POWER BI USER GROUP SESSION 6

SEPT 22, 2022

Facilitated by:
Steve Dunlop
Angus McLeod
Roy Vasher

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Agenda

- Opening Remarks
- Introductions (new attendees)
- Recap of 1st Five Meetings' Presentations
- Power BI Mapping Objects, by Dennis Rausch, Rea Wire
- Creating Predictions with What Ifs, Hannah George, Student
- Power App Introduction, Roy Vasher

Introductions – New Members

- Name, company, position

- Power BI knowledge and experience

No.	Type of User	Description
1	New	Never used, interested in learning how to use
2	Novice	Started to use but not created any business reports yet
3	Experienced User	Used for some time and developed business reports/dashboards
4	Power User	Expert user and/or IT Developer
5	Senior Manager	Interested in Capabilities for Business Reporting/Dashboards

Recap of Presentations To-Date

- **Session # 1: June 10, 2021**
  - Power BI Capabilities and Cost – Tom Cunningham - Evonik
  - Evonik Corporation Power BI Visual Management Solutions – Tom Cunningham - Evonik
  - New Users: How to get started – Roy Vasher – Purdue/DCMME
- **Session # 2: September 16, 2021**
  - Super User Development Cycle - Thomas Heltzel – Wabash National
  - Getting Data to the People That Need it Most– Bob Bierwagen – MPI
  - Import Analytics/EV Analytics – Steve Dunlop – Purdue/DCMME

Recap of Presentations To-Date

- **Session # 3: December 9, 2021**
  - Date Dimensions in Power BI- Vienna Kraay– Oscar Winski
  - Predictive Analytics and Power BI– John Dill– Wabash
- **Session # 4: March 24, 2022**
  - Enterprise Data Sources - Dennis Rausch, VP Information Technology, Rea Magnet Wire Company
  - Connection to real-time data to display up-to-date information - Kyle Smith, IT Supervisor, Nucor
  - Building Power BI Dashboard from a sketch - Student Project Team

Recap of Presentations To-Date

- **Session # 5: June 23, 2022**
  - Power BI Drill Through Features - Kyle Smith, Nucor
  - Demand/Supply Dashboard - Bob Bierwagen, Acuity Capital Group/ABC Metals
  - Hierarchy in Power BI for Mapping - Steve Dunlop, DCMME

- **Link to Power BI Resources:**
  https://www.purdue.edu/whin/education/powerbi/index.php

PowerBI User Group

Sept 2022

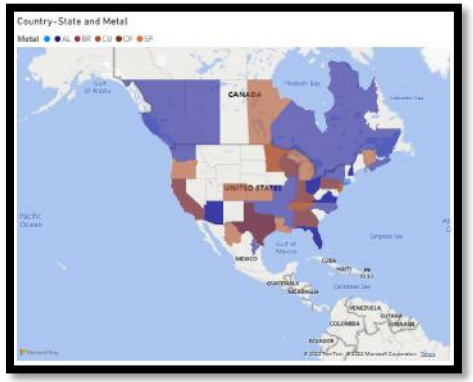
Mapping Objects

Dennis Rausch
VP Information Technology
Rea Magnet Wire, Lafayette, IN
drausch@reawire.com

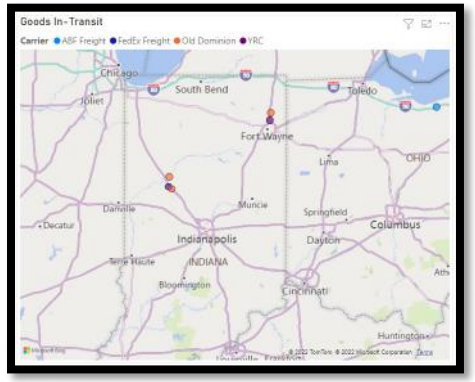
Three (3) Examples of Mapping Data

- **Classic**, Address Mapping with bubbles.
- **Area Fill** Mapping (with optional drill down).
- **Longitude / Latitude** Mapping.

Classic



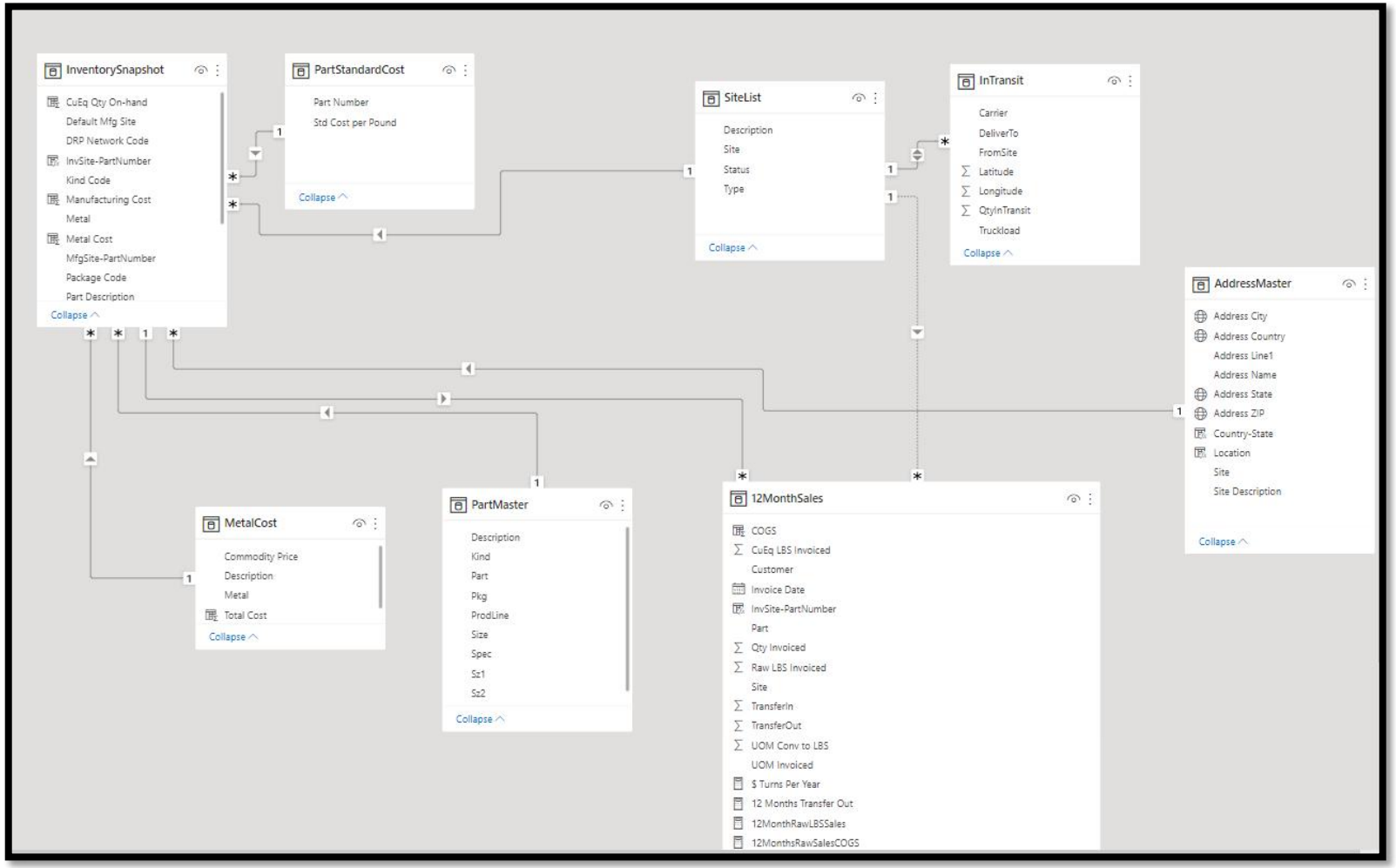
Area Fill



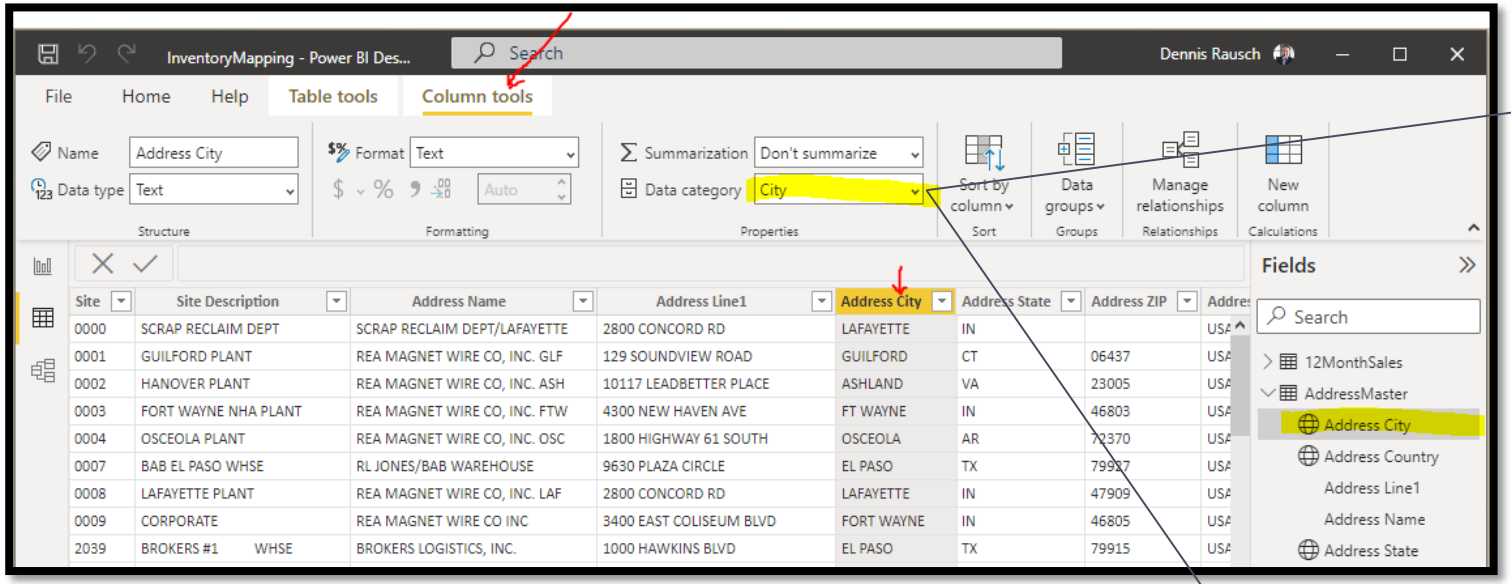
Long / Lat

Examples will be “Inventory” types of datasets

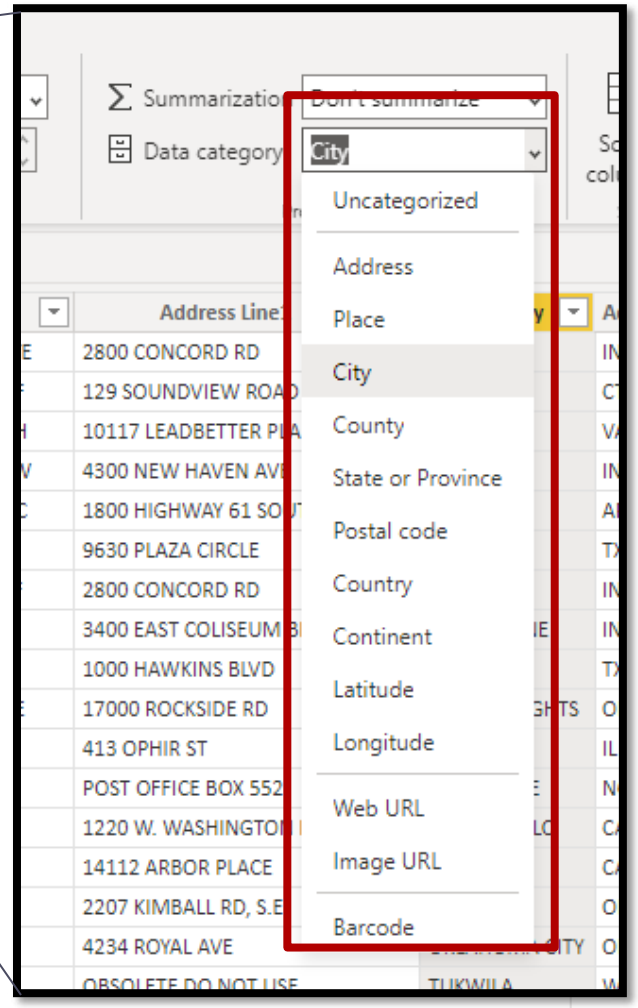
Here are the data relationships in my examples



Data Types (Data Category)



Site	Site Description	Address Name	Address Line1	Address City	Address State	Address ZIP
0000	SCRAP RECLAIM DEPT	SCRAP RECLAIM DEPT/LAFAYETTE	2800 CONCORD RD	LAFAYETTE	IN	
0001	GUILFORD PLANT	REA MAGNET WIRE CO, INC. GLF	129 SOUNDVIEW ROAD	GUILFORD	CT	06437
0002	HANOVER PLANT	REA MAGNET WIRE CO, INC. ASH	10117 LEADBETTER PLACE	ASHLAND	VA	23005
0003	FORT WAYNE NHA PLANT	REA MAGNET WIRE CO, INC. FTW	4300 NEW HAVEN AVE	FT WAYNE	IN	46803
0004	OSCEOLA PLANT	REA MAGNET WIRE CO, INC. OSC	1800 HIGHWAY 61 SOUTH	OSCEOLA	AR	72370
0007	BAB EL PASO WHSE	RL JONES/BAB WAREHOUSE	9630 PLAZA CIRCLE	EL PASO	TX	79927
0008	LAFAYETTE PLANT	REA MAGNET WIRE CO, INC. LAF	2800 CONCORD RD	LAFAYETTE	IN	47909
0009	CORPORATE	REA MAGNET WIRE CO INC	3400 EAST COLISEUM BLVD	FORT WAYNE	IN	46805
2039	BROKERS #1 WHSE	BROKERS LOGISTICS, INC.	1000 HAWKINS BLVD	EL PASO	TX	79915



- *Be sure to assign values to the Data Category for tables that contain address information*

Location Formula - Example

- Use this type of formula for the **Classic Mapping**

```
Location = [Address Line1] & ", " & [Address City] & ", "
& [Address State] & " " & [Address ZIP] & ", " &
[Address Country]
```

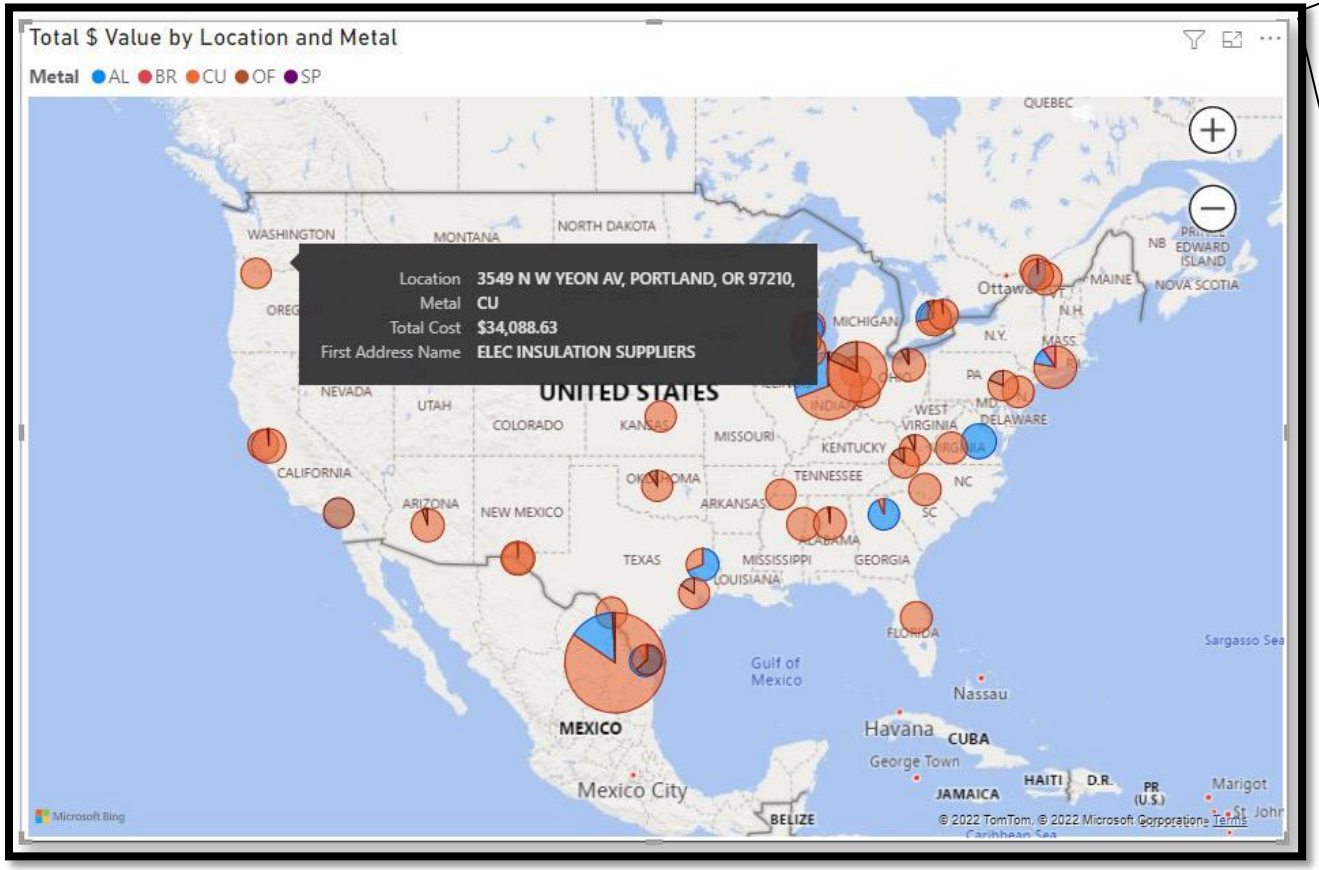
Location
2800 CONCORD RD, LAFAYETTE, IN , USA
129 SOUNDVIEW ROAD, GUILFORD, CT 06437, USA
10117 LEADBETTER PLACE, ASHLAND, VA 23005, USA
4300 NEW HAVEN AVE, FT WAYNE, IN 46803, USA
1800 HIGHWAY 61 SOUTH, OSCEOLA, AR 72370, USA
9630 PLAZA CIRCLE, EL PASO, TX 79927, USA
2800 CONCORD RD, LAFAYETTE, IN 47909, USA
3400 EAST COLISEUM BLVD, FORT WAYNE, IN 46805, USA
1000 HAWKINS BLVD, EL PASO, TX 79915, USA
17000 ROCKSIDE RD, MAPLE HEIGHTS, OH 44137, USA

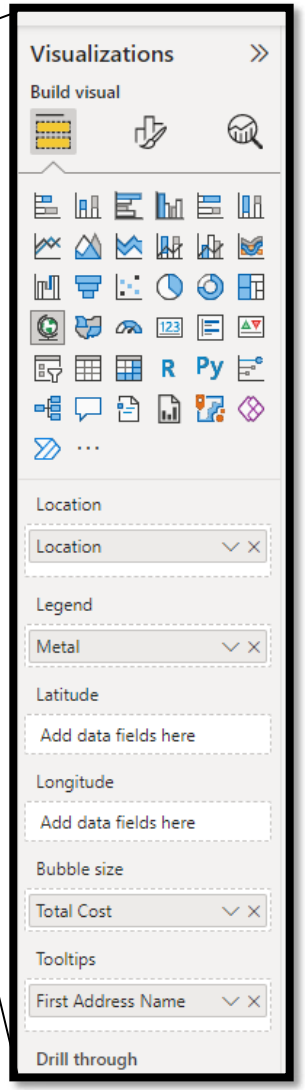
- Use this type of formula for the **Area mapping** when multiple countries are participating in the output

```
Country-State = IF([Address Country]="MEXICO",  "MX-" & [Address State],
IF([Address Country]="USA", "US-" & [Address State], if([Address
Country]="CANADA", "CN-" & [Address State], [Address Country]
& "-" & [Address State])))
```

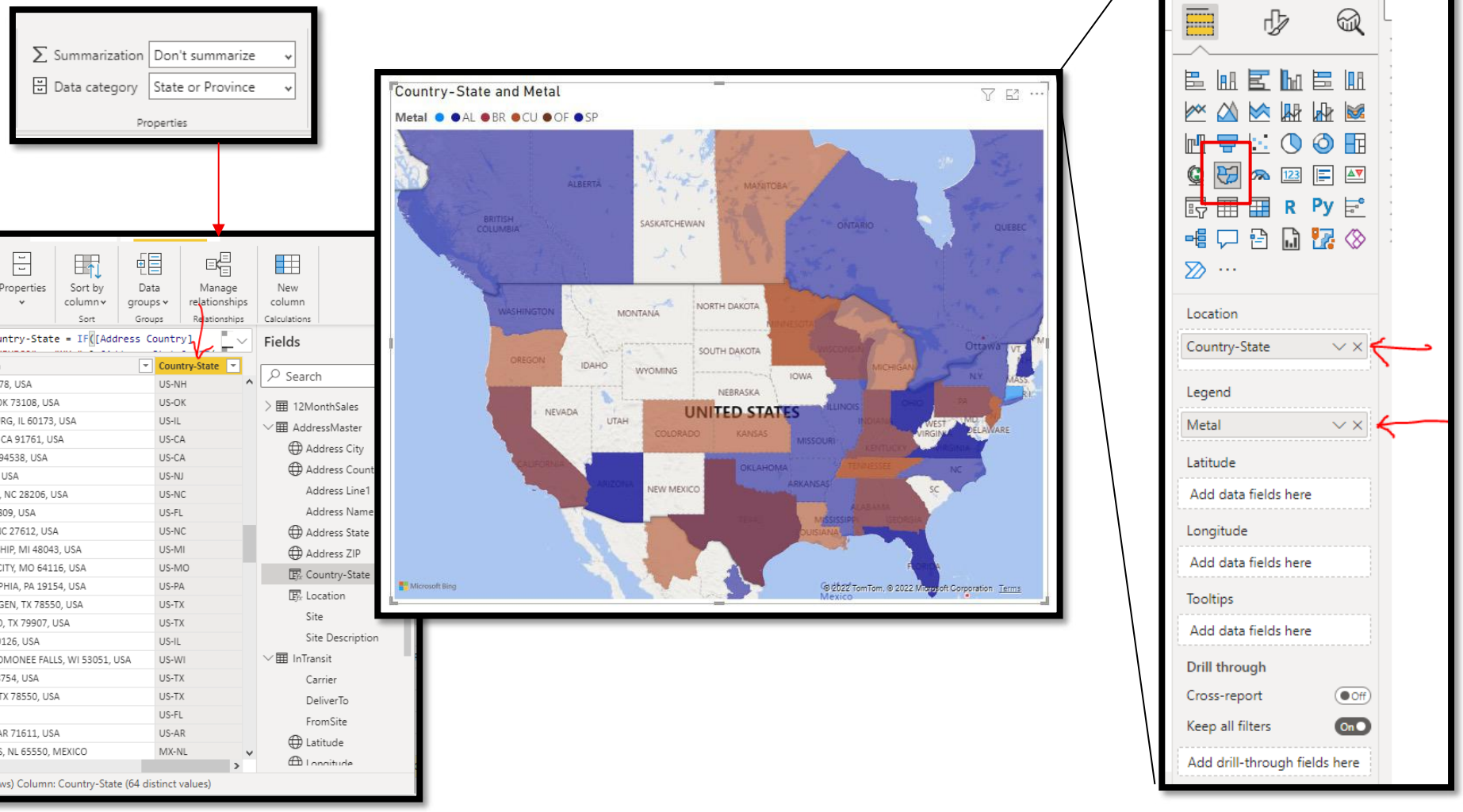
Country-State
US-IN
US-CT
US-VA
US-IN
US-AR
US-TX
US-IN
US-IN
US-TX
US-OH

Classic Address map with Bubbles

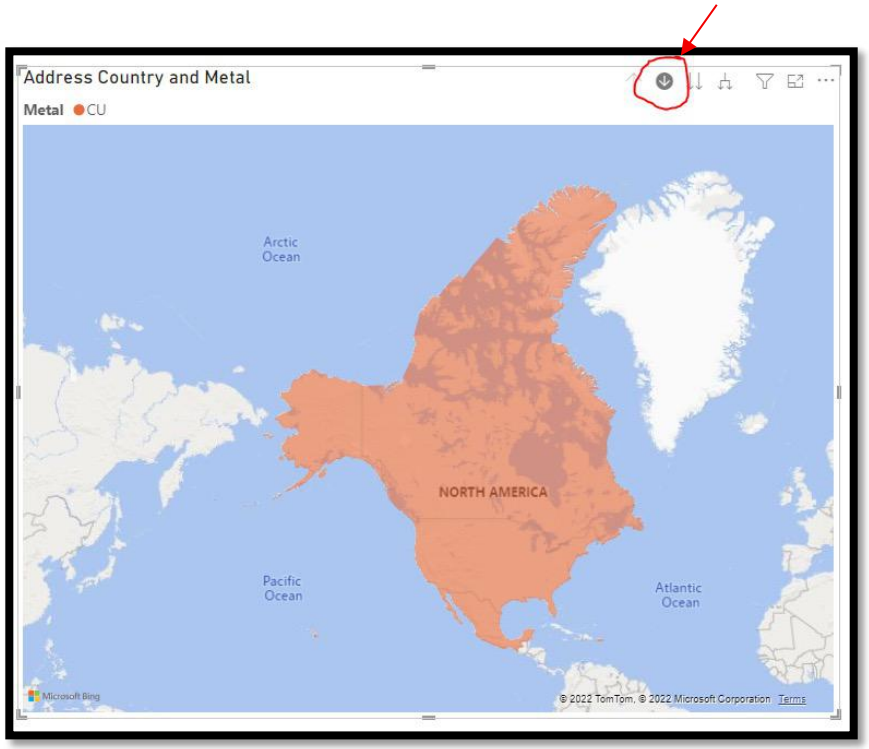




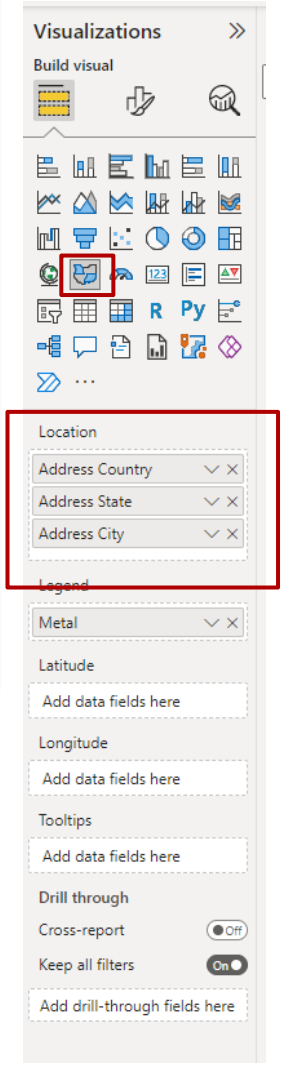
Area Fill Map

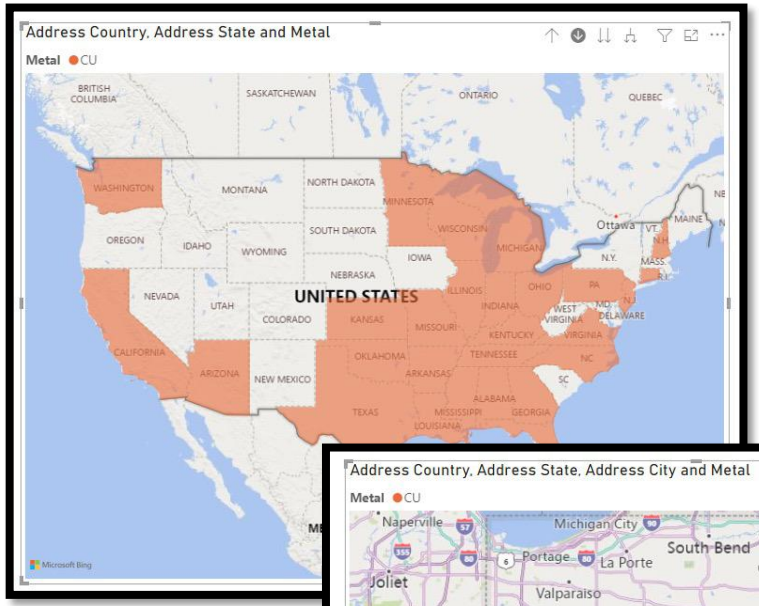


Area Fill Map with Drill Down



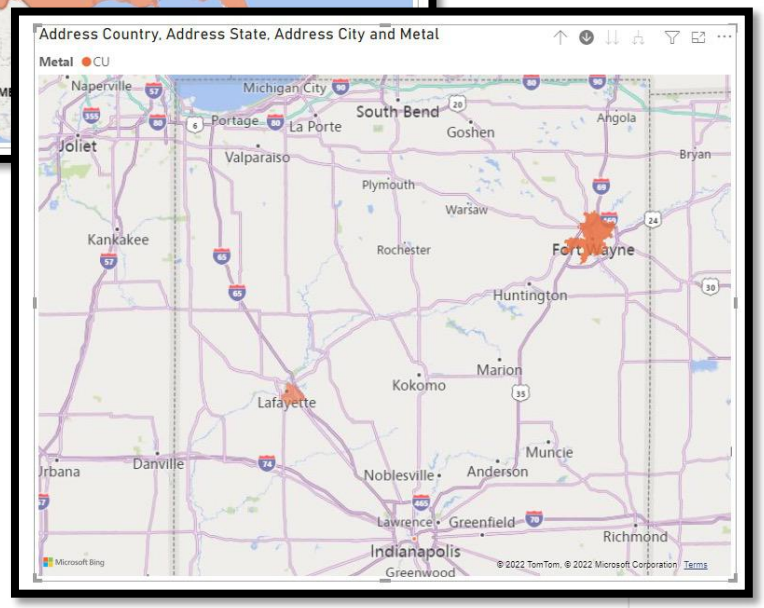
Starting View with Drill Down turned on



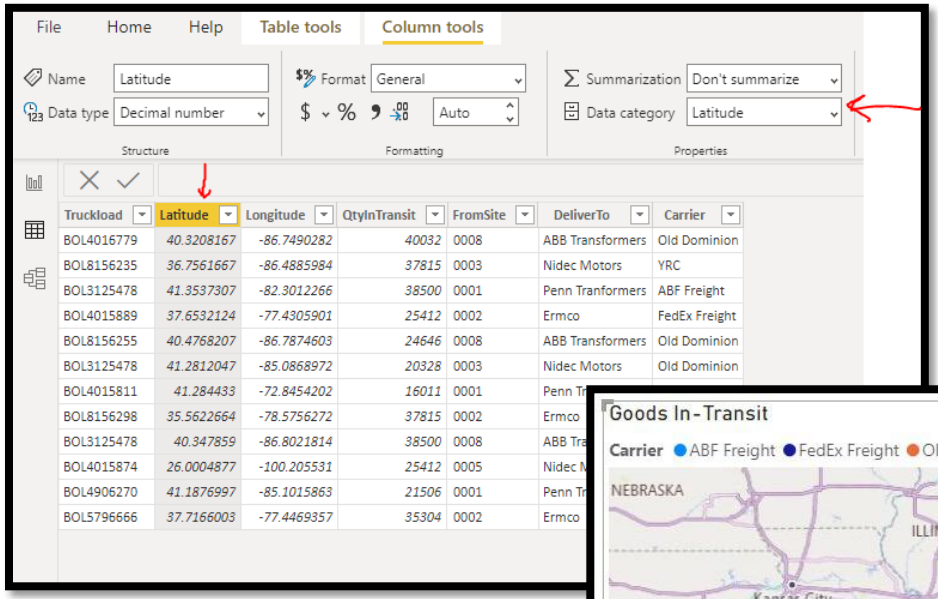


Click on the USA part of map to reveal States

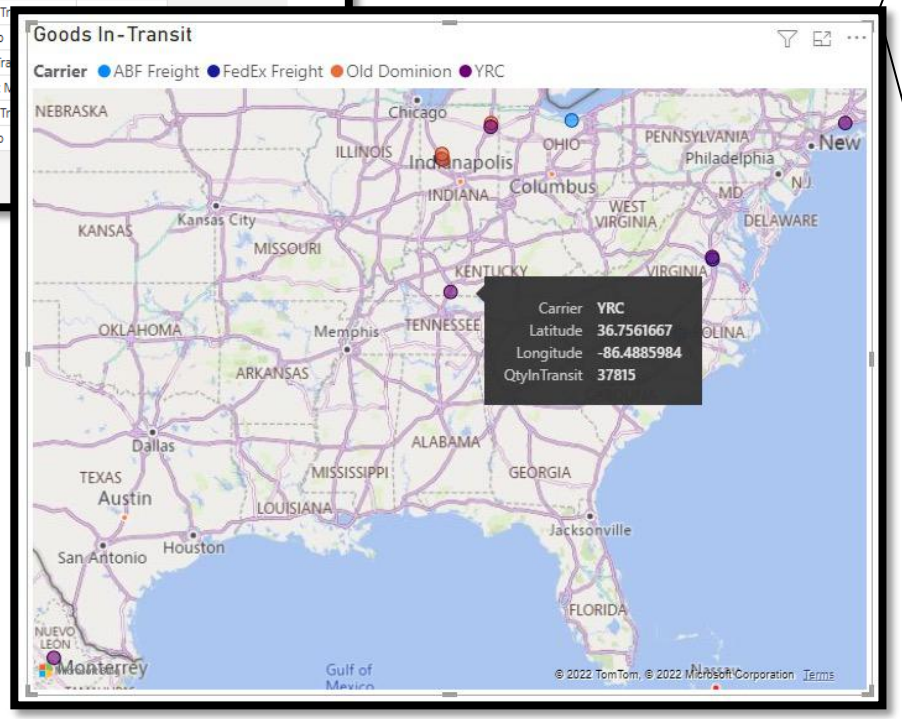
Click on a State to reveal Cities

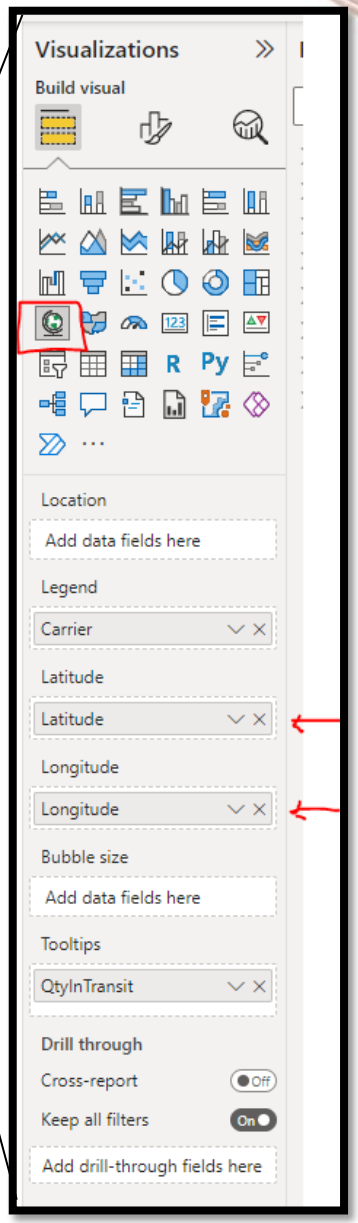


Longitude / Latitude Mapping



Truckload	Latitude	Longitude	QtyInTransit	FromSite	DeliverTo	Carrier
BOL4016779	40.3208167	-86.7490282	40032	0008	ABB Transformers	Old Dominion
BOL8156235	36.7561667	-86.4885984	37815	0003	Nidec Motors	YRC
BOL3125478	41.3537307	-82.3012266	38500	0001	Penn Tranformers	ABF Freight
BOL4015889	37.6532124	-77.4305901	25412	0002	Ermco	FedEx Freight
BOL8156255	40.4768207	-86.7874603	24646	0008	ABB Transformers	Old Dominion
BOL3125478	41.2812047	-85.0868972	20328	0003	Nidec Motors	Old Dominion
BOL4015811	41.284433	-72.8454202	16011	0001	Penn Tr	
BOL8156298	35.5622664	-78.5756272	37815	0002	Ermco	
BOL3125478	40.347859	-86.8021814	38500	0008	ABB Tra	
BOL4015874	26.0004877	-100.205531	25412	0005	Nidec M	
BOL4906270	41.1876997	-85.1015863	21506	0001	Penn Tr	
BOL5796666	37.7166003	-77.4469357	35304	0002	Ermco	





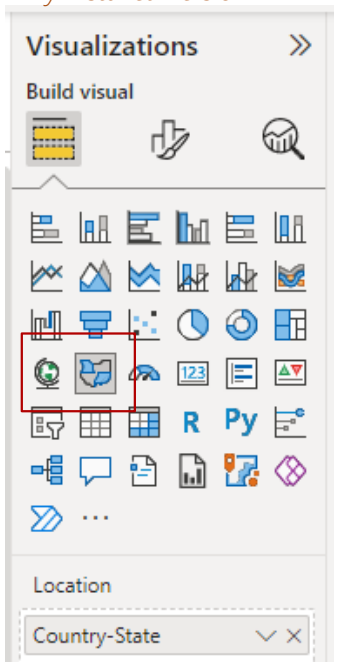
Summary

- Scrubbing your address data is important when standardizing on abbreviations of:
  - States – US States and Mexican States
  - Canadian Provinces
  - Countries
  - Territories (like Puerto Rico)

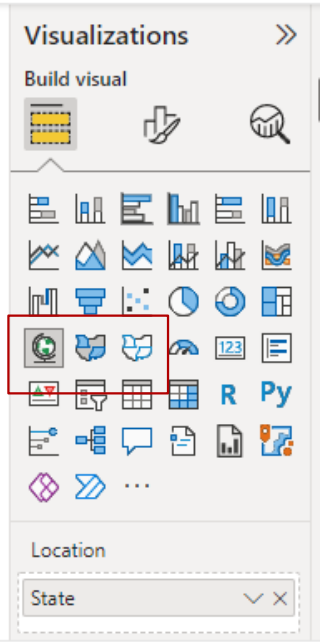
Notes: Power BI integrates with Bing Maps to provide default map coordinates (a process called geo-coding) so you can create maps. Together they use algorithms to identify the correct location, but sometimes it's a best guess. If Power BI tries, but can't create the map visualization on its own, it enlists the help of Bing Maps. Read more in Bing Maps Documentation.

- On-line Documentation is generally helpful, but I found differences between my installed version and what I found on-line.

My Installed Version



On-Line Documentation



PowerBI User Group

Sept 2022

Questions

Dennis Rausch
VP Information Technology
Rea Magnet Wire, Lafayette, IN
drausch@reawire.com

- Presentation by: Hannah George.
  - Junior at Purdue

- Topic: Creating Predictions with What Ifs

Creating Predictions with What Ifs

Power App Introduction

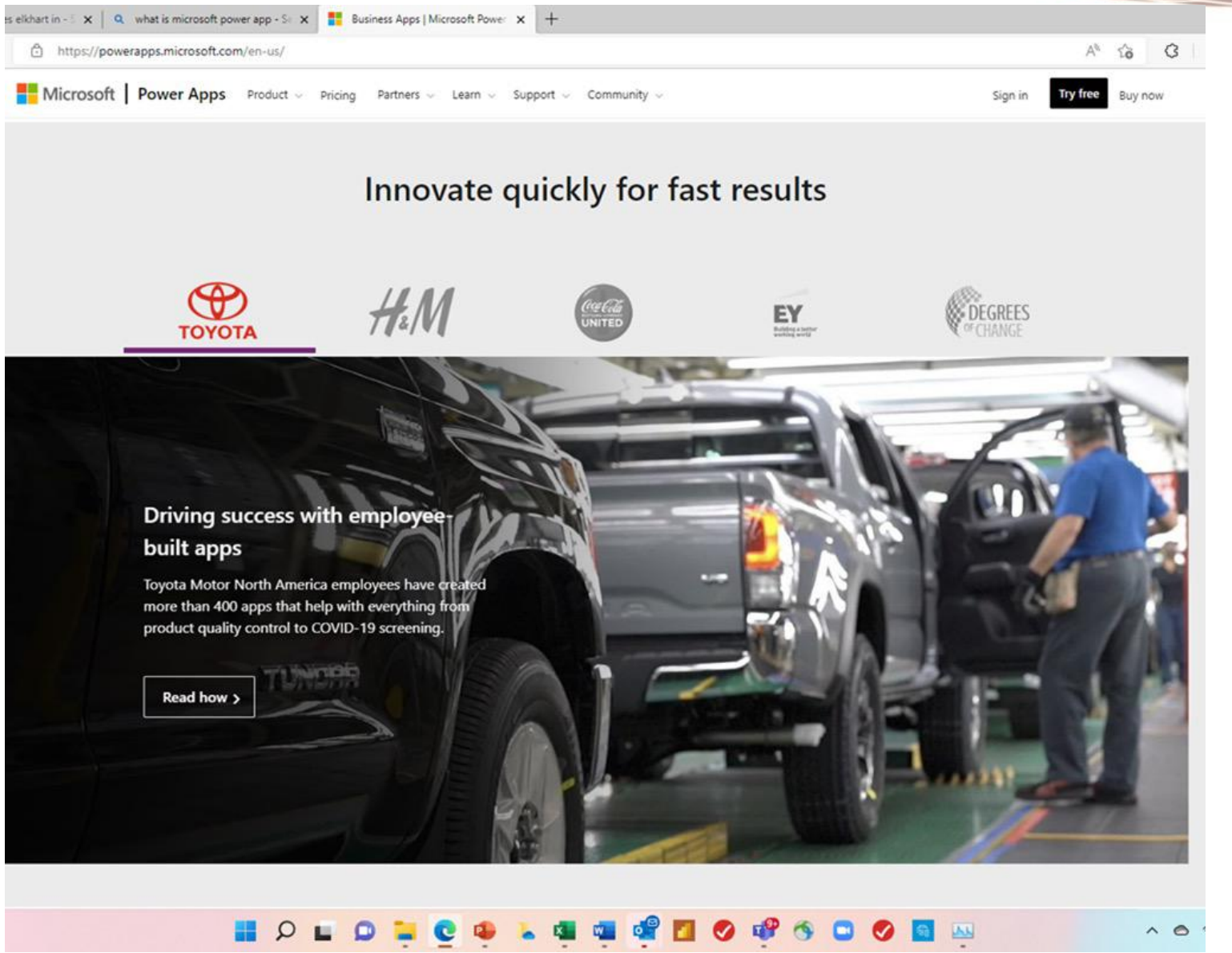
Description: Power Apps is a suite of apps, services, and connectors, as well as a data platform, that provides a rapid development environment to build custom apps for your business needs. Using Power Apps, you can quickly build custom business apps that connect to your data stored either in various online and on-premises data sources (such as SharePoint, Microsoft 365, Dynamics 365, SQL Server, and so on).

Power App Pricing

- **Pricing:**
  - **$5per user/app/month** -Run one app or portal per user, stacking licenses for access to each additional as their needs change.
  - **$20per user/month** - Run unlimited apps and portals per user for one flat monthly rate.
  - **$10per active user/app/month** - Use an Azure subscription to pay per user based on the number of unique apps or portals a user runs each month.

Power App Demo

- How to Use Power Apps | Get Started with THIS Tutorial & Create your 1st app - Bing video



Wrap Up

- Open Discussion
- Volunteers for Presenting at next meeting
- Next Meeting – Tentative December 15 at 3:00-4:30

DCMME FALL CONFERENCE (Virtual & Free)

Smart Technologies to Enable EV Transition

SEPTEMBER 30, 2022

8:30-12:30

The 2022 conference will feature speakers and thought leaders presenting on the topics of electric vehicles, new technologies in manufacturing and TP^3 strategies.

Link to Register: REGISTER TODAY
https://events.blackthorn.io/en/3ktO526/dcmme-manufacturing-conference-4a9G3kIHcT/overview

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