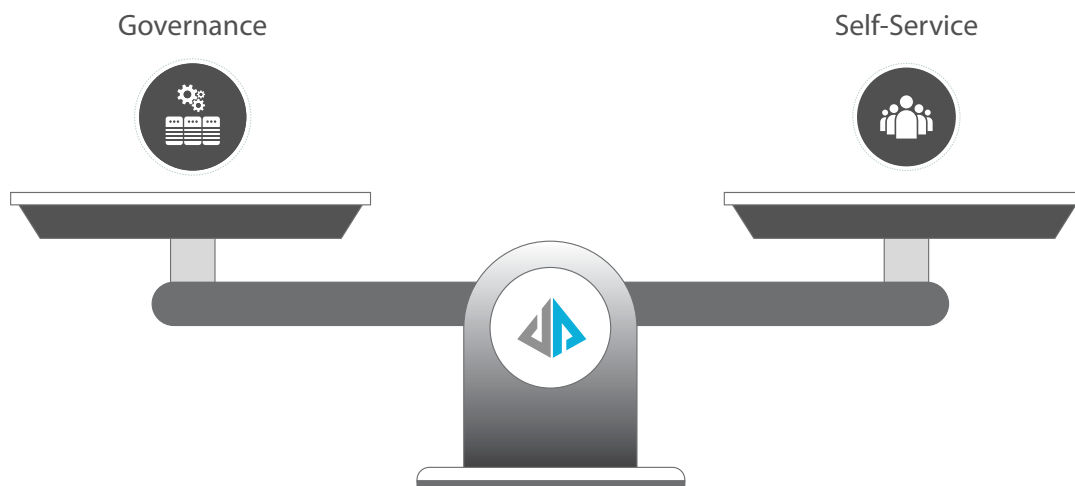
Data governance is singularly important for providing self-service users with a framework for success.

Data governance is singularly important for providing self-service users with a framework for success. And IT can help. In fact, we view IT as a critical stakeholder in the analytics process and a powerful ally of business users—not an adversary to be battled with or avoided. IT is the aggregator and protector of business data. Their data preparation, management, and connectivity skills are unrivaled in any organization. Why not harness their strengths?

So while it's great for any business user to connect to any data source and build dashboards they please, if they cannot confirm the underlying data is accurate, consistent, and up to date, then it's difficult to make confident and effective decisions. With an appropriate degree of oversight, IT can help maintain that data integrity and security, without getting in the way.

Pyramid provides an administrative framework that gives IT complete telemetry on data and users, but doesn't require them to take an overly hands-on approach. Instead, IT can focus on strategic oversight of the analytics environment so the right datasets are made available to the right people at the right time. From there, end users are free to analyze data and make unencumbered fact-based decisions.

In addition, the centralized repository-based structure makes it easier for administrators to manage and define users and roles. IT can manage users and roles and synchronize them with other corporate security role mechanisms like Active Directory or SAML. This makes it easy for IT to quickly provision new users and roles, yet still take a relatively hands-off approach to managing day-to-day analytics. ■



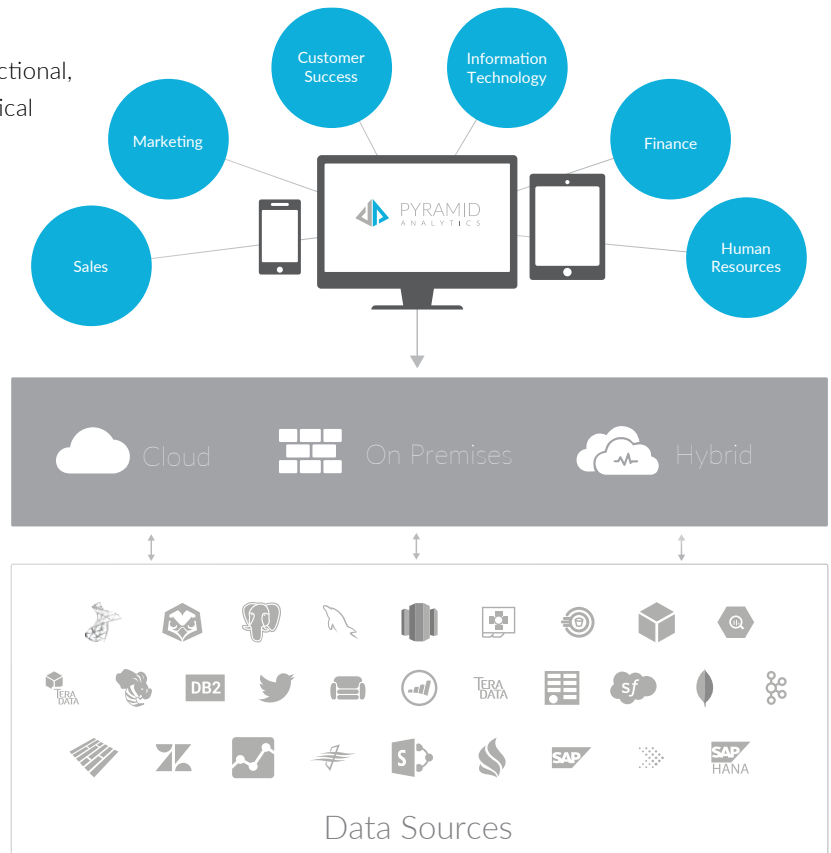
Connect End-Users to the Appropriate Data

For many organizations, data lives in functional, technological, or departmental silos. Critical insights needed by decision makers are often trapped in functional applications with proprietary reporting platforms. Enterprise data warehouse projects try to overcome these barriers, but they have slow time to value and high maintenance costs. In today's constantly evolving environment, many organizations have multiple, competing data warehouse investments.

Pyramid offers an agnostic architecture that enables governed access to data across all organizational data silos. This allows decision makers to benefit from a broader view of information they don't currently see today. We recognize that each organization will adopt different data strategies.

Pyramid is designed to provide our customers choices—what data sources to use, how to model the data, and where to deploy the analytical models. We do not tie your hands to work in one way. In addition, Pyramid can be deployed in almost any destination framework, including the cloud. Coupled with its ultra-fast Pulse Server for remote-data access, Pyramid can comfortably support private cloud and hybrid deployments.

While data connectivity is one thing, the ability to use it is perhaps more important. End users shouldn't have to use sophisticated, standalone, IT-based extract, transform, and load (ETL) products to mash up data on their own, nor should they rely exclusively on IT to build data models on their behalf. Pyramid's infrastructure framework creates a holistic analytics environment



where data can be readily accessed and prepared by sanctioned users.

Pyramid features a simple, visually based yet powerful data modeling interface that lets users connect to all their authorized sources, prepare data (filtering, sorting, time intelligence), perform standard column operations (calculate, combine, convert, etc.), and apply joins (inner, outer, left, right, and bi-directional) to build models. Using that same tool, end users can readily incorporate machine learning scripting and algorithms directly into the analytic models.

From here, data can be pulled into Pyramid's data discovery module where users can build visualizations they know are based on accurate data. After all, they're the ones who built the models in the first place! ■

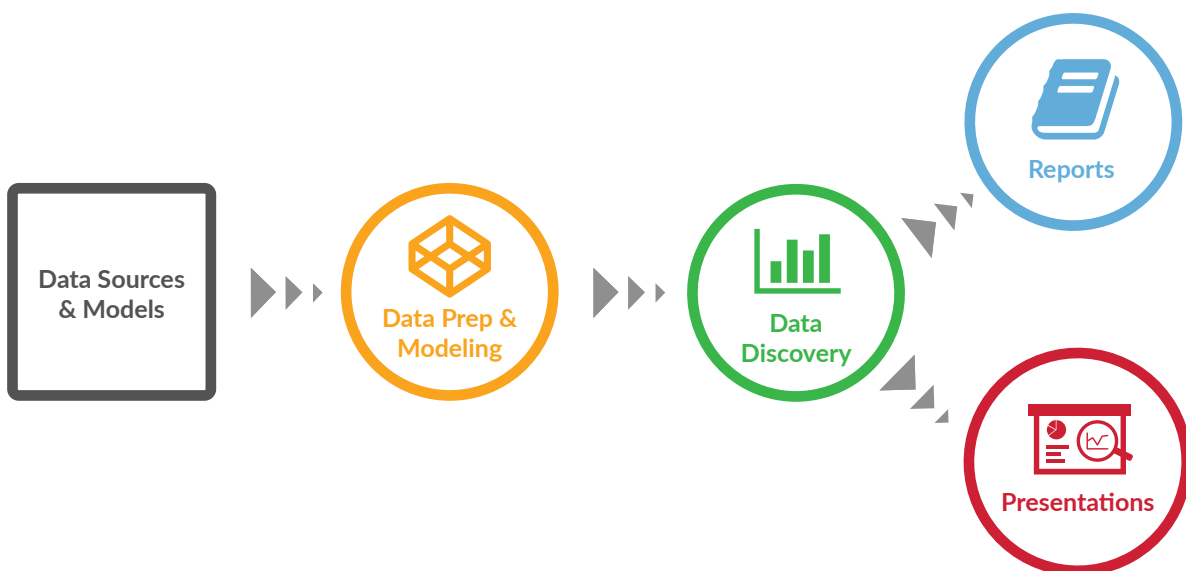
Provide End-to-End Analytics to Deliver Insights Across the Enterprise

Pyramid was designed as a truly self-service analytics application. From a single platform, users can collaborate and share data, models, reports, dashboards, and publications across the enterprise. This end-to-end, integrated platform lets users treat visualizations as vital components—not the culmination—of the analytics process. It's designed to treat data-driven *decisions* as the natural outcome of thoughtful and systematic analysis that honors a holistic, rigorous analytics process.

By integrating all aspects of the analytic workflow—from data preparation to reporting—into a single system, it reduces the complexity of the analytics infrastructure and software ecosystem, lessens the learning burden on users, and ultimately reduces licensing costs.

Pyramid's integrated approach also increases collaboration and sharing. It makes analytic building blocks (models, calculations, visualizations, dashboards) available together in an intuitive content repository. This lets users collaborate and share analytic content. And when they create content, it is instantly available for others across the organization to reuse. ■

Pyramid was designed as a complete BI platform that honors a holistic, rigorous analytics process.



Bring Advanced Analytic Capabilities to Everyday Users

By the time many of the self-service platforms had started bolting on server technologies to become “modern” analytics and BI applications, Pyramid Analytics was already focused on developing features that would take analytics beyond visualization.

Instead of chasing over-hyped technologies that no one would really implement, Pyramid was focused on matching functionality and customer requirements based on real-life scenarios. Our goal was to find ways to practically increase the level of analytic sophistication of BI by gradually exposing machine learning technologies throughout different stages of the analytic workflow.

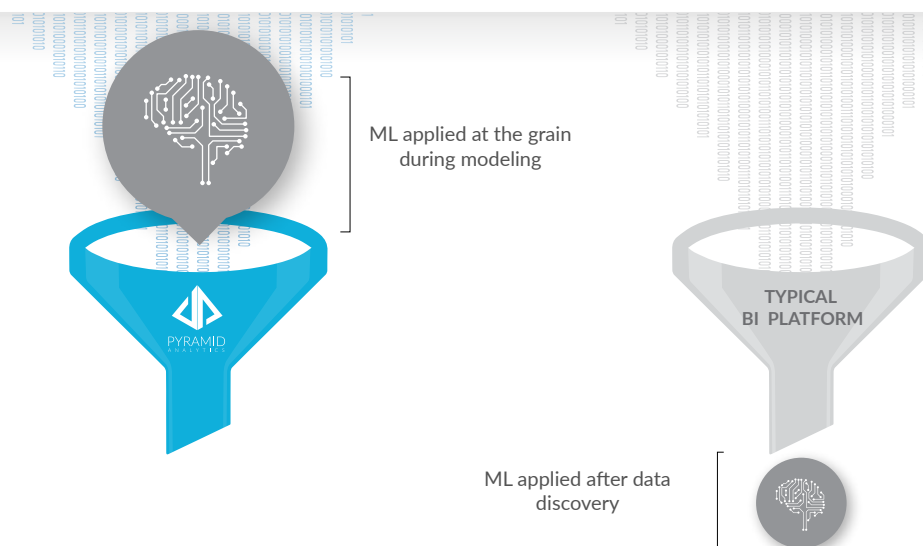
Many of the desktop tools have retrofitted their applications with R and other advanced statistical package integrations. However, because they were effectively designed as desktop tools, their server architectures aren’t equipped to handle newer, larger, and less structured sources. Specifically, they tend to apply advanced analytic functionality *after* the data has been aggregated and the analytic models are built.

In contrast, Pyramid applies machine learning during the data preparation and modeling stage. These machine

learning algorithms are applied at the grain where they are most effective. This is where machine learning can identify key trends or outliers, clusters, etc. at the individual transaction level and provide a foundation for training the models for new data.

Pyramid blends familiar analytics and business intelligence (self-service analysis, reporting, charts, dashboards, etc.) with a pervasive machine learning toolset. This lets you do more than just visualize the data. It lets you apply sophisticated machine learning algorithms, store the output of those as part of an analytic model, and build complex calculations to derive new insights from existing data. Then you can visualize that data in analytic dashboards and reports. Importantly, you do not have to be a data scientist to reap the benefits of AI and machine using Pyramid.

Beyond the data preparation and model phase, end users benefit from advanced analytics embedded within the user interface to provide automated analytics and augmented intelligence. Business users can use natural language querying to develop train-of-thought analysis, apply statistical techniques and forecasting algorithms, and auto-generate a dashboard containing recommended analysis. ■



This holistic approach is what sets Pyramid Analytics apart.

Conclusion

With other tools, users ask, “Here’s a data set, can I visualize it?” With Pyramid, users ask: “Well, here’s some data. Can I do more than just visualize it? Can I integrate all my sources on my own to build analytic models? Can I apply more advanced analytics such as machine learning/AI algorithms to my data in a way that everyday users can use and extract insight? What recommendations does the platform suggest?”

Pyramid brings the entire analytics workflow onto a universal platform that any authorized user can access on any device or browser. It creates a common analytics culture where everyone involved with the decision lifecycle—IT, analysts, data scientists, and everyday users—can interact with shared, consistent data to make better decisions.

CONTACT US

+ 1 800 385 6704

info@pyramidanalytics.com

www.pyramidanalytics.com

