DIY Database Decluttering

- Thomas M. Blackwell, MCR
  Essex County, Virginia
- Dylan DiGeronimo
  Vision Government Solutions
- Nick Leone, CAPM
  Vision Government Solutions

IAAO CONFERENCE + EXHIBITION
EMBRACING CHANGE
August 29 - September 1 ▸ Chicago, Illinois

Meet the Presenters

Thomas M. Blackwell
- Essex County, VA - MCR

Dylan DiGeronimo
- VGSI – Project Manager

Nick Leone
- VGSI – Project Manager

Session Goals

- Appreciate the IAAO Standard on Data Quality
- Recognize the Impact of Inconsistent or Inaccurate Property Data
- Use the Basic Functions of MS Excel for Improved Data Quality
- Discuss the Importance of Standardized Business Processes

Setting the Stage

IAAO Standard on Data Quality

Approved April 2021

https://www.iaao.org/media/standards/Standard_on_Data_Quality.pdf

Standard on Data Quality - Scope

The IAAO *Standard on Data Quality* defines quality requirements for critical elements of assessment data and provides guidance for meeting those requirements for use in mass appraisal. Assessment data for the purposes of this standard can be separated into property characteristic, economic, and geographic.[1]

This standard addresses quality for both the collection of new inventory and the management of existing inventory. For all types of assessment data, this standard outlines the general requirements for accuracy, currency, consistency, and completeness. Specific local standards should be developed in accordance with this general standard.

This standard is concerned with data as an input into the assessment process. It is not intended to provide guidance for data related to the state of an assessment process (e.g., inspections and other operational processes) or other secondary uses. Assessors should decide whether to include these factors in the development of their own local standards. The quality of the outcomes of assessment processes (e.g., as reported in ratio study results) are well covered in other IAAO Technical Standards and adopted by the assessment industry,[2] and therefore outside the scope of this standard.

Pre-Session Survey

Looking at the Overall Data We Collected in Our Pre-Session Survey

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What We Surveyed

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13 Questions Asked

2021 IAAO Annual Conference: DIY Database Decluttering (Pre-Session Survey)

Hello Fellow CAMA Users,

Please take a moment to complete our Pre-Session Survey for the 2021 IAAO Annual Conference!

This data will contribute to the discussion during our DIY Database Decluttering presentation where we will share DIY strategies to achieve and maintain a clutter-free database, regardless of your CAMA software.

The 2021 IAAO Annual Conference will take place from August 29 - September 1 in Chicago. Our presentation on DIY Database Decluttering will occur on Wednesday, September 1, 2021, from 1:00pm - 2:30pm.

For our stellar team, we are honored to have Thomas M. "Tommy" Blackwell, the Commissioner of the Revenue for Essex County and the Commonwealth of Virginia, who has partnered alongside both Dylan DiGeronimo, Head Project Manager at Vision Government Solutions, and Jen Rukstela, Director of the Project Management Office at Vision.

We look forward to seeing you at this year's event!

Thank you,

Thomas M. Blackwell, MCR - Essex County, Virginia
Jen Rukstela, PMP, PMI-ACP, CCMA1 - VGSI
Dylan DiGeronimo - VGSI

...

63 Responses Received

What We Successfully Found

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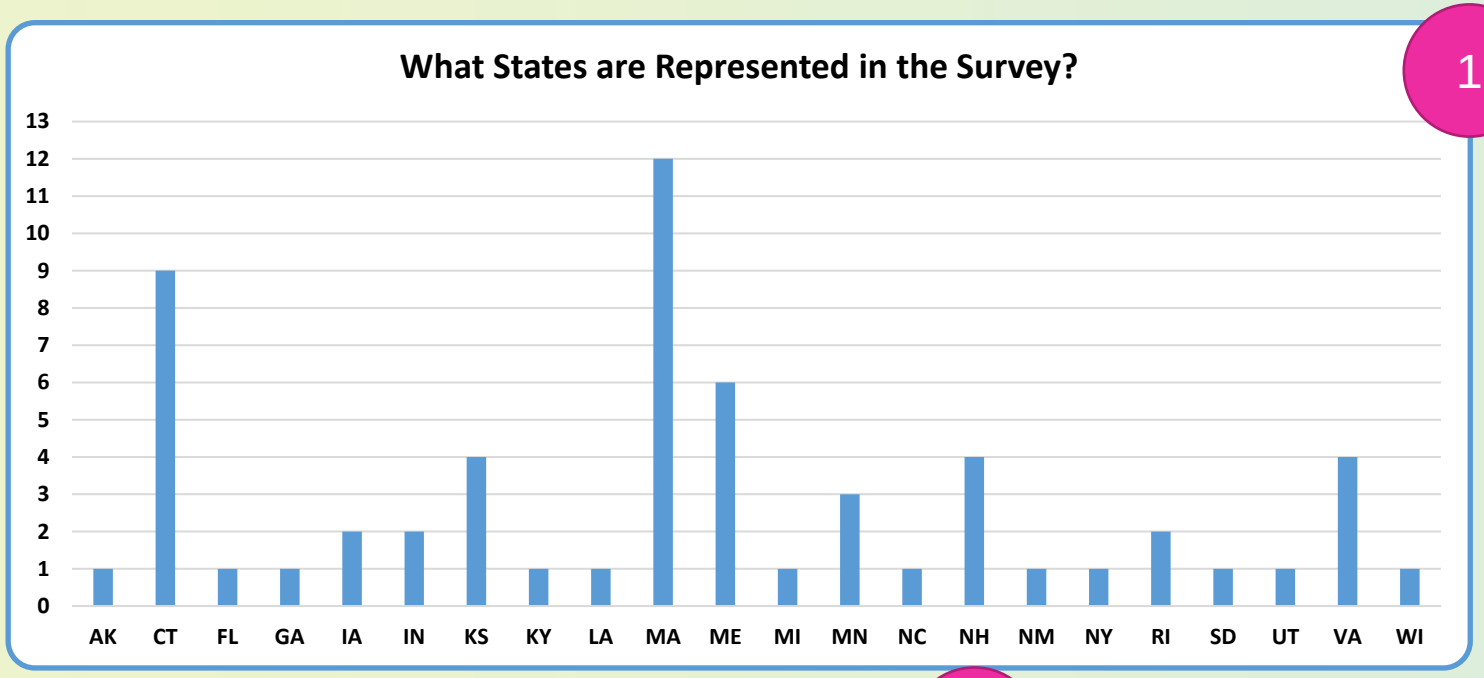
1



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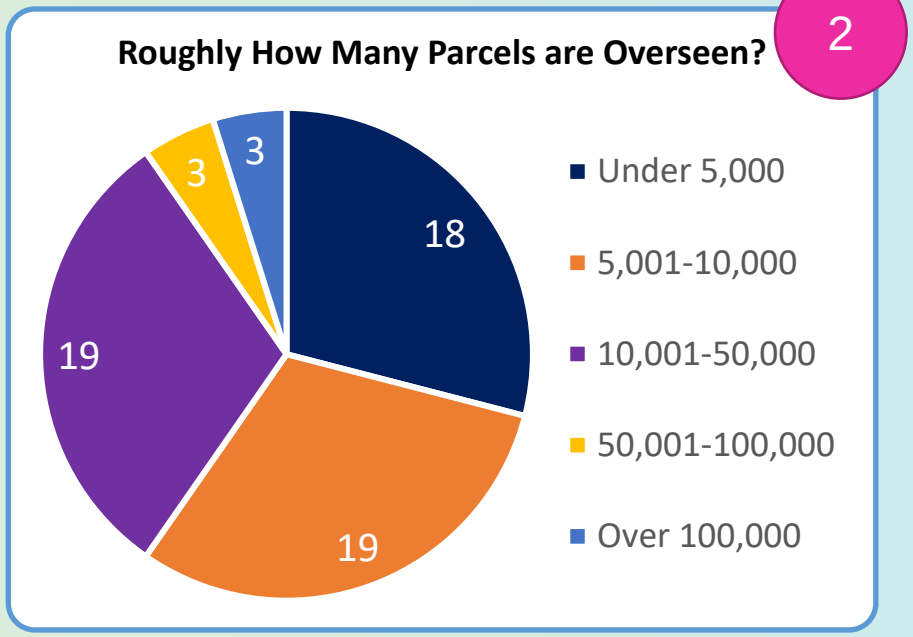

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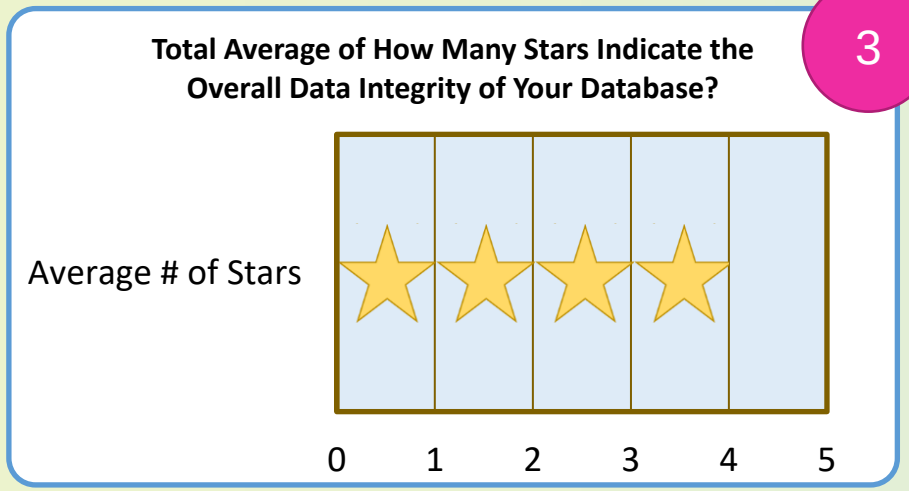
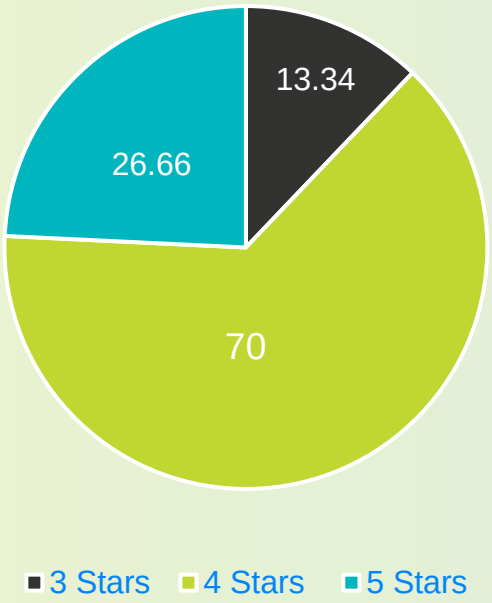
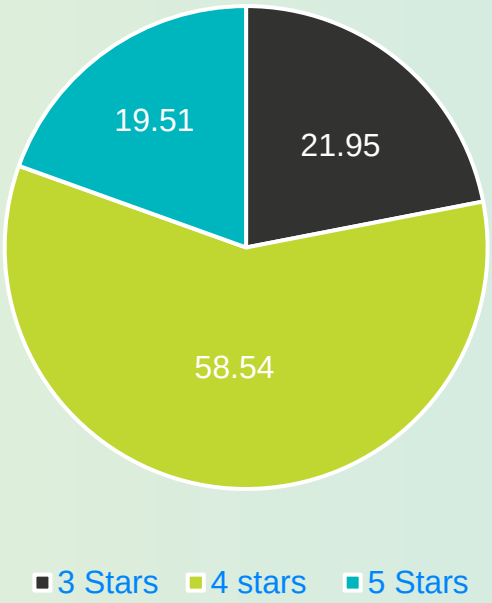


The Takeaway

Regularly Clensed Data



Data Stored in a Single Location



Pulling Data into Excel (Sorting/Filtering)

Review Data from the Comfort of Excel and Embrace Your Curiosity

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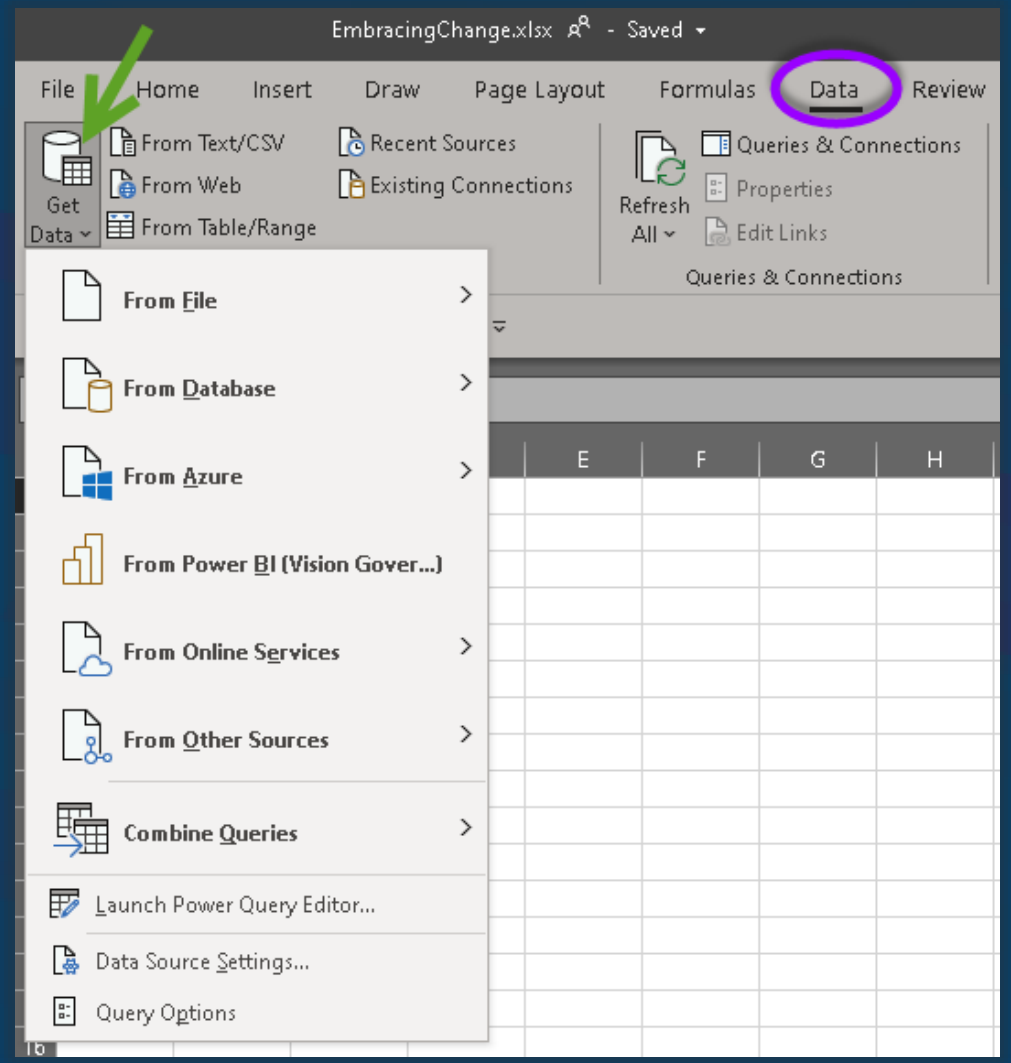
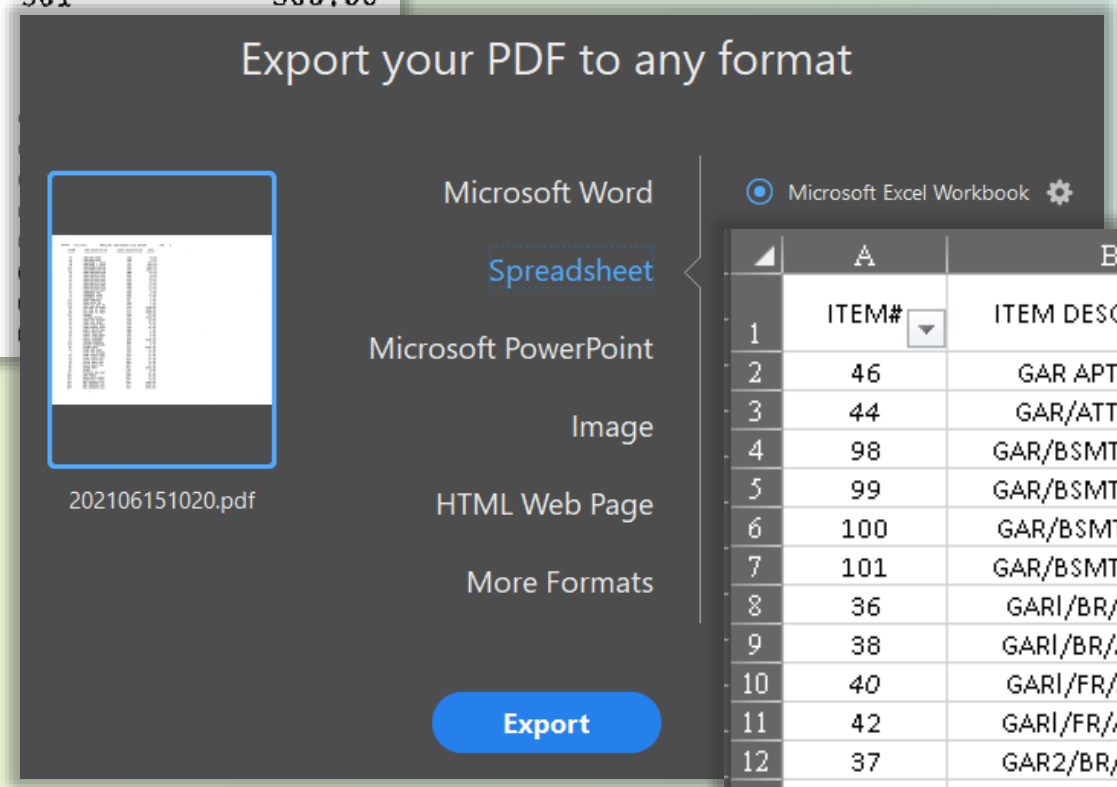
Import Data From Multiple Sources Into Excel



Export From Adobe to a Spreadsheet

ITEM#	ITEM DESCRIPTION	SHORT DESCRIPTION	RATE
46	GAR APT GOOD	LGG	41.00
44	GAR/ATT/POOR	GPA	9.00
98	GAR/BSMT 1 DOOR	301	500.00
99	GAR/BSMT 2 DOOR		
100	GAR/BSMT/1DR/FN		
101	GAR/BSMT/2DR/FN		
36	GAR1/BR/ATT/FIN		
38	GAR1/BR/ATT/UNF		
40	GAR1/FR/ATT/FIN		
42	GAR1/FR/ATT/UNF		
37	GAR2/BR/ATT/FIN		
39	GAR2/BR/ATT/UNF		
41	GAR2/FR/ATT/FIN		
43	GAR2/FR/ATT/UNF		



	A	B	C	D
1	ITEM#	ITEM DESCRIPTION	SHORT DESCRIPTION	RATE
2	46	GAR APT GOOD	LGG	41.00
3	44	GAR/ATT/POOR	GPA	9.00
4	98	GAR/BSMT 1 DOOR	301	500.00
5	99	GAR/BSMT 2 DOOR	302	800.00
6	100	GAR/BSMT/IDR/FN	303	1200.00
7	101	GAR/BSMT/2DR/FN	304	1800.00
8	36	GARI/BR/ATT/FIN	GBA	21.00
9	38	GARI/BR/ATT/UNF	GBC	19.00
10	40	GARI/FR/ATT/FIN	GFA	19.00
11	42	GARI/FR/ATT/UNF	GFC	17.00
12	37	GAR2/BR/ATT/FIN	GBB	19.00
13	39	GAR2/BR/ATT/UNF	GBD	17.00
14	41	GAR2/FR/ATT/FIN	GFB	17.00
15	43	GAR2/FR/ATT/UNF	GFD	15.00

Importing Data to Excel Demo

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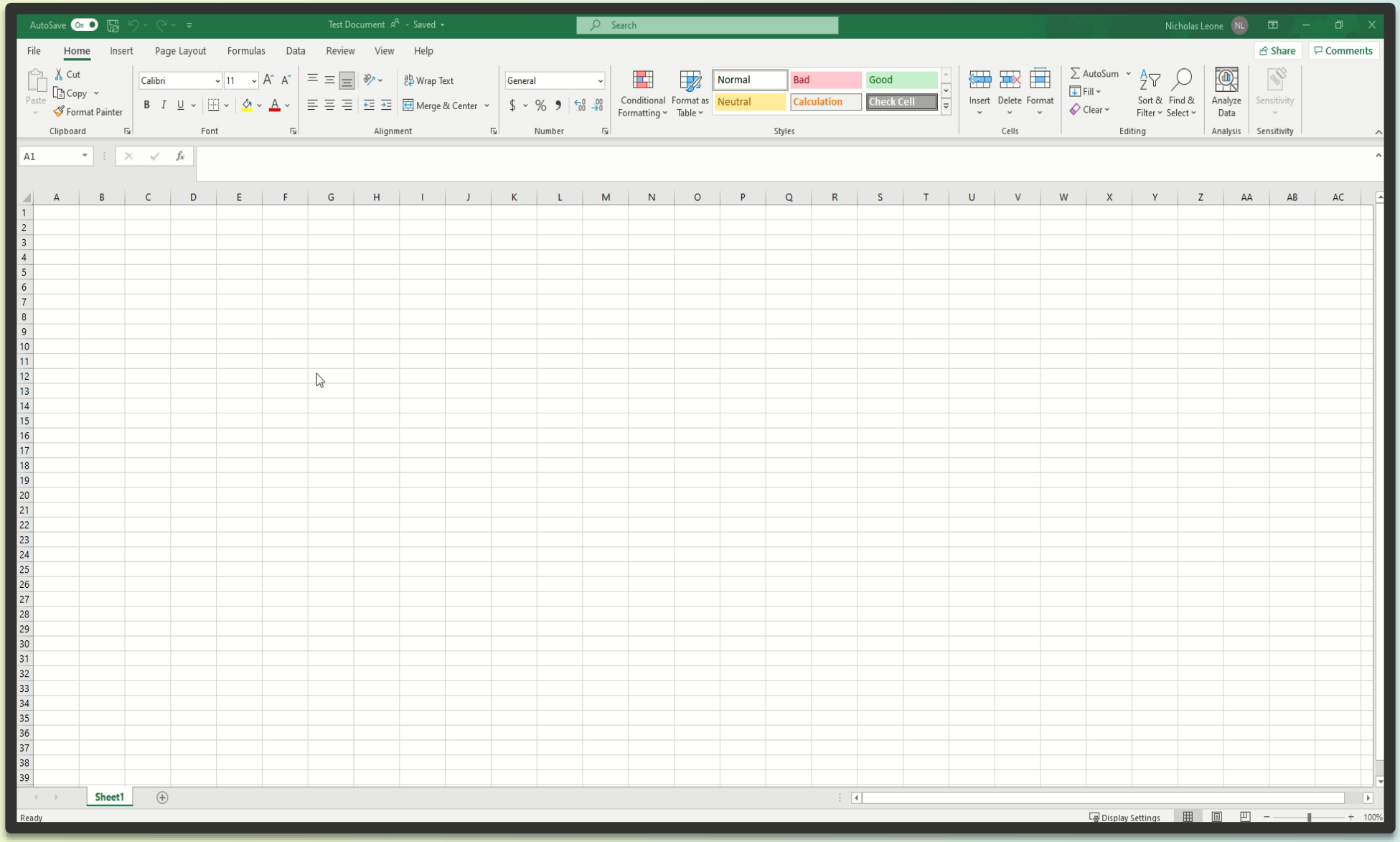
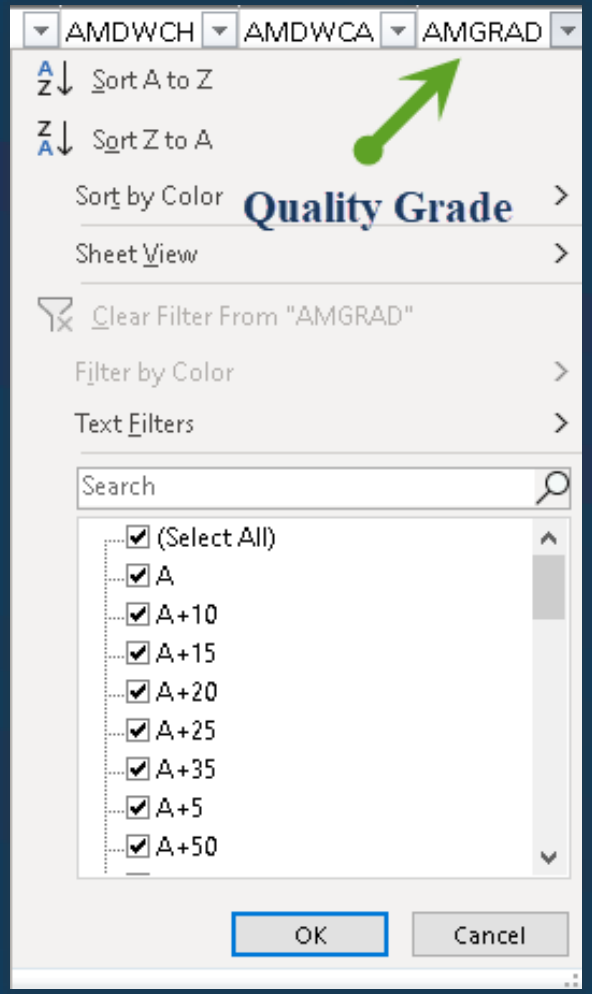
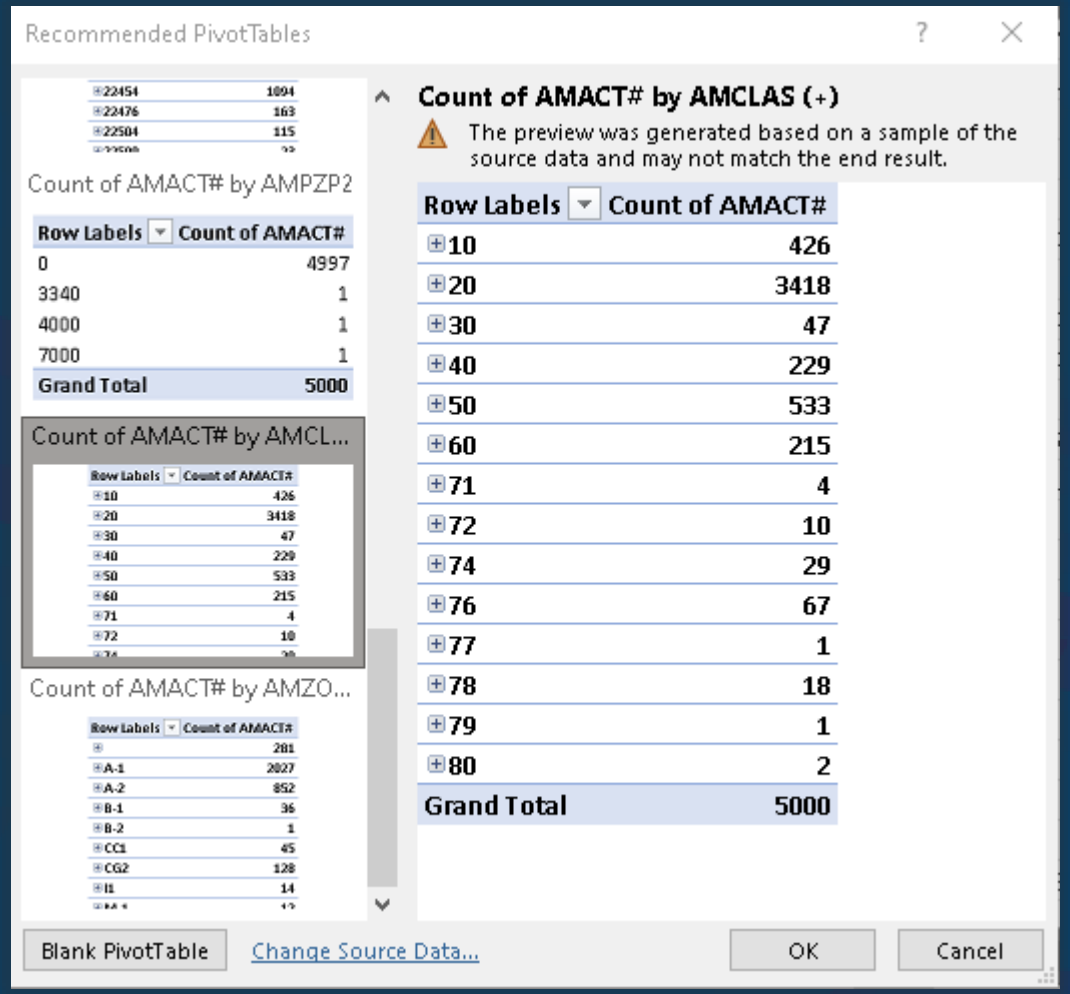


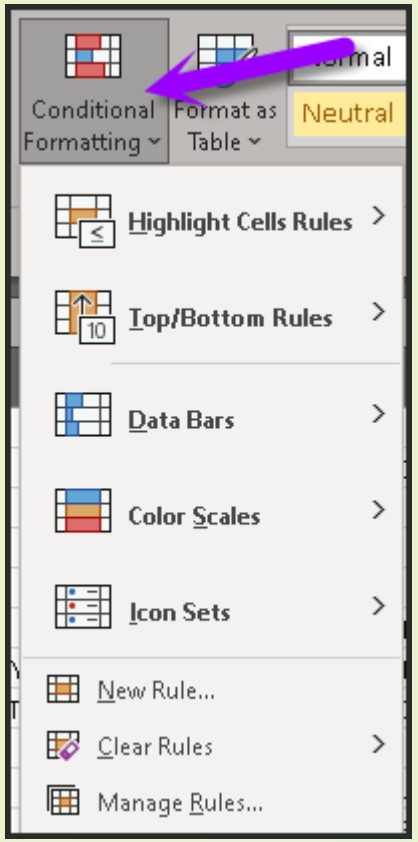
Explore With Filter & Pivot

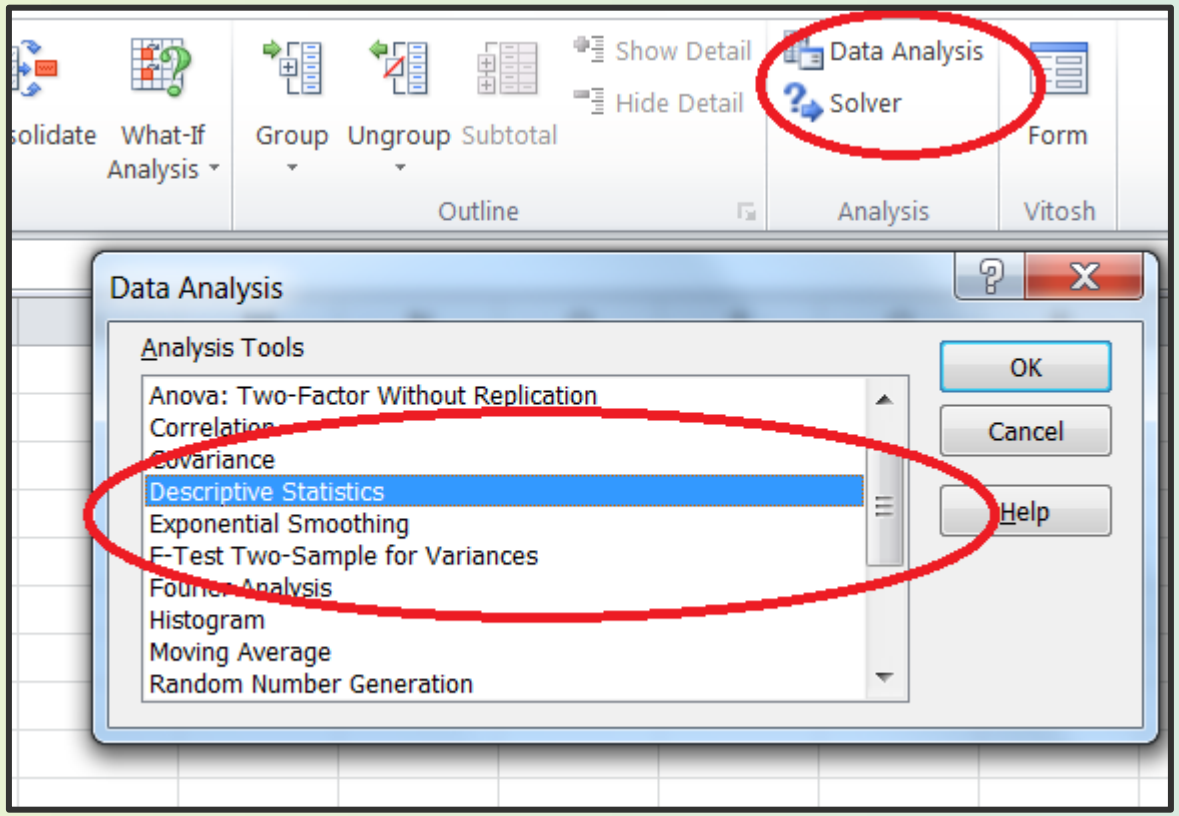


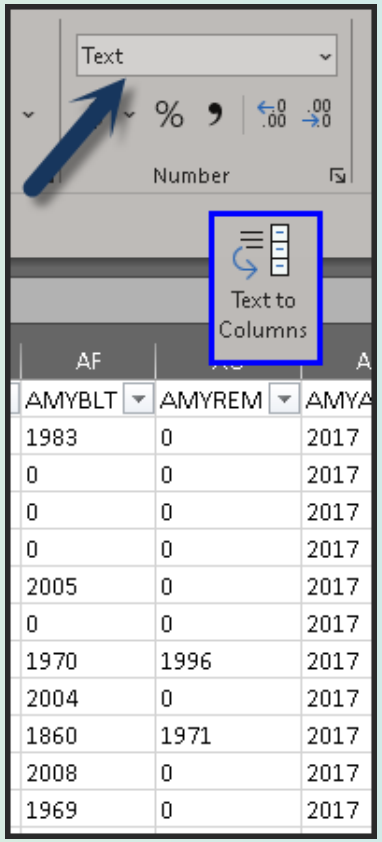


Row Labels	Count of AMACT#
	5400
B	1
A	1
C+5	1
A	21
A+10	4
A+15	2
A+20	1
A+25	4
A+35	3
A+5	9
A+50	6
A+70	1
A+99	4
A-10	9
A-5	8
B	88
B+10	74
B+5	55
B-10	112
B-5	103

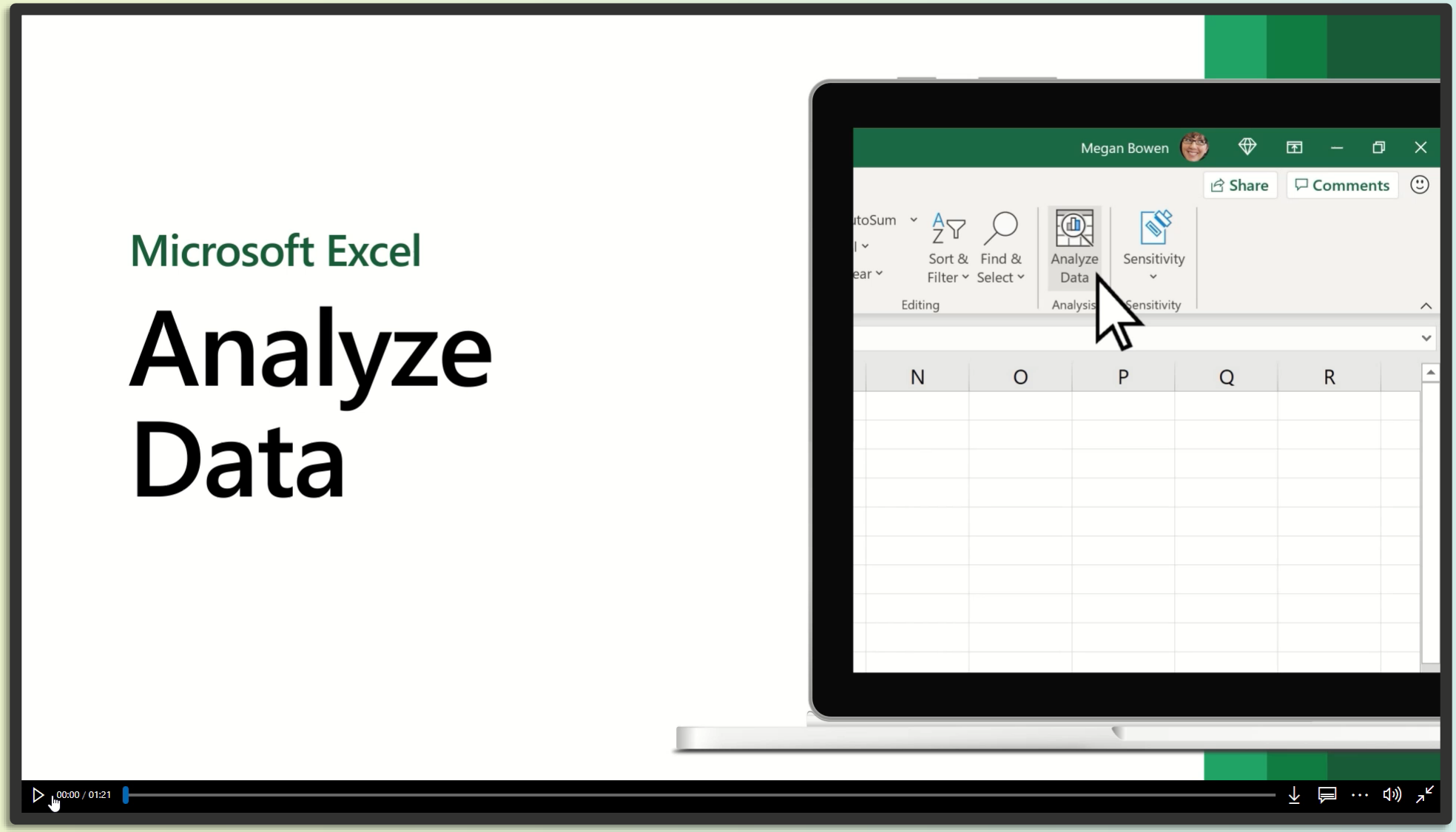
Other Helpful Tricks







Need Help Getting Started with Analysis?



Video from: https://support.microsoft.com/en-us/office/analyze-data-in-excel-3223aab8-f543-4fda-85ed-76bb0295ffc4

Diving into the Data Standards

Let's Explore the Four Dimensions of Data Quality as Presented by the IAAO

Standard on Data Quality - Dimensions

Accuracy

Currency

Data Quality

Consistency

Completeness

Dimension 1: Accuracy

Do Your Property Records Reflect Reality?

Does the Data Match the Property?

Property Characteristics
Cape Cod
Wood Siding
Gable Roof
6 Rooms
3 Bedrooms
2.5 Bathrooms
1 Fireplace
FHA Heat & CAC
City Water
City Sewer
0.25 Acre Lot

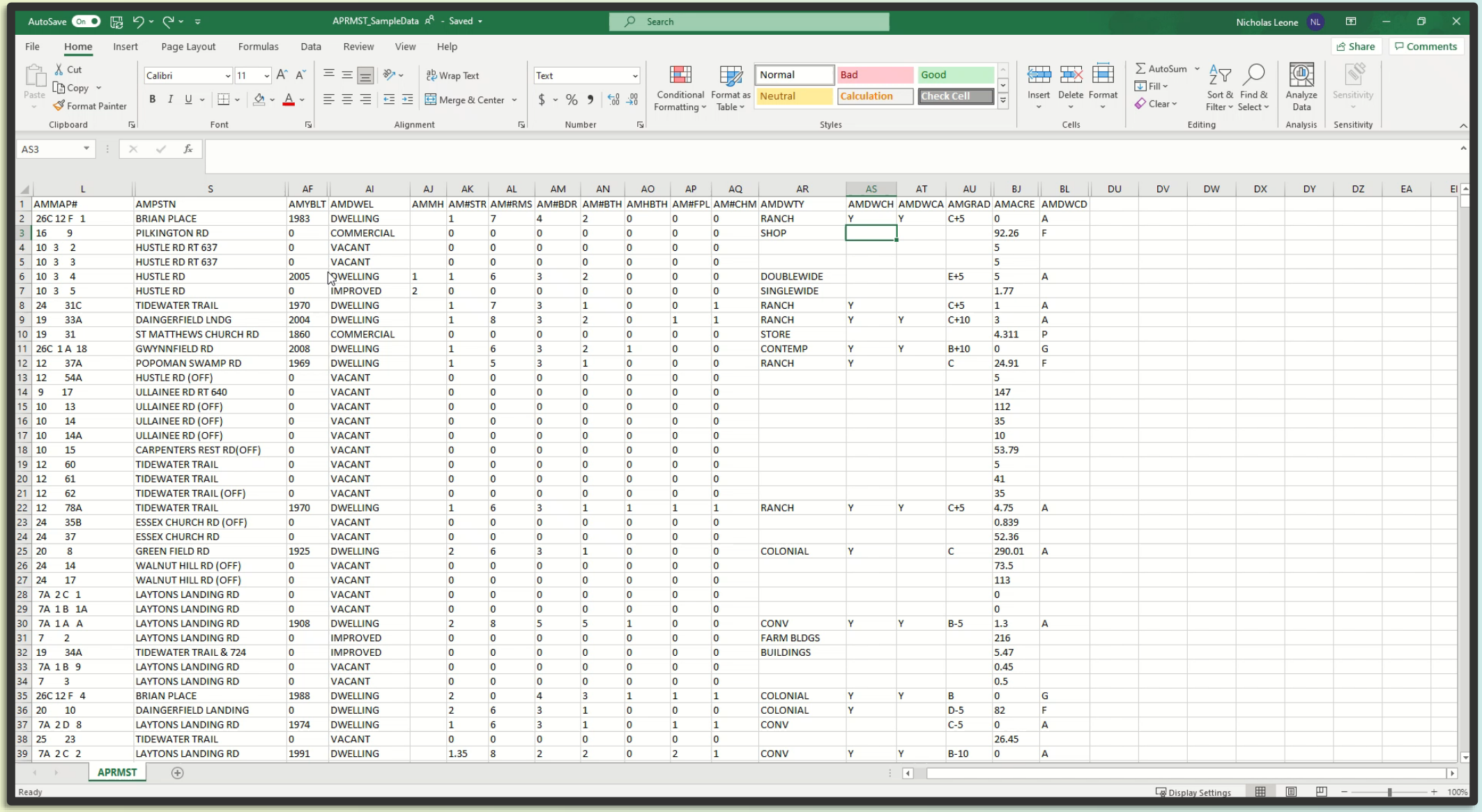
Does the Data Match the Property?

Property Characteristics
Cape Cod
Wood Siding
Gable Roof
6 Rooms
3 Bedrooms
2.5 Bathrooms
1 Fireplace
FHA Heat & CAC
City Water
City Sewer
0.25 Acre Lot

Hmmmm….

The Hunt for Discrepancies

Becoming a Data Sleuth



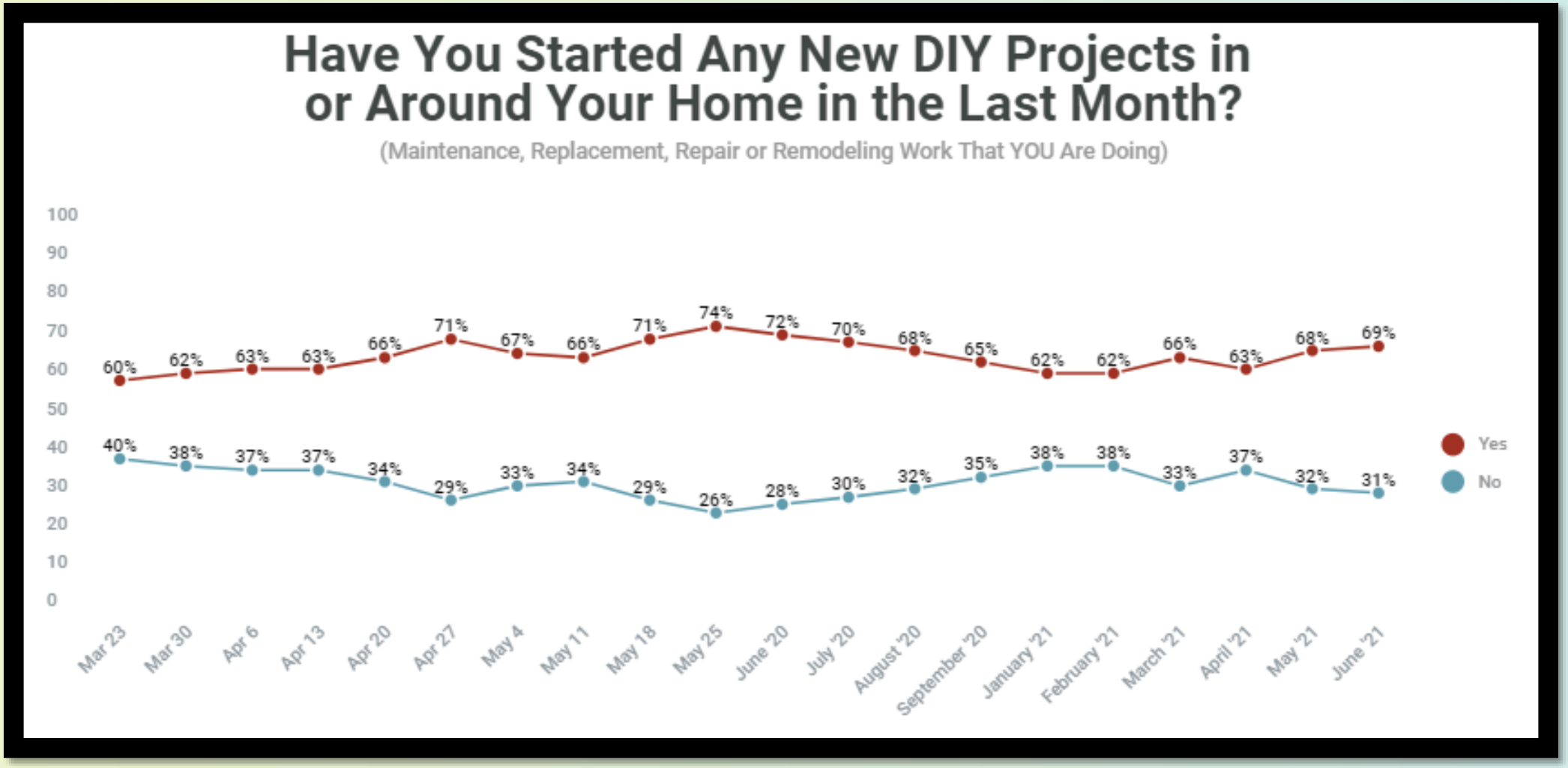
L	S	AF	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	BJ	BL
AMMAP#	AMPSTN	AMYBLT	AMDWEL	AMMH	AM#STR	AM#RMS	AM#BDR	AM#BTH	AMHBTH	AM#FPL	AM#CHM	AMDWTY	AMDWCH	AMDWCA	AMGRAD	AMACRE	AMDWCD
26C 12 F 1	BRIAN PLACE	1983	DWELLING		1	7	4	2	0	0	0	RANCH	Y	Y	C+5	0	A
16 9	PILKINGTON RD	0	COMMERCIAL		0	0	0	0	0	0	0	SHOP				92.26	F
10 3 2	HUSTLE RD RT 637	0	VACANT		0	0	0	0	0	0	0					5	
10 3 3	HUSTLE RD RT 637	0	VACANT		0	0	0	0	0	0	0					5	
10 3 4	HUSTLE RD	2005	DWELLING	1	1	6	3	2	0	0	0	DOUBLEWIDE			E+5	5	A
10 3 5	HUSTLE RD	0	IMPROVED	2	0	0	0	0	0	0	0	SINGLEWIDE				1.77	
24 31C	TIDEWATER TRAIL	1970	DWELLING		1	7	3	1	0	0	1	RANCH	Y		C+5	1	A
19 33A	DAINGERFIELD LNDG	2004	DWELLING		1	8	3	2	0	1	1	RANCH	Y	Y	C+10	3	A
19 31	ST MATTHEWS CHURCH RD	1860	COMMERCIAL		0	0	0	0	0	0	0	STORE				4.311	P
26C 1 A 18	GWYNNFIELD RD	2008	DWELLING		1	6	3	2	1	0	0	CONTEMP	Y	Y	B+10	0	G
12 37A	POPOMAN SWAMP RD	1969	DWELLING		1	5	3	1	0	0	0	RANCH	Y		C	24.91	F
12 54A	HUSTLE RD (OFF)	0	VACANT		0	0	0	0	0	0	0					5	
9 17	ULLAINEE RD RT 640	0	VACANT		0	0	0	0	0	0	0					147	
10 13	ULLAINEE RD (OFF)	0	VACANT		0	0	0	0	0	0	0					112	
10 14	ULLAINEE RD (OFF)	0	VACANT		0	0	0	0	0	0	0					35	
10 14A	ULLAINEE RD (OFF)	0	VACANT		0	0	0	0	0	0	0					10	
10 15	CARPENTERS REST RD(OFF)	0	VACANT		0	0	0	0	0	0	0					53.79	
12 60	TIDEWATER TRAIL	0	VACANT		0	0	0	0	0	0	0					5	
12 61	TIDEWATER TRAIL	0	VACANT		0	0	0	0	0	0	0					41	
12 62	TIDEWATER TRAIL (OFF)	0	VACANT		0	0	0	0	0	0	0					35	
12 78A	TIDEWATER TRAIL	1970	DWELLING		1	6	3	1	1	1	1	RANCH	Y	Y	C+5	4.75	A
24 35B	ESSEX CHURCH RD (OFF)	0	VACANT		0	0	0	0	0	0	0					0.839	
24 37	ESSEX CHURCH RD	0	VACANT		0	0	0	0	0	0	0					52.36	
20 8	GREEN FIELD RD	1925	DWELLING		2	6	3	1	0	0	0	COLONIAL	Y		C	290.01	A
24 14	WALNUT HILL RD (OFF)	0	VACANT		0	0	0	0	0	0	0					73.5	
24 17	WALNUT HILL RD (OFF)	0	VACANT		0	0	0	0	0	0	0					113	
7A 2 C 1	LAYTONS LANDING RD	0	VACANT		0	0	0	0	0	0	0					0	
7A 1 B 1A	LAYTONS LANDING RD	0	VACANT		0	0	0	0	0	0	0					0	
7A 1 A A	LAYTONS LANDING RD	1908	DWELLING		2	8	5	5	1	0	0	CONV	Y	Y	B-5	1.3	A
7 2	LAYTONS LANDING RD	0	IMPROVED		0	0	0	0	0	0	0	FARM BLDGS				216	
19 34A	TIDEWATER TRAIL & 724	0	IMPROVED		0	0	0	0	0	0	0	BUILDINGS				5.47	
7A 1 B 9	LAYTONS LANDING RD	0	VACANT		0	0	0	0	0	0	0					0.45	
7 3	LAYTONS LANDING RD	0	VACANT		0	0	0	0	0	0	0					0.5	
26C 12 F 4	BRIAN PLACE	1988	DWELLING		2	0	4	3	1	1	1	COLONIAL	Y	Y	B	0	G
20 10	DAINGERFIELD LANDING	0	DWELLING		2	6	3	1	0	0	0	COLONIAL	Y		D-5	82	F
7A 2 D 8	LAYTONS LANDING RD	1974	DWELLING		1	6	3	1	0	1	1	CONV			C-5	0	A
25 23	TIDEWATER TRAIL	0	VACANT		0	0	0	0	0	0	0					26.45	
7A 2 C 2	LAYTONS LANDING RD	1991	DWELLING		1.35	8	2	2	0	2	1	CONV	Y	Y	B-10	0	A

Dimension 2: Currency

Is Data Up-To-Date and In Alignment with Market Conditions?

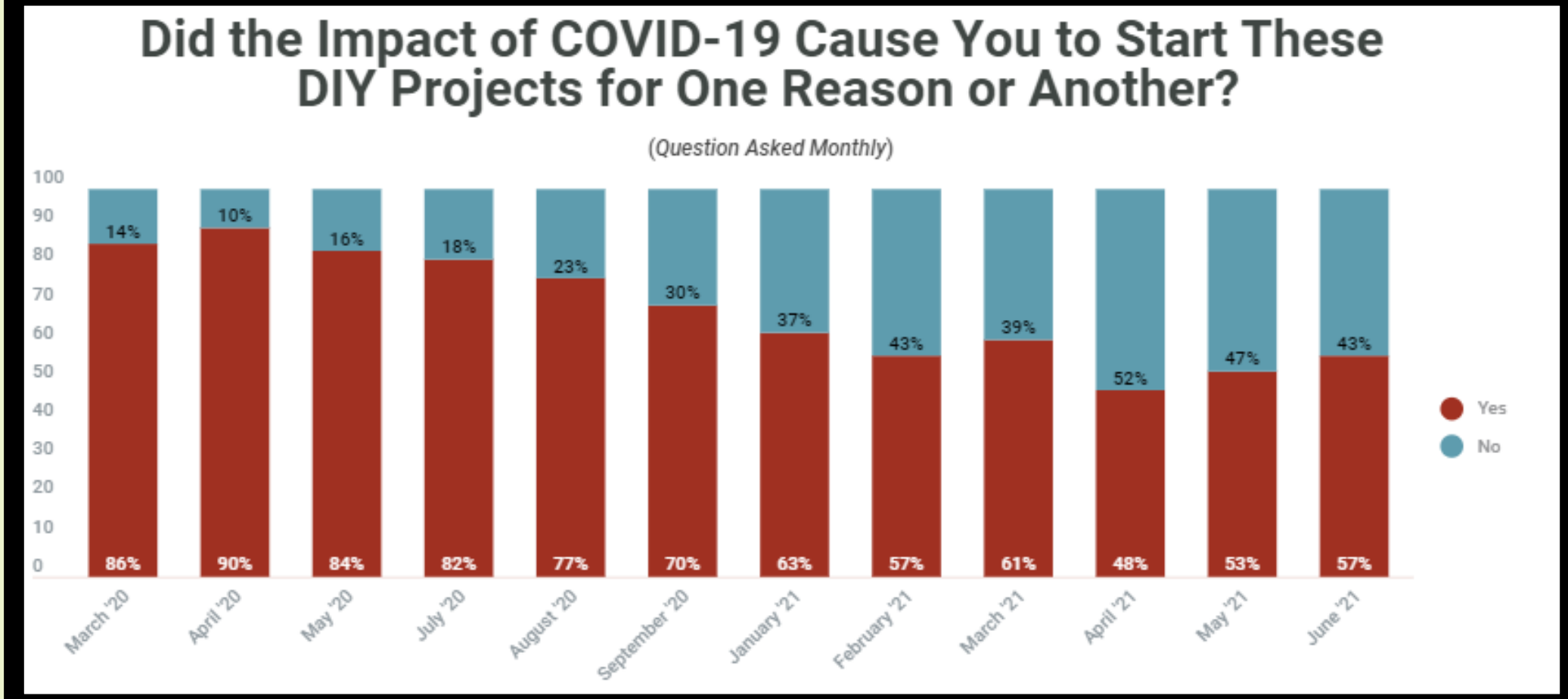
When Did THAT Happen?

DIY Improvement Projects Undermine Currency



https://www.thefarnsworthgroup.com/resources/covid-tracker-diy-results

Covid Spurred Accelerated Currency Degradation



https://www.thefarnsworthgroup.com/resources/covid-tracker-diy-results

What Do Buyers Want?

https://www.realtor.com/advice/sell/improvements-upgrades-to-help-sell-your-home-during-pandemic/

Dimension 3: Consistency

Is There Uniformity Across Properties in Your Municipality?

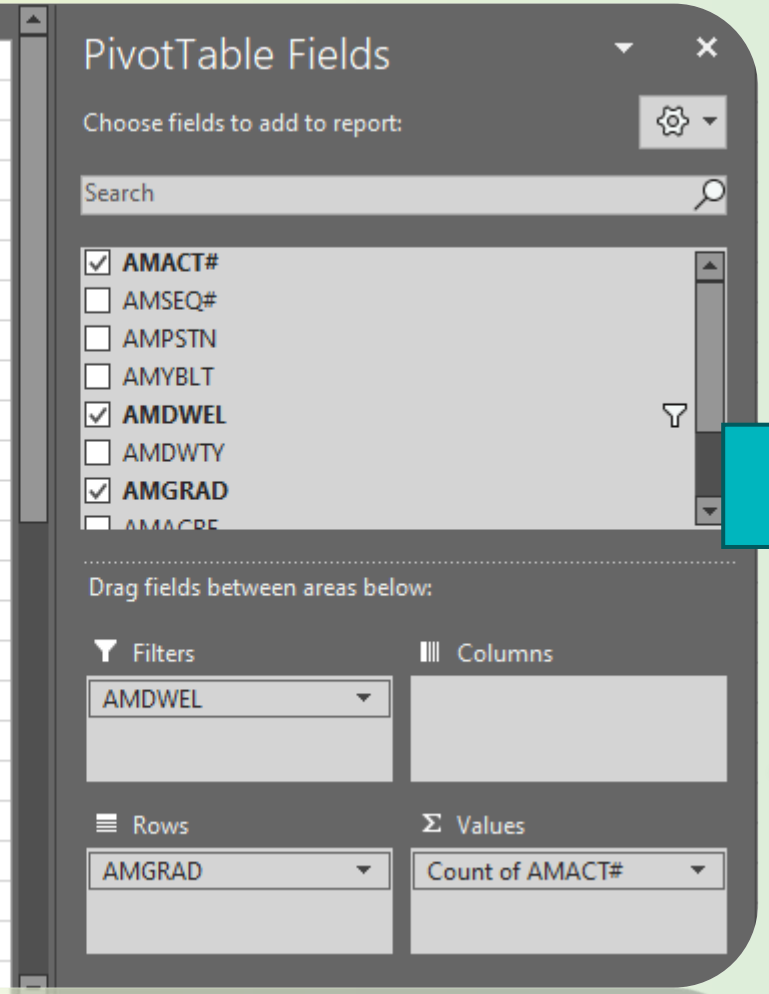
The Importance of Consistent Grading

AMACT#	AMSEQ#	AMPSTN	AMYBLT	AMDWEL	AMDWTY	AMGRAD	AMACRE	AMDWCD
100	1	BRIAN PLACE	1983	DWELLING	RANCH	C+5	0	A
101	1	PILKINGTON RD	0	COMMER	OP		92.26	F
102	1	HUSTLE RD RT 637	0				5	
103	1	HUSTLE RD RT 637					5	
104	1	HUSTLE RD			IDE	E+5	5	A
105	1	HUSTLE RD			E		1.77	
106	1	TIDEWATER TRAIL				C+5	1	A
107	1	DAINGERFIELD LNDG				C+10	3	A
108	1	ST MATTHEWS CHURCH RD			RE		4.311	P
110	1	GWYNNFIELD RD	20		ONTEMP	B+10	0	G
111	1	POPOMAN SWAMP RD	1969	DW	RANCH	C	24.91	F
112	1	HUSTLE RD (OFF)	0	VACANT			5	
113	1	ULLAINEE RD RT 640	0	VACANT			147	
114	1	ULLAINEE RD (OFF)	0	VACANT			112	
115	1	ULLAINEE RD (OFF)	0	VACANT			35	
116	1	ULLAINEE RD (OFF)	0	VACANT			10	
117	1	CARPENTERS REST RD(OFF)	0	VACANT			53.79	
118	1	TIDEWATER TRAIL	0	VACANT			5	
119	1	TIDEWATER TRAIL	0	VACANT			41	
120	1	TIDEWATER TRAIL (OFF)	0	VACANT			35	
121	1	TIDEWATER TRAIL	1970	DWELLING	RANCH	C+5	4.75	A
122	1	ESSEX CHURCH RD (OFF)	0	VACANT			0.839	

I Wonder How Grades are Applied in my Database…

The Importance of Consistent Grading

	A	B	C
1	AMDWEL	DWELLING	
2			
3	Row Labels	Count of AMACT#	
4		99	
5	B	1	
6	C+5	1	
7	A	20	
8	A+10	4	
9	A+15	2	
10	A+20	1	
11	A+25	4	
12	A+35	3	
13	A+5	9	
14	A+50	5	
15	A+99	4	
16	A-10	9	
17	A-5	8	
18	B	87	
19	B+10	69	
20	B+5	55	
21	B-10	112	
22	B-5	103	
23	C	1362	
	C-5	23	



Diving Deeper

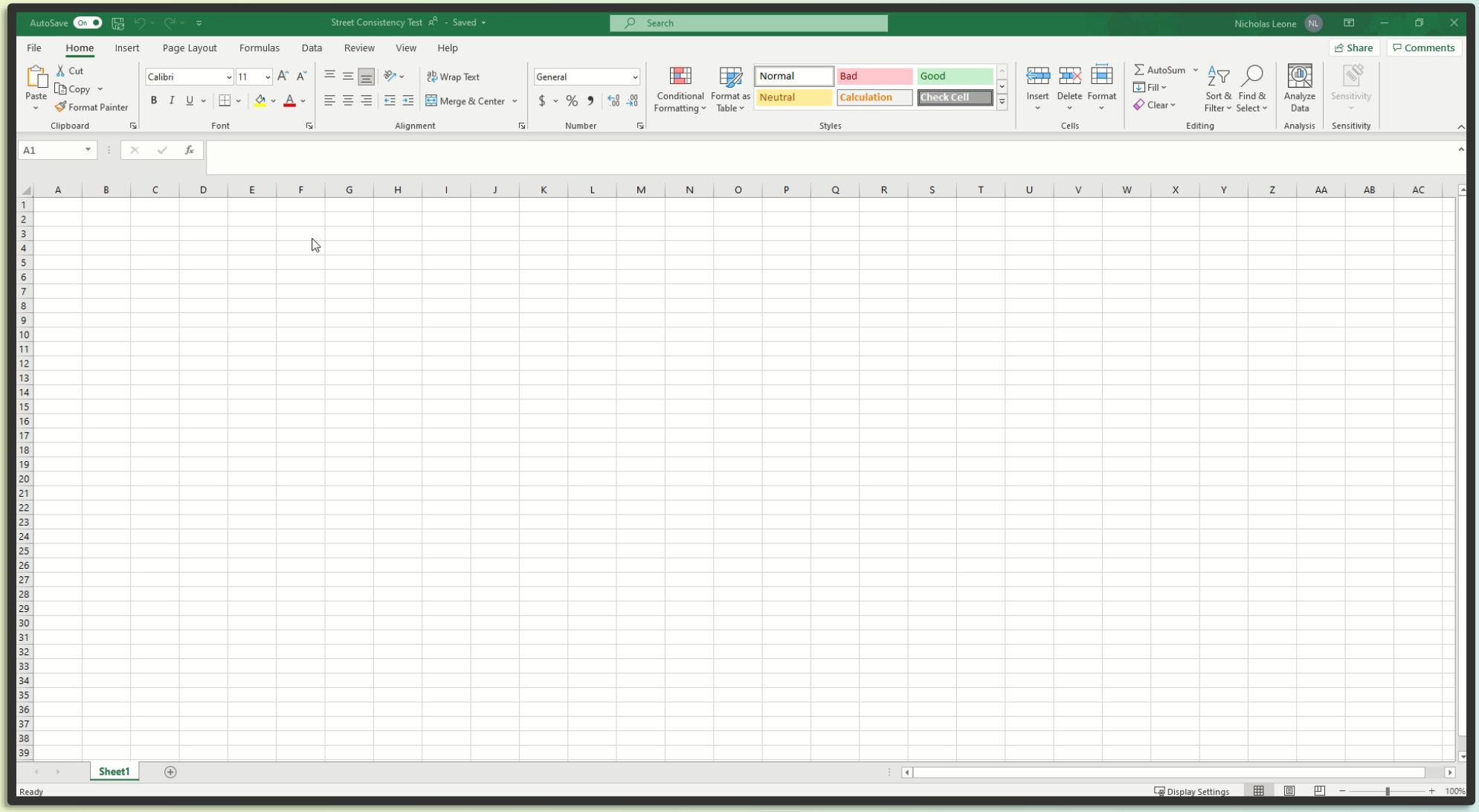
BUNAGLOW	7
	2
C+5	1
C+5	1
C-10	1
D+10	1
D+5	1
BUNGALO	4
	1
D+5	1
D+10	1
E-5	1
BUNGALOW	22
	2
C	2
C+5	1
C-10	2
D	3
D+10	2
D+5	3
D-10	1
D-5	2
E	1
E+10	3

Addresses – The Recurring Database Nightmare

address_1	address_2
#78 KANSAS RD	
#8 VIN STREAM ROAD	
% AGNES PARADISE	23 MYERS RD
% JOSIE MCPHEE	PO BOX 598
% JUANITA BAKER	121 ROUTE 6
& THOMAS A	298 MCINTIRE ROAD
& THOMAS D BOOTH	9 WOODLAWN AVENUE
& THOMAS D HANSEN	179 PEASE RD
& THOMAS E LEONARD JR	3 MARTIN HEIGHTS
&R. BRIAN BLOOD	109 LAWRENCE STREET
1 BARROWS FALLS ROAD	
1 BOWDOIN MILL ISLAND	SUITE 201
1 HADLEY STREET UNIT 1E	
1 HARBOUR PLACE	UNIT 4H
1 PIERCEVILLE RD	PO BOX 703
1 PILGRIM LANE	
1 PINE RIDGE DRIVE	
1 PINE ST	
1 POINSETTIA LANE	
1 POINT ROAD	

E911address	Roadfrontage
BLADES TRAIL	RT 614 - PAVED & GRAVEL
CARTERS FERRY ROAD	RT 626 GRAVEL
1837 RICKEY ROAD	RT 634 GRAVEL
BEETLE SPINNER DRIVE/CARTERS FERRY RD	CARTERS FERRY RD
132 KEESLING SCHOOL ROAD	RT 11 PAVED
124 CLEVELAND AVE	RT 1003 PAVED
RAMSEY MT ROAD	RT 614 - PAVED
136 CLEVELAND AVE	RT 1003 PAVED
PAULEY FLATWOOD ROAD	RT 608 GRAVEL
LEAD MINE ROAD	RT 69 PAVED
196 SPENCER DR	OFF RTS 772 AND 607
1570 & 1578 (DW) AUSTINVILLE ROAD	RT 619 PAVED
RIVERVIEW ROAD/SHORTLEAF LANE	OFF RT 634
130 BLEVINS RD + MH AT 170 BLEVINS RD	RT 11 PAVED
1154, 1140 & 893 CASTLETON ROAD	RT 607 PAVED
CROCKETT ROAD/TABERNACLE ROAD	RT 625 PAVED
1778 CROCKETT ROAD	RT 625 PAVED
PEAK CREEK ROAD, MILLERS CREEK ROAD	RT 712 - GRAVEL
221 & 211 HOGBACK RD & 124 SWALLOW HOLLO	RT 666 GRAVEL
	OFF RT 679

The Importance of Consistency Demo



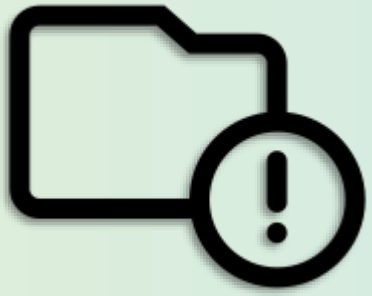
Dimension 4: Completeness

Are There Holes in Your Data?

Are There Holes in Your Data?

Sketches?

Addresses?



Class?

AYB?

Use Filter to Easily Find Your Gaps

rem_p	rem_acct_nu	REM_PRCL_LOCN	REM_PRCL_LOCN_STREET	AdrNum1	AdrStreet1	AdrNum2	AdrStreet2	AdrNum3	AdrStreet3	AdrNum4	AdrSt
43206	13737	1 OON WAY, 1505 W SPILLER ST-VOC. BLD	OON WAY, 1505 W SPILLER ST-VOC. BLD	1	MAROON WAY	1505	W SPILLER STREET	1570	W RESERVOIR STREET		
43207	13737	1 OON WAY, 1505 W SPILLER ST-VOC. BLD	OON WAY, 1505 W SPILLER ST-VOC. BLD	1	MAROON WAY	1505	W SPILLER STREET	1570	W RESERVOIR STREET		
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43210	13737	1 OON WAY, 1505 W SPILLER ST-VOC. BLD	OON WAY, 1505 W SPILLER ST-VOC. BLD	1	MAROON WAY	1505	W SPILLER STREET	1570	W RESERVOIR STREET		
43211	13737	1 OON WAY, 1505 W SPILLER ST-VOC. BLD	OON WAY, 1505 W SPILLER ST-VOC. BLD	1	MAROON WAY	1505	W SPILLER STREET	1570	W RESERVOIR STREET		
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43217	13737	1 OON WAY, 1505 W SPILLER ST-VOC. BLD	OON WAY, 1505 W SPILLER ST-VOC. BLD	1	MAROON WAY	1505	W SPILLER STREET	1570	W RESERVOIR STREET		
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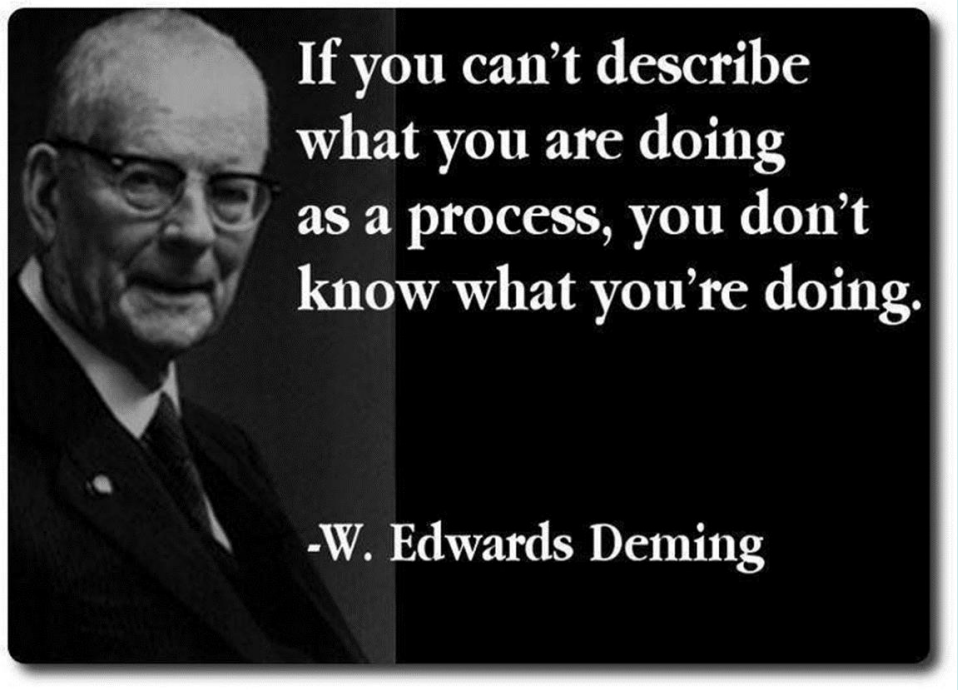
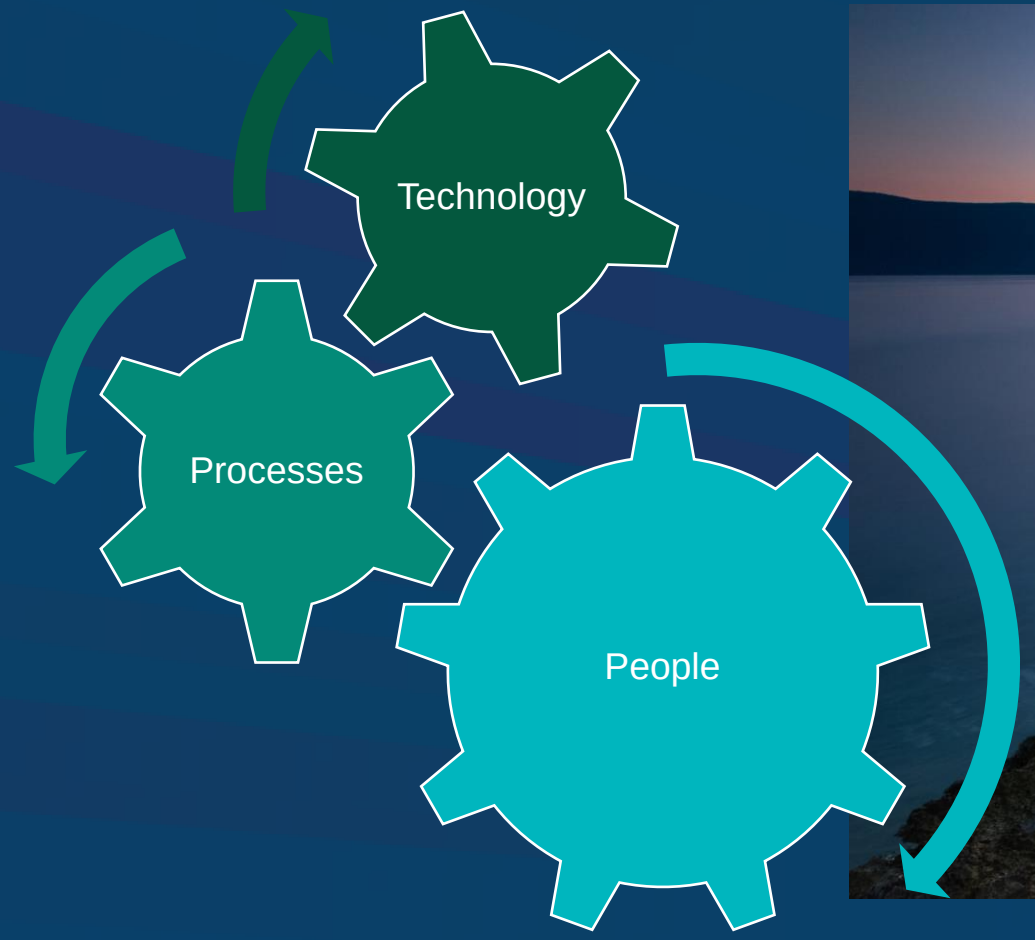
Daily Data Quality



Build Quality Into Your Business Processes

IAAO CONFERENCE + EXHIBITION
2021
EMBRACING CHANGE
August 29 - September 1 ▸ Chicago, Illinois

No Processes? Now's a Great Time to Start!



Recap

We Are Grateful for the Time You Have Invested in Us Today!

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2021

What Did We Cover Today?

- IAAO Standard on Data Quality
- Data Sleuthing in Microsoft Excel
- Four Dimensions of Data Quality
- Building Quality into Business Processes

How Can We Help?

Huge Shout-Out!

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Special Thanks!

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We'd Love to Hear From You!

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