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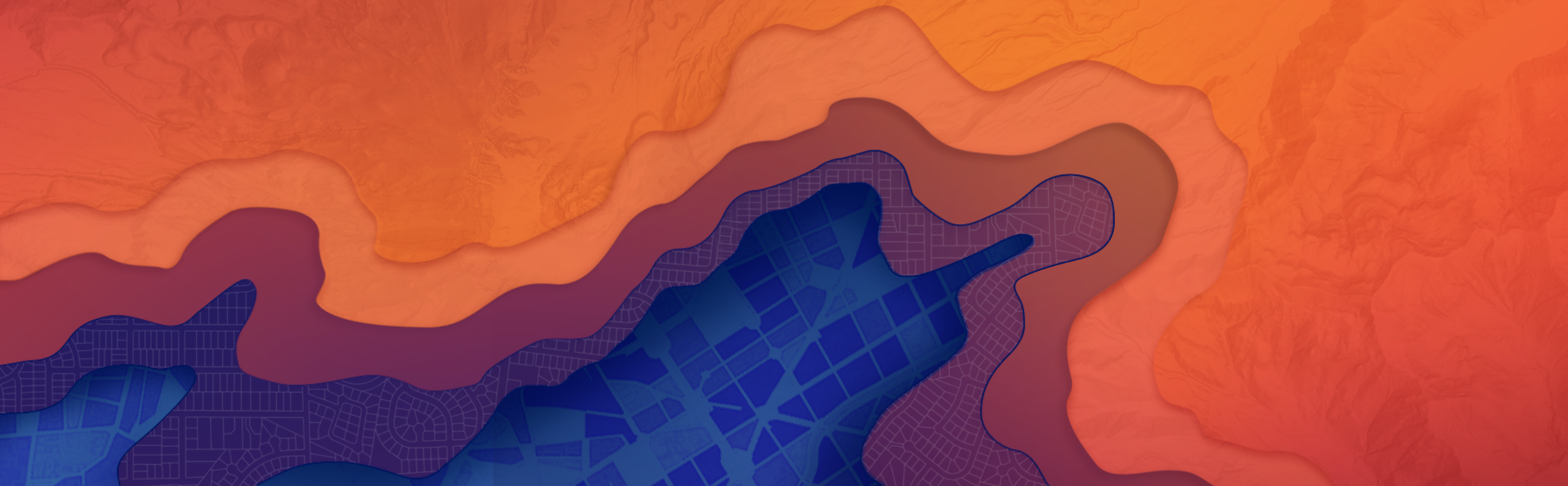
# *Cartography Bring Your Data to Life*

*Sarah Bell*



# *Terms*

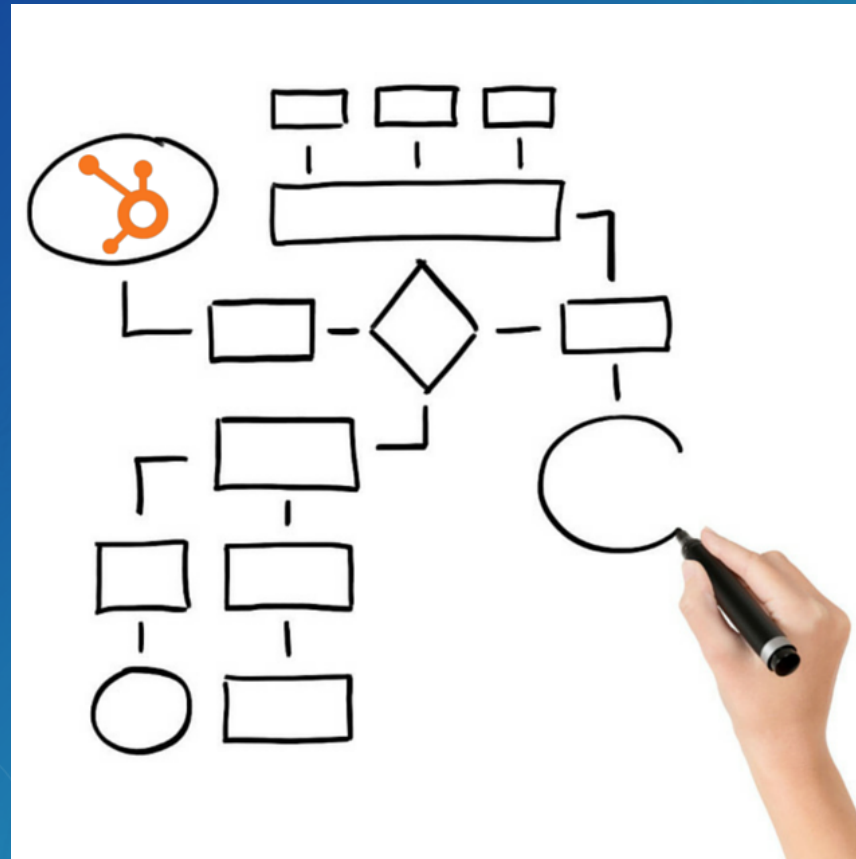
MAPPING & VISUALIZATION JARGON



# Mapping & Visualization

## UNPACKING THE JARGON

**WORKFLOW** - "The sequence of industrial, administrative, or other processes through which a piece of work passes from initiation to completion." - Oxford Dictionary, 2017



# Google Books Ngram Viewer

Graph these comma-separated phrases:   case-insensitive

between  and  from the corpus  with smoothing of  [Search lots of books](#)



(click on line/label for focus, right click to expand/contract wildcards)



# Mapping & Visualization

UNPACKING THE JARGON

**VISUALIZATION** - *“The representation of an object, situation, or set of information as a chart or other image”* - Oxford Dictionaries, 2017

**INFORMATION VISUALIZATION** - *“Information visualization is the process of representing data in a visual and meaningful way so that a user can better understand it.”* - Interaction Design Foundation, 2017 ([www.interaction-design.org](http://www.interaction-design.org))

**DATA VISUALIZATION** - *“Information visualization with datasets.”* - Sarah Bell, just now

# *Mapping & Visualization*

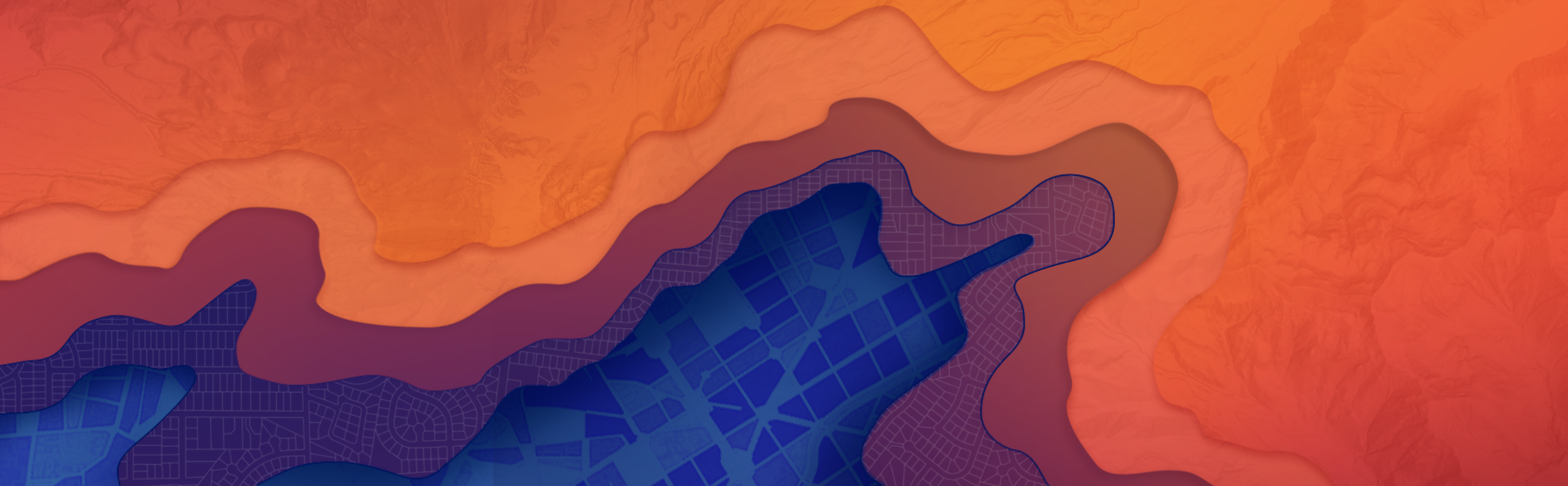
UNPACKINGG THE JARGON

*CARTOGRAPHY* - The science and art of map making.



# *Workflow*

CUSTOM IS KEY



# *The Best Workflow Design Begins Open-ended*

FREEDOM IN THE LACK OF INITIAL SPECIFICITY

- *Taking the time to design your project's workflow can improve efficiency.*
- *When you are designing your organization's cartographic data visualization's workflow, starting with an open-ended approach will allow you to uncover unforeseen data stories*
- *Starting with an open approach provides your project with flexibility and longevity; the capacity to pivot, integrate, and eliminate*



# *The Best Workflow Design Begins Open-ended*

IMPROVE EFFICIENCY

- *Taking the time to design your project's workflow can improve efficiency.*

# *The Best Workflow Design Begins Open-ended*

UNCOVERING HIDDEN STORIES WITH YOUR SPATIAL DATA

- *When you are designing your organization's cartographic data visualization's workflow, starting with an open-ended approach will allow you to uncover unforeseen data stories*
  1. *Get to know your data.*

*EXAMPLE OF THIS WITH MAPS, DATA, IMAGES*



# *The Best Workflow Design Begins Open-ended*

UNCOVERING HIDDEN STORIES WITH YOUR SPATIAL DATA

- *When you are designing your organization's cartographic data visualization's workflow, starting with an open-ended approach will allow you to uncover unforeseen data stories*
1. *Get to know your data.*
  2. *Know your statistics.*

**EXAMPLE**

# *The Best Workflow Design Begins Open-ended*

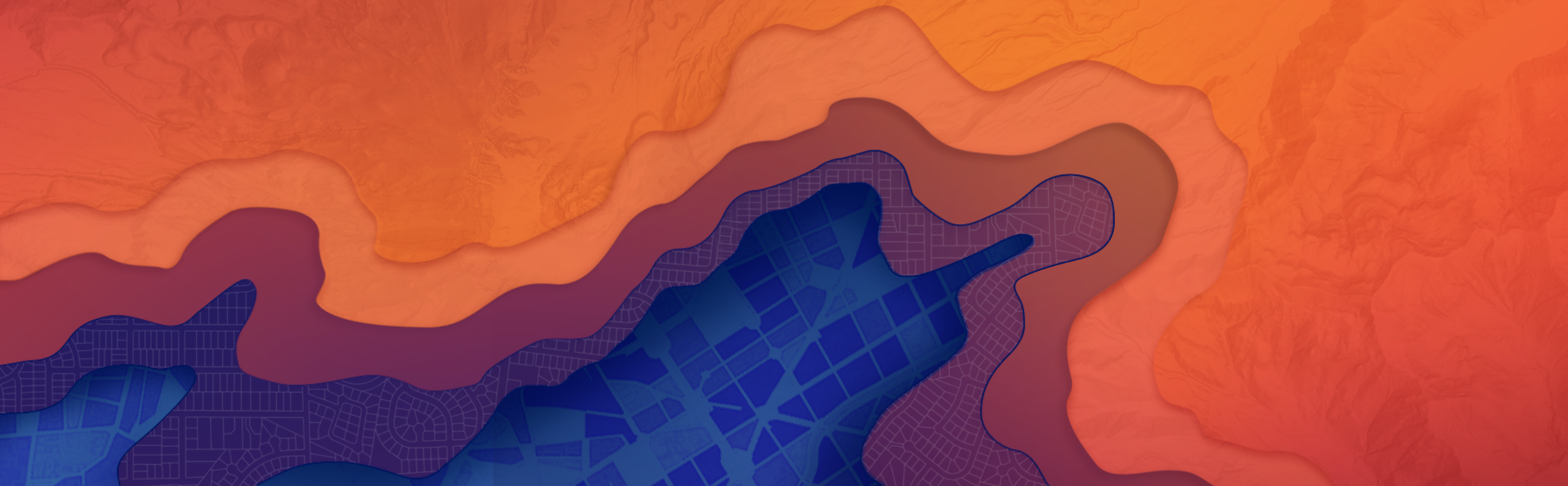
UNCOVERING HIDDEN STORIES WITH YOUR SPATIAL DATA

- *Flexibility: the capacity to pivot, integrate, and eliminate*



# *The Right Viz for the Data*

OPTIMIZING DATA COMMUNICATION



# *Point Data*

- 1. Geoprocessing rows and columns into point data is straightforward*
- 2. Point data is the simplest way to indicate location on a map*
- 3. There are several methods to visualize point data*



# Vancouver, British Columbia

THE RIGHT VIZ FOR THE DATA

Year, Month, Day, Hour, Minute

Neighborhood

Type of crime:

Break & Enter Commercial'

Break & Enter Residential/Other

Mischief

Other Theft

Theft from Vehicle

Theft of Bicycle

Theft of Vehicle

Vehicle Collision

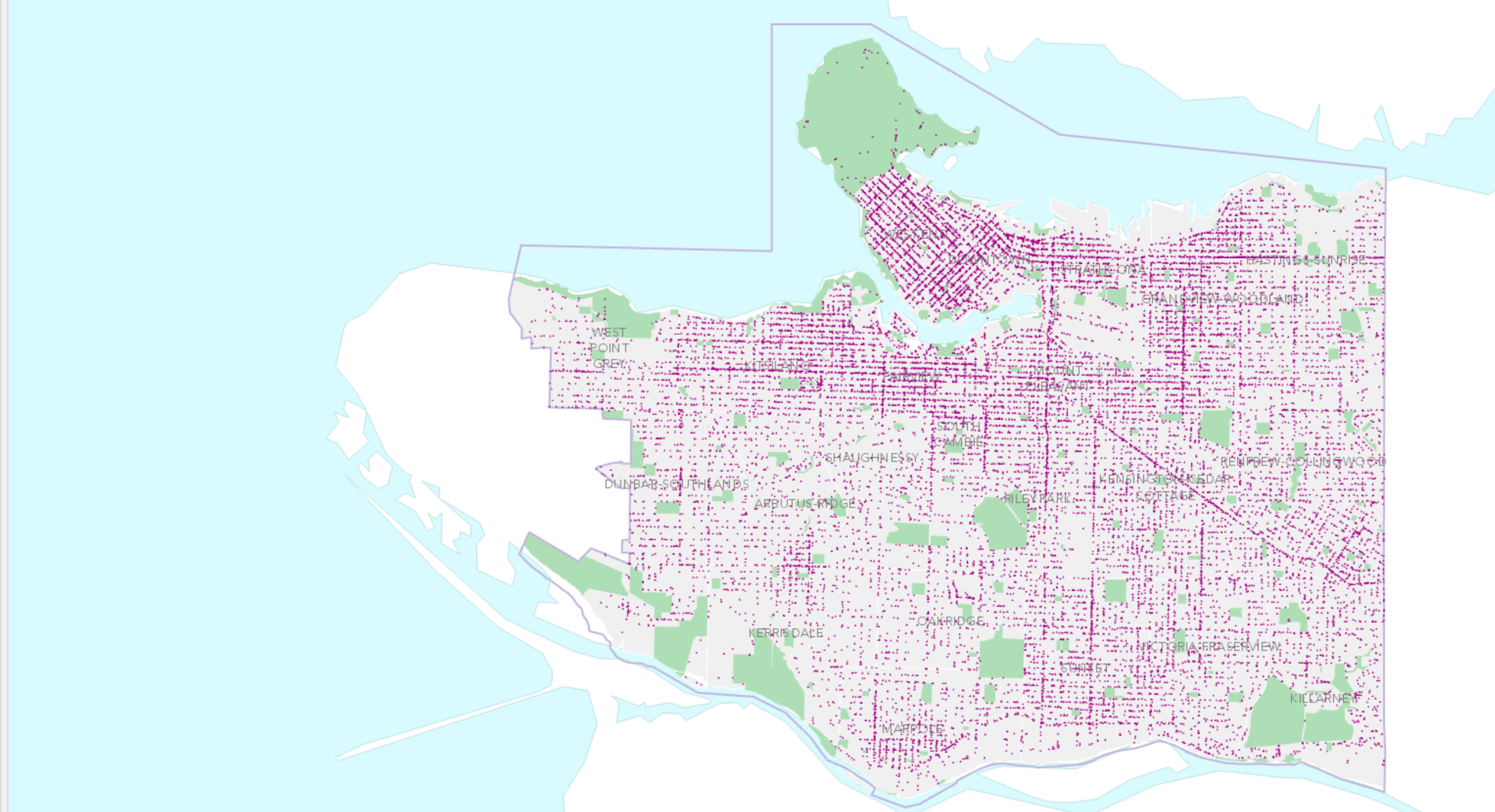
FID	Shape	TYPE	YEAR	MONTH	DAY	HOUR	MINUTE	H_BLOCK	N_HOOD
0	Point	Mischief	2003	7	9	23	15	31XX E 58TH AVE	Killarney
1	Point	Mischief	2003	1	12	6	0	8XX PRINCESS AVE	Strathcona
2	Point	Theft from Vehicle	2003	3	29	18	0	18XX W 61ST AVE	Kerrisdale
3	Point	Theft from Vehicle	2003	10	5	23	0	18XX W 63RD AVE	Kerrisdale
4	Point	Mischief	2003	6	29	21	0	31XX E 62ND AVE	Killarney
5	Point	Theft from Vehicle	2003	1	14	12	0	22XX W 37TH AVE	Arbutus Ridge
6	Point	Mischief	2003	10	5	11	45	8XX PRIOR ST	Strathcona
7	Point	Theft from Vehicle	2003	8	30	15	30	4XX BROUGHTON ST	Central Business Dist...
8	Point	Theft from Vehicle	2003	10	16	2	0	60XX YEW ST	Kerrisdale
9	Point	Theft from Vehicle	2003	3	30	22	0	18XX W 64TH AVE	Kerrisdale
10	Point	Theft from Vehicle	2003	9	3	3	10	60XX YEW ST	Kerrisdale
11	Point	Theft from Vehicle	2003	1	31	18	30	24XX W 1ST AVE	Kitsilano

0 of 46403 selected

Over 46 thousand records







- 1. show raw points 2003
- 2. We could do them by type, but that's still a little hard.
- 3. let's dive into some comparison: Theft of vehicle vs. theft from vehicle
- 4. compare those spatially
- 5. Aggregate to polygons (neighborhood AND hexagons)
- 6. map them by time of day (choropleth dots)
- 7. map them by time of year (choropleth dots).
- 8. Serial mapping time of day (hexagon)
- 9. serial mapping time of year (hexagon)
- 10. Dataviz to accompany the final map. (trendlines, etc.)

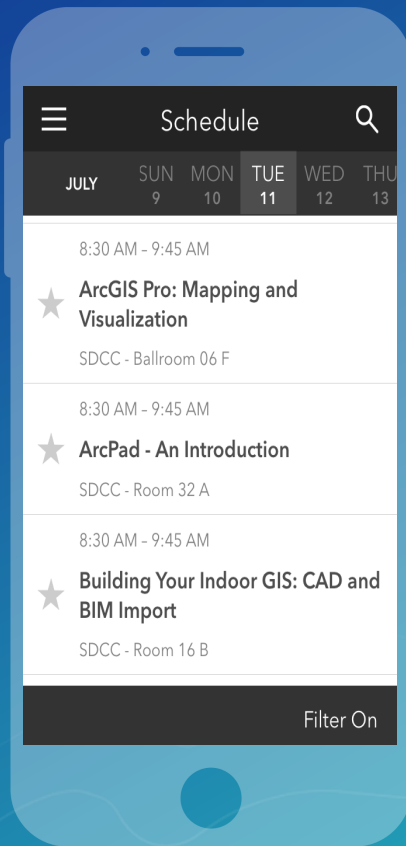


# Please Take Our Survey on the Esri Events App!

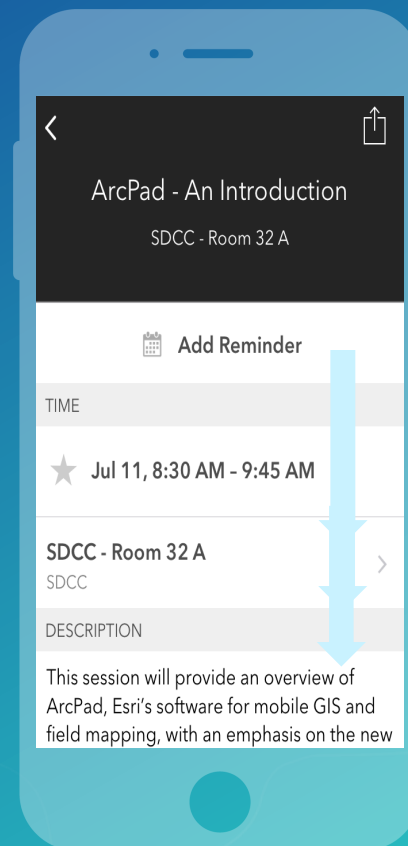
Download the Esri Events app and find your event



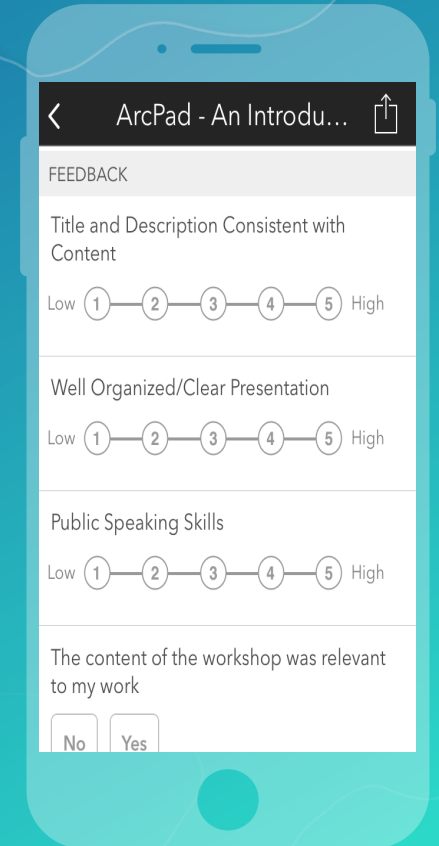
Select the session you attended



Scroll down to find the survey



Complete Answers and Select "Submit"





esri

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SCIENCE  
OF  
WHERE