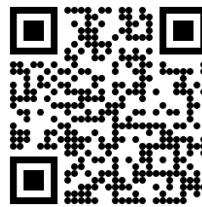




# A Students' Guide to Designing Effective Reports (Using Power BI)



Benni De Jagere  
Program Manager  
Power BI Customer Advisory Team





# Who am I?



Power BI CAT

**dataMinds.be** Member



@BenniDeJagere



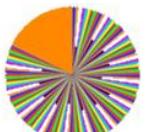
/bennidejagere



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/bennidejagere



#SayNoToPieCharts

# OUR TEAM activities

We engage with strategic Power BI customers and the sales professionals supporting them to showcase and provide technical guidance, help drive product adoption and consumption and influence our engineering roadmap.

## BDM SHOWCASE

We own demo resources for CxO-level conversations

## FIELD SUPPORT

We support technical escalations & training opportunities

## PATTERNS & PRACTICES

We curate content on cross-cutting technology topics

## ENGINEERING FEEDBACK

We influence the products roadmap via feedback rhythms



# Power BI



# CAT

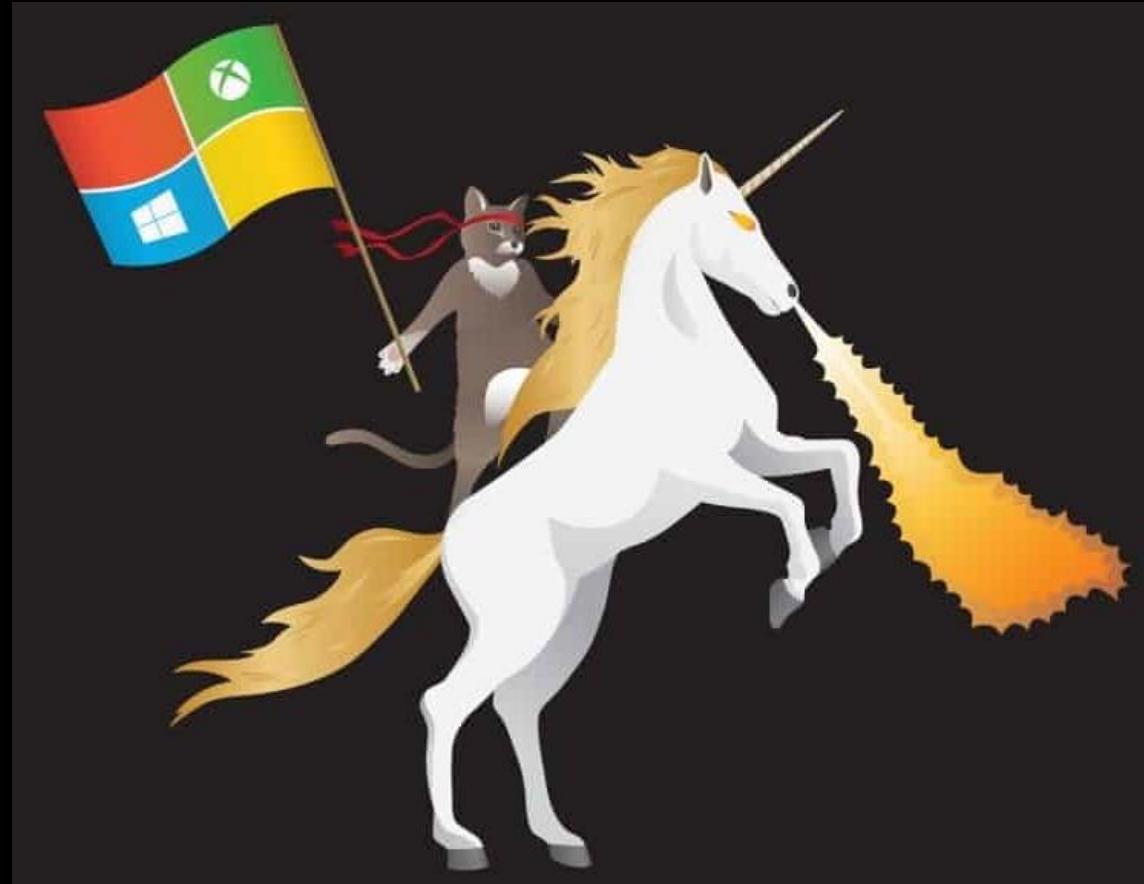
Small team of “elite ninjas”

Work with some of the largest  
customers on their toughest  
problems

Are the Power BI tip of the spear

We then provide feedback to the  
Power BI team.

Customer Success Stories





# Drive a data culture

everyone | every decision | at any scale





Source: Gartner (March 2022)

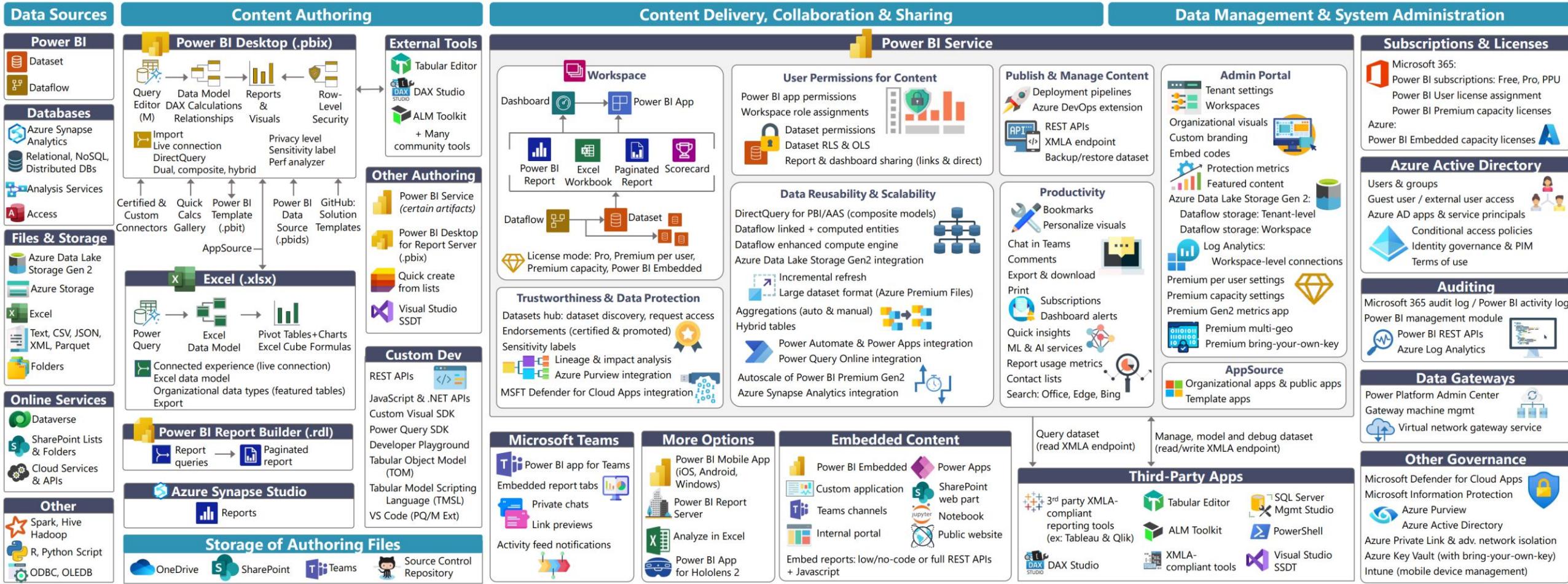


# Power BI 'At a Glance'

## Power BI End-To-End: Top Features, Key Integration Points & Related Services

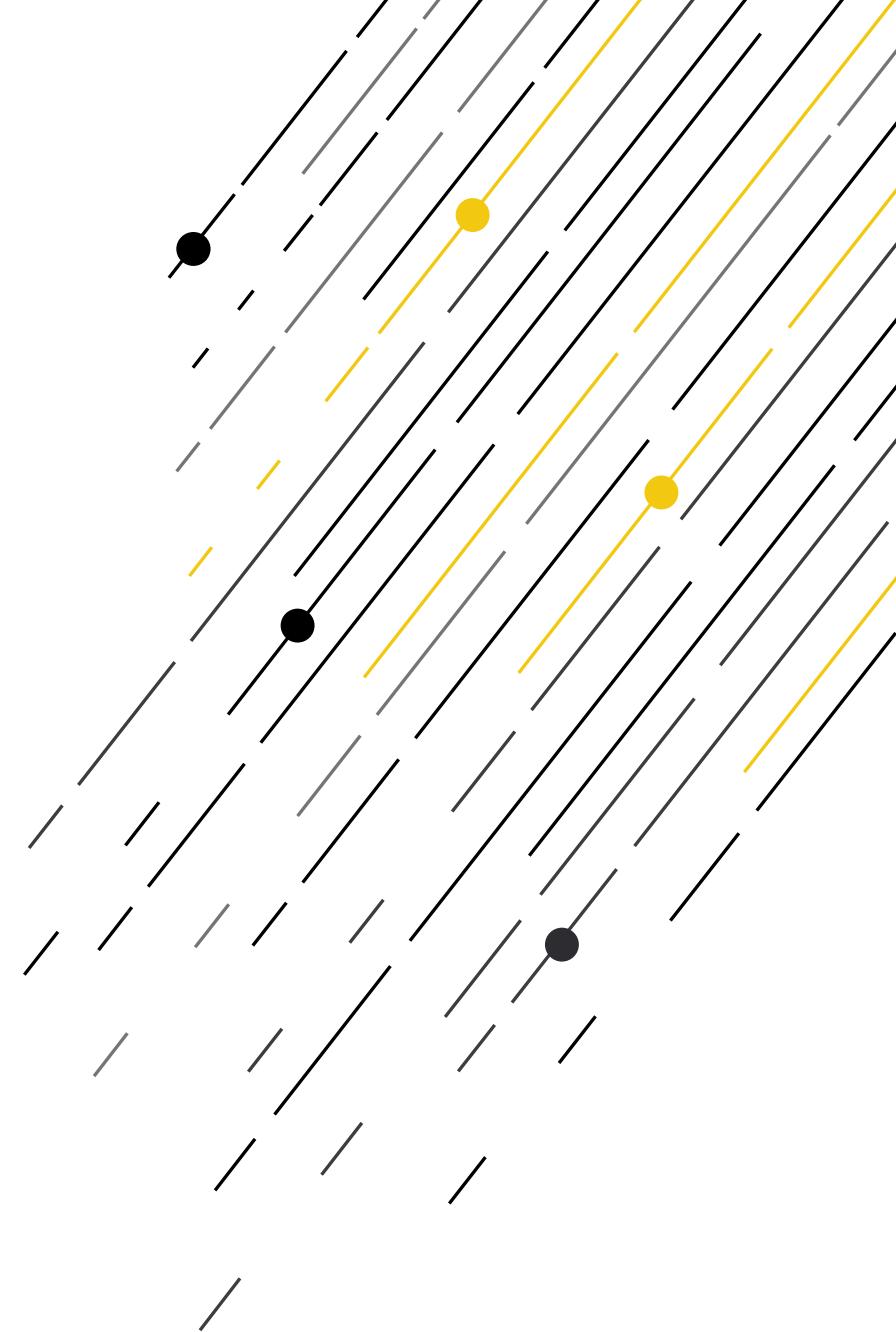
Last Updated: March 23, 2022

Coates Data Strategies





# “Debunking” Buzzwords



# Data Culture

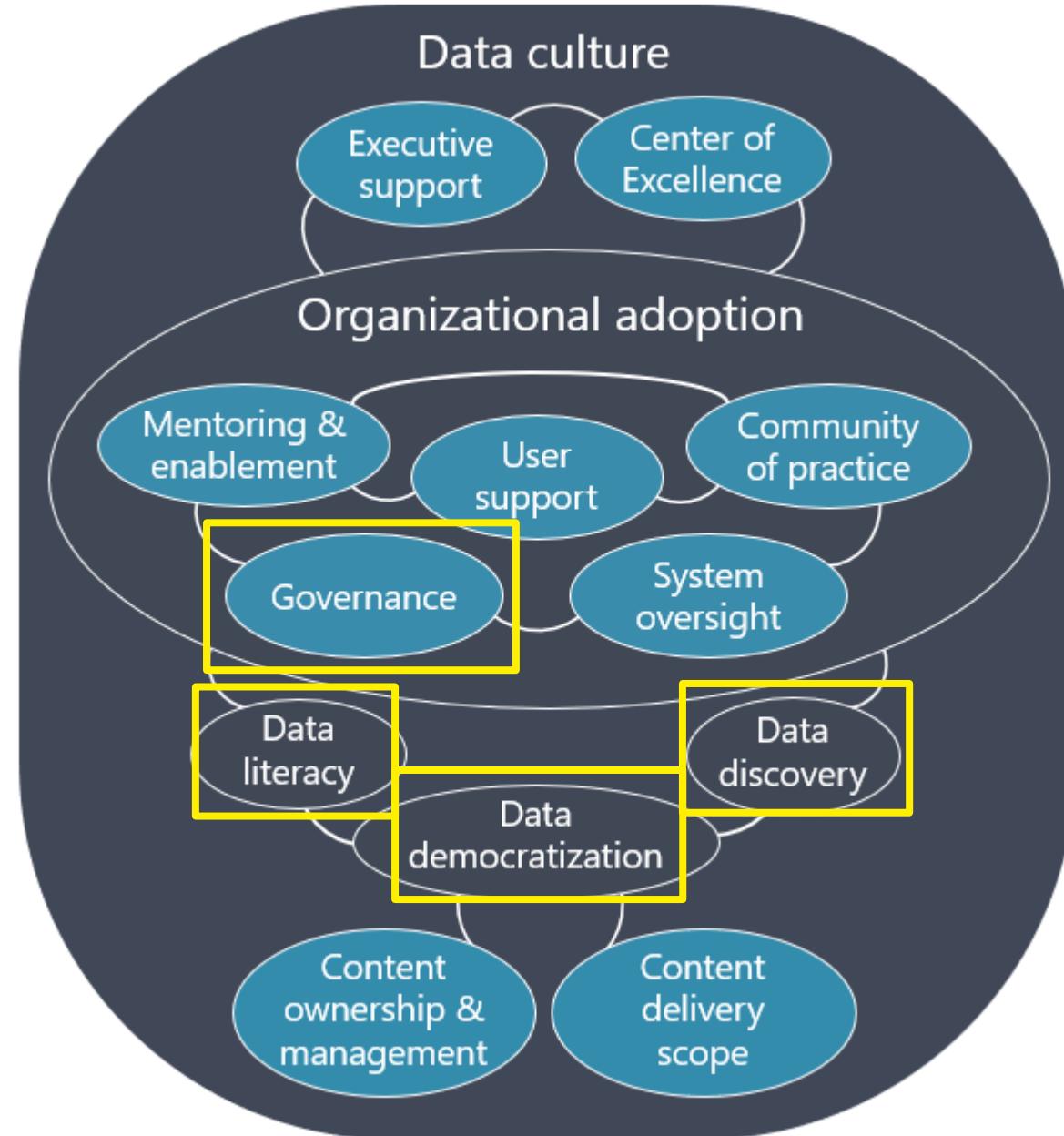
*The term **data culture** can be defined in different ways by different organizations. In this context, data culture means a set of behaviors and norms in the organization. It encourages a culture that regularly employs informed data decision-making*

[Docs – Data Culture](#)



Microsoft  
Power BI

# Data Culture



# Data Literacy

**Data literacy** refers to the ability to interpret, create, and communicate data accurately and effectively. Put another way, successful adoption takes a lot more than merely providing Power BI software and licenses to users.

[Docs – Data Literacy](#)

# Data Democratization

**Data democratization** refers to putting data into the hands of more users who are responsible for solving business problems. It's about enabling them to make decisions with the data.

[Docs – Data Democratization](#)

# Data Discovery

**Data discovery** is the ability to effectively search for, and locate, relevant data sources and artifacts across the organization. Primarily, data discovery is concerned with improving awareness that data exists, particularly when data is siloed in departmental systems.

[Docs – Data Discovery](#)

# Data Governance

**Data Governance** is "a system of decision rights and accountabilities for information-related processes, executed according to agreed-upon models which describe who can take what actions, with what information, and when, under what circumstances, using what methods."

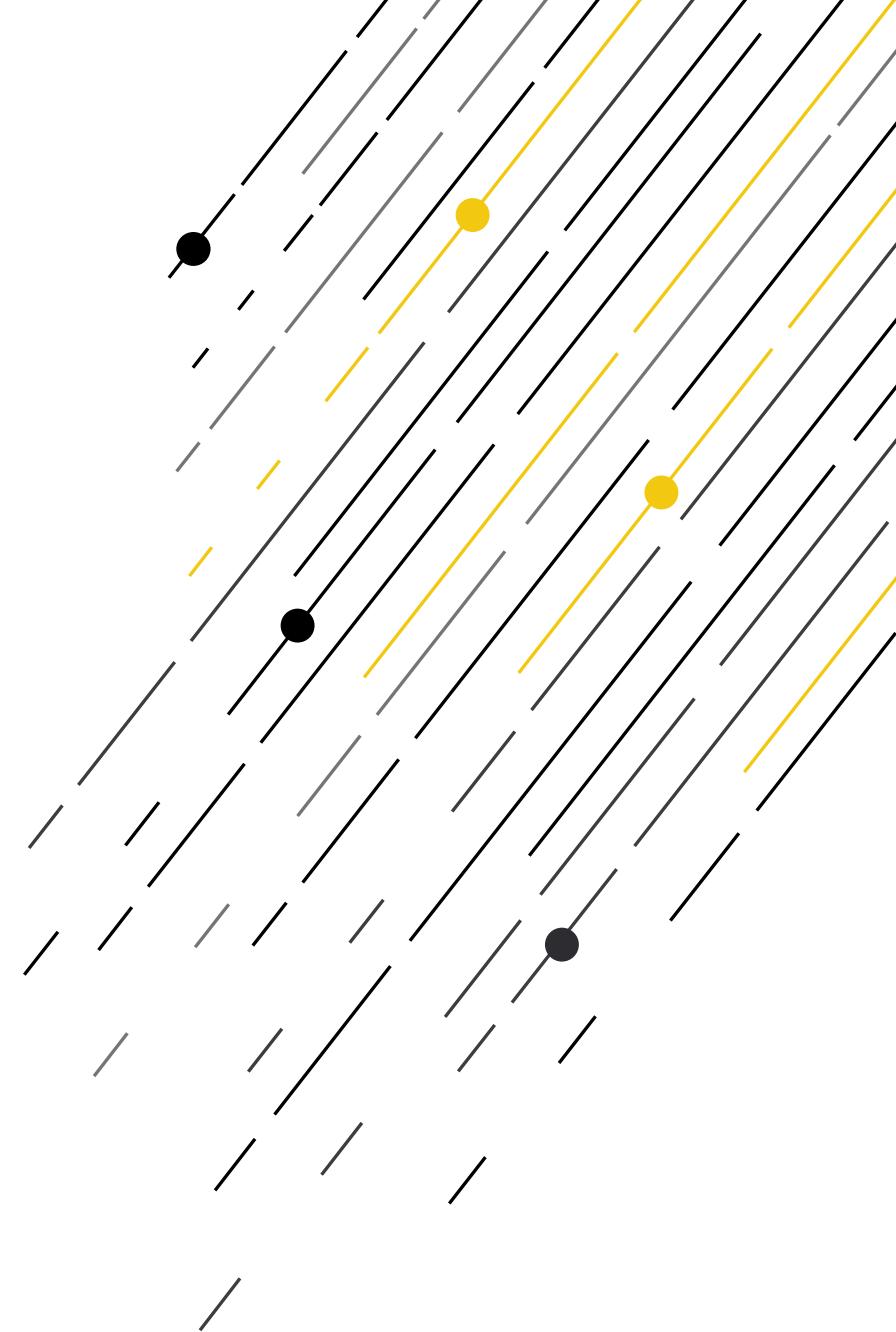
[Docs – Data Governance](#)



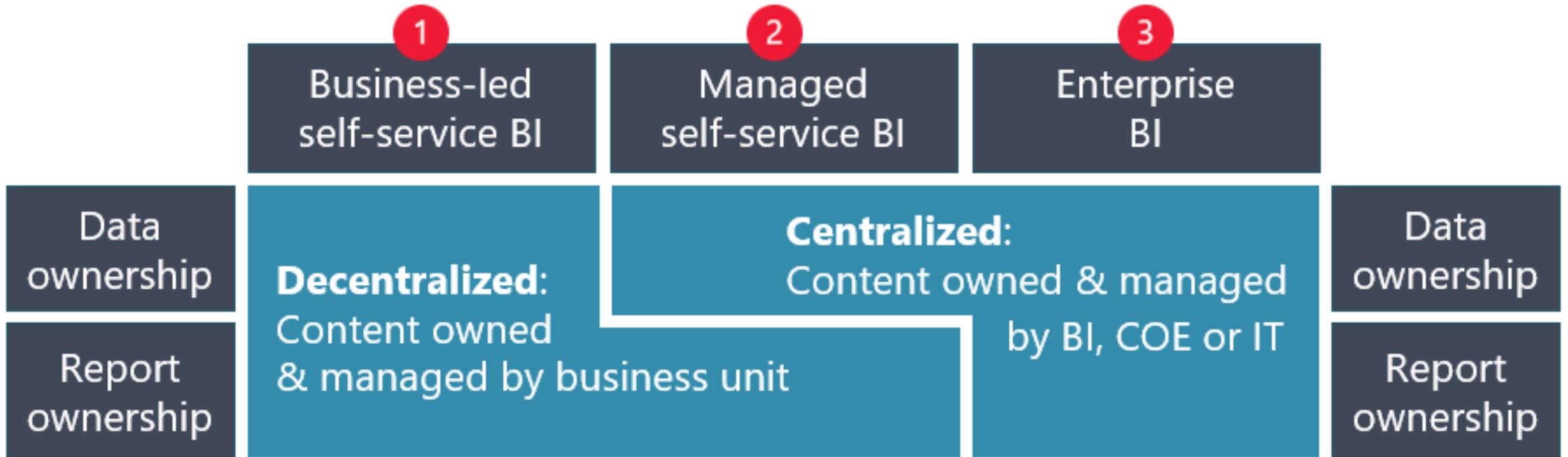
Microsoft  
Power BI



# Content Ownership



# Content Ownership



## Docs – Content Ownership



Microsoft  
Power BI

# Business-led Self-Service BI

*All content is owned and managed by the creators and subject matter experts within a business unit. This ownership strategy is also known as a decentralized or bottom-up BI strategy.*

[Docs – Data Governance](#)



Microsoft  
Power BI

# Managed Self-Service BI

*The data is owned and managed by a centralized team, whereas business users take responsibility for reports and dashboards. This ownership strategy is also known as discipline at the core and flexibility at the edge.*

[Docs – Data Governance](#)



Microsoft  
Power BI

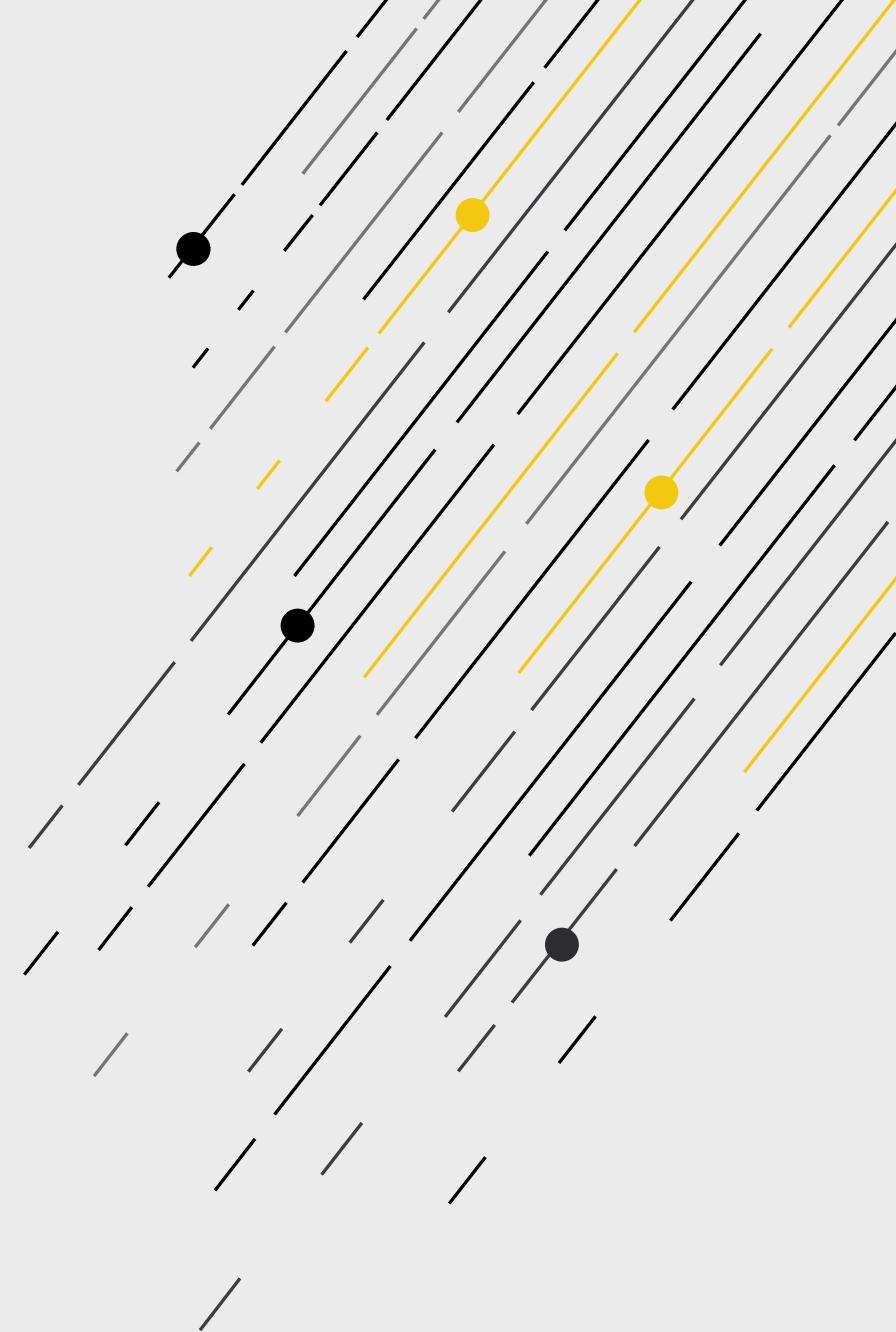
# Business-led Self-Service BI

*All content is owned and managed by a centralized team such as IT, enterprise BI, or the Center of Excellence (COE).*

[Docs – Data Governance](#)



What does this mean for YOU?



My resume after publishing my first report  
with Power BI



Microsoft  
Power BI

# Data Analysis - Demand?

The US tech industry is looking for more 'analytical' and fewer 'engineering' talent



Note: At rank #1, we have combined/aggregated job posting numbers for four skills: IT, business, sales, and finance.  
Source: Deloitte analysis based on data from the Burning Glass database.

Deloitte Insights | [deloitte.com/insights](https://deloitte.com/insights)

[Deloitte – Tech looks to analytics skills to bolster its workforce](#)

# Data Analysis – Critical Skills?

Critical Thinking & Understanding

Communication

SQL

R / Python

Data Visualisation

Presentation Skills

Excel

7 Must-Have Skills for Data Analysts



Microsoft  
Power BI

# What about local demand?

Local market is Enterprise / Managed Self-Service mostly

Combined with personal BI (Siloed)

Data Awareness is seeping through to SMB's

Data Consultancies pop up like 🍔

Look for those that offer (actual) training/coaching

Influx of starters/converters is larger than ever before

Does not reflect quality..

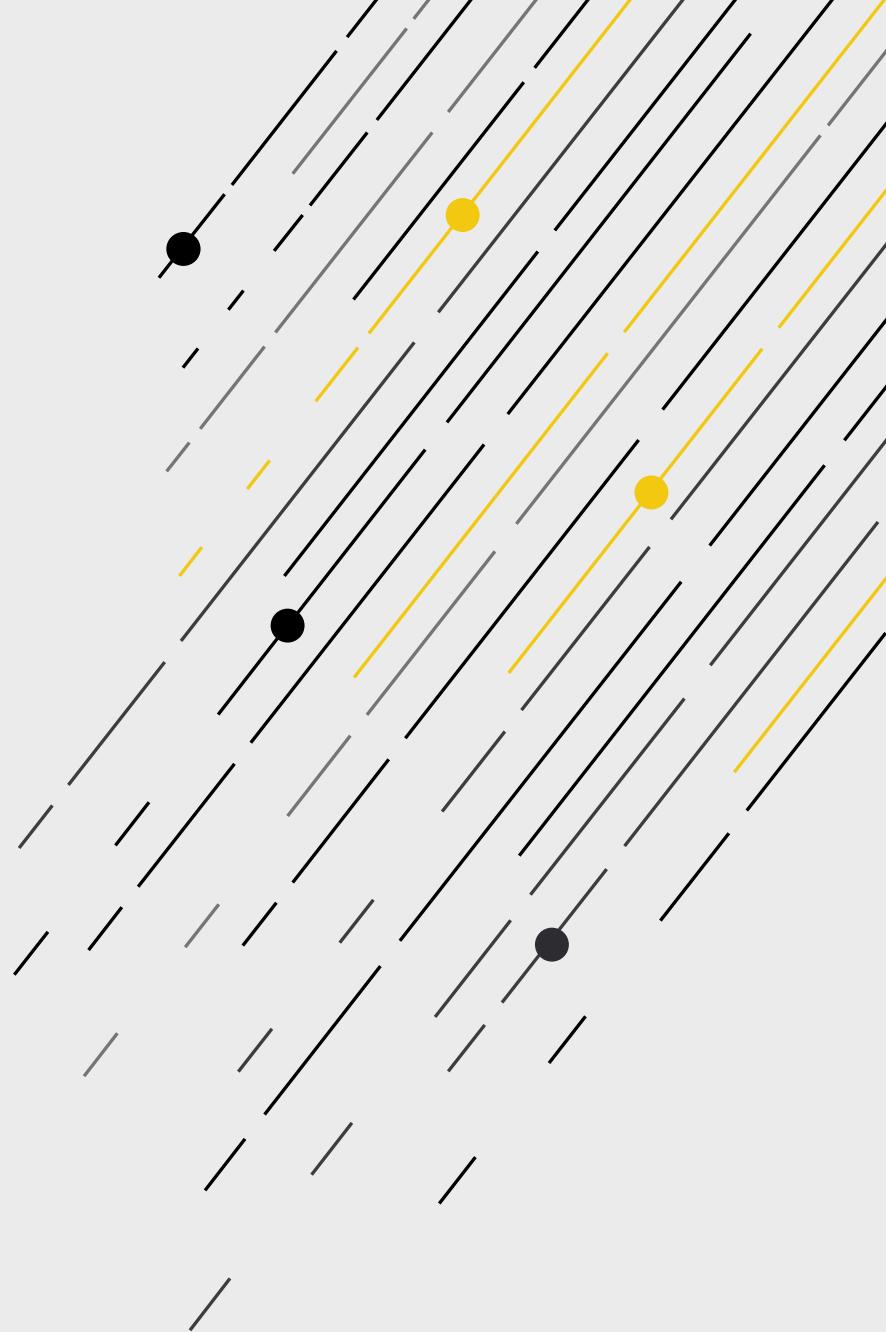
Invest in those non-technical and critical skills!

A job interview is not single way traffic!

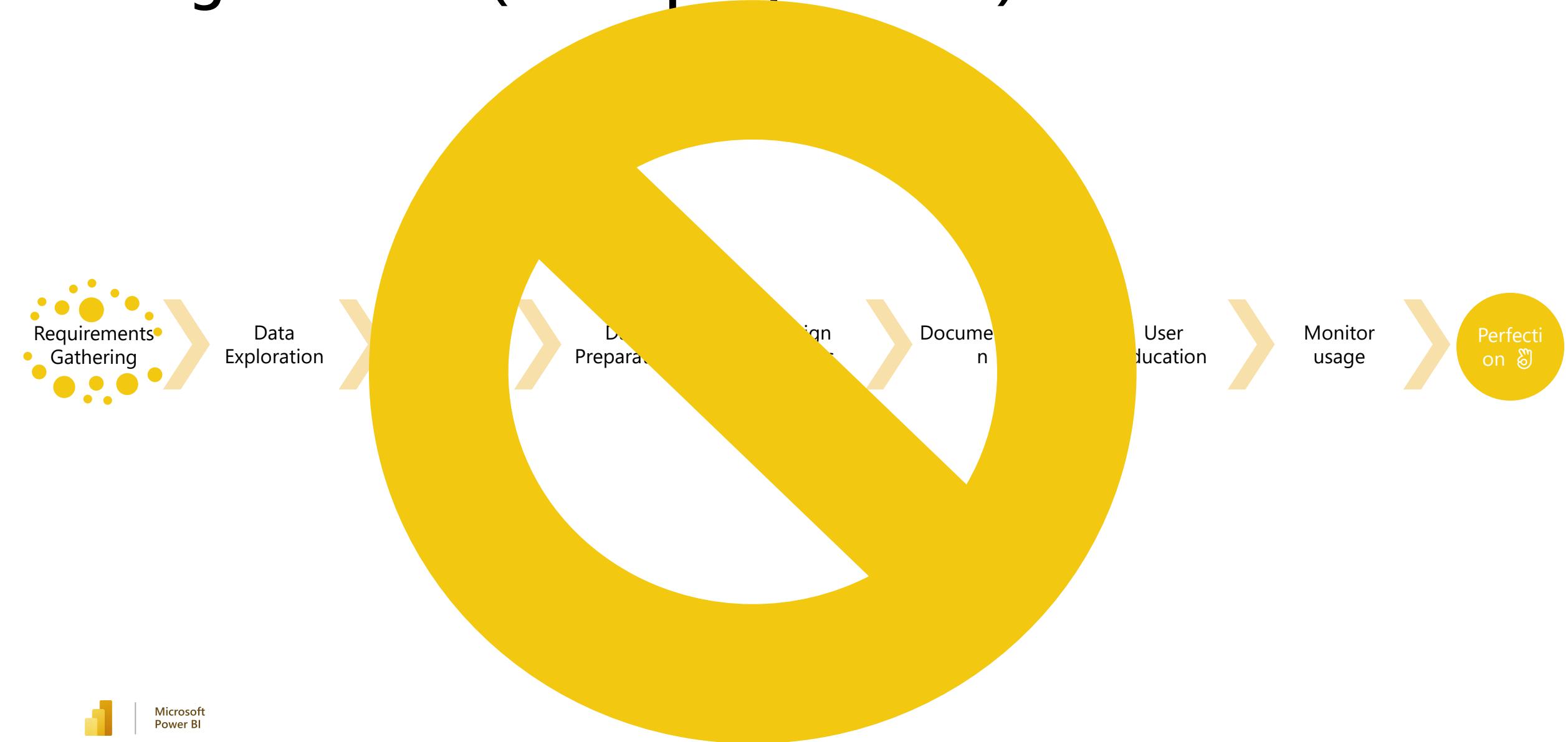




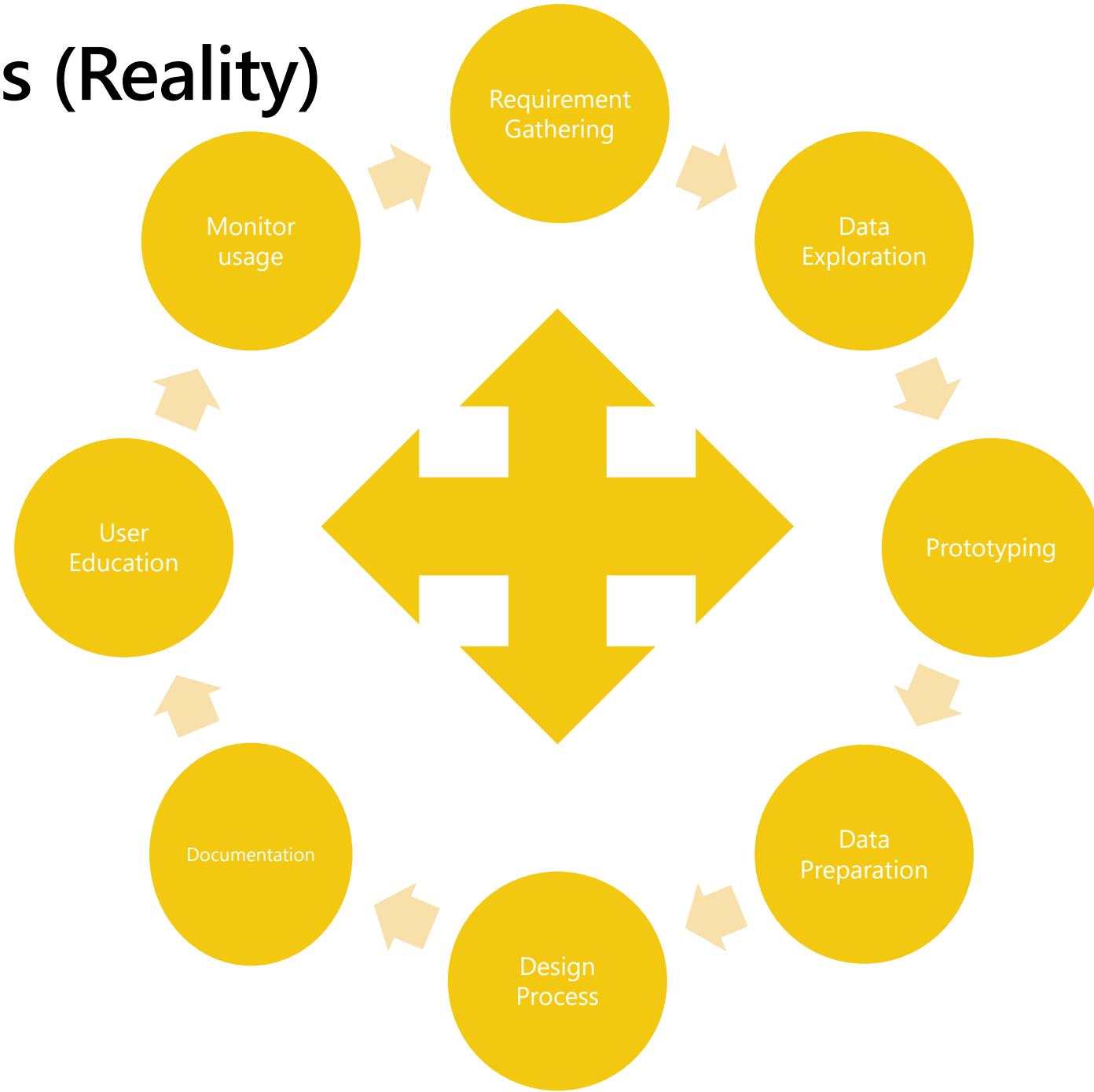
# Designing Effective Reports



# Design Process (What people think)



# Design Process (Reality)



# Scope Design Requirements

# Scope Report Design Requirements

Identify Audience

Determine Report Types

Define User Interface Requirements

Define User Experience Requirements

Business Understanding



# Identify Target Audience

## Executive

A person who is charged with making plans and decisions that often involve a medium or long-term focus. Executives are responsible for making the business run smoothly.

## Analyst

A person who provides guidance to the organization. Analysts can be responsible for a range of tasks, often with goals of determining the effectiveness of business strategies, developing or improving processes, or implementing change.

## Information worker

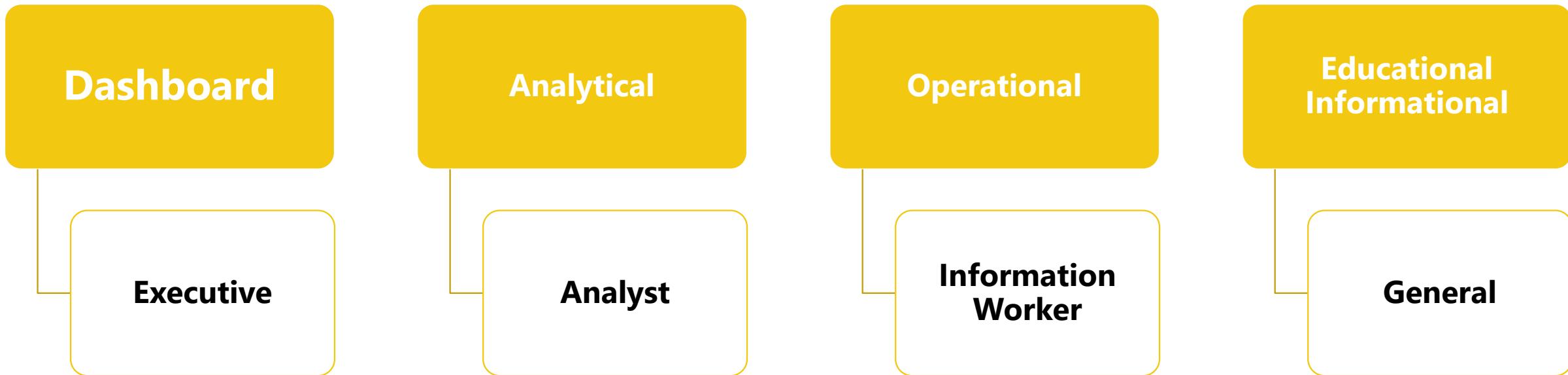
Someone who uses data to help make decisions or take actions. Often, these decisions and actions are operational in that they are done on a daily basis





Determine Report Types

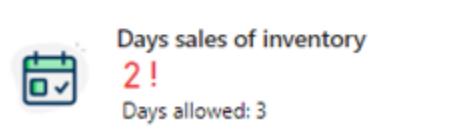
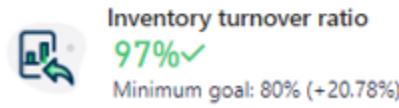
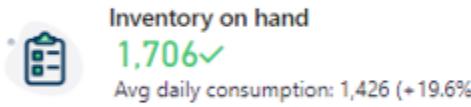
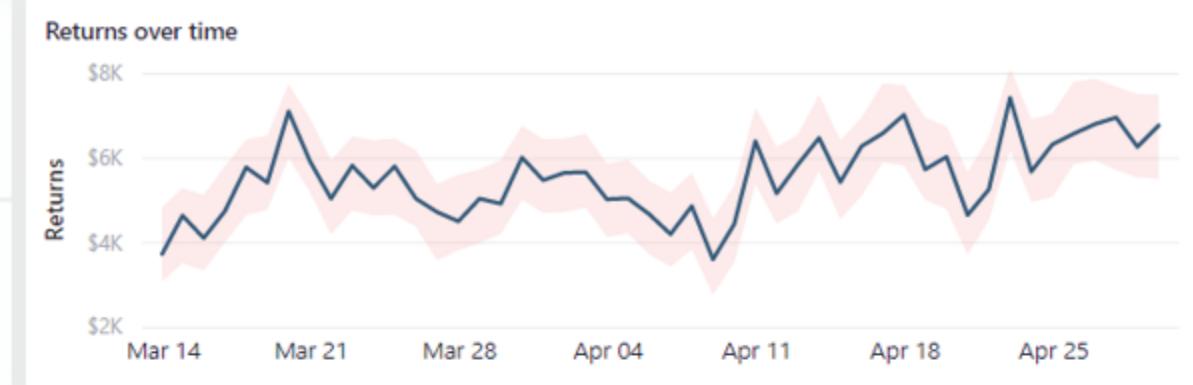
# Determine Report Types



# Determine Report Types (Dashboard)

- Goal is to interpret the story as quickly as possible.
- User interactions are limited
  - By insights that are highly curated toward the audience.
- Report visuals are focused, self-explanatory, and clearly labeled.
- A dashboard directly communicates the meaning behind the data
- Minimizes room for misinterpretation or confusion.
- Often presents high-level metrics that are displayed on a single page. Dashboards help answer questions as:
  - "How are we doing?"
  - "Are we there yet?"





# Determine Report Types (Analytical)

- Help report consumers discover answers
- Interact with the report and its visuals
- Often consists of
  - many slicers and filters
  - multiple pages and pathways
  - complex visuals to expose in-depth detail
- Designed for interactivity with focus on UX / UI
- Extends into questions as:
  - "Why did that happen?"
  - "What might happen next?"



SALES RETURNS

Last 180 Days 14/03/2021 - 30/04/2021

Sales  
**\$208,847✓**  
Previous 7 days: \$172,815 (+20.85%)

Contoso sales  
**\$52,801!**  
Previous 7 days: \$57,129 (-7.58%)

Customer sales  
**\$156,046✓**  
Previous 7 days: \$115,686 (+34.89%)

Items sold  
**3,835✓**  
Previous 7 days: 3,45K (+11.1%)

Sales over time



Sales by Product

Chart Tabular



Sales by Store

Chart Map



# Determine Report Types (Operational)

- Monitor current or real-time data
- Make decisions, and act on them
- Often includes:
  - Buttons & Actions
  - Access to external systems
- Intended to support daily activities and workload
- Design should be as frictionless as possible



Select City All 

Sales  
**\$327,852✓**  
Previous 7 days: \$126,091 (+160.01%)

Contoso sales  
**\$88,211✓**  
Previous 7 days: \$41,125 (+114.49%)

Customer sales  
**\$239,641✓**  
Previous 7 days: \$84,966 (+182.04%)

Items sold  
**5,909✓**  
Previous 7 days: 2,58K (+129.03%)

### Sales by Store



### Sales over time



City	Price	Sales	Units sold	05-WIF Forecast	05-Warehouse\$\$	On hand	Inventory turnover ratio	Days sales of inventory	Invoice
Los Angeles, CA, USA	\$3,062,400	\$20,531,526	44	\$498,680	1,562,379.00	32	100%		
Power BI	\$816,000	\$4,296,070	2	\$132,090	350,795.00	2	100%		
Excel	\$480,000	\$3,475,600	0	\$83,050	176,500.00	0	100%		
PowerPoint	\$768,000	\$5,738,240	0	\$87,680	112,240.00	0	100%		
Teams	\$268,800	\$1,681,484	42	\$46,648	147,000.00	30	99%		
PowerApps	\$345,600	\$2,325,492	0	\$76,572	254,124.00	0	100%		
XBOX	\$384,000	\$3,014,640	0	\$72,640	521,720.00	0	100%		
Total	\$21,436,800	\$156,922,431	624	\$3,601,869	15,346,908.00	1,706	97%		

# Determine Report Types (Educational)

- Assume to consumer is unfamiliar with data or context
- Provide clear narrative and guidance
- Often used for Journalism / Storytelling purposes
- Became hugely popular around March 2020 ..



**154,143,551**  
 People 18+ with at least one dose

Data last updated 05/19/21

59.7% of people 18+ with at least one dose

70.4% of people 18+ with at least one dose by July 4th

**Geolocation:**[Worldwide](#)[United States](#)**Search**

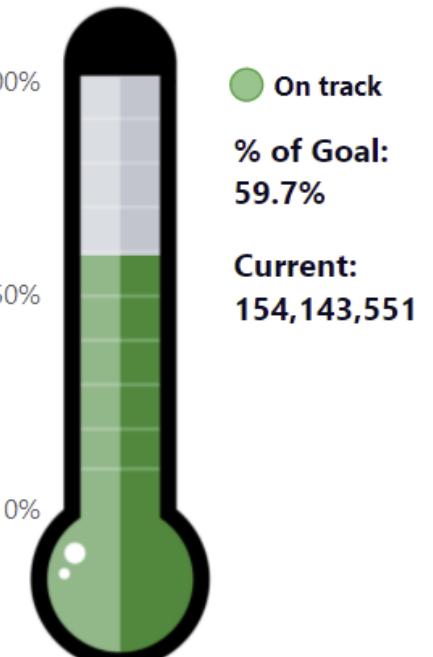
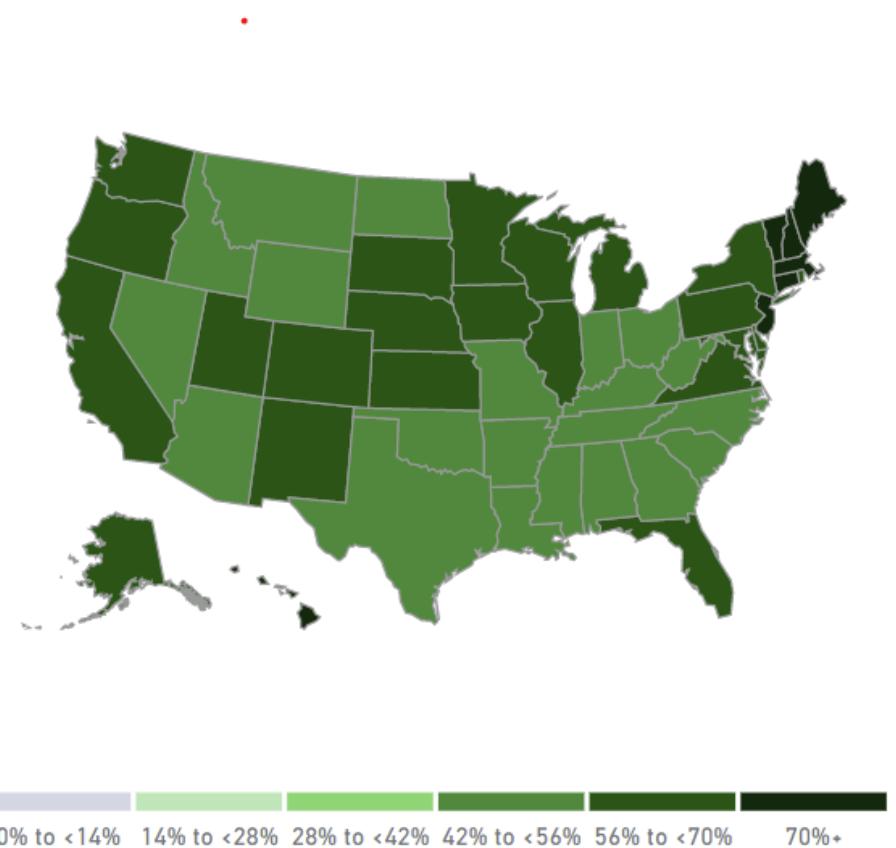
- Alabama
- Alaska
- American Samoa
- Arizona
- Arkansas
- California
- Colorado
- Connecticut
- Delaware
- District of Columbia
- Federated States of Micronesia
- Florida
- Georgia
- Guam
- Hawaii
- Idaho
- Illinois
- Indiana
- Iowa
- Kansas

**How many people are getting vaccinated?****Where and when are vaccinations being given?****People with at least one dose****Measures:**[Total population](#)[Population 18+](#)[Population 65+](#)**People fully vaccinated**[Total population](#)[Population 18+](#)[Population 65+](#)**View:**[By Location](#)[By Date](#)

This chart shows the number of people 18+ years of age who received at least one dose of the COVID-19 vaccine. In addition to tracking the total number of people 18+ with at least one dose, this chart tracks progress to the **Federal Goal to get 70% of adults at least one COVID-19 vaccine dose by July 4th**. The forecast is based on extrapolating the latest 7 day average to July 4th.

[Learn more](#)**PEOPLE 18+ WITH AT LEAST ONE DOSE OF THE COVID-19 VACCINE****United States****Federal goal:**

**70% of adults with at least one COVID-19 vaccine dose by July 4th**

**PERCENT OF PEOPLE 18+ WITH AT LEAST ONE DOSE****United States**

State	% people 18+ with at least one dose	% people 18+ with at least one dose by July 4th
Palau	92.9%	93.1%
Vermont	78.6%	100.0%
Hawaii	77.1%	97.5%
Massachusetts	75.9%	86.4%
New Hampshire	74.8%	100.0%
Connecticut	72.6%	82.4%
Maine	71.7%	83.6%
New Jersey	70.9%	83.0%
Rhode Island	69.2%	78.9%
New Mexico	69.0%	77.9%
Pennsylvania	68.2%	81.8%
California	67.3%	78.3%
Maryland	67.2%	79.8%
District of Columbia	65.7%	79.8%
Washington	65.6%	79.1%
Minnesota	65.1%	74.7%
New York	64.7%	75.7%
Virginia	64.5%	74.5%
Illinois	64.0%	74.9%
Colorado	63.4%	74.3%
Delaware	63.3%	72.6%
Guam	62.9%	77.4%
Oregon	62.6%	75.5%
South Dakota	60.7%	66.1%



Define user interface requirements

# Define user interface requirements

Form Factor

Input Method

Style and Theme

Accessibility



# Define user interface requirements (Form Factor)

- Desk/Laptops are often accompanied by (multiple) large monitors
  - Larger screens are ideal for viewing reports in browsers
  - Accompanied by many, complex visuals
  - Operate in landscape orientation by default
- Mobile devices are typically used when away from a desk
  - Mostly operate in portrait orientation by default
  - Accompanied by a smaller form factor
  - Usually contain less and more simple visuals
  - Visuals are made larger to aid with viewing and interactivity



# Define user interface requirements (Input method)

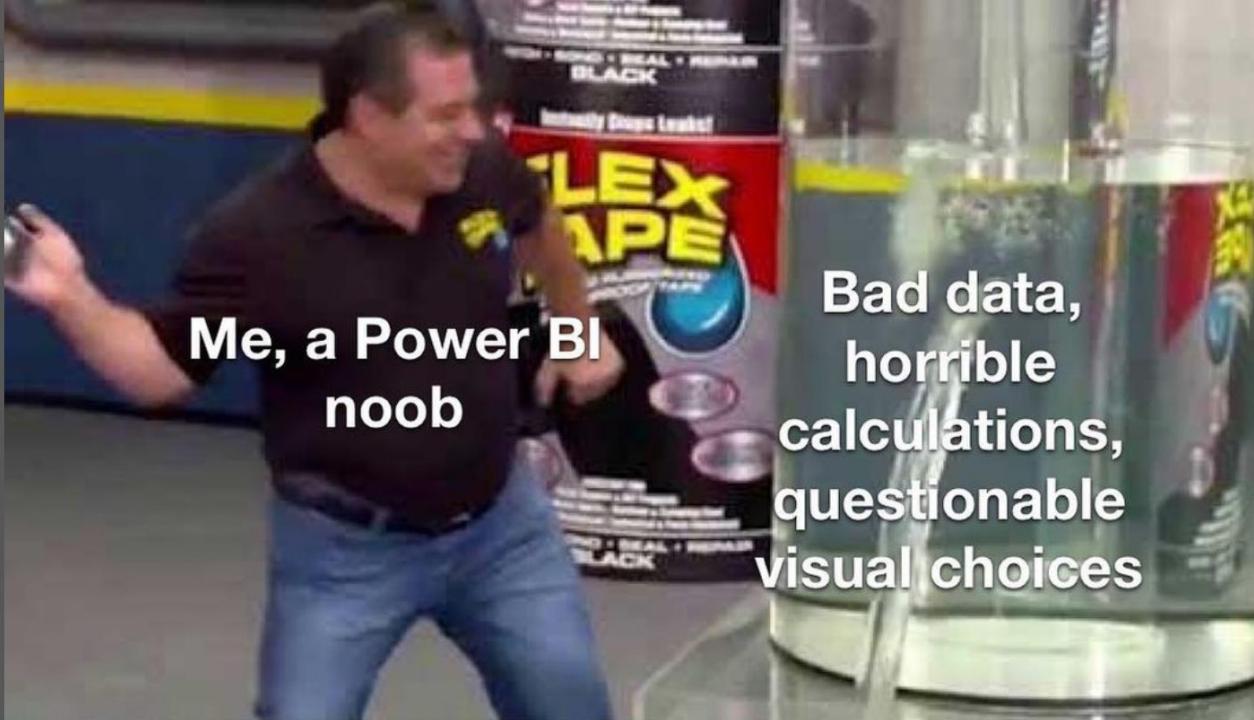
- Desk/Laptops often work with mouse/keyboard
- Mobile devices rely more on common gestures
  - Tap, double-tap, swipe, drag, pinch, spread, press, ..
  - Can also use on-screen keyboards, voice control, barcode or QR code readers
- Augmented/Mixed Reality devices rely on hand gestures
- Consider their consumption mechanism
  - Adjust visuals, complexity, .. where needed



# Define user interface requirements (Style and theme)

- Always strive to use a common theme in your reports
  - Adhere to corporate standards where needed
- Corporate branding will often include
  - Logo(s)
  - Font (s)
  - Color Palette (s)





Bad data,  
horrible  
calculations,  
questionable  
visual choices



An awesome  
color theme



Microsoft  
Power BI

made with mematic

# Define user interface requirements (Accessibility)

- Reports need to communicate to the broadest audience possible
- Consider low/no vision, physical disabilities to allow for a full experience
- The need may not always be obvious
- Consider form factor, input method, and style/theme
- These are always helpful:
  - Clear and large-sized fonts
  - Well-spaced and large visuals
  - Sufficiently contrasting colours
  - Intuitive report navigation, able to be understood by keyboard and screen readers





Define user experience requirements

# Define user experience requirements

- How do reports need to deliver the expected customer needs
- Mostly covered by UI requirements
- Can also be:
  - Interactions (Drill up, Drill down, Drill through, Navigation, Filters/Slicers, Data Export)
  - Support for ad-hoc questions
  - Data Alerts
  - Actions/Integration
  - What-if analysis
  - Printing needs
  - Subscriptions
  - ..





# Business Understanding

# Business Understanding

- First, understand the **problem** statement
- Then and only then, start talking about solutions
- Often works best if you let a stakeholder (customer) explain their current process, and challenges/gaps from their own perspective
- If needed, kickstart with specific questions
- **Insist** on talking to the actual key users/consumers
- Be aware that 'office politics' exist



# Business Understanding

- Look for:
  - Business rules
  - Business definitions
  - Meaning of certain values/targets





# Data Exploration



# What is Data Exploration?

**Data exploration** is the first step in data analysis involving the use of data visualization tools and statistical techniques to uncover data set characteristics and initial patterns.

During exploration, raw data is typically reviewed with a combination of manual workflows and automated data-exploration techniques to visually explore data sets, look for similarities, patterns and outliers and to identify the relationships between different variables.



# Data Exploration Techniques

- Profiling
- Unique Value Count
- Frequency Count
- Variance
- Pareto Analysis (80-20 rule)
- Histogram
- Clustering/Segmentation
- Outlier Analysis
- ..

[Towards Data Science – 15 Data Exploration Techniques](#)



# Prototyping



Microsoft  
Power BI

# Why Prototype?



How the customer explained it



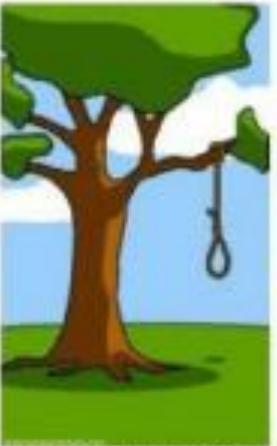
How the project leader understood it



How the analyst designed it



How the programmer wrote it



What the beta testers received



How the business consultant described it



How the project was documented



What operations installed



How the customer was billed



How it was supported



iSwing

What marketing advertised



What the customer really needed



# Prototyping

- Keep it small, simple
- Be cautious about moving to PoC/PoV directly
- Tips:
  - Start with a Sketch
  - Use a (representative) Subset of data
  - Apply the correct styling
  - Get feedback early
  - Share, Collaborate, Iterate

[Discover EI – Power of Prototype: 5 Tricks to shape your Power BI Data Story](#)

[Docs – Prototyping and Sharing](#)





# Data Preparation



# Data Preparation (Wrangling)

**Data preparation** is the sorting, cleaning, and formatting of raw data so that it can be better used in business intelligence, analytics, and machine learning applications.

***"If your downstream process receives garbage as input data, the quality of your results will also be bad."***

Some guy on the Internet

***Garbage in, Garbage Out***

Every Data Consultant Ever



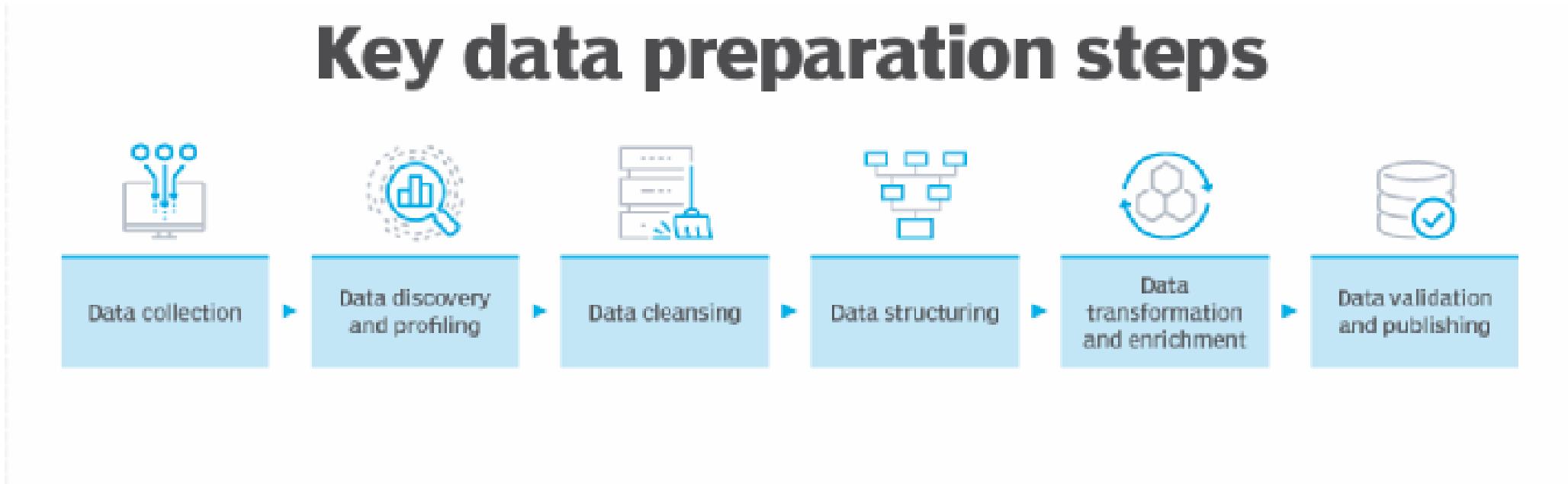
# Benefits of Data Preparation

- Helps an organization do the following:
  - ensure data used in analytics applications produces reliable results
  - identify and fix data issues that otherwise might not be detected
  - enable more informed decision-making by business executives and operational workers
  - reduce data management and analytics costs
  - avoid duplication of effort in preparing data for use in multiple applications
  - get a higher ROI from BI and analytics initiatives.



# Data Preparation Process

## Key data preparation steps



Tech Target – Data Preparation

# Data Preparation Process

## Data Collection

Relevant data is gathered from operational systems, data warehouses, data lakes and other data sources.

## Data Discovery and Profiling

Explore collected data to understand what it contains and how to prepare it for the intended uses. To help with that, data profiling identifies patterns, relationships and other attributes in the data.

## Data Cleansing

Next, the identified data errors and issues are corrected to create complete and accurate data sets.

## Data Structuring

At this point, the data needs to be modeled and organized to meet the analytics requirements.

## Data Transformation and Enrichment

In addition to being structured, the data typically must be transformed into a unified and usable format.

## Data Validation and Publishing

Automated routines are run against the data to validate its consistency, completeness and accuracy. The prepared data is then stored in a data warehouse, a data lake or another repository.



# Data Preparation Challenges

**Inadequate or nonexistent data profiling.**

**Missing or incomplete data.**

**Invalid data values.**

**Name and address standardization.**

**Inconsistent data across enterprise systems.**

**Data enrichment.**

**Maintaining and expanding data prep processes.**





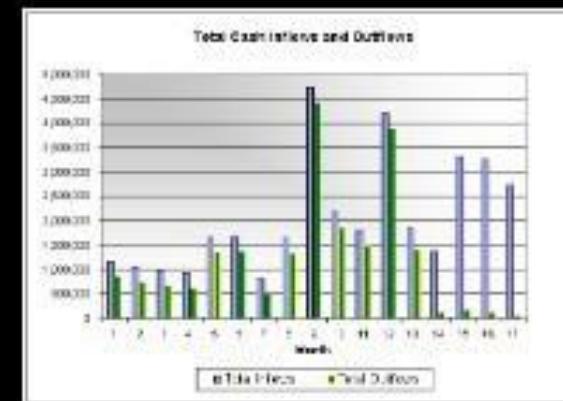
# Report Design





ID	NAME	CLASS	MARK	SEX
1	John Doe	Foof	75	female
2	Mia Rain	Three	85	male
3	Anne46	Four	90	male
4	Krish Star	Four	80	female
5	John Miles	Four	60	female
6	Alex John	Foof	50	male
7	My John Rob	Fifth	78	male
8	Arnold	Five	85	male
9	Tes Gay	Six	78	male
10	Big John	Four	55	female

**WHEN DATA IS IN TABLE FORM**



**WHEN DATA IS IN PLOT**



When you show off your visualizations to  
your boss



Microsoft  
Power BI

# Structure Analytical Report Designs

- Most report consumers have limited time
- Help them by breaking down complex reports in:
  - Condense data volumes into smaller, more targeted results
  - Visualize results graphically, to enable quick comprehension of data
- Data mostly gets influenced by 3 different scopes

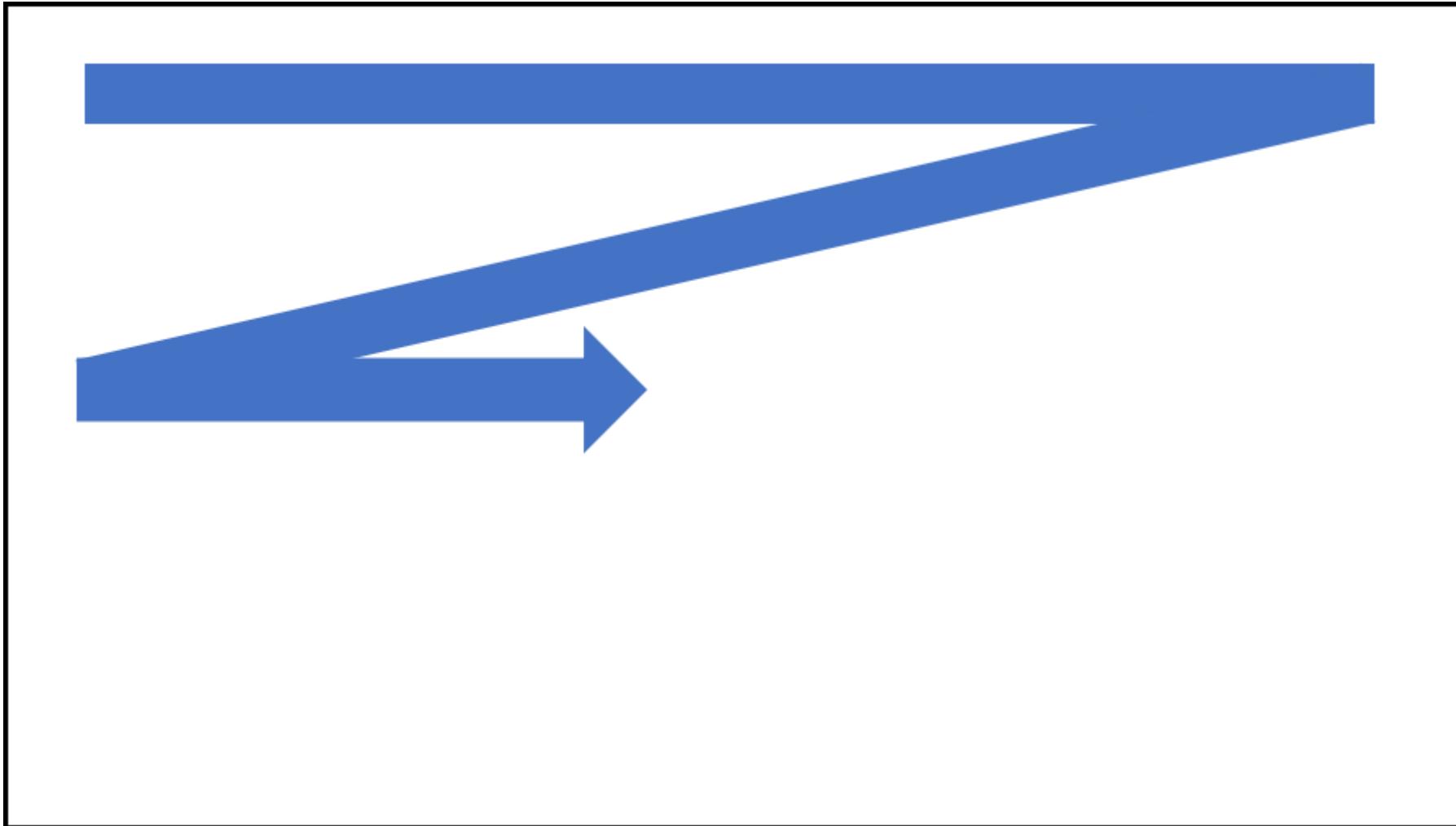
# Designing the Analytical Report Layout

*Report design is a blend of science and art, and many possible report designs are available that help achieve the audience and interface requirements. What matters most is that the report design effectively communicates the data to meet requirements.*

*Always keep in mind that the less is more adage applies; simplicity and clarity lead to good design.*

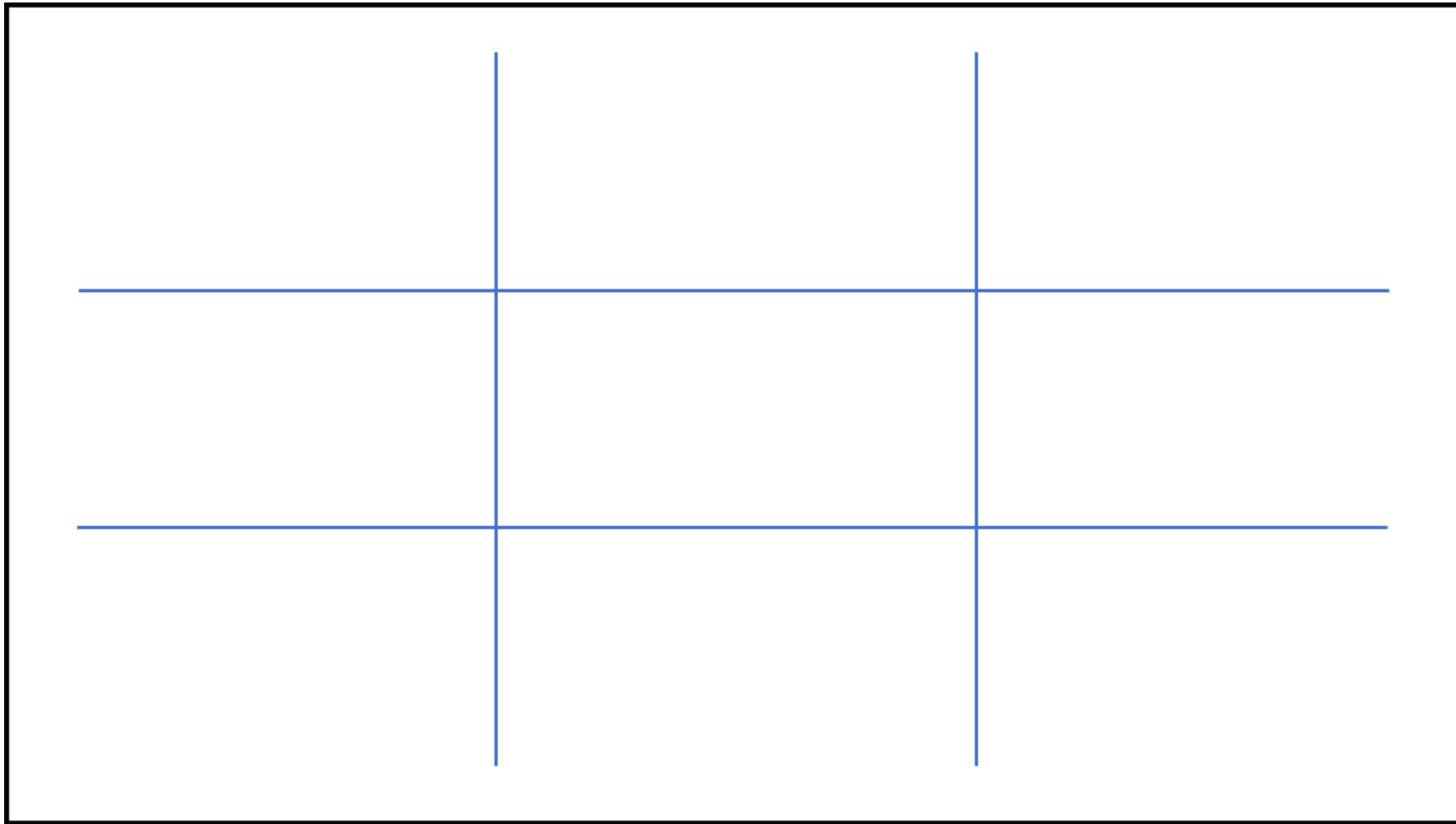


# Designing the Analytical Report Layout (Placement)



*Left to Right*

# Designing the Analytical Report Layout (Placement)



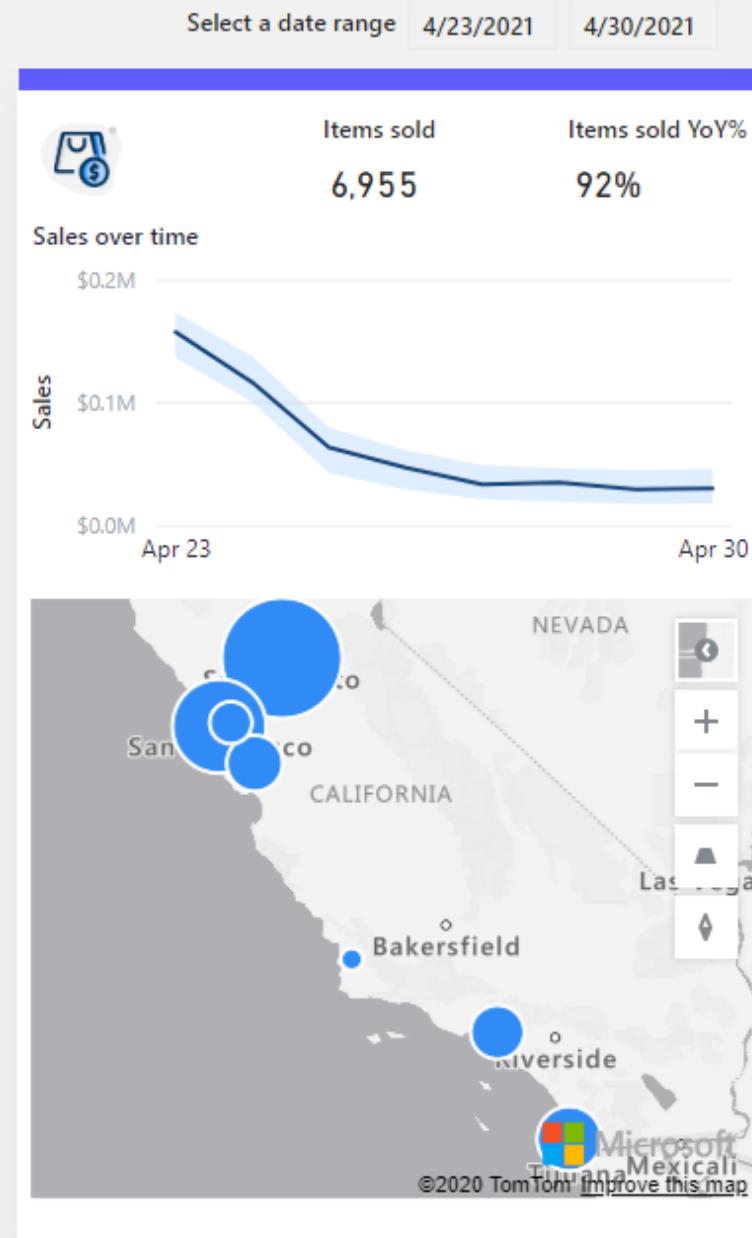
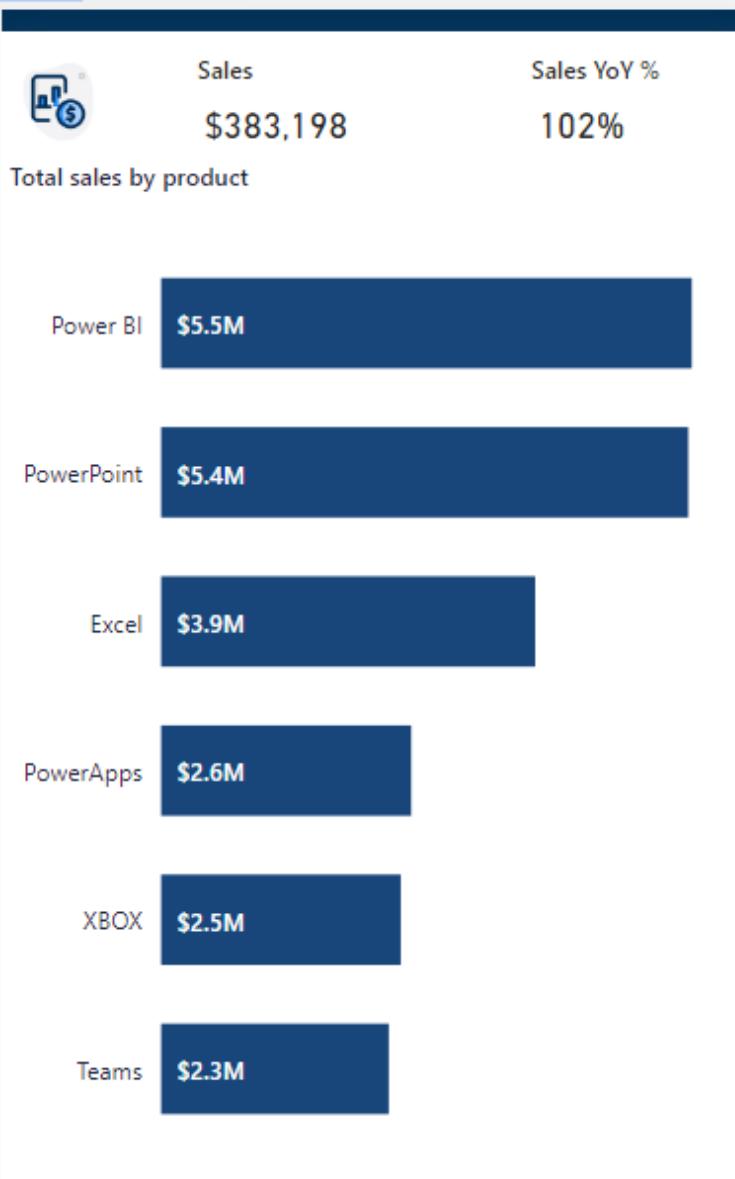
*Rule of thirds*

# Designing the Analytical Report Layout (Balance)

- Balance is concerned with stability and structure in design
- Balance is weight distributed across page by the placement of objects of the same or different sizes
- Balance can be:
  - Symmetrical balance is achieved by distributing the weight evenly on both halves of the page
  - Asymmetrical balance is achieved through contrast.
- Consider using the golden ratio for asymmetrical balance
- Based on Fibonacci sequence
- Will align a page to have one large visual to draw initial attention, which is then supported by smaller visuals that provide context.



**SALES**    RETURNS



# Designing the Analytical Report Layout (Balance)

# Designing the Analytical Report Layout (Proximity)

CONTOSO  
SKATEBOARD STORE - Sales Reporting

Select date range: 6/9/2021 – 6/23/2021

### KEY METRICS

\$177K	11.33K
Total sales	Units sold
Total sales	
PowerPoint	174M
Power BI	120M
Excel	85M
XBOX	54M
PowerApps	53M
Teams	53M
PowerPoint	682
Power BI	456
Excel	456
PowerApps	387
Teams	387
XBOX	271

\$429K	1,146	19.86K
PY sales	Units returned	Inventory

#### Proportional of sales by customer

Customer	Percentage
Contoso	34%
Power BI	21%
Fama	21%
Nature	21%
Abbas	23%

City	Sales	Inventory turnover ratio	Units sold	Units returned
Los Angeles, CA, USA	\$179,484	9.7%	3,660	278
Oakland, California, USA	\$254,151	9.4%	4,825	304
Sacramento, CA, USA	\$240,605	7.0%	4,350	246
San Diego, CA, USA	\$176,517	6.7%	3,301	224
San Francisco, CA, USA	\$235,807	6.0%	4,218	197
San Jose, California, USA	\$163,919	6.6%	3,289	207
Santa Maria, CA, USA	\$203,240	6.6%	3,678	129
Total	\$1,453,823	8.5%	27,621	1,668



# Designing the Analytical Report Layout (Contrast)

**CONTOSO**  
SCATEBOARD - STORE - Sales Reporting

Select date range: 6/9/2021 - 6/23/2021

### KEY METRICS

\$177K	11.33K																								
Total sales	Units sold																								
<table><tr><td>PowerPoint</td><td>\$1.4M</td></tr><tr><td>Power BI</td><td>\$1.2M</td></tr><tr><td>Excel</td><td>\$0.8M</td></tr><tr><td>XBOX</td><td>\$0.6M</td></tr><tr><td>PowerApps</td><td>\$0.4M</td></tr><tr><td>Teams</td><td>\$0.3M</td></tr></table>	PowerPoint	\$1.4M	Power BI	\$1.2M	Excel	\$0.8M	XBOX	\$0.6M	PowerApps	\$0.4M	Teams	\$0.3M	<table><tr><td>Power BI</td><td>480</td></tr><tr><td>PowerPoint</td><td>356</td></tr><tr><td>Teams</td><td>456</td></tr><tr><td>Power Apps</td><td>387</td></tr><tr><td>Excel</td><td>373</td></tr><tr><td>XBOX</td><td>271</td></tr></table>	Power BI	480	PowerPoint	356	Teams	456	Power Apps	387	Excel	373	XBOX	271
PowerPoint	\$1.4M																								
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Excel	373																								
XBOX	271																								
\$429K	1,146	19.86K																							
PY sales	Units returned	Inventory																							

### Proportional of sales by customer

Customer	Percentage
Contoso	34%
Fama	21%
Nature	21%
Mabus	24%

### Geographic sales information

Oakland, California, USA	\$0.25M
Sacramento, CA, USA	\$0.24M
San Francisco, CA, USA	\$0.24M
Santa Maria, CA, USA	\$0.20M
Los Angeles, CA, USA	\$0.18M
San Diego, CA, USA	\$0.18M
San Jose, California, USA	\$0.16M

City	Sales	Inventory turnover ratio	Units sold	Units returned
Los Angeles, CA, USA	\$179,484	0.7%	3,660	278
Oakland, California, USA	\$254,151	0.4%	4,825	316
Sacramento, CA, USA	\$240,605	0.9%	4,550	246
San Diego, CA, USA	\$176,517	0.7%	3,301	224
San Francisco, CA, USA	\$225,907	0.6%	4,318	197
San Jose, California, USA	\$163,819	0.8%	3,289	207
Santa Maria, CA, USA	\$203,240	0.5%	3,678	120
<b>Total</b>	<b>\$1,453,623</b>	<b>0.6%</b>	<b>27,621</b>	<b>1,668</b>

Microsoft  
Power BI

# Designing the Analytical Report Layout (Repetition)

CONTOSO  
SKATEBOARD STORE - Sales Reporting

Select date range: 6/9/2021 - 6/23/2021

**KEY METRICS**

\$177K	11.33K
Total sales	Units sold

PowerPoint: \$1.8M	Power BI: 682
Power BI: \$1.7M	PowerPoint: 536
Excel: \$0.8M	Teams: 456
Word: \$0.4M	PowerApps: 387
PowerApps: \$0.3M	Excel: 373
Teams: \$0.2M	Word: 304

\$429K	1,146	19.86K
PY sales	Units returned	Inventory

Proportional of sales by customer

Customer	Share (%)
Contoso	34%
Fama	21%
Nature	21%
Abbas	23%

Product Category	Share (%)
Teams	~20%
Power BI	~15%
PowerPoint	~15%
PowerApps	~15%
Excel	~15%
Word	~15%
Teams	~15%

Geographic sales information

Oakland, California, USA	\$0.25M
Sacramento, CA, USA	\$0.24M
San Francisco, CA, USA	\$0.24M
Santa Maria, CA, USA	\$0.20M
Los Angeles, CA, USA	\$0.18M
Tan Diego, CA, USA	\$0.18M
San Jose, California, USA	\$0.16M

City	Sales	Inventory turnover ratio	Units sold	Units returned
Los Angeles, CA, USA	\$179,494	97%	3,660	278
Oakland, California, USA	\$254,151	94%	4,825	326
Sacramento, CA, USA	\$240,625	70%	4,350	246
San Diego, CA, USA	\$176,517	67%	3,301	224
San Francisco, CA, USA	\$215,907	80%	4,318	197
San Jose, California, USA	\$163,919	88%	3,289	207
Santa Maria, CA, USA	\$200,240	99%	3,678	120
<b>Total</b>	<b>\$1,458,629</b>	<b>85%</b>	<b>27,621</b>	<b>1,668</b>



# Produce a guided analytical experience

## High-level metrics

- Present single values (cards) or simple visuals that can be quickly understood. These metrics should be related directly to the fundamental requirements of the report. For example, a card in the Contoso Skateboard Store sales report displays a single value for total sales.

## Supporting visuals

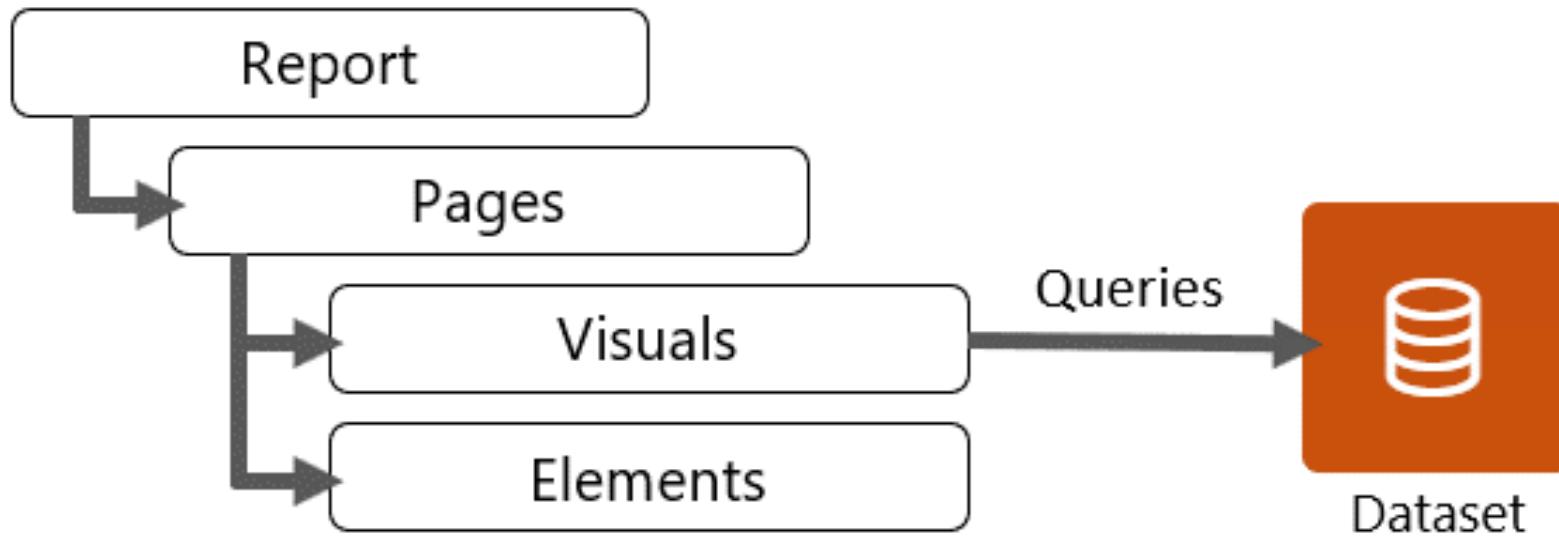
- Can be more complex visuals that provide context to the high-level metrics. They often show groups that break down the metrics, such as by month or product. These visuals can also behave as slicers, allowing the report page to be temporarily filtered by specific visuals, like a specific month or months.

## Details, when required

- When invoked, the report consumer can *drill to details*. By drilling to details, the report consumer will be directed to a supplementary report page where they can view granular details. Showing details on a different page removes noise and clutter from the main report page. Drilling into details is also a report design optimization, allowing the report to retrieve a large volume of data only when necessary.



# Produce a guided analytical experience



# Choosing the right visuals

FT visual vocabulary

<https://ft-interactive.github.io/visual-vocabulary/>

Data to viz

<https://www.data-to-viz.com/#explore>



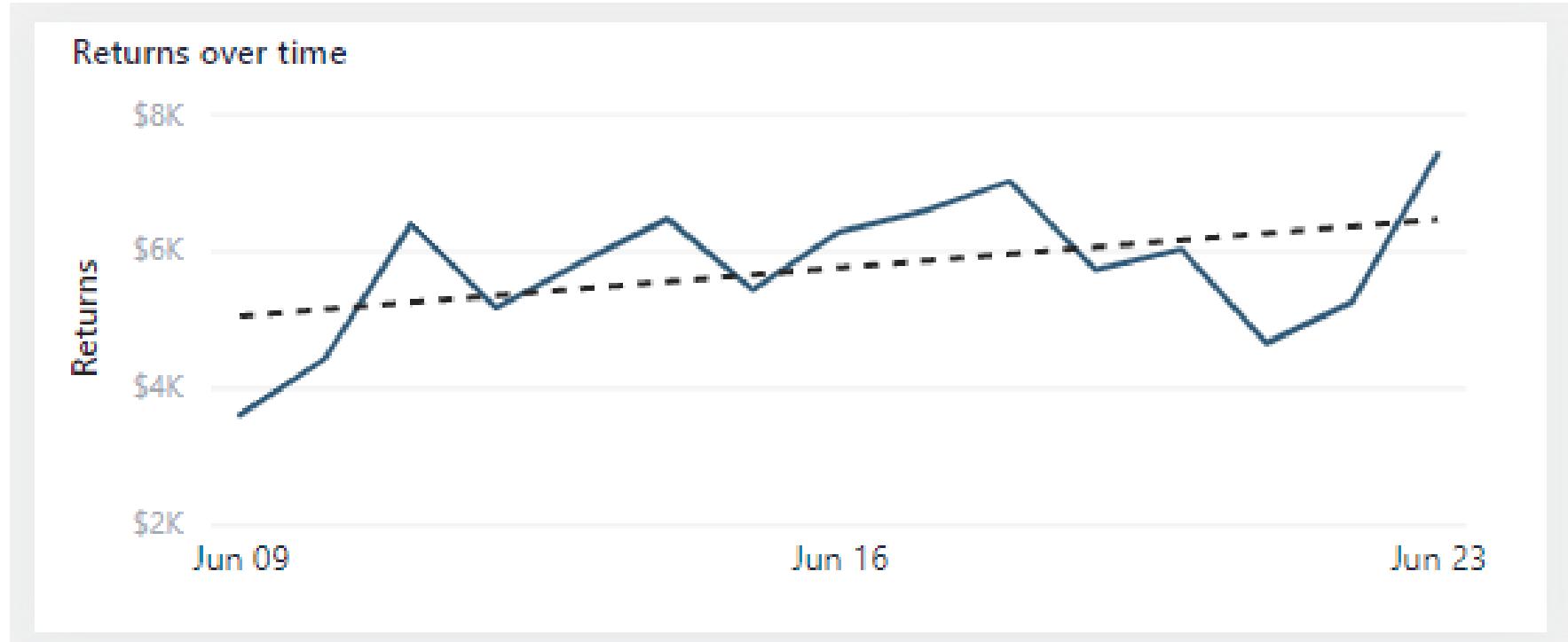
# Enhancing report designs for User Experience

Inventory on hand breakdown			
City	Units sold	On hand	
[+] Los Angeles, CA, USA	394	850	
[+] Oakland, California, USA	226	459	
[+] Sacramento, CA, USA	527	2,780	
[+] San Diego, CA, USA	412	1,550	
[+] San Francisco, CA, USA	733	1,697	
[+] San Jose, California, USA	324	1,056	
<b>Total</b>	<b>2705</b>	<b>8,536</b>	

*Conditional Formatting*



# Enhancing report designs for User Experience



*Overlaid Analytics*



# Enhancing report designs for User Experience



*Anomaly Detection*



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# Enhancing report designs for User Experience





# Documentation



# Documentation

- Documentation doesn't necessarily mean a 120page book, no one ever reads
- Think about:
  - Explanatory tooltips
  - Help overlays
  - About pages
  - ..



I FIND YOUR LACK OF DOCUMENTATION

DISTURBING

quickmeme.com



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# User Education



# User Education & Adoption

- Documentation alone doesn't cut it
- Guide end-users into using the deliverables
- Find out about satisfaction detractors
- Reiterate on design process if needed
- Share success stories





# Monitoring



# Monitoring

- Track usage details about deliverables
- Answer questions like:
  - Is the intended usage actually happening?
  - Was that urgent report really that urgent?
  - Are the end-users mostly exporting to Excel?
  - Do we have peak times?
  - ..





Rinse, Repeat!



# Resources

<https://docs.microsoft.com/en-us/learn/browse/?expanded=power-platform%2Cbusiness-applications&products=power-bi>

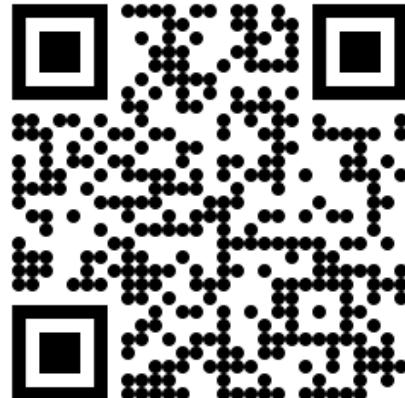
<https://docs.microsoft.com/en-us/learn/paths/power-bi-effective/>

<https://docs.microsoft.com/en-us/power-bi/guidance/powerbi-adoption-roadmap-overview>



# Slides can be found at :

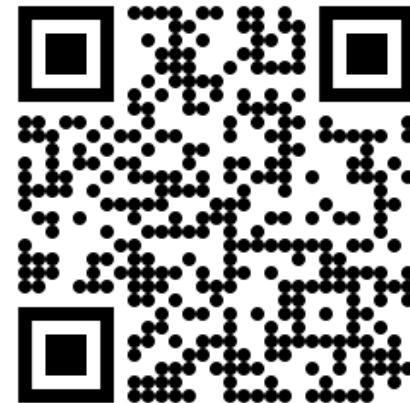
[https://github.com/BenniDeJagere/Presentations/  
{Year}/{Date}\\_{Event}](https://github.com/BenniDeJagere/Presentations/{Year}/{Date}_{Event})



## Thank you

# Slides can be found at :

[https://github.com/BenniDeJagere/Presentations/  
{Year}/{Date}\\_{Event}](https://github.com/BenniDeJagere/Presentations/{Year}/{Date}_{Event})





# Who am I?



Power BI CAT

**dataMinds.be** Member



@BenniDeJagere



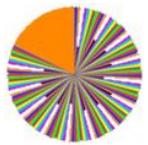
/bennidejagere



/bennidejagere



/bennidejagere



#SayNoToPieCharts