



Value Planning for Better Budget Management

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Agenda

- Introduction
- Value Planning Importance & Interdependencies
- Example Projects
 - Value Planning Study
 - Value Planning Principals in Action
- Scalability



Why Do We Need Value Planning?

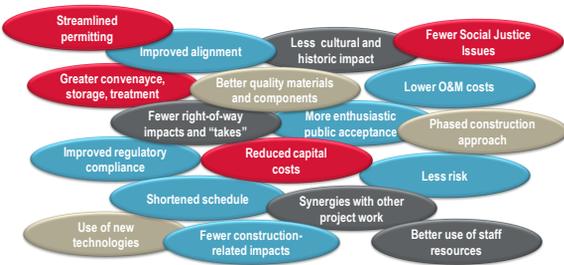
- Aging infrastructure
- History or prospect of infrastructure failure
- Backlog of capital improvement projects
- Increasing maintenance costs
- Political and regulatory pressure
- Interest in having strategy for growth
- Support for rate increases, bond financing, grant and loan programs
- Forward-thinking leadership



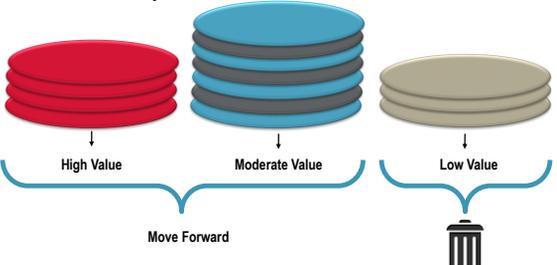
Value Planning Encompasses Many Tasks & Strategies



Identifying Opportunities for Improvement Seems Easy, but...Where do you Start?



Value Planning Helps Define Success Criteria and Identify and Prioritize Improvements



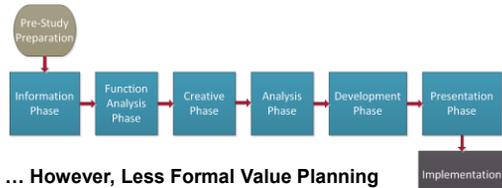
While it Can Be Hard to Quantify, Value Planning is Known to Provide a Substantial Return on Investment

Fundamentals and Benefits

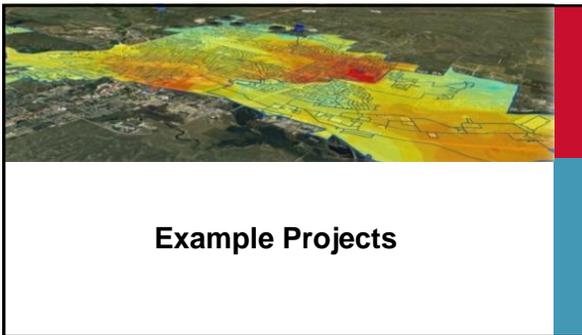
- Takes place **early** in the conceptual planning process
- Brings together a **cross-functional** team
- Examines alternatives, considering project **criteria, objectives, and function**
- Identifies approaches to deliver improved performance and lower costs (value)
- Provides **well reasoned, objective, and defensible** results
- **Validates** business and financial decisions
- Encourages **early buy-in**
- **Pays for itself** many times over

$$\text{Value} = \frac{\text{Performance} \uparrow}{\text{Cost} \downarrow}$$

Formal "Value Planning" Follows a Step-Wise Path Similar to Value Engineering



... However, Less Formal Value Planning Can Embrace These Elements Through a Different Approach.



Example Projects

Formal Value Planning – Example 1



I-17 / Camelback Road / Light Rail Crossing Value Planning Study

Example 1



Project Background

- Five-mile West Phoenix/Central Glendale corridor in Arizona for future High-Capacity Transit (HCT) Route.
- 2013 Study to identify HCT service options to connect downtown Glendale to the existing light rail system. Leading alt was a 7-mile route through the Cities of Phoenix and Glendale.
- Concurrently, the Maricopa Association of Governments (MAG) began developing a Corridor Master Plan, that recommended improvements to the I-17 / Camelback Road intersection in the City of Phoenix. Project area overlap and schedule conflict.



Example 1



Primary Objectives

- Conduct a thorough review and analysis of key project issues with a multidisciplinary team
- Develop, verify or improve upon the concepts for each alternative
- Improve the value of each alternative by improving performance while reducing cost
- Perform a cost risk analysis on each alternative.

Example 1



Process

- Combined the best transit scenario for each of the three roadway alternatives
- Scored performance of each of the alternatives developed
- Performed a risk assessment of each of the alternatives developed
- Defined a value index for each of the alternatives



Design Competition Rules for Each Team

- All work within the project limits
- One transit station near 27th
- Interchange improvements
- ROM estimate
 - Construction costs (2016 \$) and mark-ups
 - ROW costs
 - Utilities allowance

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Example 1




Best Value = Alternative 3: Platform Diamond with Median LRT



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Asset Management Based Value Planning – Example 2



King County Road Right-of-Way Drainage Trunk-Line Condition Assessment

Example 2



Background

- Trunkline (>24in diameter) drainage assets in the ROW
- Unincorporated County ROW in Western WA
- Joint project between Transportation and Stormwater Management divisions
- 1,500 mi of road and 180 bridges
- Approximately:
 - 186,000 ft of pipe/culvert
 - 1,400 catch basins
 - 70 manholes



Example 2



- Levels of Service (LOS)
 - Current management strategy
 - Reactive ... Run-to-Fail
 - Very little \$ for maintenance
 - Three alternative levels of service (proactive)
 - Additional inspection
 - Asset mapping and inventory
 - Condition assessments
 - Preventive maintenance and repair
 - Renewal prior to failure
- Business Risk Exposure (BRE)
 - Probability of Failure
 - Consequence of Failure
- Compare near- and long-term financial impact of alternative LOS

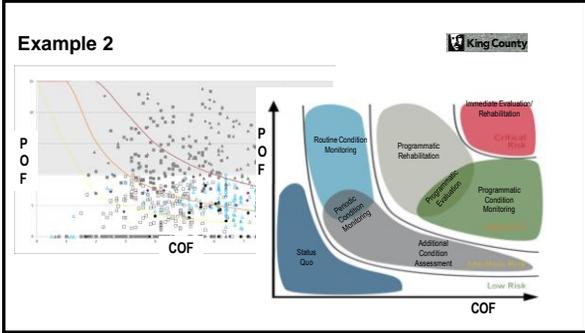


Example 2









- Scalability**
- Project Specific**
- Use smaller multidisciplinary team
 - Keep the focus on FUNCTION
 - Identify biggest \$ elements and zero in on fewer items
- Programmatic**
- Recognize the resources and information you already have
 - Keep the focus on FUNCTION
 - Determine what is important now, and what can wait for later phases
 - Extrapolate findings to limit field data collection

- Regardless of the Degree of Formality or the Size of the Project, the Benefits of Value Planning are Tangible**
- Ensures the **Right Solution** for the Right Problem
 - Focuses Limited Financial Resources and **Justifies Budget** Investments
 - Helps Projects **Qualify for Grant and Loan** Funding
 - Delivers **Long-Term Solutions** to Optimize Public Works Programs
- Get started. You've got the tools in your toolbox!
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