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Want keys to the city? Invest in data

4 areas where asset investment planning
can help public works leaders unlock
better services for citizens



Put your data to work

When you consider asset management in the context of cities and municipalities, there are a lot of moving parts: the community and needs of its individuals, the facilities and maintenance required to keep them operational, the decisions made for the greater good with the criteria used to get there, and don't forget, the funds that pay to keep the lights on or the taps running (with fresh, clean water).

In short, it's complex.

For public works leaders, navigating this complicated matrix is undoubtedly a challenge, what with balancing the care and satisfaction of citizens with the realities of the people, assets, and logistics involved with maintaining everything. And yet, in today's modern world, there is a massive opportunity to adopt new practices or systems and shift our thinking to help our communities thrive.

In this guide, we'll explore how public works leaders can invest in data and asset investment planning (AIP) to enhance their operations and improve efficiency in water treatment, parks and recreation, facilities, and sustainability.



I.

The 411 of asset investment planning

No two ways about it; public works leaders must make well-informed decisions about how to manage assets effectively. Whether it's optimizing maintenance strategies, reducing operational risks, or achieving better overall asset performance and efficiency, the data is literally in the details of your infrastructure, equipment, and facilities.

Asset investment planning is a strategic process that involves analyzing asset conditions, predicting future needs, and making informed decisions on maintenance, upgrades, or replacements. It also helps reduce risks, extend asset lifespans, and allocate resources efficiently.

Put data in the driver's seat of your asset management system

Data-driven decision-making leads to optimized asset management and better outcomes. An asset management solution can facilitate this process by collecting real-time data, predicting asset performance, supporting financial planning, and providing centralized data storage.

Data delivers long term bennies

Data is essential to making informed decisions and helps with condition assessment, performance analysis, financial calculations, and scenario planning. Over time, asset investment planning leverages that data to provide cities and municipalities with the strategic roadmap necessary for managing assets more effectively, leading to improved performance, reduced costs, and increased resilience.



Helping companies turn data into dollars

Below, see how Brightly helped two municipalities take advantage of their data:



Flexibility and prioritizing for citizen satisfaction

When the Town of Walkerville wanted to balance decisions around what the community wanted with what they could afford, all while keeping costs as low as possible, it turned to Brightly to help make the best budget allocation decisions to service current and future residents.

“With the help of Brightly’s scenario modeling, we were able to capture data on the condition of our roads and footpaths and analyze how they would be impacted by varying budget levels and intervention times for replacement. It allowed us to clearly identify that the roads were in excellent shape and not in any immediate need for maintenance in the near future—giving us the flexibility to use the funds elsewhere.”

[Read more about the Town of Walkerville →](#)



Evidence-based decision making

With its population steadily climbing, Washoe County, popular for skiing, mountain biking and water sports, needed a way to collect, analyze, and visualize data to guide leaders in making informed decisions about tasks and priorities. Opting for cloud-based technology, Washoe County turned to Brightly for a solution that could scale with the popular destination.

[Read more about Washoe County →](#)



The more we look longer-term across our suite of assets, the better decisions we can make and it costs us less in the long run—all while keeping our residents safe and happy.

James Kelly

Group Manager, Assets and Infrastructure,
Town of Walkerville



Once we had clear data from Asset Essentials, we could see that about 25% of the work orders coming in were carpentry-related, but with our current staff, we were only able to do about 10% of those per year. Having that evidence allowed us to get two new positions in carpentry so we could better fulfill customer needs.

Aaron Smith

Business Intelligence Program Manager,
Community Services Department,
Washoe County

II.

Water treatment: Use data to manage the H₂Flow

What is one of the most essential components of all life? We'll give you a hint: it's something so important, some places in the world are **actively fighting** over it. It's water, and ensuring its availability and safety is paramount for every municipality.

99 problems but a shortage of compounding issues ain't one

Public works departments responsible for water treatment facilities have the unique job of safeguarding this valuable resource amidst a host of other challenges, at a time when some cities are just **one natural disaster away** from a catastrophic water crisis.

The water game is a long one, and there are challenges coming from every angle, including:



Population growth and increased demand

It used to be “build it and they will come,” but some would-be favorable destinations—such as **Arizona**—are enacting new building restrictions to protect areas affected by long term drought and overuse of groundwater.



Aging infrastructure

Many water treatment facilities require significant maintenance and upgrades.

~62.5 billion gallons

water treated daily by centralized wastewater treatment plants¹

50–100 years

typical lifespan of wastewater pipes²

1970s

Decade many water treatment facilities were built⁷

40–50 years

the average wastewater treatment plant life expectancy⁸



Water scarcity and quality

Some regions face water scarcity and/or pollution from industrial, agricultural, and urban sources, as well as pharmaceuticals and microplastics.



Energy consumption

Water treatment facilities require significant energy to operate—and most cities and counties want to be more efficient.

300 gallons

of water per day at home used by average US household³

0.5 of 1%

of the world's water supply is fresh water in liquid form⁴

30 terawatt-hours

electricity municipal wastewater treatment plants are estimated to consume per year

25-40%

of a wastewater treatment plant's annual operating budget spend on electricity¹⁰

3.3 billion

or two-fifths of the world's population live in areas with high water stress⁵

0.6%

of the US population does not have access to clean drinking water⁶

\$2 billion

in annual electric costs⁹

Other challenges keep pourin' in

Water treatment facilities must adhere to strict regulations and standards of governmental and environmental agencies. Additionally, securing adequate funding for operation, maintenance, and improvement can be difficult, particularly for smaller or underfunded systems. Did we mention that these days, finding, onboarding, and retaining experienced operators and technicians can be challenging, especially in rural areas or areas with competing industries?

Luckily, technological advancements offer opportunities for more effective and efficient water management and treatment—and it starts with an asset management platform. Implementing and integrating new solutions can be complex, but with the right partner by your side, it's not only feasible; it's obtainable.

Better water treatment begins in asset investment planning

Public works leaders—especially those in water treatment—know that the assets they oversee and care for are essential to ensuring a high quality of life for residents.

Asset management software can go a long way to help manage and maintain critical infrastructure effectively. Technology can provide necessary data to qualify for funding while also facilitating compliance with regulatory requirements and inspections, ensuring facilities meet environmental and safety standards.

The differentiator will be using software that can also aid in long-term capital planning, helping agencies allocate resources for infrastructure upgrades and replacements to improve overall system performance and reduce downtime.

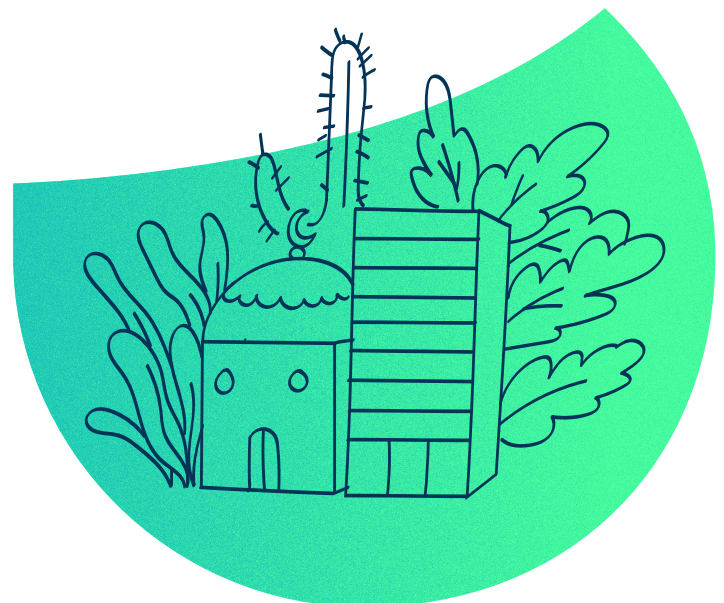
A Brightly approach to water treatment

A solution, such as Brightly Asset Essentials, gives water treatment departments the power to track and maintain equipment, such as water pumps, filters, and treatment systems, as well as optimize labor resources and workflows to keep plants functioning optimally.

Brightly's Asset Essentials can help:

- **Water treatment facilities manage critical infrastructure efficiently**
- **Aid in the tracking and maintaining of equipment such as pumps, filters, and chemical dosing systems, ensuring optimal performance and reducing downtime**
- **Facilitate preventive maintenance schedules, inspections, and compliance with regulatory requirements**
- **Offer a 360-degree view of operations enabling use of data to make more informed budget decisions that protect assets for the long-term**

Public works can make informed decisions on asset replacement or refurbishment by analyzing asset data to improve overall water treatment efficiency and cost-effectiveness.



III.

Parks and recreation: the spice of city life

If water is the salt of life, then parks must be the spice; people need open spaces and recreation areas to support their overall well-being.

And, there's some other benefits, too. One [economic impact study](#) found that parks:

- **Increased property values, as well as tax and tourism revenues**
- **Decreased medical costs through increased exercise and stormwater treatment costs**
- **Improved attractiveness of communities to homebuyers and businesses**

Maintaining clean, beautiful, and safe spaces is a lot of work; parks and recreation departments must balance citizen expectations with limited budgets and much to do. With the job requirement of covering a lot of ground, it's critical to support these teams with the right tools—and spoiler alert, one of those tools is technology.

Data: how to maximize your parks and rec-sources

For towns that know how beautiful spaces contribute to satisfied citizens, (not to mention happy tourists), an asset management solution can be a game changer for parks and recreation departments. On-the-go technology can help manage and maintain various park assets, including playground equipment, sports fields, and amenities like restrooms and water fountains—and a user-friendly mobile app is a must for busy teams.

Map out maintenance work more efficiently with GIS

For teams tasked with caring for a large area, a solution with a geographic information system (GIS) to help manage and track work orders using a map view is a must. This function can enable parks and recreation departments to map out facilities and infrastructure assets to easily pinpoint where work needs to be completed and compare asset conditions across multiple locations.

With an asset management system that has GIS, teams can:

- **assign work orders based on location for better efficiency**
- **increase visibility across multiple facilities**
- **reduce windshield time for technicians with accurate asset locations**



The Brightly side of parks and rec

Whether it's assisting in the scheduling and conducting inspections to ensure the safety and functionality of park facilities or streamlining workflows to enable efficient maintenance and repairs, the right software can add a much-needed boost to under-resourced parks and rec teams.

Brightly Asset Essentials™ gives parks and recreation employees a powerful tool to manage work orders on the go with an easy-to-use mobile app. Additionally, teams can lean on our solution to:

- Centralize data from monitoring playground equipment, sports fields, and amenities like benches and fountains.
- Help plan and budget for park asset maintenance, repairs, and upgrades over time.
- Collect data on asset conditions and usage patterns to help prioritize investments and allocate resources effectively.
- Support citizen engagement by allowing residents to report issues through user-friendly interfaces and track the progress of maintenance tasks.

By capturing and analyzing asset data, public works can also prioritize and plan capital improvements to enhance the visitor experience and extend the life of park assets.



IV.

Facilities, buildings and properties, oh my!

Facilities can be the bread and butter for public works, whether for rentals, vital services, or other points of contact between citizens and city officials. At the same time, buildings and facilities are accompanied by their own needs and requirements.

Once again, leaders must balance the public's best interests with the requirements for maintaining functional assets. And once again (again), the right asset management solution can help leverage data to optimize the maintenance and care of facilities.

Did someone say “asset investment planning”?

Know what is invaluable for public works departments managing government facilities and buildings? Asset investment planning! With asset management software that centralizes asset information, such as HVAC systems, electrical infrastructure, and elevators, public works leaders can make more informed decisions for the facilities under their purview to ensure nice, long, healthy lifespans.

Got assets? You need a registry

One component an asset management solution should include is a comprehensive asset registry. This can help track maintenance history, schedule preventive maintenance, and plan capital improvements. By utilizing analytics from a registry, public works can optimize asset life cycles, minimize breakdowns, and reduce overall operating costs, as well as facilitate compliance with safety and energy efficiency standards.

Asset investment planning software

- Assists in managing public facilities like government buildings, community centers, and public libraries.
- Helps create comprehensive asset inventories, track asset life cycles, and manage maintenance activities.
- Analyzes asset data to identify potential risks, plan for replacements, and ensure compliance with safety and regulatory standards.



Brightly Predictor: Sophisticated strategies for simple yet compelling stories

An asset investment planning solution with the power to analyze big data to model long-term funding and service scenarios, such as Brightly Predictor, can enable public infrastructure leaders to understand the impact of decision-making across various criteria and asset types, including assets, asset classes, facilities, and infrastructure.

When there's a lot to track in your purview, you need the right tools for the job. Asset management software provides insights into the total cost of ownership, helping public works make cost-effective decisions for facility management and long-term sustainability.



Strategic decisions based on data

When Jason Peek, Director of Public Works for the City of Topeka, Kansas, wanted to better understand their long-range pavement condition and funding scenarios, He engaged Brightly to leverage existing pavement inventory and condition data. The team used Predictor to model several different funding scenarios and their resulting Pavement Condition Index (PCI) ratings and levels of service over a 15-year time period.

Through the Predictor modeling process, City leaders found:

- Should the 0.5-cent sales tax expire, roads would rapidly deteriorate, resulting in 19.4% (304 lane miles) nearing End of Life condition by 2033.
- At a minimum, the City needed to maintain the existing funding level of \$24M in order to reach target average PCI goals.
- While the \$24M achieves the target average PCI, existing treatment strategies will result in over 10% of City streets at End of Life condition by 2033.
- The PCI target could be surpassed while reducing the percentage of roads at End of Life to 4.7%, all within the existing \$24M annual budget.
- An annual investment of \$31M would only yield a 3-point improvement in average PCI.



The software gave us quick, actionable insights and a robust, evidence-based forecast of our future actions and spend to achieve pavement condition goals. Importantly, this was done leveraging existing data, efficiently and affordably.

Jason Peek
Public Works Director,
City of Topeka

[Read more about The City of Topeka, Kansas →](#)

v.

Sustainability: Not just a look — it's a lifestyle

Asset investment planning and the solutions that facilitate it can be critical in achieving sustainability goals for public works. By analyzing asset data and performance metrics, public works can identify energy-intensive assets, prioritize energy-efficient replacements or retrofits, and track the progress of sustainable initiatives.

A sustainable future starts with data

For many municipalities, a focus on energy is intertwined with larger strategic planning and meeting public expectations. Asset management solutions can help optimize the use of renewable energy sources, manage waste and recycling programs, and reduce carbon emissions. Through data-driven decision-making, public works can promote sustainable practices and support broader environmental objectives.

Asset management solutions can play a crucial role in achieving sustainability goals for public works by:



Enabling the monitoring and optimization of energy-consuming assets, such as HVAC systems and lighting, to reduce energy consumption and carbon emissions.



Supporting the integration of renewable energy sources, such as solar panels and wind turbines, into the asset portfolio.



Automating utility processes to reduce usage, save money, and optimize operations.

A brighter method for sustainable energy management

Software, such as Brightly Energy Manager™, can empower facility and energy managers to identify utility waste, better prioritize action and make smarter operational decisions with centralized utility management. Our solutions help public works organizations understand the impact of their carbon emissions, develop programs to reduce their carbon footprint, and communicate success with stakeholders and citizens.

Brightly Energy Manager can help public works leaders

- Break down carbon dioxide (CO₂) emissions by fuel source to identify areas of improvement
- Rank facilities by emission levels and focus efforts where they're needed most
- Track historical emissions by facility to drive conservation efforts

A sustainable future is possible, especially once you tap into your usable data. Public works leaders can use software to develop sustainable asset management strategies that align with environmental initiatives and reduce the ecological footprint.

Sustainability is not a silo

For many public works leaders, sustainability is just one element they need to integrate into their regularly scheduled programming. Luckily, Brightly solutions are designed to help bring in the new (aka the sustainable upgrades) while ensuring old assets are leveraged to their fullest potentials.



De-siloing the data

As Scotland's capital, the City of Edinburgh often finds its infrastructure pushed to the limit. Needing to upgrade their disjointed approach to asset management, they decided to consolidate their asset data through Brightly, including an ambitious LED smart light upgrade project.

[Read more about the City of Edinburgh](#) →



What you really want is a system that lets you see the whole picture and identify which asset is causing the problem. Having all this information in [Brightly] helps us find opportunities to resolve multiple defects at one time, efficiently, compared with relying on more local and siloed knowledge.

Gareth Barwell
Head of Place Management,
City of Edinburgh Council



Brightly: Helping public works leaders unlock the power of data

At Brightly, we have decades of experience working alongside government agencies of all sizes. We deeply understand how when every dollar counts, extending asset performance is a key objective for public works leaders.

In balancing priorities, projects, citizen satisfaction, budgets, and more, asset investment planning is the key to harnessing the possibilities of data to drive citizen satisfaction and engagement in city assets, parks, and facilities.

Brightly solutions give public works leaders invaluable tools to optimize asset management, streamline maintenance processes, improve decision-making, and enhance the overall quality of service delivery. From water treatment to grounds and facilities management, we help public works leaders achieve sustainable futures.

The data not only supports this, but makes it possible.



13,000+
clients



4.6+ million
users



400 million
work orders
addressed



49 million
assets logged



\$321 billion
in asset value



97%
client satisfaction
rating

Want to learn more?

[Schedule a call with a Brightly expert today](#)

About Brightly Software

Brightly, a Siemens company, enables organizations to transform the performance of their assets. Brightly is the global leader in intelligent asset management solutions. Brightly's sophisticated cloud-based platform leverages more than 20 years of data to deliver predictive insights that help users through the key phases of the entire asset lifecycle. More than 12,000 customers of every size worldwide depend on Brightly's complete suite of intuitive software—including CMMS, EAM, Strategic Asset Management, IoT Remote Monitoring, Sustainability and Community Engagement. Paired with award-winning training, support and consulting services, Brightly helps light the way to a bright future with smarter assets and sustainable communities. For more information, visit www.brightlysoftware.com.

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