
# SMART PARKS

A 7-Step Guide to Park Asset Management

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## A 7-STEP GUIDE TO PARK ASSET MANAGEMENT

It's easy to see how a technology-driven park management program can streamline operations for a major city or state park charged with maintaining thousands of acres of gardens, playgrounds, trails, and trees. But even a small community with a handful of mini-parks, a playground or two, a few miles of trails, and maybe a ball field or a pool can leverage an asset management plan to enhance recreational services for their visitors.

Whether your parks division serves a leading cosmopolitan city or the tiniest dot on the map, your parklands probably feature the following asset categories:

### AMENITIES:
Bike racks, boat landings, fountains, sculptures, picnic tables

### ATHLETIC SPACES:
Beaches, courses, courts, fields, rinks

### BENCHES:
Athletic stands, buddy benches, concrete memorials

### FENCES:
Chain link, garden panels, marine rail, sports netting

### LANDSCAPE:
Dirt, grass, gravel, mulch, rock, sand, trees, turf

### PARKS:
Boat ramps, building grounds, dog parks, memorials, open spaces

### PLAYGROUNDS:
Climbing walls, jungle gyms, monkey bars, sandboxes, swings

### STRUCTURES:
Gazebos, maintenance sheds, pavilions, restrooms, shelters

A high-performance asset management program starts with gathering data to build an inventory of every one of these assets. Using data on asset location, features, value, and condition, you can extend the service life of park facilities, protect public safety, and enhance the experience of your park visitors. Your operations will benefit from informed decision-making, accurate forecasting, and cost control.

This guide will discuss the following best practices for establishing a sound approach to park asset and maintenance management.

1. ESTABLISH AN ACCURATE INVENTORY
2. ASSESS CURRENT CONDITIONS
3. IDENTIFY MAINTENANCE BENCHMARKS
4. PRIORITIZE RENOVATIONS OR REPLACEMENTS
5. ESTIMATE CAPITAL COSTS AND OPERATING BUDGET
6. MAP IT OUT
7. UPDATE THE PLAN AND PUT IT TO WORK

# 1. ESTABLISH AN ACCURATE INVENTORY

What exactly constitutes an asset? Every facility, amenity, and landscape is a complex asset made up of individual assets such as trees, pavement segments, lighting fixtures, pumps, and picnic tables. A technology-driven process provides field-ready templates for capturing critical data points on each individual asset.

So, for every tree, you can quickly enter location, scientific and common names, height, trunk and crown diameter, replacement value, and other details. At the same time, you can schedule routine follow-up tasks, such as pruning, at a set interval on a repeating work order. Also, note issues such as protruding roots and hazardous overhangs that affect another asset—a trail. Continue on to record other aspects of the trail, then move on to the picnic tables, and so forth.

In this way you will build an accurate, up-to-date inventory of all individual components as well as the facilities they are part of. You will be able to view and compare multiple asset types at once and understand how they are connected. Your database will be the foundation for each subsequent step of asset management—assessing condition and remaining service life, planning repair or replacement, projecting costs, and evaluating processes.

# 2. ASSESS CURRENT CONDITIONS

A thorough inspection of each asset will help you determine how it is performing, how much life it has left, and whether it is still cost-effective to maintain. Record specific deficiencies ranging from cosmetic and routine wear to those that compromise safety, structural integrity, and service life.


## CHECK IT OUT

An assessment of lighting fixtures on the softball field will expose any improper grounding of the luminaire, faulty wiring and breakers, and unclear markings on the service panel. If light levels prove to be inadequate, a quick check of history in the database will reveal when levels were last measured and how frequently measurements should be conducted. The condition of each asset can then be expressed in a benchmarking index that will enable you to develop a plan for maintenance, repair, renovation, or replacement.

# 3. IDENTIFY MAINTENANCE BENCHMARKS

Cyclical scheduled maintenance is required for all assets, whether in good condition or failing, to maximize the useful life and minimize potential liability. A system of benchmarks will tell you when to intervene at strategic points in an asset's normal life cycle to improve performance and optimize resource allocations.

Benchmarks that should be taken into consideration include:

- What's the asset's typical lifespan?
- At what point is it considered faulty or unsafe?
- Has new technology made the asset obsolete?
- What impact will a deficiency have on the total system?
- Is the asset's appearance important to the public?
- What are the cost implications?

A smart benchmarking method classifies your assets into categories from excellent to serious condition and prioritizes maintenance accordingly.

For example, here's how benchmarking might help determine the right treatment at the right time for a park pavement segment:

### EXCELLENT CONDITION ★★★★

*Requires only routine maintenance.*

An aggressive preventive maintenance cycle of sealing, patching, grading, and overlays will extend pavement life and avoid costly reactive measures.

### GOOD OR FAIR CONDITION ★★★☆

*Needs preventative work in addition to routine maintenance.*

The pavement segment may exhibit drainage problems or require ADA access modifications.

### POOR CONDITION ★★☆☆

*Will require extensive work and significant investment to correct deficiencies.*

The pavement has deteriorated and requires more invasive, costly treatments.

### VERY POOR OR SERIOUS CONDITION ★☆☆☆

*Nearing end of useful life; consider replacement alternatives.*

It will be more economical to reconstruct the segment than to repair or upgrade.

It's useful to attach time frames and priorities to each benchmark. The U.S. National Park Service uses a system of metrics that includes Critical Systems Identification as follows:


**Minor Deficiency:** Low Priority
Condition has a long-term impact beyond five years.

**Serious Deficiency:** High Priority
If not corrected within two to five years, deterioration will result in failure or a threat to user health or safety.

**Critical Deficiency:** High Priority
Advanced deterioration that has already resulted in failure or, if not corrected within one year, will result in a threat to user health or safety.

# 4. PRIORITIZE RENOVATIONS OR REPLACEMENTS

Eventually, most assets will require renovation or replacement. Your park asset management program will provide criteria to prioritize those actions. Tap your enterprise operations management system database for information on the asset's purpose and place in your infrastructure. What's it worth? What does it cost to maintain? What happens if it fails? Use these answers to make decisions about assets that your benchmarking placed in fair to poor condition.

Say a popular playground is approaching its projected lifespan of about 15 years and it may be time for an overhaul. Time to consult your work and asset data. Does the equipment still meet safety standards? Can you extend the life by salvaging equipment from other playgrounds? Would new equipment designs be more enjoyable for users?

To help you determine when to renovate or replace assets and justify your capital improvement requests, apply criteria such as the following:

- Public safety
- Codes and legal mandates
- Technological advances
- Geographic equity
- Cost of maintaining older systems
- Demand for new or expanded services

# 5. ESTIMATE COSTS AND OPERATING BUDGET

A key aspect of your park asset management plan is the ability to evaluate different strategies to answer the questions:

- Which solution will provide the highest level of service?
- How much will it cost?
- Can we afford to do it—and can we afford not to?

Real-time work and asset data lends credibility to spending decisions and funding requests, whether for routine operations and maintenance or capital expenditures for new assets and upgrades. Your 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.

Specifically, work and asset data will enable you to:

- Document the need for funding renovations and replacements
- Quantify the impact of delays and inadequate funding
- Accurately allocate available resources to new and existing assets
- Provide historical information on maintenance hours and materials
- Effectively manage assets despite budget constraints

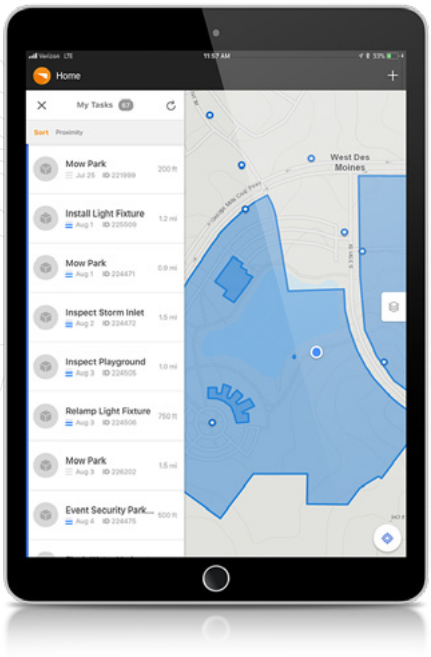
### *PRO TIP*

Remember to factor in funding from sources such as grants, partnerships, and donations. For New York's 843-acre **Central Park**, the most frequently visited urban park in the United States, these sources are significant. The Central Park Conservancy's asset management system tracks endowments and benefactors of benches, fountains, and other park features.

# 6. MAP IT OUT

Integrating your park management software with your GIS system leverages the power of both systems. When you have two platforms that work seamlessly together, like Cartegraph and ArcGIS you'll combine web maps and asset inventories with operations and asset management functionality.

Records in the asset management software will link with corresponding records in the GIS database. Spatial and attribute data will update in both systems in real-time as changes are made. Whichever system you're using, you'll always have current data to work from.




The right GIS interface will allow you to locate a feature, add it to the map with a single click, color code it by class or type, and access it in real time. Digitized base layers for playgrounds, trails, athletic facilities, and other park assets will be projected onto aerial images.

Variable filtering options allow you to focus on the exact features you want to see. Maps can be examined using different viewing options, such as road, satellite, or topographic. In addition, the integrated data is easily shared among departments so, for example, park employees can access park-related data collected by maintenance employees and vice versa.

**CASE STUDY:**

## FOX VALLEY PARK DISTRICT, ILLINOIS

The Fox Valley Park District faced a mountain of paperwork it could no longer climb. Completed work orders sat for as long as six months, while inaccurate data made it difficult to confidentially make and back decisions to improve their district. By drastically slashing paperwork, integrating spatial technology, and streamlining operational workflows, they can now to tell a story with their Cartegraph and ArcGIS data—whether that means highlighting major project achievements in granular detail or identifying maintenance hot spots.

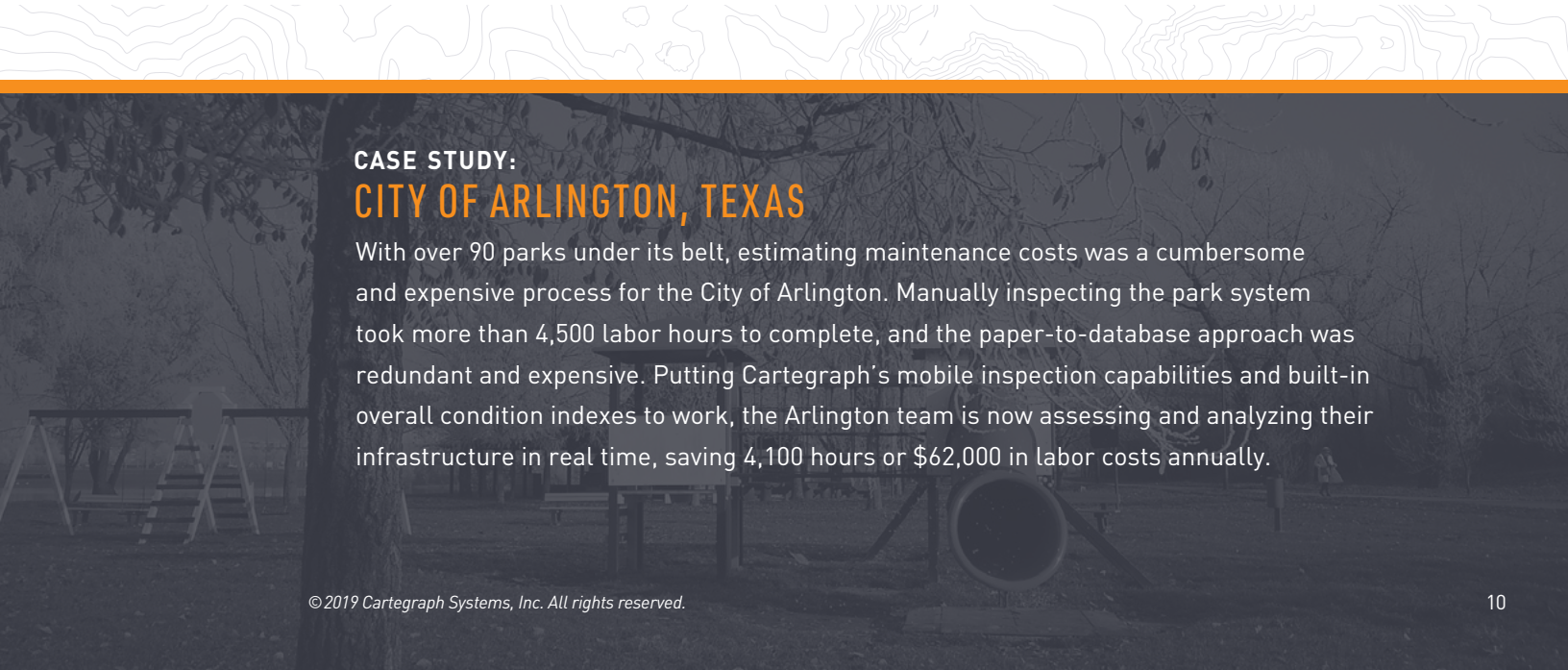
# 7. UPDATE THE PLAN AND PUT IT TO WORK

Your park asset management system is not a snapshot in time but an ongoing effort. You'll want to establish procedures to continually update inventory, condition, maintenance requirements, and costs. Then, you can mine your database to generate resources such as:

- Periodic progress reports that assess maintenance efficiency
- Comprehensive audits that evaluate performance measures
- Long-term strategic plans that look beyond current needs and budgets
- Feedback mechanisms that confirm achievement of intended results

### NOW YOU KNOW

Today's mobile park management technology will help your team capture asset data, analyze it, and use that information to prepare for the future. By treating your park system assets as an extension of your public infrastructure, your organization enables itself to improve safety, effectively manage asset and labor costs, improve the quality of life in your community, and, most importantly, provide better amenities and services to the public.



**CASE STUDY:**

## CITY OF ARLINGTON, TEXAS

With over 90 parks under its belt, estimating maintenance costs was a cumbersome and expensive process for the City of Arlington. Manually inspecting the park system took more than 4,500 labor hours to complete, and the paper-to-database approach was redundant and expensive. Putting Cartegraph's mobile inspection capabilities and built-in overall condition indexes to work, the Arlington team is now assessing and analyzing their infrastructure in real time, saving 4,100 hours or $62,000 in labor costs annually.

# *IF YOU'RE INTERESTED IN PARK ASSET MANAGEMENT, YOU'LL LOVE THESE RESOURCES:*


## Asset Management Basics: A Guide for Communities of all Sizes

cartegraph.com/download/asset-management-basics

READ THE GUIDE >


## Thinking Beyond Asset Management

cartegraph.com/download/beyond-asset-management-public-works-guide

READ THE GUIDE >


## An Introduction to High-Performance Government

cartegraph.com/download/introduction-to-high-performance-government

READ THE GUIDE >


## How We Work: Arlington, TX

cartegraph.com/video/arlington-tx-park-management

WATCH THEIR STORY >

# ABOUT CARTEGRAPH

Cartegraph is in the business of building high-performance government. They offer software solutions that help local government agencies manage their physical assets and associated operations. With Cartegraph, users optimize the life of their infrastructure, deploy maintenance resources efficiently, and increase productivity.

To build high-performance governments, Cartegraph uses a comprehensive, three-pronged approach that combines success coaching, expert consulting, and state-of-the-art software solutions for asset, work, and resource management to help agencies capture data, analyze it, and prepare for the future. For more information, visit cartegraph.com.