

Managing Scope, Schedule & Budget APPA Institute – September 2019

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Credit(s) earned on completion of this course will be reported to American Institute of Architects (AIA) Continuing Education Session (CES) for AIA members.

Certificates of Completion for both AIA members and non-AIA members are available upon request.

Questions related to specific materials, methods, and services will be addressed at the conclusion of this presentation.

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Course Description

The interaction of scope, schedule and budget impacts many of our project, maintenance, and operations activities. This class explores each of these elements individually and seeks to understand the relationship among them as key drivers in our daily work. Attendees will engage in discussion and small group exercises in order to highlight the continuing tension among these elements and the need to keep them in balance.



Learning Objectives

1. Discuss the interaction of scope, schedule and budget impact on projects, maintenance, and operations
2. Discuss projects, maintenance, and operations and seek to understand their relationship
3. Discuss the continuing tension among maintenance and operations
4. Discuss the key drivers in daily work.

AIA
Continuing
Education
Provider

Mike Carmagnola

- Licensed Architect / MBA
- 22 Years Institutional Leadership
 - 5 ½ years – University of Texas at Austin – Director
 - 2 ½ years – Washington & Lee University – Chief Facilities Officer
 - 14 years – University of Virginia – Sr. PM / Asst. Director / Director
- 13 Years Private Practice – Own business; Several A/E firms
- Personal – Family; Guitar; Carpentry; Stained Glass

Course Makeup

- 56 Attendees Total
- Planning Design & Construction (15%)
- Maint. & Ops (50%)
- Admin / Business Ops (35%)
- Director / AD / Manager / Supervisor (50%)
- Trades / Project Manager / Front Line Staff (50%)
- State / Public Universities (60%)
- Private / Community College / K-12 (40%)

Course Overview

- Provide Overview of Scope, Schedule & Budget
- Explore Relationship of these elements to each other
- Explore Relationship of these elements to Project, Maintenance, & Operations activities
- Discuss Management challenges
- Engage in Small Group Exercise & Discussion

SCOPE

Scope

- First leg of three-legged stool
- Three-legged stool represents Scope, Schedule, Budget

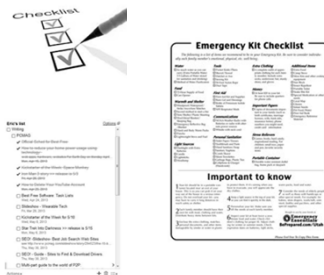


Scope Development

- What Do You Have? – Existing Conditions
- What Do You Need? – Program; Functional Drivers
- How Do You Get There? – Plan

Tasks

- Prioritize
- Scale
 - Big Picture
 - Bundle
 - Leverage
- Task Management



How can you tell the difference
Between a Want & a Need?

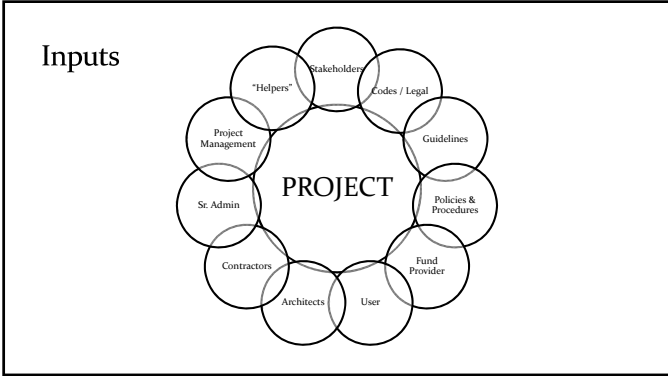
PRIORITIZE

Managing Scope - Macro

- Revisit established goals continuously
- Balance big picture vs. individual needs
- Clarify wants vs. needs

Managing Scope - Micro

- Build Consensus
- Set Clear Expectations
- Manage Stakeholder Involvement



Be comfortable working in the Grey
in order to firmly
Establish the Black and White

SCHEDULE

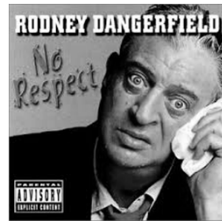
Schedule

- Second leg of three-legged stool
- If scope is given; then time (Schedule) or money (Budget) has to drive



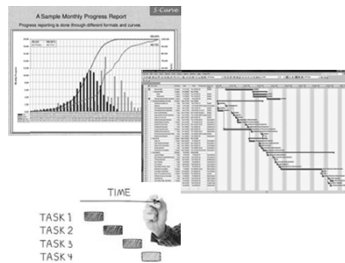
Schedule

The Rodney Dangerfield of projects
No Respect – Why?



Schedule Tools

- Microsoft Project
- Primavera
- Microsoft Outlook
- Microsoft Excel
- White Board
- Handwritten Notes



What happens in a Project when
Schedule is the driver?

Managing Schedules

- Manage Expectations
- Clarify responsibilities of each stakeholder
- Communicate from a position of knowledge & expertise
- Highlight previous examples
- Make the best decisions possible with the information in hand

We allocate budget contingency
What about schedule contingency?

Schedule Drivers

- Time = Money
- Project Dominoes
- Long-lead Items
- Complexity of Tasks
- Political Factors



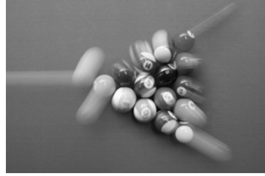
Pareto's Principle

- The 80/20 Rule
- Developed as a mathematical formula to highlight the distribution of wealth in the U.S. in early 1900's
- Vital Few & Trivial Many
- 20% of work (first 10% & last 10%) consume 80% of time and resources
- Focus on 20% most important things

MOMENTUM

Momentum

- Hard to gain; Easy to lose
- Time is precious & fleeting
- Work smart...on the right things
- Plan, plan, plan



BUDGET

Budget

- Third and final leg of three-legged stool
- Often given the highest level of discussion & importance

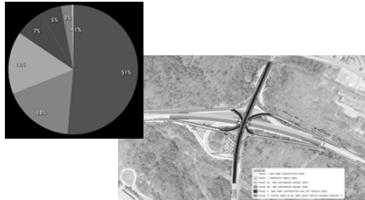


If *Budget* is the key driver...

What happens to
Scope & Schedule?

Budgeting Strategies

- Scope
- Schedule
- Phasing
- Allocations



Budget Categories

- Total Project Cost (TPC) = Hard Costs + Soft Costs
- Hard Costs
 - Construction (Labor & Materials)
 - Construction Contingency
- Soft Costs
 - Professional Service Provider Fees
 - Institutional Expenses - ITS; PTS; EHS...
 - Escalation (to mid-point of Construction)
 - Furniture, Fixtures, & Equipment (FF&E)
 - Project Contingency

Budget Tools

- Microsoft Excel
- Intuit Quicken
- Calculator
- Checkbook
- Others?



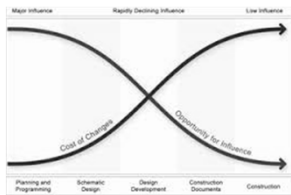
Budgeting

- Estimated / Actual / Variance
- Budgeting
- Forecasting
- Planning



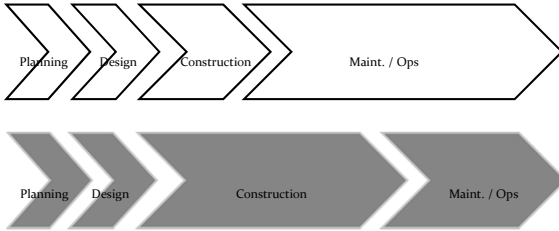
Diminishing Returns

- Opportunity to influence – Greatest up front
- Cost of Changes
 - Small up front
 - Large later on



When do you know
How much a Project will cost?

Time vs. Money (Total Cost of Ownership)



VALUE

Connections

- Interrelationship of Scope, Schedule, & Budget
- Scope Creep = Higher Cost
- Longer Schedule = Higher Cost



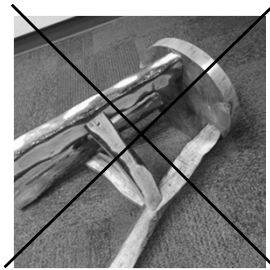
Tension

- Constant tension among all three elements
- Constant pull and tug
- Someone wins!?
- Recognize & manage tension



Balance

- Continually manage Scope, Schedule, & Budget
- Continually adjust to Changing Conditions
- Continually manage Expectations



Project Scenarios

- Review & Discuss Project Scenario with Team
- Identify key project issues
- Develop a plan for moving forward
- Present findings



In Summary...

- Scope – Prioritize Wants & Needs
- Schedule – Build & Maintain Momentum
- Budget – Seek Best Value

On the way out...

- Take something home from this class and apply it
- Share information with your colleagues
- Please sign in
- Complete Evaluations & Leave on tables

This concludes The American Institute of
Architects Continuing Education Systems
Course

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