tellius

The Ultimate Guide to

SELF-SERVICE ANALYTICS

AN INTRODUCTION TO SELF-SERVICE ANALYTICS

Self-service analytics is often considered the holy grail for many data-driven enterprises. Why? Businesses have so much data to analyze, and decision-makers want to be able to analyze that data independently—without spending extra time, money, and resources.

Gartner defines self-service analytics as “a form of business intelligence in which line-of-business professionals are enabled and encouraged to perform queries and generate reports on their own, with nominal IT support.”

Today, self-service analytics is entering a new era where AI and machine learning (ML) can enable capabilities beyond reporting and visualization so businesses gain access to data-driven insights more easily.

The history of self-service analytics

The implementation of data analytics for business use goes back much further than you might expect. Initial cases of organizations analyzing data to make informed decisions date all the way back to the early 19th century, when business owners began to analyze various aspects of their organization to improve performance and increase profit. Although these attempts look nothing like they do today, the basic concept remains the same.

As advancements were made in technology, data analysis and statistics became more digitized, launching the ever-expanding industry of business intelligence (BI) tools. Microsoft launched the trusty Excel spreadsheet back in 1985, and over 30 million people were using the desktop program just 11 years after its launch: In a 1996 press release, Microsoft specifically touted the "robust functionality and intuitive design" to help its users understand data. Even today, spreadsheets are considered the standard approach to self-service analysis: extracting data from source systems and then manually analyzing data through a point-and-click approach.

Self-service BI solutions took another leap in the 2000s with the rise of visualization tools. Qlik emerged in the '90s with its in-memory approach to handling data, enabling users to more interactively explore dashboards. Tableau was founded in the early 2000s, providing users with a more intuitive interface to build and explore dashboards. Tableau was acquired by Salesforce in a multibillion-dollar deal just a few years ago, underscoring the massive market for self-service data visualization tools. The launches of these innovative BI products over the years demonstrate a longtime need for users to have improved access to data.

That's not the end of the story, though. In recent years, studies done by Gartner, BARC, and Eckerson Group have shown analytics adoption struggling to go beyond 25-35% of the workforce. This number is only slightly higher than the numbers from 2009 when a Gartner study found BI adoption at 22% amongst organizations. There still is plenty of room for innovation in the field of self-service analytics.

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We're currently in an era of making data analysis even more accessible so that users can be even more productive. Thanks to the emergence of AI, ML, and automation, people can perform data analysis at a much larger scale than ever before. Self-service BI is about applying advanced processes while still making it accessible to more people (as well as better enabling the data analysts, too).

Businesses today thrive when everyone—not just the data experts—has access to the tools and information they need to make quick, insightful decisions driven by data.

Why do organizations need self-service analytics?

Self-service offerings, designed to empower the business user, are everywhere you look. We live in a self-service world that enables consumers to get things done on their own: from pumping gas, to shopping online, to ordering food delivery. The goal is to carry out tasks entirely independently (with the help of some computers), whenever and wherever you'd like.

This concept translates to the business world of data analytics, which now goes beyond the traditional dashboards, reports, and data visualization that BI has offered for decades. As organizations need to solve more granular questions, self-service tools provide a path Ato inform those answers and subsequent decisions.

Instead of relying on IT teams or data experts to get this information, users need to be able to have answers right at their fingertips. Businesses want to accelerate decision-making that's informed by data, and executive and frontline workers want these answers when they need it—not just when an analyst is available to support them.

The automated self-discovery of insights reduces business users' reliance on analysts—making it easier to independently answer in-depth questions with the help of machine learning algorithms running behind the scenes. In addition, new insights can be found when domain experts apply their skill sets to the data analysis problem directly.

The core benefits of self-service analytics

The information and analytical needs of a business are a constantly moving target. With more and more questions asked every day, which calls for deeper analysis, it can be difficult for organizations to keep up with the demand.

Self-service analytics abolishes complex data silos and streamlines the process of generating reports in real time. In turn, this reduces what is often an overwhelming BI backlog for organizations. Using features like intelligent data discovery, users across an organization (with varying levels of tech know-how) have immediate access to information, especially if they can use natural language queries rather than complex scripts, simplifying the process of getting answers.

A self-service BI tool can enable even the most non-technical of users to pose real-world business questions and quickly harness data and analytics to aid their role. In addition to eliminating a BI backlog, other benefits of self-service analytics include the ability for organizations to:

> **A self-service BI tool can empower the most non-technical users to pose business questions and get answers — fast.**

- Improve access to data across the business
- Generate real-time reports
- Eliminate data silos
- Reduce overhead costs
- Decrease the workload of the existing IT team
- Make informed, data-driven decisions quickly

Who uses self-service analytics?

Traditionally, self-service analytics is designed for business users who want to get answers when they need them and without relying on IT. Because you don't need specialized knowledge or complex training to operate a self-service analytics platform, employees across your organization can reap the benefits—e.g., human resources, marketing, customer success, R&D, finance, or sales— of having access to the same data as those in advanced IT sectors.

In addition, the definition of self-service analytics is increasingly applicable to data analysts. Instead of having to wait for data scientists to build models or execute the automation of analysis, data analysts are making use of self-service analytics themselves. By using the right self-service tools, they can perform their own advanced analysis using AI and machine learning, which is often siloed for data scientists.

For business users and data analysts alike, self-service BI brings a new level of autonomy to data analysis.

Modern self-service analytics: powered by AI and machine learning

Today, self-service analytics goes beyond just enabling users to generate a report or visualize data on their own—it's also about making advanced insights and analysis available to more people.

With AI-enabled self-service tools, people can ask more questions of their data in plain English (i.e., natural language searches).

Instead of using more limited parameters traditionally presented in BI tools, or manually slicing and dicing data in a spreadsheet, you can interact with your data in an intuitive way, enabling you to carry out these types of complex functions (and more):

- Automatically spotting anomalies or outliers in your data
- Discovering the most important contributors of change
- Building and operationalizing machine learning model

With self-service tools enabling deeper insights into data, you no longer have to come up with your own hypotheses on why things have changed. Instead, you have these key contributors of change automatically presented to you. In turn, you can lend your own business expertise to the data analysis at your organization without relying on IT or data scientists (and also reducing the headaches of spreadsheets).

Business intelligence platforms nowadays should deliver one thing: insight into the data that matters to the success of your organization. With modern self-service analytics tools, companies can more easily use data to drive profit for consistent growth.

The Evolving Definition of Self-Service Analytics

Self-service analytics means vastly different things depending on who you ask. We interviewed a few dozen analytics leaders at a recent roundtable, and definitions ranged from “access to data,” to “create their own dashboards,” and all the way to “no-code predictive analytics for all.”

Differing definitions isn’t a problem if it’s just a matter of semantics. But the confusion and expectations around self-service analytics is at the heart of a decades-old debate between IT, analytics teams, and the business—and is hampering wider adoption of data-driven decision-making. The root cause of the confusion around this term is that there is really a spectrum to self-service analytics.

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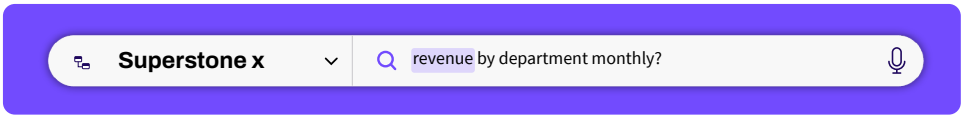
At the baseline today, self-service analytics means providing business users with the ability to create their own reports with simple point-and-click interfaces. However, some more data-driven organizations with higher analytics priorities might also include in that definition additional modern advanced analytics capabilities. These capabilities can include using natural language to query data, generating automated insights from data with a simple click, and leveraging low-/no-code data preparation tools.

The many definitions of self-service analytics have also generated conversations about potential applications, the value derived from these initiatives, and the future of the concept. It’s a great, healthy conversation to have in a growing analytics marketplace as more and more institutions scale their data initiatives across their organizations.

Self-service analytics use cases

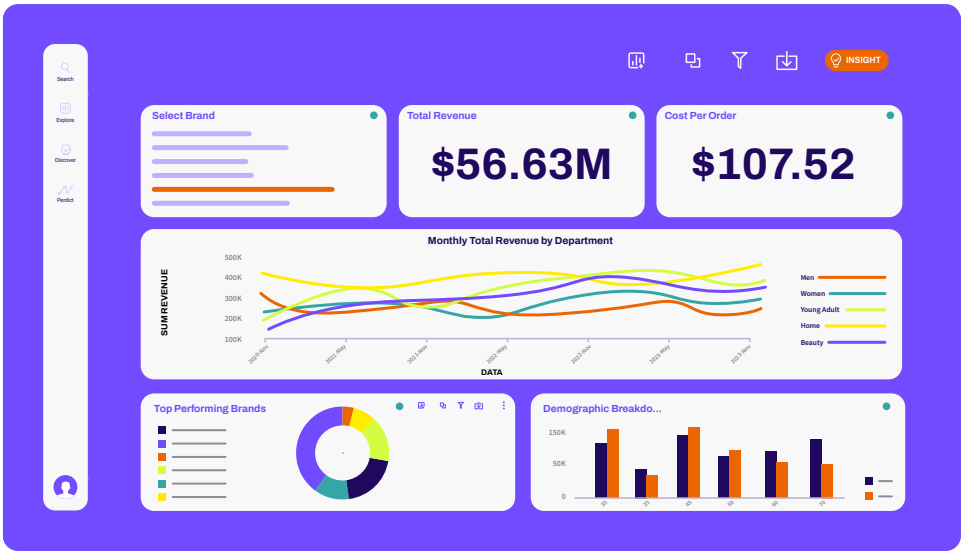
Data Exploration and Discovery

Self-service analytics enables teams to independently analyze large datasets to uncover patterns, trends, and insights. Analytics platforms enable users to interactively filter, sort, and drill down into specific subsets of the data. Business users leverage point-and-click visualization creation or auto-recommended visualizations to identify patterns and relationships within the data. This analysis done by business teams fosters a deeper understanding of the data and facilitates the identification of valuable insights directly from domain experts.



Ad Hoc Reporting

The creation of custom reports and analyses on the fly enables business users to generate specific insights tailored to their immediate needs. This ad hoc report generation reduces the need to rely on a central IT team for report creation and allows for quick responses to emerging business questions. Ad hoc reporting requires the ability for users to build interactive dashboards containing various visualizations and enabling iterative analysis based on feedback from stakeholders.



Predictive Analytics

Self-service analytics lowers the technical expertise required to leverage predictive modeling techniques. Analysts and business users leverage intuitive, user-friendly interfaces to build predictive models, forecast trends, run regression analysis, and make prescriptive recommendations for future decisions. Self-service predictive analytics allows organizations to make data-driven predictions without relying on specialized data scientists.

Collaborative Analysis

Self-service analytics enables collaborative analysis among users within your organization. Putting analytics in the hands of business users enables the sharing of insights, analyses, and findings with team members. By promoting collaboration within the analytics platform, organizations can harness the collective intelligence of their teams. As insights are shared and validated, decision-making throughout the organization is enhanced.

Operational Efficiency

With users independently accessing and analyzing data, self-service analytics reduces the operational burden on IT and data teams. In addition, automated data preparation saves time and effort put into manually cleaning and formatting data. This frees up time for those teams to work on more high-value projects and complex tasks.

Self-Service Case Study

Self-service analytics is being used across myriad industries and departments within organizations. Consumer goods and retailers are enabling their category management and shopper insights teams to uncover crucial insights about customer behavior and market share. For example, a multibillion-dollar global consumer brand used Tellius for self-service analytics to gain deeper, actionable insights into consumer data while also freeing up time for the data scientist team members. Like a lot of organizations, they were struggling with a growing BI backlog, with terabytes of data across sales, marketing, shipments, and third parties, but only a small data analytics team to support a whopping 100+ brands—20 of which have more than $1 billion in revenue each. Once the teams gained access to AI-powered, self-service intelligence, they were able to automate previously manual processes of analyzing data across brands. This enabled dramatically faster data modeling, leading to more timely insights shared across the organization. Enabled with more autonomy and better data, the teams were able to create higher-quality shopper profiles 10 times more quickly than before, optimize marketing campaign effectiveness, and realize a multimillion-dollar impact on sales. What's more, with less time spent on data modeling, the data scientists were able to spend their time supporting more brands.

TOP 5 BEST PRACTICES FOR SELF-SERVICE ANALYTICS

The benefits of self-service analytics are substantial. However, there are many pitfalls associated with implementation of this new paradigm. With a self-serve model, you can start to truly scale your organization's data-driven decision-making approach. However, many organizations exchange the freedom to self-serve new analytics for the control associated with a centrally run program. A centralized approach can often deliver consistency and governance across the organization. One of the primary fears is that giving up control over analytics will lead to poor results as users may not have the technical ability to accomplish their goals within the tool. In addition, data literacy levels can be varied to a wide extent across organizations. This could potentially lead to undesired outcomes for some attempting to leverage analytics. There is also the potential to duplicate efforts amongst individual domain groups and create an overwhelming amount of content. Finally, there are privacy and security concerns about who should be able to access what data.

At the end of the day, you can't just give the keys to the kingdom to everyone in your organization. You need to put best practices in place to successfully achieve your desired outcomes in a self-service analytics initiative.

Data governance

The foundation of a good self-service analytics initiative is data governance. A self-service analytics initiative cannot succeed without properly defined processes, roles, standards, metrics, and policies put in place by the central IT or data team. Privacy and security issues are top of mind in a world with HIPAA and GDPR compliance. You also don't want Jim the part-time data analyst making changes to a critical table without him understanding the contents of the data. One of the first major projects of a self-service analytics initiative should be defining roles and level of access for these roles.

Data governance helps to define who can access the right data and what it can be used for. It also provides a business glossary of the data available and can help to ensure data consistency, accuracy, completeness, and trustworthiness. Data governance is also important to help you maintain a single source of truth for the data in your organization. A report verification process may help to ensure the integrity of the data while also maintaining consistency across teams. Additionally, the central IT or data team may want to publish data products for the most popular use cases in the organization.

Build an analytics community

The relationship between central IT or your organization's centralized data team and individual business units is absolutely critical to any self-service analytics initiative. In a self-service analytics model, your organization's central IT team is turned from a reactive organization prompted by business needs to a proactive organization promoting best organizational practices, focusing on data governance activities, and running other high-value projects. The central IT team must work with business units to gather feedback, publish verified datasets, identify valuable new use cases, and message changes to critical datasets as those changes occur.

Building an analytics community is challenging, but getting started early will help deliver a successful self-service initiative. There are a few simple and effective ways to begin an analytics community. For starters, creating a channel on your organization's messaging app where users can collaborate on use cases, share popular datasets, and promote high-value content can deliver immediate value. With data literacy being a concern, kicking off regular sessions providing training and enablement can help ensure best practices across your organization. Finally, identifying and recognizing top users can help build organizational momentum for a self-service analytics initiative.

Intuitive analytics user experience

The value unlocked from a self-service analytics initiative will largely depend on the user experience associated with the underlying analytics tools used by data analysts and business users. Self-service analytics can turn data consumers into data explorers with the right tools, enabling traditional data consumers to even run their own analyses. This helps to unlock critical domain expertise in the analysis process.

An intuitive user experience isn't only beneficial to business users and data consumers—it's helpful for data analysts and experts as well. Data analysts can also take advantage of simple-to-use data science tools to grow their arsenal of problem-solving capabilities. Additionally, depending on which self-service platform they choose, data experts will have more (or less) time to focus on high-value priorities. After all, choosing the right tool will go a long way toward unlocking value for the whole organization.

From natural language search to AutoML, there's a plethora of features in next-generation analytics tools that open data access to more users in your organization. Natural language search allows anyone to search data with a "Google-like" experience. Recommended visualizations take away the guesswork associated with putting together a visualization, while automated insights can easily generate answers to difficult business questions with a click of a button. The combination of these features can provide business users with powerful tools to solve complex problems.

> **Choosing the right tool will go a long way toward unlocking value for the whole organization.**

Additionally, tools designed specifically for data analysts can help streamline workflows. Low-/no-code data preparation and pipelining may help make their work more efficient. Natural language code preparation is an easy way to avoid tedious manual efforts for cleansing, joining, and preparing data. Finally, AutoML can open access to predictive analytics capabilities that were once thought to be accessible only to data scientists. Modern analytics platforms can provide a tremendous amount of value to organizations kicking off a self-service analytics program.

Go for quick wins

Successful self-service analytics programs are built day by day and don't happen overnight. To that end, going for quick wins rather than business-changing wins will help to build momentum for the initiative across the organization. Focus your initial efforts on highly popular use cases that deliver immediate value for the largest number of users. Central IT can look to see which reports or datasets are the most popular and create curated views for business users to explore on their own.

The temptation to immediately try to publish as much information as possible could lead to over-inflated expectations. It is imperative to understand your organization's immediate needs and start to address those first, and then work on the more strategic areas of opportunity. Starting small can help your organization create a feedback loop where business users and data analysts feel invested from the start of the program.

Choose the right tools

At the end of the day, the most important choice you will make in a self-service analytics initiative is deciding which platforms to deliver analytics to end users. Platform evaluators should create a list of prerequisites identifying must-have features to help make progress in these initiatives. Does your desired platform need to access multiple data sources in order to create a single source of truth for your teams? Does your team have enough SQL training to effectively query, or will you require natural language search? Are your teams sophisticated enough to generate insights from static dashboards, or will automated insights deliver more value for your business users? These are questions you, as the platform evaluator, must answer prior to investigating and investing in a new platform from your data ecosystem. You may also want to research multiple vendors and understand how they deliver value in a self-service architecture. There is a sea of potential platforms available on the market today, but only a handful will deliver truly transformational solutions to your self-service needs.

Wrap-up

Self-service analytics has the opportunity to make your workflows more efficient while providing faster and better answers to end users. However, balancing centralized control of data with the freedom of end-users to generate their own answers can be a fine line to walk. Following some of the tips above can help put organizations on a path toward delivering value for their entire organization.

CHOOSING THE RIGHT SELF-SERVICE ANALYTICS PLATFORM

Your analytics platform choice informs your self-service strategy. There are a number of different levels of self-service available to analytics creators and consumers today. On one end, there's the ability for users to create simple point-and-click dashboards. On the other end of the spectrum, there are automated decision-making tools that will essentially decide the outcome of a business scenario for you.

Self-Service Roadmap Informed by Self-Driving Cars

As much as there's confusion about self-service analytics, there's also confusion today in the self-driving car space around what exactly defines "self-driving." Depending on who you ask at Tesla, Autopilot is either a self-driving tool or an advanced driver assistance system. Today, Autopilot is used as an enhanced cruise control mechanism, essentially matching your speed with the speed of traffic, and assisting with steering in situations where lanes are clearly marked. At a future stage, Autopilot will take over the task of driving completely for you. At the full self-driving stage, you will not need to place your hands on the wheel or your feet on the accelerator/brake pedals. And yet, some Tesla advertisements and investor calls might suggest that full self-driving capabilities are already here.

Fortunately, SAE International has already defined the levels of self-driving cars to clear any ambiguity surrounding the concept. SAE International, formerly named the Society of Automotive Engineers, is a standards-developing organization for engineering professionals in various industries with an emphasis placed on global transport industries such as aerospace, automotive, and commercial vehicles. The organization has defined six levels (0-5) of Self-Driving Car Automation.

The levels range from 0, which is defined as having no driving automation technology, to 5, which is defined as a vehicle driving itself anywhere with zero human interaction. While at level 0, cars may appear largely as they do today, at level 5, cars may not have a steering wheel, accelerator, or brake. In between the levels are various steps in how the industry will most likely get to fully automated self-driving cars.

SAE Self-Driving Car Automation Levels

SAE Level	Name	Definition
Human driver monitors the driving environment		
0	No Automation	Vehicle has no driving automation technology. The driver operates the vehicle's movement, including steering, accelerating, braking, parking, and any maneuver necessary to move the car in any direction.
1	Driver Assistance	Vehicle has at least one driver support system providing steering assistance or braking/acceleration assistance.
2	Partial Automation	Vehicle can take over steering, acceleration, and braking in specific scenarios (e.g., Tesla's current Autopilot capabilities).
Automated driving system monitors the driving environment		
3	Conditional Automation	Vehicle leverages the combination of driver assistance systems and artificial intelligence to make decisions based on changing driving situations. Human must be able to take control of the vehicle at any time in case of emergency due to system failure.
4	High Automation	The same as level 3—however, the vehicle does not require human interaction in its operation because it is programmed to stop in case of system failure. These vehicles may be restricted to a particular geographic area.
5	Full Automation	A vehicle can drive itself anywhere and does not require human interaction.

The reason why it's important to have a standard of self-driving automation is simply that many different manufacturers are currently trying to claim full self-driving capabilities in their marketing, and having an industry definition for self-driving automation allows consumers to understand the key capabilities necessary to achieve their desired end goal. As shown in the table, Tesla branded their self-driving capabilities as Autopilot, which may be confusing to end buyers. The word "autopilot" comes from a system of piloting an airplane without the intervention of the pilot, whereas Tesla's current Autopilot capabilities can only take over steering and acceleration/braking in very specific scenarios. In addition, Tesla requires humans to monitor the environment and be able to take over driving at a moment's notice.

We could use SAE International's Self-Driving Car Automation Levels methodology to inform new levels of self-service analytics. Much like the Self-Driving Car Automation Levels, self-service analytics is defined by how much automation is done within the platform to help augment the user's (driver's) capabilities to analyze (drive). And again, much like the Self-Driving Levels, many business intelligence and analytics providers use a varied definition of self-service analytics in their marketing. Defining levels of self-service analytics can help clear up the analytics buyer's confusion over the potential value delivered by a self-service analytics platform.

While we can take inspiration from SAE's levels, how do we translate their methodology into a set of requirements for each level of our self-service analytics?

Defining levels of self-service analytics can help clear up the analytics buyer's confusion over the potential value delivered by a self-service analytics platform.

Self-Service Analytics Levels

SAE Level	Automation Level	Examples	Ownership	Category	Required Capabilities
Human derives insights					
0	No Automation	Excel, Google Sheets	Business user	Spread sheets	-
1	No Automation	Microstrategy, QlikView	Central IT	Legacy Business Intelligence	Dashboarding and reporting
2	Very Limited Automation	Tableau, PowerBI, Qlik Sense	Central IT	Traditional Business Intelligence	Drag-and-drop dashboarding and best-fit visualizations
AI derives insights, humans turn insights into decisions					
3	Some Automation	Thought Spot	Central IT	Search Business Intelligence	The above features and natural language search
4	Partial Automation	Tellius	Central IT	Decision Intelligence	The above features along with alerting, ML-based insight generation, and some AutoML capabilities.
5	Full Automation	N/A	Central IT & Domain-specific Data Experts	Decision Intelligence	The above features combined with advanced AI capabilities allow for training to improve decision-making.
AI derives insights, makes decisions, takes actions					
6	End-to-End Automation	N/A	Central IT & Domain-specific Data Experts	Future State Decision Engine	-

Key Requirements for Next-Level Self-Service

Much like the levels of self-driving cars, the levels of self-service analytics must be informed by the amount of automation available to the user. In our range, we present seven levels of self-service analytics, ranging from highly technical, complex platforms with no automation to a completely autonomous future-state AI decision-making platform. Automation, in the case of analytics, can include natural language search, recommended visualizations, automated insight generation, and more. As you progress through the levels of self-service analytics, you begin opening analytics to less technical users within your organization.

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Level 1 At the lowest level, you'll find the most popular data analytics tool available today: spreadsheets. When we recently asked a group of chief data and analytics officers what the most po pular data tools were in their organizations, there was a near unanimous consensus that Excel was the most frequently used tool. It's powerful and comes with a ton of capabilities, but it also requires an almost total manual effort to build anything valuable. It also requires a high degree of training when you need to use it for more intensive applications.

The next two levels are your more legacy and traditional business intelligence platforms. The platforms here are defined by their ability to deliver KPIs and visualizations in pixel-perfect dashboards and reports. These platforms allow highly technical members of your organization (e.g., data engineers) to do the data preparation and dashboard creation.

Level 2 When you reach level 2, you start to see features to open dashboard creation to data analysts with low-/no-code drag-and-drop features included.

Level 3 After the second level, some level of automation is starting to be included on the platform. These platforms often include artificial intelligence or machine learning as a means to allow less technical users to begin doing more with data. AI/ML can assist with data preparation, data discovery, insight generation, light data science capabilities, and much more. At this level, you'll find modern BI platforms with more advanced capabilities, which begin to allow line of business users to run light data discovery and analysis activities. These features might include visual data pipelining and the use of natural language as a means to explore data.

Level 4 When we reach the fourth level, we see a shift from business intelligence to decision intelligence. Business intelligence is typically associated

with the ability to analyze aggregated data with visualizations typically consumed via dashboards and reports, whereas decision intelligence adds more advanced AI/ML techniques into the mix to help users consume unaggregated data with powerful automation tools. These AI/ML techniques can be used to power features like automated insight generation to understand key drivers behind trends, anomaly detection, cohort analysis, and much more. In addition, the use of AI/ML helps to make more technical users more efficient in their day-to-day operations. Decision intelligence enables non-technical members of your organization to acquire valuable insights from your data and helps to modernize your data team.

Level 4/5

At the fourth and fifth level, we should begin to see domain- and industry-specific insights being generated on these platforms. There currently are several vendors that provide pharmaceutical and life sciences insights for market access, commercial effectiveness, and much more pre-built into the platform. In addition to pharmaceutical and life sciences-related insights, there are vendors that offer consumer packaged goods, financial, and fintech automated insights. We've also seen domain-specific insights for marketing, sales, and more.

Level 5/6

As we approach the fifth and six levels of self-service analytics, we see an even greater shift toward the use of AI automation to open data-based insights to everyone in your organization and help to streamline workflows. The use of AI/ML will extend from natural language search and automated insight generation to data preparation/pipelining activities, as well as extend AutoML capabilities, opening data science activities to data analyst and engineer users. The use of large language models (LLMs) to augment users' workflows will substantially save time on mundane tasks related to data preparation and analysis. LLMs will also be used to power analysis with narratives written around visualizations to help further democratize data across the organization. Even further, LLMs could be used in a ChatGPT-style, allowing for prompt engineering of data discovery, preparation, analysis, and more. These features will help to further enable access to critical insights for more of your team.

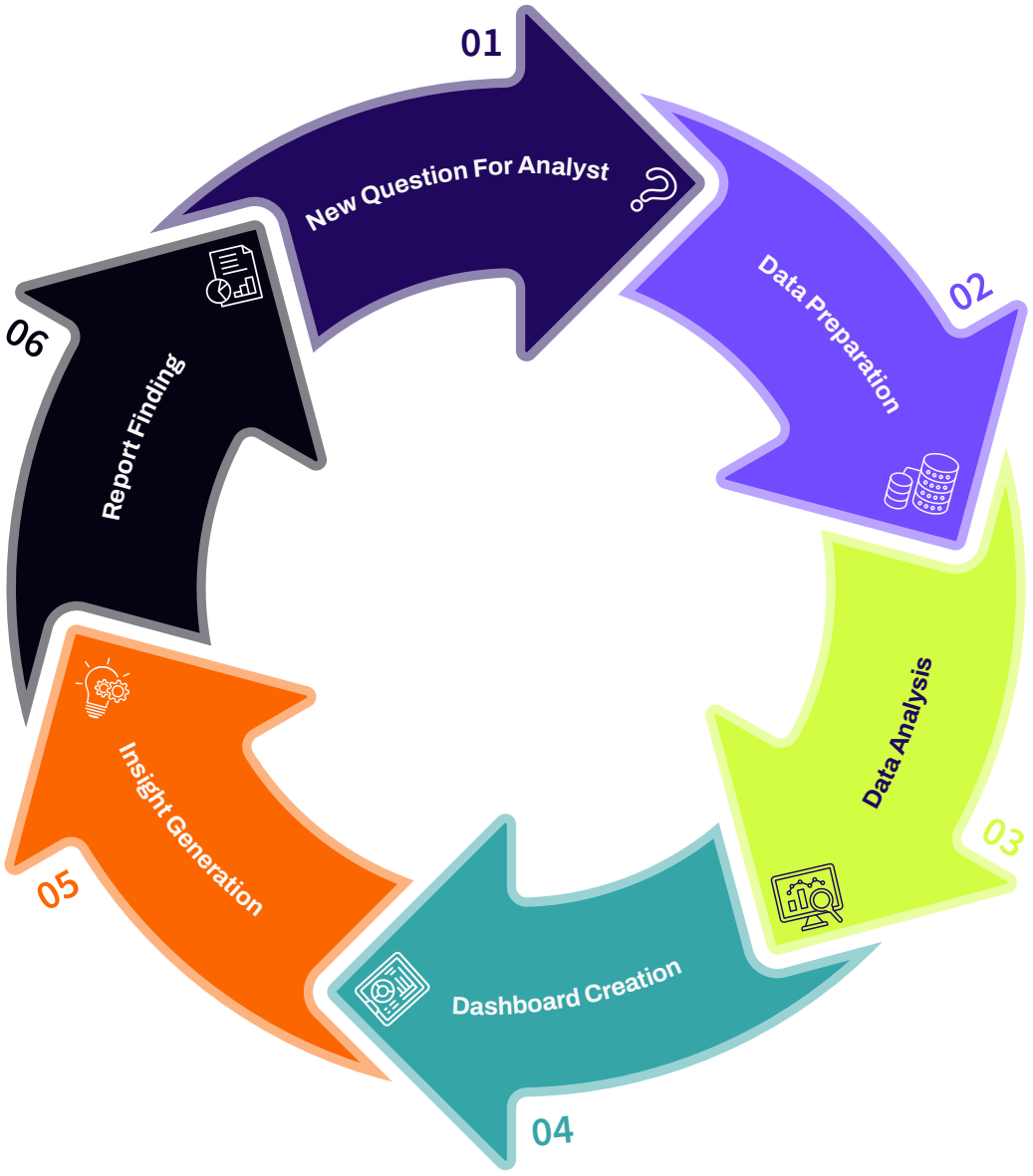
Level 7

The final level of self-service analytics is purely hypothetical today—however, we've seen evidence of progress toward the ultimate end goal: a platform that is trained on the business questions to ask, receives an answer, and is able to act on that answer. Even today, some organizations are leveraging platforms that act similarly. A high-frequency trading hedge fund, for example, may use anomaly detection to "ask questions" and when an anomaly is detected, it may trigger a buy/sell based on that information.

As companies advance through their self-service analytics journey, the paradigm for how best to organize your data analytics teams should evolve to match the technology.

This may be a simple use case, but as the technology evolves, we will see more “business questions” open to these AI-based techniques.

In the future, AI may be used on the fly for optimizing market basket analysis every few hours to automatically uncover cross-sell and upsell opportunities. You may walk to your desk and receive notifications on opportunities for streamlining your supply chain without even thinking about the question. The possibilities are limitless. As companies advance through their self-service analytics journey, the paradigm for how best to organize your data analytics teams should evolve to match the technology. Many organizations today approach



The Maturing Self-Service Analytics Organization

data analytics with the same mindset as the past two decades. The typical case is as such: The line of business user or executive will have a business question that they pass to the data team, the data team prepares the data and creates a dashboard, the business user reviews the dashboard and has additional questions, and the cycle repeats. There's a lot of friction in this cycle as line of business domain experts are unable to move at the speed the business requires. Newer technologies have provided the opportunity to change this paradigm to increase business agility and make better decisions faster.

Receiving value from new technologies requires more than just leveraging these new features. It also requires fundamental organizational changes. As an example, natural language search is a feature that was released broadly to the analytics market years ago—however, this feature alone was not able to deliver the value it was initially promised to provide. Natural language search, as previously mentioned, is the ability to use a "Google-like" interface to ask questions of the data instead of using SQL or keywords associated with your column headers. When it's used alone, you still have the problem of users needing to understand what data is available and how best to visualize the data.

The promise of natural language search is being delivered with the advent of deeper contextual metadata and recommended visualizations. Additions to metadata, like synonyms and descriptions for columns, helps to make natural language search more powerful and opens data access to those in your organization who do not understand the shape of the data. Recommended visualizations provide the right chart type automatically for the business question you have, and the advent of AI-generated narratives and storytelling takes away the complexity of deep analysis. The combination of these four features unlocks a new way to leverage data in your organization. This allows business users to run ad hoc data discovery and analysis instead of the traditional cycle of a data-centric organization.

This type of shift decreases the overall burden on your data team while making your business users more productive. This also shifts the responsibilities of the data team from being data creators to being data curators and keepers of best practices.

Gartner is also a proponent of taking this framework further, embedding each business with an analytics franchise. Analytics franchises are essentially a small data team who is responsible for the business group's data and works with a central data/IT team to understand best practices. These franchises help enable business users with the best approaches for specific business questions.

Receiving value from new technologies requires fundamental organizational changes.

Take Your Self-Service Analytics Journey to the Next Level

With widespread technological change over the last 20 years, self-service analytics as a concept is more at the forefront than ever before. The evolution over the last 20 years has been fast and furious, and yet, there's been no standardization as to what the term means today. The concept to one vendor may mean something completely different to another vendor. Unfortunately, marketing hype coupled with a lack of standardization around the term means technology buyers have to understand the analytics ecosystem deeply or risk missing out on truly transformational progress toward a more data-driven strategy. With the number of companies operating in the data analytics industry, staying up to date with the latest vendors, technology, and market trends is truly a monumental task.

The standard should not be to build your own dashboard, but to perform ad hoc exploration and run deep analysis with limited training.

Armed with this analogy between the levels of self-service analytics and the self-driving car, we hope to show that there's a wide range of potential value for self-service analytics initiatives. Some vendors might promise self-service analytics—however, their definition may be many years out of date. We've entered a new age where the standard should not be "build your own dashboard" but perform ad hoc exploration and run deep analysis with limited training on the platform of your choice. Get in the driver's seat and research new technologies with an understanding of the potential available to you in today's market for self-service analytics.

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See how real users today are taking advantage of AI-powered self-service analytics with Tellius, or schedule a demo to learn how Tellius can help your business excel.