



Power BI

Overview

Power BI is a business analytics tool by Microsoft that lets you create, share, and embed rich interactive reports using live data – securely and at scale.

Summary

Why to use Power BI

- Connect to multiple data sources (Excel, SQL, APIs, SharePoint, etc.)
- Interactive charts, filters, drill-down
- Auto-refreshing, real-time dashboards
- Can be shared securely or embedded in websites
- Scales easily across departments
- Enterprise-grade security + governance
- Integrates with Microsoft ecosystem (Teams, Office, Azure, etc.)

Ease of Learning

Feature	Power BI
Learning curve	Easy for Excel users
Query building	No code (Power Query) + Advanced (DAX)
Visuals	Drag & Drop
Resources	Huge free learning from Microsoft learn.

Why Power BI – if we can use Excel

Feature	Excel	Power BI
Basic Charts	Yes	Yes
Pivot Tables	Yes	Yes (better with DAX)
Live data connections	Limited	Yes (SQL, APIs, Azure, etc.)
Interactive dashboards	Static	Fully interactive
Scheduled data refresh	Manual	Auto (e.g., every hour)
Secure web embedding	No	Yes
Role-based access	No	Yes
Real-time dashboards	No	Yes
Drill-through & slicers	Very limited	Powerful interactivity
Data modeling	Very basic	Advanced (relationships, DAX, measures)
Web & mobile app access	No	Yes
Enterprise sharing & governance	No	Yes
Custom visuals	No	Yes (Marketplace & custom-coded)
Power Query (ETL)	Basic	Full Power Query support

Our Power BI Goals

- Build interactive, visual reports using Power BI
- Embed Power BI reports into a PHP web app
- Allow public or no-login viewing of reports
- Get full admin control over Power BI settings
- Enable “Publish to web” or use Power BI Embedded
- Choose the right Power BI plan (Pro or Embedded A SKU)
- Automate data refresh (daily/hourly updates)
- Train team for basic Power BI usage (easy learning curve)
- Create dashboards with KPIs, KRIs, drill-downs, filters
- Keep reports clean, simple, and mobile-friendly
- Prepare standard dashboard templates for reuse
- Ensure proper security if needed (role-based access)

Power Bi plans and Pricing

Plan	Price (approx.)	Best For
Power BI Free	₹0	Personal use
Power BI Pro	₹830/user/month	Team sharing, collaboration
Power BI Premium Per User (PPU)	₹1660/user/month	Advanced features + larger data
Power BI Premium Capacity (P SKU)	Starts ₹4.5–5 Lakh/month	Large enterprise
Power BI Embedded (A SKU)	Pay-as-you-go (Azure)	Public or seamless embedding















Why Power Bi vs (tableau, google sheets)

Feature	Power BI	Tableau	Excel/Sheets
Easy to learn	Yes	Steeper	Yes
Embedding in app	Best (via Embedded)	Yes (complex)	No
Auto refresh	Yes	Yes	Manual
Pricing	Affordable	Costly	Free
Microsoft ecosystem	Native	No	Yes
Modeling large data	Excellent	Good	Limited
Web-based sharing	Yes	Yes	Not secure

Open source Dashboard tools

Tool	Embeddable?	Backend Support	Notes
Metabase	Yes (iframe)	MySQL, Postgres, etc.	Super easy, great UI, self-hosted
Apache Superset	Yes (via iframe or JS)	SQL DBs	Powerful, enterprise-grade
Redash	Yes	SQL, APIs	Simple + good embed support
Grafana	Yes	Time-series + SQL	Great for metrics, logs, monitoring
Kibana	Limited	Elasticsearch	Data log/analytics; not general BI
Dash by Plotly	(custom HTML)	Any via code	Best for custom Python dashboards
Chart.js + Custom Backend	Fully Custom	Any	Manual charts, but lightweight

Power BI V/S Open Source tools

Feature / Criteria	Power BI	 Open Source Tools (Metabase, Superset, etc.)
 Cost	Paid (Pro/Embedded plans)	Free forever (self-hosted)
 Ease of Use	Drag & drop, no coding	May need SQL, setup skills
 Public Embed	"Publish to Web" (free) or Embedded (paid)	Easy iframe/public link
 Security	Enterprise-grade (RLS, Azure AD)	Basic, needs manual config
 Auto Refresh	Scheduled refresh (built-in)	Needs manual setup (cron, etc.)
 Visuals & Charts	Rich, polished visuals	Limited/custom via code
 Customization	Limited (closed source)	Fully customizable (open-source)
 Setup Effort	Very low (cloud-based)	Needs hosting, DB setup
 Microsoft Ecosystem	Native with Excel, Teams, SharePoint, etc.	No MS integration
 User Roles/Admin	Granular control, full admin portal	Basic in most OSS tools
 Dev-Friendly	Closed platform	Code/API-friendly
 Enterprise-Ready	Yes	Depends on tool/setup
 All-in-One Tool	ETL + Model + Viz in one	Often just dashboards