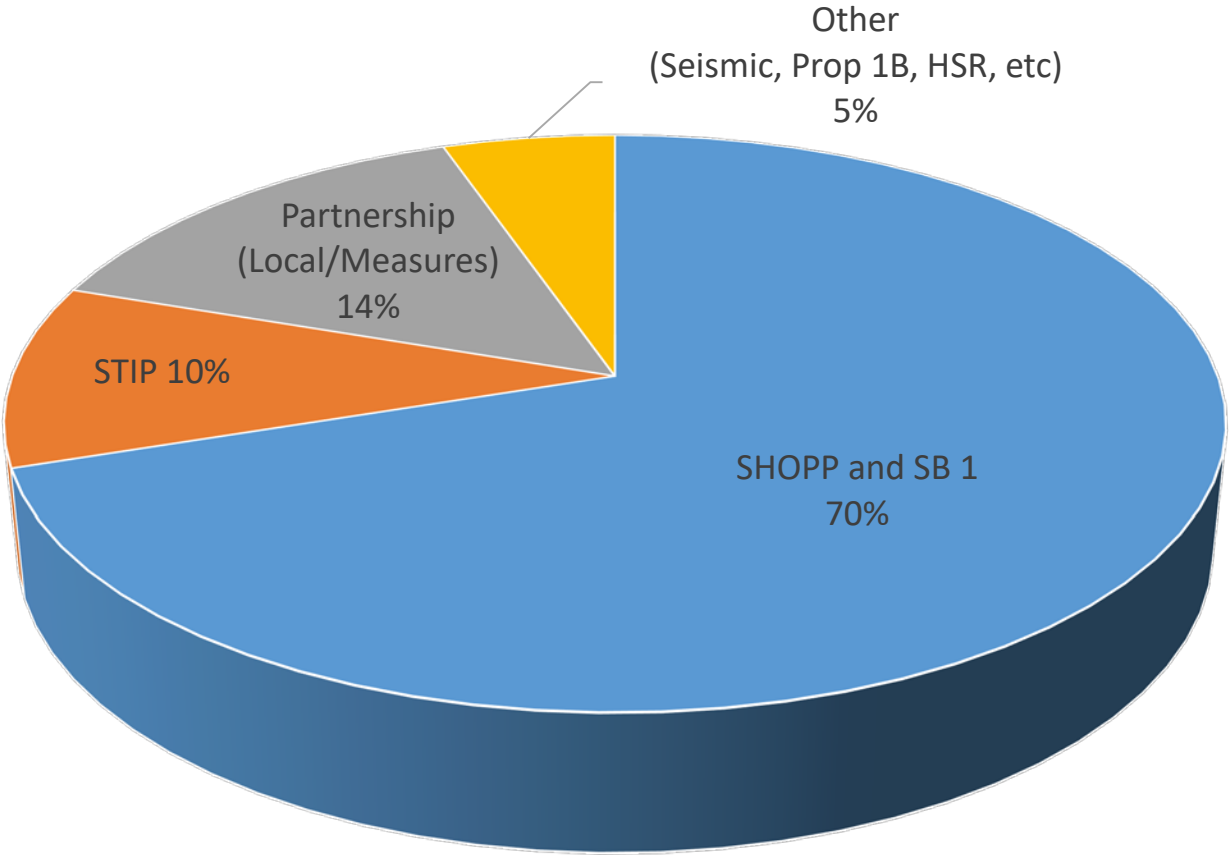


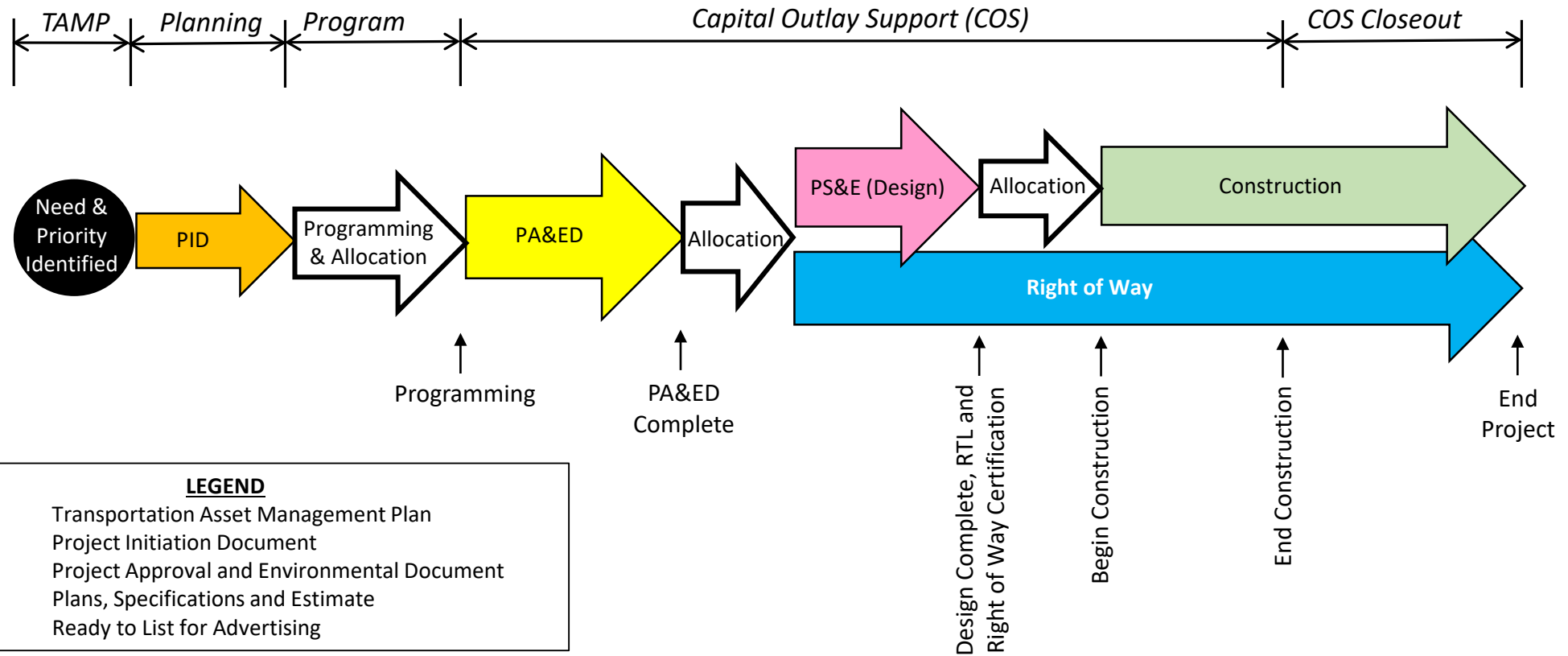
Commission Program Delivery Workshop

February 1, 2018

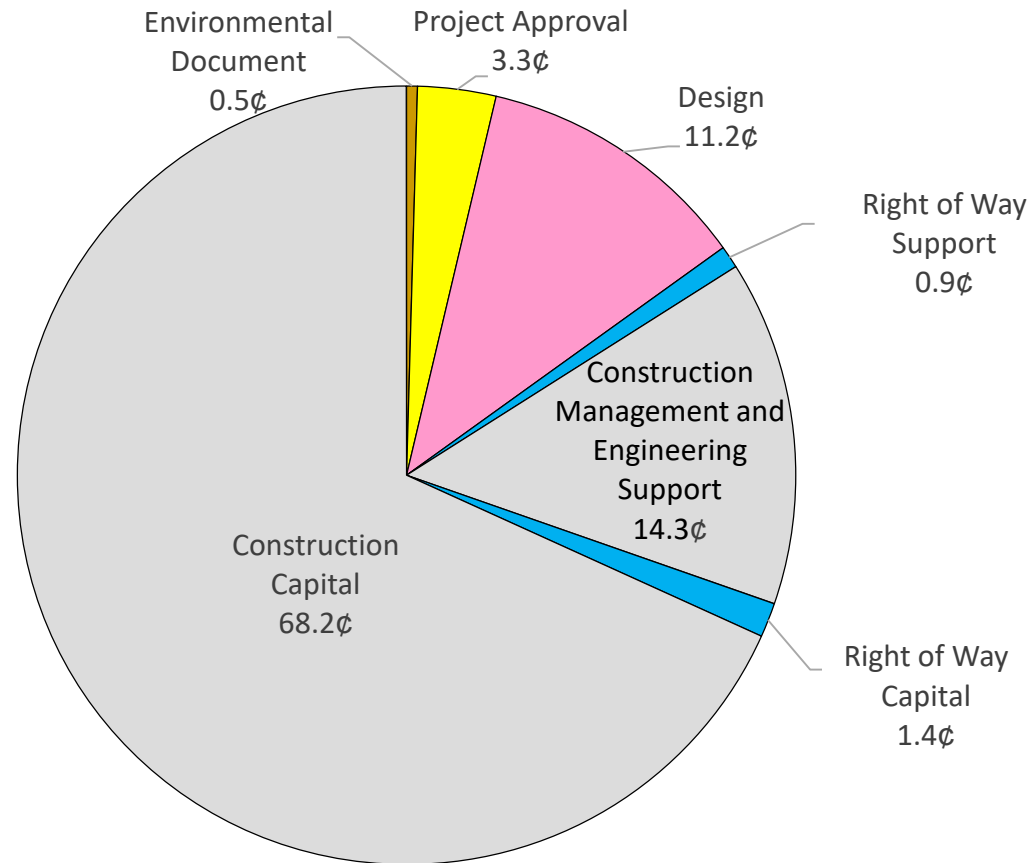
Capital Outlay Support (COS) Program Workload



Phases of Project Development



Construction Costs Dominate SHOPP Expenditures¹



¹ For each dollar of SHOPP expenditures for projects that completed construction in Fiscal Years 2014-15, 2015-16, and 2016-17.

Organized for Program Management

Program Management

- Districts
 - Project/Phase (Scope, Cost, Schedule, Outputs)
 - Project Manager, Single Focal Point and District Director
 - Status the project and identify and manage risks
 - Regular project reviews of portfolio with the District Director
- Headquarters
 - Programming Documents & Commission Guidelines
 - Statewide Plan – Contract for Delivery – tracked weekly
 - Monitor deviations on Scope, Cost, Schedule performance
 - Quarterly review of performance deviations, risks and trends
 - Quarterly report performance to the Commission including the “Risk” Watch list

Formal Controls in Place

- 97% of projects completed within delegated authority (Allocation+G12))
- Caltrans Project Change Management (Multiple-levels)
 - Project Change Request
 - Reviewed by multiple HQ Units
 - Approved by Project Manager, Single Focal Point and District Director
 - Reviewed and approved/rejected by Project Change Control Committee in HQ
 - Larger changes are elevated to Executive Project Change Control Committee
- Commission Change Management
 - Amendment, >120%, Supplemental Vote
- Less than 3% of projects come to the Commission for cost increases

Capital Cost Estimating

Purpose: Establish a construction budget for the project.

Goal: Predict how much a contractor is going to charge for building the project

Objective: Put the dollars to work

Capital Construction Costs

➤ Caltrans Estimate:

- Historical Based
 - Items and quantities
 - Unit costs
- Future Trends

➤ Contractors Cost:

- Production Based
 - crews and equipment
 - materials, subcontractors, etc.
 - converted to a Quantity/Unit Cost format

Capital Cost Estimating Improvement Efforts

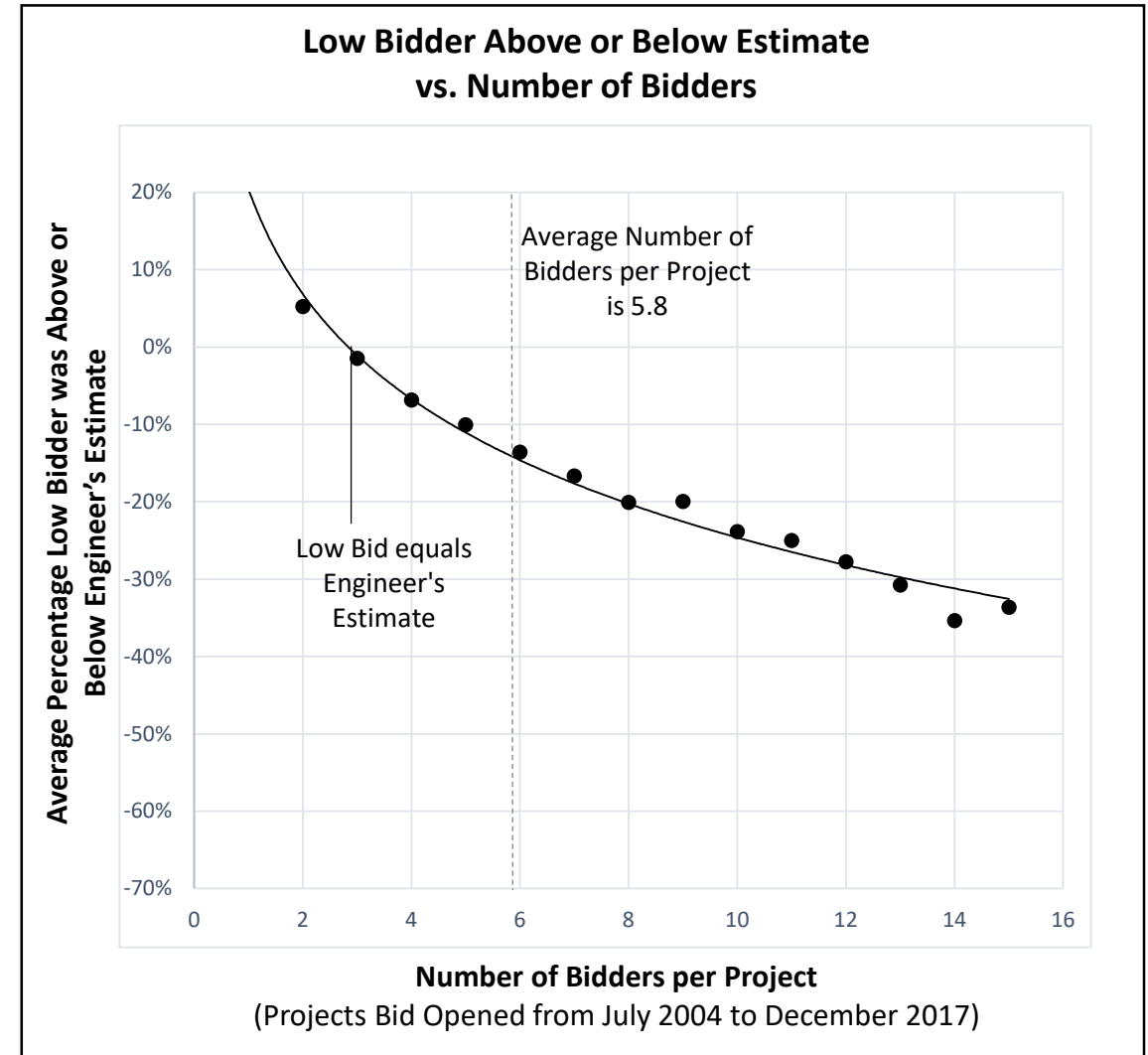
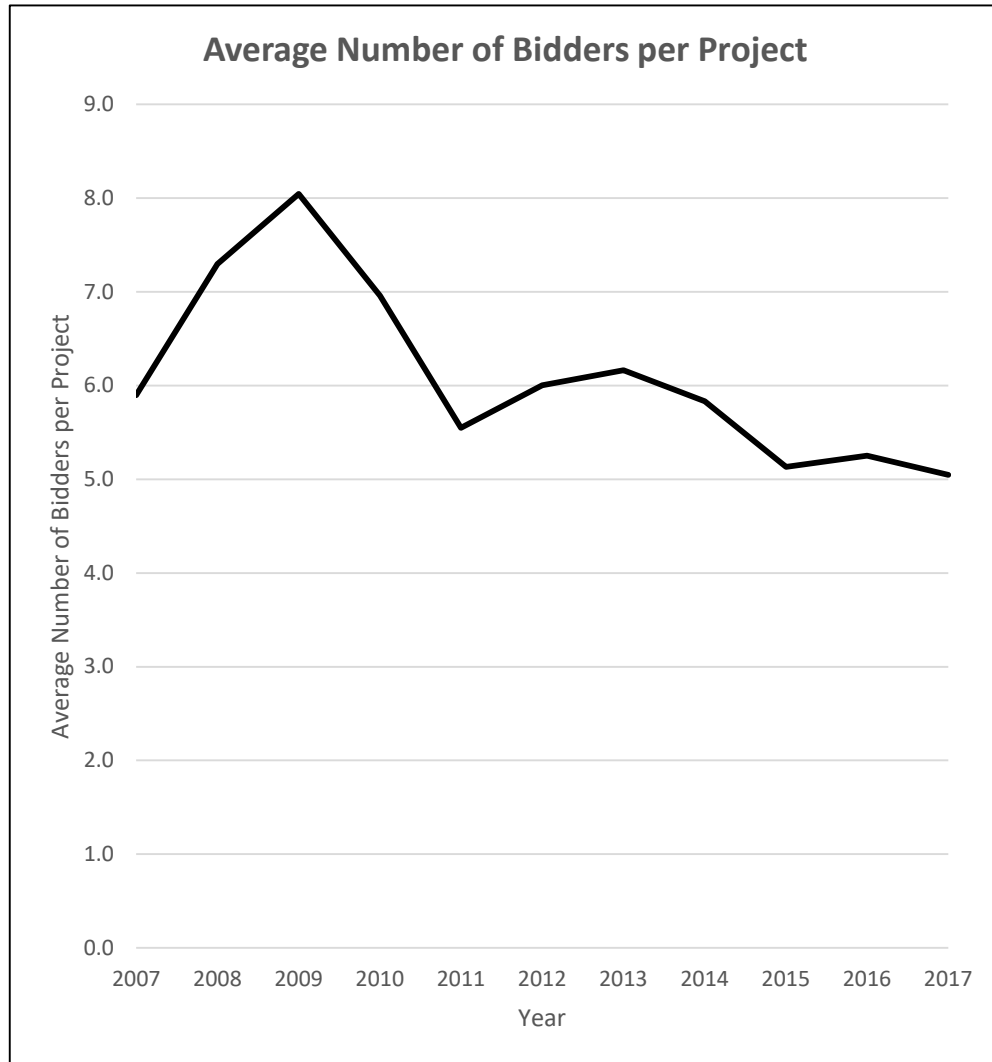
Recent Changes

- Continual Practice Improvements
- Piloting independent cost estimators

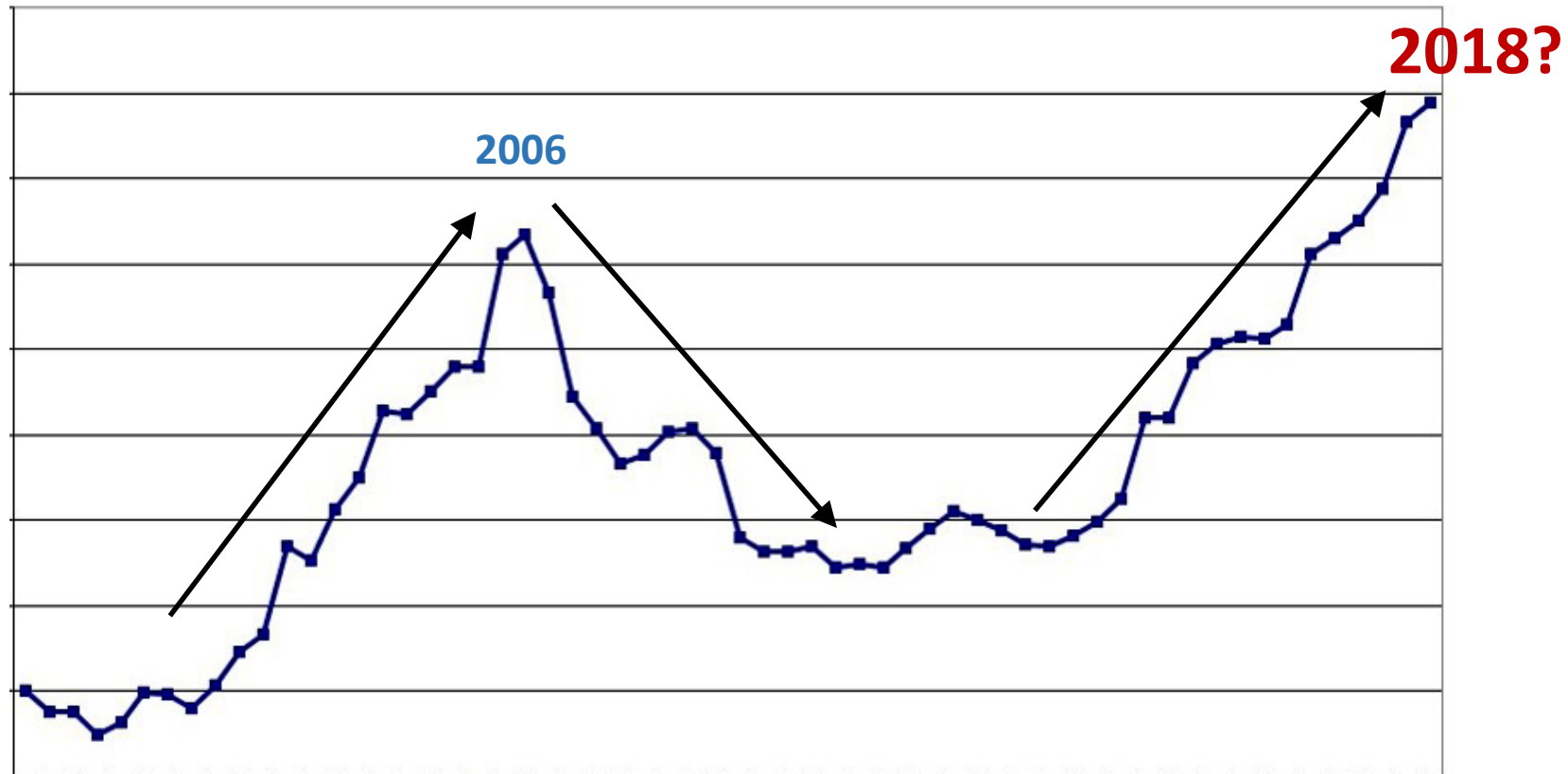
Opportunities for Improvements

- Enhance expertise
 - designated subject matter expert
 - economics/market expertise
- Analytics on top 10-15% of Project Items

More Bidders Equals Lower Costs



Construction Costs are Volatile and Unpredictable

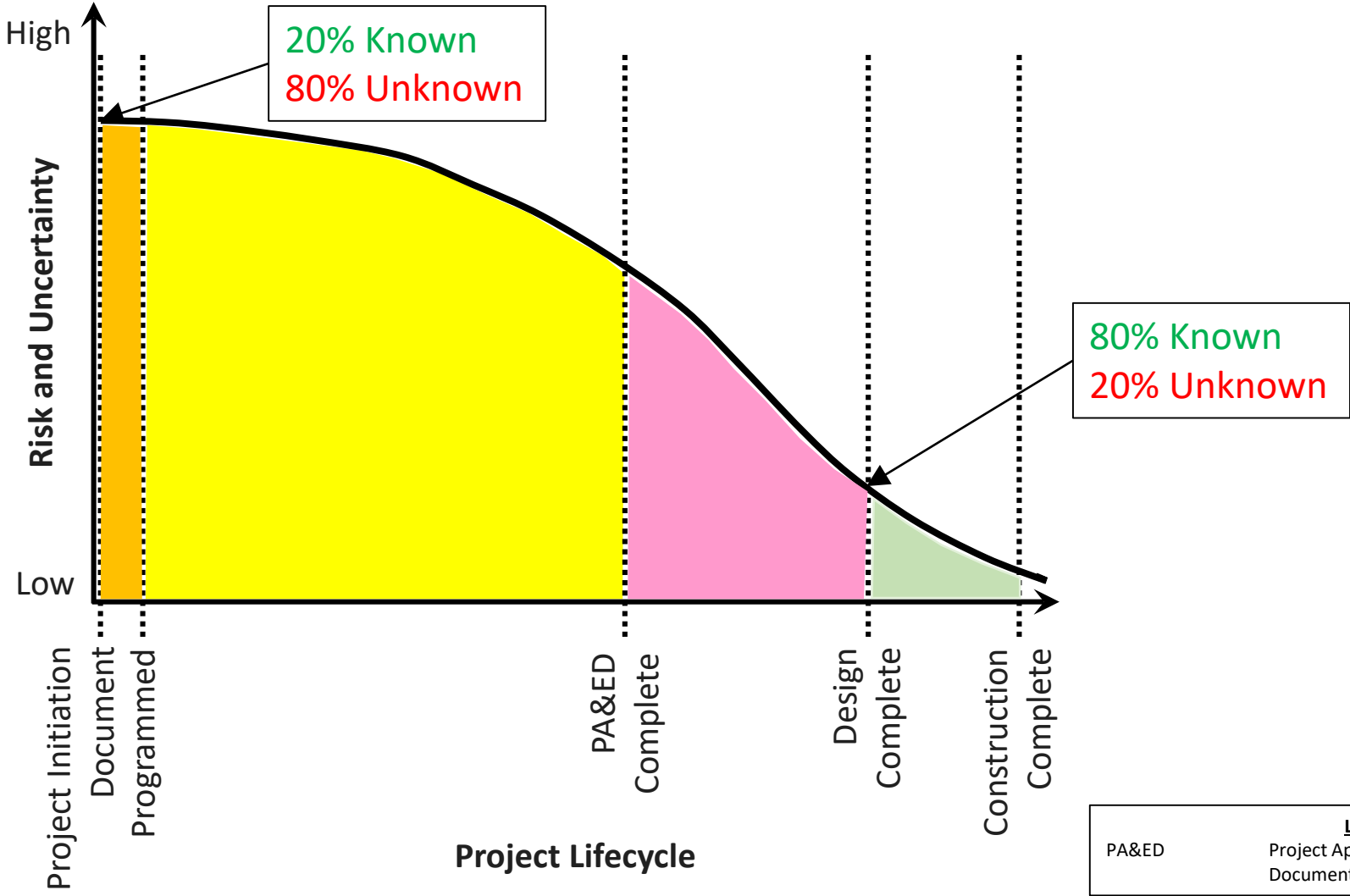


Risk

Risk

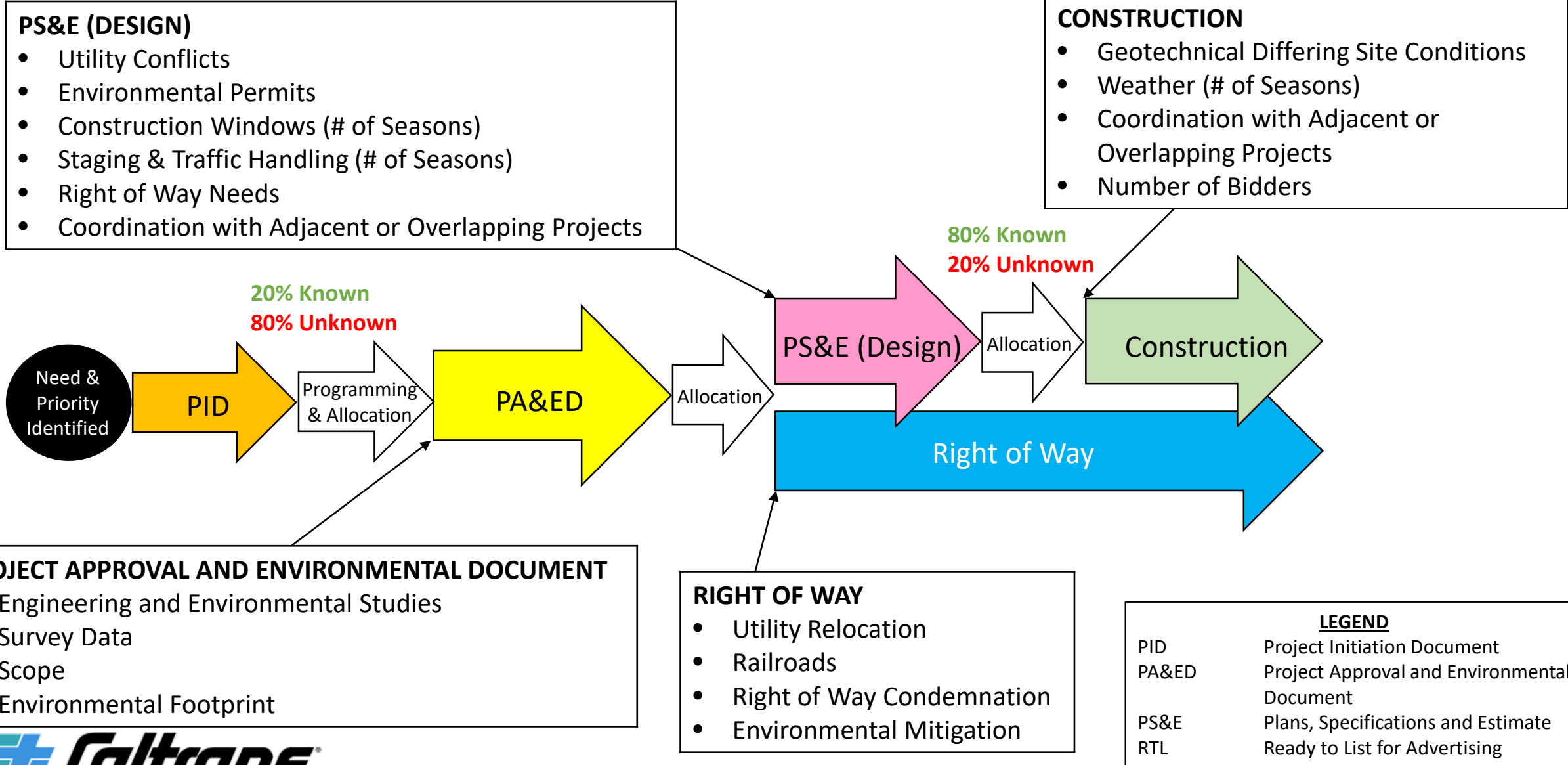
- Project Development involves many stakeholders
- Project scope evolves when new information is known
- There is inherent uncertainty in projects
- Take “reasonable” risks and put dollars to work
- Goal is to have biddable and buildable projects
- Report project risks in Quarterly Delivery Report (Watch List)
- Manage risks

Risk and Uncertainty During Project Phases

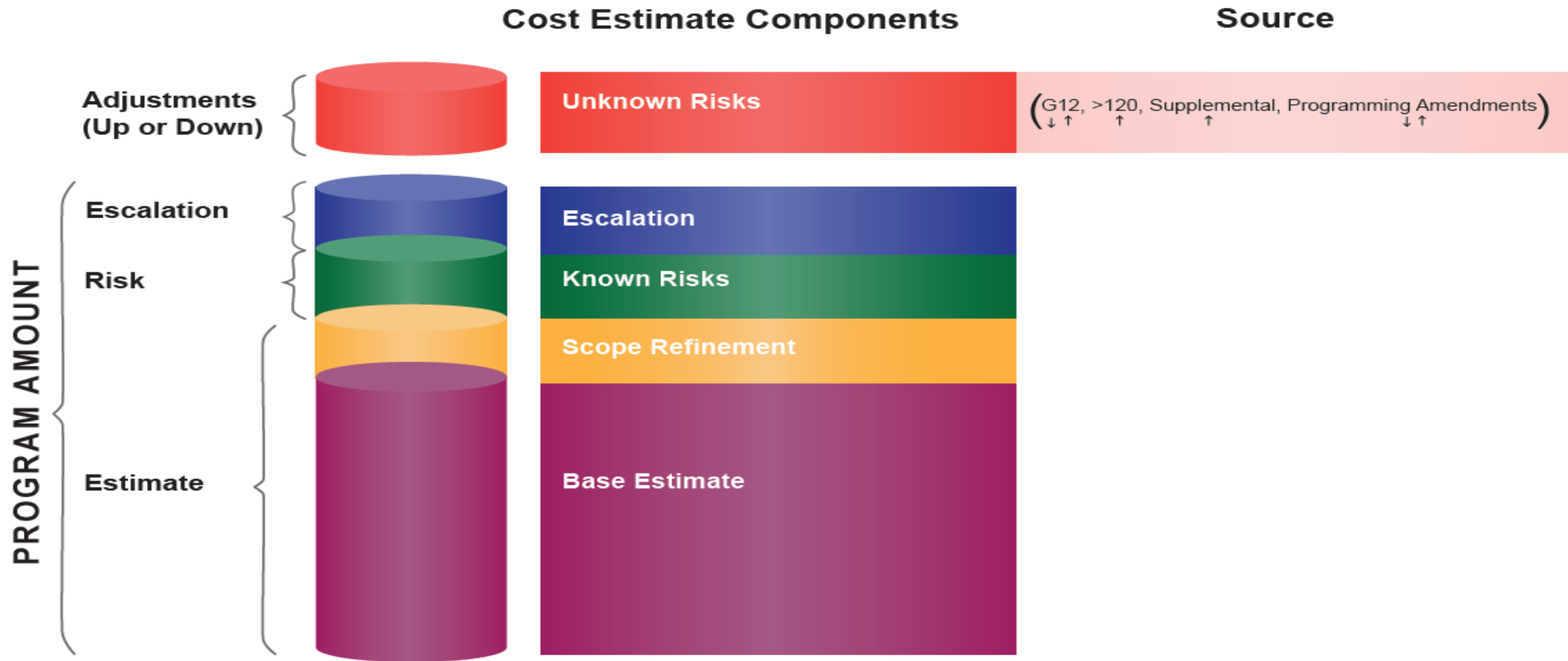


Modified version of Project Management Institute, A Guide to the Project Management Body of Knowledge, (PMBOK® Guide) - Fifth Edition, Project Management Institute Inc., 2013 Page 40 Figure 2-9

Risks and Uncertainty in Project Phases



Caltrans Project Cost Estimate Components



* All components are made up of both support & capital except scope refinement, which is capital only.

Version 2
Rev. 10/30/17

Closing

- Program consists of over 2,500 projects
- Assign project manager to be accountable
- Project scope evolves over time and changes are normal
- Robust change management control process
- We provide transparent reporting on a quarterly basis
- Take “reasonable” risks and put dollars to work
- 97% of projects delivered within delegated authority
- Continue to improve cost estimating and risk quantifying efforts
- Need to grow the transportation industry in California