Empowering a Data-Driven Organization

Adam Carnow
Abstract

There is a lot of discussion surrounding business intelligence and data-driven decisions. But what does that mean? What technology and governance do you need in place? Organizations need to develop a comprehensive strategy for data-driven decision-making. This session will show you how to use Esri technology to create your strategy by first collecting, organizing, and analyzing data in a more meaningful way; then identifying ready-to-use applications to solve problems that affect your community; and finally, providing your personnel with the tools they need to act on this information.
quality data reporting management
Business Intelligence (BI) is the set of techniques and tools for the transformation of raw data into meaningful and useful information for business analysis purposes.
Location Intelligence defined:
Location Intelligence (LI) is the process of deriving meaningful insight from geospatial data relationships to solve a particular problem.
Data-Driven defined:
...often labeled as business jargon for evidence-based decision-making...

**Data-Driven** is progress in an activity compelled by data, rather than by intuition or personal experience.
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...often labeled as business jargon for evidence-based decision-making...

Data-Driven is progress in an activity compelled by data, rather than by intuition or personal experience.

• Controlling for other factors, data-driven organizations are:
  - 5% more productive
  - Analytics pays back $13 per $1 invested

Source: Creating a Data-Driven Organization by Carl Anderson
http://www.slideshare.net/CarlAnderson4/ddo-seattle
Putting Data to Work

Featured Initiative

VISION ZERO
LOS ANGELES 2015-2025

“Every year, more than 200 people are killed while trying to move around Los Angeles. Nearly half of the people who die on our streets are people walking and bicycling, and an alarming number of them are children and older adults. Our streets must be safer.” – Mayor Eric Garcetti

See how the Los Angeles Vision Zero initiative is making our streets safer by putting data to work.

See Data in Action

Los Angeles Annual Traffic Fatalities and Severe Injuries
Field EOC Operations Dashboard

Agile Work Request Type
- TREES: 19 (9.55%)
- CONCRETE: 3 (2.35%)
- GENERAL MAINTENANCE: 4 (4.71%)
- DRAINAGE CLEAN: 10 (75.25%)

Work Requests by Inspector
- HIDDEN, CAROL: 5
- GRIGGS, GREG: 5
- HINCHLIFFE, DAVE: 3
- DERRICK, LARRY: 3
- FLOWERS, FRED: 3
- COUNCILL, BRYAN: 3
- VINCENT, JON: 5
- BALLARD, KAREN: 3
- TAYLOR, ROB: 3

Work Requests Completed
- GENERAL MAINTENANCE: 4
- TREES: 19
- ROAD MAINTENANCE: 2
- DRAINAGE CLEAN: 10

Latest Calls
- #1594601 (PER KAREN): NEED HIGH WATER SIGNING INSTALLED.
- #1594597 (RODGERS, JOHN): CITIZEN STATED COUNTY CAME OUT TWICE AND ADVISED PIPE CORRODING UNDER/YARD AND SHOULD BE REPAIRED NOW. HOLE IS GETTING BIGGER NEAR DRIVEWAY AND INTENSITY OF DRIVEWAY IS A FACTOR. THE PIPE GOES INTO JOES CREEK. CITIZEN STATED EMERGENCY DUE TO DRIVEWAY IMPACTED SOON.
- #1594597 (SCF 2857840): WATER FROM THE DRAINAGE DITCH BEHIND CALAIG IS OVERFLOWING ONTO TOP APARTMENT/PROPERTY, WITH CONTINUED RAIN OUR DOWNSTAIRS UNITS WILL SOON FLOOD. MAYBE PRIVATE, BUT SAW DRAINAGE PIPE ON MAP.
- #1594596 (DEFABRIO, SUSAN): THE DRAINAGES IN THE DEAD END ARE FILLED WITH GARBAGE AND NOW THE STREET IS FLOODED.
- #1594595 (COLEMAN, TAMMY): DRAINAGE ISSUE AS STORM DRAIN ARE NOT DRAINING POSSIBLY CLOGGED. THIS IS AT BOTH THE NORTH & SOUTH ENDS OF THE ROADWAY (WATER IS KNEE DEEP).
- #1594593 (KENDALL): TREE FELL ON VACANT HOME POSSIBLY PRIVATE & ON SUNDAY MORNING & YESTERDAY THE NEXT DOOR NEIGHBORS STARTING CUTTING IT UP & LEFT ON ROW & NOW ITS BLOWN INTO THE ROADWAY & IS BEING HIT BY VEHICLES & WORRIED ABOUT THE STORM & WANTS REMOVED.
- #1594592 (GORDON): POT HOLE IN FRONT OF PROPERTY.
- #1594591 (Tiffany):
Johns Creek DataHub
Open Data, Dashboards, and Mapping Apps

The "DataHub" is the City of Johns Creek's central location for open data, dashboards, and interactive mapping applications.

Through this Hub, you can visualize city data in maps, charts, and dashboards. Developers can even tie their own data services and applications into City data.

Visualize Data in Dashboards
Dashboards provide an interactive way of visualizing information in the Johns Creek DataHub.

Most Common Data
Explore the most commonly accessed data in the DataHub

CreekView
Interact with property information through a map

Business Locations
Find businesses and associated information

Building
Browse building permits and construction projects
Which strategies have proved successful in promoting a data-driven culture in your organization?

<table>
<thead>
<tr>
<th>Strategy</th>
<th>% of respondents</th>
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</thead>
<tbody>
<tr>
<td>Top-down guidance and/or executive mandate</td>
<td>49</td>
</tr>
<tr>
<td>Promotion of data-sharing practices</td>
<td>48</td>
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<tr>
<td>Increased availability of training in data analytics</td>
<td>40</td>
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<tr>
<td>Communication of the benefits of data-driven decision-making</td>
<td>40</td>
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<tr>
<td>Recruitment of additional data analysts</td>
<td>17</td>
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</tbody>
</table>

Source: Creating a Data-Driven Organization by Carl Anderson
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Smart [insert noun here]

- Smart Phone
- Smart Cars
- Smart Board
- Smart Device
- Smart Sensor
- Smart Network
- Smart Grid
- Smart Growth

- Smart Schools
- Smart Government
- Smart City
- Smart County
- Smart State
- Smart Nation
- Smart World
- Smart Community
A Smart Community is…

- Safe

SAFE

Detect where police are needed before an incident occurs.

Police departments use intelligent maps to identify threats so they can proactively avert trouble. Share information across jurisdictions to improve situational awareness, safeguard lives, and protect property.

Discover Safety Solutions
A Smart Community is...

- Safe
- Well-Run

Intelligently address infrastructure improvements to limit public impact.

To maximize the efficiency of events such as road resurfacing, well-run communities communicate developments publicly through transparent intelligence platforms. Informed citizens can plan to avoid congestion while local utilities can simultaneously take the opportunity to inspect their underground assets, limiting disruptions from breaking ground in the future.

Explore Optimization
A Smart Community is…

- Safe
- Well-Run
- Livable
A Smart Community is...

- Safe
- Well-Run
- Livable
- Healthy
A Smart Community is...

- Safe
- Well-Run
- Livable
- Healthy
- **Prosperous**
A Smart Community is…

• Safe
• Well-Run
• Livable
• Healthy
• Prosperous
• Sustainable
Becoming a Smart Community
1. Use a World-Class GIS Platform
Making Mapping and Location-Aware Apps Available Across Your Organization
1. Use a World-Class GIS Platform
Discover, Use, Make and Share Maps from Any Device, Anywhere, Any Time
2. Build a Location Strategy
Requires Leadership and Vision

- **Location Enablement**: Discover, use, make, and share maps at work – anywhere, anytime
- **Constituent Engagement**: Facilitate and manage communication with stakeholders
- **Decision Support**: Inform execs and manage communication with maps and location intelligence
- **Field Mobility**: Get authoritative information into and out of the field
- **Analytics**: Describe, predict, and improve business performance
- **Location Data Management**: Collect and organize location data about your assets and resources
## 2. Build a Location Strategy
Find Opportunities Where Location Can Add Value

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Define and Measure Success

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*Green = Meeting Need, Yellow = Partially Meeting Need, Red = Not Meeting Need*
2. Build a Location Strategy

Project Prioritization

![Diagram showing decision matrix for building a location strategy based on benefit and challenges. The matrix has four quadrants: High and Clear (Cautiously Embrace), Low and Manageable (Aggressively Embrace), High or Unmanageable (Avoid), and Low or Uncertain (Experiment).]
3. Deliver Real Solutions

Apps for Everyone

ArcGIS apps get the job done through their sheer focus, geographic awareness, and readiness to work. They are powered by the industry-leading ArcGIS mapping platform.

See what ArcGIS Apps are available

Apps for the Field
Apps for the Office
Apps for the Community
App Builders

http://www.esri.com/software/apps
3. Deliver Real Solutions
Supported, Configurable, Included

ArcGIS Industry Specific Maps and Apps

ArcGIS Solutions deliver Ready-to-Use Maps and Apps to jumpstart your work

http://solutions.arcgis.com

Leverage hundreds of ready-to-use maps, apps, and platform configurations to meet your needs, delivering innovation and best practices for your organization.
3. Deliver Real Solutions
Supported, Configurable, Included
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Supported, Configurable, Included

- Land Records
- Utilities
- Public Works
- Fire Service
- Law Enforcement
- Emergency Management
- Planning & Development
- Elections

- Health & Human Services
- Transportation
- Economic Development
- Fish & Wildlife
- Environment & Natural Resources
- And more…

A Smart Community is: Safe, Well-Run, Livable, Healthy, Prosperous, Sustainable
3. Deliver Real Solutions
Supported, Configurable, Included

Tackle Opioid Epidemic

A collection of maps and apps used by public health and safety agencies to communicate the severity of the opioid epidemic, promote treatment alternatives, and understand the effectiveness of response activities.

A Smart Community is: Safe, Well-Run, Livable, Healthy, Prosperous, Sustainable
3. Deliver Real Solutions
 Supported, Configurable, Included

Reduce Homelessness
A collection of maps and apps used by health and human services agencies to count the homeless population, inventory homeless resources, and increase awareness of homeless services.

A Smart Community is: Safe, Well-Run, Livable, Healthy, Prosperous, Sustainable
3. Deliver Real Solutions
Supported, Configurable, Included

**Combat Vector Borne Diseases**

A collection of maps and apps used by health and human services agencies to manage mosquito populations and combat the spread of vector-borne diseases.

A Smart Community is: Safe, Well-Run, Livable, Healthy, Prosperous, Sustainable
3. Deliver Real Solutions

ArcGIS Open Data

Connecting Citizens and Businesses to Your Authoritative Data

Set up a public-facing website within minutes to share your open data. ArcGIS Open Data is an Esri hosted and managed solution that is included with ArcGIS Online.
ArcGIS Hub provides a two-way engagement platform to connect government and citizens.

Encourage people to take action and bring positive change in their own neighborhoods.

https://hub.arcgis.com/
ArcGIS Hub provides a two-way engagement platform to connect government and citizens.
4. Develop Strong Partnerships

Esri Team and Esri Partners

- **Esri Team**
  - Account Team (Manager and Solution Engineer)
  - Subject Matter Experts
  - Training Consultant
    - Workforce Development Plan
  - Technical Support
    - Premium Support
  - Professional Services
    - Packages, Rent-a-Tech, Projects
  - Esri Enterprise Advantage Program (EEAP)

- **Esri Partners**
  - Specialties (ArcGIS Online, ArcGIS for Local Government)
  - ArcGIS Marketplace
4. Develop Strong Partnerships

Develop and Grow Your Internal Team

- Executive Champion(s)
  - Alleviate their Pain
  - Support their Vision
- IT Leadership
- Align the GIS Plan with the IT Plan and the Organization’s Plan
- Enable collaboration and empower others
- Mindset of a GIS Consulting Firm
- Market Spatial Analysis
- Measure and document the impact (ROI)
Keys to Success
Follow Best Practices

• People
• Data
• Process
• Technology
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Follow Best Practices

• People
• Data
• Process
• Technology

“...whether or not our GIS implementation is successful is not a technology problem, it’s a people problem...”
- Assistant City Manager
ArcGIS Hub Sessions at the User Conference

- **ArcGIS Online: Getting Started with Open Data & Initiatives in the ArcGIS Hub**
  - Tu, July 11, 10:15-11:30AM, SDCC Room 14B
  - Th, July 13, 3:15-4:30PM, SDCC Room 05B

- **Engaging Your Community with Open Data & ArcGIS Hub**
  - Tu, July 11, 2:30-3:15PM, SDCC Demo Theater 10
  - W, July 12, 3:30-4:15PM, SDCC Demo Theater 10

- **SDG Hub – A Federated System for the SDGs (Sustainable Development Goals)**
  - W, July 12, 9:30-10:00AM, SDCC Esri Pavilion: Sustainable World Theaterette

- **The Hub – A Civic Engagement Platform**
  - W, July 12, 2:30-3:15PM, SDCC Envisioning Center 2 (Hall C)
  - Th, July 13, 12:30-1:15PM, SDCC Envisioning Center 2 (Hall C)

- **Best Practices: Implementing Hub**
  - W, July 12, 3:30-4:15PM, SDCC Demo Theater - Implementing Enterprise ArcGIS
  - Th, July 13, 11:30AM-12:15PM, SDCC Demo Theater - Implementing Enterprise ArcGIS
Please Take Our Survey on the **Esri Events App**!

1. **Download the Esri Events app and find your event**
2. **Select the session you attended**
3. **Scroll down to find the survey**
4. **Complete Answers and Select “Submit”**