PM Rock Stars

Excel at Managing the Triple Constraint

Project Management Symposium November 18, 2011



Your Presenters

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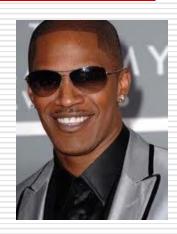
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Pop Culture Analogies

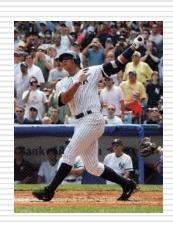
Triple threat may refer to:

 <u>Triple threat entertainer</u>, an entertainment industry term for an individual proficient in the disciplines of acting, singing, and dancing.



Five-tool player

 In baseball, a five-tool player is one who excels at hitting for <u>average</u>, hitting for <u>power</u>, baserunning skills and <u>speed</u>, <u>throwing</u> ability, and <u>fielding</u> abilities.

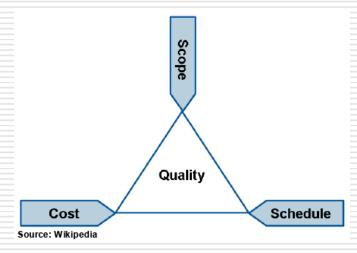




PM Culture: Triple Constraint

Triple Constraint

- ✓ Scope
- ✓ Schedule
- ✓ Cost



The <u>art</u> is in being well-balanced across all three concerns

The <u>science</u> is in excelling at managing all three with equal attention;

without tipping the scale on any one

Today's Goal:

To motivate you to <u>excel</u> at managing all three! We will ask for volunteers to share your challenging real life examples.



What is the Business Priority

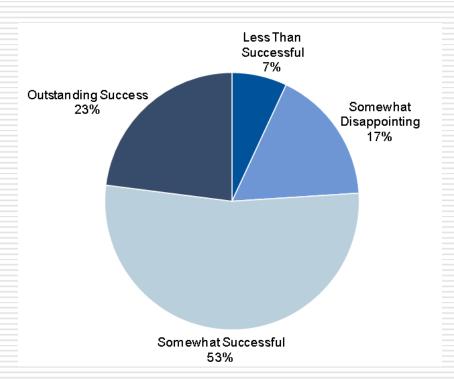
- Identify your business sponsor's priority for their project
- Early in your project, eg: Project Charter or at Kick-off
- Ask them to Rank #1, #2 and #3
 - ___ Scope
 - Schedule
 - ___ Budget
- This becomes your leadership barometer and helps in decision making when directing your project
- The priority still must maintain the balance

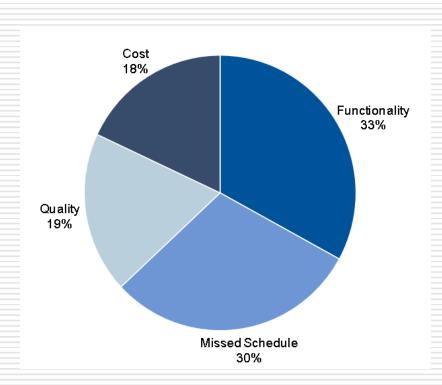


Relevant Research

project success

Customer perception of IT Reason for IT projects being less than successful





Source: Gartner, Inc. September 2011, ID Number: G00216378



MANAGING SCOPE



Managing Scope

PMs must understand the scope of the solution

- Natural primary target for a PM to manage
- Functional Requirements: what functional capabilities are required (priorities & revisit)
- Non-functional requirements: Safety, Security, Reliability
- Design considerations
- Stakeholder input

Best Practices

- PM has experience in the discipline (5+ years)
- Definition and agreement of what is <u>out-of-scope</u>
- Change Control process

Triple Constraint PMs

- Excel at controlling scope by understanding all requirements and are adept at understanding the implications to the solution
- Constantly scrutinizing for any substantial changes
- Implications to schedule and cost



Scope Management Considerations

Quality Dimension

- PM holds their team to high standards of quality
- A clear set of requirements and a well-governed change-management process are the critical ingredients to project success

Risk & Issue Management

 Testing may be expensive, but it's a lot cheaper to get the requirements done right the first time



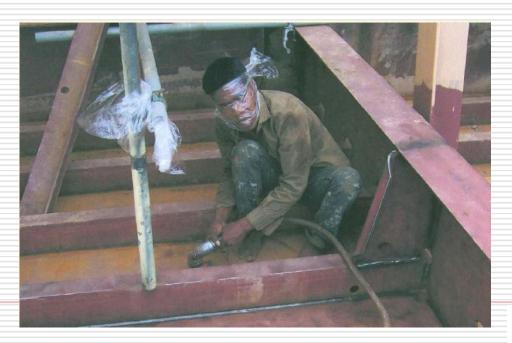




Scope Management Considerations

Communications

 Regardless of the technology used, governance and compliance must be in place in order to properly manage information in the enterprise





Scope Mngt Considerations

Source: PMBOK 4th Edition

Project Scope Management

5.1 Collect Requirements

- .1 Inputs
 - .1 Project charter
 - .2 Stakeholder register
- .2 Tools & Techniques
 - .1 Interviews
 - .2 Focus groups
 - .3 Facilitated workshops
 - .4 Group creativity techniques
 - .5 Group decision making techniques
 - .6 Questionnaires and surveys
 - .7 Observations
 - .8 Prototypes
- .3 Outputs
 - .1 Requirements documentation
 - Requirements management plan
- .3 Requirements traceability matrix

5.4 Verify Scope

- .1 Inputs
 - .1 Project management plan
- .2 Requirements documentation
- .3 Requirements traceability matrix
- .4 Validated deliverables
- .2 Tools & Techniques
 - .1 Inspection
- .3 Outputs
 - .1 Accepted deliverables
 - .2 Change requests
 - .3 Project document updates

5.2 Define Scope

- .1 Inputs
- .1 Project charter
- .2 Requirements documentation
- .3 Organizational process assets
- .2 Tools & Techniques
 - .1 Expert judgment
 - .2 Product analysis
 - .3 Alternatives identification
 - .4 Facilitated workshops
- .3 Outputs
- .1 Project scope statement
- .2 Project document updates

5.3 Create WBS

- .1 Inputs
 - .1 Project scope statement
 - .2 Requirements documentation
- .3 Organizational process assets
- 2 Tools & Techniques
- .1 Decomposition
- .3 Outputs
- .1 WBS
- .2 WBS dictionary
- .3 Scope baseline
- 4 Project document updates

5.5 Control Scope

- .1 Inputs
 - .1 Project management plan
 - .2 Work performance information
 - .3 Requirements documentation
 - .4 Requirements traceability
- .5 Organizational process assets
- 2 Tools & Techniques
 - .1 Variance analysis
- .3 Outputs
 - .1 Work performance measurements
 - Organizational process assets updates
 - .3 Change requests
 - .4 Project management plan updates
 - .5 Project document updates

Figure 5-1. Project Scope Management Overview



Scope Example: Money is no object

Project Charter Written

- #1 Schedule was most important = time to market
- #2 Scope was important
- #3 Budget was less important

Top priority of a New Executive

Triple Constraint Project Manager

- Focused on scope during requirements elicitation
- Asked for priorities of requirements
- Negotiated with service providers to get as much scope as possible, while delivering on-schedule, and allowing for additional capital considerations
- Presented options to business sponsors to maximize scope while delivering on-time and with varying budget impacts
- Change Request for scope and cost refinements



MANAGING SCHEDULE



Managing Schedule

Anything and everything can affect schedule. Manage stakeholder expectations from the beginning

- Develop a "reasonable" schedule. Allow sufficient time to do the job right (there's usually enough time to do it right, but seldom time to do it over)
- Aggressive schedules increase risk of failure and allow little slack. Save the "crashes" for the crises
- Cutting other activities to "catch up" just kicks the can down the road and causes other problems
- If you didn't build it, be careful to verify and validate it
- The devil is in the details. Sweat 'em



Managing Schedule

Review, Review - based on actual or potential events

- Put the reviews in the schedule at key points
- Put in the flags ahead of the critical points so you can see when you're <u>starting</u> to deviate. Take action immediately.
- Baseline the schedule and implement controls
- Use your team to plan prevention/mitigation/implementation
- Do a periodic comprehensive schedule scrub to verify risks and update mitigation alternatives – make it iterative
- Use the "rolling wave" on longer projects
 - Avoid planning your detailed schedule too early
 - Use a continuous process as you gain information



Schedule Management Considerations

- Understand the factors that influence the schedule and how to manipulate them
- Look for root causes of slippages correct them
- Don't cut key activities (e.g. testing) to "catch up"
- Identify alternatives –other ways to get the job done?
- Look for possible ways to adjust scope (customer prioritization, incremental implementation) to handle schedule issues
- Look at your resources Are there enough? Are the skill levels appropriate? Are the tools OK?
- Don't be afraid to ask for help (not all PMs are scheduling experts)



Schedule Mngt Considerations

Source: PMBOK 4th Edition

Management Overview 6.3 Estimate Activity 6.1 Define Activities 6.2 Sequence Activities Resources _1 Inputs .1 Inputs .1 Inputs .1 Activity list .1 Activity list .1 Scope baseline 2 Activity attributes 2 Activity attributes .2 Enterprise environmental .3 Resource calendars .3 Milestone list factors A Enterprise environmental .3 Organizational process assets A Project scope statement factors .5 Organizational process assets 2 Tools & Techniques .5 Organizational process assets .1 Decomposition .2 Tools & Techniques 2 Tools & Techniques .1 Precedence diagramming .2 Rolling wave planning method (PDM) .1 Export judgment .3 Templates .2 Alternatives analysis .2 Dependency determination A Expert judgment .3 Applying leads and lags ,3 Published estimating data .3 Outputs A Schedule network templates .4 Bottom-up estimating .1 Activity list .5 Project management software .2 Activity attributes .1 Project schedule network .3 Outputs .3 Milestone list .1 Activity resource requirements diagrams .2 Project document updates .2 Resource breakdown structure .3 Project document updates 6.4 Estimate Activity Durations 6.5 Develop Schedule .1 Inputs 6.6 Control Schedule .1 Activity list .1 Inputs .2 Activity attributes .1 Activity list 3 Activity resource requirements .t Inputs .2 Activity attributes .4 Resource calendars .1 Project management plan .3 Project schedule network .5 Project scope statement 2 Project schedule diagrams .6 Enterprise environmental .3 Work performance information A Activity resource A Organizational process assets requirements .7 Organizational process assets .5 Resource calendars 2 Tools & Techniques .6 Activity duration estimates 2 Tools & Techniques .1 Performance reviews .7 Project scope statement .1 Expert judgment .2 Variance analysis .8 Enterprise environmental .2 Analogous estimating .3 Project management software .3 Parametric estimating factors A Resource leveling .9 Organizational process assets A Three-point estimates .5 What-if scenario analysis .5 Reserve analysis .6 Adjusting leads and lags 2 Tools & Techniques .7 Schedule compression .1 Schedule network analysis .8 Scheduling tool .1 Activity duration estimates .2 Critical path method 3 Critical chain method 2 Project document updates .3 Outputs A Resource leveling .1 Work performance .5 What-if scenario analysis measurements .6 Applying leads and lags .2 Organizational process assets 7 Schedule compression updates .8 Scheduling tool .3 Change requests A Project management plan .3 Outputs updates .1 Project schedule .5 Project document updates .2 Schedule baseline .3 Schedule data A Project document updates

Project Time

Figure 6-1. Project Time Management Overview



Schedule Example

Project moves to development – architecture done

- · After 30 days, project is 4 weeks behind schedule
- New PM appointed
- Solution architect part time; skills issues

PM Actions

- Short, but intensive analysis (2.5 days) of issues
- Engaged senior management for resource assistance
- Changed skills/skill mix/resources on the project negotiated with other PMs/staffing agencies
- Implemented parallel activities and some "crashing"
- Negotiated with sponsor for some schedule relief/prioritization and maintained close communication/coordination throughout
- Put the brakes on scope creep got customer buy-in
- Reworked the schedule using realistic goals and careful risk identification and mitigation
- Selectively applied skills training
- Made up the "lost month" in just over 6 months
- Future schedule deviation was negligible. Cost impact was relatively small (margin decrease <4%)



MANAGING COST



Managing Cost

Project Cost Management includes the processes involved in planning, estimating, budgeting, and controlling costs so that the project can be completed within the approved budget.

Cost is the least-cited failure factor. We're not off the hook though!

Setting Cost Expectations

Initial estimates anchor in the minds of project sponsors, setting a psychological baseline. Use this technique to <u>set expectation up front</u>:

- Project Approval Estimate: Estimate represents 50% +/- of what the project will cost at completion (EAC)
- At the end of the Planning Phase: Estimate represents 30% +/- at EAC
- At the end of the *Design Phase*: Estimate represents 15% +/- at EAC



Managing Cost

Best Practices

- Provide estimates using proven estimating techniques that factor in risk.
- Always communicate the following in project status:
 - Current Budget Amount as well as Estimate to Complete, Estimate at Complete, and Variance.
- Identify and communicate the use of project cost contingency.

Triple Constraint PMs Know

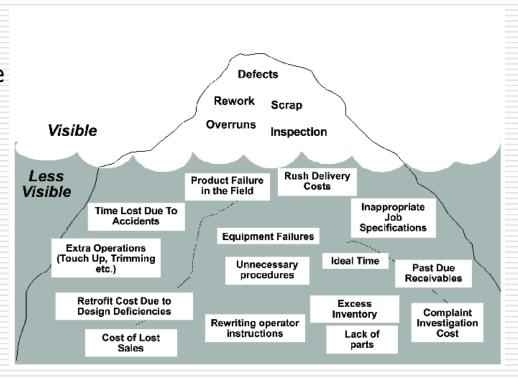
- Communication transparency specific to cost is key to stakeholder understanding and decision making.
- Poor resource management, inadequate demand management and overloaded staff contribute unnecessarily to cost.
- The CR process is essential to managing cost expectation.



Managing Costs

Quality

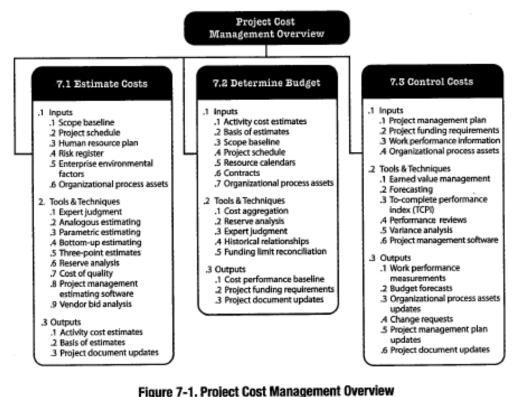
- The manner in which you manage and communicate project cost weighs in on the quality of your credibility as a PM.
- Project quality control and assurance comes at a price.
- Your approach to integrating quality controls and assurance should be factored in your project estimates (and should be commensurate with the project risk and significance).





Cost Mngt Considerations

Source: PMBOK 4th Edition

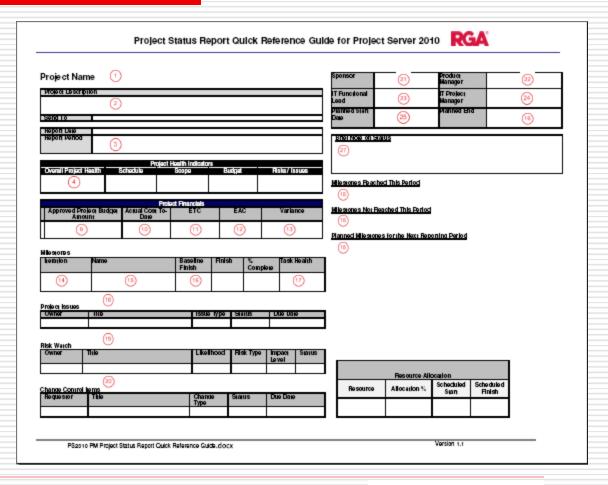


- COMMUNICATION THE TRIPLE CONSTRAINT



Reporting the Triple "Cs"

- ✓ Status Reporting
- ✓ Change Request
- ✓ Issue Identification
- ✓ Risk Mitigation





How Can You Excel at Managing the Triple Constraint

- Apply the techniques discussed today
- Regularly review these PM fundamentals versus other soft-skills
- Assess your strengths in the triple constraint, and work on your deficiencies
- Ask for feedback from your business sponsor, manager, team or peers
- Stretch yourself in 2012 by setting aggressive personal objectives, measurements & metrics



Triple Constraint PM "Drills"

Audience Volunteers

- Give us your most difficult current or recent challenge
- 30 second description

Facilitators Responses

Audience Responses



Summary

- PMs who <u>excel</u> at managing all of the Triple Constraints are a rare talent
- Most of us have a natural strength at managing one of the three constraints
- The other constraint(s) should be your regular development priority
- Rock Star PMs set the highest quality standards in all three while maintaining a proper balance
- Techniques and experiences shared today can help you
- Handout for reference



Q & A

