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Domo Business Cloud

Executive Summary

Domo Business Cloud is a cloud-based data and self-service analytics platform that makes it easy for business users to connect to any data source and build attractive dashboards and action-oriented, custom applications. Domo's biggest asset is its 1,800+ customers who are not shy about touting the platform's merits: namely, that it is fast to deploy, easy to use, and scales to any size data. They consistently say that Domo Business Cloud has transformed their organizations by making data, both inside and outside Domo, easy to access and consume through web, mobile, and custom analytics applications.

Company

In 2010, Josh James decided the business intelligence (BI) market was ripe for disruption and he was the person to disrupt it. In a prior role as tech startup CEO, James found that none of the BI players at the time could deliver an interactive dashboard that put all the data at his fingertips to allow him to run his business by the numbers. To realize this vision, James purchased a small, Utah-based dashboard company and raised lots of venture money. He pumped millions into research and development, and even more into sales and marketing. Thanks in part to James's magnetic personality and strong tech track record, Domo became a high-profile startup in Silicon Valley and went public in 2018, raising \$193 million.

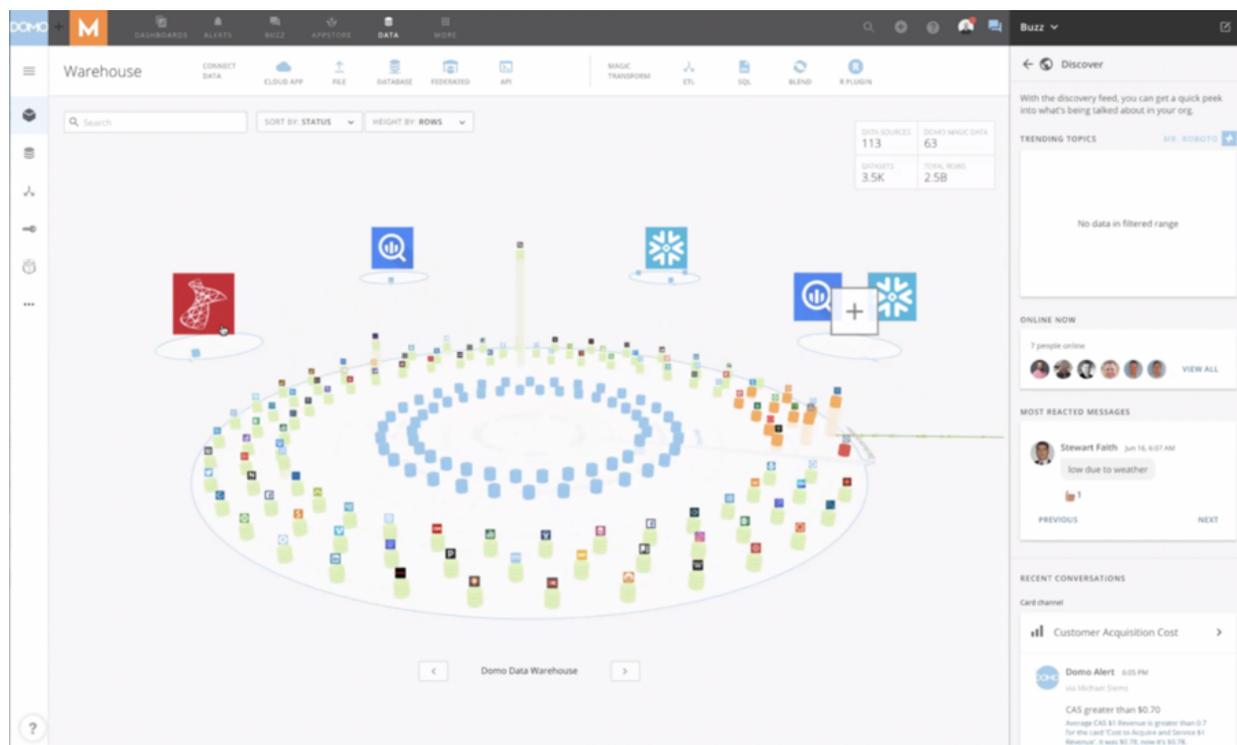
Domo's vision has evolved along with its cloud platform, which now provides much more than just executive dashboards. Domo is a full-featured data and analytics platform that connects people to data both inside and outside an organization. Today, Domo customers are as likely to purchase the product for its data integration and custom development capabilities as its self-service dashboard and visualization features. Whether customers use Domo as an all-in-one data and analytics platform or a complementary product, most cite its ability to transform their organizations by making it easy for business users to build data-driven solutions.

Product

Domo Business Cloud provides functionality in three major areas: data integration, BI and analytics, and intelligent applications.

Data Platform. Domo Business Cloud contains a modern data platform built for the cloud. It connects to more than 1,000 data sources, providing a logical view of distributed data. (See figure 1.) It stores and processes large volumes of data in a scalable repository, which currently processes 1.2 trillion rows of data daily for its global customers. And it can now directly query (i.e., federate) both cloud and on-premises databases so users don't have to load all their data into Domo to visualize it. It also offers a graphical data integration and governance environment that makes it easy for business users to find data, examine its lineage, clean, and transform it. Administrators can certify data sets and control access via granular permissions. It also offers a scripting and SQL coding environment for more complex transformations.

Figure 1. Domo's Data Viewer



Domo's Data Viewer provides animated visualization that shows all data sources available to an individual user, including external sources (shown as icons outside the circle.) Users can click on any icon to view details of that data source and begin accessing and manipulating the data.

BI and Analytics Platform. On the front end, customers can view, interact, create, and administer dashboards using a thin-client browser—no desktop required, unlike some of its competitors. Domo makes it easy for business users to create their own web and mobile dashboards using point-and-click design tools with flexible, templated layouts. With Domo Explorer, users can filter views and explore data sets much like a visual discovery tool.

The product also supports automated insights and natural language querying, and it has built-in alerting, collaboration, and storytelling. It also has scheduled report distribution, and customizable portal pages. Finally, with Domo Business Cloud, developers can add statistical

and machine learning functions to data pipelines, while data scientists can write or import R and Python scripts and run them natively on the platform.

Intelligent Applications. Domo has invested significant resources in extending its ability to support the development of custom analytics applications. Business users can use a graphical development environment to build custom applications that have a custom look-and-feel, run on mobile devices, support workflows, and trigger actions, such as updating a remote application like Salesforce.com.

Domo also provides a development kit for software developers who want to create more complex applications or embed Domo functionality into a host application. Domo has a web site for the developer community (developer.domo.com) that provides documentation, guides, application programming interface references, and an app store with more than 200 Domo-ready applications built by Domo and third parties. It also offers a free development sandbox pre-loaded with sample data and dashboards so developers can see what it's like to build Domo applications.

Customers

As a full-featured data and analytics platform, there is no one way that customers use Domo. Some purchase it for its user-friendly environment for building business dashboards and visualizations. Others find its data environment a compelling way to integrate disparate data sources in the cloud and on-premises. And a growing number are turning to its custom development and embedded analytics capabilities to create novel, data-driven applications.

As an all-in-one, cloud-based solution, Domo is ideal for organizations that don't have a sizable IT department or lots of available technical resources. This includes small and midsize businesses as well as departments at large organizations. But this doesn't mean large enterprises shouldn't consider Domo or that the product doesn't scale. Fidelity, L'Oreal, ESPN, DHL, 7-Eleven, Cisco, and Trip Advisor are some of its brand name customers who have deployed the platform to their entire organization. Top executives at these companies have testified publicly via video or live conference about Domo's transformative impact on their organizations.

Here are comments I've heard Domo customers make:

- Financial services: *"We bought Domo for our executive team, but it worked so well, we deployed it to thousands of people across the company."*
- Pharmaceutical: *"To solve a data integration problem, I got a free trial to Domo and assigned two college grads with little technical experience to the task, which they completed in a couple of weeks, even before the trial expired."*
- Consumer packaged goods: *"Domo is not a BI tool; it's a data platform that holds all our data and delivers thousands of governed data sets to hundreds of business users across all our business units."*

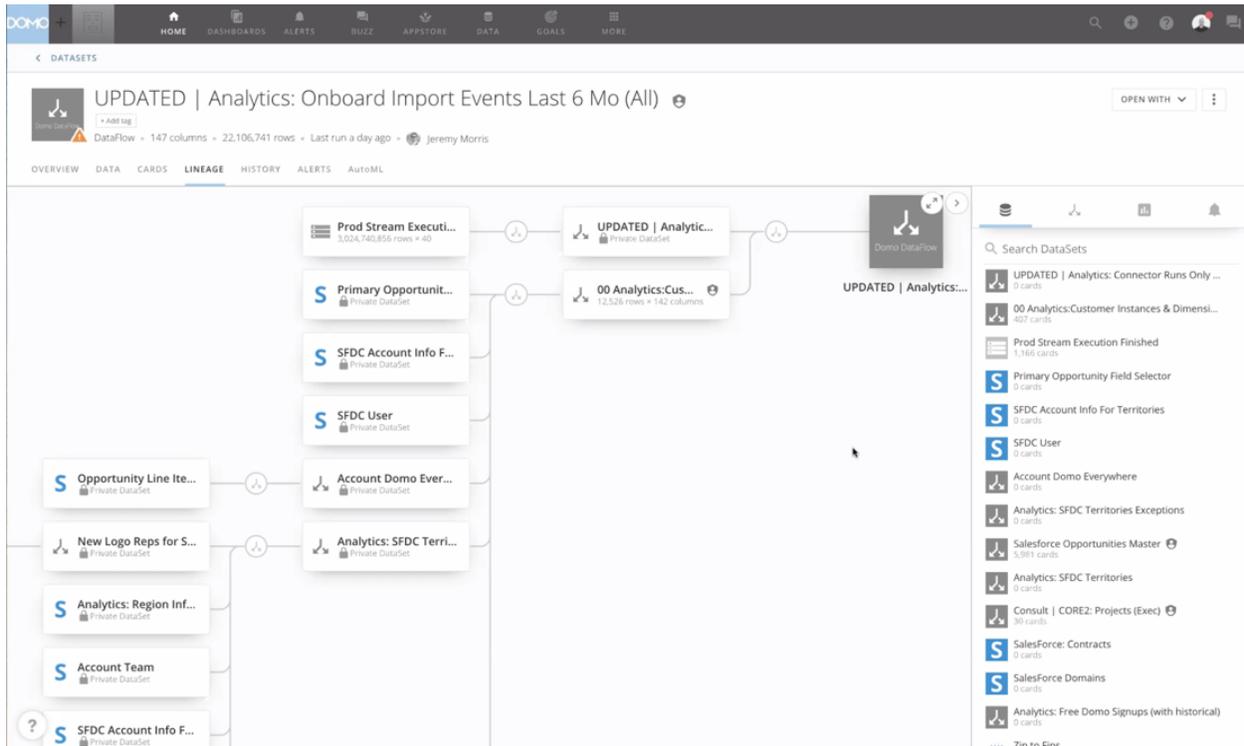
- Construction: *“Before Domo, we relied on gut instinct to determine what was going on at a job site. Now we check our dashboard before we arrive and know exactly what’s going well and not, and where we need to focus.”*
- Global bank: *“We track the bank’s digital transformation on our mobile phones using Domo dashboards and tiles.”*

Differentiators

With its heavy investment in research and development, Domo accelerated the evolution of Domo Business Cloud, delivering functionality in a few years that took most BI vendors a decade or more. Here are some of the more salient differentiators of the Domo Business Cloud:

1. **Data Connectors.** One reason Domo Business Cloud delivers value quickly is that it has 1,000+ connectors to a vast number of cloud applications as well as on-premises databases, local files, and internet servers. These connectors, some of which are bidirectional, unlock vast reserves of “dark data” that exist in most organizations. Domo can also directly query (or federate) cloud and on-premises databases, giving users a logical view of all data no matter where it’s located, whether inside or outside Domo. The company also offers a software developer’s kit for building custom connectors.
2. **Data Governance.** Domo offers granular permissions across all connected data sources and derived data sets, giving users a logical view of authorized data. (See “Domo Data Viewer” above.) By clicking on any data object, users can view its lineage. (See figure 2.) Administrators or stewards can certify data objects, which carry a “certified” icon. When users save a certified data set or card to their personal workspace for modification, it loses the certification icon.

Figure 2. Data Lineage in Domo



3. **Visual Analysis.** Customers always mention how easy it is for business users to create interactive “cards”—which are charts and visualizations—and stories, which are collections of cards, text, and images designed to support guided analysis. Domo’s mobile-first environment automatically resizes all output for any mobile device. (See figure 3.)

Figure 3. Domo Provides a Mobile-First Architecture

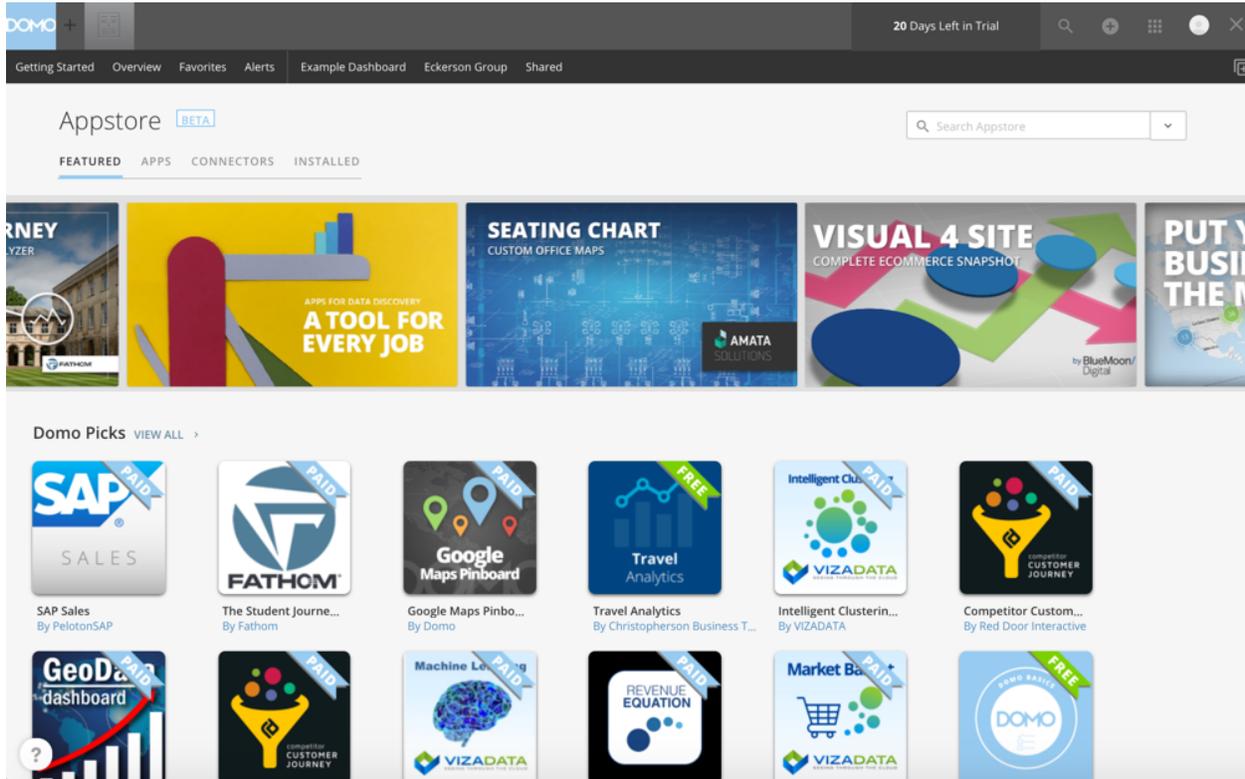


Most Domo Business Cloud customers access interactive charts and dashboards via mobile devices.

Domo supports a rich array of visualizations and a developer's kit (App Dev Studio) to create custom web pages and visualizations using CSS, HTML, and Javascript. Developers can easily embed Domo visualizations into other applications using embedded iFrame code. Users can arrange cards and stories on a personalized portal page so they see only the metrics relevant to them.

4. **Data Integration.** As a platform-as-a-service provider, Domo has invested heavily in building a cloud data infrastructure. Most customers use its Magic ETL graphical modeling and transformation tool to clean and transform data, while some leverage its SQL-based editor to code data pipelines. Developers can inject data science functions (e.g., clustering, classification, and multivariate analysis) into data workflows as well as R and Python scripts, which run natively on the platform. With new enhancements, developers can also combine data from multiple on-premises databases in a single real-time query.
5. **Collaboration.** Domo Cloud Platform offers a host of collaboration features. Domo Buzz is a messaging platform geared to BI that allows users to annotate cards and share comments with individuals, teams, and custom channels. Domo Business Cloud also integrates with popular collaboration tools, such as Slack and iMessage, so users can share insights via existing channels. Domo also contains a directory feature that allows business users to view organization charts and user profiles, making it easier to target their insights. Finally, users can set alerts on key metrics and select who should be notified if data exceeds a threshold.
6. **Developer Gallery.** Finally, Domo has done more than most BI vendors to recruit third parties to publish content for Domo customers. It offers a Domo Sandbox, a full-featured development environment with sample data and cards and extensive documentation and guides for building custom applications. Domo has also built a bona fide app store where users can download 200+ Domo Apps (prebuilt dashboards) for free or a fee and import them into their Domo instance. (See figure 4.)

Figure 4. Domo App Store

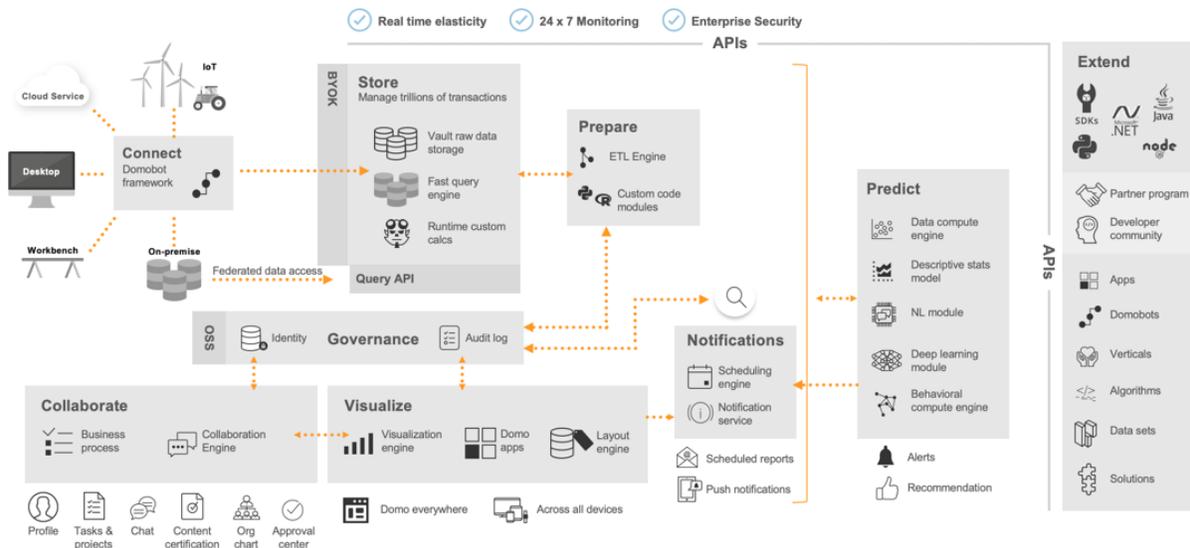


Architecture

Domo customers get a fully integrated data warehouse and analytics environment in the cloud. (See figure 5.) The environment was designed for customers to load all their data into Domo. Queries then run against the platform’s massively parallel processing columnar database, called Adrenaline. Thanks to the cloud, Domo customers can store as much data as they want in Adrenaline, using its cache to ensure consistently fast performance. The product’s scalability has prompted some customers to refer to Domo Business Cloud as their “data lake.”

For customers who can’t move their data to the cloud, Domo offers an on-premises appliance that runs Adrenaline, which customers can query from the cloud through a secure connection. For hybrid cloud customers, Domo offers connectors that query on-premises databases from the Domo Business Cloud and federate queries across both cloud and on-premises databases.

Figure 5. Domo Business Cloud Architecture



Conclusion

Domo has morphed from a cloud-based tool for building executive dashboards to a comprehensive data and analytics platform that makes it easy for business users to integrate and visualize data across an enterprise with both cloud and on-premises data sources. Its heavy investment in research and development has resulted in a full-featured environment that delivers best-in-class capabilities for visual analytics, data integration, and custom analytics development. Although Domo is ideal for companies who want an all-in-one cloud based data and analytics solution, many customers use it to complement existing solutions. Given its flexibility and breadth, Domo is a good choice for any organization looking to get more value from its data.

About the Author



Wayne W. Eckerson has been a thought leader in the data and analytics field since the early 1990s. He is a sought-after consultant, noted speaker, and expert educator who thinks critically, writes clearly, and presents persuasively about complex topics. Eckerson has conducted many groundbreaking research studies, chaired numerous conferences, written two widely read books on performance dashboards and analytics, and consulted on BI, analytics, and data management topics for numerous organizations. Eckerson is the founder and principal consultant of Eckerson Group.

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