



PROJECT MANAGEMENT CENTER FOR EXCELLENCE

A.J. CLARK SCHOOL OF ENGINEERING
Civil & Environmental Engineering Department

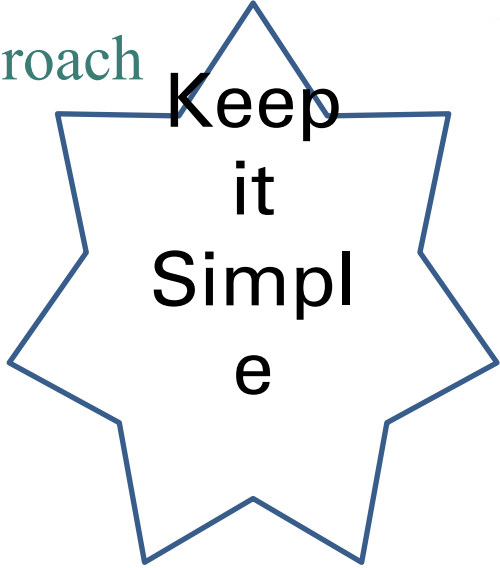


SCHEDULING WORKSHOP: STEPS AND MISSTEPS OF PROJECT SCHEDULING

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Workshop Plan of Action

- Introduce Project & Review Project Requirements
- Generate Schedule and Review Risks
- Discuss Additional Requirements and Constraints
- Revisit Schedule and Review Risks
- Top-Down vs Bottom-Up Scheduling Approach
- Discuss Lessons Learned & Re-Learned
- Wrap-up and Summary



Keep
it
Simple

Requirements

- New Master Bathroom Design & Installation
 - Add a Shower
 - Keep a Bath Tub
 - Add a Window over the tub
 - Add Closet Space: Walk In and Linen
- Have water on to the house at the end of every day
- No more than three days without toilet

Your Experience Is Important; You Provide the Baseline

Where do you get basis for PM Baseline?

What have you done in the past that is comparable?

Have neighbors/co-workers done something similar?

What have been the experiences of the contractor in the past?

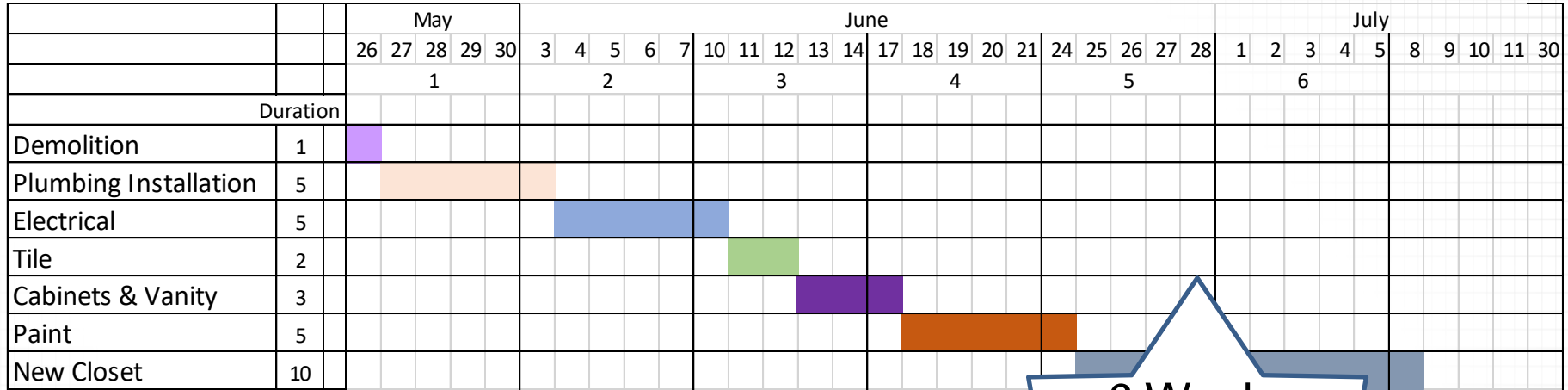
Talk to previous customers?

How Long Would You Expect? Rough Estimate

- Three Weeks
- Six Weeks
- Two Months
- Four Months
- Six Months
- Eight Months
- Twelve Month
- One and Half Years

POLL:
**How long do you think it will
take?**

How Long Did I Estimate?



- Demolition – 1 day
- Plumbing Installation – 1 week
- Electrical – 1 week
- Tiling – 2 days
- Cabinets & Vanity – 3 days
- Painting – 1 week
- New Closet – 2 weeks

6 Weeks
Memoria
1 Day to
4th of
July

POLL 1



What is this schedule missing?

What key players does this schedule not take into account?

What or Where are the Risks to Success?

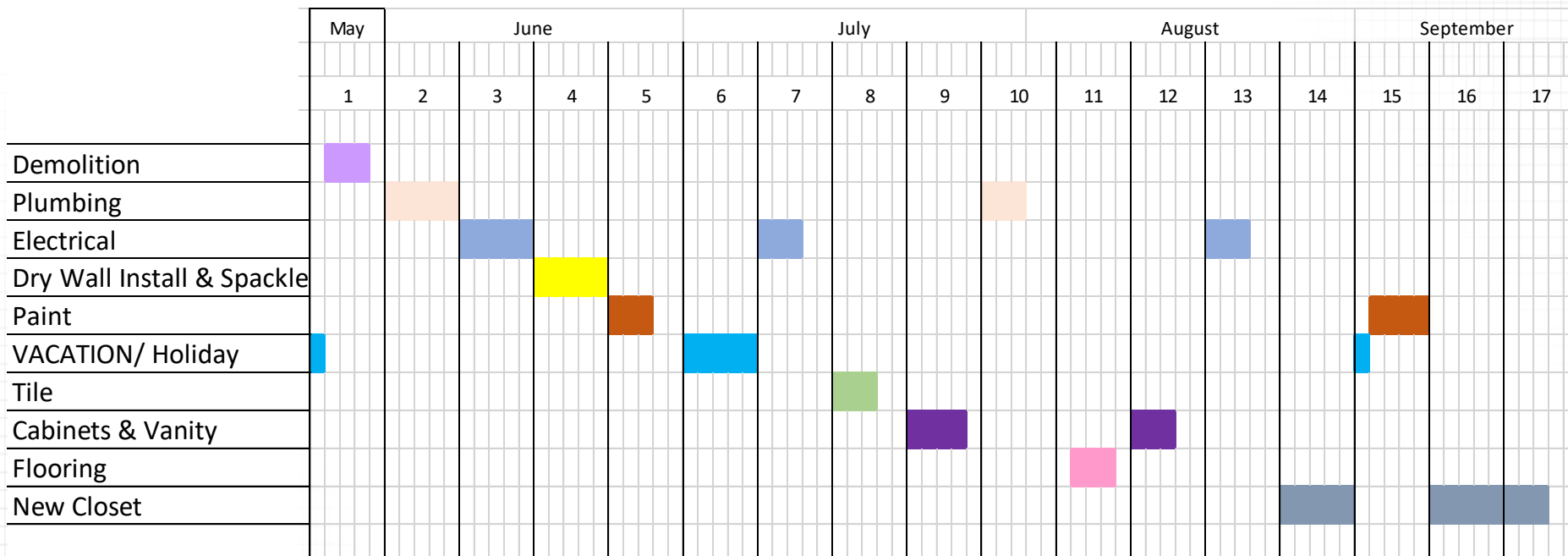
Schedule Constraints & Additional Information

- All subcontract teams want to start at the beginning of the week
- Anything with glue, adhesive, spackle, or sealant takes no less than three days to dry before anything else can be done
- Plumbing comes in at least twice; behind the walls and outside the walls
- Electrical comes in three times
 - Behind the walls
 - Heated floor pads
 - Install lights and switches
- Inspections of Electrical & Plumbing before walls go up
- Painting comes in twice
 - After walls are complete; before anything is installed
 - After everything else is complete
- Need to have access to the house



Top-Down Schedule

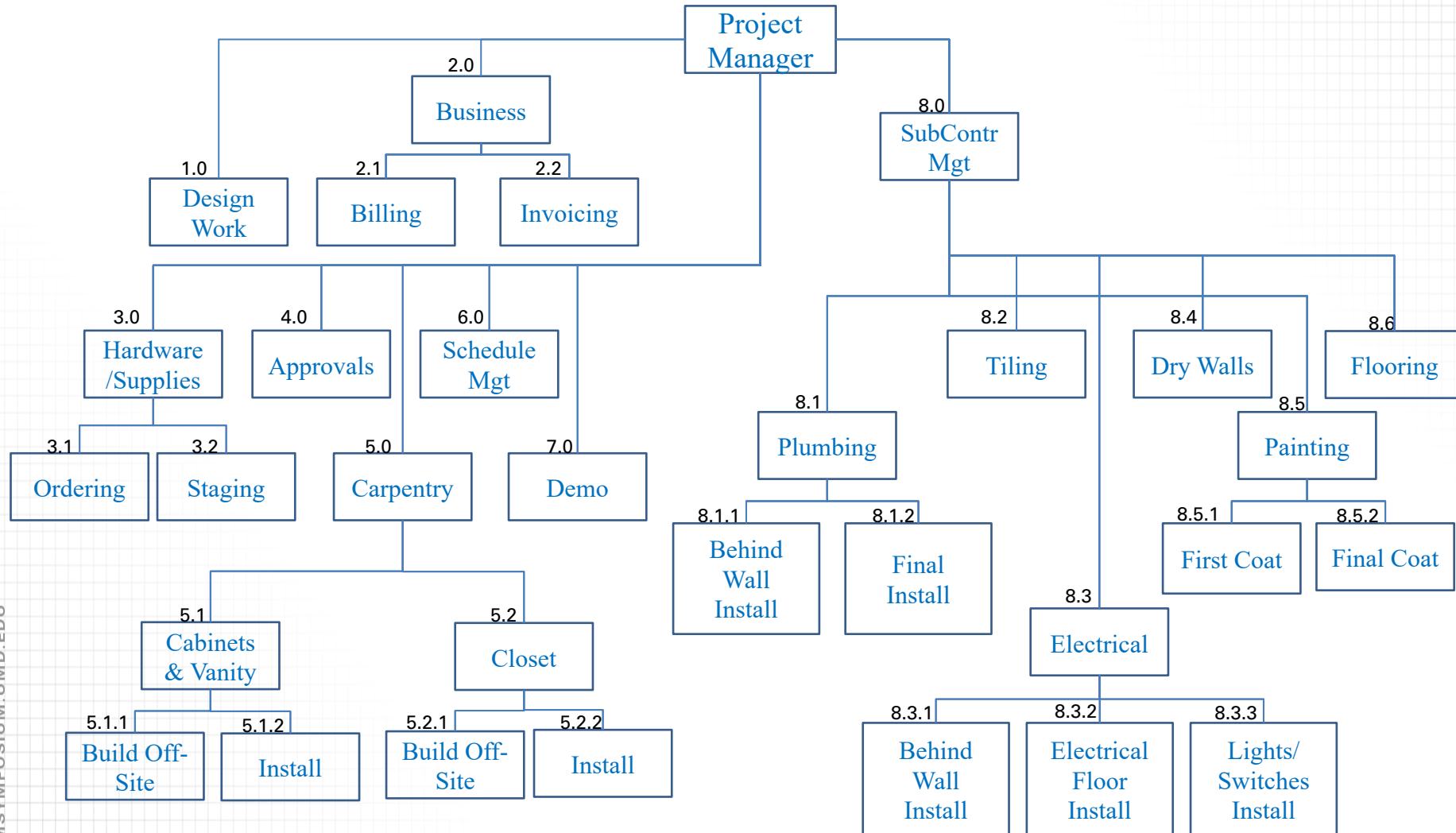
Based on Schedule Constraints & Additional Information



POLL:

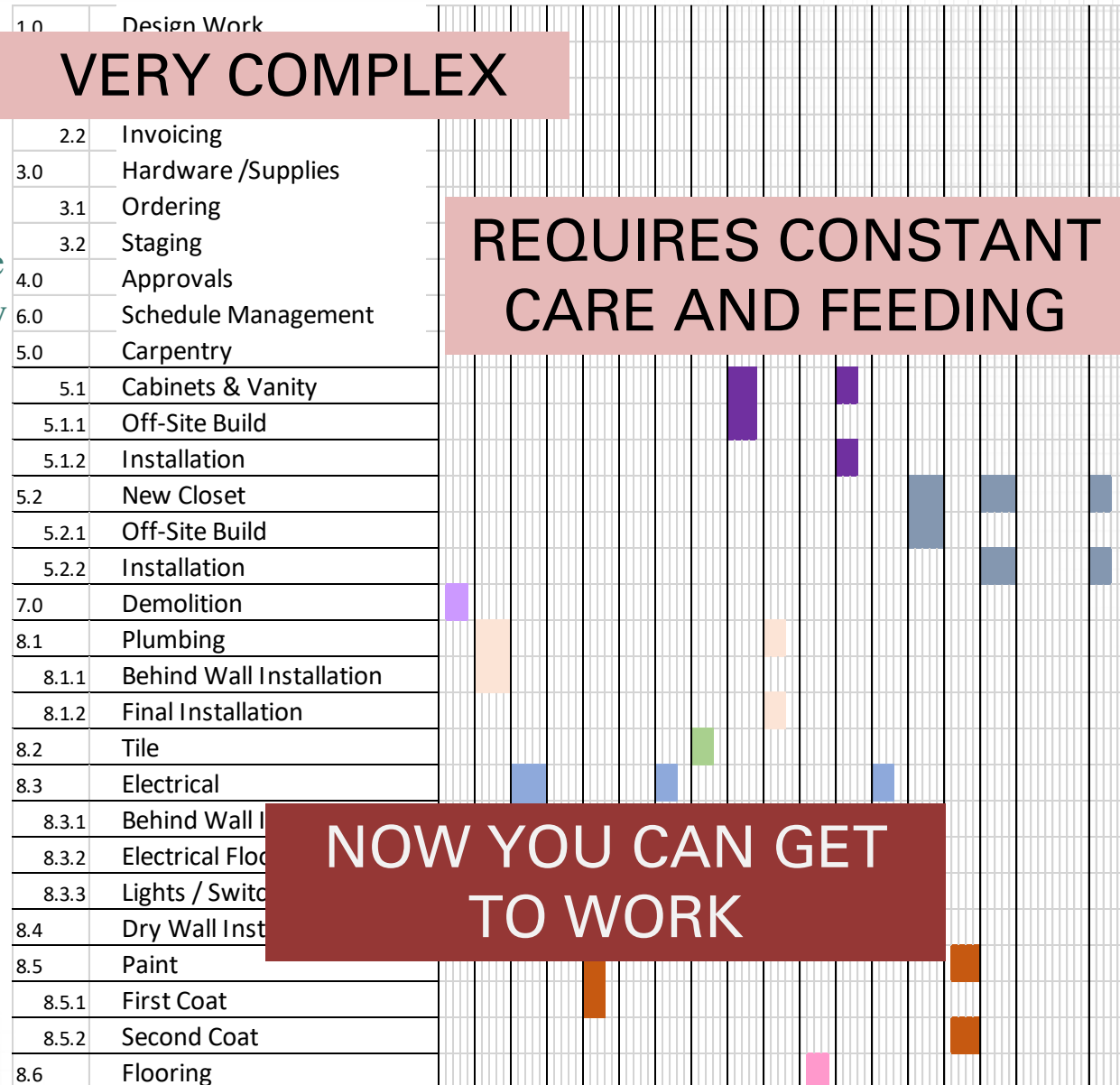
What is your level of confidence in this schedule on a scale of 1-10?

Work Breakdown Structure



- Based on WBS
- Incorporates many discussions with Subject Matter Experts (SMEs)
- Durations are defined by those that are doing the work; not by management
- Multiple Negotiations
 - Availability
 - Personnel
 - Hardware & Supplies
- Deconflicts space
- Clearly defines predecessors and successors

POLL:
What is your level of confidence in this schedule on a scale of 1-10?





Somethings We Need To Relearn Lessons - Over And Over Again

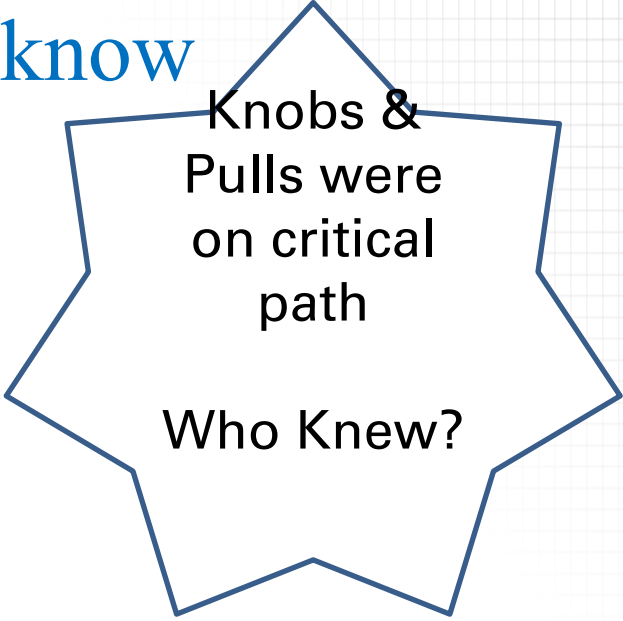
- Continuous Discussion Is Imperative
 - Try to Set-up a Drum Beat
- You don't know what you don't know
- Real Life Happens
- Every Change has Consequences

What are some topics for Drum Beat?

- What is being worked on Today?
 - What happens if it is not completed today?
- What is being worked on tomorrow?
 - What happens if it is not complete tomorrow
- Do you have all of the supplies and hardware that is required?
 - Today? Tomorrow?
- Do you have enough people?
- Do you have the right people?
- Do you know and understand the Subcontractor priorities
 - Is this job aligned with their priorities
- What are the impacts to the program if a response is “No”?
- What can I help you with?

You don't know what you don't know – Knobs & Pulls

- Knobs and Pulls were not on the schedule
- Simple Items
- Easy to purchase
- Easy to install
- Not priced because there is a huge variance based on personal preference
- You can go on line and pick a set but the company buyer does not have a supplier that supports the product
- It take six weeks to work with company buyer to choose and get delivered



Knobs &
Pulls were
on critical
path

Who Knew?



Real Life Things Happen – Site Coordinator is called off-site

- For the latter stages of the installations the project lead was called away to support a family member in the hospital
- Communications between work complete and next step were delayed sometimes by full weeks
- The closet which required on-site carpentry need to be rebuilt

Every Change has Consequences

True or False

- You can delay a task and not impact the schedule (T/F)
- You can add a task and not impact the schedule (T/F)
- You can come in early and not impact the schedule (T/F)
- You can rearrange tasks without impacting the schedule (T/F)
- You do not have to communicate schedule changes to other task owners (T/F)
- All schedule delays are day to day impacts to Project (T/F)
- Every change has consequences to the Project Schedule (T/F)

Summary

- It takes time and LOTS of communication to build a schedule
- Your Subject Matter Experts and the people who are doing the work know what they need and how long it will take
 - Ask Them Early
 - Ask Them Often
- Communication to all stakeholders must be continuous throughout the project
 - Verify that you are talking the same language/vocabulary and have the same expectations
- ANY change to the project WILL result in a change to the Project schedule
 - Document It
 - Communicate It



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QUESTIONS?



Learning Points for continuous reference

- Tasks in the schedule should be based on your requirements and match the tasks in your WBS.
- Articulate emphasis that the specialists know how long it really takes to do the job; you should ask them.
- Options on how to add new requirements without blowing up the schedule,
- Things that you need to watch are not always on the critical path (Schedule Risk Assessment & Tornado chart?)