

# Data Analytics for Managers

# Instructors: Richard Dunks and Julia Marden

Follow along at: <a href="http://bit.ly/data-driven-gov">http://bit.ly/data-driven-gov</a>

See the code at: <a href="http://bit.ly/data-driven-gov-code">http://bit.ly/data-driven-gov-code</a>

## Key Questions for the Morning

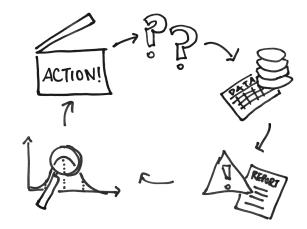
- What is the value of data?

- What is analysis?

- What does it mean to be data-driven?

## The Analytics Value Chain

- What are the key steps?

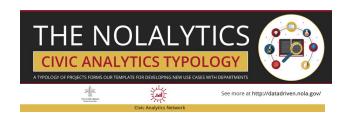


- What are the key things to keep in mind?

# **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





Based on the work of the <u>City of New Orleans</u>, <u>Office of Performance and Accountability</u> Graphics: Copyright <sup>©</sup> <u>Harvard University Ash</u> <u>Center</u> (Used with Permission)



Finding the needle in a haystack



Better, quicker decisions



Prioritizing work for impact



Optimizing resource allocation



Early warning tools



Experimenting for what works

#### 4 Concerns to Be Mindful Of

1. Technical

2. Legal

3. Cultural

4. Political

Key Benefits of Good Analysis

# Key Questions for the Afternoon

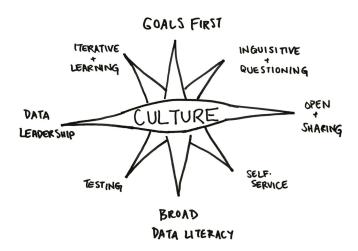
- What is open data?

- What are the benefits of open data?

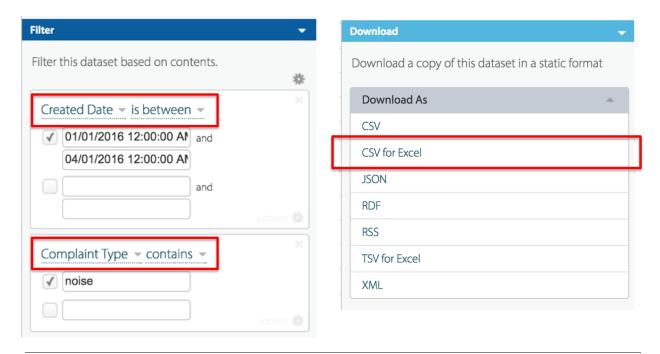
- What are some of the concerns with open data?

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

- What is a data-driven culture?

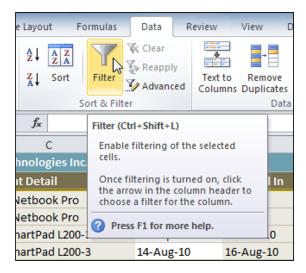


- How do we create it in government?



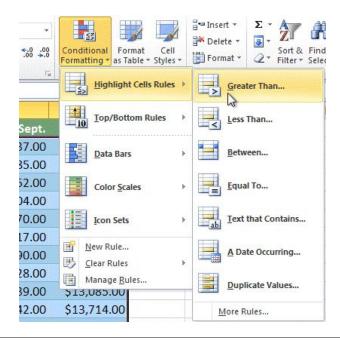
#### **Data Exercise**

## **Filtering**



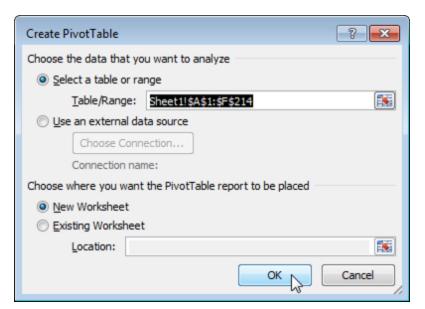


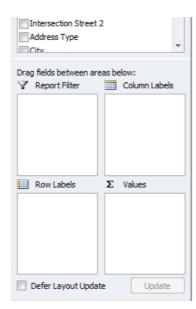
## **Conditional Formatting**



#### **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

#### **Your Notes**

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#### Resources

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