



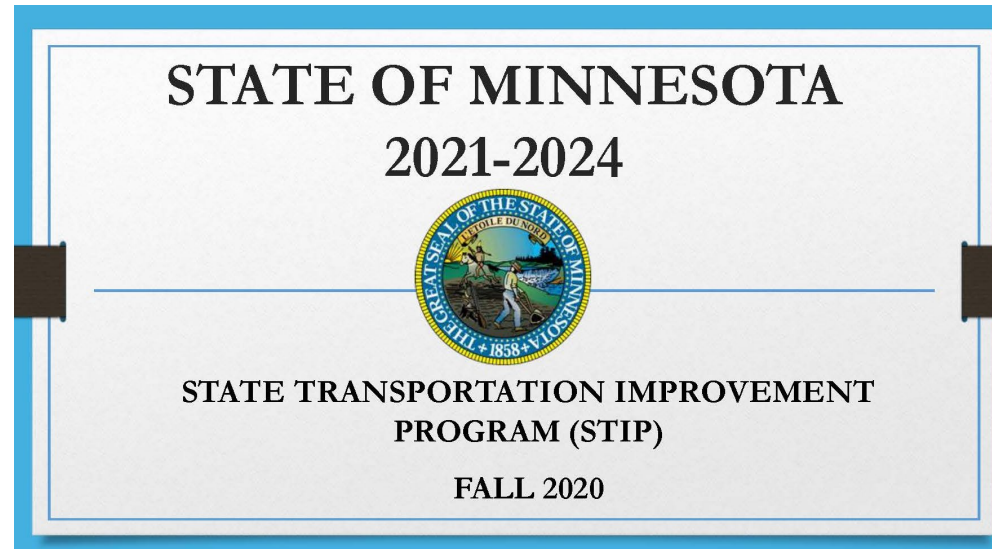
MnDOT: Managing risks thru the Construction-let Budget Setting Process

Minnesota Transportation Alliance

Feb 12, 2021 Webinar

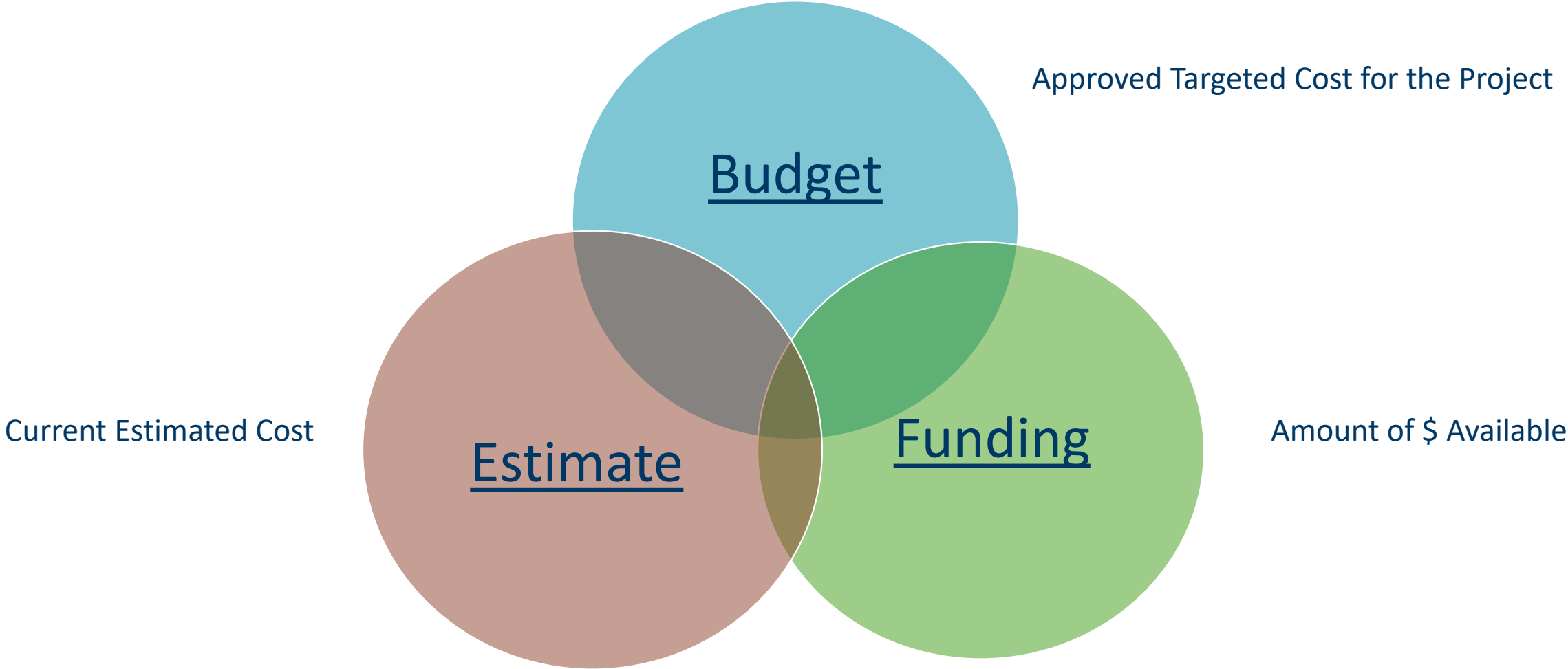
So What is New?

- Are Budgets new to MnDOT?

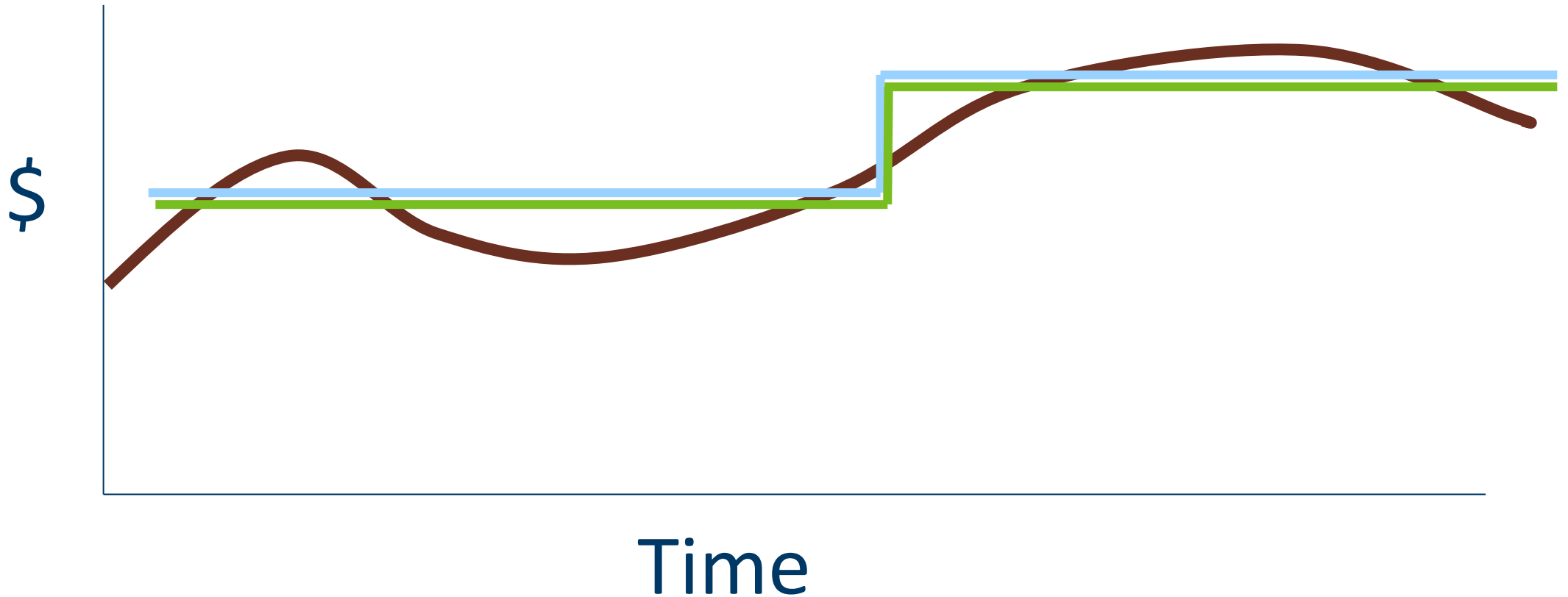
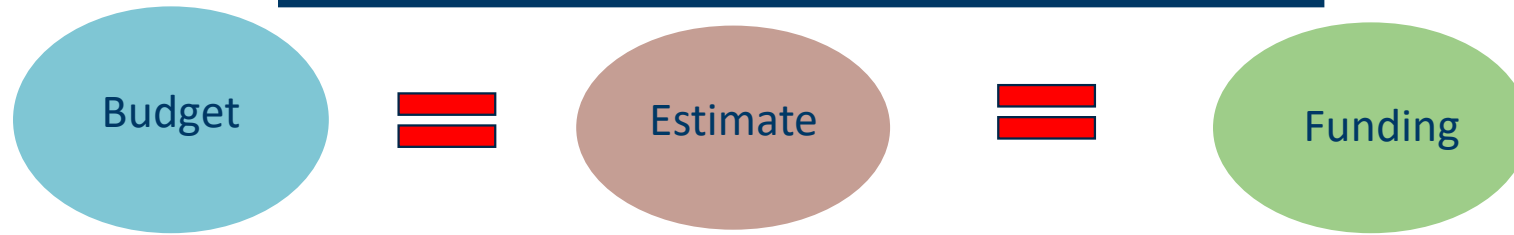


- Improved processes to set, track, and adjust project budgets

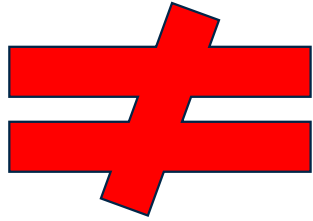
Three Key Elements



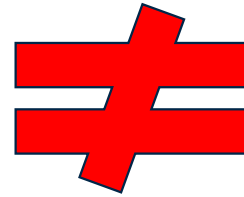
“Ideal Scenario”



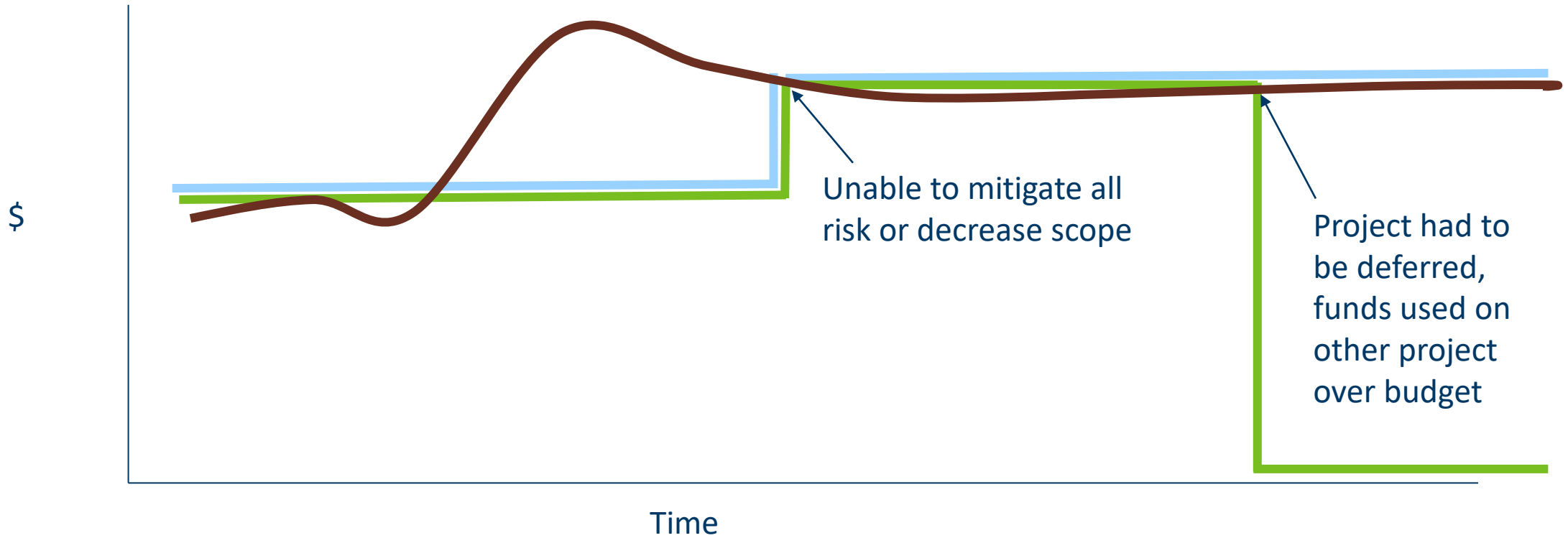
Budget



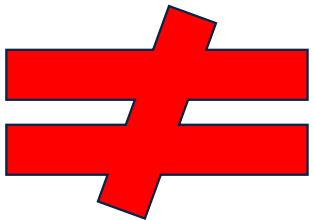
Estimate



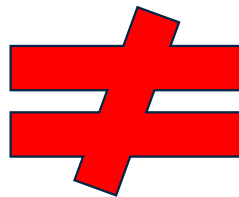
Funding



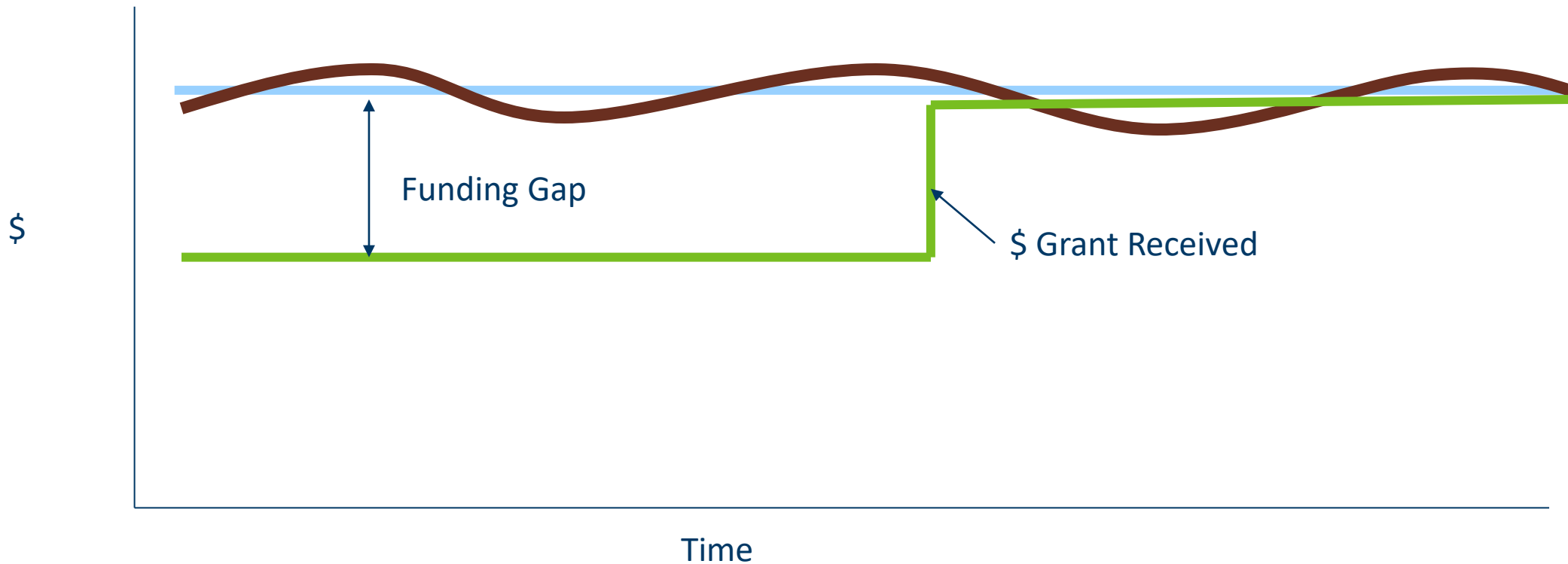
Budget



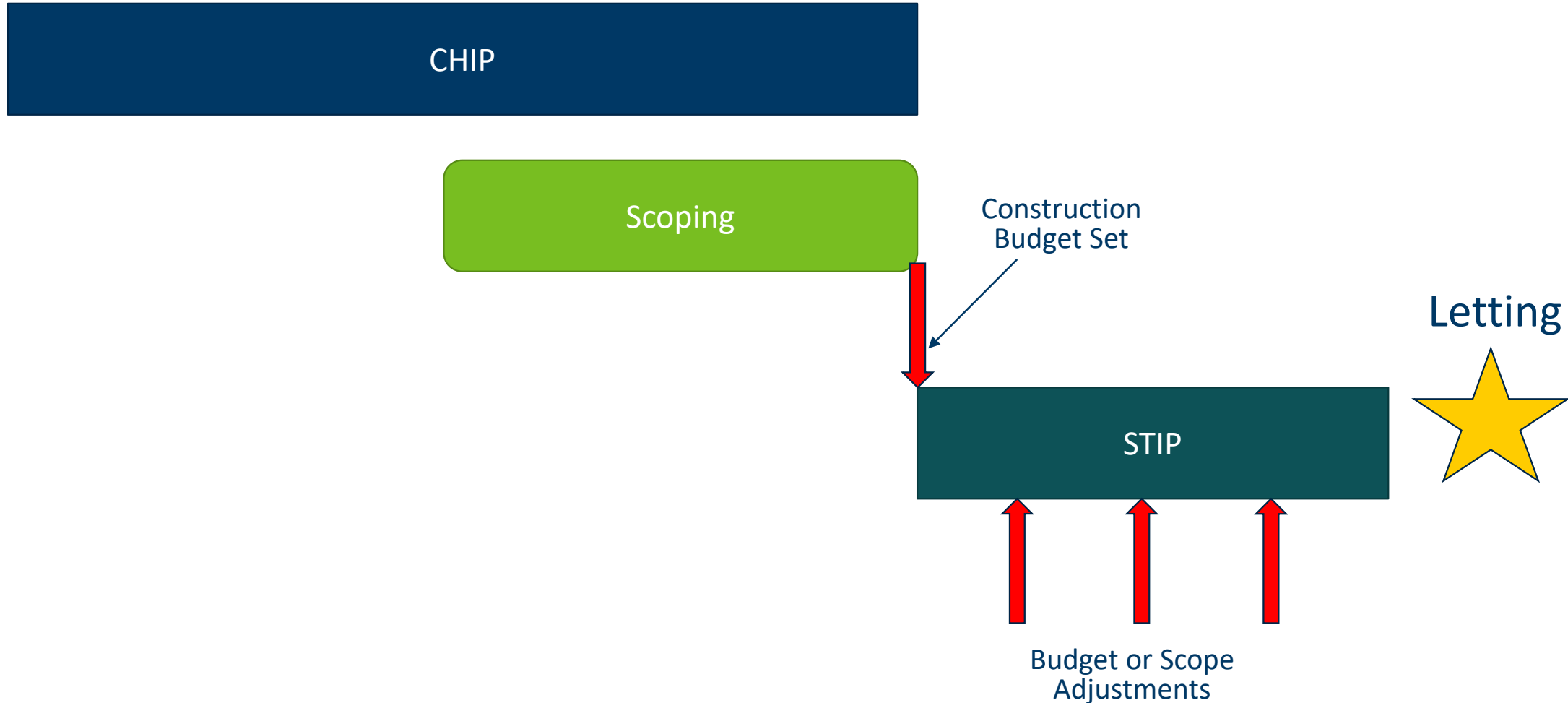
Estimate



Funding



Programmed Projects Budget Setting Timeline & Updates



LEVEL 1

- Significant Cost- >20% of District Construction Budget
- High Profile
- Most Complex
- Higher Impacts
- Special Funding Programs



Risk and Monte Carlo Analysis

Budget Set by Major Project Leadership Team

Level 2 & 3 Projects

LEVEL 2

- Moderate Cost – 5-20% of district program
- Moderate Profile
- “Normal” risks

Project Manager Recommends Budget

District Engineer Approves Budget and Changes

LEVEL 3

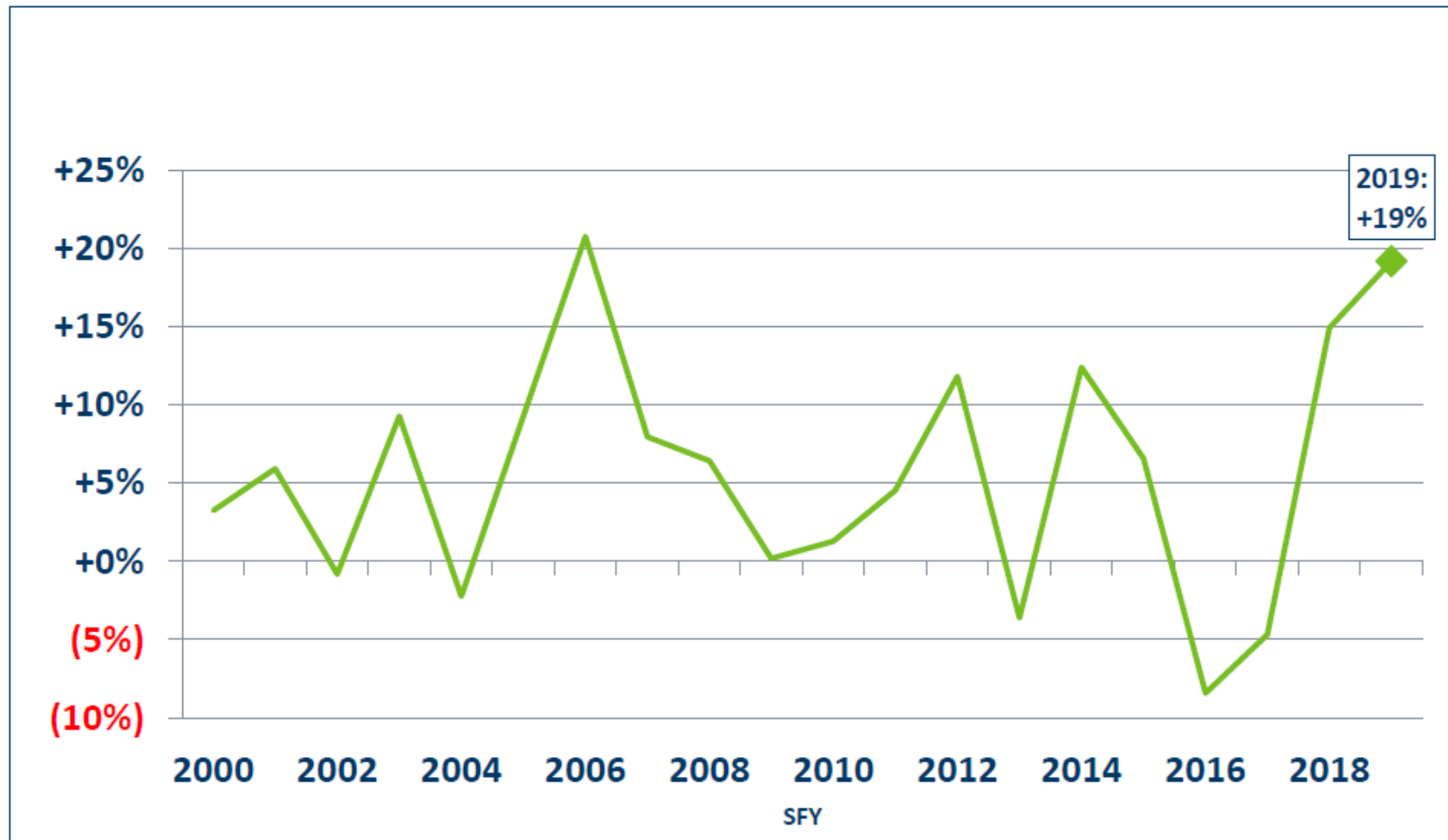
- Lower Cost - <5%
- Low Complexity

Project Manager Recommends Budget

Assistant District Engineer Approves Budget and Changes

Challenges with Budgets

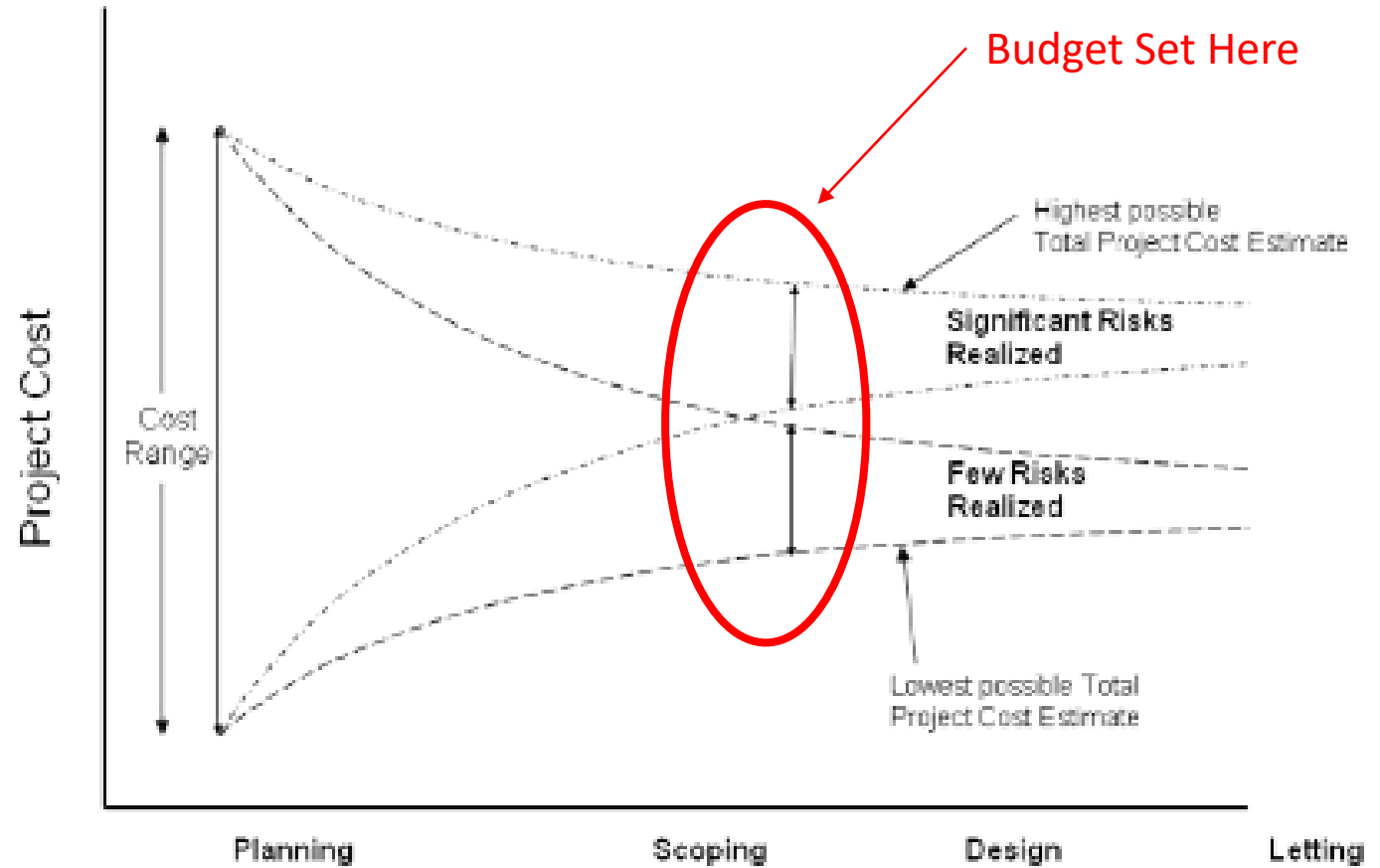
MnDOT Highway Construction Annual Inflation Rate History



Why Will Budgets Change

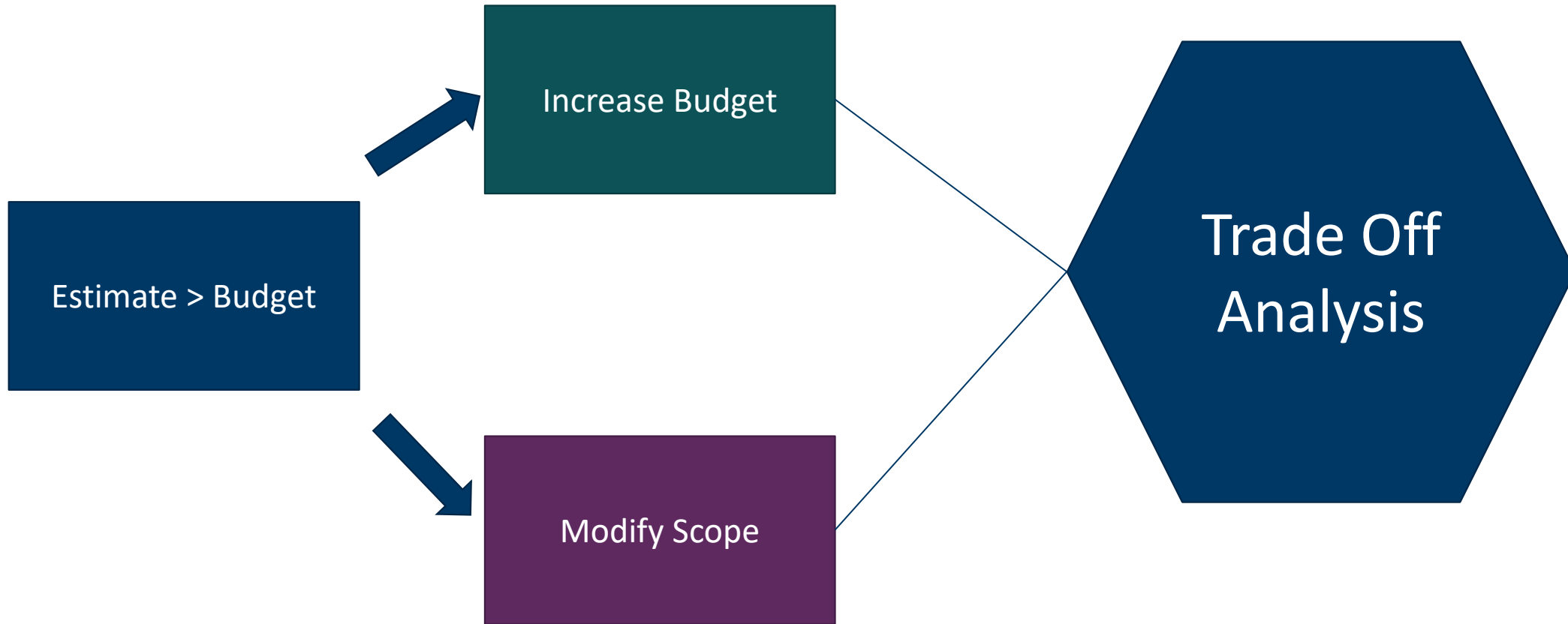


DISCOVERY



Project Development Process

Changing Budgets



Programmed and Unprogrammed Projects

**Programmed
Projects**



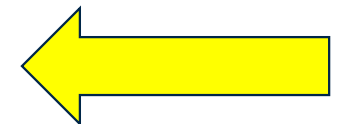
**Non-
Programmed
Projects**

How can budget process help these projects?

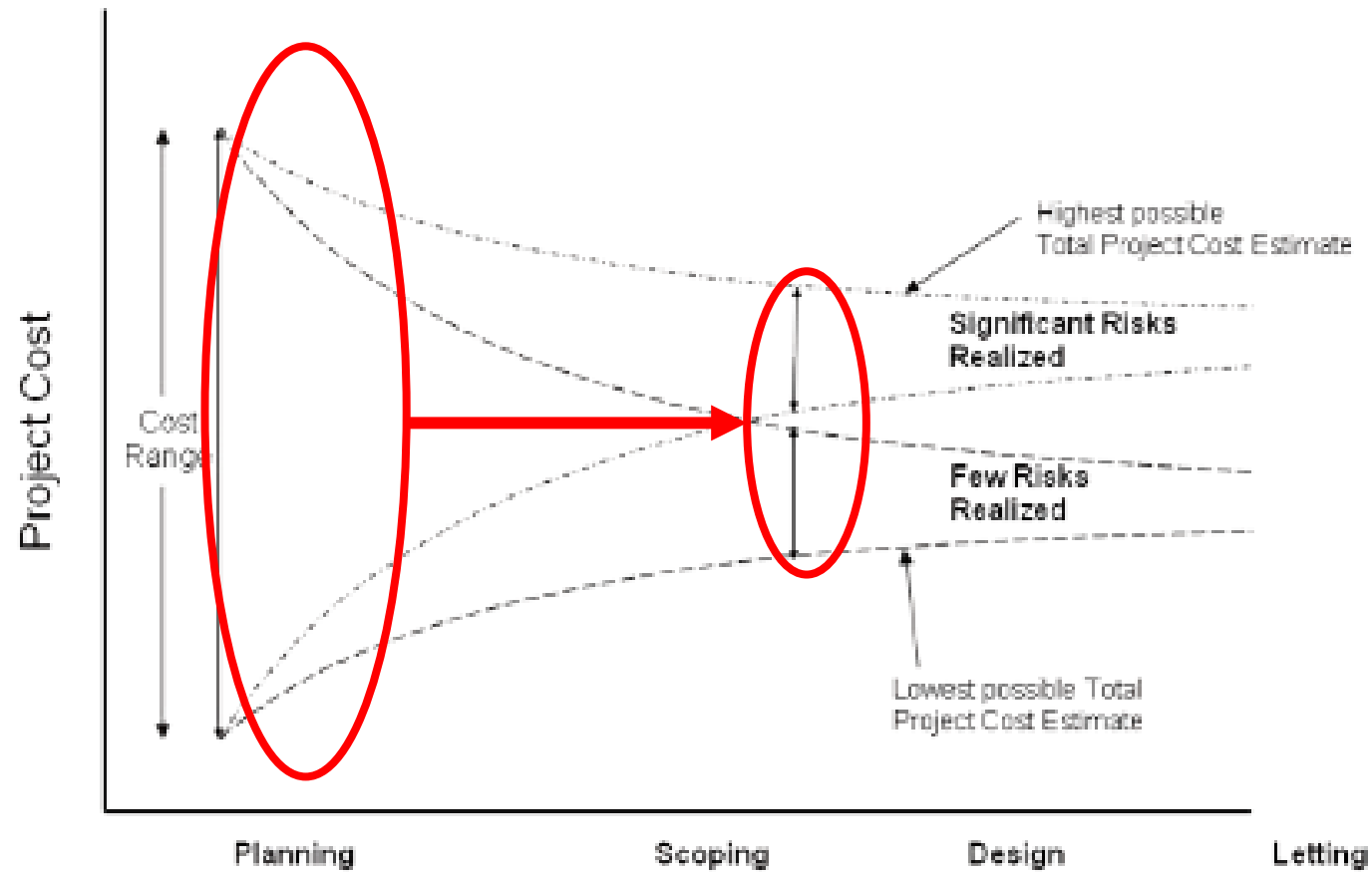
Cost Estimate Risk

Table II.3-1. Cost Estimate Classification System

| Project Development Phase | Project Maturity (% project definition completed) | Purpose of the Estimate | Estimating Methodology | Estimate Range |
|---------------------------|---|--|--|----------------|
| Planning | 0 to 2% | Conceptual Estimating Estimate Potential Funds Needed (20-year plan) | Parametric (Stochastic or Judgment) | -50% to +200% |
| | 1% to 15% | Conceptual Estimating Prioritize Needs for Long Range Plans (HIP – 10-year plan) | Parametric or Historical Bid-Based (Primarily Stochastic) | -40% to +100% |
| Scoping | 10% to 30% | Scope Estimating Establish a Baseline Cost for Project and Program Projects (HIP and STIP) | Historical Bid-Based or Cost-Based (Mixed, but Primarily Stochastic) | -30% to +50% |
| Design | 30% to 90% | Design Estimating Manage Project Budgets Against Baseline (STIP, Contingency) | Historical Bid-Based or Cost-Based (Primarily Deterministic) | -10% to +25% |
| Letting | 90% to 100% | PS&E Estimating Compare with Bid and Obligate Funds for Construction | Cost-Based or Historical Bid-Based Using CES (Deterministic) | -5% to +10% |



“Shelf Project” Confidence



Thank you again!

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