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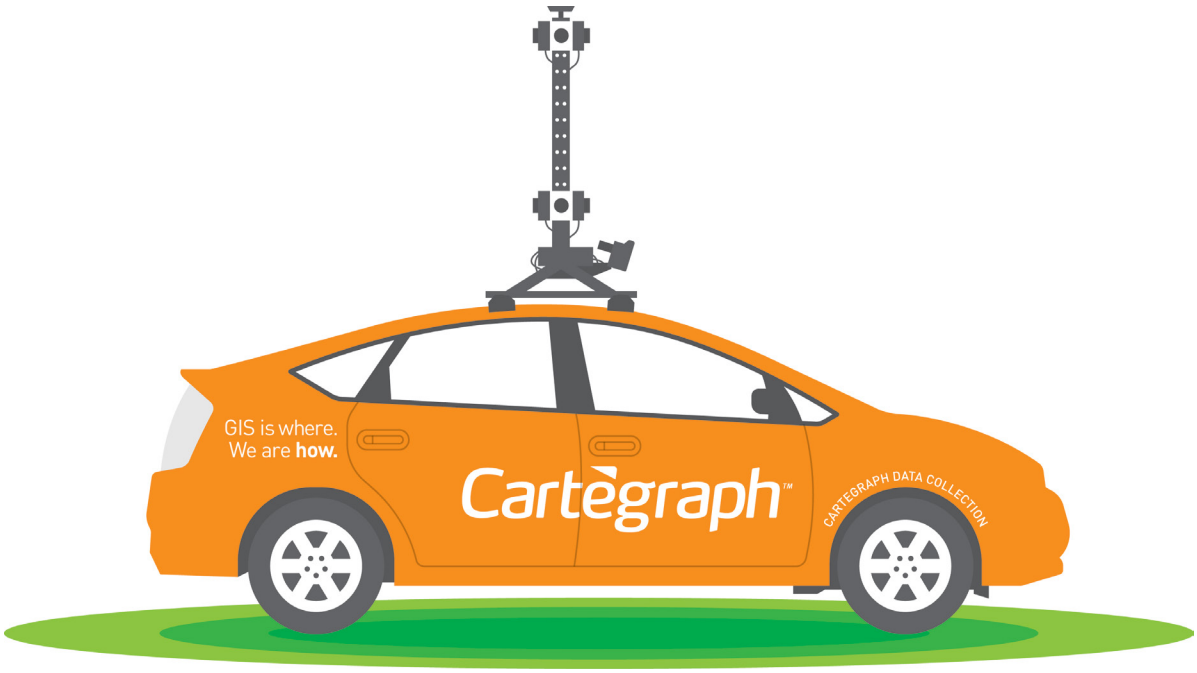

An Introduction for Local Government:

How-to Capture Great Asset Data

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How to Capture Great Asset Data

Local governments invest considerable time and money in their assets and the technology to manage them. Reliable, targeted asset data is the key to controlling costs and streamlining operations. However, data quality varies among organizations and what data they do have isn't always used effectively.

This white paper will demonstrate the power of good data with a discussion of these areas:

1. How good asset data improves decisions about spending time and money.
2. Why a populated database doesn't guarantee accurate data.
3. Why private sector data collection services are a cost effective resource.
4. The core tenets of sound asset data capture and management strategy.

The Power of Data

Good data forms the basis of an asset management approach that can boost efficiency, sharpen decision making, and facilitate forecasting. The process starts with gathering data to build an inventory of every asset in your municipality, including location, pertinent features, value, and condition. The result of this effort is a database that puts a picture of your assets at your fingertips and feeds into every aspect of asset management.

Optimize Service Life

Data generated via a comprehensive inventory and mapping process will tell you when it is cost-effective to inspect, repair, or replace any asset. Good data will reveal the severity and extent of defects and help understand the impact of failure. Imagine controlling the life-cycle costs of every bridge and bus shelter, every parkway tree and drainage culvert, every street sign and signal, every component in the flood protection system.

U.S. Department of Transportation
Federal Highway Administration

EXAMPLE: *A municipality has the resources to repair 5% of its roadways each year. With access to detailed, mapped data on the current condition of every road, decision makers can project the service life, understand how it affects the rest of the network, and prioritize immediate and future repairs. They can develop a long-term road maintenance plan that is easily justified to stakeholders and qualifies for FHA funding.*

Document Needs and Justify Decisions

Timely, objective data lends credibility to spending decisions and funding requests. Data can be used to run different scenarios and compare outcomes. Key decision makers and stakeholders can see first-hand the impact of postponing repairs and the payoff in increasing budgets.

FEMA

EXAMPLE: *A natural disaster hit a small town that maintained current data on the condition of all of its assets. The town received a higher level of FEMA assistance than surrounding towns because officials were able to quantify losses by providing before-and-after data supported with images.*

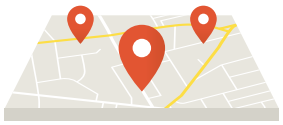
Protect Public Safety

Sharing data among departments puts everyone on the same page when it comes to making sure public assets are functional and safe. What's more, knowing the location of every asset is especially critical during emergencies. This proactive approach applies informed, data-driven evaluations rather than reacting to complaints after the damage is done.

EXAMPLE: *In a drought-ridden city, a car hit a water hydrant and dislodged the entire assembly, causing a one thousand gallon per minute leak. A sequence of events resulted in dirty water flowing toward the storage reservoirs. The city's GIS analyst quickly mapped incoming calls from citizens to identify the affected areas and appropriate hydrants so crews could flush those hydrants and forestall the dirty water.*

Improve Operations

Knowing what needs to be done where helps a municipality stay focused and channel its resources accordingly. Gaps and weaknesses can be readily identified and remedied.



EXAMPLE: *Data analysis revealed to one township that two-thirds of its work orders came from the northern part of town. Further analysis attributed the high volume to booming growth in the northern communities. With this information the town could justify moving its operations center closer to the growth area to improve response time, reduce crews' travel time, minimize wear and tear on vehicles and equipment, and save fuel.*

Capturing the Right Data: Common Mistakes

The secret to harnessing the power of data is to gather the right data in the first place. Here are some common mistakes to avoid:

1

Failing to Set Goals

What do you want to achieve? How will you use your asset data? These are not simple questions but the answers will drive your data-gathering strategies. Setting goals will enable you to identify, capture, and organize all of the essential data to track performance and make informed decisions. This process will also help avoid the costly trap of collecting and maintaining data that will never be used.

2

Attaining Quantity without Quality

The number of assets managed by a municipality can be mind-boggling. It's easy to amass a glut of information that is disorganized and incomplete. For example, an asset may be documented without information on its condition or a vital feature — as simple as a record of a street sign with no indication of which traffic direction it faces. And data gathered haphazardly may not be organized in a way that is accessible to all the departments that need it.

3

Creating Data Silos

"Silo" refers to a set of data that is not integrated with other information systems and not accessible to all who need to use it. Asset data should be available to everyone from the field crew to the finance department. It's important to anticipate who will need access to what data.

4

Relying on Human Memory

Sometimes it's easier to ask a veteran field worker about the status of an asset rather than go digging for information that isn't captured systematically. Needless to say, this approach is neither reliable nor comprehensive.

Common Mistakes (continued)

5 Overlooking Unstructured Data

Data gathering involves not only physically surveying every asset, but also mining the wealth of information sitting in files, logs, purchase orders, job tickets, correspondence, and other sources. The trick is to extract the gold from the ore.

6 Trying to Do It Alone

What does it take to assemble reliable, targeted data for all enterprise assets? To inventory and map roads and transportation systems, traffic signals and signs, parks and public spaces … not to mention infrastructure networks such as sanitary sewer, water distribution, storm water, and flood protection? Many municipalities underestimate this task. Unable to dedicate the necessary manpower, they fit it in as time permits. A data collection effort estimated at a few months may take years instead, or never be completed.

Tackling the Task: Here's How

There is an alternative to saddling field crews and office staff with the added burden of data gathering: private sector data collection services that specialize in municipal asset management. Engaging a data collection service can actually stretch budget dollars, especially for small and mid-sized municipalities with limited resources. Here's how:

Fast Action

Data must be current to be reliable. A data collection service will help identify, prioritize, and start gathering essential data immediately so it can be put to use before it becomes outdated. The sooner accurate forecasts and sound decisions can be made, the greater the cost savings.

Experience

Data collection professionals know what questions to ask to set goals for data management. They can determine what data is essential, how to obtain it ... and what data not to collect. This helps municipalities stay on track and avoid costly errors.

Dedicated Manpower

Data collection specialists do all the legwork, mapping and evaluating each asset in the field and sorting through the unstructured data in the office. Investing in these capabilities can save significant staff hours.

State-of-the-Art Technology

The data collection service can bring the field to the office with tools such as GIS mapping, 3D imagery, and software tailored for creating benchmarks and measuring outcomes. Look for the capability to integrate the technology and output with existing systems to facilitate analysis, streamline operations, and get the data to everyone who needs it.

Looking Ahead

The initial inventory is a snapshot in time. The data must be maintained or will soon become obsolete. However, once the baseline data is in place the task of updating and tracking is much more manageable. The data collection service can continue with data management or train staff to bring this function in-house.

Putting the Data to Work

Capturing the right asset data requires a substantial commitment, but it is just the beginning of a comprehensive asset management strategy. Good data is the springboard for a systematic process of operating, maintaining, and upgrading assets throughout their life-cycle, and for implementing sound business practices for resource allocation based on well-defined objectives. The process can be summarized through the following essential steps:

1

Collect Data

Current, accurate data tells you exactly what assets you have and where they're located. Collecting good data as described in this paper provides the foundation for effective asset management.

2

Assess Condition

One thorough inspection will tell you how an asset is performing, how much life it has left, and whether it's worth the money you spent on it. This information will help you form a plan for maintenance, repair and replacement.

3

Valuate

Consider the asset's purpose and place in your infrastructure. What is it worth? What does it cost to maintain? What happens if it fails? Use the answers to these questions to prioritize your assets and the resources necessary to sustain them.

4

Gauge Performance

Identify the factors that measure the asset's performance. At what point is it considered faulty or unsafe? Does the public expect it to look good? Understanding these service expectations enables you to develop a plan for maintaining the asset.

5

Create a Strategy

There's a time to repair and a time to replace. Based on the analysis performed at each of these steps, you can optimize your resources and investment strategies for operations, maintenance, replacements, and improvement.

6

Put into Practice

You will install, maintain, inspect, and, ultimately, replace every asset in every network … and then you will do it all again. With a data-driven strategy in place, you'll steadily improve your infrastructure and ensure long-term affordability.

7

Follow Through

You've made the commitment to capture the data. Don't let it sit on the shelf. Support your investment with regular, proactive monitoring that keeps your organization working efficiently and ensures that assets are maintained to your satisfaction and the public's benefit.

Now You Know

Now that you understand the enormous value of having good, accurate asset data at your disposal, you can begin thinking about your organization's approach to collecting it. By using the insight outlined in this paper, you'll position yourself to make better decisions about implementing data collection processes and strategies into your day-to-day operations.

Better Data Makes for Better Decisions

Cartegraph Data Collection Services are simple, cost-effective, and especially suited to growing communities with limited budgets and resources. Our Data Collection team combines advanced technology and superior know-how to capture and deliver asset data that's remarkably accurate and detailed.

Learn More Now

About Cartegraph

Cartegraph operates with a single goal in mind: to understand and simplify how every city runs. By emphasizing ease-of-use, adoptability, and return on investment, Cartegraph technology and services enable local governments — big and small — make the most of limited budgets and resources.