



# Data Intelligence Solutions

VISUALIZATION, ANALYTICS & INSIGHTS

# Benefits of Digital Transformation



Companies that embrace digital transformation with cloud, data & A.I.:

**NEARLY  
DOUBLE**

operating  
margin

**\$40k**

more revenue per  
employee

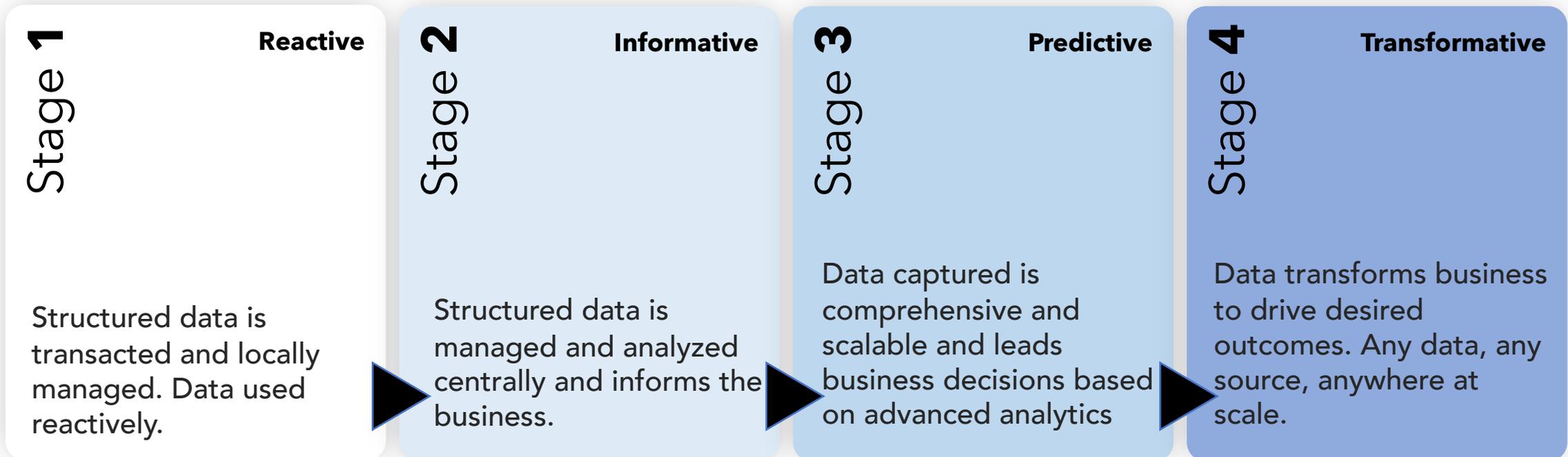
**50%+**

higher average net  
income on revenue

**\$100M**

The most digitally transformed enterprises generate on average \$100 million in additional operating income each year

# Data & analytics maturity model



# Opportunities & Challenges



- Empower employees with enhanced business agility
- Optimize operations and business processes
- Transform products through differentiated business models
- Engage customers with personalized experiences

- Data security
- Legacy app modernization
- Increased price/performance demands
- Faster & richer business insights

# Migration Opportunities

Identify, Accelerate, and Close

## Competitor Workload Opportunities

<b>Data Platform</b>	<b>Relational Database</b>
	<b>Data Warehouse</b>
	<b>Advanced Analytics</b>
<b>Infrastructure</b>	<b>Datacenter Transformation</b>
<b>Enterprise Mobility</b>	<b>Mobile Device Management</b>
	<b>Identity &amp; Access Management</b>



# The Process



## Discovery & Goals

Understanding the data silos in your organization



## Roadmap to a data intelligence platform

Build a plan to extract the actionable insights



## Implementation

1. Analyze and integrate your organizational data
2. Create insightful and actionable business information visualizations

# Discovery & Goals



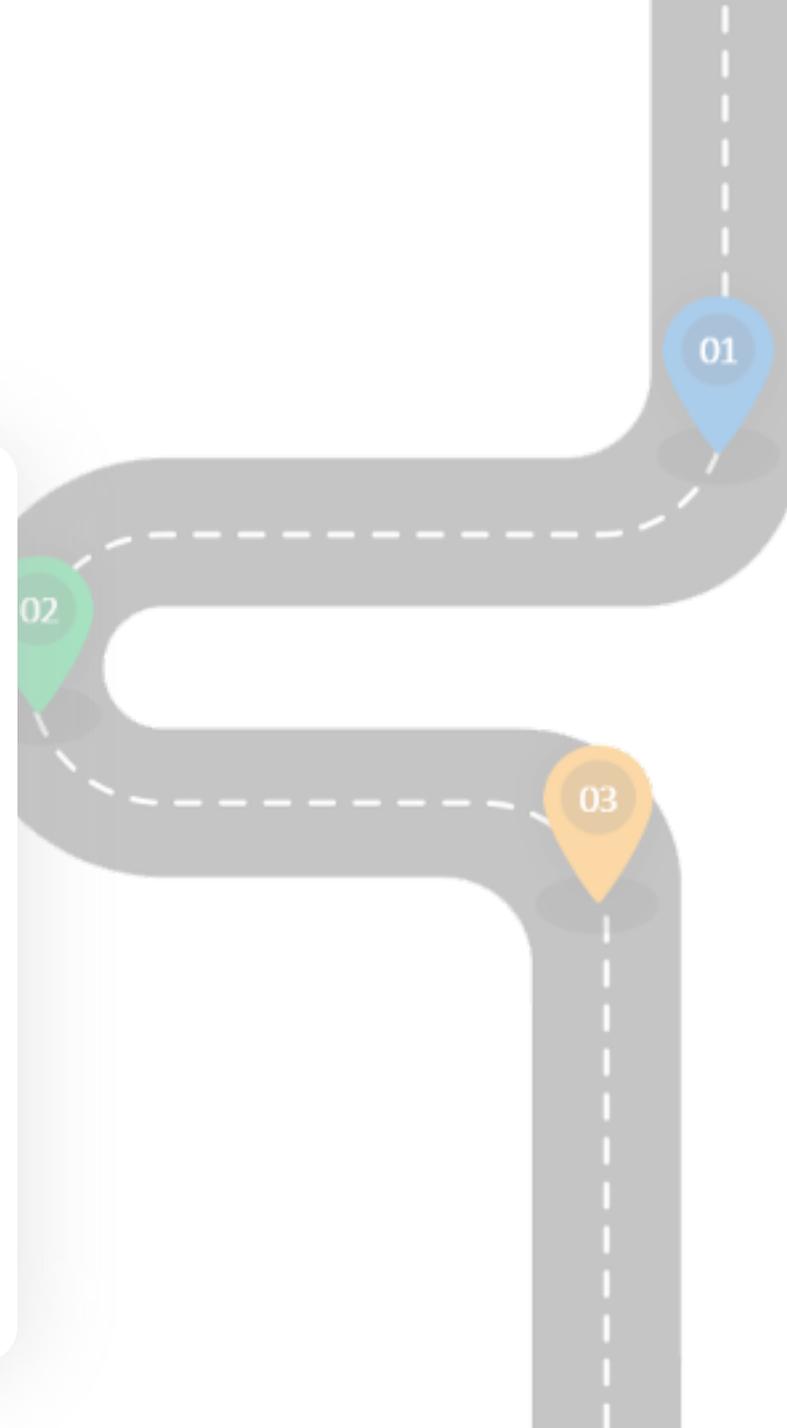
- Understanding the data silos in your organization
  - Goal generation
    - Outline purpose
    - Define deliverables
  - Collect requirements
  - Identify data sources
- Rapid experimentation at lower costs
  - Optimized internal business processes
  - Increased operational efficiency
  - New revenue streams and increased competitive advantage

# Roadmap

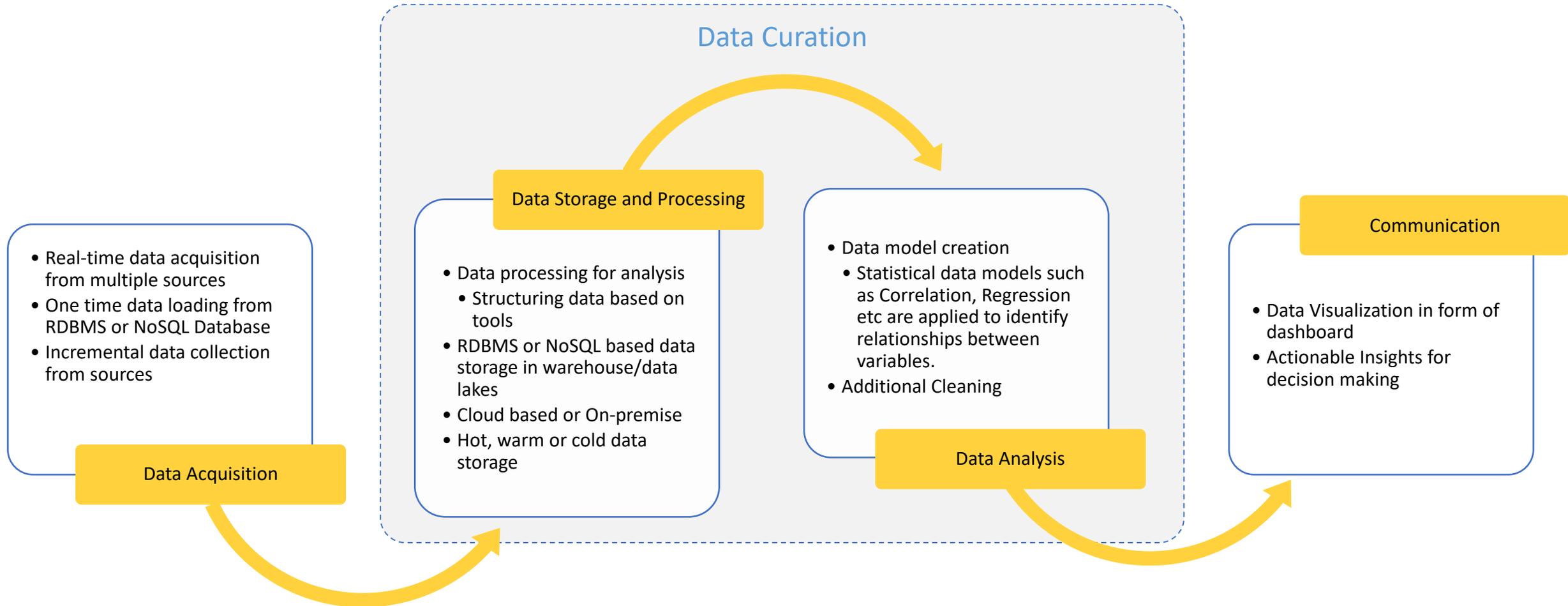
Build a plan to extract the actionable insights



- Building a plan to extract the actionable insights:
  - Identify key stakeholders
  - Define scope
  - Set timeline & budget
  - Prepare data infrastructure
  - Keep track of infrastructure such as data warehouse
  - Select variables that count towards achieving the goals



# Implementation



# Deliverables



- Simple, results-oriented and intuitive visualizations with a strong focus on business outcomes.
- Customized reports uncovering actionable insights for proactive decision making.
- A scalable, secure and future-proof solution.

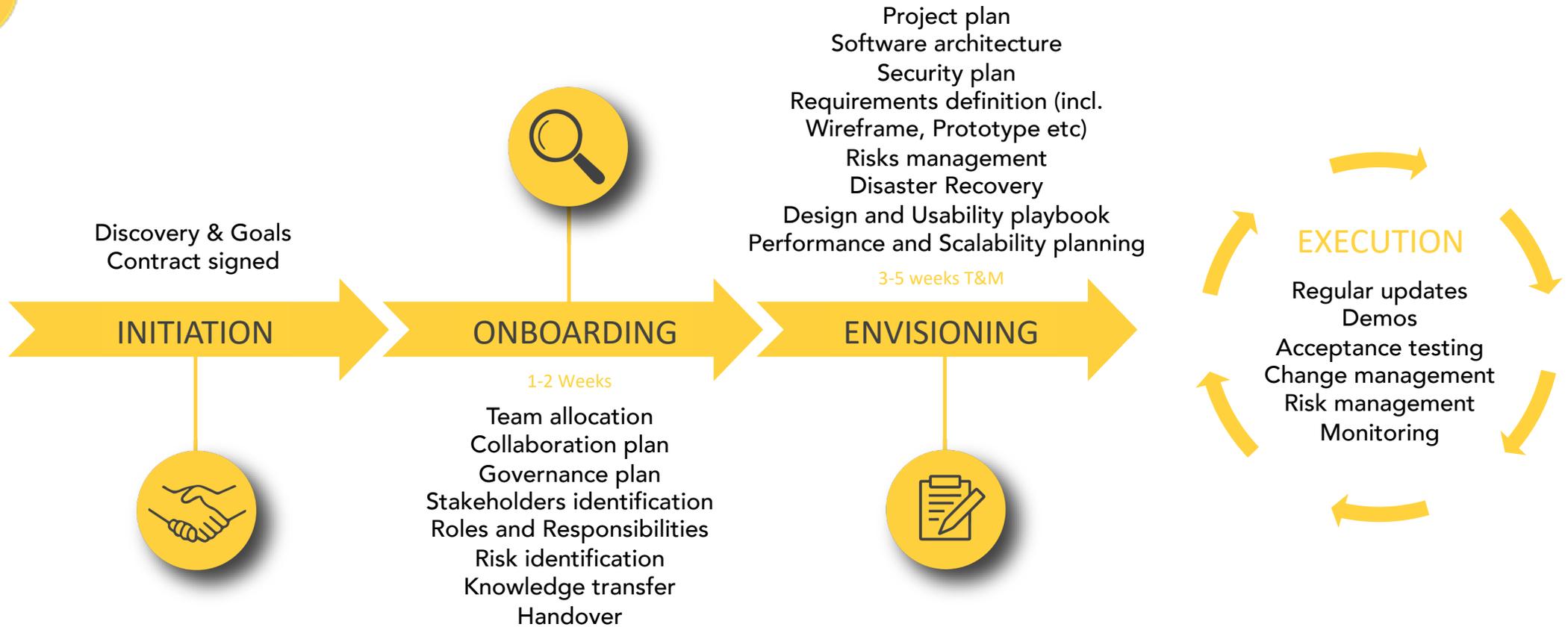


# What you achieve



- Fast and accurate decision making
  - Insightful and actionable dashboard powered by state-of-the-art data visualization platforms
  - Lower costs for data warehousing, systems integration, and data quality
  - Accelerated data preparation and analytics to improve speed of business
- Rapid experimentation at lower costs
  - Optimized internal business processes
  - Increased operational efficiency
  - New revenue streams and increased competitive advantage

# Client Journey



# Visualization Tools



Power BI



Tableau



Google Charts



Domo



Chartist.js



Custom visualization  
Controls using Telerik



jQuery plugins



D3.js



Chart.js

# Change Over Time



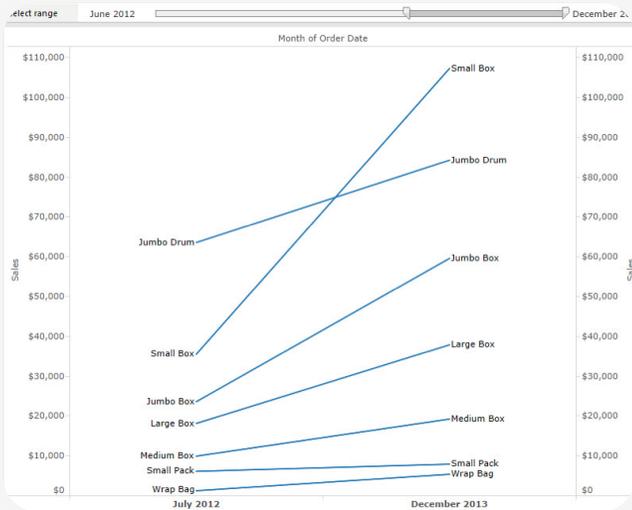
Showing a change over time for a measure is one of the fundamental categories of visualizations. There are many options for exploring change over time, including line charts, slope charts, and highlight tables.

To show change over time, you need to know the value you expect to change, and how to work with Date fields in Tableau.

- What kind of question does this chart answer?
- How has this measure changed in the past year?
- When did this measure change?
- How quickly has this measure changed?

# Change Over Time

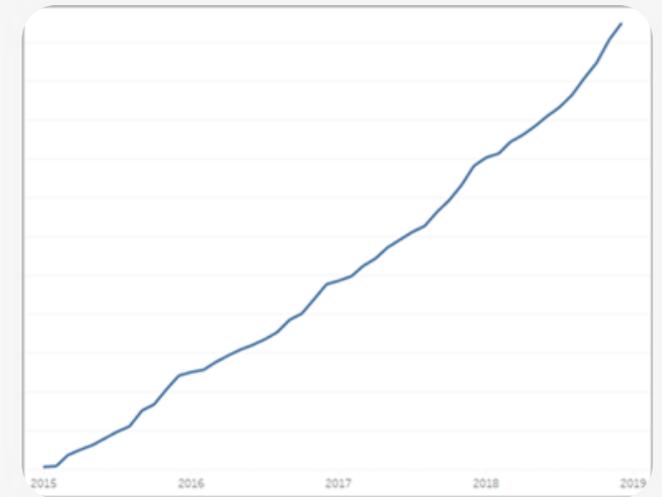
Slope Chart



Highlight Table

Region	Sub-Category	Segment		
		Consumer	Corporate	Home Office
Central	Accessories	Light Blue	Light Blue	Light Blue
	Appliances	Orange	Light Blue	Light Blue
	Art	Light Blue	Light Blue	Light Blue
	Binders	Light Blue	Orange	Light Blue
	Bookcases	Orange	Light Blue	Light Blue
	Chairs	Light Blue	Light Blue	Light Blue
	Copiers	Light Blue	Dark Blue	Light Blue
	Envelopes	Light Blue	Light Blue	Light Blue
	Fasteners	Light Blue	Light Blue	Light Blue
	Furnishings	Orange	Light Blue	Light Blue
	Labels	Light Blue	Light Blue	Light Blue
	Machines	Orange	Light Blue	Light Blue
	Paper	Light Blue	Light Blue	Light Blue
	Phones	Dark Blue	Light Blue	Light Blue
	Storage	Light Blue	Light Blue	Light Blue
Supplies	Orange	Light Blue	Light Blue	
Tables	Orange	Light Blue	Light Blue	

Line chart



# Correlation



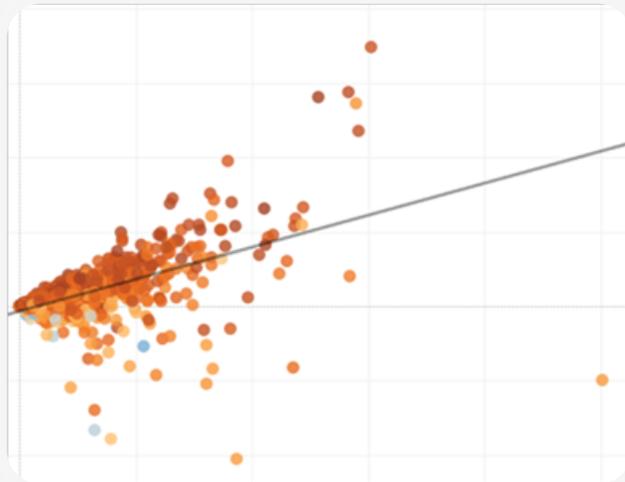
Sometimes you have two variables and are looking for the relationship between them. For example, you may be looking for the relationship between classroom size and school graduation rate, or how much lung capacity relates to endurance. (But remember, correlation does not always equal causation.)

Correlation can be shown with scatter plots or highlight tables to show the strength of the correlation.

- What types of question can this chart answer?
  - Are these two measures related? How strongly?
  - Are some measures more related than others?
  - How strongly related are these measures?

# Correlation

Scatter Plot



Highlight Table

Region	Sub-Category	Segment		
		Consumer	Corporate	Home Office
Central	Accessories	Blue	Blue	Blue
	Appliances	Orange	Orange	Blue
	Art	Blue	Blue	Blue
	Binders	Blue	Orange	Blue
	Bookcases	Orange	Orange	Blue
	Chairs	Blue	Blue	Blue
	Copiers	Blue	Dark Blue	Blue
	Envelopes	Blue	Blue	Blue
	Fasteners	Blue	Blue	Blue
	Furnishings	Orange	Orange	Orange
	Labels	Blue	Blue	Blue
	Machines	Orange	Orange	Blue
	Paper	Blue	Blue	Blue
	Phones	Blue	Blue	Blue
	Storage	Blue	Blue	Blue
	Supplies	Orange	Blue	Blue
Tables	Orange	Blue	Orange	

# Magnitude



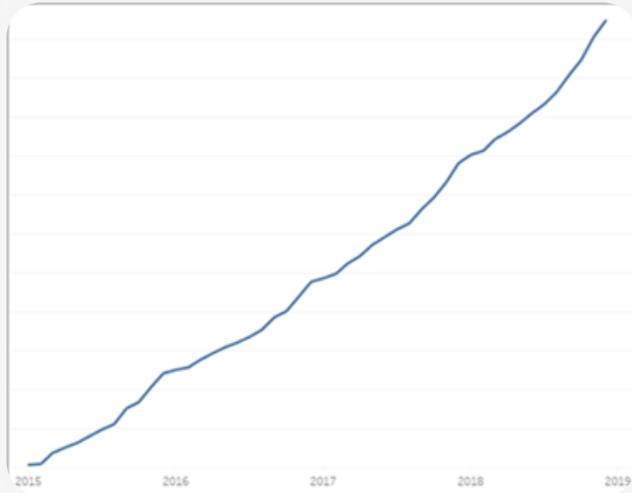
Magnitude shows the relative size or value of two or more discrete items. If you are comparing sales for different regions, you are looking at magnitude.

Magnitude charts include bar charts, packed bubble charts, and line charts.

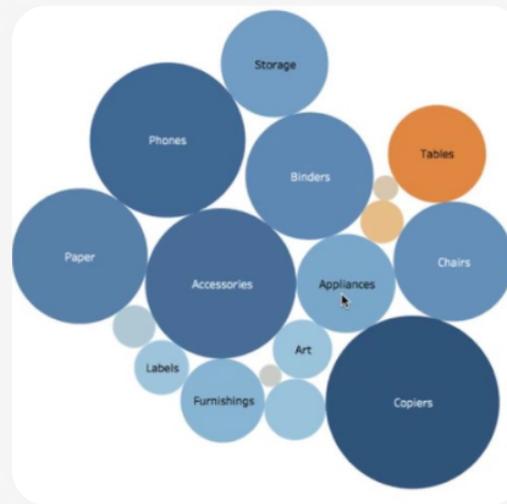
- What types of question can this chart answer?
  - Which of these dimension members has the highest measure?
  - Are there any exceptional dimensions?
  - How large of a gap is there between the lowest and highest measure between these dimensions?

# Magnitude

Line chart



Packet Bubble



Bar Chart



# Deviation



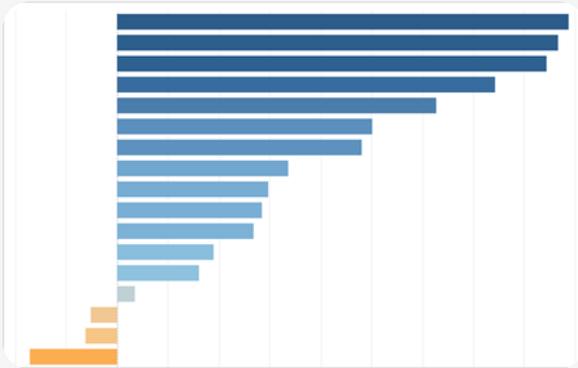
Deviation charts show how far a value varies from some baseline, such as the average or median. If you wanted to know which items had unusually high or low profit margins, you would use a deviation chart.

You can use bullet charts, bar charts, and combination charts to show deviation. You can also find the statistical significance of the deviation using a Z-score.

- What types of question can this chart answer?
  - How far from the norm does this measure stray?
  - How important are the deviations in this measure?
  - Is there a pattern to the deviations?

# Deviation

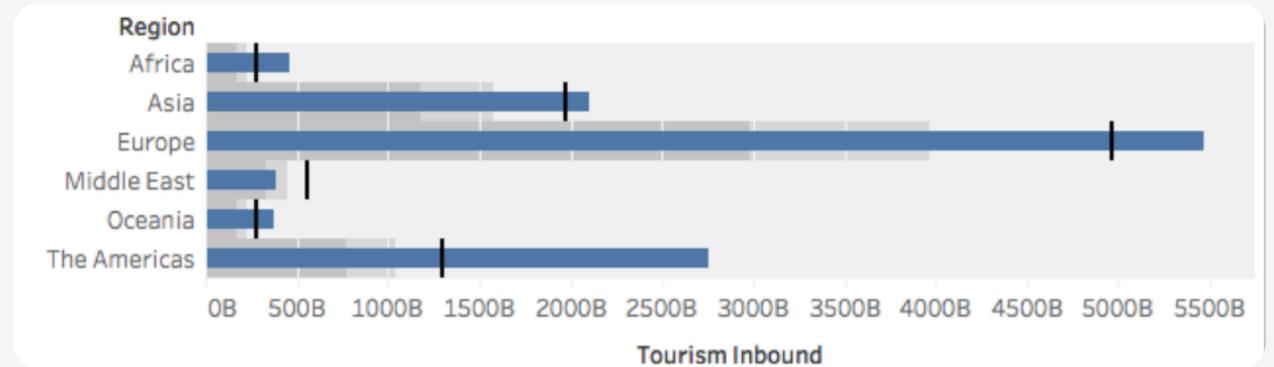
Combination Chart



Bar Chart



Bullet Chart



# Distribution



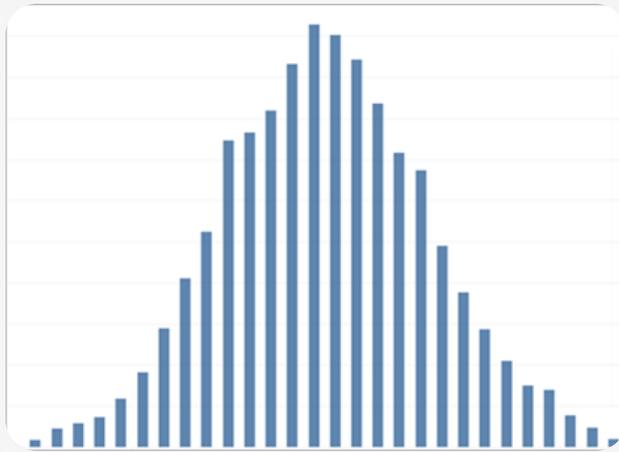
When you are trying to find the frequency of events within a population, you are looking at the distribution. If you are showing the number of respondents to a survey by age, or the frequency of incoming calls by day, a distribution chart might be the best choice.

Distribution charts include histograms, population pyramids, Pareto charts, and box plots.

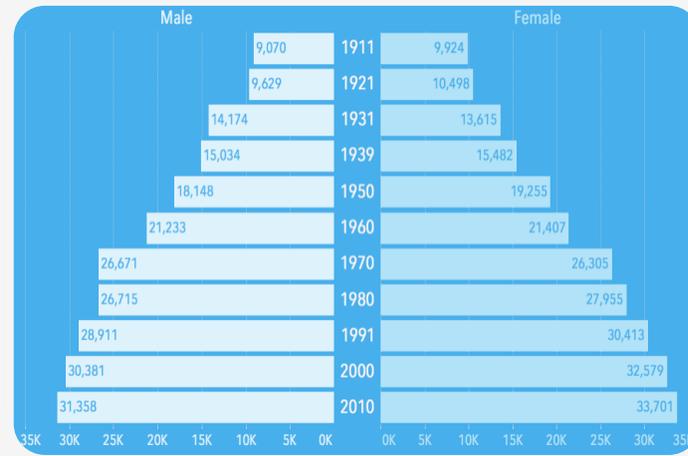
- What types of question can this chart answer?
  - Are events clustered around a certain probability?
  - Which population group buys the most items?
  - When are the busiest times in our work day?

# Distribution

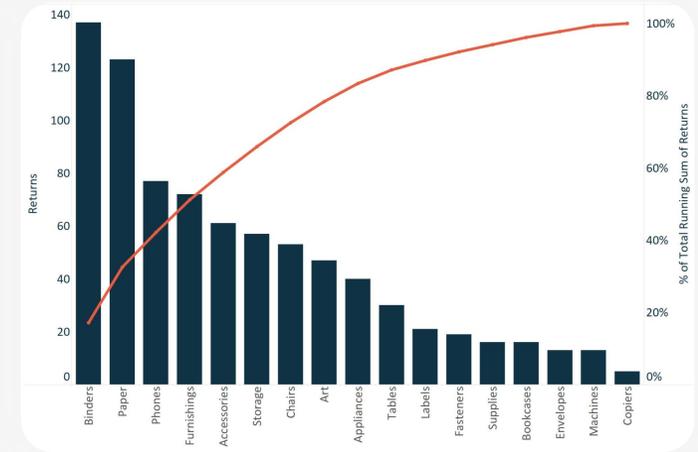
Histogram



Population Pyramid



Pareto Chart



# Ranking



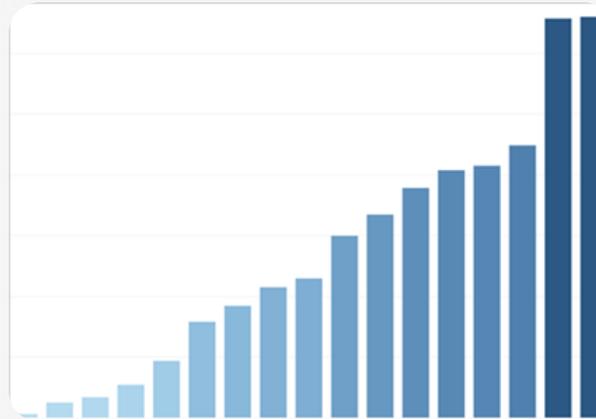
Sometimes you not only want to depict the magnitude of some value, but also the relative ranking of all the members of your dimension. Showing the top ten sales people or demonstrating the under-performing states use a ranking chart.

Ranking charts are usually bar charts that integrate rank calculations, top n sets, or key progress indicators.

- What types of question can this chart answer?
  - How many people are under-performing in the company?
  - How much revenue is generated by our top ten customers?
  - What is the value of our ten lowest revenue properties?

# Ranking

Bar Chart



# Part-To-Whole



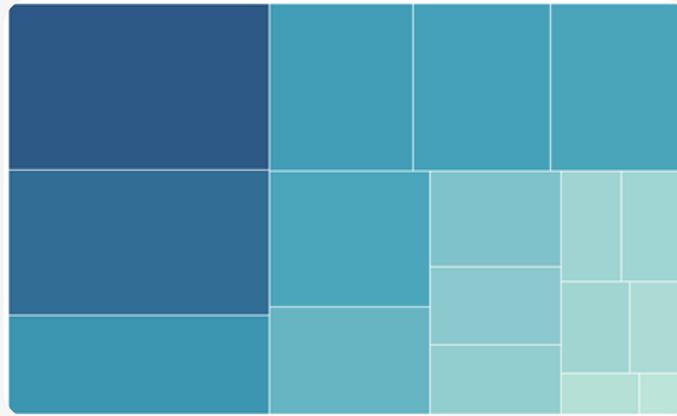
Part-to-Whole charts show how much of a whole an individual part takes up. For example, if you are showing how much each region contributes to overall sales, or how expensive each different shipping mode is for an individual product, you would use a part to whole chart.

Part-to-Whole charts can be pie charts, area charts, stacked bar charts, or treemaps.

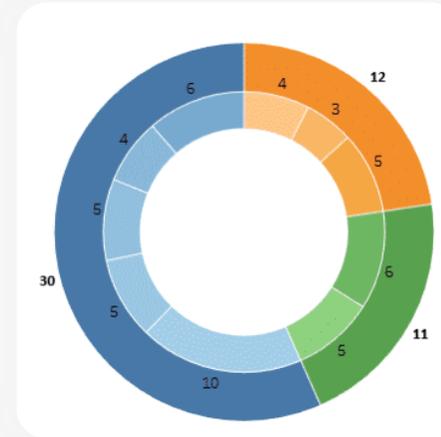
- What types of question can this chart answer?
  - How much does this value contribute to the total?
  - How does the distribution of costs change each year?
  - Do different items contribute different amounts to sales by region?

# Part-To-Whole

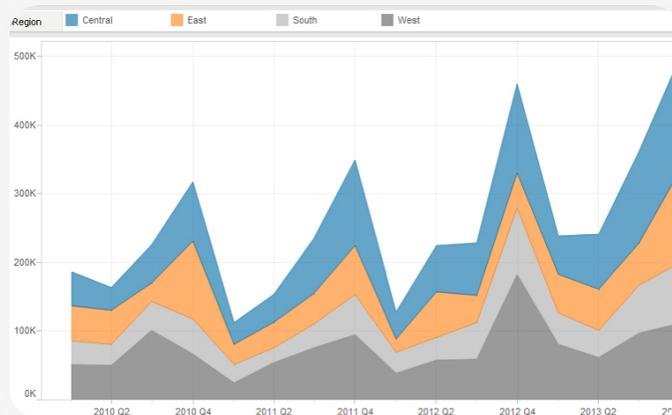
Treemap



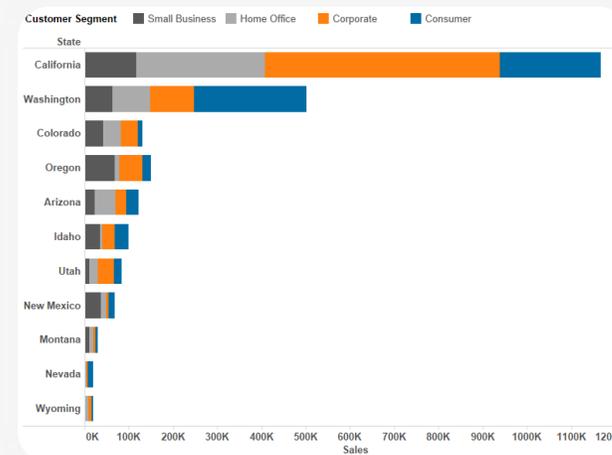
Pie Chart (nested)



Area chart



Stacked Bar chart



# Spatial



Spatial charts can precise locations and geographical patterns in your data. Showing the airport terminals with the most foot traffic or a map of all sales across the country are examples of spatial maps.

Spatial maps include filled maps, point distribution maps, symbol maps, and density maps.

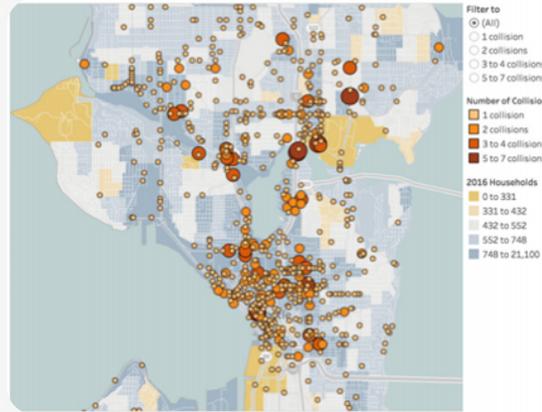
- What types of question can this chart answer?
  - Which city has the highest sales?
  - How far from distribution centers are our customers?
  - How many people arrive at which gate?

# Spatial

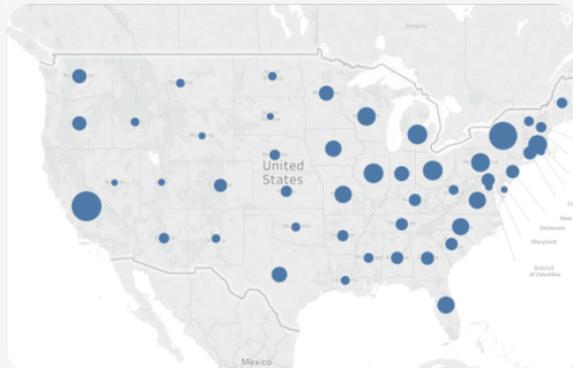
### Filled Maps



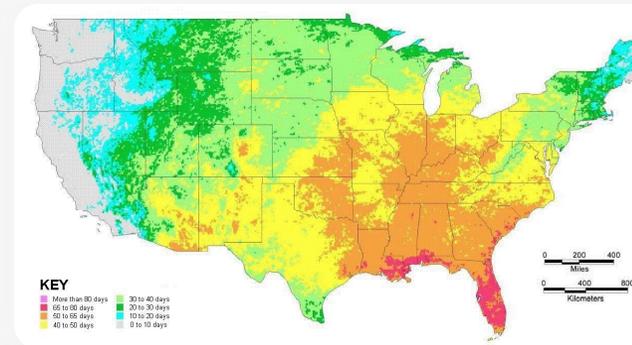
### Point Distribution Maps



### Symbol Maps



### Density Maps



# Flow

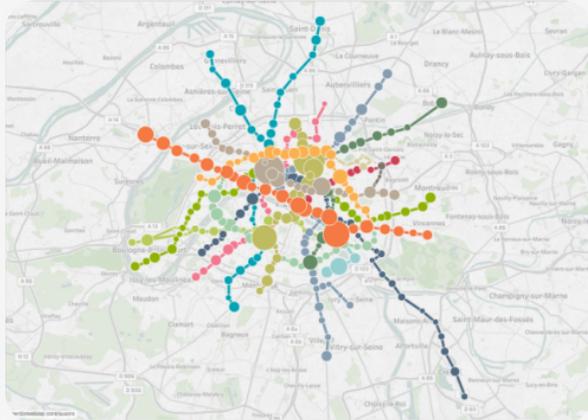


Flow charts can be maps that convey movement over time, such as Sankey diagrams. Flow maps include path over time and path between origin and destination charts.

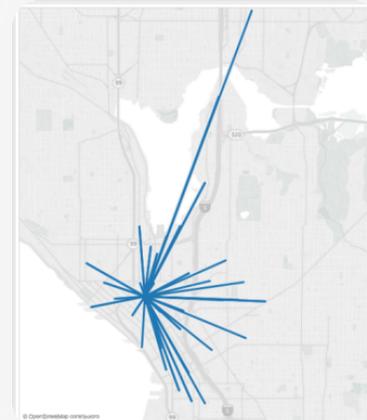
- What types of question can this chart answer?
  - What is the longest shipping route?
  - How long are people lingering around gates?
  - What are the bottlenecks to traffic in the city?

# Flow

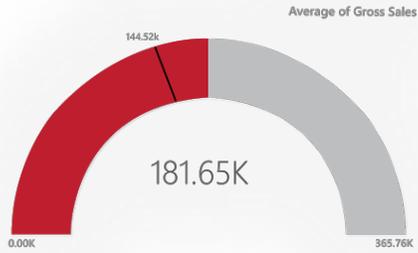
Spider Maps



Origin-Destination Map



# Other Types



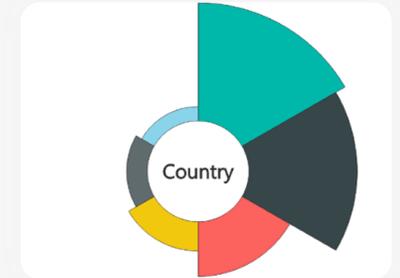
Gauge Charts



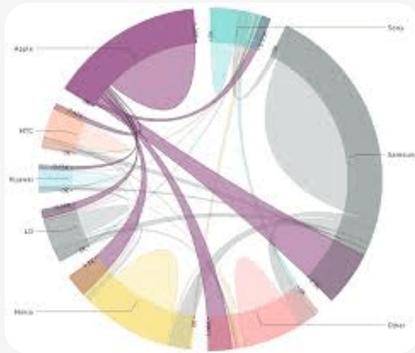
Funnel Charts



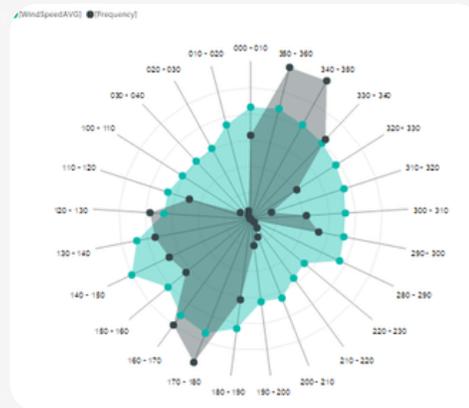
Waterfall Charts



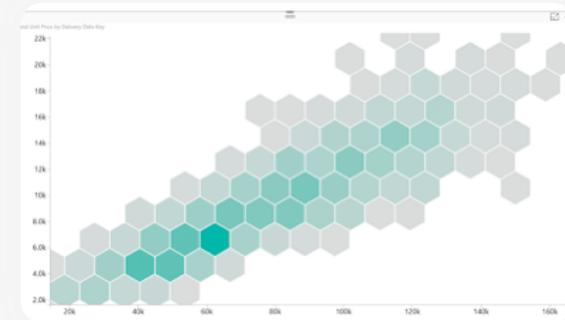
Aster Plot



Chord



Radar Chart

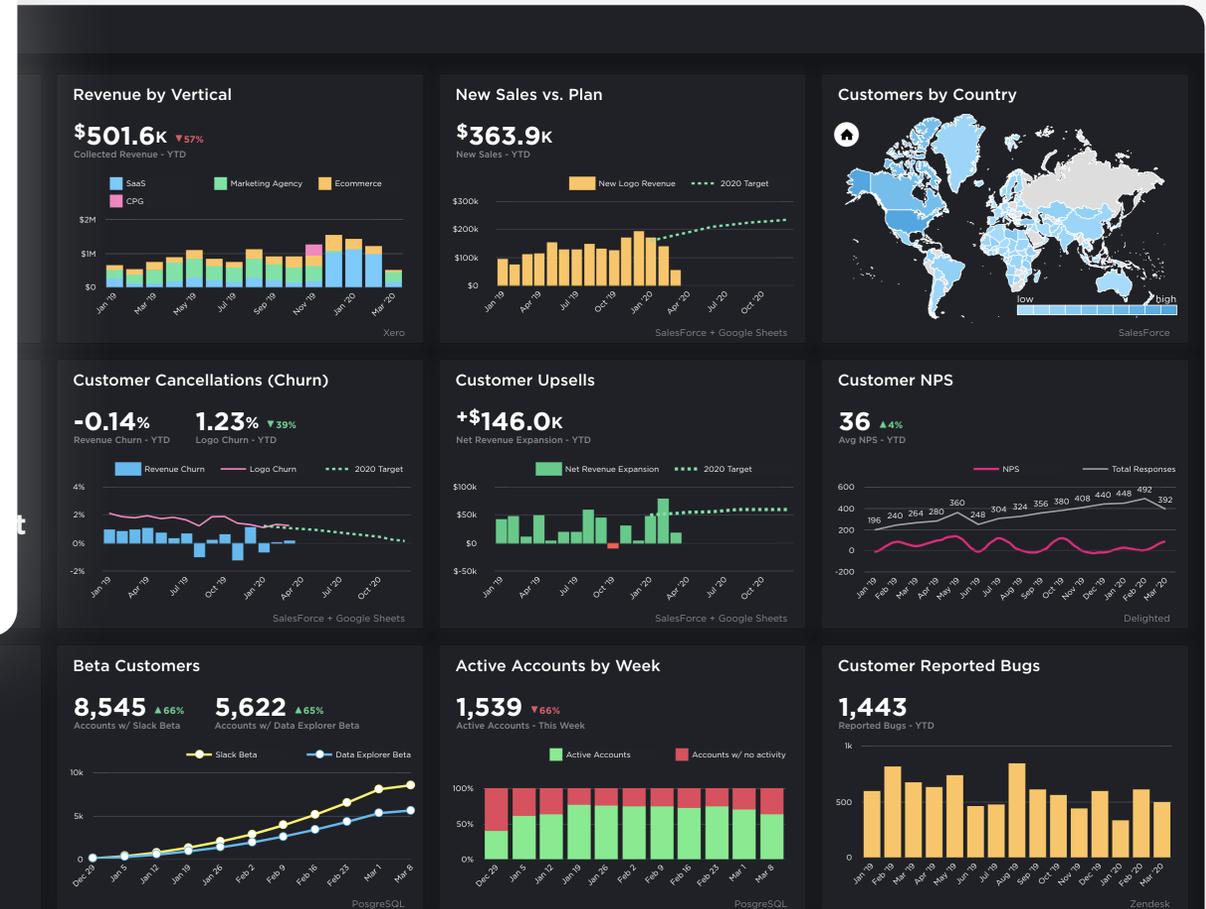


Hexbin Scatter Plot

# To summarize, we will



- Study and understand the data silos in your organization
- Building a plan to extract the actionable insights
- Assist in integrating and analyzing your organizations data
- Create insightful and actionable business information visualizations



Initiative #3

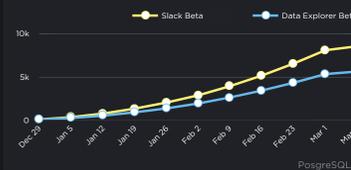


## Launch Stealth Product

Active accounts > 50% every week

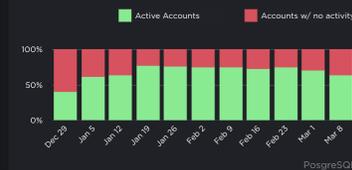
Beta Customers

8,545 ▲66% Accounts w/ Slack Beta  
5,622 ▲65% Accounts w/ Data Explorer Beta



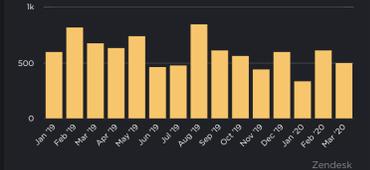
Active Accounts by Week

1,539 ▼66% Active Accounts - This Week



Customer Reported Bugs

1,443 Reported Bugs - YTD



Recognized as one of *Inc.'s 5000 Fastest-Growing US Companies (2019 & 2020)*, Pegasus One partners with industry leaders including Snowflake, Microsoft and Amazon AWS to bring advanced expertise, resources, and leadership to every project.

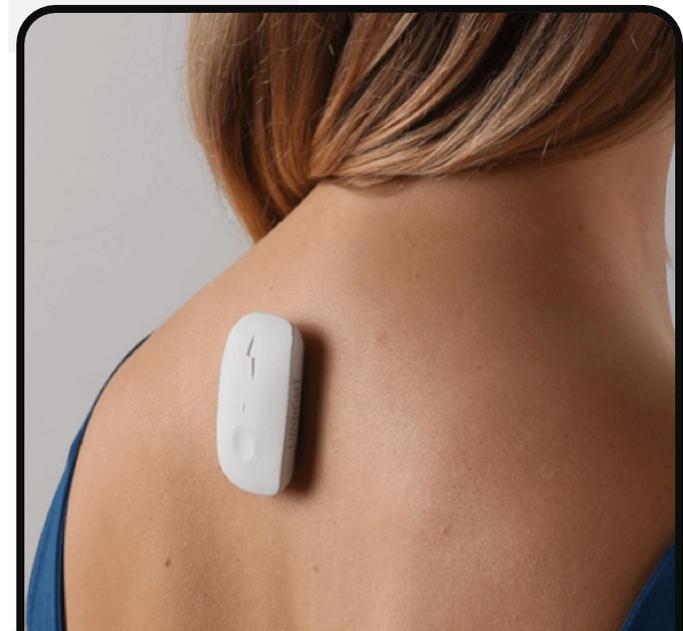


# Projects



## HEALTHCARE INSURANCE

Azure based healthcare insurance platform built using Azure SQL data warehouse and Tableau



## POSTURE MANAGEMENT

AWS based data warehouse built using structured (RDBMS) and unstructured data from sensors/IOT devices for healthcare app

# Projects



## ONLINE LEARNING PORTAL

AWS based data warehouse built using structured (RDBMS) and API data fetched from Canvas LMS



## SBA LENDING

MS SQL server and PowerBI implementation for a lending product.

# Projects



## INTELLIGENT LOGISTICS

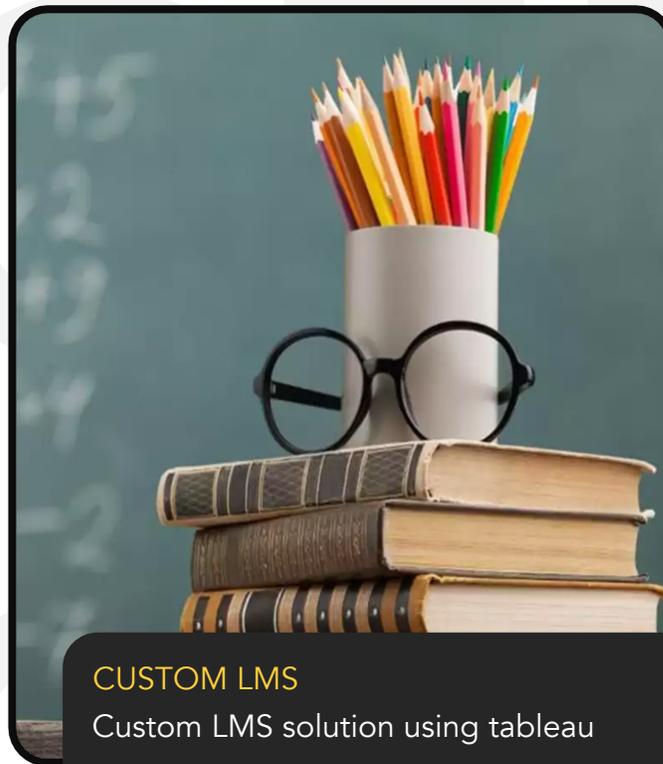
40% increase in ROI aided by powerful dashboards delivering actionable insights



## AI BASED LOGISTICS

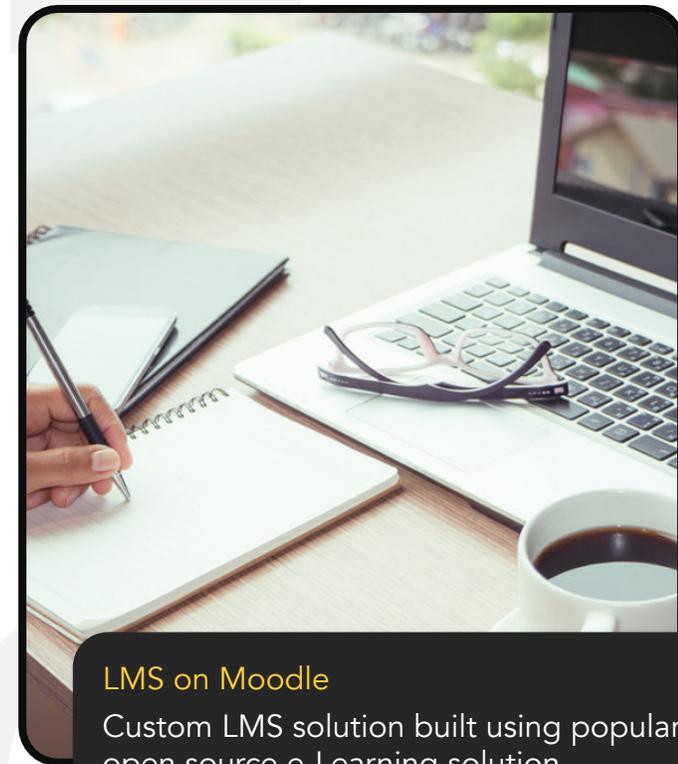
50% reduction of fleet costs with Machine Learning optimized logistics pipeline

# Projects



## CUSTOM LMS

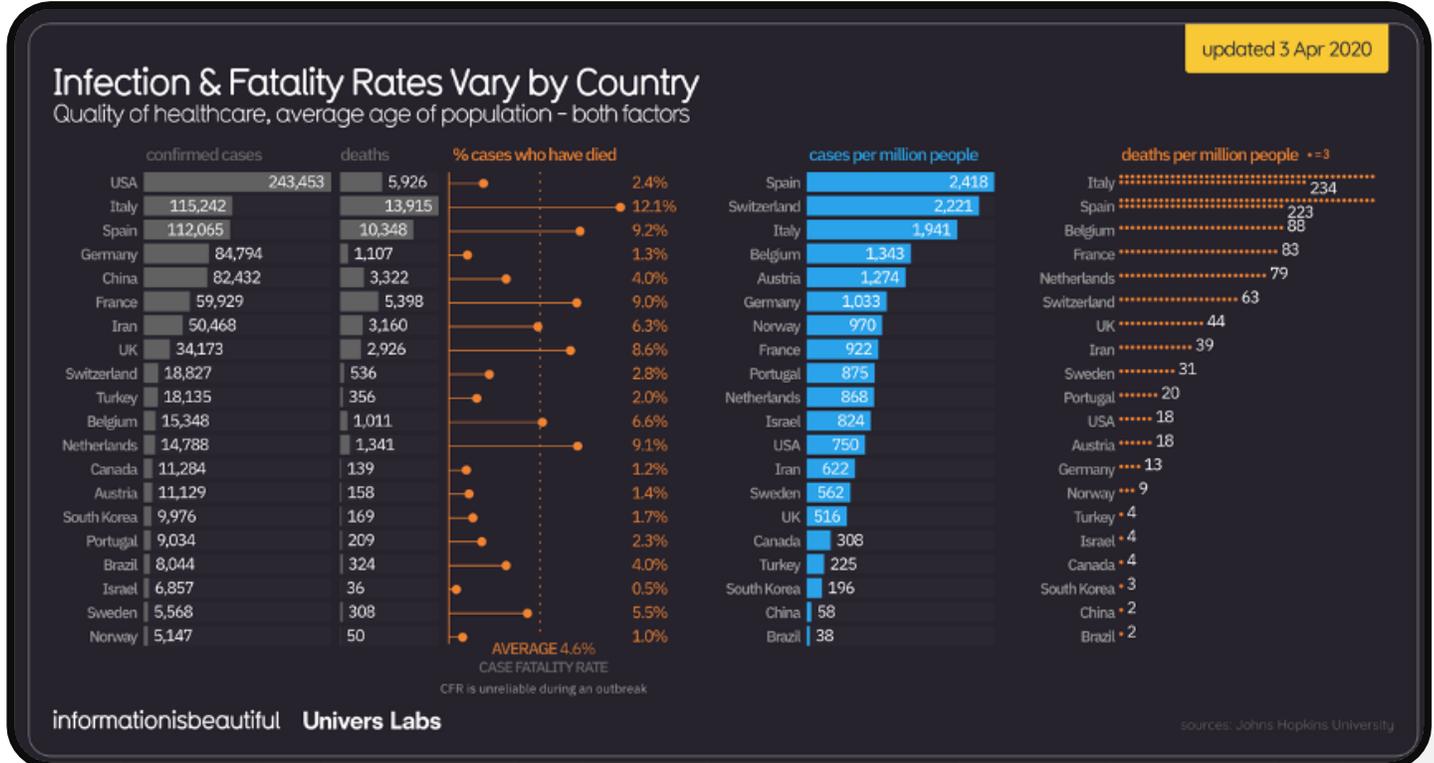
Custom LMS solution using tableau



## LMS on Moodle

Custom LMS solution built using popular open source e-Learning solution

# A life-saving win of Data Intelligence



## USE OF DATA VISUALIZATION TO DEFEAT COVID-19

Read Here <https://www.pegasusone.com/the-use-of-data-visualization-to-defeat-the-covid-19-pandemic/>