Democratisation of Risk

The importance of Risk to everyone….

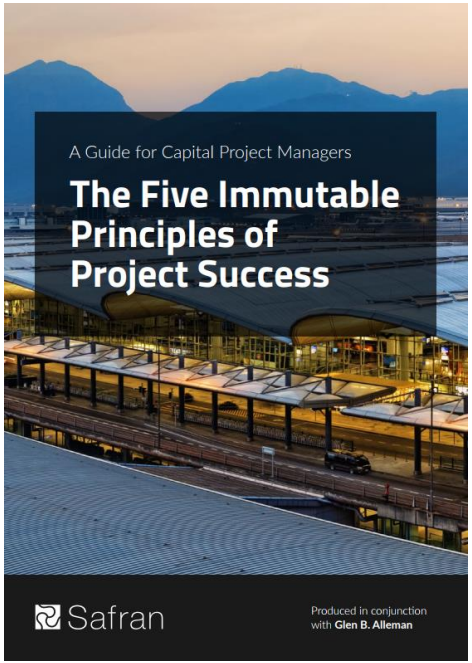
The ‘Five Immutable Principles of Project Success’

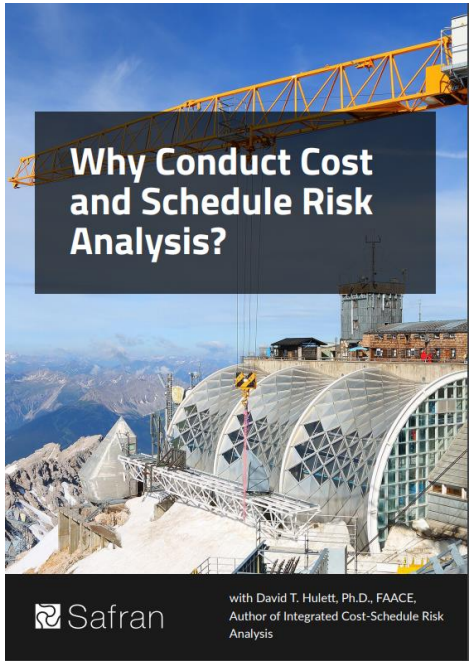
This is me….

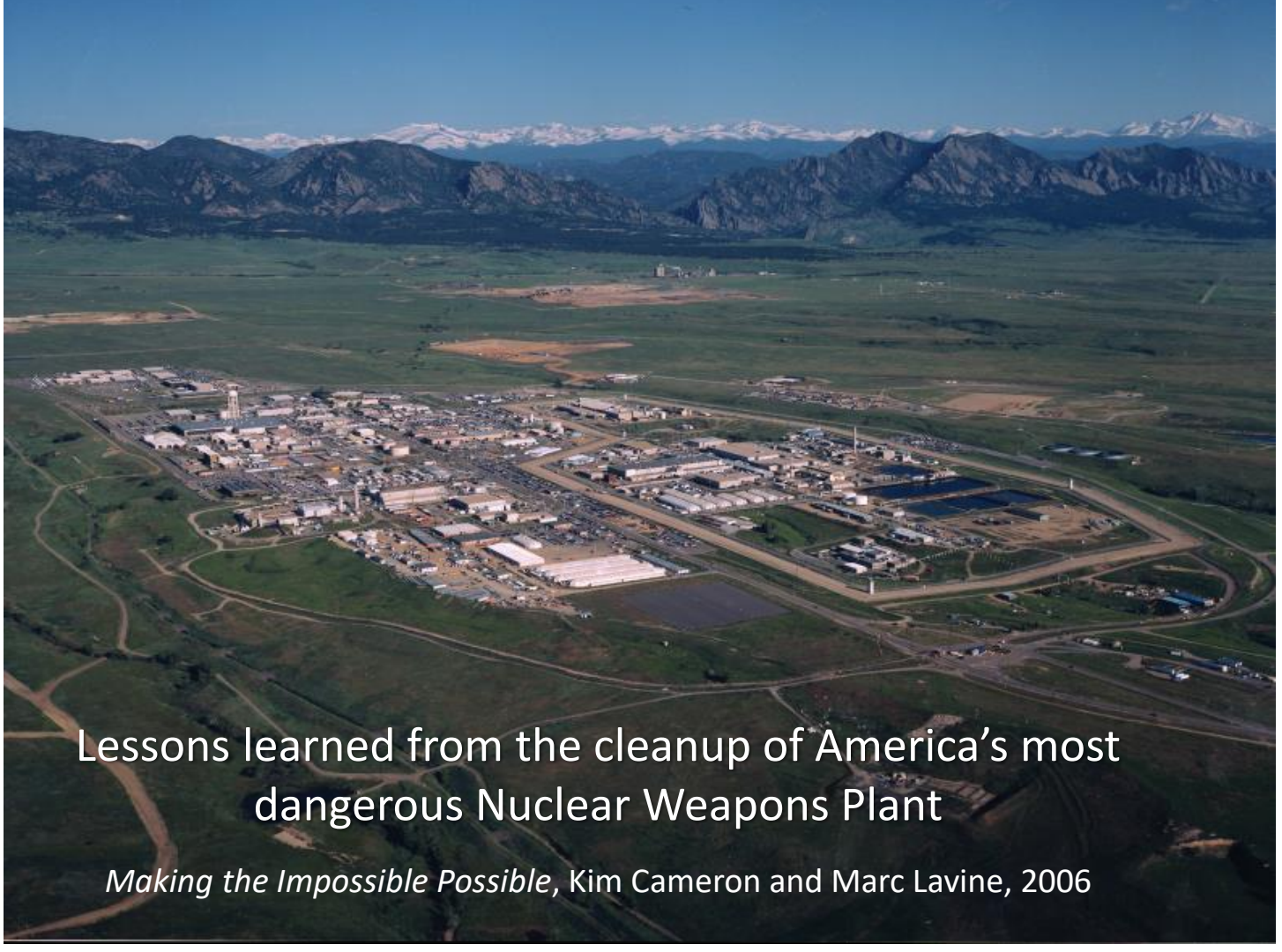
RICHARD WOOD / VP INTERNATIONAL Safran Sales

Project Controls EXPO

Two recent eBooks from Safran







Lessons learned from the cleanup of America's most dangerous Nuclear Weapons Plant

Making the Impossible Possible, Kim Cameron and Marc Lavine, 2006

Project Controls EXPO

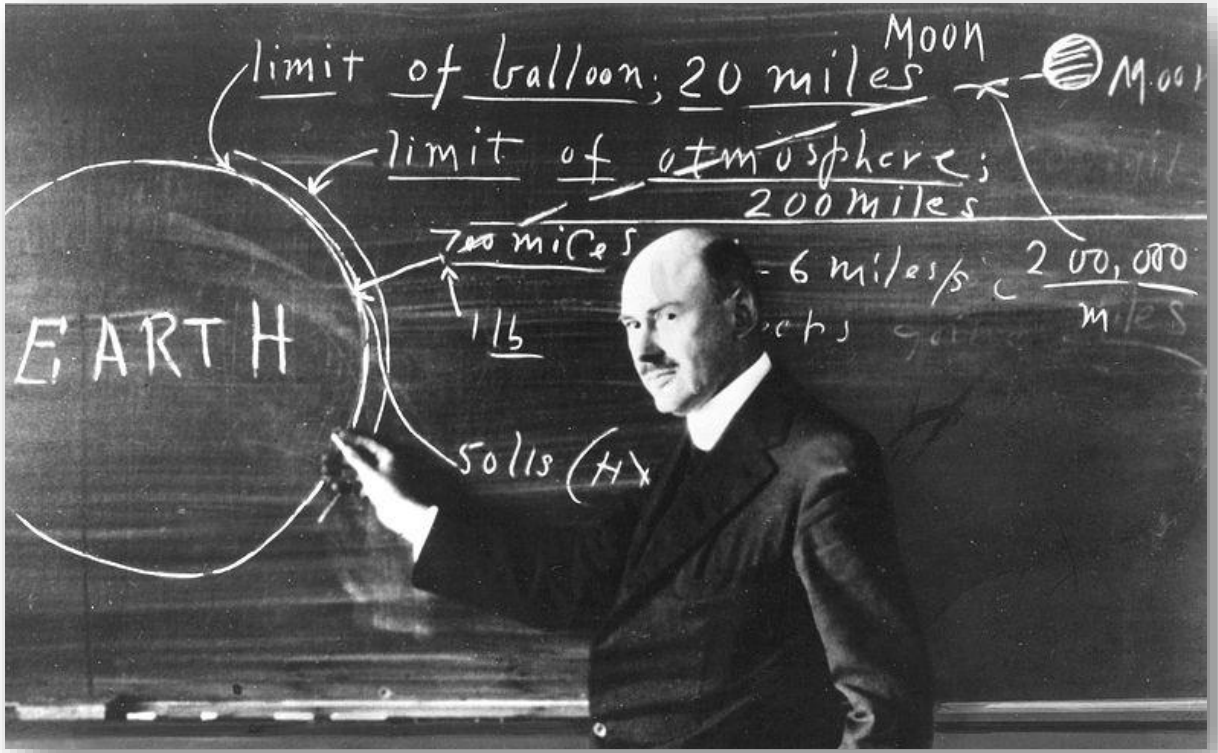
The Five Principles Of Project Success

1	What does done look like?	Capabilities and Requirements
2	How do we get there?	Master Plan and Schedule
3	Are there enough resources?	Schedule and Resource Plan
4	What are impediments to progress?	Risk Management Plan
5	How do we measure progress?	Physical Percent Complete

What Does Done Look Like?

1. Develop a list of features or deliverables and describe the technical capabilities for each, in units of measure meaningful to the decision makers.
2. Model the interdependencies between these deliverables.
3. Develop the Measures of Effectiveness and Measures of Performance and Key Performance Parameters for each Capability.

“Done” Provides a Capability to Do Something



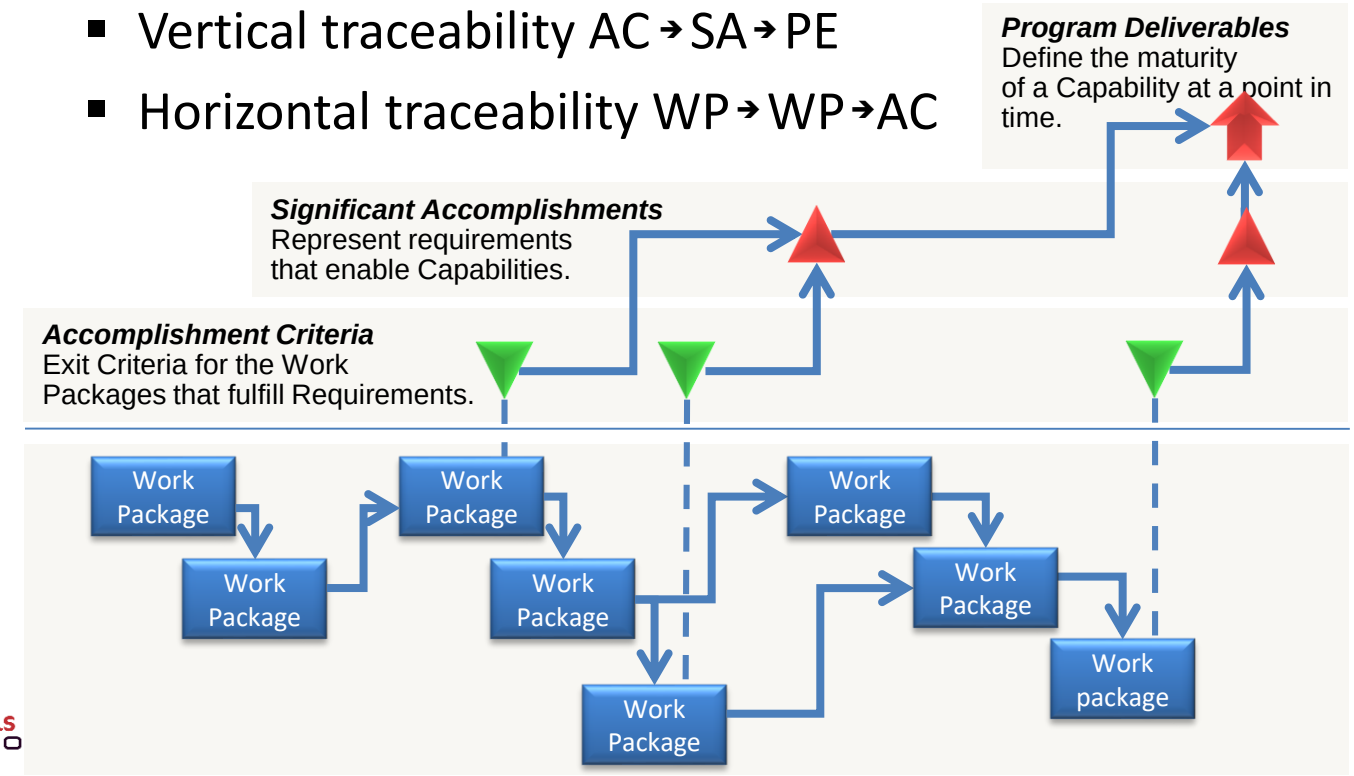
19 October 1899 Robert Goddard decided that he wanted to "fly without wings" to Moon.

How Do We Get to Done when planned, for the planned cost?

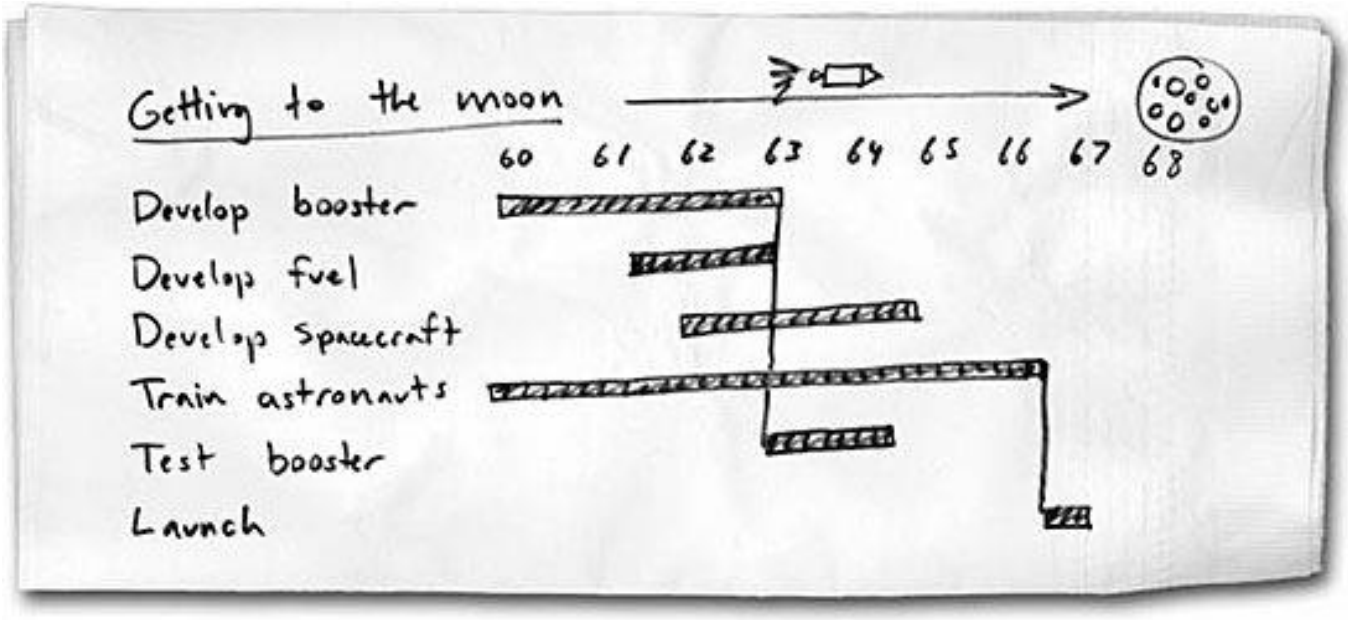
1. Build a Plan and a Schedule to implement that Plan with the work to be performed.
2. Define “Packages of Work” for all the activities with deliverables defined as “Exit Criteria”
3. Link the Accomplishment and Criteria vertically and then link the Work Packages horizontally.

The Schedule Connects Work to Deliverables

- Vertical traceability AC → SA → PE
- Horizontal traceability WP → WP → AC



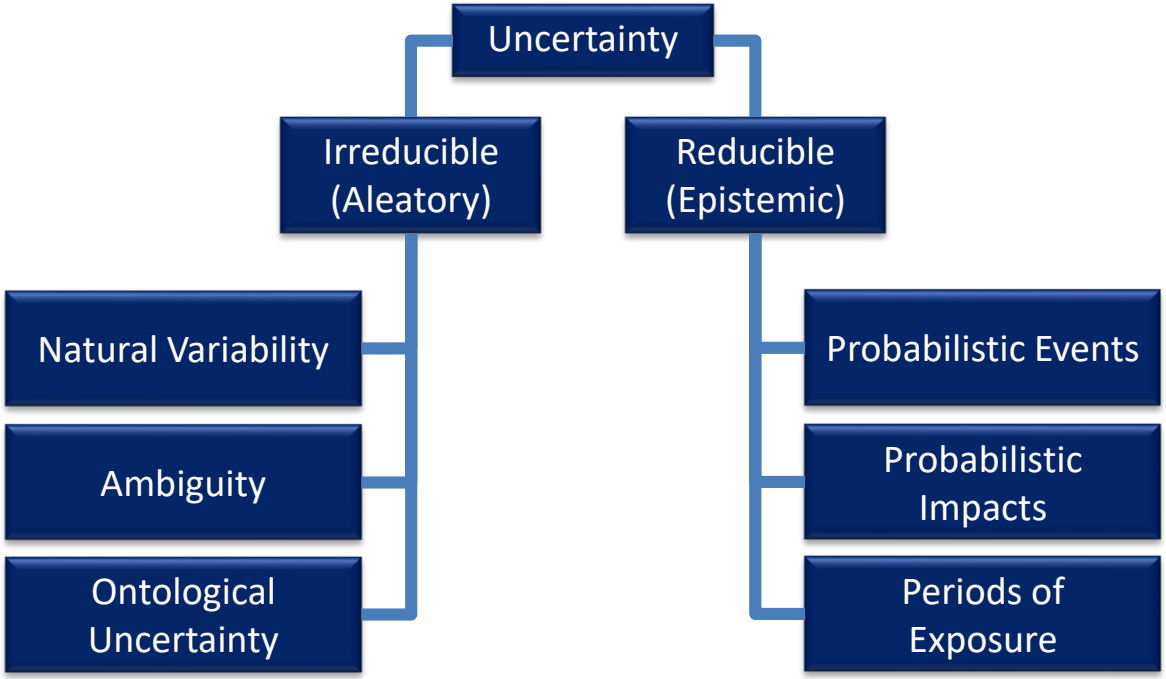
The schedule tells us the order of the planned work



What Are The Impediments To Reaching Done?

1. Make a list of risks and rank them by priority.
2. Assess impact on cost and schedule for each risk and the dependencies of these risks on external and internal drivers
3. Assess the probability of occurrence and the probabilistic impact on cost and schedule impact, cost of handling, and cost of the residual risk after handling

All Risk Comes From Uncertainty



Risk Reduction Activities

This is What *DONE* Looks Like

Safran Project™

How we can Democratise Risk for all…

Project Controls EXPO

Risking the entire Portfolio

For a top 5 Energy company…

80% of projects

- Are budgeted < $50m
- Contribute 20% by portfolio value

20% of projects

- $50m are risk adjusted
- Contribute 80% by value

- And… 80% are late and/or over budget….

Safran Project Family

Plan and control complex projects with built-in schedule risk analysis and integrated, powerful reporting

Safran Project™

Unified project management capabilities for capex and opex, with Safran Integrator for SAP

Safran Integrator for SAP™

Use our lightweight scheduling tool – quick to learn and easy to use – for control of smaller projects

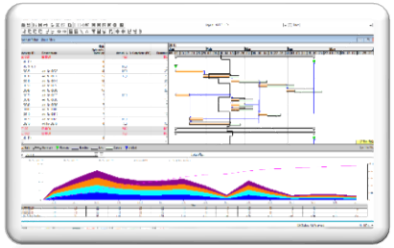
Safran Planner™

A range of Web based tools for both Reporting and Progress updating.

Safran Web

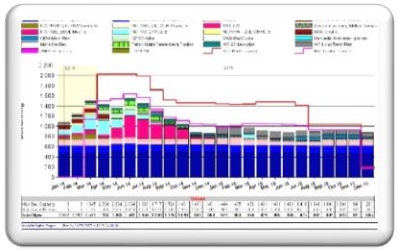
Safran Project Solution Overview

Safran

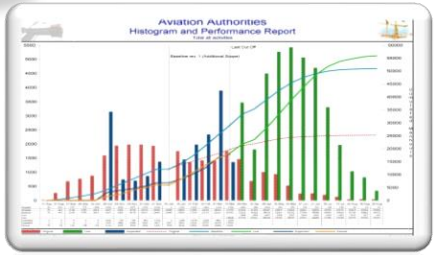


Scenario Planning

Integrated Risk Mgt



Scheduling & Resource Management



Earned Value

Project Controls EXPO

Common Use Cases for Safran

Fully Integrated Project Controls & Risk Management

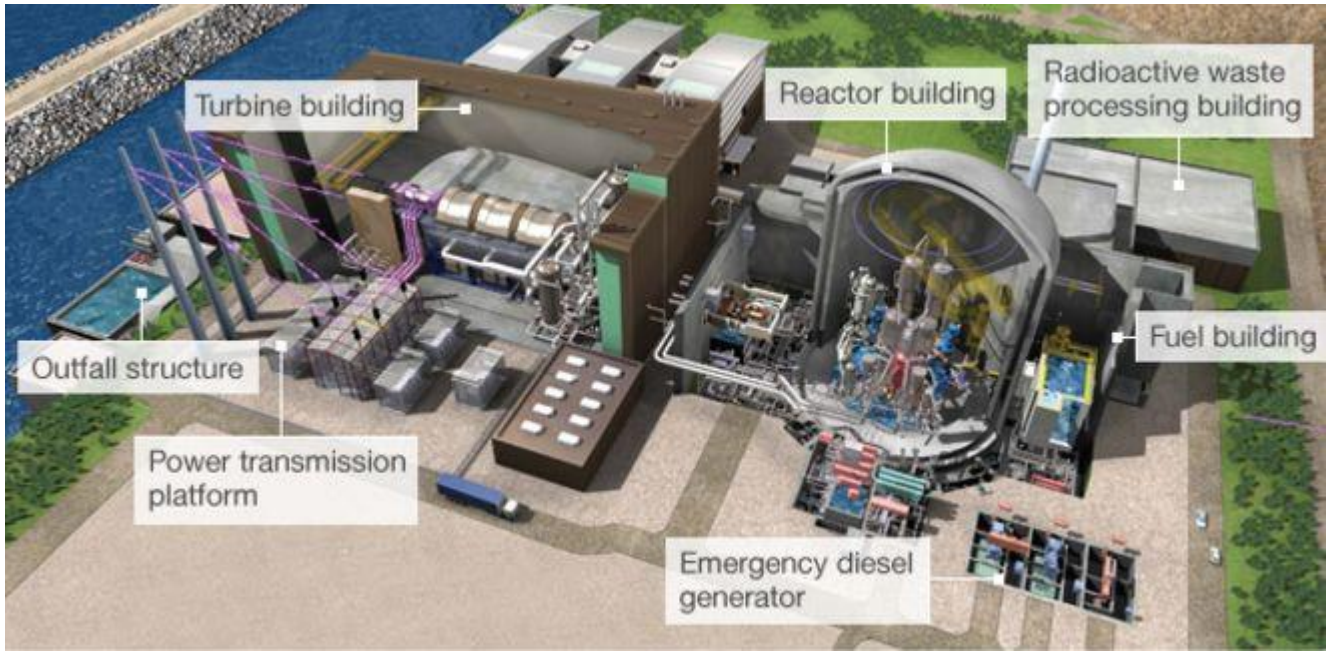
Navantia – Defense Vessel Construction in Spain

Safran

Project Controls EXPO

Ocean Farming – World's First Offshore Fish Farm

EDF Energy – Hinkley Point C Nuclear Plant in the UK

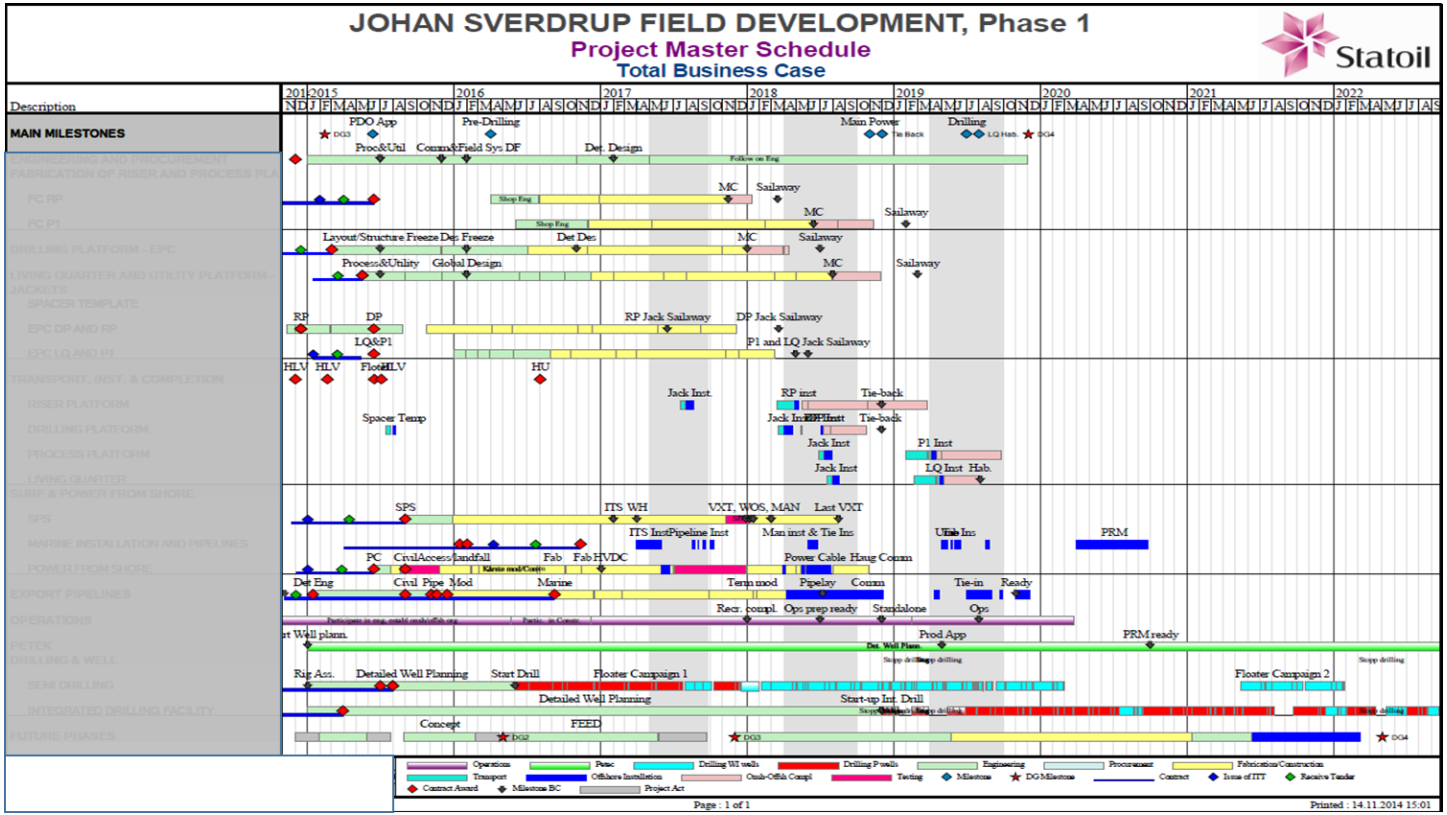


What does DONE look like?

Johan Sverdup

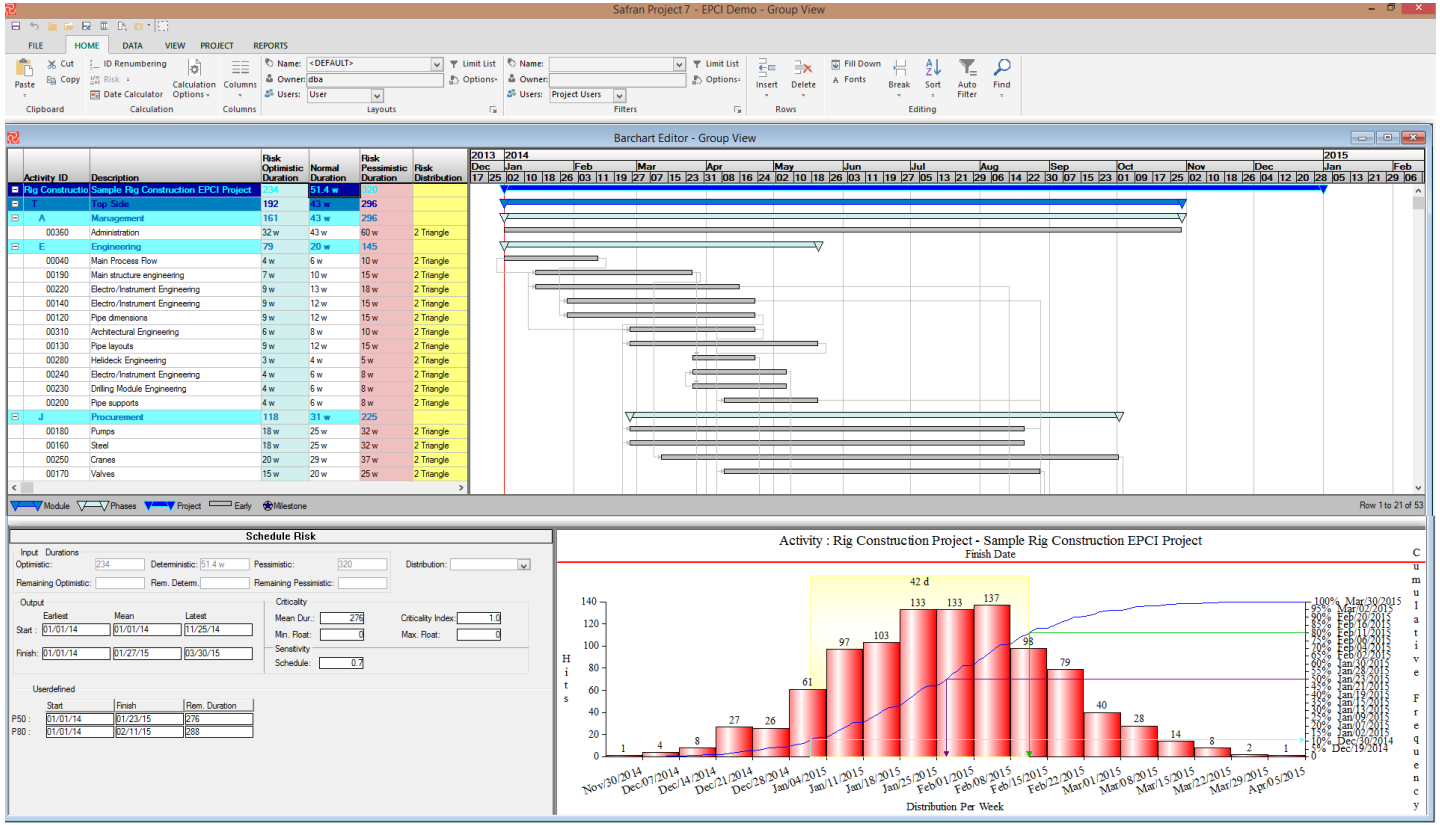
Johan Sverdrup is one of the five largest oil fields on the Norwegian continental shelf. With expected resources of between 1.9—3.0 billion barrels of oil equivalents, it will also be one of the most important industrial projects in Norway in the next 50 years. The development and operation of this enormous field will generate revenue and provide jobs for coming generations.

Master Schedule

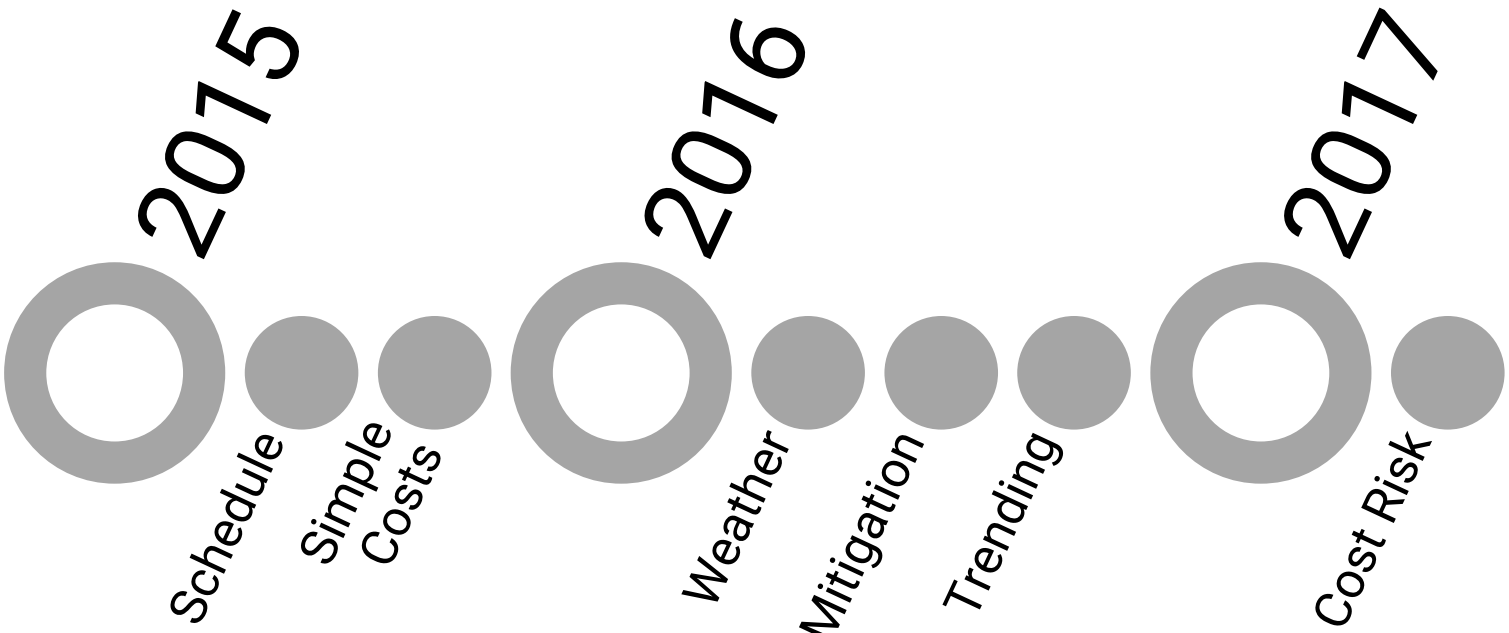


Democratisation of Risk

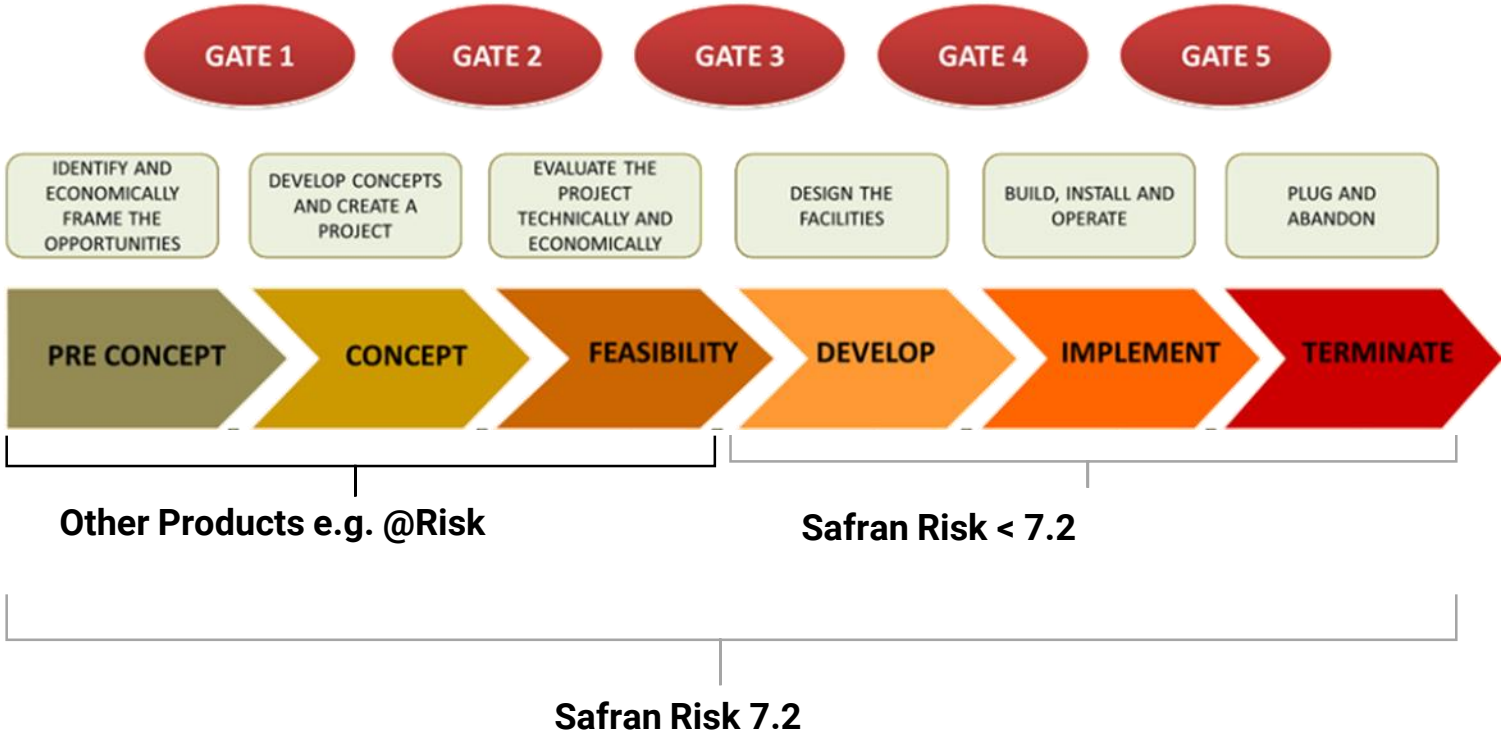
Risk – Duration Uncertainty



Safran Risk - Brief Product History

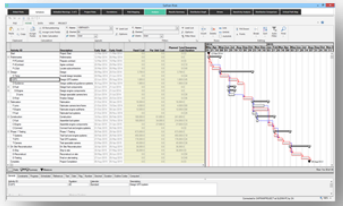


The Importance of Integrating Cost & Schedule

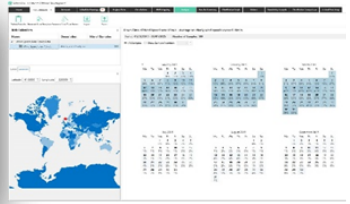


Safran Risk

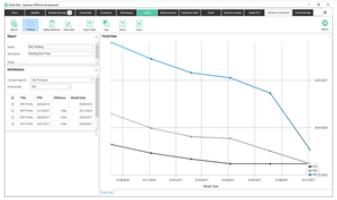
- **INTUITIVE AND PROCESS-LED USER INTERFACE**
  - *Embedded best-practice process flows*
  - *Inputs on the left of "analyze", outputs on the right*
- **BEST-IN-CLASS REPORTING**
  - *Sensitivity Analysis showing schedule and cost impacts*
  - *Scatter Plot showing combined schedule and cost*
  - *Trending report to show risk performance over time*
- **BUILT-IN SCHEDULING ENGINE**
  - *Iterative "review/ analyze" process*
- **RISK-READINESS SCHEDULE CHECK**
  - *Ensures higher quality plans resulting in higher quality risk analysis*
- **POWERFUL RISK CALENDARS**
  - *Model weather using real time-series data*
- **RISK ANALYSIS TO THE MINUTE**
  - *Perform risk analysis to the minute level*



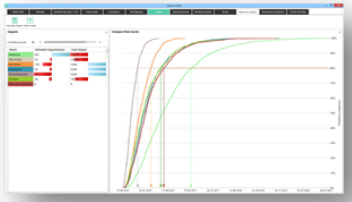
Fully integrated scheduler



Risk Calendars – Weather Modelling



Risk Reporting - Trending



Risk reporting – Sensitivities

Risk reporting – Scatter Plot

Risk reporting - Drivers

Add Cost | Add Factor | Delete | Grouping | Regroup

Name	Base	Base Uncertainty	Schedule Connection				Risks	Total
			Activity	Duration	Fixed	Variable		
Project	207,825							0
Additional Unforeseen Cost	0						Fire	0
Site Preparation	9,475							0
Rough Stake	1,250	Triangle(1,000 ; 1,250 ; 1,875)						0
Clearing, Grading, Hauling	1,725		70% 00430 - Structure Hammock 30% 00020 - Demo Prep	247	0.00	1,725.00		0
Quantity in Hours	15.00	Uniform(10 ; 20)						0.00
Price per hour	115.00	Triangle(92 ; 115 ; 173)						0.00
Fill Dirt	3,750	Normal(3,750 ; 100)						0
Locate Corners	2,750							0
Footings	22,150							0
Layout, Dig, and Pour	2,470	Triangle(1,976 ; 2,470 ; 3,705)					Piling	0
Steel	2,430							0
Concrete	17,250							0
Foundations	176,200							0
Concrete	23,000							0
Brick	80,000						Faulty Bricks	0
Block	4,000							0
Mortar	1,000							0
Sand	4,250							0
Steel	4,050							0
Vents	1,000							0
Damp Proofing	3,750							0

General | Factors | Risks | Distribution

Deterministic Cost: 1,725

Safran Risk - SSample

Home | Global Risks | Schedule | Cost | Schedule Warnings 2 | Project Risks | Correlations | Risk Mapping | Analyze | Results Summary | Distribution Graph | Drivers | Sensitivity Analysis | Scatter Plot | Distribution Comparison | Critical Path Map

Add Cost | Add Factor | Delete | Grouping | Regroup

Name	Base	Base Uncertainty	Schedule Connection: Activity	Duration	Fixed	Variable	Risks	Total
Project	207,825							0
Additional Unforeseen Cost	0						Fire	0
Site Preparation	9,475							0
Rough Stake	1,250	Triangle(1,000 ; 1,250 ; 1,875)						0
Clearing, Grading, Hauling	1,725					1,725.00		0
Quantity in Hours	15.00	Uniform(10 ; 20)						0.00
Price per hour	115.00	Triangle(92 ; 115 ; 173)						0.00
Fill Dirt	3,750	Normal(3,750 ; 100)						0
Locate Corners	2,750							0
Footings	22,150							0
Layout, Dig, and Pour	2,470	Triangle(1,976 ; 2,470 ; 3,705)					Piling	0
Steel	2,430							0
Concrete	17,250							0
Foundations	176,200							0
Concrete	23,000							0
Brick	80,000					0.00	Faulty Bricks	0
US$ -> NOK	8.00	Triangle(7 ; 8 ; 10)						0.00
Brick (in US$)	10,000.00							0.00
Block	4,000							0
Mortar	1,000							0
Sand	4,250							0
Steel	4,050							0
Vents	1,000							0

Pick the activities that affect the cost

Filter

Id	Description
00120	Electrical
00130	A/V
00140	House wrap
00150	Insulation
00160	Drywall
00170	Exterior stone
00180	Exterior case work
00420	Interior Work
00190	Laundry/furnace roo
00200	Hardwoods
00210	Tile
00220	Cabinets

Activity	Fraction
00030 - Demolition	40%
00170 - Exterior stone	60%

OK | Cancel

General | Factors | Risks | Distribution

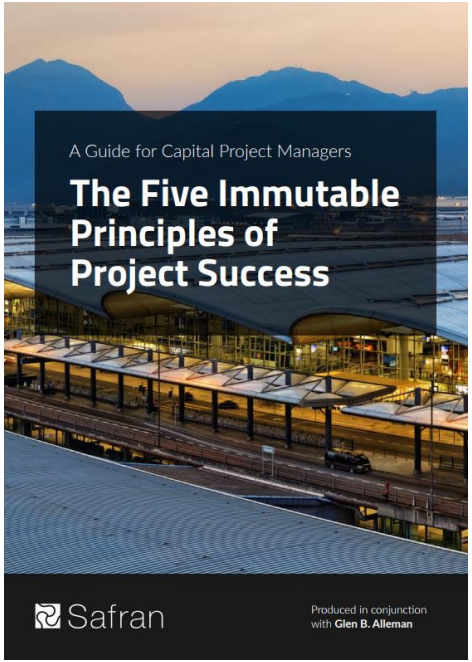
Name	Description	Probability	Selected Position
Faulty Bricks	Need to send back to factory	20%	Pre-Mitigated

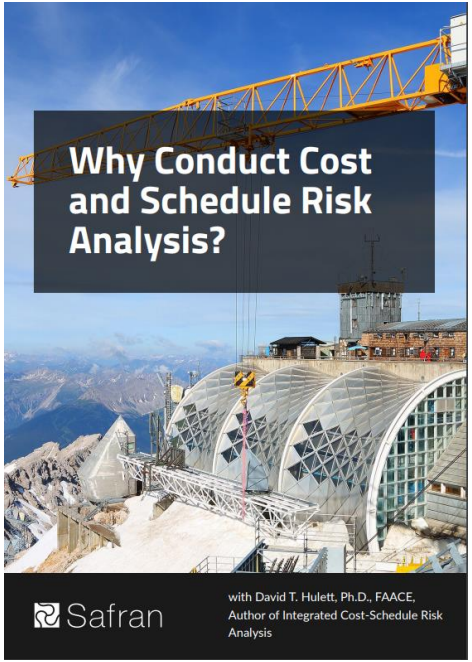
Category	Type	Function	Distribution
Cost	Absolute	Triangle(100;200;1000)	100 … 1,000

The Five Principles Of Project Success

1	What does done look like?	Capabilities and Requirements
2	How do we get there?	Master Plan and Schedule
3	Are there enough resources?	Schedule and Resource Plan
4	What are impediments to progress?	Risk Management Plan
5	How do we measure progress?	Physical Percent Complete

Why not take a look?





Questions?

Use the questions box on the right side of your screen

Safran

For more information, contact us:

sales@safran.com

www.safran.com