



# Under the Hood: The GoodData Analytics Engine

In the last decade, Snowflake revolutionized data storage by separating storage from compute. When the company first proposed the idea, it seemed strange: Why would anyone ever need this? What would be the application? Today, it's been adopted by nearly every industry to increase business flexibility and agility.

GoodData is bringing about a similar revolution by separating the logic of analytics from its presentation — making it possible for any user to access data insights and visualizations without needing data science training. By enabling anyone at a company to query, manipulate, and leverage real-time data, composable data & analytics democratizes data literacy for businesses.

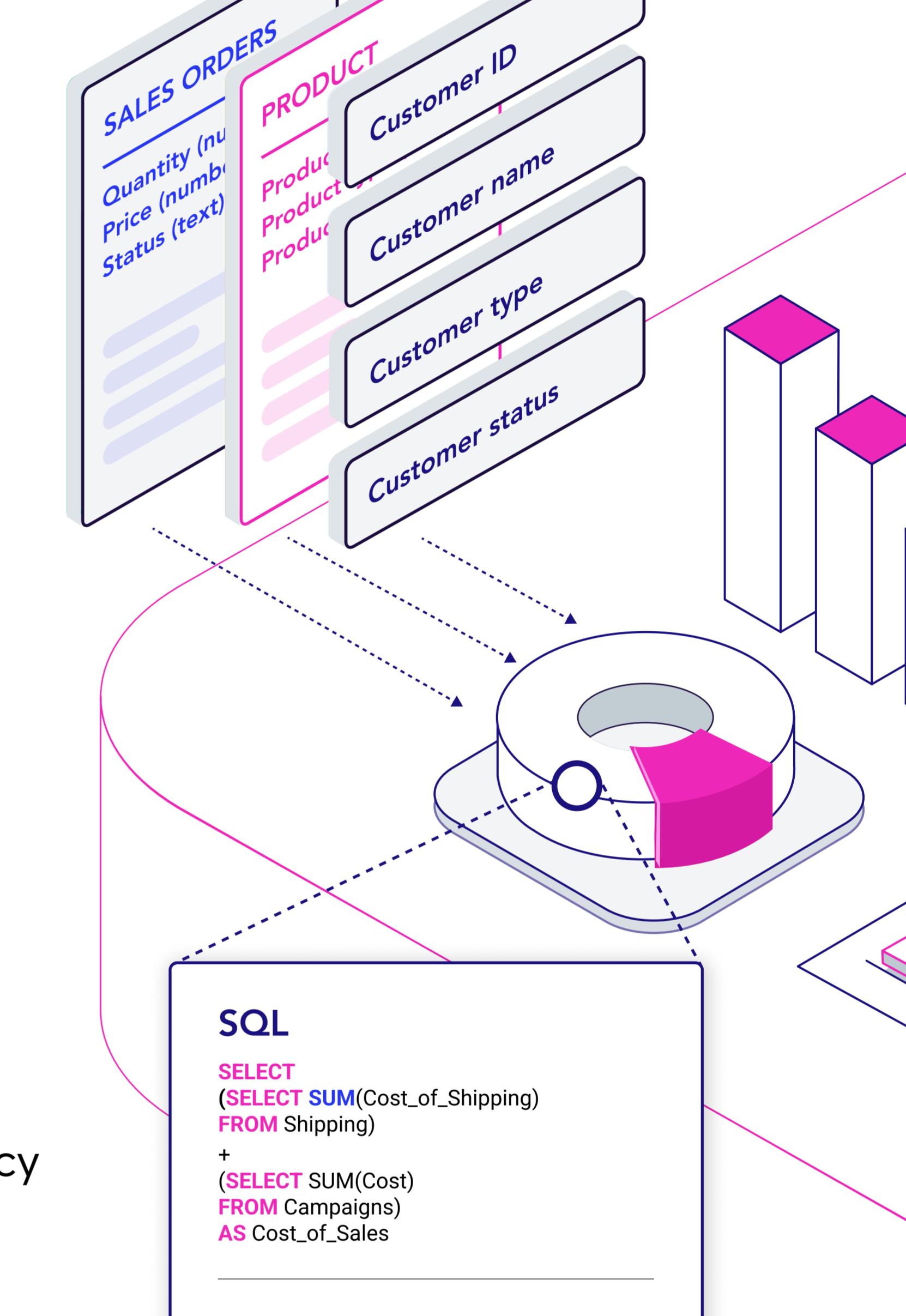
Companies know they need to democratize data access across their organizations, and **95% of companies in one survey** agree that data for decision-making will be much more important in the next two years. But today, most users are not working with current data. Because users must rely on data science or IT teams to fulfill queries, the data they work with is outdated by the time they receive it.

Enter: The GoodData analytics engine. It sits in between data management and data presentation, creating a connection that allows business users to access data in real-time while maintaining governance. In the future, data accessibility will not only be critical for business users making decisions — it will also power emerging, data-dependent applications and devices.

So, how does the analytics engine work? Here's a peek under the hood:

## LAYER 1: INSTALLATION

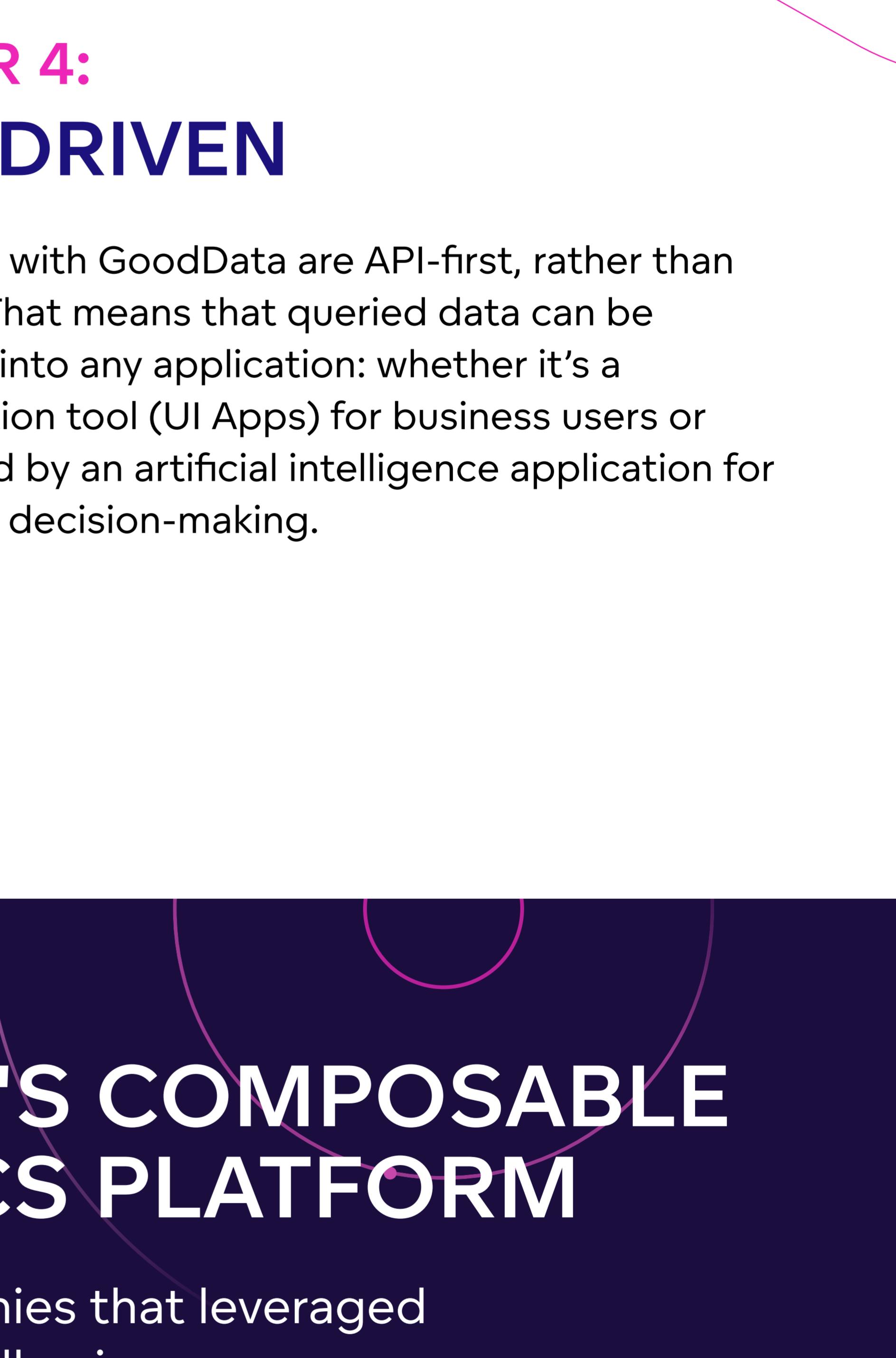
The GoodData analytics engine is installed directly so that companies retain ownership of the data, and there's no copying or migrating of the data that needs to take place. Using a containerized architecture based on Kubernetes and Docker technology, the analytics engine is deployed into the data environment — whether public cloud, private cloud, an internal data center, and more.



## LAYER 3: SEMANTIC LAYER

The analytics engine also has a semantic layer embedded that translates data contained in spreadsheets into clear, consistent business terms, like "Gross Revenue." And, supported by the direct query function, this ensures data is consistent:

- No instances of comparing outdated information to more recent information across teams
- No competing definitions of business terms: everyone is defining metrics the same
- No need for extensive data and analytics training across teams: the semantic layer promotes data literacy



## LAYER 2: ANALYTICS ENGINE

Once the analytics engine is installed, it can begin automatically generating SQL queries across multiple data sources. Because it's directly querying the database, data is always up-to-the-minute.



## LAYER 4: API-DRIVEN

Analytics with GoodData are API-first, rather than UI-first. That means that queried data can be plugged into any application: whether it's a visualization tool (UI Apps) for business users or leveraged by an artificial intelligence application for real-time decision-making.

## THE ROI OF GOODDATA'S COMPOSABLE DATA AND ANALYTICS PLATFORM

According to one study, companies that leveraged GoodData saw the following:

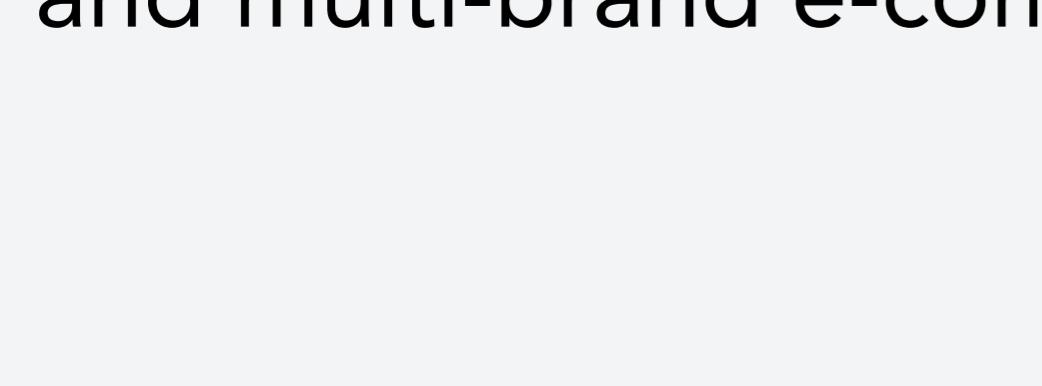
- **5 months**  
Average time to install the analytics engine.
- **7 months**  
Average payback period. Some saw payback in as little as 2 weeks.
- **\$4 for every \$1**  
The return for every dollar invested in the first three years.

Want to learn more about GoodData?

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## About GoodData

GoodData is on a mission to break data silos by ensuring a real-time, open, governed, and scalable platform. Our leading composable data and analytics platform gives our customers the flexibility to build and scale any of their data use cases; from self-service and embeddable analytics, to machine learning and IoT — while maintaining the performance, cost-efficiency, and easy change management of such a central and integrated solution.

GoodData has teams and data centers in the USA, Europe, and Asia, with customers including leading software companies (SaaS), global financial and payment institutions, and multi-brand e-commerce platforms.