

You're Quite Ready for a Schedule Risk Assessment, but is your Culture?

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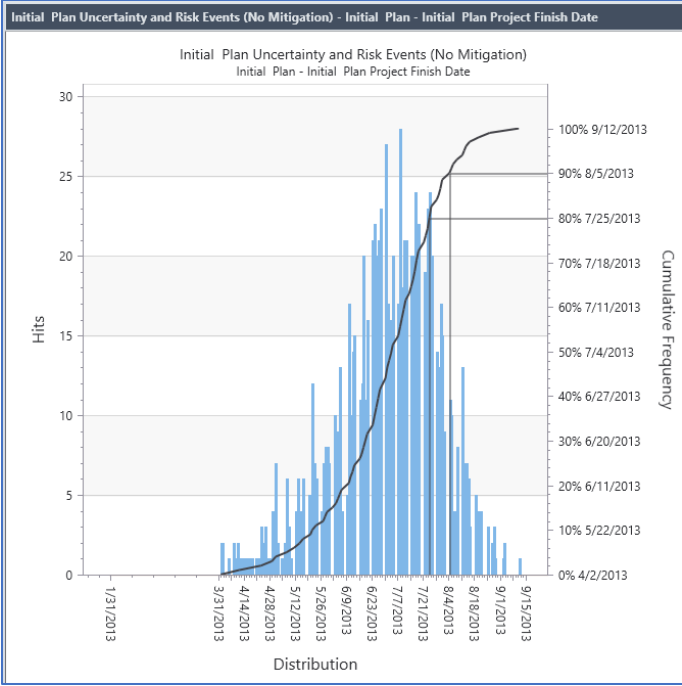


What is a Schedule Risk Assessment (SRA) ?

- A forecast of the project outcome, including the likely impact of events that may or may not happen.
- Helps the team to understand the preparation and contingency required for a successful outcome.
- An opportunity to learn from the past, while attempting the delicate art of predicting the future.
- Establishes confidence that the project delivery can or cannot be met.

Predicting the future is inherently difficult. An SRA is used to gather all deterministic and probabilistic inputs to model future outcomes with coherent and relentless communication, forecasting, and analysis.

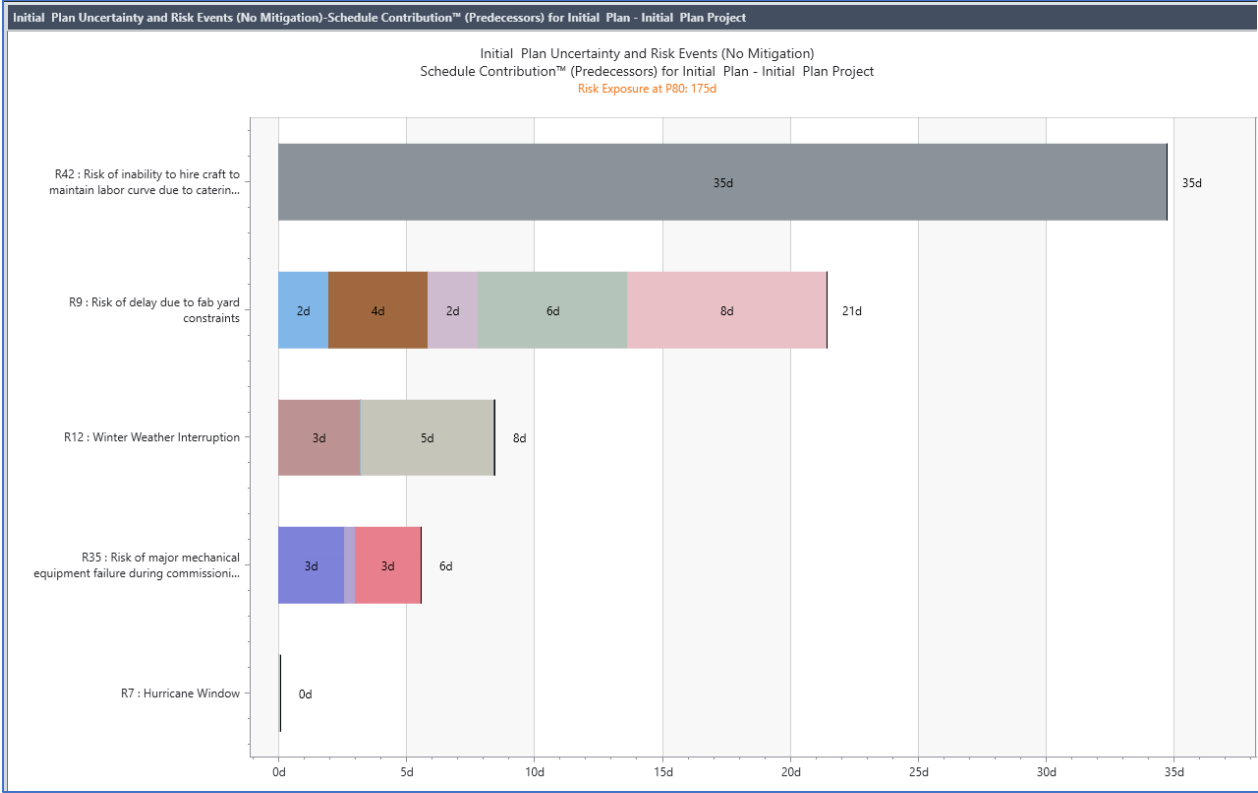
What are Some Outputs?



Metric	Value
Deterministic - 0.00%	1/31/2013
Mean (P46)	7/1/2013
P0 - Best Case	4/2/2013
P80	7/25/2013
P90	8/5/2013
P100 - Worst Case	9/12/2013
Range	163.1d
Risk Range Factor	14%

The Exposure Histogram helps us to say “in 80% of outcomes, we deliver as late as July 25, while we are committed to deliver on January 31 of the same year, which seems possible in 0% of outcomes. Our commitment may need to change, but we will conduct Risk Mitigation exercises to see what can be done.”

Better Output?



The Risk Drivers Tornado chart illustrates which Threats will affect execution and by how many units of time. This is crucial to understanding the true impact of Risk to the plan.

How Do These Visualizations Help?

- Keep it simple!
- Risks can achieve equal standing with project issues and actions.
- You can name the reasons why you are most likely to deliver late.
- Simple indicators pointing to root causes of future delays are actionable.
- Contingency becomes a topic of discussion. In certain environments, Schedule Margin is a required component of the plan and must be managed appropriately.
- The team acknowledges that Risks can and will be realized.

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“SRA Culture” Factors

- Often, very large capital projects speak of “doing an SRA” as either a requirement at project baseline or at one or more key stage gates.
- Have you heard it expressed like this?
- Are there issues with this approach?

Discussion...

The technical capability to ‘run an SRA’ and the characteristics of a Risk-Aware culture are two different things entirely.

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What are some methods you can use to incorporate Risk into a project forecast?

SRA Inputs that Rely on a Risk-Friendly Culture

- Duration Uncertainty
- Risk Register
- Risk Mappings
- Weather, Correlation, Risk Interdependencies
- Mitigation

There is one critical item missing from the list above. What is it?

Cultural Factor #1: The Project Plan

- You cannot squeeze project predictability from an SRA using an unreliable schedule as the base. No exceptions!
- A reliable project plan
 - Flows smoothly.
 - Has manageable granularity.
 - Is unconstrained. Risk can run without blockage.
 - Has completely accurate driving paths to key deliverables.
 - Has realistic and reasonable estimates
- Technical schedule characteristics to avoid
 - Missing Logic
 - Hard Constraints
 - Leads/Lags
 - Merge Hotspots
 - High Duration Tasks
 - Unusual Float
 - Too much logic

Cultural Factor #2: Determining Uncertainty

- **Assigning Duration Uncertainty is “SRA 101”**
 - Often, these are 3 Point Estimates, but software can help with these assignments.
 - Both deterministic durations and Duration Uncertainty can suffer from Optimism Bias.
 - Engineers can feel pressure to keep Duration Uncertainty in line with stated project goals.
- **The team may wish to focus on Critical Path duration uncertainty**
 - Non-critical paths may become Critical when Duration Uncertainty is properly assessed.
 - Unless the entire project has Duration Uncertainty assigned, Risk Adjusted Critical Paths will be missed.
- **Understand the “Why” behind uncertainty assignments.**
 - Uncertainty can be General, but there must be some underlying reason for Uncertainty.
 - Specific drivers/causes of Uncertainty may become candidates for the Project Risk Register

Cultural Factor #3: Risk Register

- For Threats, focus on Cause, not Consequence
 - A speeding ticket for driving too fast can be costly.
 - While a \$\$ fine is the consequence of speeding and may be a Risk Impact, you must ask...
 - “Why was I in a hurry?” – That is the likely Risk rather than the action of speeding.
- Are all Risks raised by team members documented?
 - Avoid pre-filtering project Threats. While not all will apply, it is important not to create blindspots.
 - Don't forget opportunities!
- Map Risks to the areas of the plan they are most likely to impact
 - This is critical to understanding the “where, when, and how much” of Risk impacts
 - Not all SRA tools support this directly, but this step should be taken nonetheless.
 - A Risk Register without this mapping process performed is just another project document.

Cultural Factor #4: Additional Inputs

- These additional inputs are not always common, but important to consider when necessary.
 - Don't get caught late because of weather. "Derek, the project was in Antarctica. Did you account for weather threats in the Risk Register?" (weather events)
 - "We know if the requirements take forever to develop that engineering to those requirements may also take forever." (correlation)
 - If there's an earthquake during construction, we know that some contractors are highly likely to walk away from the job. (serial / dependent risks)
 - The Risk of bad weather makes construction take longer, but if the building materials are substandard then the weather doesn't matter. (parallel risks)
 - Poor materials and unskilled workers make everything take longer. (non-parallel)

Cultural Factor #5: Lack of SRA Understanding

- “Our P80 date needs to show September 30 or earlier. No exceptions or our customer will withhold funding.”
- “Risks are unacceptable on this project.”
- “Risk? Nah. We already padded our estimates to account for it.”
- “We don’t own the Risk.” If you own on-time delivery, you own the Risk, Risk Management process, and transparency regarding threats to execution when reporting project status.

Many project fixate on a target date for P80 before Risk and Uncertainty are even discussed. Many also “run a quick SRA” when asked. Remember, predicting the future is a delicate art, not to be taken lightly.

Remember...

- You need a great project plan before the SRA exercise, but consider Risk while developing the plan.
- A safe environment to discuss threats and opportunities is critical.
- Risk inputs need checks and balances. “Groupthink” is real.
- Focus on Cause of Risk, not Consequences.
- Prioritize threats. Mitigate.
- Full ownership of delivery requires ownership of Risk.

A culture can orient itself toward a Risk-friendly mindset one step at a time. Each of these items are a tool that helps the entire SRA process improve. The exercise is inherently uncertain. Marginal improvements will snowball into true cultural change and improvement.



THANK YOU