

SCAG GIS/Big Data

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What is BIG Data?

Velocity

- Sensor-based information – traffic flow (Waze), parking

Variety

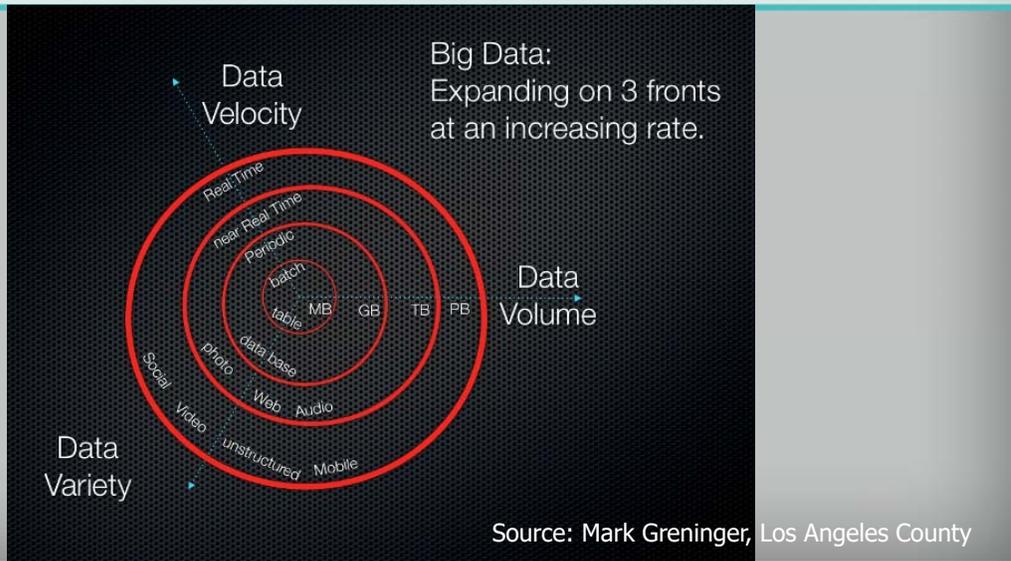
- Social Media - sentiment analysis, predictive policing, sidewalk repairs

Volume

- Raster analytics - solar analysis (12.5 billion points)

Source: Mark Greninger, Los Angeles County

What is BIG Data?



Open Data Defined

"Open data is the idea that some data should be freely available to everyone to use and republish as they wish, without restrictions from copyright, patents or other mechanisms of control." –Wikipedia

- Government agencies generally open the most requested existing data sets to the public first
 - This saves time because the data source is:
 - Researched thoroughly once
 - Redacted for privacy and security
 - Attorney approval is granted in advance of CPRA requests

Source: Lea Deesing, City of Riverside

Examples of Analytics and Maturity Level

Prescriptive— What should we do?

How should we allocate staff?
Which project should we do first?

Predictive – What Might Happen?

Is this a trend, or is it an anomaly?
Can we extrapolate to make predictions for other routes?

Descriptive with context? – Why Did it Happen?

Why do so many residents lack health insurance?
Why did traffic spike on this route?

Descriptive – What Happened?

How many residents lack health insurance?
What is the busiest route?

Source: Scott Larson, Microsoft

SCAG Open Data / Big Data

Smart and Connected Region Committee



Committee Goals

- Review SCAG's current data initiatives and tools within the context of big and open data
- Determine an appropriate role for SCAG in addressing the challenges and opportunities that big data, open data, and new technologies provide
- Develop strategic recommendations for the agency that can add value and hasten the adoption of innovative policies and programs across the region

Committee Goals

- Expected Deliverable: *Regional Smart Cities Framework*
 - A report to be adopted by the Regional Council to provide direction to SCAG
 - Policy framework for big data, open data, and smart cities
 - Overview of the topics addressed by the committee, including challenges and opportunities
 - Strategic priorities, including identified short term projects and long term initiatives

Regional Data Survey

Survey for Local Jurisdictions



Survey Audience + Objectives

- Identify current data needs and opportunities from local jurisdictions
- Foster initiatives that support data-driven decision making in regional and local planning
- Meet data related opportunities and challenges of the next decade



Survey Content

- Data Needs:
 - In what areas of local policymaking, do you have the greatest challenge in securing local or regional data to make informed decisions?
 - In what areas of local policymaking do you have sufficient amounts of data to make informed decisions?
 - What types of data could SCAG provide that would be most beneficial to you?
- Analytics Capabilities:
 - On a scale of 1-10, how much capacity does your agency have to capture and use data to inform decision-making?
 - Does your agency have a GIS department or other avenue for mapping data to better understand local policy issues?



Survey Content (Continued)

- Data Resources:
 - What data do you collect and report that might be helpful in understanding larger regional trends in housing, transportation, land-use, environment, etc.?
- SCAG's Role + Future Opportunities:
 - What role should SCAG play in the realm of big/open data and smart cities?
 - How often do you use SCAG data sources for your day-to-day work?
 - How could SCAG best promote existing data sets?
 - Are you aware of other regional data collaboratives or partnerships that SCAG should engage through this effort?



Questions



SCAG Benchmarking

State-of-the-Practice

- Static maps including those made with GIS
- Static Reports
- GIS Shapefiles
- Interactive maps
- Interactive datasets
- Aerial imagery/lidar

State-of-the-Art

- Dashboards/Summary data
- Technical advisory committees
- Bi-directional information sharing
- Open-data portal
- Enterprise data systems