






01

# Why visual analytics are so important?



## Tableau Software

	
Type	Public
Traded as	NASDAQ: DATA 
Industry	Software
Founded	Mountain View, California (2003)
Founder	Christian Chabot Chris Stolte <a href="#">Pat Hanrahan</a>
Headquarters	<a href="#">Seattle, Washington</a> , United States
Key people	Adam Selipsky (CEO) Christian Chabot, Co-founder and Chairman of the Board Chris Stolte, Co-founder and Technical Advisor Andrew Beers, CDO Pat Hanrahan, Chief Scientist and Co-founder
Revenue	 US\$877 million (2017) <sup>[1]</sup> US\$ 827 million (2016)
Net income	 US\$ 5,873,000 (2014) <sup>[2]</sup> US\$ 7,076,000 (2013)
Number of employees	3,489 (December 2017)
Website	<a href="https://tableau.com">tableau.com</a> 

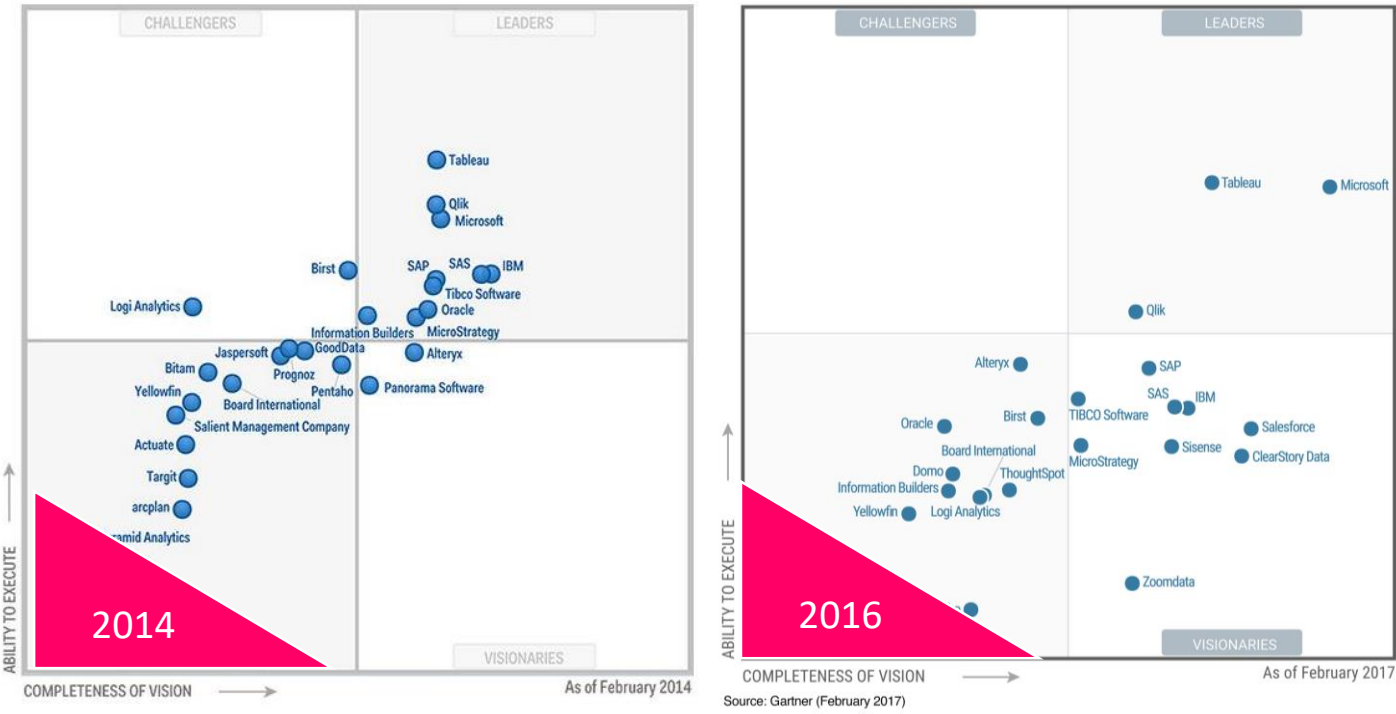


Dr. Christopher Stolte

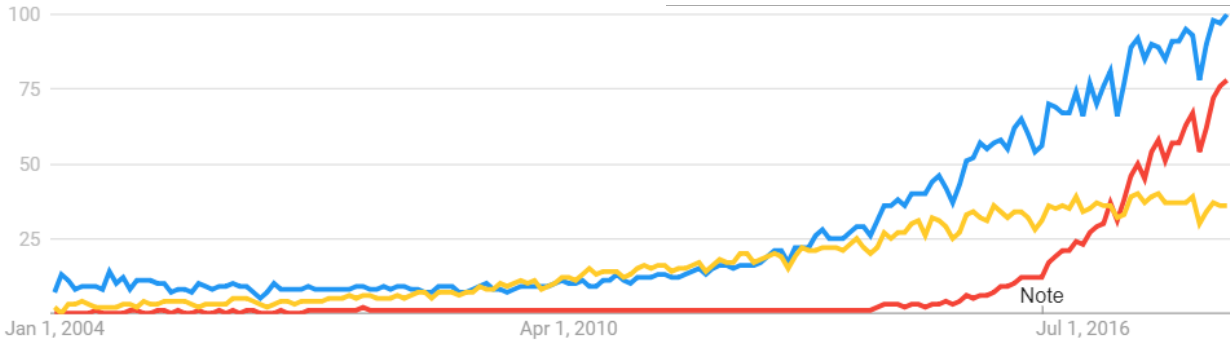
# Business Intelligence Landscape



**Gartner®**  
Analytics and  
Business  
Intelligence  
Platforms





**Google Trends**  
Popularity









## Tableau vs. Power BI



Parameters	 Power BI	 + a b   e a u
Year Of Establishment	2013	2003
Cost	Low	High
Application	Dashboards	AD-Hoc Analysis
Users	Technical/Non technical People	Analysts
Support Level	Low	High
Scalability (Large Data-Sets)	Good	Very Good
Licensing	Rigid	Flexible
Overall functionality	Good	Very Good
Infrastructure	Software as a Service	Flexible

	Desktop		Reader	Server	Public	Online
Details	<b>Personal</b> <ul style="list-style-type: none"> <li>- Local client for building dashboards</li> <li>- Limited data sources, no ability to connect to Tableau Server</li> </ul>	<b>Professional</b> <ul style="list-style-type: none"> <li>- Local client for building dashboards</li> <li>- Full enterprise capabilities</li> </ul>	<ul style="list-style-type: none"> <li>- Local client to view and interact with local files</li> <li>- Unable to modify workbooks or connect to server</li> </ul>	<ul style="list-style-type: none"> <li>- Privately managed Tableau Server (may be on premise or service hosted)</li> <li>- Users may directly interact with dashboards via browser</li> </ul>	<ul style="list-style-type: none"> <li>- Essentially a massive, public non-commercial Tableau server</li> <li>- All data published is public</li> <li>- Free client available to create dashboards</li> </ul>	<ul style="list-style-type: none"> <li>- Private version of Tableau Public eliminates need for infrastructure</li> <li>- Live connections currently only possible with Google BigQuery and Amazon Redshift</li> </ul>
OS					N/A	N/A
License	\$999	\$1,999	Free	Named User or Core Licensing	Free	\$500/user per year

Source: Extentia Information Technology (2016)



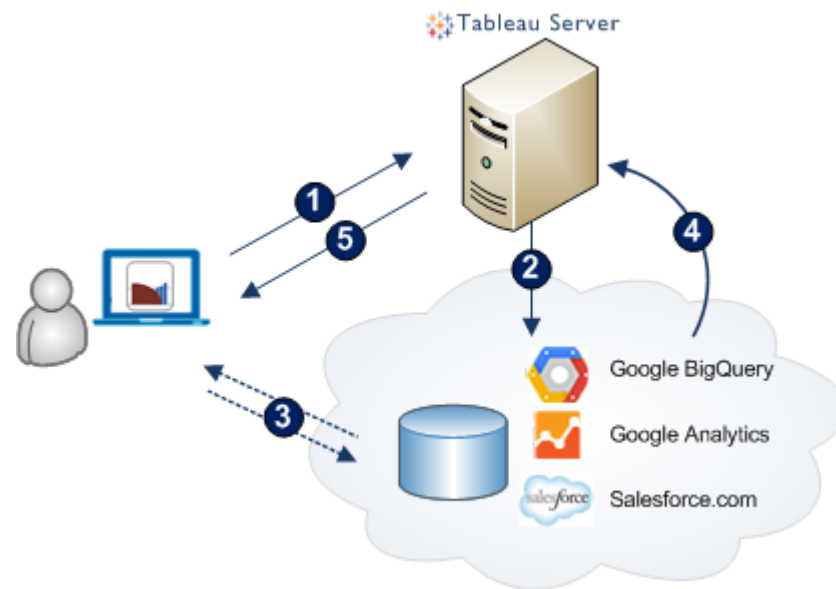


# Tableau Desktop

- **Tableau Desktop** can be used to create worksheets, dashboards, stories connecting to data sources which can be files or server
- One can share their work locally by sending the workbook (twbx). But it is important to know that the recipient should have **Tableau Desktop or Tableau Reader** in their PC
- By sharing it locally we would not be able to restrict the end user from making changes to the Workbook. This will end up in having multiple versions of the same report in different locations
- Tableau desktop is best use for developers to build in reports to give insights to decision makers
- **Tableau Desktop- Development**

**Source:** Tableau Help (2017)

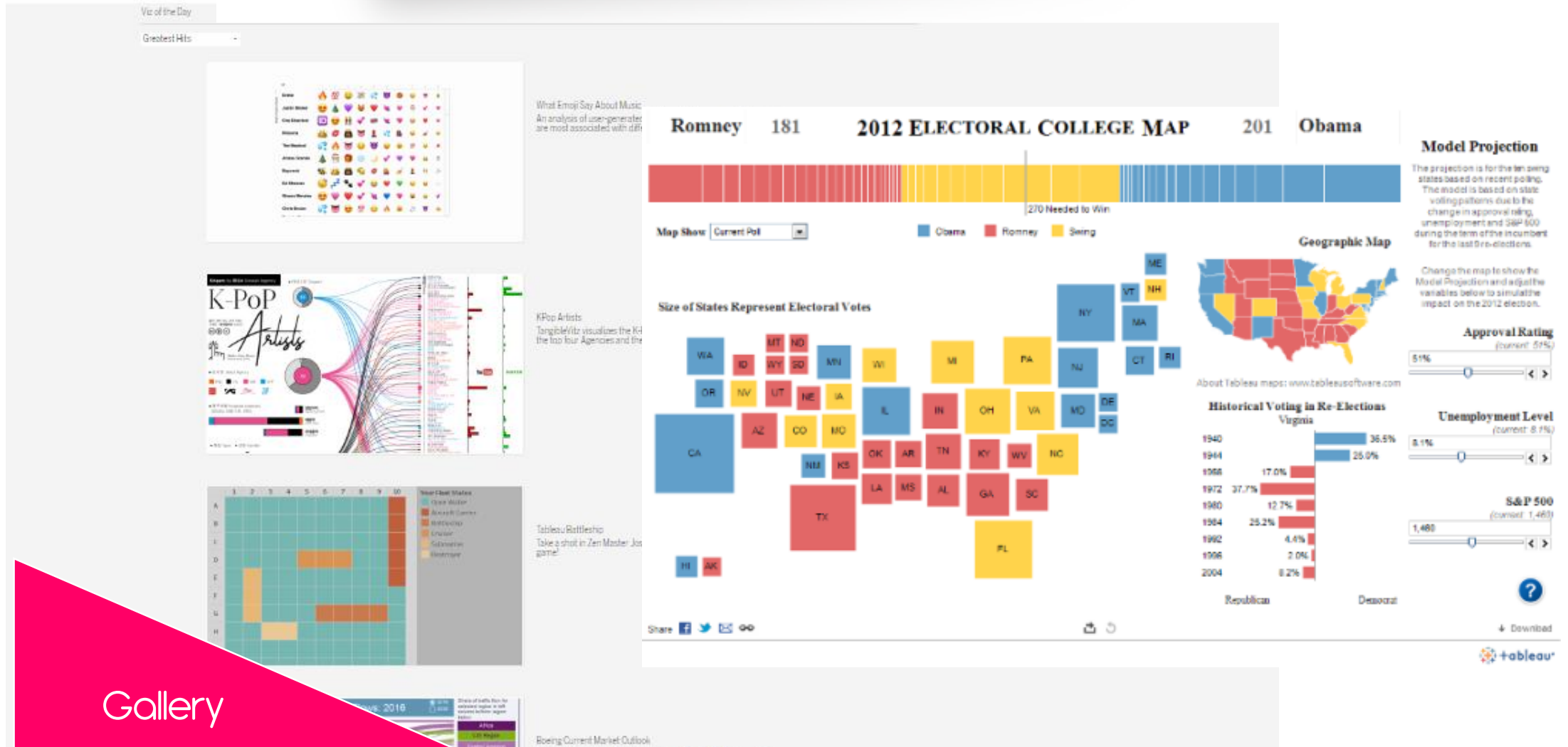
## Tableau Server



- **Tableau Server** can be used to publish the worksheet, dashboard and stories that are created using **Tableau Desktop**
- Once the workbook is uploaded onto the server, the recipient need not have **Tableau Server** installed in their PC. All that they need is Login credentials.
- **Tableau Admin** can set permission for each user, whether they can view, make changes, edit etc. when you log on to the server and you have permission to edit then you will be able to make changes to the existing report using an Online Tableau Desktop tool
- **Tableau server** best fits Decision makers to analyze their results
- **Tableau Server- Sharing and Collaboration**



# Tableau Public

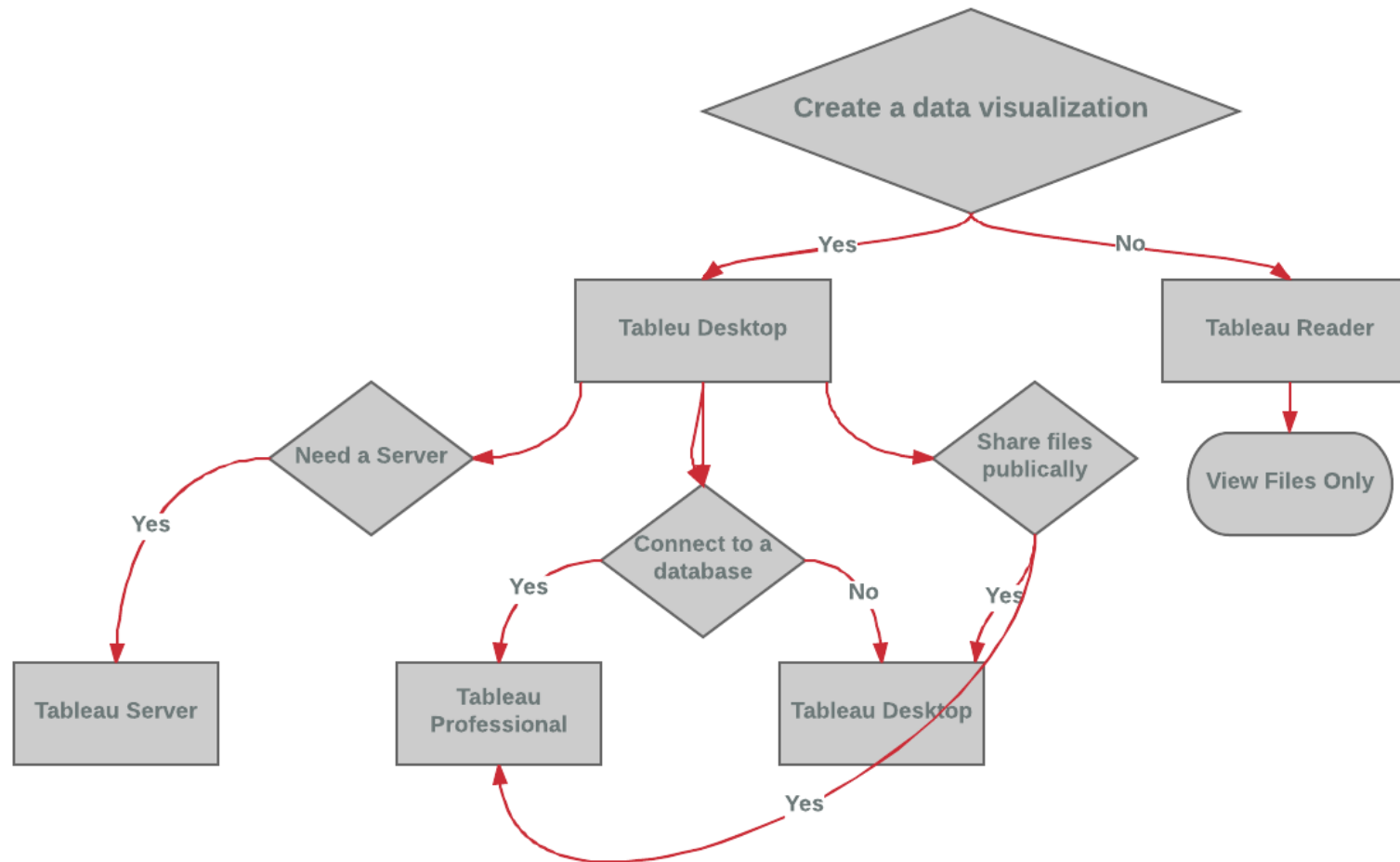


Gallery

Source: Tableau Public (2018)



# So What's the Difference?

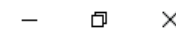




# Data Sources



Tableau - Book1



File Data Server Help

To a File

Microsoft Excel

Text file

JSON file

Microsoft Access

PDF file

Spatial file

Statistical file

More...

To a Server

Tableau Server

Microsoft SQL Server

MySQL

Oracle

Amazon Redshift

More... >

Saved Data Sources

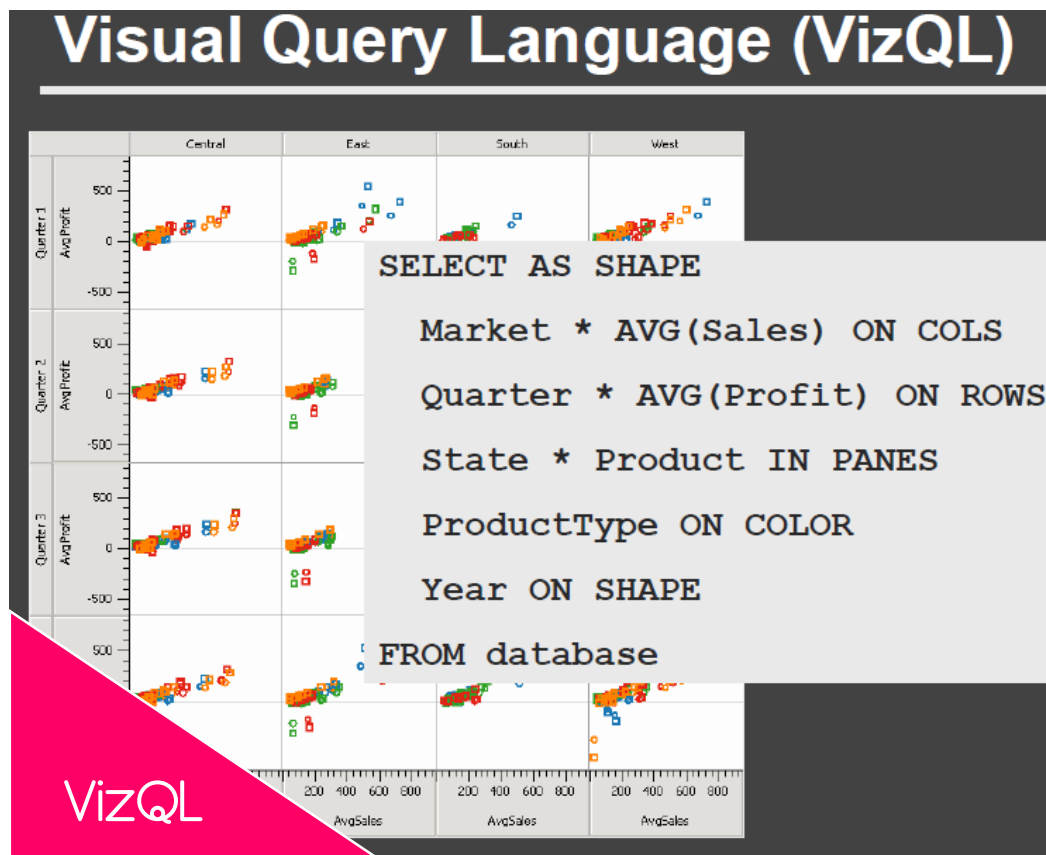
Sample - EU Superstore

Sample - Superstore

World Indicators

Search

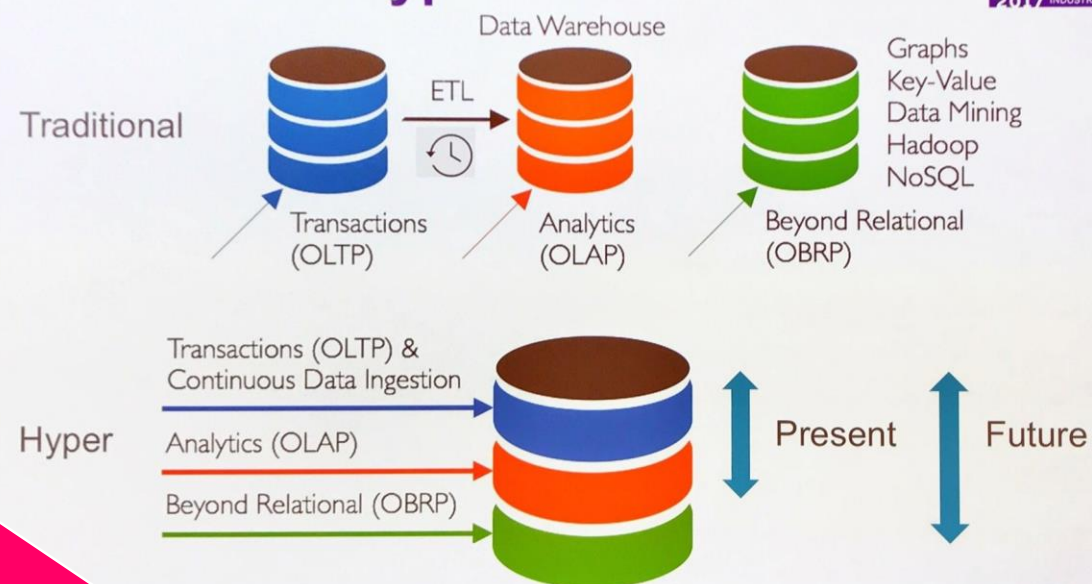
Tableau Server	Google Sheets	Oracle Eloqua
Action Matrix	Hortonworks Hadoop Hive	Oracle Essbase
Action Vector	HP Vertica	Other Databases (ODBC)
Amazon Athena	IBM BigInsights	Pivotal Greenplum Database
Amazon Aurora	IBM DB2	PostgreSQL
Amazon EMR	IBM PDA (Netezza)	Presto
Amazon Redshift	Kognitio	Progress OpenEdge
Anaplan	MapR Hadoop Hive	QuickBooks Online
Apache Drill	Marketo	Salesforce
Aster Database	MarkLogic	SAP HANA
Box	MemSQL	SAP NetWeaver Business Warehouse
Cisco Information Server	Microsoft Analysis Services	SAP Sybase ASE
Cloudera Hadoop	Microsoft PowerPivot	SAP Sybase IQ
Denodo	Microsoft SQL Server	ServiceNow ITSM
Dropbox	MonetDB	SharePoint Lists
EXASOL	MongoDB BI Connector	Snowflake
Firebird	MySQL	Spark SQL
Google Analytics	OData	Splunk
Google BigQuery	OneDrive	Teradata
Google Cloud SQL	Oracle	Teradata OLAP Connector
		Web Data Connector



Source: bibuddy.com (2017)

## What Makes Hyper so Fast?

TABLEAU  
CONFERENCE  
2017 INDUSTRY ANALYST TRACK



Hyper

Source: tableau.com (2016)



Data Analytics

Sample - EU Superstore

Dimensions

- Order Date
- Order ID
- Ship Date
- Ship Mode
- Location
  - Country
  - State
  - City
- Product
  - Category
  - Sub-Category

Measures

- Quantity
- Sales
- Latitude (generated)
- Longitude (generated)
- Number of Records
- Measure Values

Sets

- Top Customers by Profit

Parameters

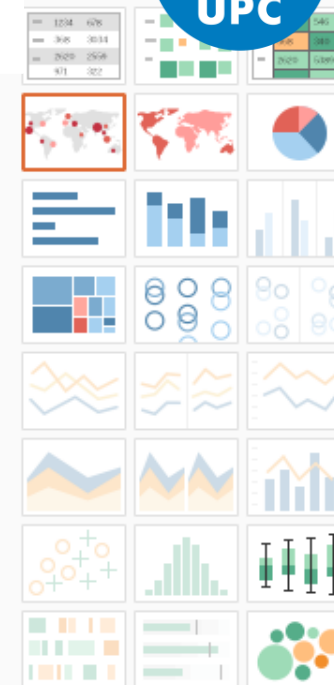
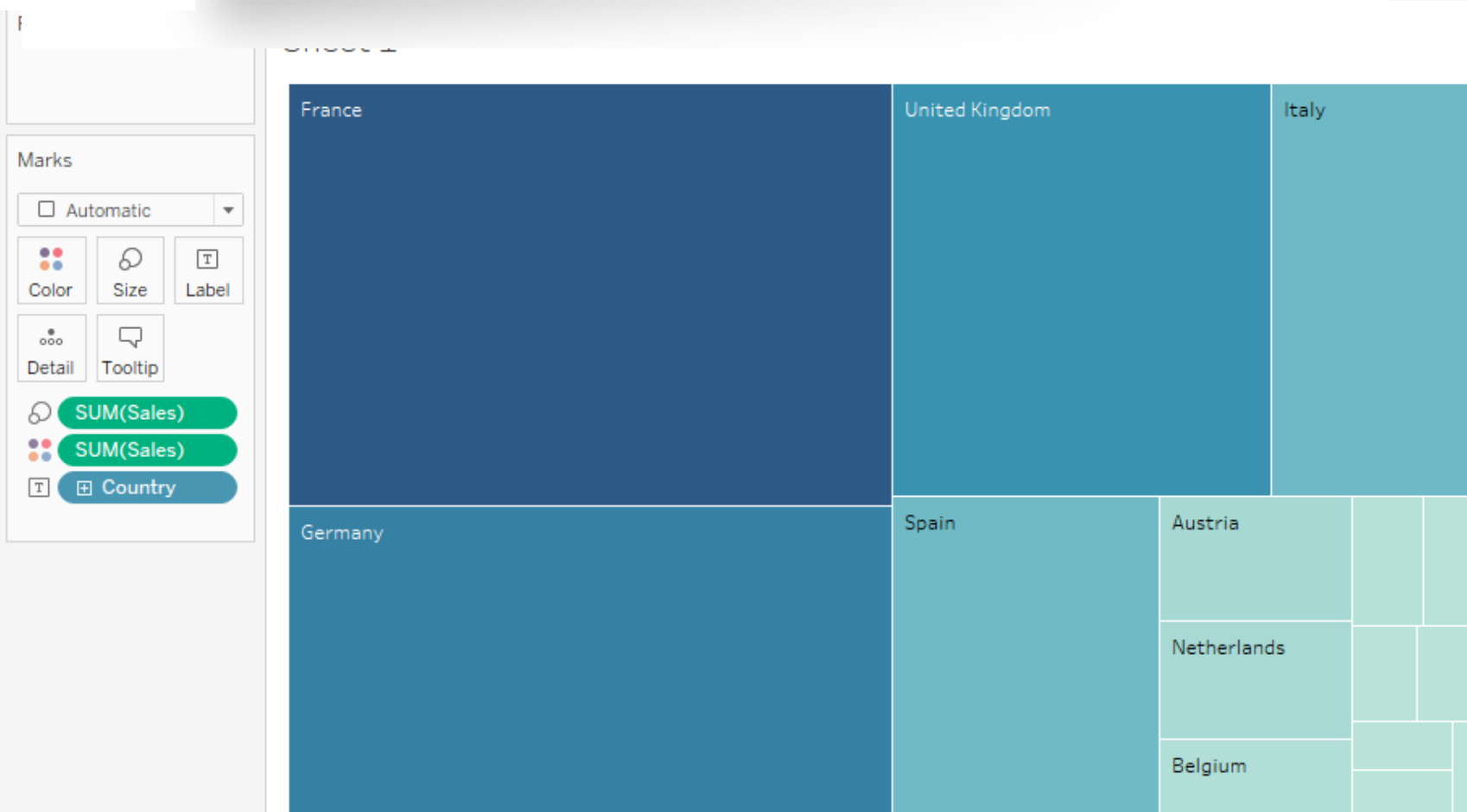
- Profit Bin Size
- Top Customers

Data Source Sheet 1

15 marks 1 row by 1 column SUM(Sales): £2,938,089

12

# Worksheet



For **symbol maps** try

1 geo **Dimension**

0 or more **Dimensions**

0 to 2 **Measures**

May use spatial measure in place of geo dimension



Device Preview

## Size

Desktop Browser (1000 x 8...

## Sheets

Sheet 1

Sheet 2

## Objects

Horizontal Image  
Vertical Web Page  
Text Blank

Tiled Floating

☐ Show dashboard title

Data Source Sheet 1

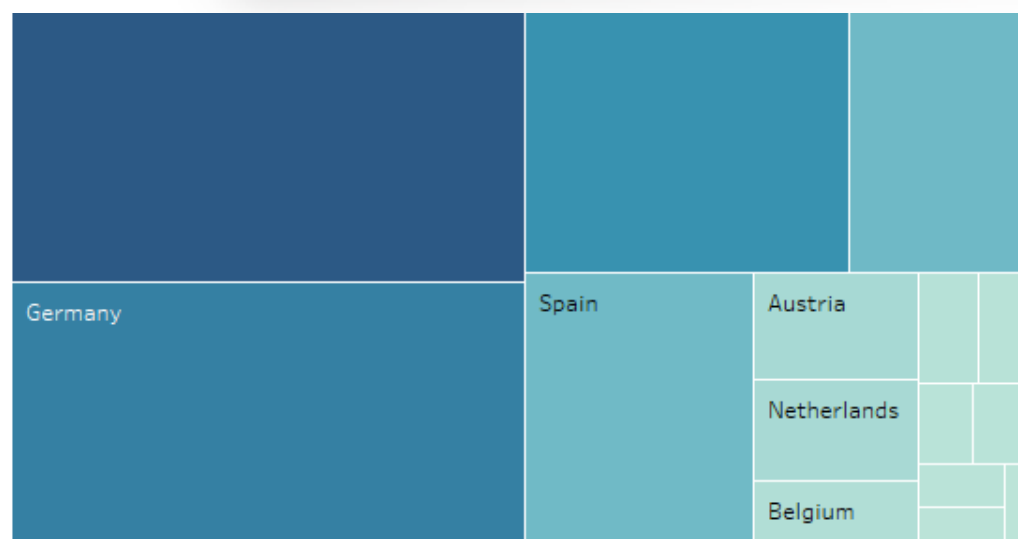
Dashboard 1

Sheet 2

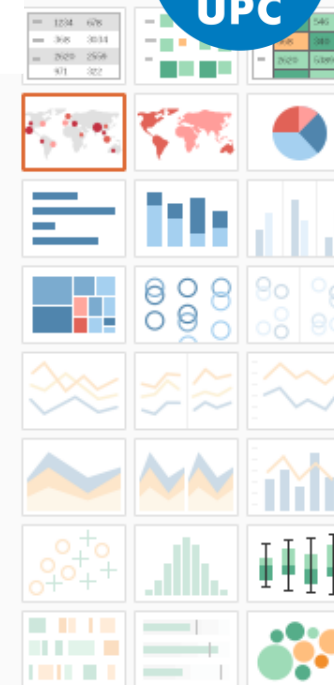
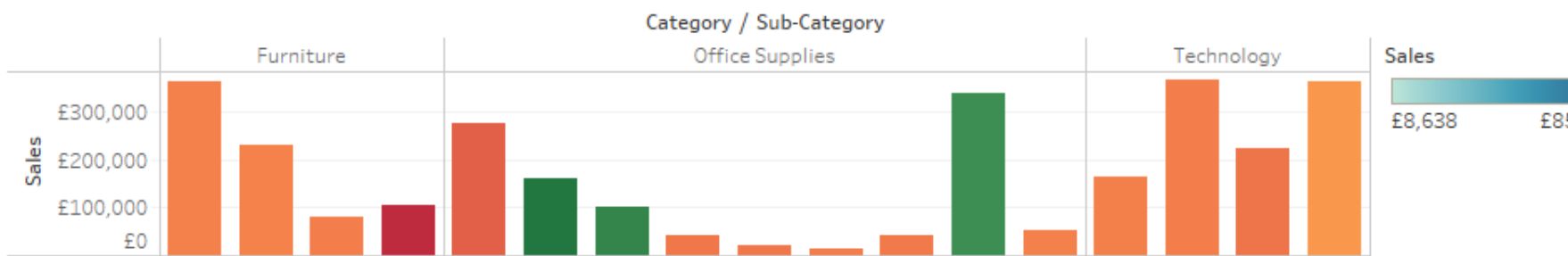
15 marks 1 row by 1 column SUM(Sales): £2,938,089

13

## Dashboard



Sales by product category

For **symbol maps** try

1 geo Dimension

0 or more Dimensions

0 to 2 Measures

May use spatial measure in place of geo dimension





Story Layout

New story point

Blank

Duplicate

- Sheet 1
- Dashboard 1
- Sheet 2

A Drag to add text

☒ Show title

Size

Story (1016 x 964)

Data Source

Sheet 1

Dashboard 1

Story 1

Sheet 2

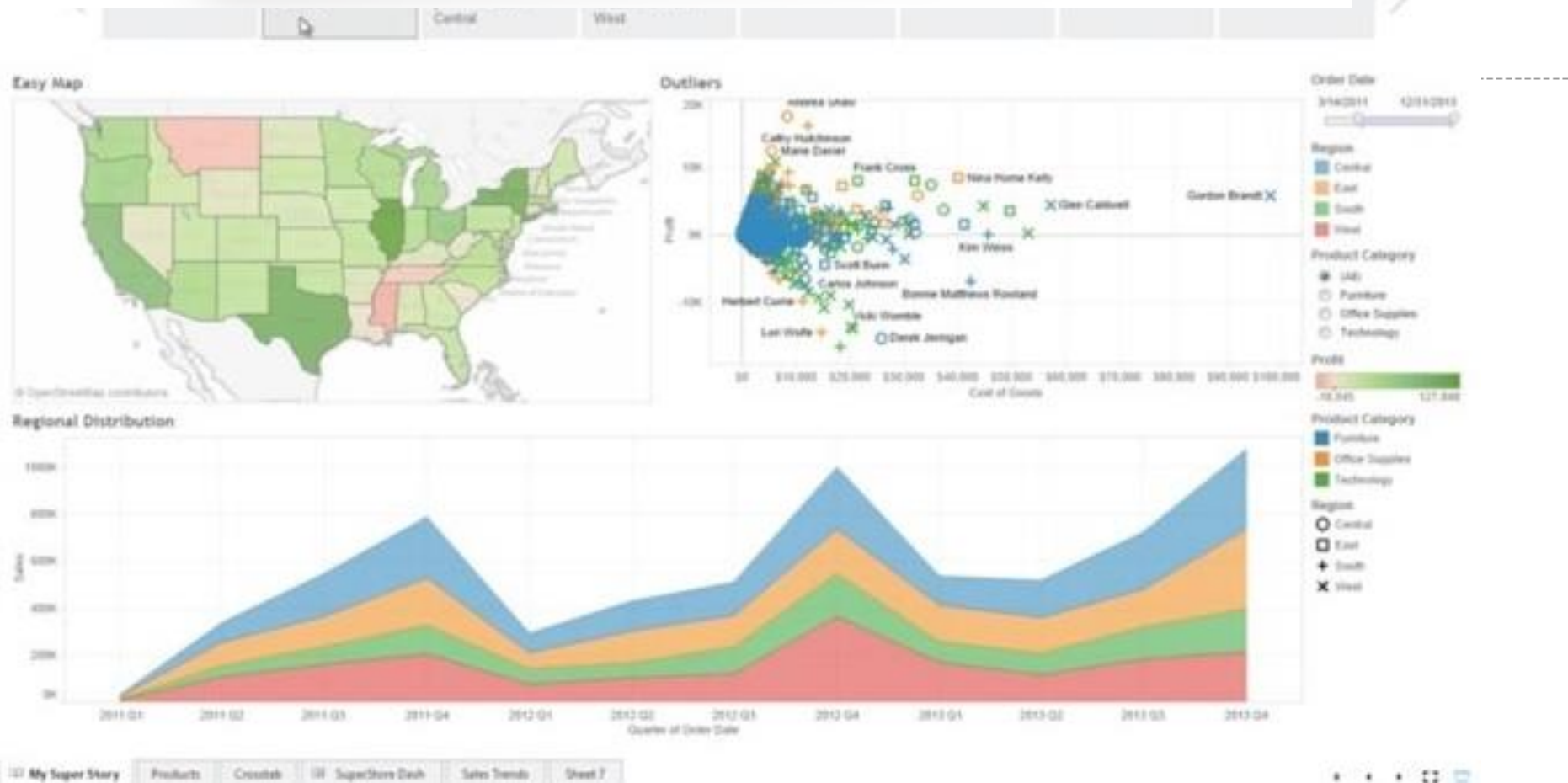
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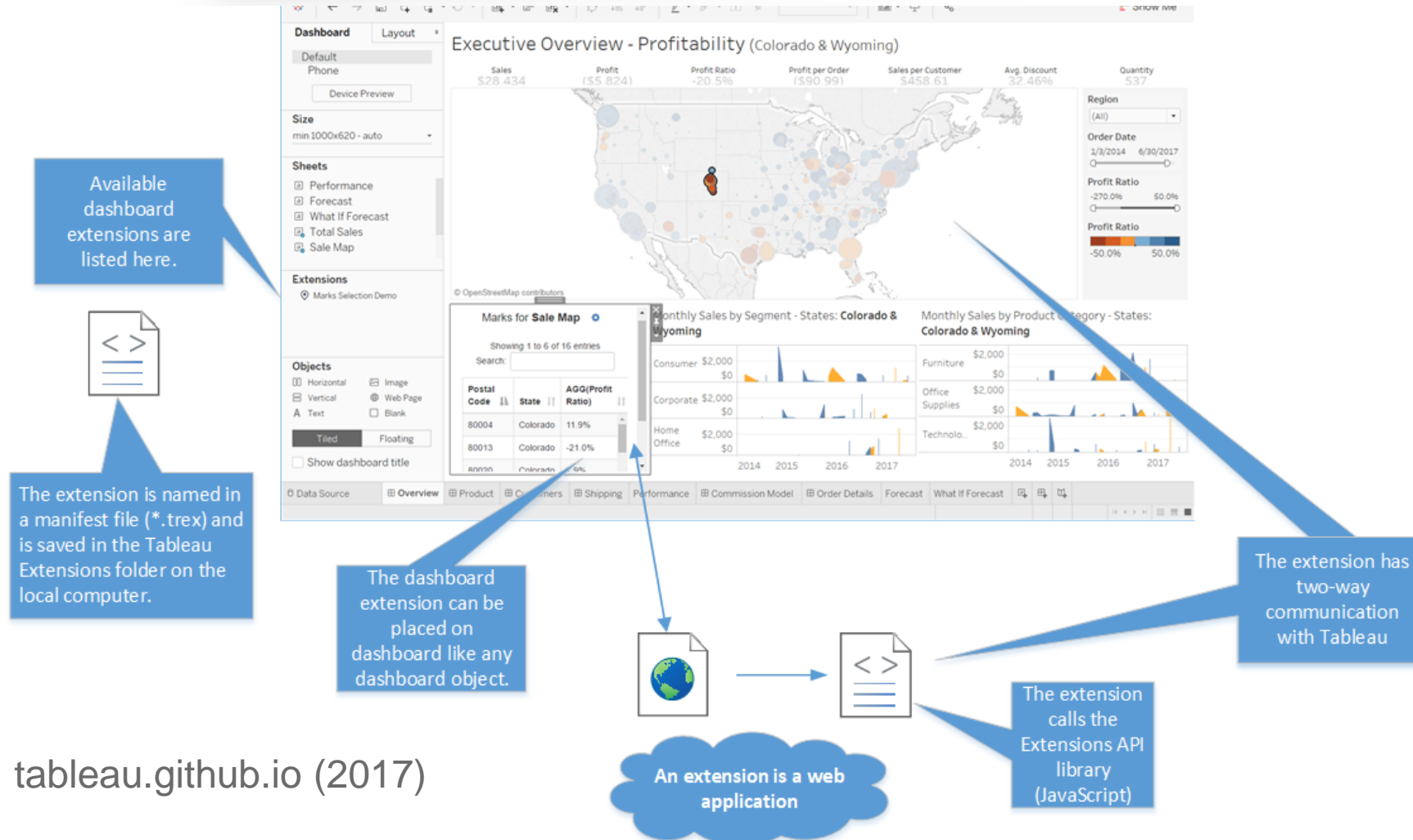
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+

# Stories

14



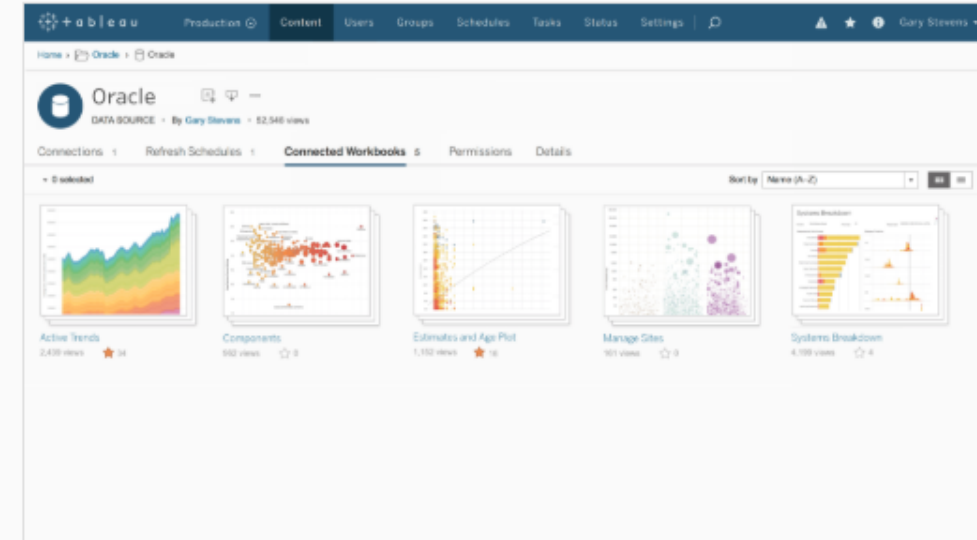


Source: [tableau.github.io](https://tableau.github.io) (2017)



## Data connectivity

Create connectors to data sources that are not currently supported by Tableau, including websites and custom applications. With the **Web Data Connector**, ODBC driver, and more, get the data your organization needs.



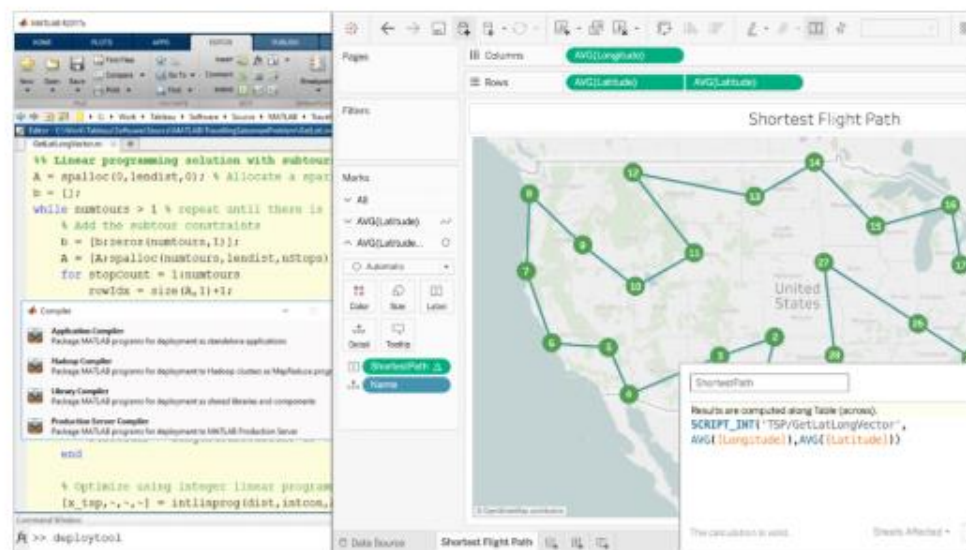
## Automation

Programmatically eliminate tedious content management tasks—allowing you to more effectively maintain and update workbooks, data sources, and users on Tableau Server.

[LEARN MORE →](#)

**Source:** tableau.com (2018)

# Advanced features: Data science & embedded analytics

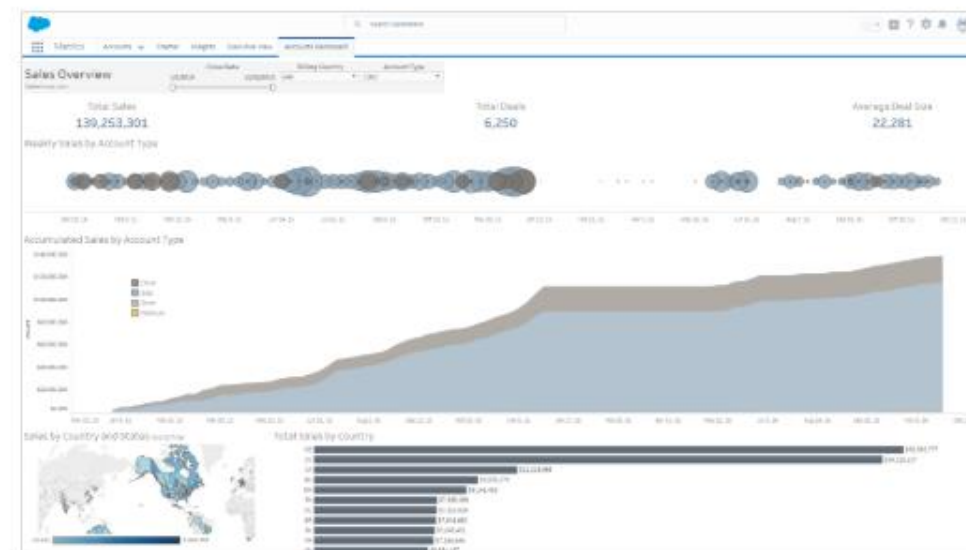


## Data science integration

Give more people the ability to use statistical models. Integrate and visualize the data from your R, Python, and Matlab models in Tableau.

LEARN MORE →

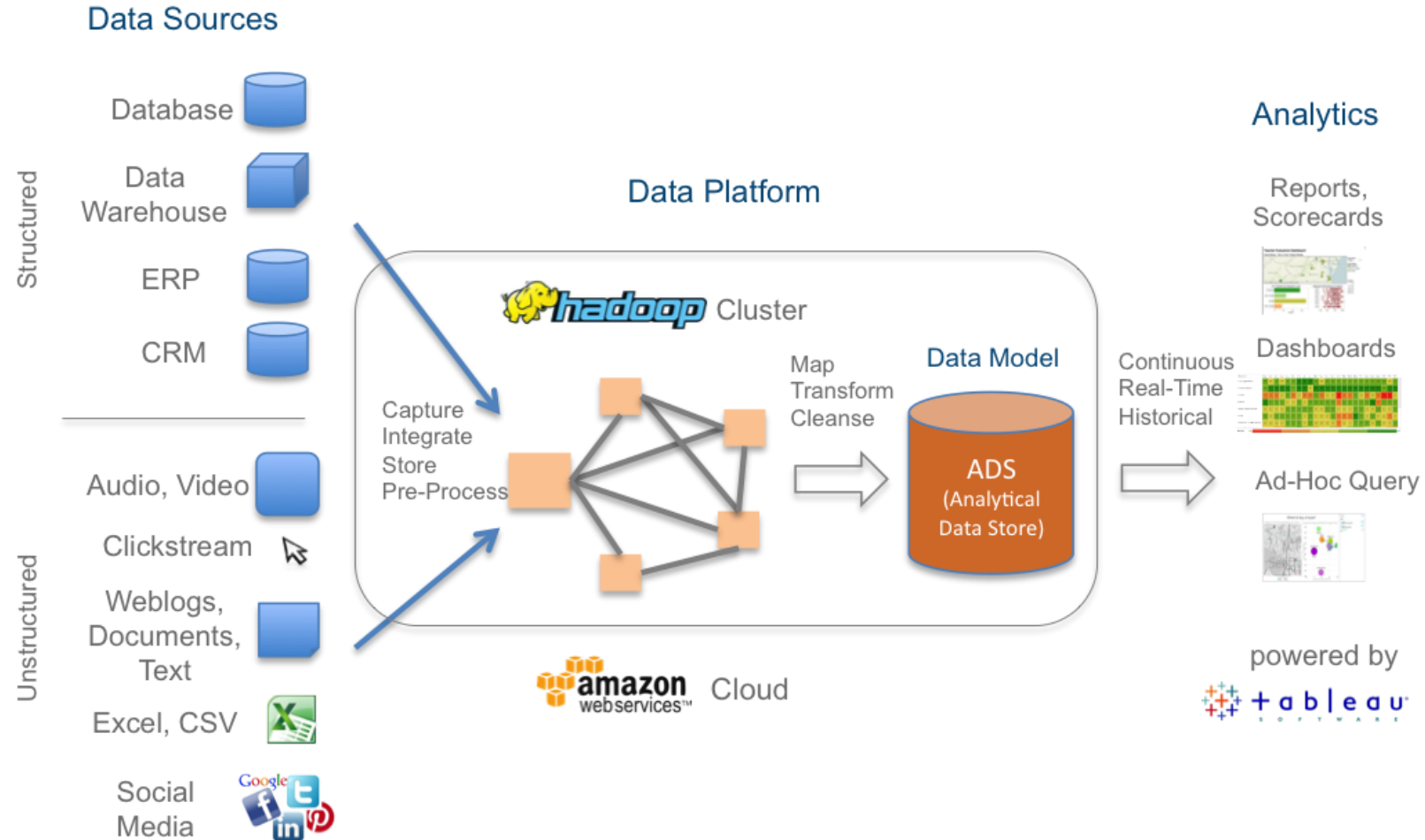
**Source:** tableau.com (2018)



## Embedded analytics

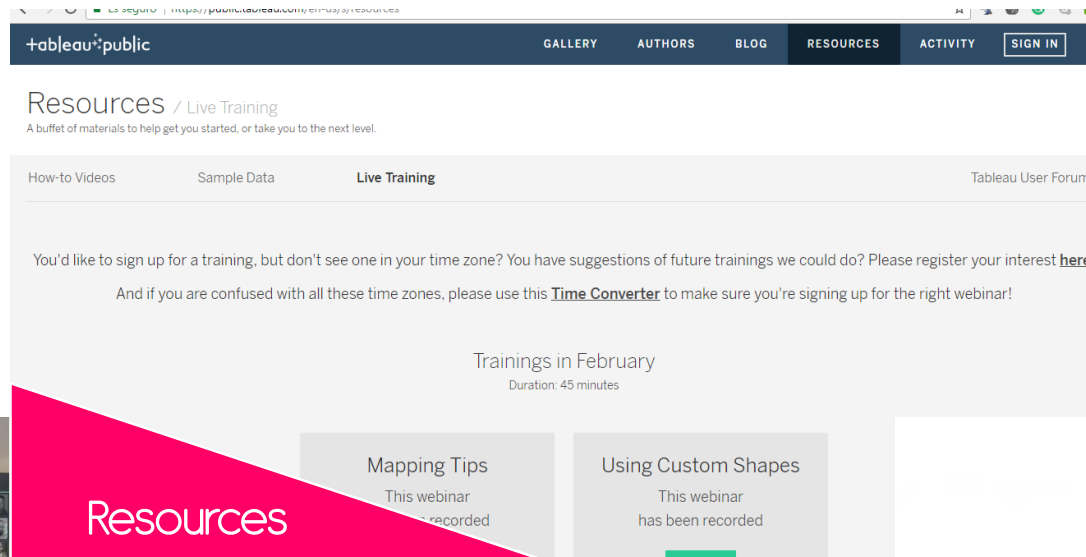
Make your Tableau content available anywhere. It's easy to embed your vizzes into other business applications like Salesforce and Microsoft SharePoint, so more of your people use data to make decisions.

LEARN MORE →





# Additional information



Resources



Community



Partnerships

- Functionality and maturity
- Worksheets -> Dashboards -> Stories
- Tableau Product Suite
- Pros & Cons
- Tableau vs. Power BI
- Advanced features & Big Data Analysis

