

Data Analytics as a Service

# EMBRACING DATA-DRIVEN DECISIONS

Data Analytics as a Service delivers a scalable, comprehensive solution to the challenges of big data



VERSANT

# Table of Contents

**1** Executive brief

**2** Managing a Tsunami of Data

**7** Addressing the Challenges of Big Data

**10** A New Delivery Paradigm

**12** A Use Case: More Capabilities Deliver More Value for the Maritime Industry

**14** Driving Business Success with DAaaS

The digital evolution has created a dramatic surge in the quantity of business data, providing tremendous opportunities to gain valuable insight into processes that can improve organizational efficiency and performance. However, much of this data resides in silos, limiting the ability to readily access this information and achieve a holistic view of operational efficiency.

Without a unified location to house multi-sourced data, businesses are resigned to time-consuming, manual processes to compile information and attempt to extract value. With a rich history of providing customers with data analytics services, Versiant, a leading managed services provider, offers a digital enhancement to its existing services. Powered by Microsoft technologies, Versiant Data Analytics as a Service provides a centralized, cloud-based data warehouse that empowers enterprise with greater agility, increased analytics and reporting proficiency, and standardized access with unifying data definitions. Driving businesses' transformational journeys to data, DAaaS provides critical insights into key performance indicators to promote growth and increase competitive advantage.

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Big data is a growing reality among enterprises worldwide. According to management consulting firm [McKinsey & Company](#), 15 of 17 industry sectors in the U.S. already have more data per company than the entire U.S. Library of Congress.

The sharp spike in the sheer quantity of data is well documented—and there is no end in sight. In *According to Gartner's Top 100 Data Analytics predictions through 2023, By 2022*, 90% of corporate strategies will explicitly mention information as a critical enterprise asset and analytics as an essential competency.

Harnessing this wealth of data to propel business success is a growing challenge for organizations trying to keep pace with rapidly evolving business requirements and the enduring demand for time and cost efficiencies.

The evolving landscape of digital business provides organizations with nearly unlimited possibilities to create business value. As important, data and analytics have become an essential and critical driver of business strategy, and the potential for data-driven business strategies and information products is greater than ever. It is a part of everything they do. Yet the ability to migrate from intuitive leadership decision-making to a strategic map is still difficult for many enterprises, leaving most in a fog.

This transition to data-driven business requires executive leadership, and analytics leaders to elevate information and analytics strategies, advancing a new vision of business problem solving. This will result in a profound impact on the work of a data and analytics organization and the enterprise competencies that must be built. Most organizations lack the ability or finances to implement a data strategy.

While most organizations are aware of the unknown—and in many situations, untapped—potential data sets offer, they struggle to organize, coordinate and map data into an easy-to-understand, value-infused format. This challenge becomes more complex as silos of information within businesses continue to grow. Without a centralized management platform for swelling quantities of data, companies will find it difficult to ensure the security, compliance and quality of this data while effectively leveraging it to drive value for the business.

Industry experts predict through 2022, only 20% of analytic insights will deliver business outcomes.

The burning question is, how do we capture and mold diverse data sets to seamlessly deliver the information and insights that organizations need?

Data analytics is the headlining answer. Centralizing silos of information and integrating them with artificial intelligence, data analytics extracts value and enables data-driven business decisions. Versiant's Data Analytics as a Service (DAaaS) solution elevates these capabilities, offering the scalability and performance of cloud computing to transform how big data is delivered and consumed. However, silos are only one of the issues facing businesses. The more significant issue is that leadership often lacks actionable and easily digestible information that is critical to empower decision making and help advance the enterprise.

While the wave of big data offers immense opportunities to gain valuable insight into key performance indicators (KPIs), navigating this space is not without its challenges. This is especially true for businesses that lack an effective approach to compiling and leveraging data.

### Data has no place in a vacuum

Business success teeters on optimizing KPIs, yet many businesses are unable to assess these critical factors across multiple, disparate data sets. These data silos are inherent components of a business's framework. Individual departments amass the data they create and consume with little regard—or even need—to share this information across other business areas. This poses a problem when organizations need to access information across multiple departments to gather insight into trends or make decisions on future direction based on existing data. For example, marrying data from the sales pipeline with warehouse inventory can help optimize the supply chain. Without ready access to information across the organization, businesses are handicapped in their ability to foster and drive true operational value.

To gain a more thorough understanding of the factors that impact performance, businesses need to break down silos to analyze data across the organization.

### Successfully accessing and managing data

For many businesses, understanding what data they need, where it resides and how to access it, is another obstacle in a parade of challenges. An inability to access data—or more specifically, the right data—can bring any attempt to gain business-transforming insight to a screeching halt.

While some businesses may argue this challenge comes down to employing the right people with the right skill sets, there are other pressing issues. Finding and retaining employees that understand data schematics can be time consuming and expensive. There is also the menacing probability that this person leaves the company with this knowledge base in tow.

## Lacking a business intelligence perspective

Even a business that knows its way around a database may be stymied when it comes to extracting KPI-enhancing merit from raw data. To draw any form of operation-refining worth from vast pools of data, KPIs must be identified, analyzed and addressed. While most businesses know their KPIs, they lack the ability to analyze the statistics detailed in reports and apply them in a way that enriches business opportunities. The more significant issue is that leadership often lacks actionable and easily digestible information that is critical to empower decision making and help advance the enterprise. Without analytics driving the process, business decisions may be void of factually based details that provide an in-depth understanding of what the numbers mean, the driving force behind them, and how they can be used to address underlying issues and pave pathways for improvement. This lack of business intelligence (BI) also limits a company's ability to take a more proactive approach to improving KPIs and business outcomes.

### Diminishing performance

The multitude of reports businesses generate and store on a recurring basis can be staggering. When these reports are stored in the production environment, performance is impacted—decreasing in direct relationship with the size of the database and the frequency in which reports are produced. The seemingly simple solution is to delete reports after they are run or purge older data sets. This is far from the ideal solution. Eliminating historical data—whether in its raw data form or as part of a report—removes crucial information that can be used to identify long-term trends and provide any number of valuable insights to the organization. It is always in a company's best interest to retain legacy data.

## Opportunities for error and inefficiencies

People make mistakes. Relying on humans to manually compile data and generate reports opens businesses to unnecessary risk. This can span from erroneously deleting or altering a data source to pulling the wrong information and allowing decisions to be made on flawed data. When multiple people perform these tasks, there is also an innate possibility that they are not pulling the same data in the same way. This undoubtedly leads to inaccuracies in data sets and the reports derived from them.

Also worth mentioning is the “tribal knowledge” and/or human resource point, as well. Companies using manually compiled reports often rely on a single resource to do specific manual compilation and report preparation, and that process is either not documented or is poorly documented. When/if that resource leaves the company, they lose that tribal knowledge and are left scrambling to recreate the process and/or define new processes. BI enables documented rules that are automated, consistent, and transparent.

Manual processes are also riddled with inefficiencies. In many businesses, report details are manually logged in a spreadsheet to track KPI metrics. This time-intensive task is highly reliant on information being accurately entered into the spreadsheet—offering another opportunity for error. Relying on spreadsheets to aggregate makes deciphering information more complex and time consuming as users must mine through copious amounts of information to try to extrapolate value.

Automating processes helps minimize these risks and also improves efficiency, allowing employees to focus on other important business-driving initiatives.



To best manage and extract value from growing volumes of big data, businesses have embraced data analytics as a key business driver. Breaking down silos across the organization and integrating diverse data sets, data analytics provides a more macro picture of the business and its KPIs.

Versiant's deep-seeded experience with data analytics provides a rich backdrop for its new, agile deployment, Data Analytics as a Service (DAaaS). This enhanced solution delivers cloud-based data analytics that offer heightened visibility, self-service capabilities, and anywhere, anytime access from any connected device. The guiding star in developing this innovative service was the pressing need to aggregate disparate data in a comprehensive and scalable platform.

DAaaS automatically collects information from multiple data sources and consolidates it in a unified, scalable data warehouse. The solution offers out-of-the box data modeling to provide business-ready solutions designed to provide insight into a business's KPIs. These reporting capabilities integrate with existing tools and can be customized to best fit the needs of any business.

DAaaS provides a plethora of benefits to businesses looking to drive value from organizational data.

### **Easing data management**

DAaaS takes on the challenge of consolidating data. By compiling multi-sourced data in a unified data warehouse, DAaaS enables the ability to measure and assess KPI metrics across multiple business applications including financial, payroll and ERP systems as well as external databases. With enterprise data centralized in a single, secure repository in the cloud, businesses can more readily access and manipulate data to garner better business decisions.

The solution also incorporates a business's own language in the platform to promote understanding of KPI metrics across the organization. Without the restrictions of hardware, DAaaS also frees customers from the time-intense, error-prone management of their data environments.

## Scalable to bolster performance

The cloud-based environment also allows businesses to seamlessly scale to accommodate growing data quantities. This flexibility improves the speed in which reports can be produced and ensures the integrity and breadth of the database as data and reports do not need to be purged to maintain an acceptable performance level. This extended history of data strengthens opportunities to identify long-term trends and more precisely forecast needs.

## Increased accuracy

With DAaaS all data is mined from a unified data source to ensure accuracy across all reporting platforms. The solution seamlessly maps data points across multiple data sets to create a single source of truth and an unmatched level of data consistency. Without manual manipulation of the data, there is also limited opportunity for errors.

## Improved visibility and automation

Offering complete transparency into business capabilities, DAaaS helps organizations make more informed decisions and predictions. Dashboards offer a visual, easy-to-digest view of critical KPI metrics. Through this interface users can quickly access a library of on-demand, self-generated reports or download selected data into an Excel spreadsheet to provide a more granular look at KPI details. This automated, transparent process streamlines reporting functionality to generate reports in minutes as opposed to hours and boosts productivity.

While the service offers a selection of core dashboards and reports that highlight the most critical KPIs, additional interfaces can be customized to address more unique queries or requirements.

## Forecasting the future/Deriving value from KPI metrics

Businesses rely on data analytics to push them past detailing what happened last week and allow them to explore historical data, decipher long-term trends, and forecast future metrics for improved planning. DAaaS' cloud-based architecture allows an unlimited amount of data to be stored in its data warehouse without fear of bogging down the production environment. Businesses can quickly scale the environment to accommodate data growth, eliminating the need to expunge data or reports to optimize performance.

**“With Versiant DAaaS, the data is consistent and accurate every time”**

## Proactive decision making

Ultimately, KPIs and other business factors impact the business and its bottom line. Businesses want to understand not only their KPIs but also the variables that impact them. This deep, multifaceted awareness offers an opportunity to continuously improve outcomes. With DAaaS, businesses can traverse beyond predictions to understand the “why” behind a metric. It allows businesses to test variables to determine their potential impacts on a KPI or recognize if data is skewed by an anomaly. This helps businesses derive real value from information, ensuring they make impactful decisions that establish more dynamic and productive ways to conduct business. This critical insight also moves businesses away from making fragmented and reactive decisions, instead, shifting the focus to proactive options.

Versiant's DAaaS solution replicates customers' databases into an Azure cloud environment. Maintaining the Microsoft stack, Versiant uses Azure data factory—an extract, transform, load (ETL) tool -- to take the data from the replicated database and transfer it to the cloud-based data warehouse. ETL is also used to extract data from other corporate data silos, such as finance, security or operating systems, that should be included in the data warehouse. DAaaS maintains and supports this mass of data—monitoring the ETL tool and activity runs to ensure the data warehouse is operating appropriately. Once the data is in the warehouse, it is shaped to ensure data points are properly aligned so data looks the same and can be successfully queried. Shaping the data ensures that all appropriate data points are captured to provide the most accurate and complete picture of the organization.

### **Versiant's Data Analytics as a Service is purposely built for big data analytics**

- Secure - protects data at file and folder levels
- Multi-layered protection with at-rest storage service encryption and Azure Active Directory Integration
- Fast – quickly comb through unstructured data
- Scalable – no limit to data storage size
- Cost effective – offers pricing tiers
- Integration ready

Versiant's big data infrastructure is based on a Versiant managed and Microsoft Unified Analytics Platform (UAP), which includes the Azure Storage Blob, Azure Data Lake, and Azure Data Warehouse. These serve as the collaboration layer for Versiant's data scientists. Versiant's business units now have their choice of industry-leading analytics tools integrated with Microsoft Azure for analysis and data visualization.

The Versiant Microsoft solutions are hosted on a production Microsoft Azure Data Computing Environment (DCE), a unified and modular Big Data solution. The back end of the Versiant Microsoft DCE is directly connected to Versiant's enterprise extract, transform and load (ETL) platform, which is hosted on a completely virtualized infrastructure. The ETL

platform loads data from various sources, including your N4 TOS, GOS, JD Edwards, Labor Management platform, OCR platform, Asset Management System, SAP, Oracle, and many other enterprise data sources.

For high availability, Versiant relies on the Microsoft ecosystem, which is a top tier cloud compute infrastructure.

The maritime industry relies heavily on manual processes to document and report critical performance measures. With 75% of its report data originating from the terminal operation system (TOS), the industry has limited view into its operational performance and productivity.

While TOS compiles specific terminal information such as turn time, container moves and dwell time, this system operates as a silo—unable to integrate information from other business systems to provide a more holistic picture of operations. This makes integrating information from multiple data sources a manual and time-consuming process.

Representing diverse groups of terminals and maritime workers, Port operators want a consolidated ecosystem that can compile data sets across their terminals and their unique business units.

Versiant DAaaS offers this comprehensive, wide-reaching solution. With a centralized repository, DAaaS compiles business system data from across terminals under operation. Utilizing security measures built into the underlying Microsoft Azure environment, the data warehouse provides organizations overarching access to the database, and individual terminals with only the data relevant to their individual businesses.

This unified environment ensures a single source of truth to provide accurate reporting across a large set of KPIs. Self-generated reports allow terminal operators to seamlessly capture data from multiple sources, moving beyond simple TOS information. This level of detail could only have been achieved manually before DAaaS.

DAaaS offers marine ports tremendous value, beginning with a more complete view of consolidated operational data. With DAaaS, a port can quickly, and in real time, understand labor, operations, and integrated financial information to make fact-based decisions more easily. DAaaS also allows marine ports to be more predictive in their planning. For example, the port may provide a multi-day window for trucking services to pick up containers. If analytics efforts determine that, historically, 75% arrive the day the window opens, the port can predict the number of containers that will be picked up that first day and stage the yard to optimize access and improve turn time and operational efficiency.

By combining terminal operating data, labor data and safety metric data, terminals are able to gauge accident rates against operational data and confirm the most common areas of incidents as well as the labor groups most directly affected by these accidents. With a handle on this data, terminals can address the safety areas to focus on and the frequency in which safety training should occur. This improves terminal safety and ultimately reduces costs while providing a better work environment for employees.

DAaaS builds on Versiant's long-standing commitment to provide its customers with the data points necessary to recognize and engage opportunities that hyperscale business success. With a unified data warehouse that aggregates information from business systems across the company, DAaaS positions enterprises to utilize integrated data to achieve valuable forward-reaching decisions that push productivity—and the business itself—to new heights.





# VERSIANT IS YOUR ANSWER TO MARITIME DATA, MANAGEMENT, AND SECURITY.

Data Analytics as a Service by Versiant brings a single source of truth to empower efficiency in the maritime industry. Consistent data sources, robust analytical filters, and powerful metrics are strengthened by over 10 years of port and terminal experience to shine a light on your critical business decisions.

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