ART + SCIENCE of Infrastructure Asset Management

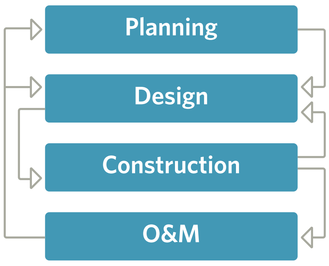
Limited or decreased funding is driving a change in the way we develop and manage infrastructure. The focus is no longer to simply create new and additional capacity but to also maximize the functionality of existing assets. *True asset management is part art, part science.*

The Art

Asset management is the art of doing the right thing at the right time at the right place.

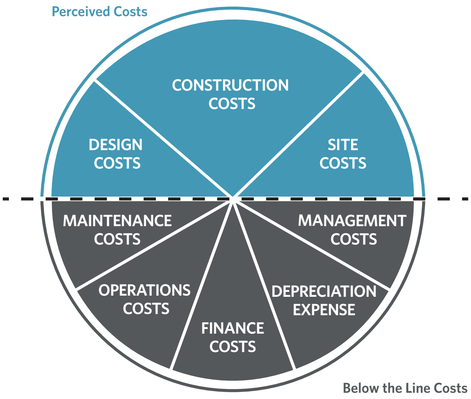
Historically, the way we've managed and made decisions about infrastructure has typically been linear, with different teams handling different aspects of the project. This approach does not always encourage the sharing of information across phases, nor does it always consider the long-term cost or value of the asset.

Asset management seeks to leverage information across the asset's life cycle in order to make better decisions. For example, **insight gained from operating and maintaining an asset can be used to optimize future planning and design phases.**



Asset management challenges us to think differently about how we develop and manage infrastructure.

The Science



Sound science is the foundation of asset management and intelligent decision making.

Amid dwindling budgets and increasing demand, the natural tendency is to focus on immediate savings by concentrating on reducing the perceived costs of only the design and construction, while often ignoring "below the line" costs.

Asset management uses a whole life cost approach to balance capital versus operational expenditures. Innovative decision support and risk management tools help owners evaluate options in order to make decisions that will yield the greatest financial value over the life of an asset.

Asset management recognizes that significant costs savings can be achieved if an asset's whole life costs are taken into account.

Planning for Performance

Asset management plans combine the art and the science, outlining a strategic approach to decision making focused on maximizing a system's performance and value over the long-term. A continuous inventory-driven, performance-based process drives effective investment decisions and implementation strategies.

EXECUTE
- O&M Delivery
- Capital Rehabilitation Strategies
- Decommissioning/Replacement

PRIORITIZE
- Life-Cycle Plan
- Risk Management Plan
- Investment Plan

ASSESS
- Data Collection
- Asset Inventory
- Condition Assessment

ANALYZE
- Levels of Service/ Deterioration Modeling
- Future Conditions

Keys to Success

A successful asset management strategy makes use of high-quality data, robust decision support and performance-based maintenance programs.

Data Management

Good data is the engine of an effective asset management program. A robust data management strategy uses data collected and generated from an asset to inform decision making.

Decision Support

Decision support tools help owners prioritize projects and programs, understand tradeoffs, measure benefits and evaluate risk in order to determine the best investment and policy strategies.

Performance-Based Maintenance

Performance-based contracting can help owners maintain their infrastructure more efficiently and often with better quality. A focus on performance measures, not subcontractors, streamlines procurement and lowers overhead costs.

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