How to Enable Self-Service Analytics to Ensure D&A Success

Published 16 June 2021 - ID G00748717 - 11 min read

By Analyst(s): Anirudh Ganeshan, Carlie Idoine

Initiatives: Analytics, BI and Data Science Solutions

Mastering self-service analytics at scale continues to evade organizations, leading to disconnected business value. Data and analytics leaders must showcase self-service value, foster collaborative development between IT and business, and adopt lightweight management and control.

Overview

Key Challenges

- Data and analytics (D&A) leaders struggle to align self-service analytics to concrete business goals or outcomes. Gartner’s review of D&A strategies indicates only 15% of organizations have concrete performance indicators to measure D&A success.

- Self-service initiatives continue to become self-serving and siloed. IT’s focus on process leads to slow response times and pushes business users to bypass them. This ungoverned mess leads to duplication of effort, compliance- and security-related issues, and increased costs associated with maintaining self-service tools.

- Firms lack a lightweight delegated approach to manage and control self-service. This approach should certify all analytics content and address security issues by setting user permissions and access rights for various self-service users. Gartner’s 2020 CDO Survey reveals data governance and data management as top enablers for D&A success.

Recommendations

To derive value from self-service analytics, leaders responsible for analytics, business intelligence and DSML solutions should:

- Define business value when beginning with self-service initiatives by aligning these initiatives to concrete key performance indicators (KPIs) and organizational goals.
Strategic Planning Assumptions

By 2023, overall analytics adoption will increase from 35% to 50%, driven by vertical- and domain-specific augmented analytics solutions.

By 2022, over 75% of centrally organized analytics programs will be replaced by a hybrid organizational model that shares power with local domain D&A leaders.

Introduction

Organizations are embracing self-service analytics to democratize analytics capabilities among all end users. Gartner inquiries reveal a seven-fold increase in self-service topics since 2019. Moreover, the 2020 Gartner CDO Survey underscored the criticality of self-service analytics for D&A success (see Figure 1).

However, many self-service initiatives often get lost in the workspaces of decentralized business users. Additionally, maintaining different self-service capabilities leads to an ungoverned and expensive mess for IT to support. Poor data literacy among end users and absence of management and control frameworks to govern self-service content remain one of the top reasons for self-service failure.

A self-service analytics approach must build a holistic, balanced ecosystem that includes data, people, process and technology focused on delivering business value. This research outlines three best practices that are key to enabling self-service analytics:

- Aligning self-service initiatives with business goals to measure value.
- Building collaborative development between IT and business that increases trust.
- Incorporating a lightweight management and control of self-service content.
Figure 1. Self-Service Analytics Is One of the Top Enablers for D&A Success

Self-Service Analytics Is One of the Top Enablers for D&A Success

Data Governance and Data Management 18% 50%
Analytics, AI, ML 10% 33%
BI, Reporting and Data Visualization 11% 32%
Self-Service Analytics and BI 8% 32%
Data Engineering 7% 26%

n = 469, all respondents
Q04: Which of the following are the most important roadblocks to the success of your data and analytics initiatives?
Source: 2020 Gartner CDO Survey
34877_C

Analysis
Showcase Self-Service Value by Tying It Concretely to KPIs and Business Outcomes to Justify D&A Investments

Business Problem
According to the 2019 Gartner AI Survey, only 18% of the respondents used business KPIs to measure analytics value. Not tying analytics initiatives to specific measurable business outcomes often leads to an ungoverned, self-serving environment that is difficult to manage and support.

Recommendations
Incorporate an outcome-driven mindset while starting self-service initiatives: The use of self-service analytics is validated when it can be tied to real business outcomes and objectives (see Align AI, Data and Analytics Strategies to Measurable Metrics for Desired Business Outcomes). To successfully measure self-service value, data leaders must:

- Begin with the end in mind — the business objective — as opposed to beginning with the data and a tool in search of a problem to solve. Doing so clarifies the business outcome and the key metrics to be measured (see Figure 2).
Prioritizing these business outcomes in accordance with the business's needs helps achieve the quick wins needed to justify self-service analytics (see How to Optimize Business Value From Data and Analytics Investments ... Finally).

Use augmented analytics to quicken time to insight and drive adoption: In many organizations, one of the principal barriers to self-service analytics is that they lack the skills to prepare, analyze or visualize data findings. Augmented analytics tools have the potential to make analytics more accessible and easier for end users.
Augmented analytics uses machine learning to automate many analytics processes — such as data preparation, insight discovery and sharing, model development — for a broad range of business users, operational workers and citizen data scientists. Deploying an augmented analytics tool, in conjunction with a multistep training process, can accelerate self-service analytics adoption.

Top practices to leverage augmented analytics include:

- Ensuring the augmented insights are not a “black box.” It is important to audit and verify insights for explainability.
- Using augmented platforms to increase collaboration between expert and citizen roles. For instance, a citizen data scientist could do the initial data preparation, featuring engineering and model building using an augmented tool. An expert data scientist could then validate the earlier steps.

Prioritize Collaborative Development to Increase Trust Between IT and Business Users

Business Problem

IT usually focuses narrowly on process and suffers from a traditionally rigid view of the respective roles and responsibilities of business and IT. On the other hand, businesspeople tend to be laser-focused on their own area within the organization. Moreover, IT is often measured on least cost to serve, whereas business staff is measured on, and rewarded for, performance. This leads to an increase in silos and failure of self-service initiatives.

Recommendations

To drive impact from self-service initiatives and make IT and business collaborate and establish mutual trust, analytics leaders must:

Create a hybrid and federated organizational model: This approach allows a proper division of work and lets experts focus on more complex and specialized business problems. Furthermore, it pushes analytics closer to the business while enabling collaboration, sharing and governance to be defined and managed consistently, when and where needed (see Figure 3). The responsibilities of various teams are elaborated on as follows —
The IT group is typically responsible for the data warehouse, cubes and reports that serve the needs of the entire company (e.g., financial and human resources reports). Additionally, the IT group is responsible for provisioning the hardware and software and ensuring appropriate security of data.

The line-of-business teams are responsible for their business unit’s specific analytic needs related to the performance and operations of the unit. Information analysts, engineers, experts and citizen data scientists in the line-of-business units are enabled to create and manage their own data models, dashboards and analysis, and DSML models.

The data science lab is charged with enacting the transformational application of analytics and serves the needs of multiple business units, coordinating data science and machine learning efforts throughout the organization.

Create and support analytics communities to share key challenges and best practices: The idea of creating communities is to break silos and encourage knowledge sharing and collaboration between the various analytics users in the firm. This aids in identifying key challenges and sharing the best practices required to derive value from self-service analytics.
To create and support vibrant communities, data leaders must:

- Identify analytics influencers who can drive self-service adoption and highlight newer self-service capabilities and success stories of various users. These influencers could be C-level executives, experts (like data scientists), or even analysts and business users (see How to Use Influencers Within Communities to Increase Data and Analytics Adoption).

- Create an analytics catalog that becomes a one-stop shop for analytics, providing reports, dashboards and visualizations to users across various functions. Moreover, the catalog should enable users to easily share, search, find and rate dashboards, reports and datasets. Analytics catalogs are featured in Gartner's Hype Cycle for 2020 and is increasingly generating industry interest (see Hype Cycle for Analytics and Business Intelligence, 2020).

- Conduct workshops, knowledge-sharing sessions and data literacy programs aimed at elevating the overall analytics awareness of the firm. Training programs should include an understanding of data sources and constructs, analytical methods, and techniques applied. Furthermore, the focus should be on describing the use case, its application to a business problem and its resulting value (see Roadmap for Data Literacy and Data-Driven Business Transformation: A Gartner Trend Insight Report).

### Adopt a Lightweight Management and Control Approach to Support Self-Service Analytics

#### Business Problem

Self-service analytics will fail to deliver value if the initiative focuses only on access to data. To be useful, the data self-service users access must have certain qualities: It must be intuitive, relevant, accurate and reliable.

Furthermore, firms lack control mechanisms to govern self-service content and set user permissions for accessibility to that content. This leads to self-service becoming chaotic and messy, with issues revolving around data quality, security and more. D&A leaders tend to become disillusioned with self-service analytics and scale back to a centralized IT model.

#### Recommendations

D&A governance must be adaptive to changing business needs and challenges. To achieve this, D&A leaders must:
Create analytics personas to set user accessibility and permissions: Define “personas,” which include the role, activity, skill set and type of data needed (see Figure 4). Each persona is provided with the relevant set of tools and appropriate governance. For instance, the consumers might not have complete access to curate data and just interact with it in production. Likewise, innovators and experts create analytics content and have more access to edit data. How to Balance Control and Agility in Your Self-Service Analytics elaborates these personas in detail.

**Figure 4. Analytics Persona Model**

<table>
<thead>
<tr>
<th>Analytics Persona Model</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consumer</strong></td>
</tr>
<tr>
<td>- Consume and interact with production content.</td>
</tr>
<tr>
<td>- Have no formal content creation rights, and typically do not request them.</td>
</tr>
<tr>
<td>- Required for validation of piloted analytics content, but are not promoting any new content themselves to be piloted.</td>
</tr>
</tbody>
</table>

| **Explorer**            |
| - Able to duplicate and then modify certified datasets and production content. |
| - Sometimes able to bring in domain-specific data, flat files or third-party data to enhance analyses. |
| - Able to nominate their content to be promoted to pilots. |
| - Active in analytics communities and play a large role in informing analytics policies. |

| **Innovator**           |
| - Can leverage any curated data and organize unexplored data into “sandbox” environments to build prototypes. |
| - The gap between an Explorer and an Innovator typically revolves around these data integration/data modeling skill sets. |

Consider a delegated approach to manage self-service content: The delegated approach often consists of —

- The central D&A team that frames the global policies to control and manage self-service for the firm. The team is responsible for managing data warehouses, lakes, marts and other data sources.

- Data stewards that enforce all of these policies within the business units (see Figure 5). The positioning of stewards in the business functions allows for some flexibility in adapting workflows to fit various use cases.
The data stewards and the users who rely on domain data see the immediate benefits of accurate, up-to-date, governed data, and have a vested interest in maintaining and exploiting it. Three Approaches to Support Data and Analytics Governance elaborates this point further.

**Figure 5. Delegated Approach to D&A Governance**

Adopt a prototype-first approach to certify analytics content: Self-service content is rigorously passed from the prototype stage, which has the least governance, to the production stage, with the most governance (see 3 Approaches to Build a Distributed Hybrid Organizational Model for Data and Analytics). The various stages are —

- Frequent interaction between the stewards and the central team to understand incumbent needs and refine policies. This ensures consistency in enforcing newer policies. Close collaboration is vital for effective governance.
It is important to note that IT has a twofold role: guardian of specific Mode 1 data solutions that require centralized control and governance, and facilitator of Mode 2 data solutions for business-based insight and analytics. In many cases, the central teams create prototypes for the business users, if the domain lacks skills and maturity. Hence, IT needs to support and act as an enabler and facilitator for Mode 2 projects.

**Evidence**

2020 Gartner Chief Data Officer Survey was conducted to explore the business impact of the CDO role and/or the office of the CDO. The research was conducted online from September through November 2020 among 469 respondents from across the world.

Respondents were required to be the highest level data and analytics leader, the chief data officer, the chief digital officer, or the leader with data and analytics responsibilities in IT or in a business unit, outside of the IT organization. The survey sample was gleaned from a variety of sources (including LinkedIn), with the greatest number coming from a Gartner-curated list of over 3,450 CDOs and other high-level data and analytics leaders.

**Document Revision History**

How to Enable Self-Service Analytics - 9 September 2019

How to Enable Self-Service Analytics and Business Intelligence: Lessons From Gartner Award Finalists - 5 October 2017
Recommended by the Authors

Some documents may not be available as part of your current Gartner subscription.

Solution Path for Modernizing Analytic Architectures

Top Trends in Data and Analytics for 2021: The Rise of the Augmented Consumer

Data and Analytics Has Evolved to a Collaborative Business-IT Function: A Gartner Trend Insight Report

Data and Analytics Essentials: Self-Service Analytics Operating Model

7 Must-Have Foundations for Modern Data and Analytics Governance