

WELCOME TO

HALL & COMPANY
Serving Architects, Engineers and Environmental Consultants

AE RESOURCES WEBINAR

**EFFECTIVE PROJECT MANAGEMENT PRACTICES
AS A KEY, RISK MANAGEMENT STRATEGY**

Presented By

Bob Rosain, PE, PMP®
Bob Rosain & Associates, LLC
www.bobrosain.com

What about Bob...?



Bob Rosain & Associates...Providing comprehensive management, operations and project delivery solutions to project-owning organizations and the A/E/C industry...

35 years in the A/E/C business working nationally and internationally, currently based in Seattle

- Parametrix, CH2M HILL, Dames & Moore
- Senior Project/Program Manager
- Managed Small to Mega projects
- Principal/Office Manager/Operations Manager
- PM Program Development & Training

HALL & COMPANY

My goal today.....

To help you, as A/E/C's, understand what you can to...

minimize business risks through effective project management practices...

Sponsored by HALL & COMPANY

“Projects...”

- If we execute our projects well, we’ll succeed...If we don’t, we’ll fail...
- So, **EFFECTIVE PROJECT MANAGEMENT** needs to be one of your firm’s **KEY**, business and risk management strategies...



Sponsored by HALL & COMPANY

So let’s talk about RISKS...

Risks are EVERYWHERE...

- Personal risks
 - Life, liberty and the pursuit of happiness...
- General business risks
 - Markets, competition, business continuity, personnel...



Sponsored by HALL & COMPANY

And then there’s General Project Risks...

- **General Project Risks**
 - Clients
 - RFP’s and Go/No Go Decisions
 - Contracts
 - Financial
 - Sub-consultants
 - Schedule
 - Delivery Mechanism
 - Health & Safety
 - Political
 - Quality



Sponsored by HALL & COMPANY

And then there's Project Specific Risks...

- **Project Specific Risks**...to name a few
 - New technology
 - Unknown conditions (e.g., soils, water)
 - Project funding
 - Regulations
 - Weather
 - Construction climate
 - Escalation
 - Client organization
 - Expedited schedules



Sponsored by HALL & COMPANY

So what do we do about all these Risks?

- **Successful A/E firms employ a multi-faceted, risk management strategy**
 - ✓ Insurance
 - ✓ Experienced management engagement
 - ✓ Educated and trained staff
 - ✓ Effective project management practices, processes and tools



Sponsored by HALL & COMPANY

But today... We want to concentrate on...


- ✓ Effective project management practices, processes and tools, specifically, the TOP FIVE project management strategies to minimize your project risks



Sponsored by HALL & COMPANY

The Top Five strategies are:

- Develop and follow a clear Project Management Plan
- Judiciously manage your project's scope, schedule and budget
- Ensure frequent and effective communications at all levels of the project
- Make sure you deliver quality products
- Carefully monitor and manage project specific risks



Sponsored by HALL & COMPANY

Now, let's take a look at these Five strategies individually...

- 1. Project Management Plans**
2. Scope, Schedule, Budget
3. Communications
4. Quality
5. Project Specific Risks

Sponsored by HALL & COMPANY

1. Project Management Plans


"...effectively planning a project may not guarantee success, but failing to plan a project will certainly guarantee failure"



Sponsored by HALL & COMPANY

Project Management Plans (PMP's)

- Need to be scalable...
- Unique project documents...
- Developed with the team...
- Can use standard policies and procedures...
- Updated regularly...
- But they need to be followed !



Sponsored by HALL & COMPANY

The "ten essential" sections of PMP's

1. Project Goals & Objectives

- Purpose & Need (strategic)
- Project Charter (tactical)
- Critical Success Factors



2. Team Organization & management


- Leadership
- Functional delegation
- Roles and responsibilities

Sponsored by HALL & COMPANY

The "ten essential" sections of PMP's

3. Scope and Work Breakdown Structure (WBS)

- Written, detailed explanation of the work to be performed and delivered for each WBS phase, task and subtask
- Built with the team, agreed to and approved by the client



4. Schedule


- Based on the WBS; built with the team; approved by the client
- Defines the logic and Critical Path

Sponsored by HALL & COMPANY

The “ten essential” sections of PMP’s

5. Budget

- Based on the WBS; built with the team; approved by the client
- Built from the bottom up with all labor and expenses
- Consider staff experience vs. cost vs. schedule



6. Change Management


- Must have a plan and an approval process
- Tied to the A/E contract

Sponsored by HALL & COMPANY

The “ten essential” sections of PMP’s

7. Quality Management

- Must have a plan and a process
- Includes Quality Control
- Includes Quality Assurance



8. Risk Management


- Must have a plan and a process
- Defines assessment, response and control

Sponsored by HALL & COMPANY

The “ten essential” sections of PMP’s

9. Communications Management

- Defines communication channels
- Defines communication protocols
- Establishes expectations



10. Information Management

- Defines the needs, conveyance, tools, quality control, and other procedures related to information and document use, collection, storage and retrieval

Sponsored by HALL & COMPANY


Now, let's take a look at these Five strategies individually...

1. Project Management Plans
- 2. Scope, Schedule, Budget**
3. Communications
4. Quality
5. Project Specific Risks

Sponsored by HALL & COMPANY

2. Scope, Schedule, Budget


- Often referred to as the “three-legged stool” in project management
 - Equally balanced...change one leg and the others must change as well



Sponsored by HALL & COMPANY

But SCOPE is the key part of these three elements...


- **The scope of work sets the stage for...**
 - Scheduling
 - Budgeting
 - Project tracking
 - Performance monitoring
 - Responsibility assignments



Sponsored by HALL & COMPANY

The Scope of Work...

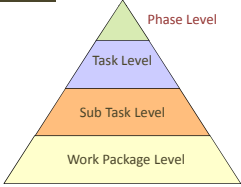
- Is an accurate, written description of the work to be performed, broken down into discrete phases, tasks and subtasks, to describe exactly what will be done and delivered as a work product, including:
 - Measurable goals & objectives
 - Approach to the work
 - Assumptions
 - Constraints
 - Deliverables
 - Exclusions



Sponsored by HALL & COMPANY

The Scope of Work...

- The hierarchical, decomposition of the scope into phases, tasks, subtasks and work packages is the scope's Work Breakdown Structure (WBS)



Sponsored by HALL & COMPANY

WBS's typically follow a numbering system similar to this...

- 1.0 Phase Level scope description**
 - 1.1 Task level scope description
 - 1.2 Task level scope description
 - 1.2.1 Sub-task level scope description
 - 1.2.2 Sub-task level scope description
 - 1.2.2.1 Work package level
 - 1.2.2.2 Work package level
- 2.0 Etc.**
- 3.0 Etc.**

Sponsored by HALL & COMPANY

The WBS is used to develop the Project Schedule...

PROJECT SCHEDULE						
Scope of Work Element	Schedule Duration - Weeks					
	1	2	3	4	5	6
1.0 Phase 1 Title						
1.1 Task Title						
1.2 Task Title						
1.2.1 Sub-Task Title						
1.2.2 Sub-Task Title						
1.2.2.1 Work Package Title						
1.2.2.1 Work Package Title						

Sponsored by HALL & COMPANY

The WBS is used to develop the Project Budget...

PROJECT BUDGET						
Scope of Work Element	Labor category & Rate					Total \$
	\$50	\$75	\$100	\$125	\$150	
Labor Hours						Total \$
1.0 Phase 1 Title						\$875
1.1 Task Title		2		10	10	\$3,250
1.2 Task Title	5			5	5	\$2,500
1.2.1 Sub-Task Title				5	5	\$1,725
1.2.2 Sub-Task Title			5		10	\$2,000
1.2.2.1 Work Package Title		10		5		\$1,375
1.2.2.1 Work Package Title	10		5			\$1,000
						\$12,725

Sponsored by HALL & COMPANY

What are the risks associated with scope/schedule/budget?


- Did I accurately scope the project? What did I forget?
- Did I schedule sufficient time, or too much time, to complete the work considering the staff I will use? Do I have reasonable float?
- Did I provide sufficient budget considering the staff I will use and their labor rates? Do I have enough contingency or management reserve?
- But the big risk is.....CHANGE



Sponsored by HALL & COMPANY

Change Management


- ALL projects involve changes, but they must be managed or they can become a significant business and/or project specific risk
- Some changes are:
 - Easily identified and incorporated
 - Client generated
 - A/E generated
 - Stakeholder generated
- But some are insidious...also called "Scope Creep"



Sponsored by HALL & COMPANY

Change Management Tips...

- Be diligent in identifying, quantifying and obtaining client approval for changes
- NEVER work on an added scope change without client approval FIRST
- NEVER wait until the end of the project to discuss added changes and expect to gain client approval and added budget...it rarely happens



Sponsored by HALL & COMPANY

Now, let's take a look at these Five strategies individually...

1. Project Management Plans
2. Scope, Schedule, Budget
- 3. Communications**
4. Quality
5. Project Specific Risks

Sponsored by HALL & COMPANY

3. Communications

“For all the reasons projects fail or get in trouble...poor communications may be the biggest cause...”


(William Dow and Bruce Taylor, the Project Communications Bible, 2008)



Sponsored by HALL & COMPANY

Project Communication Channels

- **Written and verbal communications with:**
 - The client project manager
 - The client’s organization
 - The A/E project manager
 - The project team(s)
 - Project stakeholders
 - The public



Sponsored by HALL & COMPANY

The “ten essentials” of a Communications Plan...

- 1. Formats and Style Guides**
 - Standardization=consistency & quality
- 2. Project team contact lists**
 - A/E team, client team, subs, stakeholders, vendors
- 3. Distribution lists**
 - Based on the information being distributed
- 4. Email capture**
 - For use and retrieval
- 5. Email protocols**
 - For consistency, quality and safety



Sponsored by HALL & COMPANY

The “ten essentials” of a Communications Plan...

- 6. Project team meetings**
 - And....keeping them under control
- 7. Discipline specific team meetings**
 - ditto
- 8. Regular client meetings**
 - An essential communication element
- 9. Informal client meetings**
 - Helps build the client relationship
- 10. Communication protocols for stakeholders and the public**
 - For consistency, quality and safety



Sponsored by HALL & COMPANY

Now, let’s take a look at these Five strategies individually...

1. Project Management Plans
2. Scope, Schedule, Budget
3. Communications
- 4. Quality**
5. Project Specific Risks

Sponsored by HALL & COMPANY

4. Quality

The quality of the project and project deliverables will be remembered long after the project’s been completed.



Sponsored by HALL & COMPANY

Quality

- **A well-founded and maintained Quality Program is:**
 - essential to the viability and sustainability of an A/E firm’s practice
 - represents a “Standard of Care” in the industry
 - Is a fundamental risk management strategy




Sponsored by HALL & COMPANY

Quality

However, quality is still “...in the eyes of the beholder...” and may extend beyond documents and deliverables to:

- The “quality” of client communications
- Stakeholder management
- Budgets
- Schedules



Sponsored by HALL & COMPANY

Quality

- A firm’s Quality Program also has defined implications in insurance and in litigation with respect to its insurance coverage and ultimate liability for potential errors and omissions including:
 - Insurance discounts
 - Its project specific application



Sponsored by HALL & COMPANY


Now, let's take a look at these Five strategies individually...

1. Project Management Plans
2. Scope, Schedule, Budget
3. Communications
4. Quality
- 5. Project Specific Risks**

Sponsored by HALL & COMPANY

5. Project Specific Risks

- The Project Management Institute (PMI) defines project specific risk as *"...an uncertain event or condition that, if it occurs, has a positive or negative effect on the project's objectives...a risk has a cause and, if it occurs, a consequence."*



Sponsored by HALL & COMPANY

Project specific risk management

- An essential element of every project's Project management Plan
- The more critical the project objectives, the more critical the risk management effort
- If not properly managed or mitigated, negative project risks can turn into significant financial and business liabilities for your firm



Sponsored by HALL & COMPANY

Typical sources of negative project specific risks...


- Complex, unproven or evolving technology
- Unknown conditions (e.g., soils, water)
- Uncertain or interruptible project funding
- Uncertain or legal or regulatory environment
- Weather
- Uncertain construction market/bidding climate
- Cost Escalation
- Changing client/sponsor organization
- Expedited schedules




Sponsored by HALL & COMPANY

Establish a Risk Register...

- To identify and monitor project risks (+/-)
- To quantify the risk potential (+/-)
- To manage the risk response (+/-)



OR



Sponsored by HALL & COMPANY

Risk Register Elements...

- 1. Risk identification**
 - A simple list of all potential project risks (+/-)
 - Updated regularly with additions, deletions, changes
- 2. Qualitative risk assessment**
 - Defines, based on the probability of occurrence, the potential qualitative effects of the risk if it is realized
- 3. Quantitative risk assessment**
 - Defines, based on the probability of occurrence, the potential quantitative effect of the risk if it is realized

Sponsored by HALL & COMPANY

Risk Register Elements...

4. Risk response

- Defines what can and will be done to respond to the risk if it is realized
 - Avoid/exploit
 - Mitigate/enhance
 - Transfer/share
 - Accept

5. Risk response control

- On-going risk tracking, monitoring residual risks, identifying new risks, evaluating risk response effectiveness

Sponsored by HALL & COMPANY

Project Risk Example...

1. Risk Identification

- The potential to encounter contaminated soils during construction excavation

2. Qualitative Assessment

- Adverse public reaction, safety concerns, work stoppage

3. Quantitative Assessment

- Based on a 20% probability of occurrence and \$500,000 in potential cleanup costs, the quantitative risk exposure is \$100,000

Sponsored by HALL & COMPANY

Project Risk Example...

4. Risk Response

- a) Avoidance – build somewhere else
- b) Mitigation – develop contingency plan for site clean-up
- c) Transfer – Purchase site clean-up insurance
- d) Accept – Do nothing

5. Risk Response Control

- a) Avoidance – look for alternate sites
- b) Mitigation - monitor the risk daily during excavation and adjust contingency plans as necessary
- c) Transfer – monitor the risk daily during excavation and keep insurer in the loop
- d) Accept – cross your fingers

Sponsored by HALL & COMPANY

In Summary...

1. Effective Project Management must be one of your firm's key, risk management strategies and embraced as fundamental core value of the practice
2. Project management procedures, processes and tools must be in place and used to support the firm's project managers
3. All project staff need to become knowledgeable and familiar with project management practices through training and experience

Sponsored by HALL & COMPANY



Bob Rosain & Associates, LLC
 Bellevue, WA
 425-765-6748
 Bob@BobRosain.com

Delivery Processes and Tools
 Leadership and Organizational Support
 Staff Knowledge and Development

An Associate in the **Keystone Project Delivery Initiative™**
 (www.keystonepdi.com)

Helping you build an effective and sustainable Project Delivery Practice

HALL & COMPANY

Questions?

To request a certificate of completion:
 Email Krysten Bernal – krysten@hallandcompany.com

Sponsored by HALL & COMPANY
