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Asset Management: The Best Defense Against Uncertainty

Why now is an opportune time to invest in an asset management program and five best practices for success.

The financial and social impacts of the COVID-19 pandemic have created great uncertainty. Asset management practices provide some of the best methods and tools to mitigate risks and optimize the value of the use of limited public funds. Here are three reasons why transportation agencies may want to implement or leverage their existing asset management program now:

1. With lower than usual traffic volumes, more efficient and safer access to the field exists for comprehensive asset inspection and condition assessment activities.
2. With user fees and tax revenues in question, agencies need sound tools and processes to make data-driven, defendable decisions as they look to optimize and prioritize investments.
3. With the potential for increased federal funding, agencies can optimize their allocation of those funds for the greatest benefit.

Armed with asset management programs and systems, transportation agencies can:

- Successfully plan improvements, operations and maintenance;
- Extend infrastructure life cycles and ensure sustainability;
- Prioritize projects for better budget allocation;
- Base decisions and actions on a single source of truth;
- Improve capital planning should Congress approve a transportation reauthorization bill.

Although these reasons make a compelling case for implementing or increasing investments in an asset management plan, some agencies view the task as being too large to undertake. However, the effort becomes more achievable when agencies follow these best practices:

1. Prepare the foundation

Before embarking on developing or leveraging an asset management plan, engineers will want to secure top-down, high-level support and have a sense of the funding available to support the effort.

2. Understand the scope

An asset management plan's purpose is to measure performance. To reach that point in the process, however, the transportation agency must first identify its assets (roadways, bridges, rails, stations, runways, ancillary structures, etc.), their locations and conditions. Once the agency has a comprehensive grasp of its assets and their current conditions, only then can it develop an effective program for how best to manage them.

3. Take an incremental approach

Start with a small goal, such as identifying your assets and developing an asset registry. Then, when additional funding, staff and time become available, flesh out the inventory list with each asset's location, and schedule condition assessments. Start with priority assets and expand to other classes as time and funding will support.

4. Conduct a pilot program

A pilot program can identify low-hanging fruit – opportunities that help illustrate the potential value of a full system-wide program. Once decision makers experience first-hand the value of proper asset management practices, they then often become advocates, prioritizing asset management and allocating more resources to the effort.

Jeff Siegel, GISP
Technology Services Director
HNTB Corporation

John Benda
Senior Project Manager,
Asset Management and Enhanced Transportation Operations
HNTB Corporation

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For example, a decision-support system, based on science and supported by technology, can help inform maintenance strategies to extend the life of assets through predictive modeling of various maintenance and reconstruction strategies. Such insights are invaluable when an agency is trying to stretch limited funding to make the greatest impact to the longevity and safety of their infrastructure.

5. **Present data that is meaningful and actionable**

   An asset management program will produce vast amounts of data, but none of this information will be useful if the agency doesn't understand it. The key is to translate the data into the agency's rating criteria, which will help both staff and decision makers better understand their assets' conditions and make better decisions based on that data.

Expect a positive ROI

Case studies have shown that effective asset management programs have helped transportation agencies yield a 13%-25% return on investment in improved asset longevity at the same expenditure levels. For example, as a result of an asset management initiative, one transportation agency found it was overinvesting in pavement reconstruction of specific segments of roadway on its most highly traveled roads. The asset management system's predictive analytics capabilities illustrated that reallocating funding from those segments to other roadway sections would extend the entire facility's pavement life by more than a decade at the same funding levels.

Transportation agencies have enormous investments in their transportation systems. Strategic asset management programs can help agencies optimize their investments through data-driven decisions and improve their ability to manage great uncertainty. ■

ABOUT THE AUTHORS:

Jeff Siegel is vice president and practice leader of digital innovation and technology services. He has more than 26 years of experience specializing in the implementation of sophisticated spatially enabled information systems and related technologies.

Contact him at (312) 930-9119 or jsiegel@HNTB.com

John Benda is senior project manager. He has more than 40 years of public-sector experience, including 32 years with the Illinois Tollway. Benda supports the firm's asset management, maintenance management and technology services practices and serves on projects through the United States.

Contact him at (312) 930-9119 or jbenda@hntb.com

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