



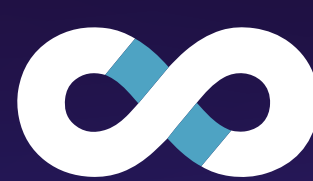
Business Intelligence Platforms 2025

GUIDE

Free and Open-Source
Data Visualization Tools



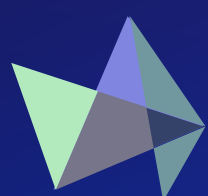
Data Studio



Apache
Superset



React +



HIGHCHARTS

This guide is our way to help you decide which Business Intelligence solution best suits you.

Let's start with the essentials

Business Intelligence (BI)

means using data to make better business decisions. It involves collecting, storing, analyzing and visualizing information. It can help your organization understand what is happening, why and what to do about it.

Data Visualization turns numbers and data into visual representations like charts, graphs, maps and dashboards to make information easier and quicker to understand. It can help you make sense of your data and ultimately make meaningful, data-driven decisions.

Free-Tier BI tools

are basic versions of commercial Business Intelligence products offered at no cost. The free usage is typically constrained by certain limitations (data volume, number of users, access to advanced features, etc.) designed to encourage an upgrade to a paid license.

Open-Source BI tools

are Business Intelligence products where the source code and features are publicly available, allowing users to inspect, modify and distribute them. These are typically free to use but require technical expertise, like coding or setting up your own infrastructure, for effective implementation and maintenance.*

*Open-source BI Tools usually have communities supporting their development and growth, and a strong implementation will likely need some members of your team to know how to use community-created tools.

This guide is for those who...

- are technical professionals or decision makers.
- are undecided about which data visualization platform to choose.
- want to understand which tool best fits your organization's conditions, goals and needs.
- are curious to know the main features and benefits of these tools in order to get the most out of them.

Why is it important to talk about free and open-source BI platforms?

Free and/or open-source Business Intelligence (BI) platforms are crucial for the democratization of data analytics. Their capacity to reduce costs, enhance flexibility and broaden access to powerful analytics makes them a compelling choice for many organizations.

- By eliminating licensing fees associated with proprietary software, these solutions make advanced data visualization and analysis accessible to businesses with limited budgets.
- By offering unparalleled flexibility, the open-source options allow users to customize and integrate tools without committing to a single vendor, enabling organizations to tailor BI solutions to their specific needs.
- By lowering financial barriers and increasing customization, these platforms empower a wider range of professionals to leverage data for informed decision-making and continuous improvement.

Meet the platforms >>

These are three of the most popular BI tools in the free and open-source landscape. They offer unique characteristics and strengths that help organizations better use their data.

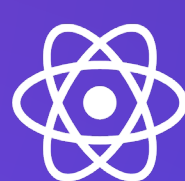


Data Studio

is a free web-based data visualization platform, owned by Google, that helps turn data into fully customizable dashboards and reports.



is a modern open-source data exploration and visualization platform developed by the Apache Software Foundation.



React +



HIGHCHARTS

is an open-source JavaScript tool, developed by Highsoft (Norway), that combines a charting library with a user interface library for building interactive dashboards.

Each solution stands out according to the features or functions they offer. Next is what, from our perspective, distinguishes each one.



Data Studio

Simple and
extensive data
connectivity



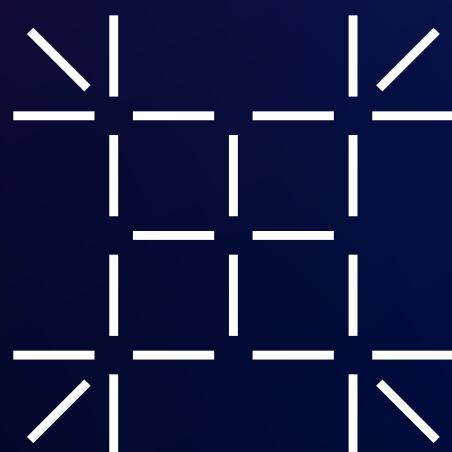
Access and blend your data
from over 1200 connectors
(Google products, databases,
social platforms, flat files, APIs).

Sharing and
real-time
collaboration



Share dashboards with view
or edit rights, work together
in real time and track changes
with built-in version history.

Seamless Google
ecosystem
integration



Connect directly to Google tools
like BigQuery, Sheets, Analytics
and Slides, making it simple
to analyze and present within
the Workspace ecosystem.

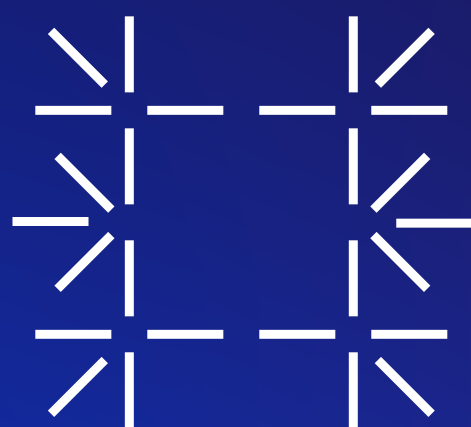
Security and
governance



Manage data securely with
row- and column-level
permissions (available in Data
Studio Pro, which is not free),
ensuring users see only the data
they are authorized to view.



Wide
SQL-based
data compatibility



Connect to virtually any
SQL-speaking database
(including BigQuery, Redshift,
Snowflake, Druid).

Dual-mode
exploration



Build visuals using no-code
chart builder for quick visual
exploration and a robust SQL Lab
interface for advanced queries.

Rich visualization
and interactivity



Make use of 40+ built-in chart
types (including geospatial
visuals), custom plugins, filters
and drill-downs for interactive
dashboards.

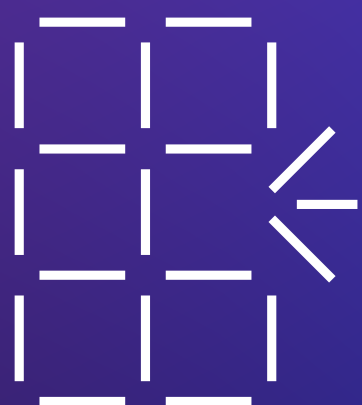
Cloud-native
scalability



Scale seamlessly from small
team setups to enterprise-wide
deployments, handling thousands
of users and large data workloads
efficiently by scaling horizontally
(adding servers or containers
as demand grows).

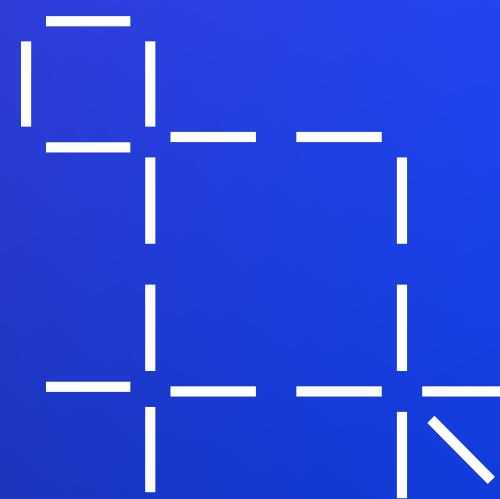


Broad library
and framework
support



With compatibility across major JavaScript frameworks, Highcharts makes dashboard development flexible and adaptable to future-proof your organization's technology.

Wide range
of charts
and widgets



Create dashboards with pre-built chart types (line, bar, scatter, heatmaps, treemaps) and advanced options (stock, maps and Gantt), all configurable in React for KPIs, data grids and interactive elements.

Deep React
integration



Configure charts within React using familiar component syntax. Dashboards can embed custom React elements (such as tooltips, filters or buttons) directly into charts, ensuring consistency with the app's design system and branding.

React-oriented
API & ESM
support



Build charts using React's component syntax and modular imports, keeping dashboards clean, lightweight and performant.

How to choose the one that best suits your needs

There are five factors for consideration that commonly surface during our data modernization projects. We created a framework to help you choose the visualization platform that best suits your organization's characteristics (size, budget, amount of data, number of users, etc.).

These criteria are crucial for decision-making:

- 1 **Easy to use and learn:** How intuitive is it to learn and use? Does it align with your current skillset? Does it have a strong community to help you learn?
- 2 **Visualization options and customizations:** Do the native charts and graphs in the program fit your needs? How much can you edit and change the visuals to fit your needs?

- 3

Collaboration and sharing: How easy is it to share dashboards and allow for collaboration in creating or using dashboards? Do the sharing and editing permissions fit your team’s needs?
- 4

Data integration: How easy is it to connect to various data sources and handle large datasets? Does it fit your data modeling needs?
- 5

Cost and licensing: Is it affordable if you wanted to move beyond the free version and upgrade?

	 Data Studio	 Apache Superset	 React + HIGHCHARTS
Easy to use and learn	LEADERSHIP	DEVELOPMENT	COMPETITIVE
Visualization options and customizations	DEVELOPMENT	LEADERSHIP	COMPETITIVE
Collaboration and sharing	LEADERSHIP	COMPETITIVE	DEVELOPMENT
Data integration	LEADERSHIP	COMPETITIVE	DEVELOPMENT
Cost and licensing	DEVELOPMENT	LEADERSHIP	LEADERSHIP

The use of BI platforms is gaining popularity since they represent a very useful strategic tool for organizations and businesses.

The value of these tools lies in the ability to process and visualize large amounts of data and help your data tell a story that will connect with your audience. This is key for making informed decisions, solving problems, understanding users and preventing risks.

These solutions are designed for anyone to use. However, individuals with specialized expertise will be able to maximize their potential.

Here are some of the most common BI use cases to help you determine the skill level of your solution.

1 Dashboard vision or initial stages you can do by yourself:

- Upload a dataset, connect to a database and create a visualization to begin identifying the most important insights, trends and patterns of your data environment.
- Leverage sharing your visualizations with others for continuous improvement, which will make your dashboard easier to understand.

2 Cases in which an expert's perspective upgrades the outcome:

- **Ensure high quality, clean and optimized visualizations for the available data.** Only an expert knows how to take the data available and create custom visuals tailored to your organization's goals.
- **Transform and load complex data types.** An expert easily and efficiently prepares data from multiple sources to build more complex visualization types and interactions in a timely manner within your budget.
- **Prioritize and implement the needs of multiple stakeholders** and create a more simplistic and easy-to-understand set of visualizations that meet your stakeholders' needs.
- **Avoid common pitfalls in design and practical application** that may lead to your dashboard not being used or sustained long-term. Experts drive efficiency and effectiveness in your workflow, processes and results.



Business Intelligence Platforms 2025

Specialized BI services that we offer at Crocus

At Crocus, we specialize in empowering organizations with data-driven decision-making through our wide Business Intelligence services.

> Custom dashboard creation

Transforming your data into compelling, interactive and sustainable dashboards.

> Expert data-driven analytics

Developing complex calculations to uncover deeper business insights.

> Training and knowledge transfer

Empowering your team with skills to maintain and expand your BI solution.

> Combining complex data systems and data modeling

Structuring your data for optimal performance and insights.

> BI tool administration

Setting up and managing workspaces, gateways and security roles.

We hope this guide helped you understand the basics about each of these platforms.

If you need more guidance or expert support at any phase of your dashboard journey, we will gladly do so!

At Crocus, we have a team of Business Intelligence experts ready to assist you with your data visualization needs.

You can find us at hello@crocusllc.com



Business Intelligence Platforms 2025

GUIDE

'Crocus Business Intelligence Platform Series' is produced by Crocus, LLC.

Copyright© 2025 Crocus, LLC.
All rights reserved.

<https://www.crocusllc.com/>

650 Massachusetts Ave NW, Suite 600
Washington, DC 20001-3979

<https://www.linkedin.com/company/crocusllc/>