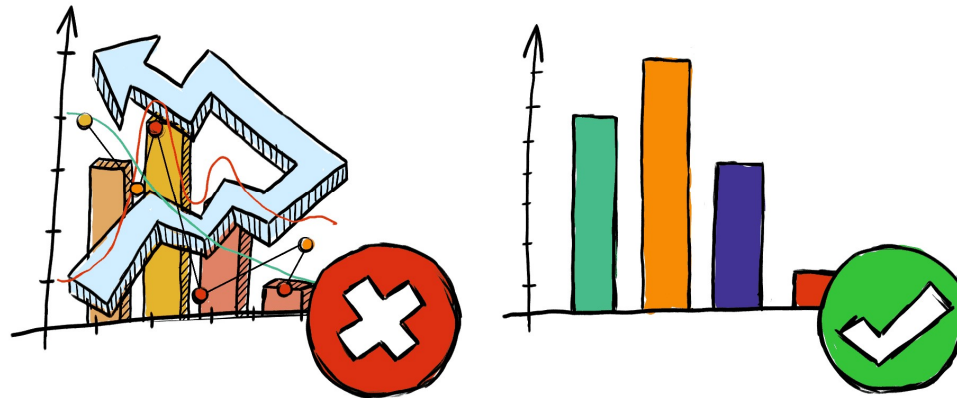


# Visualize Your Data With Confidence with a Solution Specific Data-Model



# Visualize Your Data With Confidence



Frank Di Lorenzo  
Client Relationship Director  
Preferred Strategies

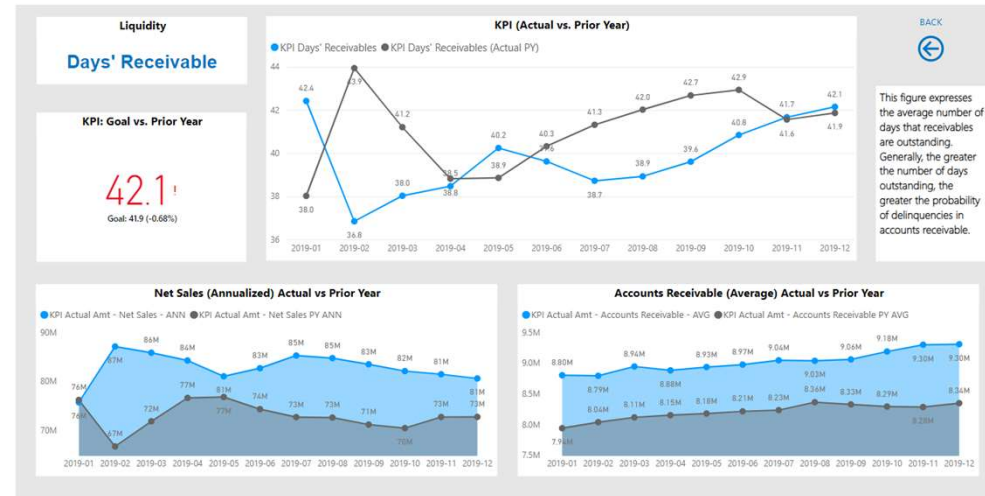
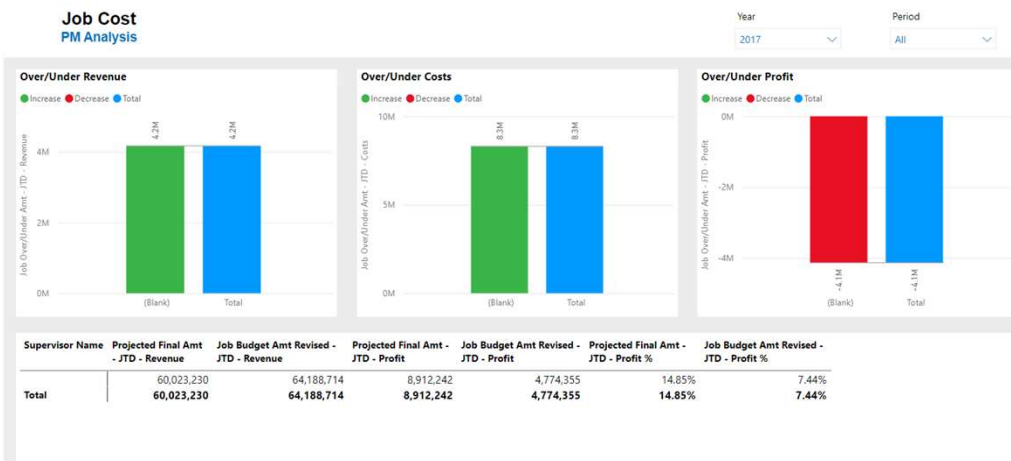
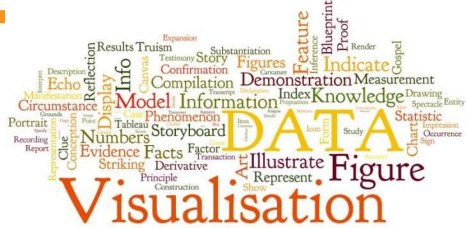


# Agenda

- Data Visualization
- Analytics Maturity
- The Value of a Data-Model
- The Next Steps
  - The problem with visuals
  - Visualization options/types
- The Long Term Goal
  - Making Visuals work together

# Data Visualization

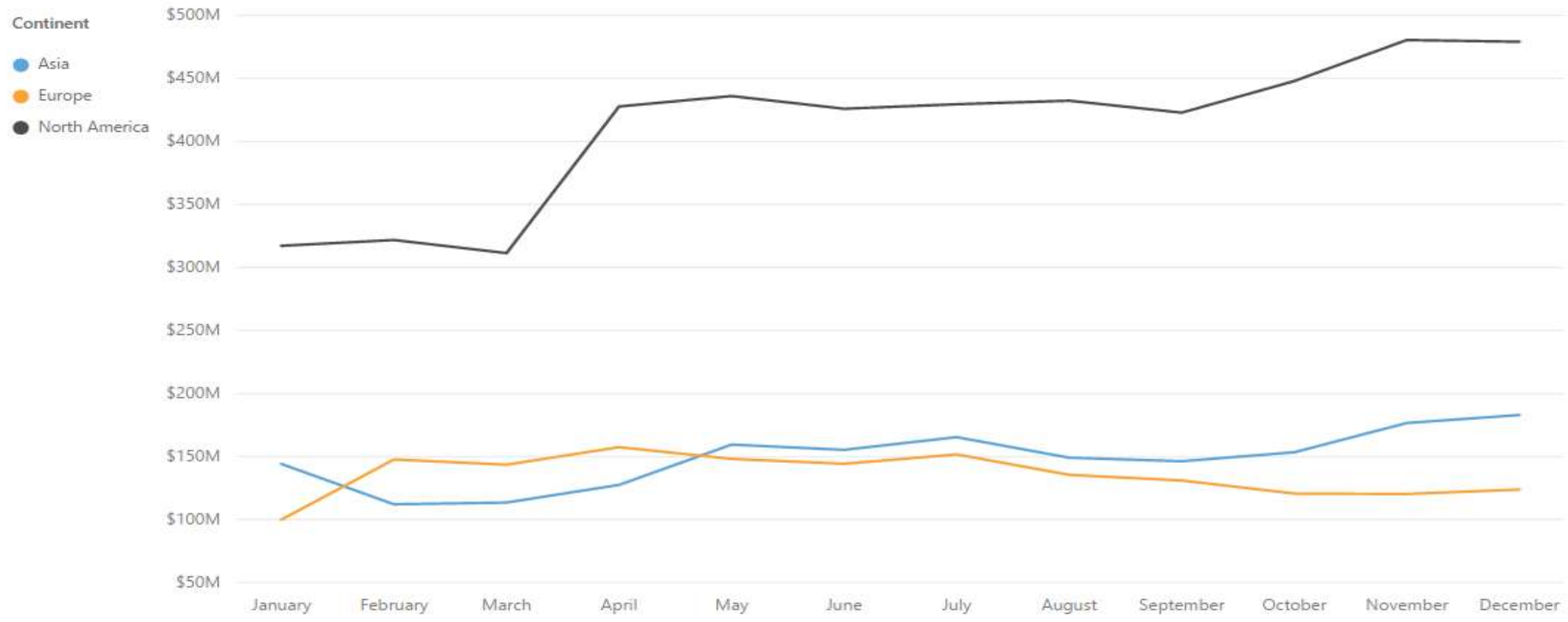
A pictorial or graphical representation that enables **exploration, discovery, analysis and communication.**



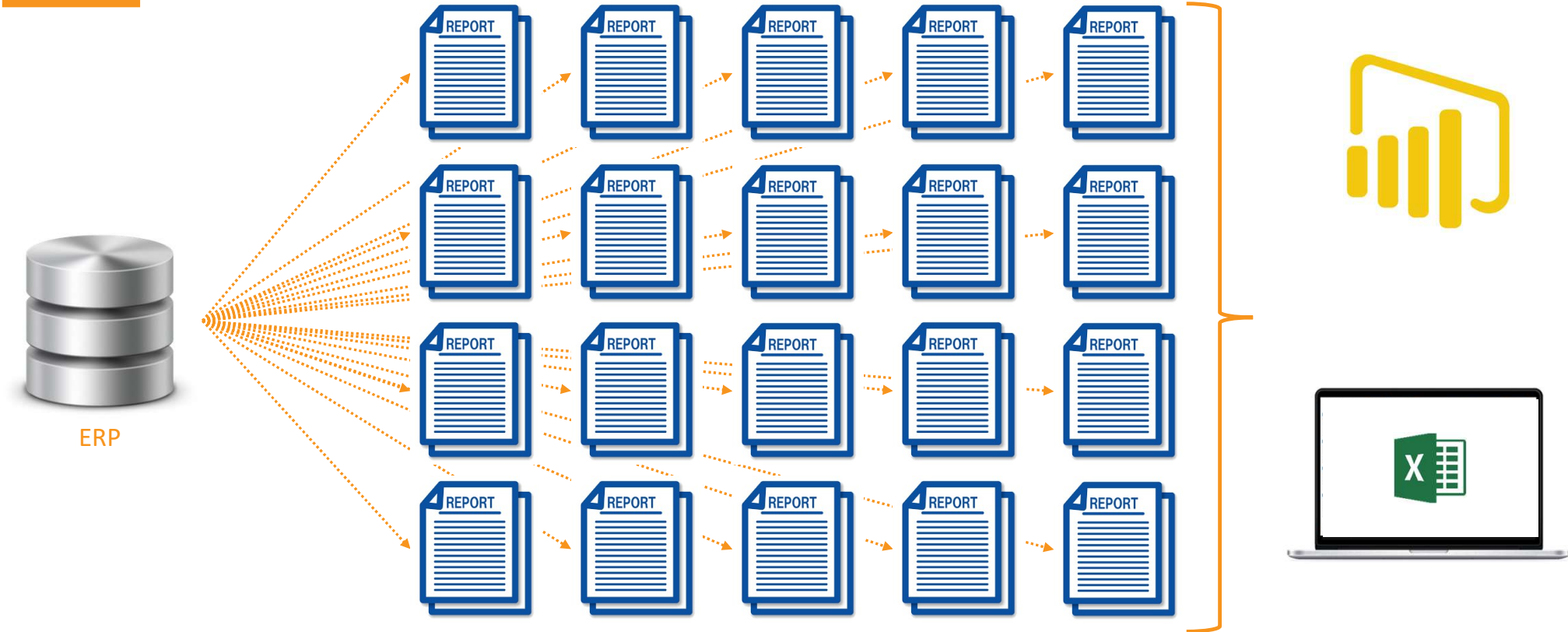
## Sales Revenue

Continent	January	February	March	April	May	June	July	August	September	October	November	December
Asia	\$144,088,592.61	\$112,065,074.94	\$113,479,208.55	\$127,474,505.77	\$159,443,303.41	\$155,293,304.00	\$165,375,164.94	\$149,053,847.40	\$146,236,759.75	\$153,354,622.00	\$176,584,797.60	\$182,913,700.88
Europe	\$99,917,852.13	\$147,650,044.35	\$143,483,150.01	\$157,414,489.67	\$148,102,715.28	\$144,235,084.23	\$151,663,328.72	\$135,447,593.94	\$130,965,224.81	\$120,628,861.66	\$120,252,310.07	\$123,806,812.58
North America	\$317,210,452.75	\$321,785,303.19	\$311,403,997.00	\$427,745,829.98	\$436,009,605.75	\$425,935,744.25	\$429,526,192.12	\$432,344,758.25	\$422,840,528.63	\$447,912,649.68	\$480,474,549.64	\$479,104,404.29
Total	\$561,216,897.49	\$581,500,422.48	\$568,366,355.56	\$712,634,825.41	\$743,555,624.44	\$725,464,132.48	\$746,564,685.77	\$716,846,199.59	\$700,042,513.20	\$721,896,133.34	\$777,311,657.31	\$785,824,917.75

## Sales Revenue



# The Reporting of the Past (and still current)



# The Analytics of the Future with a Data Model

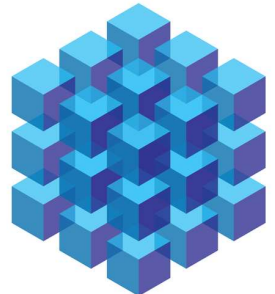
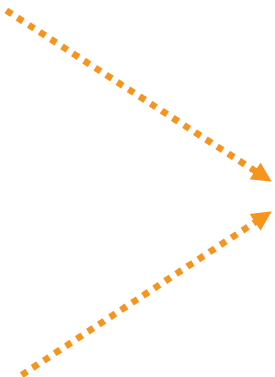
## Direct Connect



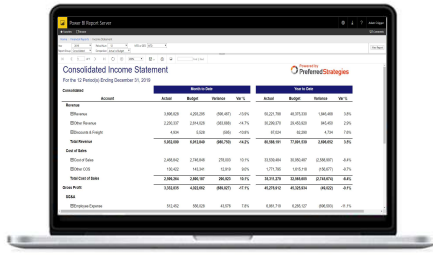
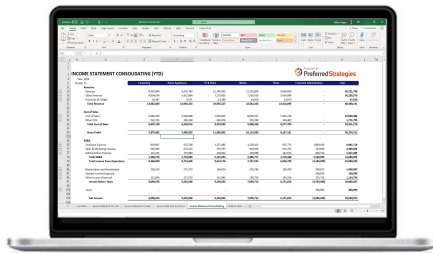
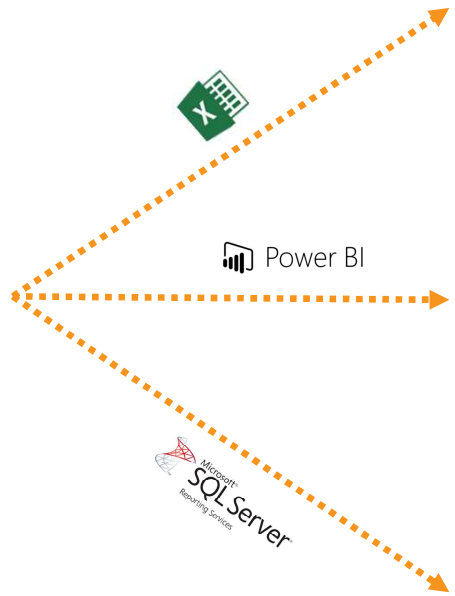
ERP

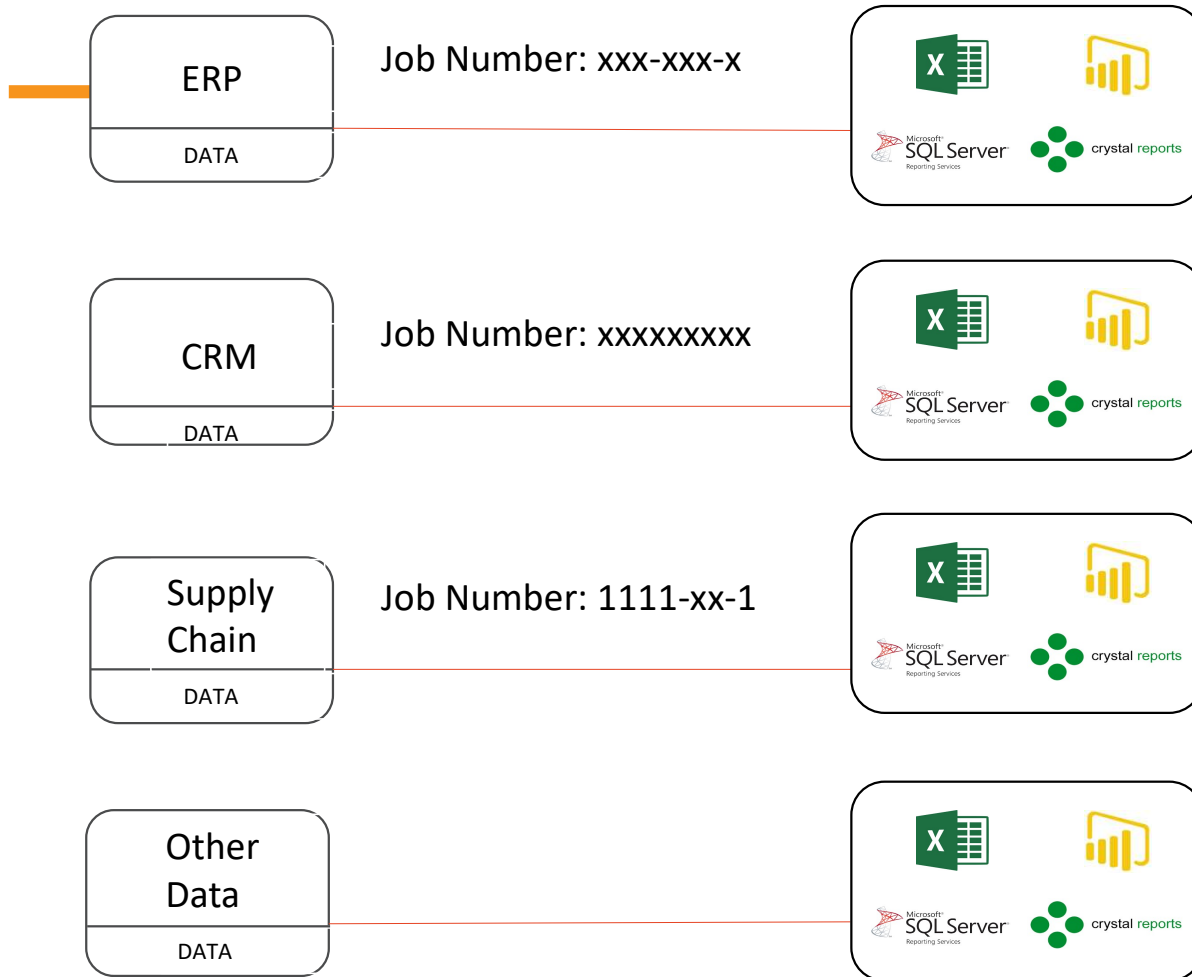


Other Data



SSAS Tabular Data Model or Power BI Premium Dataset



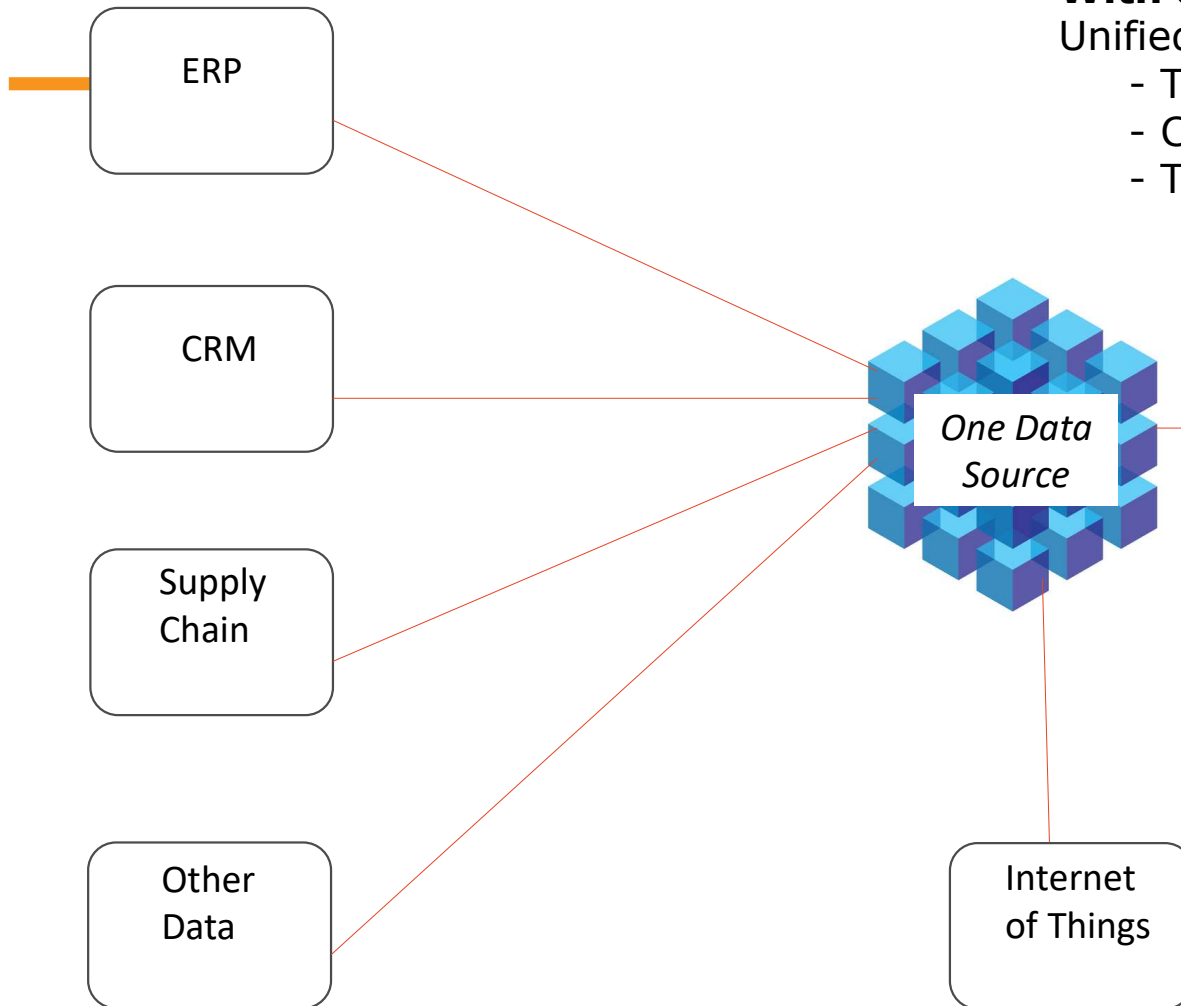


**Without a Data Model:**  
Data everywhere:

- On-Premise
- Various Hosting Locations
- Inconsistent Format







## With a Data Model:

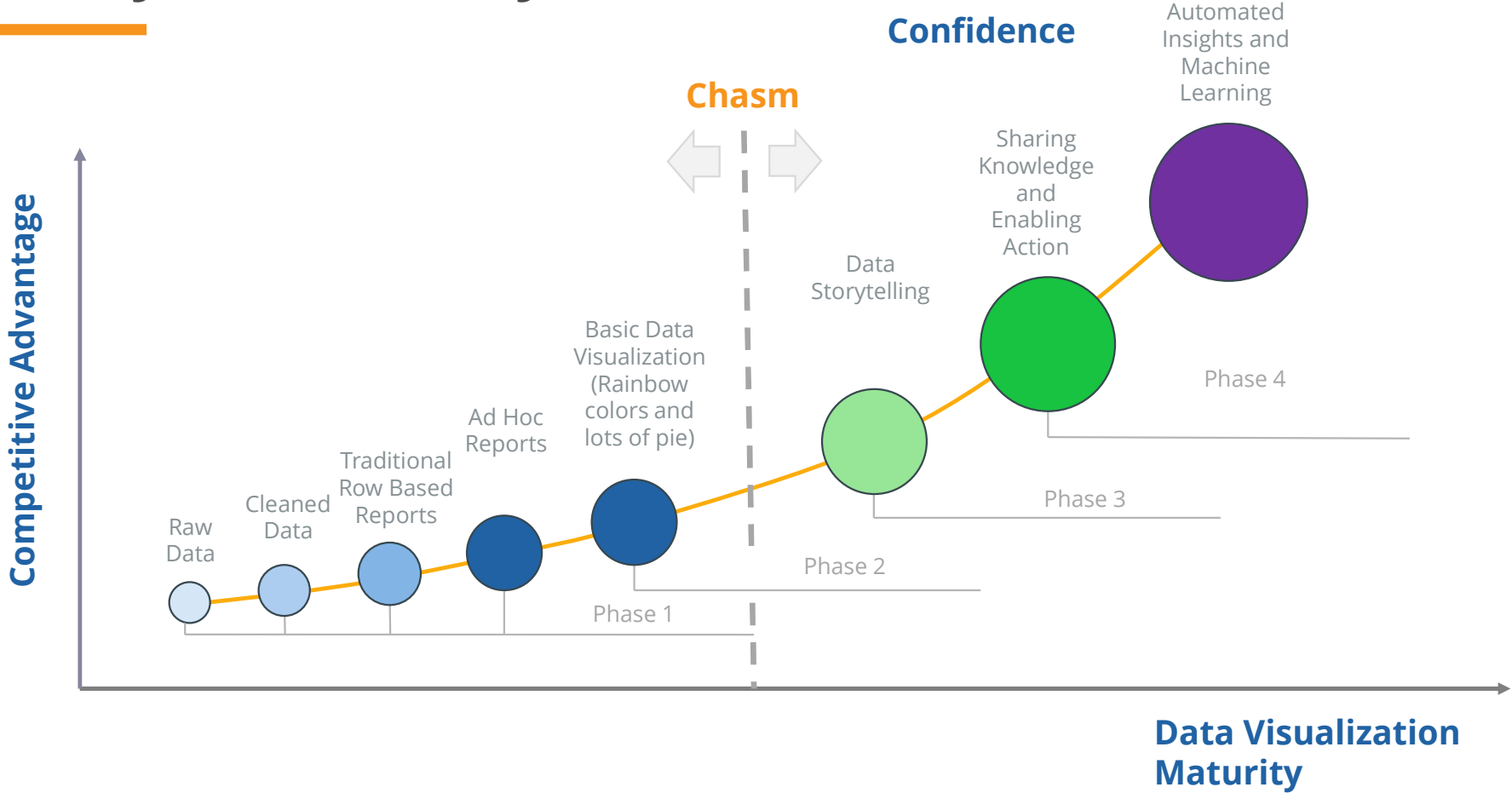
Unified Data:

- Transformed for Reporting
- Consistent format for Ease
- Trusted Source of Data



Job Number and Name  
FORMATTED

# Analytics Maturity Curve



# What's needed to cross the chasm?

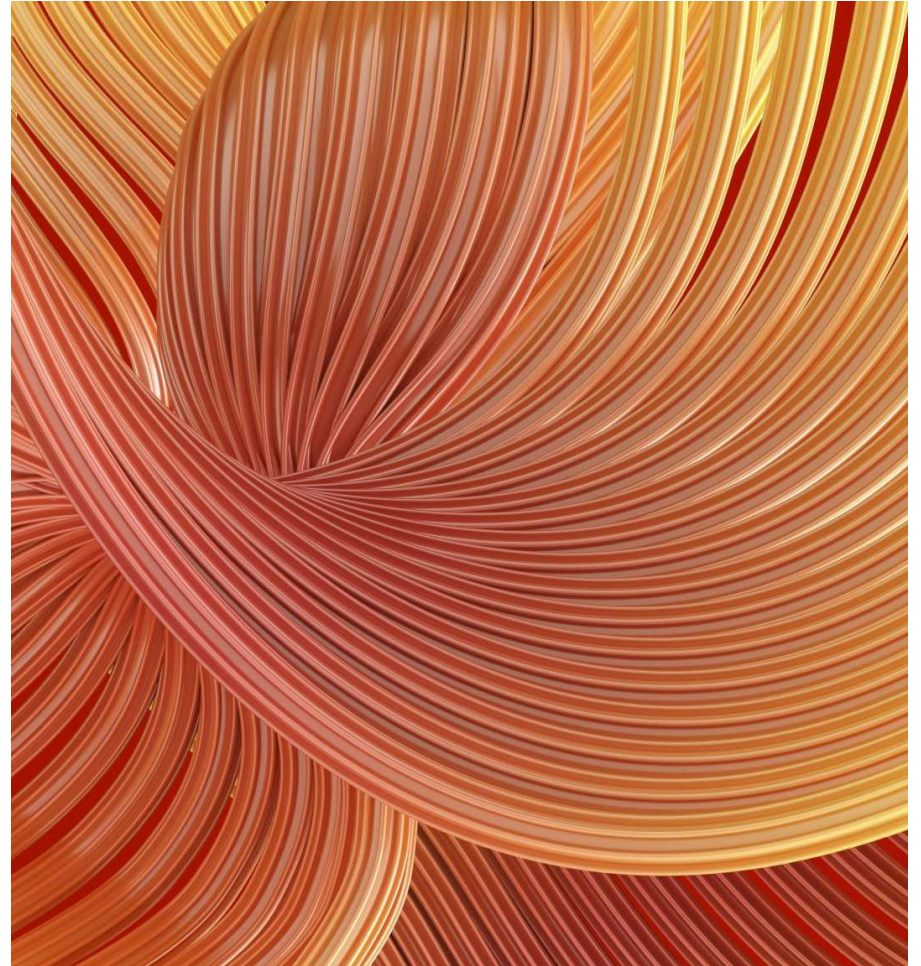
Solid Data Foundation - Single version of the truth

Basic Knowledge of Design Principles

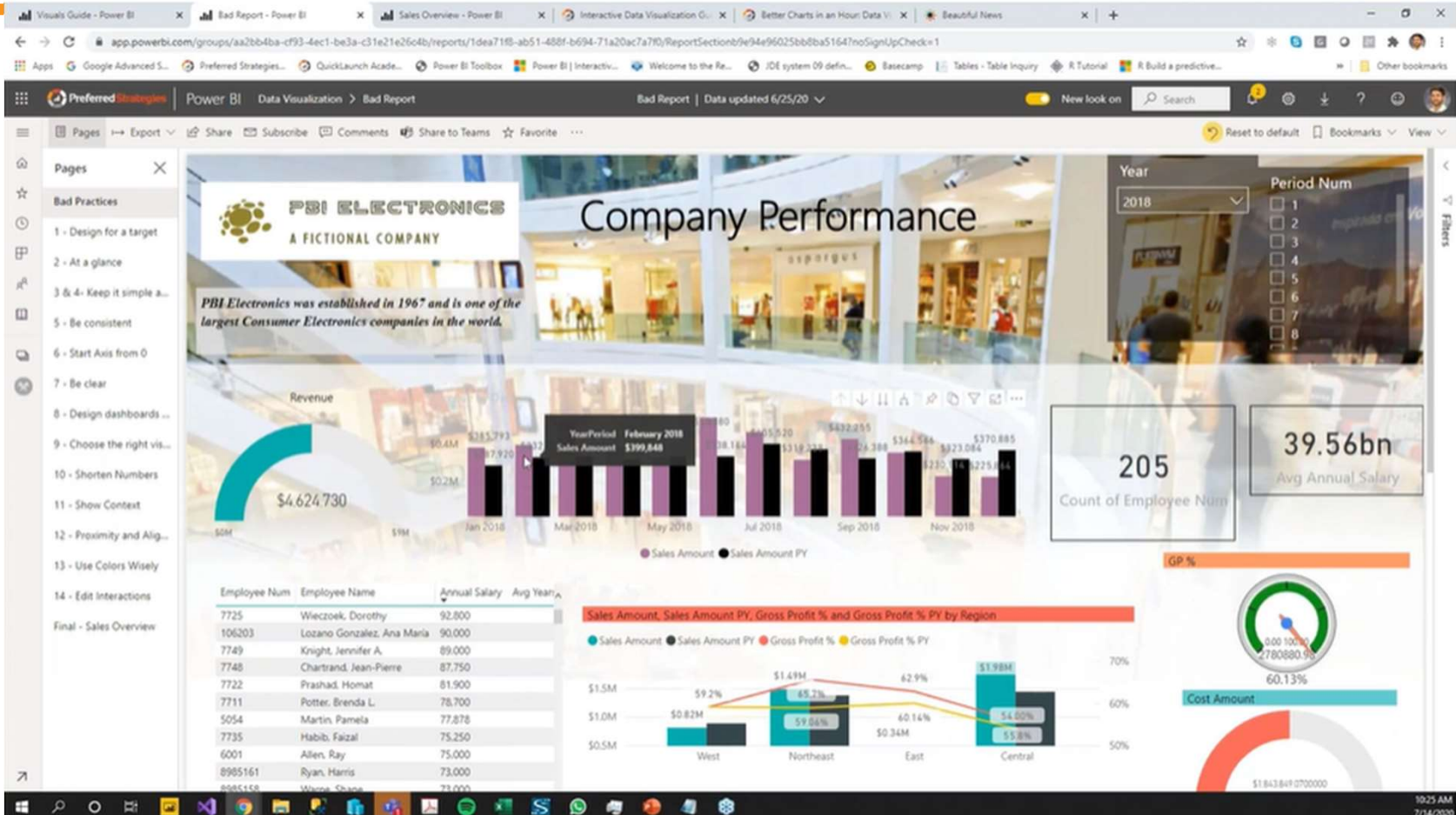
Data Visualization Best Practices

- Be Consistent
- Shorten Numbers
- Use colors wisely
- Show context
- Know the audience

Standards for consistency



# The Problem with Visuals

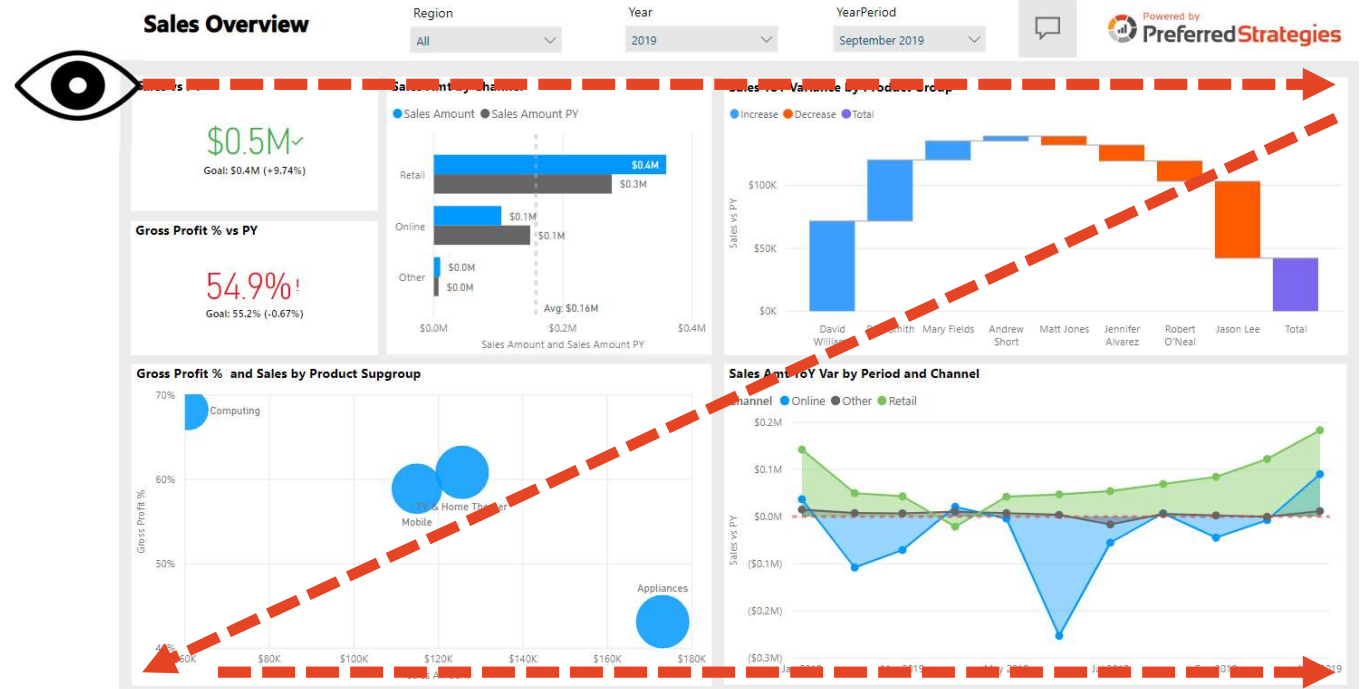


# Design Principles

## Processing Information

### Design for information processing

- Most people read from left to right
- Information is interpreted from the top down
- Place most important metrics in the top left of the report
- Place more detailed information at the bottom of reports



# Important Construction Measures

Revenue (Billed, Earned) (\$)

Profit (\$ and %)

Expenses (OH) (\$ and %)

Backlog (\$ and %)

Est v Act (\$ and %)

Over/Under Billing (\$)

Change Order Growth (\$ and %)

Earned Value

**CIE/BIE (Three numbers. CIE, BIE, and Net) (\$)**

Bid Work (\$)

Procurement (New Work) (\$ and %)

Hit Rate (%)

Left on the Table (\$ and %)

Buyout

Open AR

Aging

DSO

Discounts Lost (Offered, Taken) (\$)

Profit Fade

Safety (Inspections, Incidence, Rates)

Government Reporting/Compliance

Projections (changes).

Material Sales

Headcount

Cashflow

*Measures and Filters*

*Budget, Actual, Forecast, Current Year, Prior Year*

*Week to Date, Month to Date, Quarter to Date*

*Year to Date, Inception to Date, Year Total*

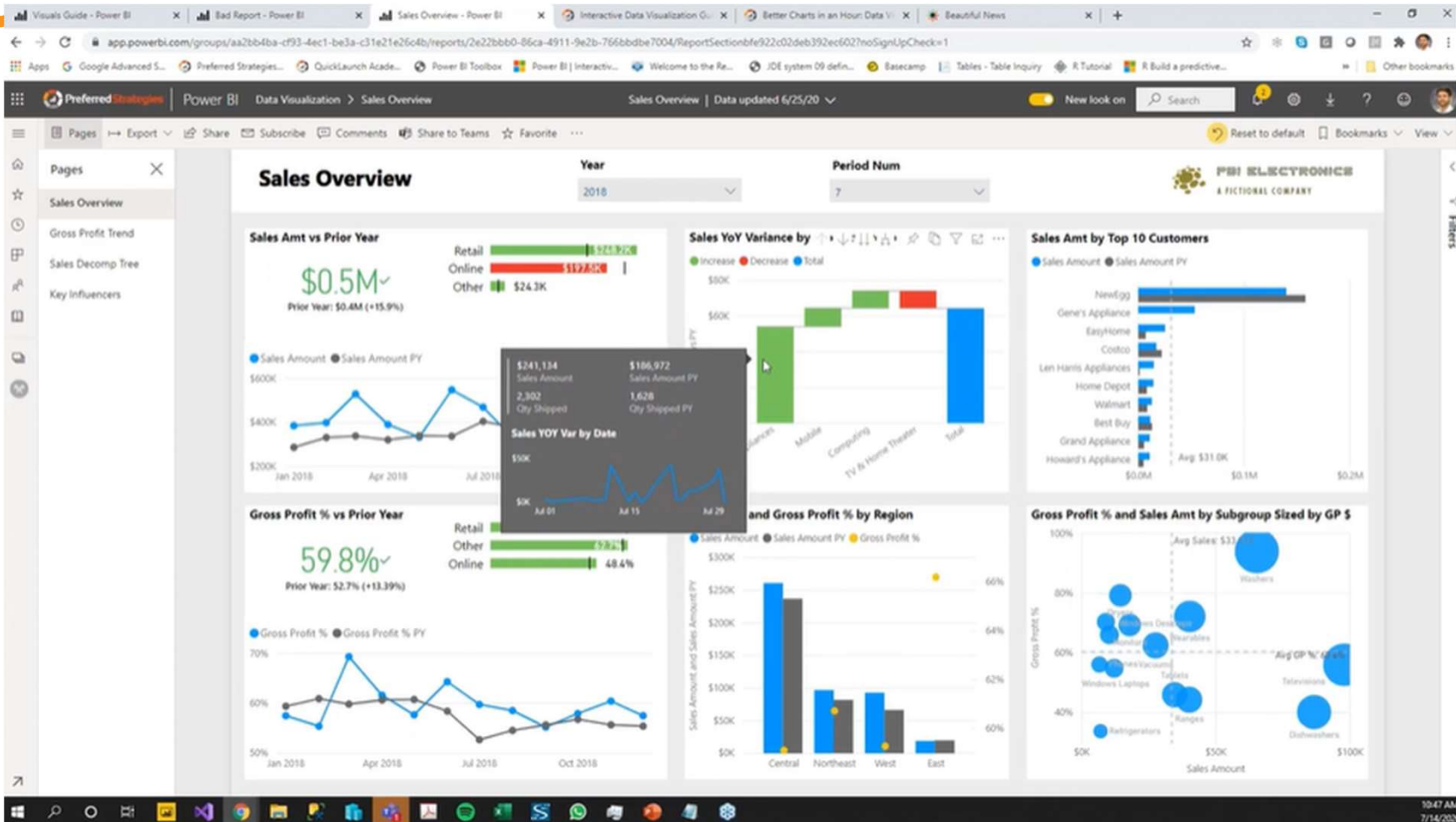
# Demo

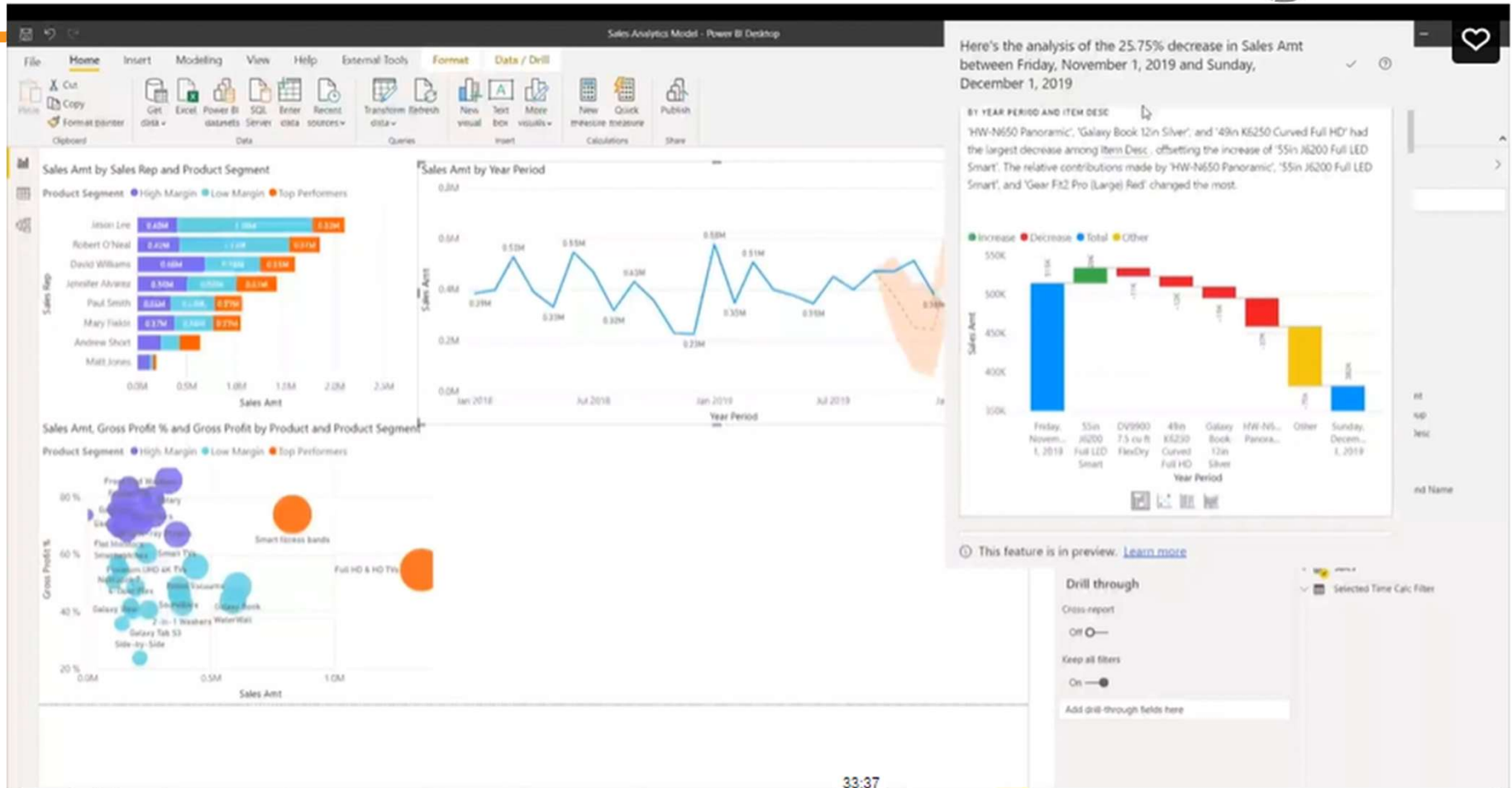
License Type	Pros	Cons	Use Case	Microsoft List Price
Power BI Free (Power BI Desktop)	<ul style="list-style-type: none"> <li>This particular version of Power BI is free to download and use while giving you all the basic features of Power BI</li> </ul>	<ul style="list-style-type: none"> <li>For evaluation purpose or personal use only. Dashboards cannot be shared.</li> </ul>	<ul style="list-style-type: none"> <li>Power BI free is for anybody and everybody that wants to glean meaningful insight from their data and apply it to their business. It is ideal for small business owners and individual professionals for whom large scale collaboration and integration is not always necessary</li> </ul>	Free
<b>Power BI Pro</b> (Sharing dashboard with Specific users and user groups)	<ul style="list-style-type: none"> <li>Dashboards can only be viewed by specific users with permissions</li> <li>Row Level Security applicable (Users only see data that they are permitted to see although they are viewing the same dashboard)</li> </ul>	<ul style="list-style-type: none"> <li>Gets expensive when there are many users</li> <li>Model Size Limit 1 GB</li> <li>Refresh rate 8/day</li> </ul>	<ul style="list-style-type: none"> <li>For dashboards with sensitive data</li> <li>For dashboards where different users are only allowed to view their own datasets</li> <li><b>Required to publish dashboards in embedded capacity</b></li> </ul>	\$9.99 per user/month (60 days free trail is available)
<b>Power BI Embedded</b> (Embedded In application)	<ul style="list-style-type: none"> <li><b>Viewers do not need licenses to view dashboards</b></li> <li><b>Cost is calculated by consumption (amount of time turned on, computing power and capacity)</b></li> <li>Row level security can be applied with additional development</li> </ul>	<ul style="list-style-type: none"> <li>Coding required to embed dashboards in web application</li> </ul>	<ul style="list-style-type: none"> <li><b>To embed dashboards in web applications</b></li> </ul>	Customized according to amount of time turned on, computing power and capacity
Power BI Premium Per User	<ul style="list-style-type: none"> <li>Paginated (RDL) reports</li> <li>Model Size Limit 100 GB</li> <li>Refresh rate 48/day</li> <li>Advanced AI (text analytics, image detection, automated machine learning)</li> </ul>	<ul style="list-style-type: none"> <li>Slightly more expensive per user subscription</li> </ul>	<ul style="list-style-type: none"> <li>Paginated reports needed</li> <li>Higher model size is required up to 100 GB</li> </ul>	\$20 per user/month
Power BI Premium Per capacity	<ul style="list-style-type: none"> <li>Unlimited Users</li> <li>Power BI Embedded Included</li> <li>Dedicated capacity</li> <li>Lower Cost with &gt;499 users</li> </ul>	<ul style="list-style-type: none"> <li>Higher cost compared to Power BI Pro for &lt;500 users</li> </ul>	<ul style="list-style-type: none"> <li>&gt;499 named Power BI report users</li> <li>&gt;426 name Power BI report users + Power BI Embedded needed</li> </ul>	Subscription by contacting Microsoft Sales team



# Better Charts in an Hour: Data Visualization Best (and Worst) Practices

<https://preferredstrategies.com/dataviz/>



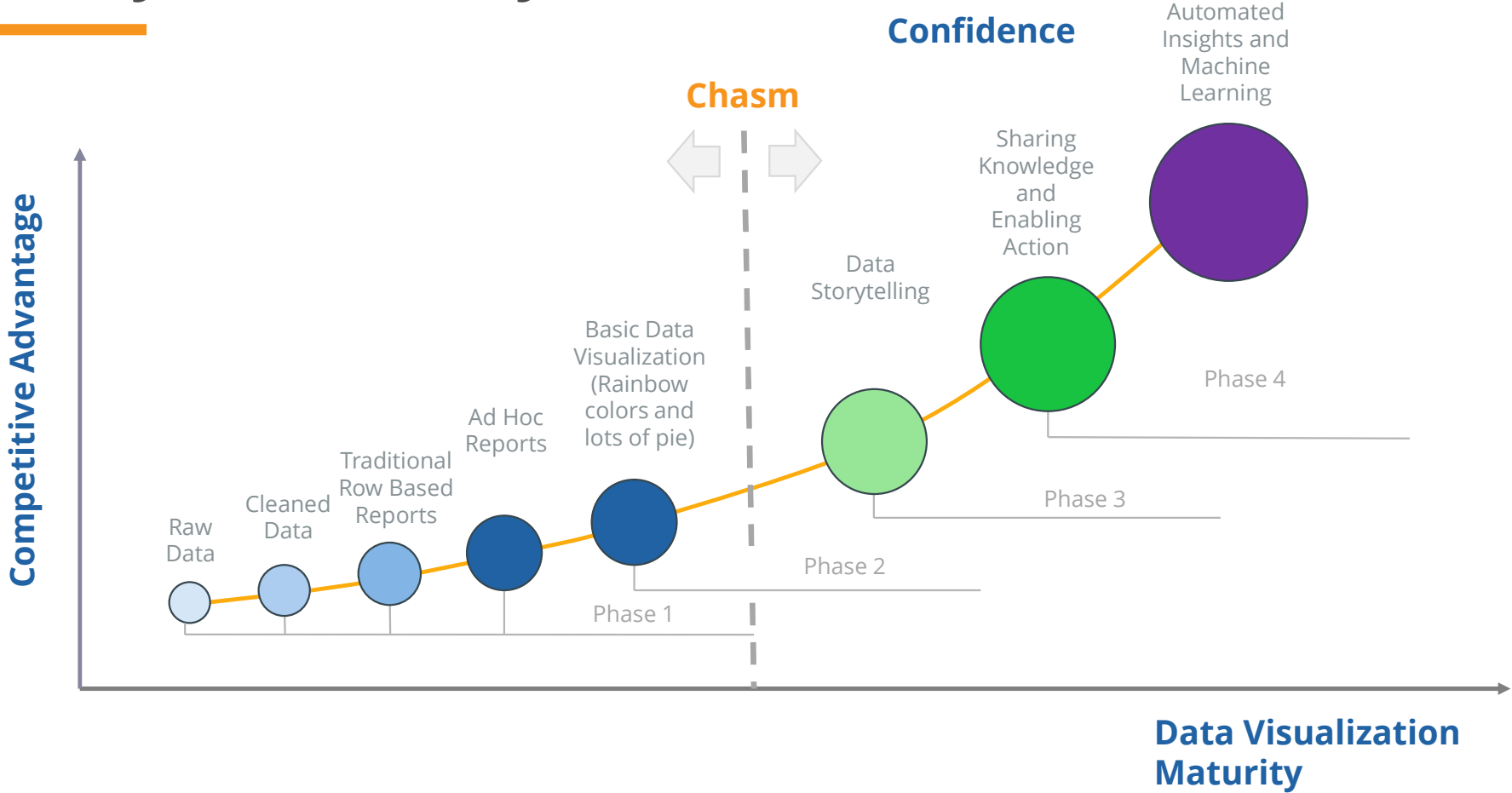


33:37

## What's Next

- This is a journey
- Excellence takes work
- Create short term wins
- Learn what works and do more of that

# Analytics Maturity Curve



# Questions

---

“By visualizing information, we turn it into a landscape that you can explore with your eyes. A sort of information map. And when you’re lost in information, an information map is kind of useful.” -  
David McCandless

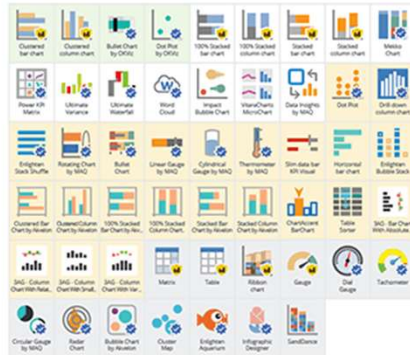
“There is no such thing as information overload. There is only bad design.”  
Edward Tufte

“The single biggest threat to the credibility of a presentation is cherry-picked data.”  
Edward Tufte

“Visualization gives you answers to questions you didn’t know you had.”  
Ben Schneiderman

**COMPARISON**

Display measures compared by their magnitude



**CHANGE OVER TIME**

Display the changing trend of measures



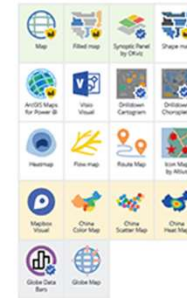
**RANKING**

Display measures by their rank order



**SPATIAL**

Display measures over spatial maps



**FLOW**

Display a flow or dynamic relations



**PART-TO-WHOLE**

Display the parts of a measure



**DISTRIBUTION**

Display the distribution of a measure



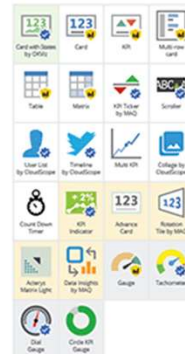
**CORRELATION**

Display relations between measures



**SINGLE**

Display single values



**FILTER**

Control report filters



**NARRATIVE**

Tell a story with data



**MISCELLANEOUS**



Recommended There is a better alternative Don't use in the category Built-in visual Certified visual R required

2018 © SQLBI AND OKVIZ ARE TRADEMARKS OF SQLBI CORP. / POWER BI IS A TRADEMARK OF MICROSOFT CORP.