Business &
Audit Intelligence tool
for the new data landscap

Power BI

Nikunj Shah B.Com., MA, LL.B., FCA, DISA(ICAI), CIA(USA),ACFE

gust 12th, 2018

What is Power BI?

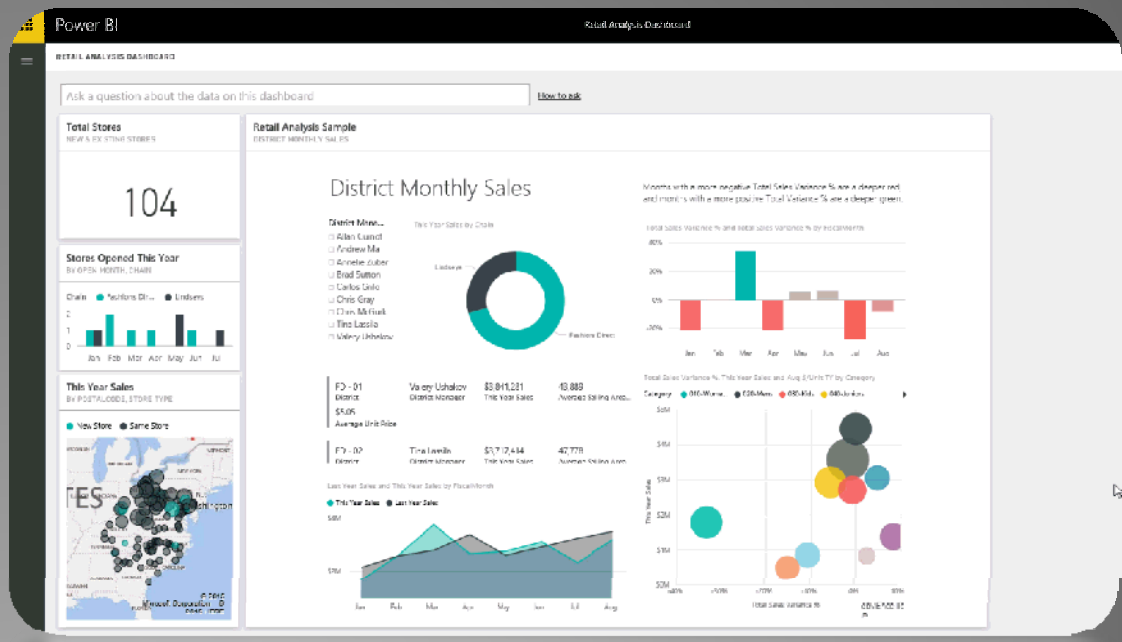
r BI is a

ection of software services

work together

urn your unrelated sources of

interactive insights.



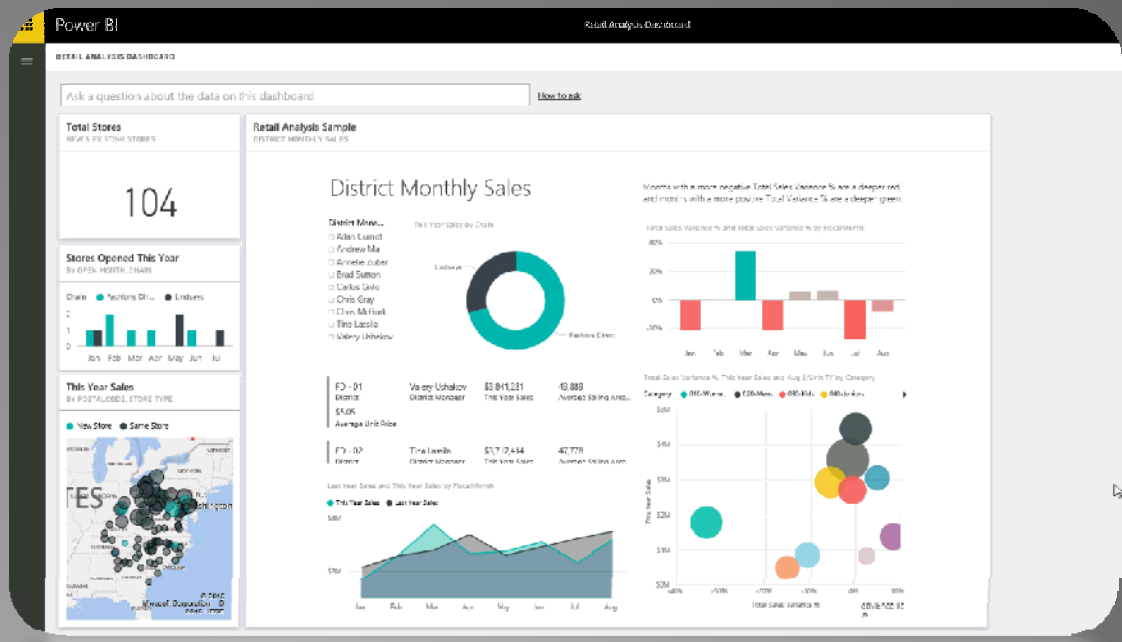
What is Power BI?

r BI

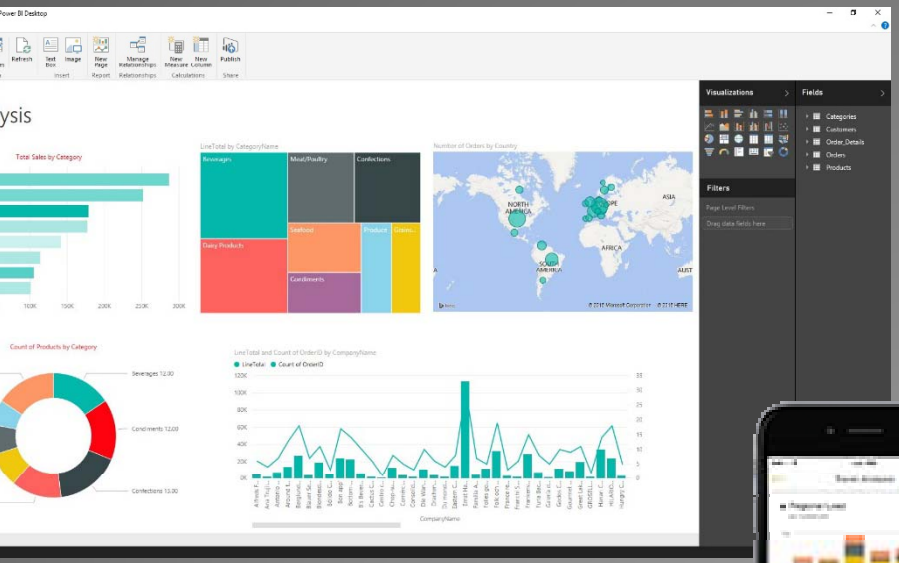
you easily connect to your sources,

alize (or discover) what's ortant, and

e that with anyone or yone you want



Access Points

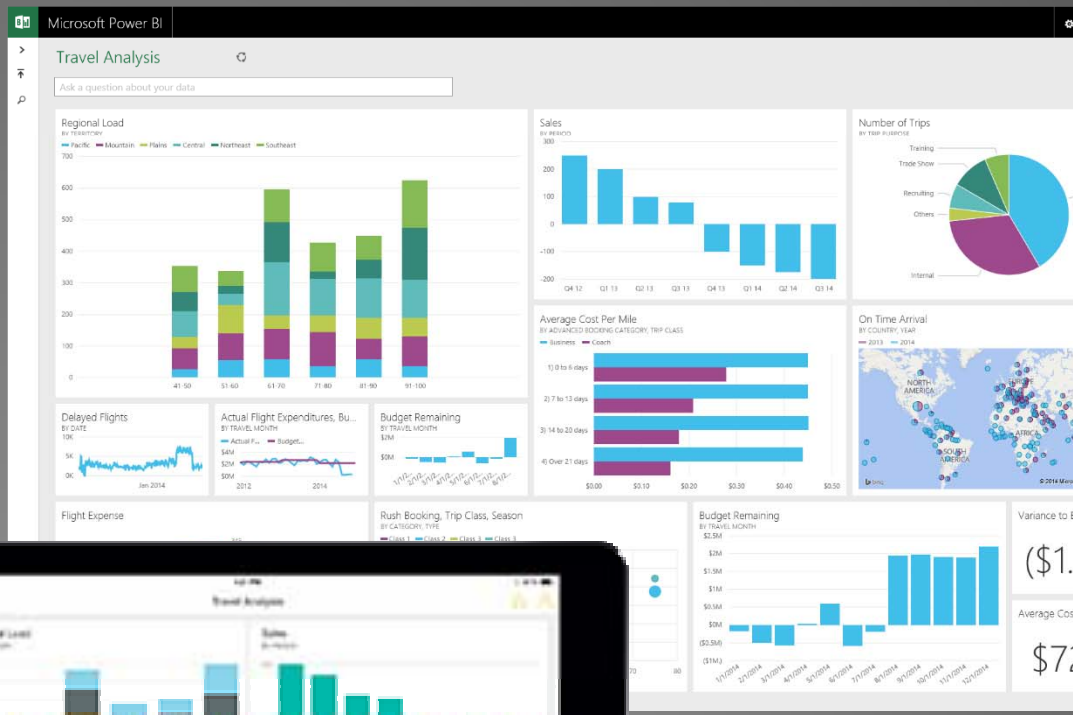


ver BI Desktop

onnect to data sources
odel, Analyze & Enrich

Power BI Mobile

- Track data on the go



Power BI Saa

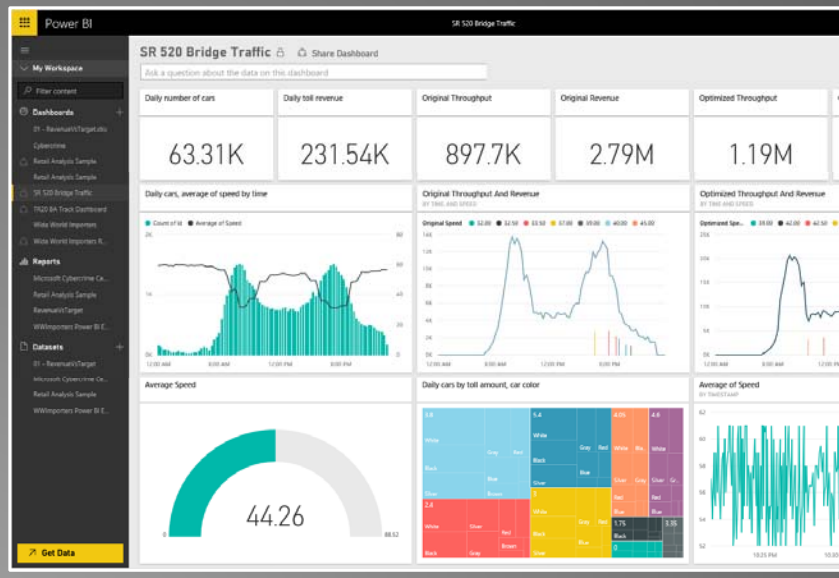
- Share Dashboa
- Connect to 3rd
  Saas Applicati

wer BI

rience your data. Any data, any way, anywhere

Power BI is a cloud-based business analytics service that enables

- fast and easy access to your data
- a live 360º view of your business
- data discovery and exploration
- insights from any device
- collaboration across your organization
- anyone to visualize and analyze data



benefits and differentiators of Power BI

- Pre-built dashboards and reports for popular SaaS solutions
- Real-time dashboard updates
- Secure, live connection to your data sources, on-premises and in the cloud
- Intuitive data exploration using natural language query
- Integrated with familiar Microsoft products and utilizes commitment for scale & availability in Azure
- Fast deployment, hybrid configuration, secure, and integrated with existing IT systems.

ver BI Overview

Po

ata sources

- SaaS solutions
  e.g. Salesforce, GitHub, Dynamics CRM
- On-premises data
  e.g. SQL Server Analysis Services
- Organizational content packs
  Corporate data sources or external data services
- Azure services
  Azure SQL, Stream Analytics…
- Excel files
  Workbook data / data models
- Power BI Desktop files
  Data from files, databases, Azure, and other sources

Power BI service

- Content packs
- Live dashboards
- Visualizations
- Reports
- Datasets
- Data refresh

Natural language query

Sharing & collaboration

er BI Overview

Po

ata sources

- SaaS solutions
  e.g. Salesforce, GitHub, Dynamics CRM
- On-premises data
  e.g. Analysis Services
- Organizational content packs
  Corporate data sources or external data services
- Azure services
  Azure SQL, Stream Analytics…
- Excel files
  Workbook data / data models
- Power BI Desktop files
  Data from files, databases, Azure, and other sources

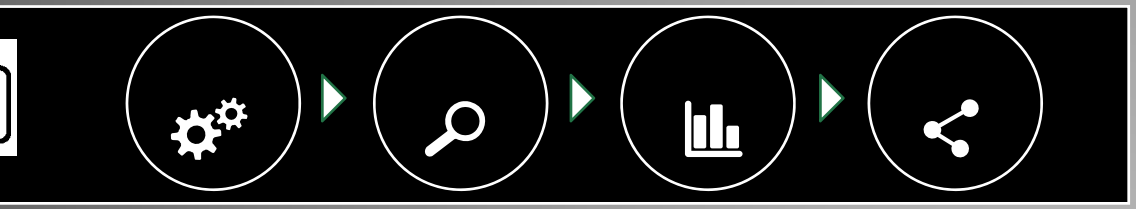
Power BI service

- Content packs
- Live dashboards
- Visualizations
- Reports
- Datasets
- Data refresh

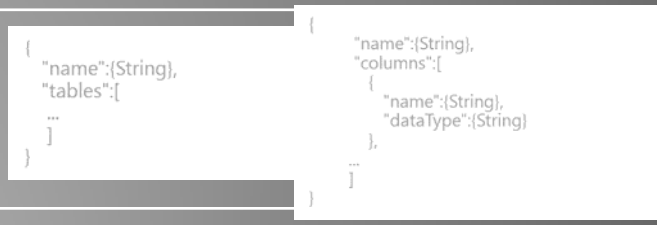
Natural language query

Sharing & collaboration

Power BI Desktop



Power BI REST APIs



Power BI Desktop ?

ownloadable 32/64 bit
application optimized for the
I Service

es the power of Power Query,
ivot and Power View

ed BI workflow: Specializing
ctive Visualization and

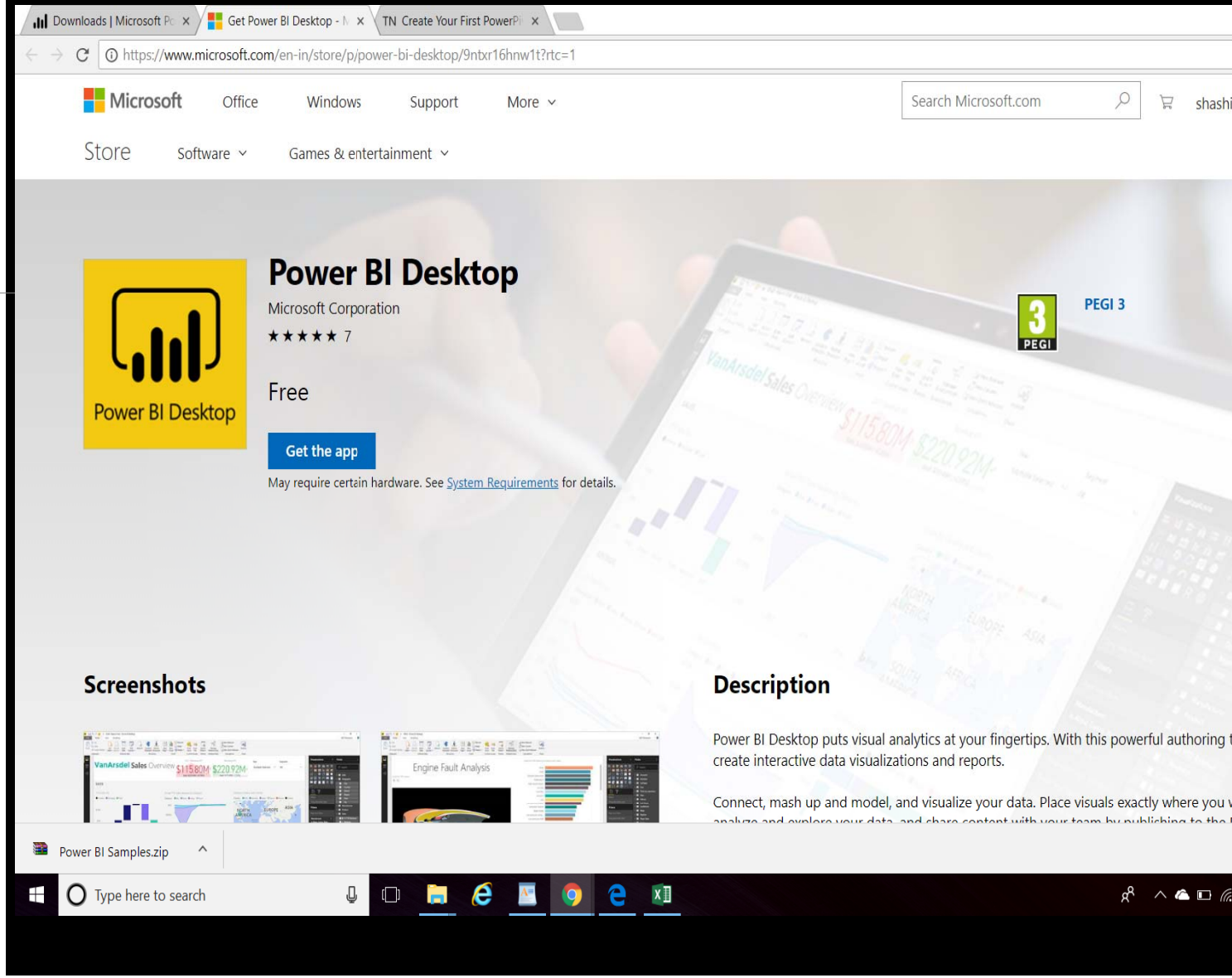
tput: Interactive Reports

ssly publish interactive visual
o Power BI users

: Monthly updates

Create Power BI Content

Connect to data and build reports for Power



BI Desktop

re

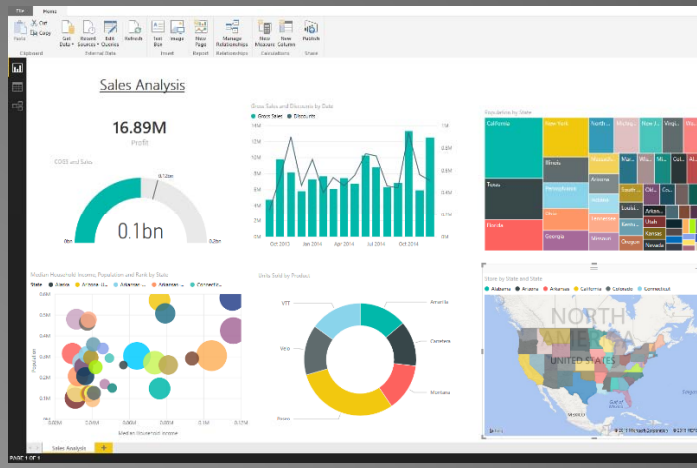
Explore

rt

Share & collaborate

Prepare, explore, report and collaborate wit Power BI Desktop

- Acquire and prepare data with extensive query capabilities
- Establish data structure and transform and analyze data
- Explore data in new ways through a freeform, drag-and-drop canvas
- Author reports with a broad range of modern data visualizations
- Publish interactive reports to Power BI



Available as a free, downloadable desktop compan the Power BI service, ***Power BI Desktop is a visual exploration and reporting tool***

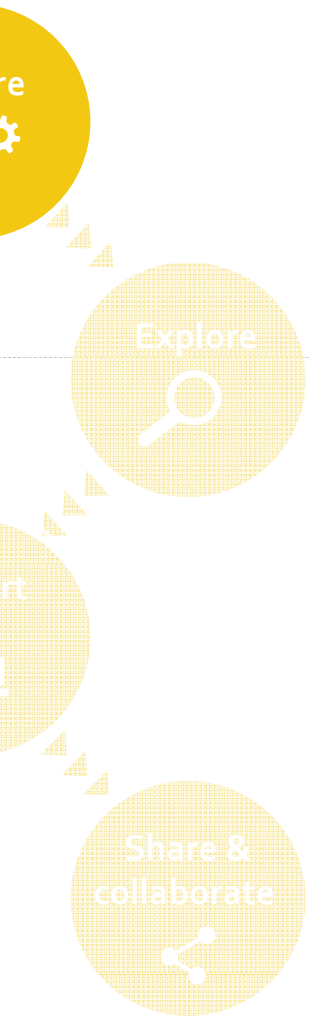
BI Desktop

Consolidate data from a broad range of source

ture

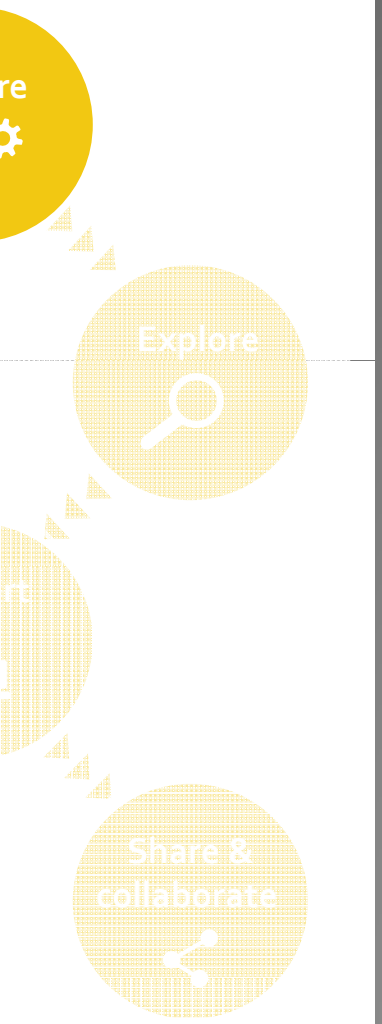
Use Query functionality to connect to data from a variety of sources beyond those available from powerbi.com

- Navigate data quickly with in-memory processing that optimizes performance
- Pare down datasets to only what's needed by editing queries before data loading
- Ability to automatically find related tables when connecting to database sources



Data sources available through Power BI Desktop

File	Database	Azure	Other	
• Excel • CSV • XML • Text • Folder	• SQL Server • Direct Query for SQL Server • Access • SQL Server Analysis Services • Oracle • IBM DB2 • MySQL • PostgreSQL • Sybase • Teradata	• SQL Database • Direct Query for SQL Database • SQL Data Warehouse • Marketplace • HDInsight • Blob Storage • Table Storage • HDInsight Spark • DocumentDB	• Web • SharePoint List • Odata Feed • Hadoop File (HDFS) • Active Directory • Microsoft Exchange • Dynamics CRM Online • Facebook • Google Analytics • Salesforce Objects • Salesforce Reports • ODBC • appFigures • GitHub • QuickBooks Online	• SweetIQ • Twilio • Zendesk • Spark • Blank Query • Mail Chimp



Shape data into the format and structure you n

- Transform data to fit your needs using intuitive UI
  - Select data for inclusion
  - Cleanse data and remove errors
  - Precisely tune the query step sequence: re-order, add, edit or delete steps as needed
  - Modify data types to support specific calculation requirements
- Very powerful for advanced scenarios such as Mashups

Common data-shaping task

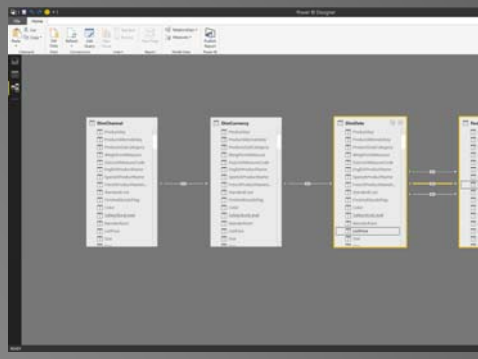
- Remove rows
- Rename/Remove tables and columns
- Change a data type
- Delete Relationships
- Pivot columns and group ro
- Modify a table name
- Identify and fix errors
- Merge or append queries to combine data from multiple queries into a single query

BI Desktop

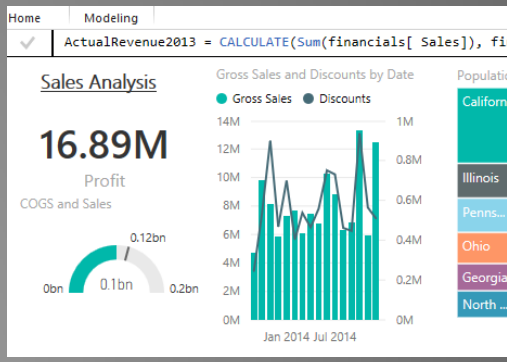
Produce rich data models using formulas an relationships

- Automatically create a model by importing data
  - Desktop detects relationships automatically, categorizes data and applies default summarization
- Refine models to enable complex calculations
  - Create relationships between tables manually or using the AutoDetect feature
  - Adjust relationship type (1:1, many:many, m:1) and cross-filter data for new insights

Apply complex schema and business lo rich, reusable data models



Create and modify relationships



Define and use measures with DAX for

BI Desktop

re

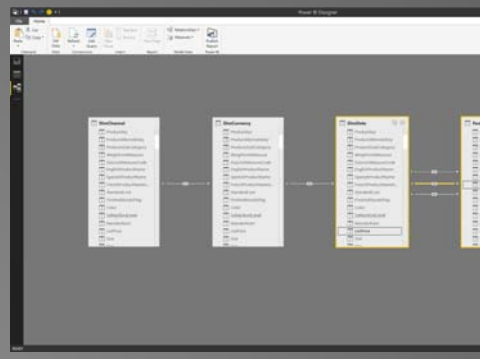
Explore

Share & collaborate

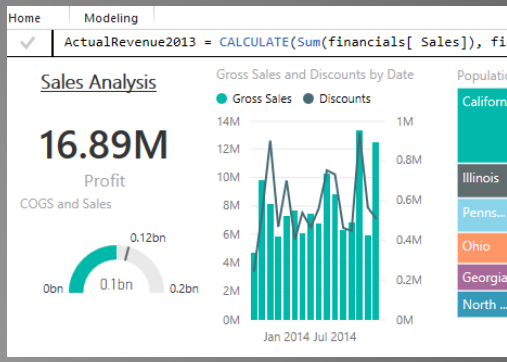
Produce rich data models using formulas an relationships

- Define calculations – known as measures – to generate new fields for use in reports
  - Use automatically generated measures, create custom measures, or create Calculated Tables with Data Analysis Expressions (DAX) formulas
- Develop advanced analytics using a combination of measures and relationships
  - Uncover correlations, highlight exceptions and understand business outcomes

Apply complex schema and business lo rich, reusable data models



Create and modify relationships

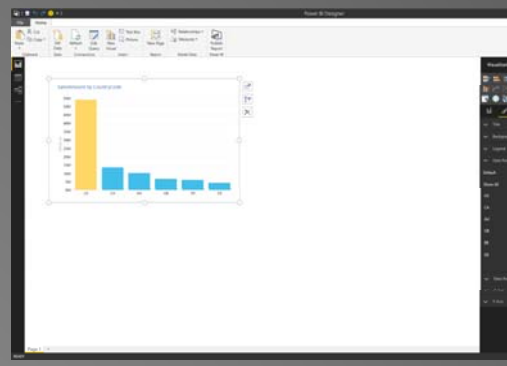


Define and use measures with DAX for

BI Desktop

Explore your data with freeform, drag and drop canv

- Explore data in a variety of ways and across multiple visualizations
  - Select data elements and sort data
  - Filter data and use cross-filter capabilities
  - Drill into and across datasets
  - Pivot and slice data
  - Change visualization types
  - Date sort and filters including Min & Max functions
  - Ability to refresh all views with a single click
  - Copy/Paste queries to/from Excel
  - Improved default sorting
  - Ability to sort the slicers
  - KPI Consumption when connecting to Analysis Services or importing Excel Workbooks with Data Model KPIs (Preview Feature)
- Select, transform and mashup data via a freeform, drag-and-drop canvas



Power BI Desktop allows you to explo data and create insightful visualizatio freeform canvas

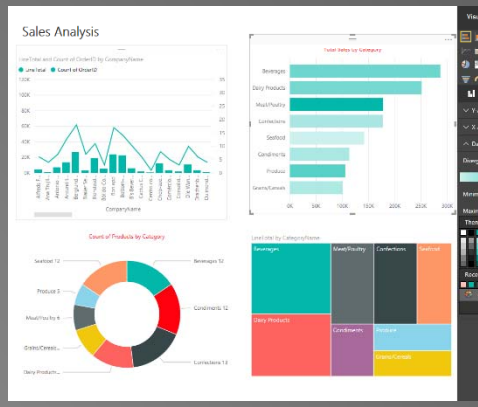
Explore

Share & collaborate

BI Desktop

Deliver valuable insights with customizable visual repo

- Visualize data and author reports
  - Depict data in compelling reports that tell stories using a range of interactive visualizations
  - Use data from many sources in a single, consolidated report
  - Create relationships via drag & drop between 2 tables
  - Apply filters in visualization, page, and reports
  - Ability to drill down/up in column and scatter charts
  - Support for inserting Shapes in the Report canvas
  - Expand/Collapse All for multiple tables in Fields pane
  - Adjust reports to fit various screen sizes
  - Rename and delete tables and columns
  - Support for median, standard deviation, and variance
  - Ability to incorporate custom visualizations
- Change color, format and customize
  - Adjust Title, Background Color, Legend, Data Labels including color saturation values
  - Change X-Axis label direction
  - New visual color formatting with fixed and data driven settings
  - Linear or Logarithmic scales for values in Y-axis



Power BI Desktop allows you to cre customize reports that tell visually compelling data stories

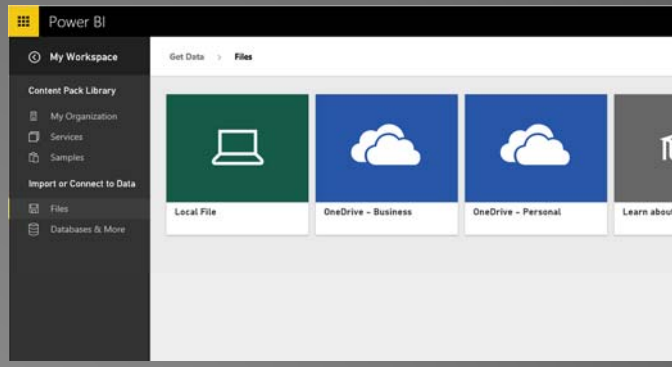
BI Desktop

Share reports, visualizations and data with a broad audience

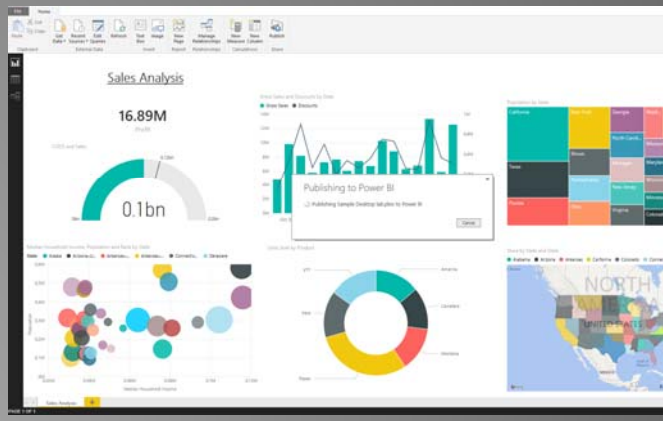
Explore

Share & collaborate

- Save Power BI Desktop report files and easily publish them to Power BI
- Share as appropriate with other Power BI users in your organization
- Changes to dashboards automatically sync across all users
- Copy table, cells or columns to clipboard



Import Power BI Desktop file in Power BI service



Publish from Power BI Desktop to Power BI service

Demos

k you!

IDEAS?

QUERIES??

SUGGESTIONS???

Nikunj Shah B.Com., MA, LL.B., FCA, DISA(ICAI), CIA(USA), ACFE
nnikunjca@gmail.com | 9323 801 801