



Client Enrichment Series

Welcome to today's presentation on

Cost Estimating and Cost Management Principles

October 18, 2022

The presentation will start at 1:00 pm Eastern

Note: Phones are automatically muted during the presentation. You can send questions to our presentation team via your Q&A pane and team will answer as many questions as possible during the presentation. All questions will be responded to in writing in a formal Q&A document, posted along with the slide deck and session recording, on our website, <http://www.gsa.gov/ces>



Client Enrichment Series

Cost Estimating and Cost Management Principles

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Poll #1

- ***What is your role with Cost Management within your agency?***
 - ***Cost Estimator***
 - ***Project Manager***
 - ***Project Coordinator/Liaison***
 - ***No formal role - general interest in the topic***
 - ***Other (please specify in the “Chat” pane***
- ***How comfortable are you with the processes of Cost Estimating/Cost Management? (Scale of 1-5)***
 - 1 = Not comfortable at all - I have little/no experience***
 - 5 = Very comfortable - I have extensive experience/expertise***

Agenda



- *What is Cost Management?*
- *What is the Project Life Cycle, and How Does Cost Management Fit In?*
- *What is Needed for Good Cost Estimating?*
- *Why do Estimates Vary?*
- *What Resources are Available to Support Cost Management?*
- *Q&A*

What is Cost Management?

Cost Management is concerned with the process of planning and controlling the project development to remain in scope and budget.

Cost Estimating

Forecast of financial and other resources needed to complete a project with a defined scope.

Project Budgeting

Is the sum of all estimated costs. Establishes baseline. Defines the funds authorized to execute the project.

Cost Control

Managing changes to the project that impact time and scope.

What is Needed for a Reliable Estimate?



A clearly articulated vision of a successful project outcome

A well defined scope



Clear parameters/expectations on constraints

Continuous communication and partnership as needs evolve. Involve the key stakeholders.



Ideal Scope of Work

- ***Should be :***
 - *Organized*
 - *Sequential*
 - *Reviewed for alignment between all parties*
- ***A Scope of Work should tell a concise story with a clear outcome!***

Writing the Scope of Work

- ***In order to be able to adequately estimate a project, the scope has to be developed in adequate detail as possible.***
 - Expectations shall be clear within the scope
 - Where, how, and why should be part of the narrative
- ***These items should be part of the scope***

Existing
Conditions

Working
Hours

Special
Clearances

Period of
Performance

Subject
Matter
Support

Restrictions

Market
Conditions

Clear statement of
the need

Why Do Estimates Vary?

All PBS estimates are prepared in accordance with industry and professional standards and methodologies, but estimates *do* vary...

Project Scope and Scale



Granularity of the Scope of Work



Timing to Market and Prevailing Conditions



Location of Project



Large Capital vs. Small Projects

Size matters...significant differences in...

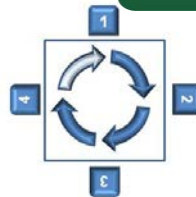
How your agency and GSA have to budget for the project



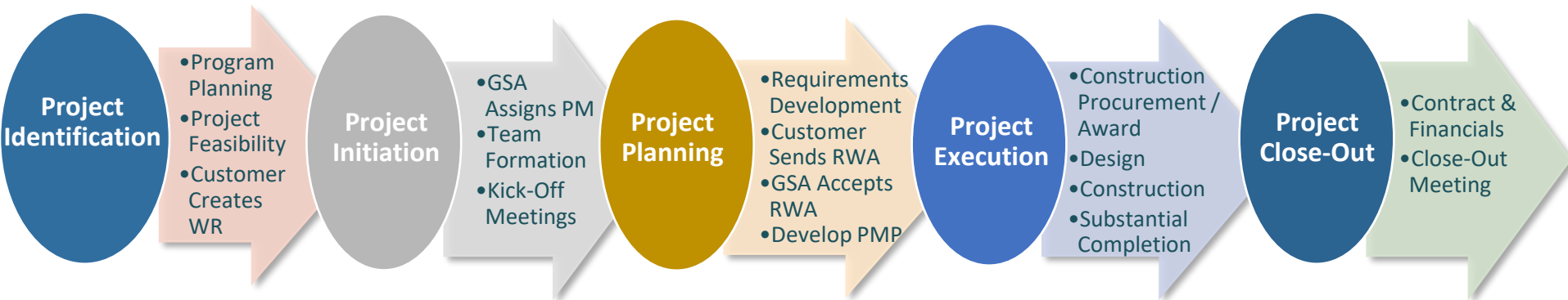
Pre-project analysis, including feasibility studies, are required for large projects



Lifecycle of the project



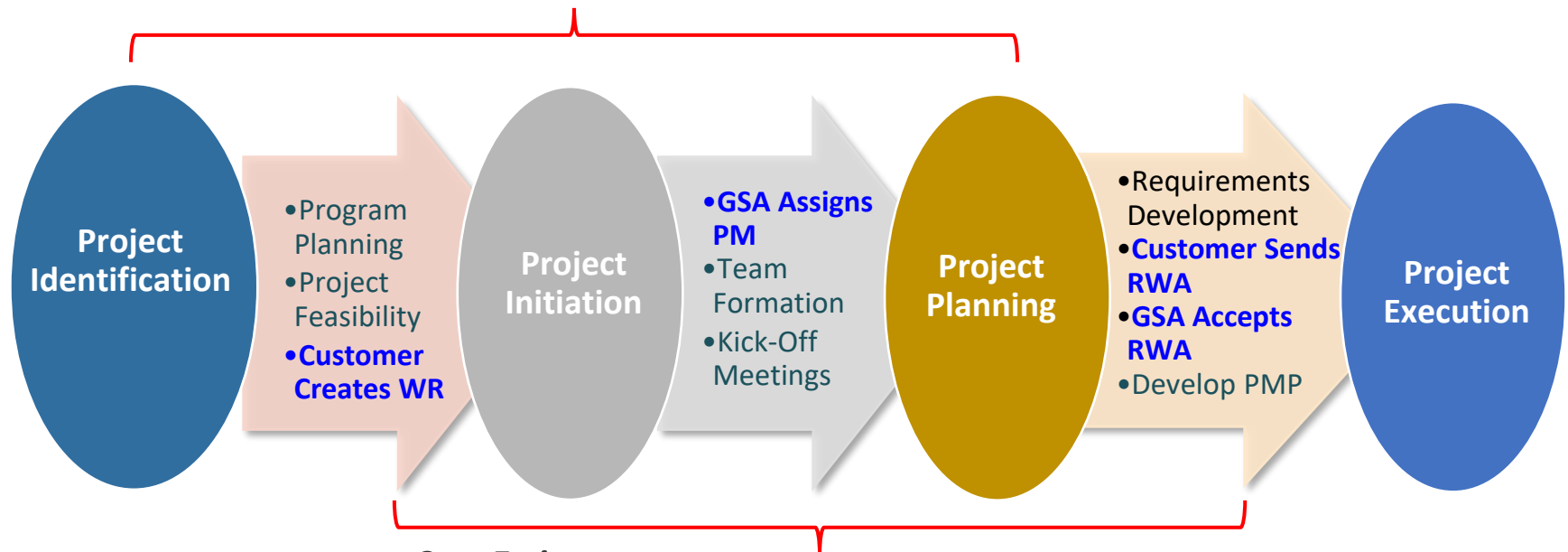
Cost Management and the Project Lifecycle



Cost Management and the Project Lifecycle

– Early Stages

- *Work Requests (WR) sent via eRETA begin the Project formation*
- *Work with GSA Project Manager to complete requirements development*
- *Cost Management - Develop cost estimates at various phases of the project and manage costs within scope*



Cost Estimates:

- *Project Initiation - Order of Magnitude Estimate*
- *Project Planning - Budget Estimate*

Cost Management and the Project Lifecycle

- Later Stages

Cost Estimates:

- *Project Execution - Construction*
- *Project Execution - Change Order*



Estimate Types (RWA) - Accuracy as Details

Type of Estimate (Tier)	Purpose	Information Available	Accuracy
Order of Magnitude	To assist client with initial budgeting in order to vet work items and properly scope project	Very little information may be available at this stage. Requirements may be undefined	+75%, -40%
Budgetary	To establish a project budget after the Scope of Work is defined.	Scope-of-Work finalized, blocking plans, existing building conditions verified.	± 30%
Conceptual Design	To check the current project costs against initial budget, scope, design elements	Design Development drawings and project documents typically 25% to 40% complete.	± 20%
Construction Estimate	Final detailed requirements - To be used for construction procurement.	100% complete drawings and specifications and all relevant project information.	+10%, -5%
Contractor Bid/Proposal	To award construction contract	Bids are based on drawings and specifications	Varies based on contractor and market conditions
Change Order Cost Evaluation	To verify costs are fair and reasonable and to verify proper Shell/IT allocation	Varies depending on scope of the change.	+10%, -5%

 **Iterations become more refined through Project Life-Cycle**

Estimate Accuracy Increase As Details Increase

Example #1 - On **Aug 25**, you submit an RWA to **completely remodel** your office... there's been **no prior discussion with GSA, no design, requirements are undefined, and there's no opportunity for a site visit before EOY**....what type of estimate should you expect?

- A) Order of Magnitude (+75% to -40%)
- B) Budgetary Estimate (+ or - 30%)
- C) Construction Estimate (+10% to -5%)

Example #2 - On **Nov 25**, you submit an RWA for the **design to completely remodel** your office..a **work request has been submitted into eRETA, site visit(s) have occurred, estimates developed, scope of work and requirements development finalized**.....what type of estimate should you expect?

- A) Order of Magnitude (+75% to -40%)
- B) Budgetary Estimate (+ or - 30%)
- C) Construction Estimate (+10% to -5%)

Each RWA Has a Summary Cost Estimate (SCE)

SUMMARY COST ESTIMATE

BASIC INFORMATION

Est. Tracking No.: Estimate Total: **\$0.00** Estimate Status: Estimate Creation Date:

RWA Type: [v] RWA Number: []

*Project Phase: Click Here to Select [v] *Estimate Type / Range of Accuracy: Click Here to Select [v]

*Estimated RWA Start/Acceptance Date: [] Estimated Substantial Completion Date: []

Project Control Number: [] Project Name: []

OA Number: [] CBR Number: []

*Primary Worksite (Building) No: [] Land Point Of Entry (LPOE)?: No Yes

The *SCE* worksheet is required for all nonseverable RWAs.

Project Phase

Click Here to Select Project Phase [v]

- Click Here to Select Project Phase
- 1 - Project Initiation
- 2 - Project Planning & Development**
- 3 - Design
- 4 - Construction Procurement
- 5 - Construction
- 6 - Close-out

Estimate Type (Range of Accuracy)

Click Here to Select Estimate Type (Range of Accuracy) [v]

- Click Here to Select Estimate Type (Range of Accuracy)
- Order of Magnitude (+75%, -40%)
- Budgetary (+/- 30%)
- Conceptual Design (+/- 20%)
- Construction Estimate (+10%, -5%)
- Change Order Estimate (+10%, -5%)

Updated *SCEs*, with tighter ranges of accuracy, are sent to customers as cost estimates are refined throughout the project lifecycle.

Summary Cost Estimate (SCE)

SUMMARY COST ESTIMATE

		BASE PROJECT COSTS			
		GSA (Shell) Costs		Tenant (RWA) Costs	
*TI Scenario: <input type="text" value="Click Here To Select"/>					
1.	E.C.C.A. (Estimated Cost of Construction at Award)		\$0.00		\$0.00
	1A: Construction of New Building/Facility		\$0.00		\$0.00
	1B: Initial Space Buildout and Alterations		\$0.00		\$0.00
	1C: Existing Space Alterations		\$0.00		\$0.00
2.	Construction Contingency:	Choose Method			
		1- Percent of Line 1	10.00%	\$0.00	10.00%
3.	Estimated Construction Cost: (Line 1 + Line 2)		\$0.00		\$0.00
4.	Workplace Engagement and Other Studies:		\$0.00	\$0.00	\$0.00
5.	Design/DIDs: (All costs associated with design narratives, models, calculations, specifications, construction drawings and cost estimates).	Choose Method		\$0.00	\$0.00
		Not Applicable			
6.	Construction Mgmt and Inspection: Select from menu and enter appropriate value in line 6	Choose Method		\$0.00	\$0.00
		Not Applicable			
7.	Misc. Construction and Design(Identify)		\$0.00		\$0.00
8.	PBS Travel Associated with Project	Building Location: GSA PM Location:	\$0.00		\$0.00
9.	Subtotal (Lines 3 through 8):		\$0.00		\$0.00
10.	Tenant Improvement (TI) Allowance:				\$0.00
11.	TI Lump Sum (Buy Down):				\$0.00
12.	TI To Be Amortized In Rent:				\$0.00
13.	Subtotal (Lines 9 through 12):				\$0.00

ESTIMATE COST SUMMARY	
Base Project Costs	\$0.00
Additional Project Costs	\$0.00
Subtotal	\$0.00
RWA Mgmt Fee	\$0.00
Subtotal	\$0.00
Personal Property Costs	\$0.00
Total Est RWA Authorized Amount	\$0.00
Range of Accuracy: -17%, +26%	

GSA Cost Management Process Enhancements

- *The Forward Looking approach*
 - **Escalation method** - Instead of looking at the past data, we are leveraging a strategic calculation that assumes escalation will gradually go down over the next years.
 - **Current Data vs Historical Data** - We are stressing out the use of updated data to build our estimates, that will align better with current market conditions.

GSA Cost Management Process Enhancements con't

- **Contingency Rates and Locality Market Adjustments**
 - Labor adjustments for increased rates and labor shortages
 - Material supply chain premiums

 - Project Labor Agreements
 - Low Embodied Carbon Materials
 - Sustainability/Net Zero requirements

GSA Cost Management Process Enhancements

- **Participation in an Interagency Forum for Knowledge Exchange on Best Practices**
- **Future enhancements towards leveraging historic data capturing and analytics**

Case Study - Market Volatility

CASE 1 - TENANT PROJECT IN DETROIT	CASE 2 - PROJECT IN USVI
Estimated Cost Of Construction - \$2,463,000 - April 2021	Went Out To Bid 2 Times - Budget - \$3,500,000
Sole Bidder Amount - \$3,750,000 - June 2021	First Bid Round - \$5,900,000 - March 2021
Interview Discoveries - Trade Shortage, Commodity Market Spikes, Market Uncertainty, Estimate Pricing Point	Second Bid Round - \$8,800,000 - October 2021
Awarded At A Negotiated \$3,500,000	Currently Pivoted Delivery Method To Design Build And De-Scoped.

Managing Volatility - Lessons Learned

- **Estimate current costs** based on the latest data.
 - Blanket percentages can wildly over/undershoot the potential risks.
- **Encourage early purchase** of materials on long delivery timelines
- **Design to 90% of ECCA**; Create options for the remaining 10%.
Minimize number of total options provided to GC and ensure they do not impact quality.

Managing Volatility - Lessons Learned con't

- **Active budget management,** The final cost estimate must include a list of cost-saving items that would collectively reduce the project cost to approximately 10 percent below budget.
- **Competition:** Many regions have been experiencing up to 30-40% cost increases when procurement does not include competition.
- **Value Management:** For projects over prospectus utilize value management studies to reduce construction and life cycle costs
- **Funding Timing:** The shorter timeframe from funding to execution the less risk the market bears on the project

eRETA WRs & RWAs

- **How does Customer Direct Data Entry work?**
 - Customers submit new project or service need by creating a Work Request (WR) directly in eRETA in under 60 seconds. **Tracking number generated.**
 - The Work Request is routed to the appropriate GSA regional office who assigns a GSA Project Manager.
 - Customer fills out remaining fields which is the equivalent of page 1 of the RWA 2957 Form and sends it to GSA
- **Digital Signatures**
 - Required for both Customer Agency Fund Certifying Official and GSA-PBS Approving Official.
 - Corrections to data can be made by GSA or customer before signatures requested - mitigates need for customer to sign multiple times.
 - **eRETA access is NOT needed to use digital signatures**
 - GSA will route the RWA for digital signature(s) just prior to acceptance
- **How do customers gain access to eRETA?**
 - Complete a simple application form (no PII required) and send it to your supervisor for approval and forwarding to eRETA@gsa.gov.
 - Visit www.gsa.gov/ereta for more details and information.

Summary

- *Early planning helps improve scope development*
- *A well defined scope leads to a more accurate estimation of costs*
- *Current Market data should be used when doing cost management exercise*
- *Communication through the project life cycle is key to success*

Poll #3

- A. What topics within Cost Management would you be interested in learning more about? (Choose all that apply)**
- a. Definitive/Detailed Estimating**
 - b. How to build Cost Breakdown Structures**
 - c. Understanding market volatility**
 - d. Other (please contribute in the “Chat” pane)**
- A. After attending this session, how comfortable are you now with the processes of Cost Estimating/Cost Management? (Scale of 1-5)**
- 1 = I’m still not comfortable at all**
 - 5 = I am significantly more comfortable with these processes!**



Questions?

Presented by

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Cost Mgt Q&A SMEs

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Schedule and Tools

***Jason Cook, Greg Fowler,
Brandon Duffy***

Cost Management Experts

RWA / eRETA eXPERTs





Upcoming Client Enrichment Series Sessions

Tour de CPA (Client Project Agreement)

Thursday, November 17th 1pm-2:30pm ET - [Register Now](#)



GSA's COVID-19 Resources for Customers

See our [***Safer Federal Workplace page***](#) for procedures and guidance for GSA Owned and Leased Buildings, Projects and Workplaces

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