

Leveraging Analytics

Follow along at: <http://bit.ly/leveraging-analytics>

See the code at: <http://bit.ly/leveraging-analytics-code>

Key Questions for the Morning

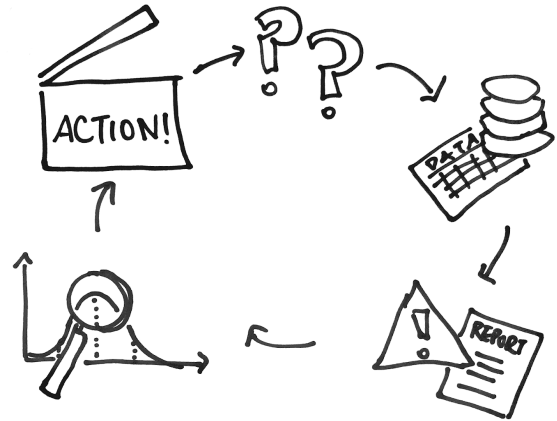
- What is the value of data?

- What is analysis?

- What does it mean to be data-driven?

The Analytics Value Chain

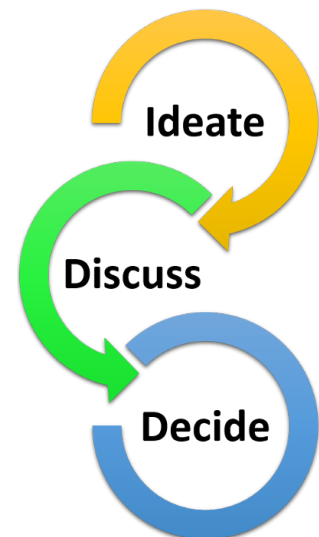
- What are the key steps?



- What are the key things to keep in mind?

Problem Scoping

- **Ideate:** On your own, generate at least 3 ideas (ideally more), each on their own Post-It Note
- **Discuss:** Review the ideas generated
- **Decide:** Come to a consensus as a group



Process Mapping Steps

Outcomes vs Outputs

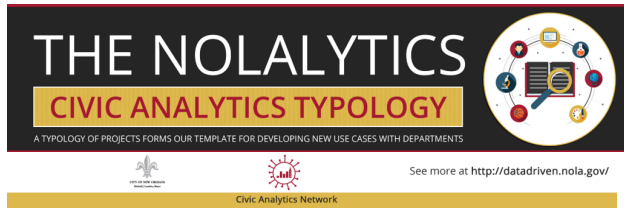
- Identify the key problem/question

- Identify the desired outcome

- Identify key outputs

- Identify the key inputs (data)

- Identify the key steps to use inputs to achieve the outcome



Based on the work of the [City of New Orleans, Office of Performance and Accountability](#)
Graphics: Copyright © [Harvard University Ash Center](#) (Used with Permission)



4 Concerns to Be Mindful Of

1. Technical

2. Legal

3. Cultural

4. Political

Key Benefits of Good Analysis

Key Questions for the Afternoon

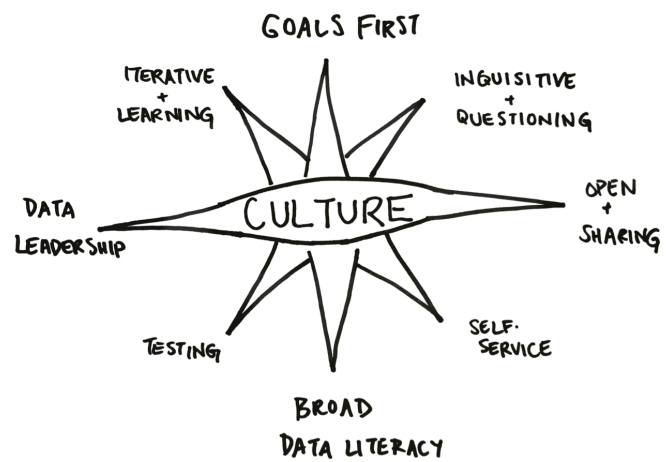
- What is open data?

- What are the benefits of open data?

- What are some of the concerns with open data?

- What is exploratory data analysis? Why is it important?

- What is a data-driven culture?



- How do we create it in our organization?

Data Exercise

Filter

Filter this dataset based on contents.

Created Date is between

01/01/2016 12:00:00 AM and 04/01/2016 12:00:00 AM

and

Complaint Type contains

noise

Download

Download a copy of this dataset in a static format

Download As

CSV

CSV for Excel

JSON

RDF

RSS

TSV for Excel

XML

Filtering

Layout Formulas Data Review View

Sort Filter Clear Reapply Advanced Text to Columns Remove Duplicates

Sort & Filter Data

Filter (Ctrl+Shift+L)

Enable filtering of the selected cells.

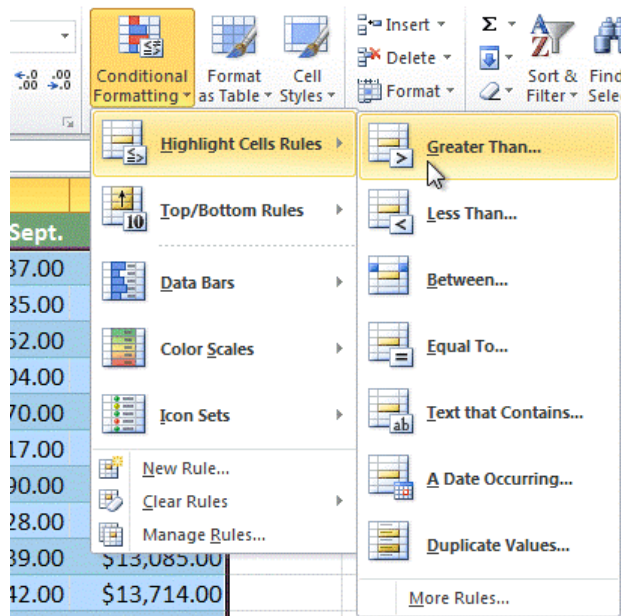
Once filtering is turned on, click the arrow in the column header to choose a filter for the column.

Press F1 for more help.

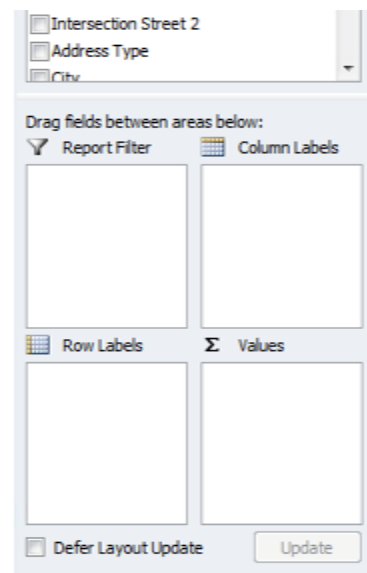
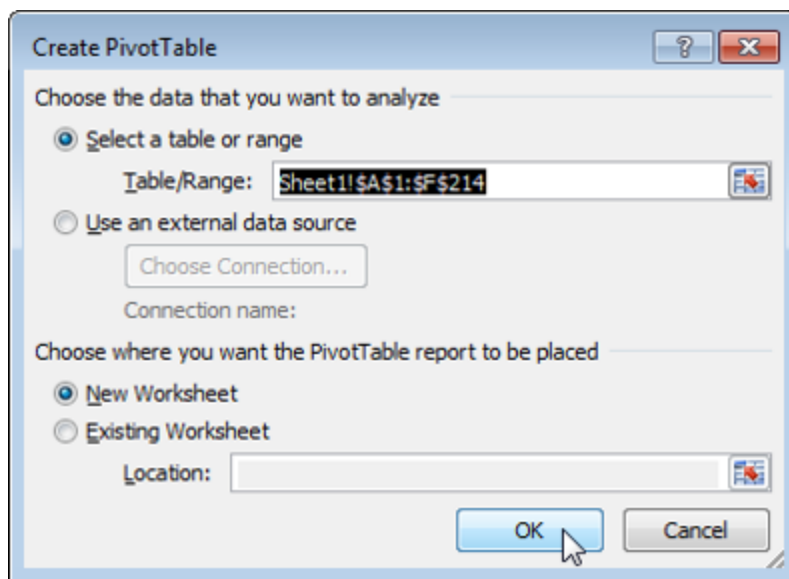
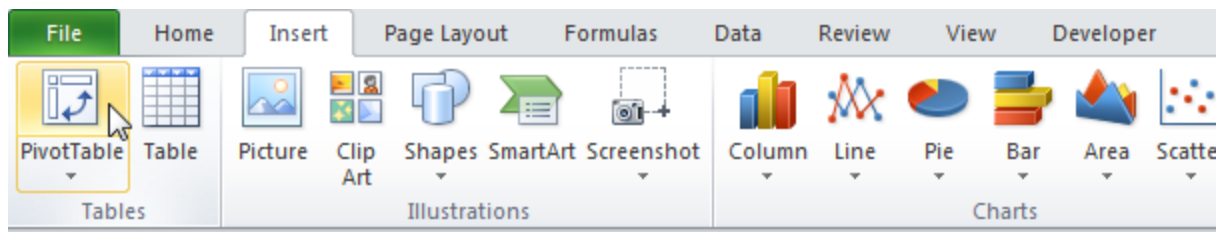
	A	B	C	D	E	F
1	Unique K	Created Dat	Closed Date	Agen	Agency Name	Complaint Type
2						
3						
4						

	A	B	C	D	E	F
1	Unique K	Created Dat	Closed Date	Agen	Agency Name	Complaint Type

Conditional Formatting



PivotTables



Useful Functions in Excel

=**SUM()**: Calculates the sum for a range of numbers

=**COUNT()**: Counts the number of cells containing numbers in a range

=**COUNTA()**: Counts the number of non-blank cells in a range

=**HOUR()**: Extracts the hour from a timestamp

=**WEEKDAY()**: Extracts the day of the week from a timestamp

=**CHOOSE()**: Uses an index number to return a result from an ordered list of values

Technical Support

- Microsoft Office Support <http://office.microsoft.com/en-us/support>
- Excel Tips <http://excel.tips.net>
- Data Science Cheatsheet <https://github.com/govex/Data-Science>
- Open Data Handbook <http://opendatahandbook.org>

Resources

- Data Driven New Orleans <https://datadriven.nola.gov>
- Harvard Government Performance Lab <https://govlab.hks.harvard.edu>
- Carl Anderson **Creating a Data-Driven Organization**
- DJ Patil & Hilary Mason **Data Driven: Creating a Data Culture** <https://www.oreilly.com/ideas/data-driven>
- Datapolitan training classes <http://training.datapolitan.com/>

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Your Notes