



Risk Assessment – Beyond the Heat Map

Quantitative Methods to inform Proposals and Delivery

John Greenwood

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Portfolio Risk Manager



- John followed a traditional career path through systems engineering in the electronics industry, into project and programme management across IT and outsourcing sectors.
- Through managing a number of business recovery and 'get-well' programmes, he formed some strong opinions about shortcomings in the set-up and delivery of business, and how many challenged projects may inadvertently have been set up to fail.
- This led him to concentrate on uncertainties and assumptions that are a necessary part of planning and estimating, and to consider how these could be better understood, before unrealistic commitments were made.
- He has since applied the same risk management techniques across IT, outsourcing, construction, and utilities sectors.

This Session

- Challenge 'single-value' estimates
- Understand confidence in estimates.



Risk Management Recap

- What are the objectives?



Three objectives:

Change
the future

Forecast
the future

Knowledge
capture

Change the Future:



Forecasting the Future

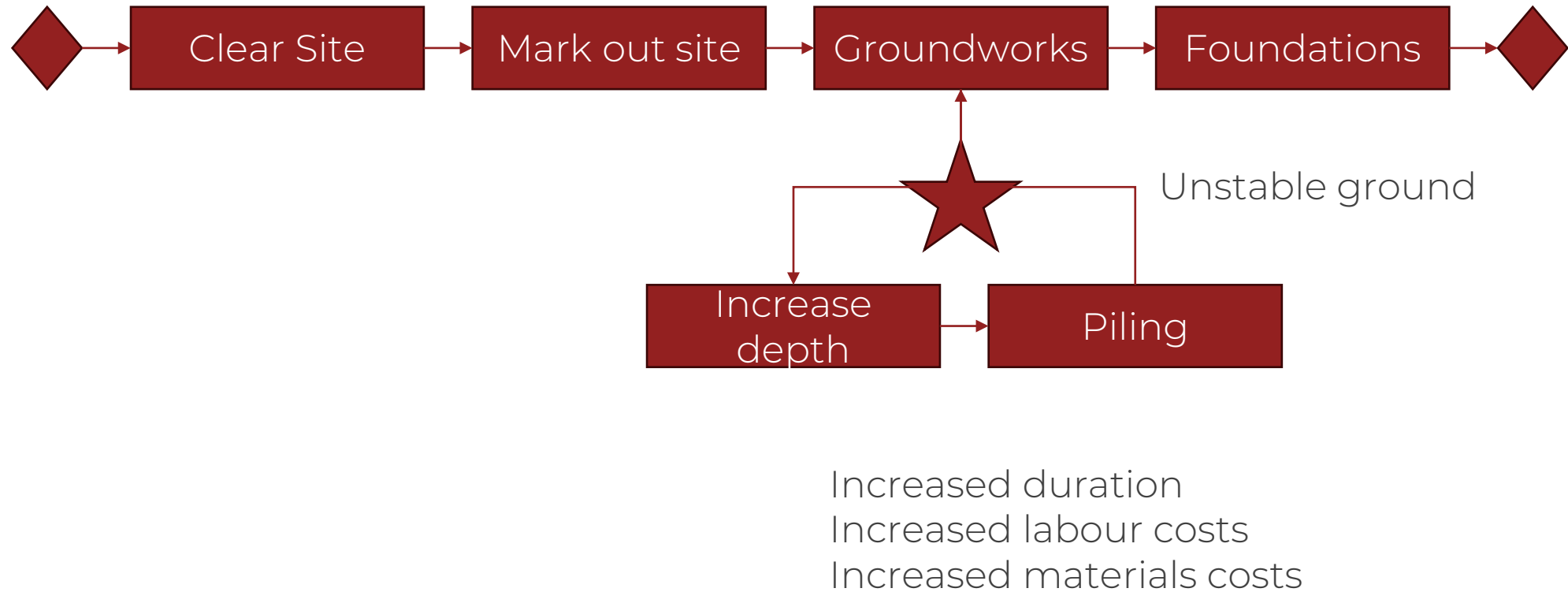


Prerequisites:

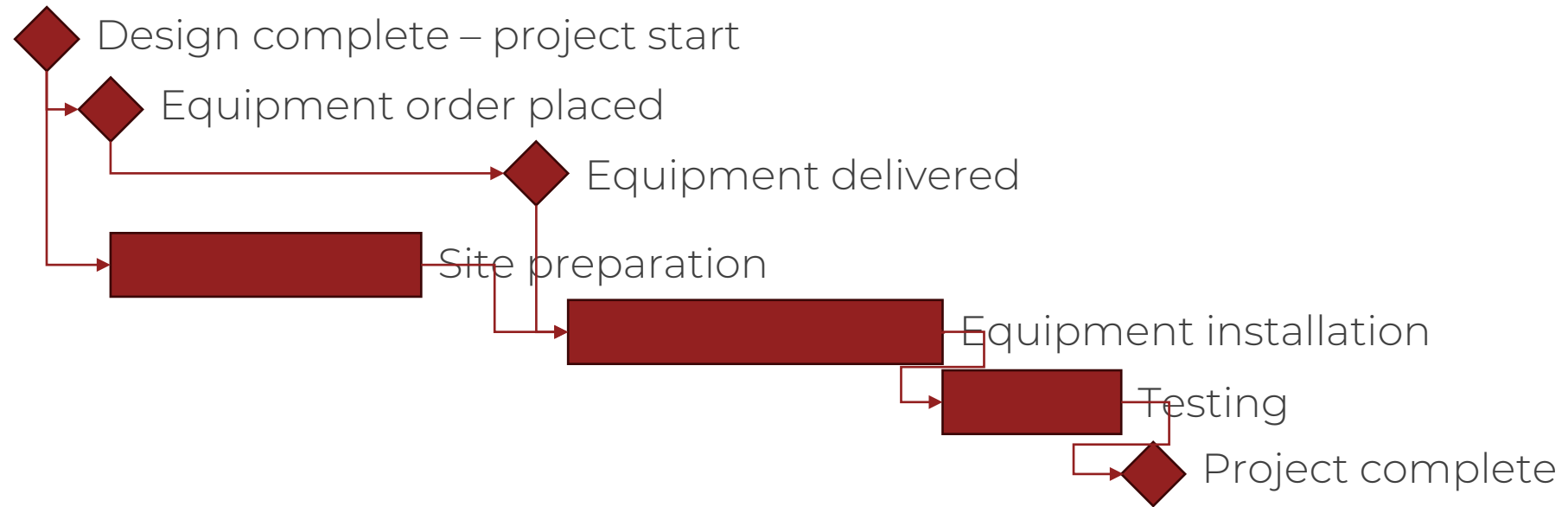
							2014												2015					2016						
							Mar	May	Jul	Sep	Nov	Jan	Mar	May	Jul	Sep	Nov	Jan												
							11	20	30	09	18	27	06	16	25	06	15	25	04	13	22	01	11	20						
Activity ID	Description	Activity Type	Start	Finish	Duration																									
[-] UAV	UAV Prototype	Summary	12/Mar/2014	26/Sep/2015	564																									
	A0100	Project Start	12/Mar/2014	12/Mar/2014	0																									
	A0140	Project Completion	26/Sep/2015	26/Sep/2015	0																									
[-] UAV.01 PRELIM	Preliminaries	Summary	12/Mar/2014	13/May/2014	63																									
	A0110	Prepare contract	12/Mar/2014	19/Mar/2014	8																									
	A0120	Agree contract	21/Mar/2014	03/Apr/2014	10																									
	A0130	Locate subcontractors	04/Apr/2014	13/May/2014	40																									
[-] UAV.02 DESIGN	Design	Summary	14/May/2014	24/Nov/2014	195																									
	D0110	Design additional guidance systems	11/Aug/2014	09/Sep/2014	30																									
	A0200	Overall design template	14/May/2014	26/Jun/2014	44																									
	D0130	Finalize Design	10/Oct/2014	24/Nov/2014	46																									
	D0100	Design GPS system	27/Jun/2014	10/Aug/2014	45																									
	D0120	Design specialist camera lens	10/Sep/2014	09/Oct/2014	30																									
[-] UAV.03 FAB	Fabrication	Summary	25/Nov/2014	23/Jan/2015	60																									
	F0100	Fabricate camera lens frame	25/Nov/2014	23/Jan/2015	60																									
	F0120	Fabricate fuel systems	25/Nov/2014	14/Dec/2014	20																									
	F0110	Fabricate engine subframe	25/Nov/2014	13/Jan/2015	50																									
[-] UAV.04 CONST	Construction	Summary	15/Dec/2014	23/Feb/2015	71																									
	C0110	Assemble engine components	24/Jan/2015	15/Feb/2015	23																									
	C0100	Assemble fuel system	15/Dec/2014	24/Dec/2014	10																									
	C0120	Connect fuel and engine systems	16/Feb/2015	23/Feb/2015	8																									
[-] UAV.05 TEST	Phase 1 Testing	Summary	24/Feb/2015	10/Jun/2015	107																									
	T0110	Test lens	14/Mar/2015	27/Mar/2015	14																									
	T0100	Test fuel and engine systems	24/Feb/2015	13/Mar/2015	18																									
	T0140	Test specialist camera	04/May/2015	10/Jun/2015	38																									
	T0120	Test guidance	28/Mar/2015	09/Apr/2015	13																									
	T0130	Test GPS systems	10/Apr/2015	03/May/2015	24																									
[-] UAV.06 RECONSTR	On-Site Reconstruction	Summary	11/Jun/2015	26/Sep/2015	108																									
	R0140	Reconstruct on site	29/Jun/2015	17/Aug/2015	50																									

- Schedule
- Costs
- Risk Register

Forecast the Future: Events



Forecast the Future: Outline for Exercise 1



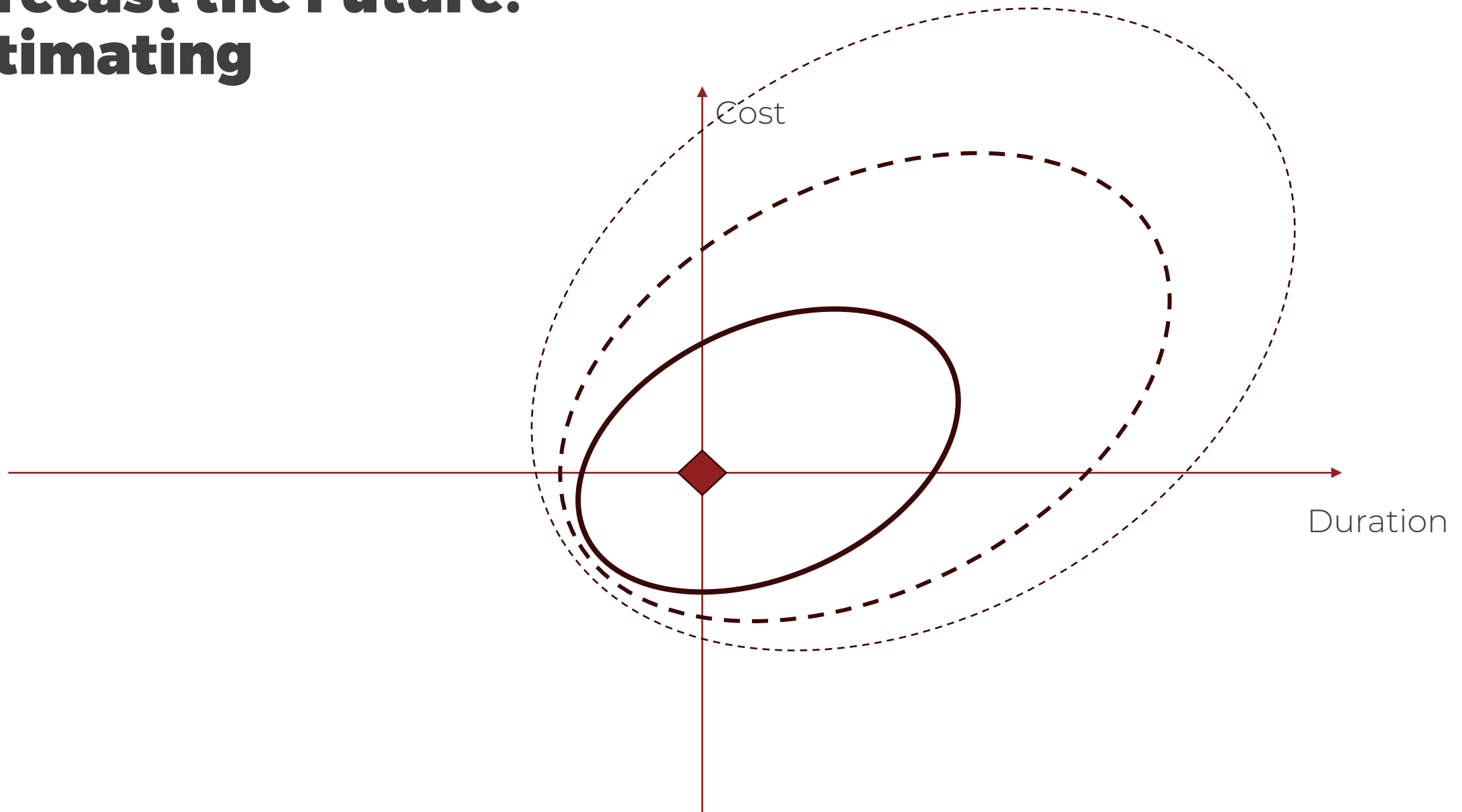
Exercise 1

You are planning a simple installation project that includes purchase of equipment, site preparation, installation, and testing.

Consider the risks that affect your project plan.

Activity:	Risk:

Forecast the Future: Estimating



Exercise 2

You are estimating a simple installation project.

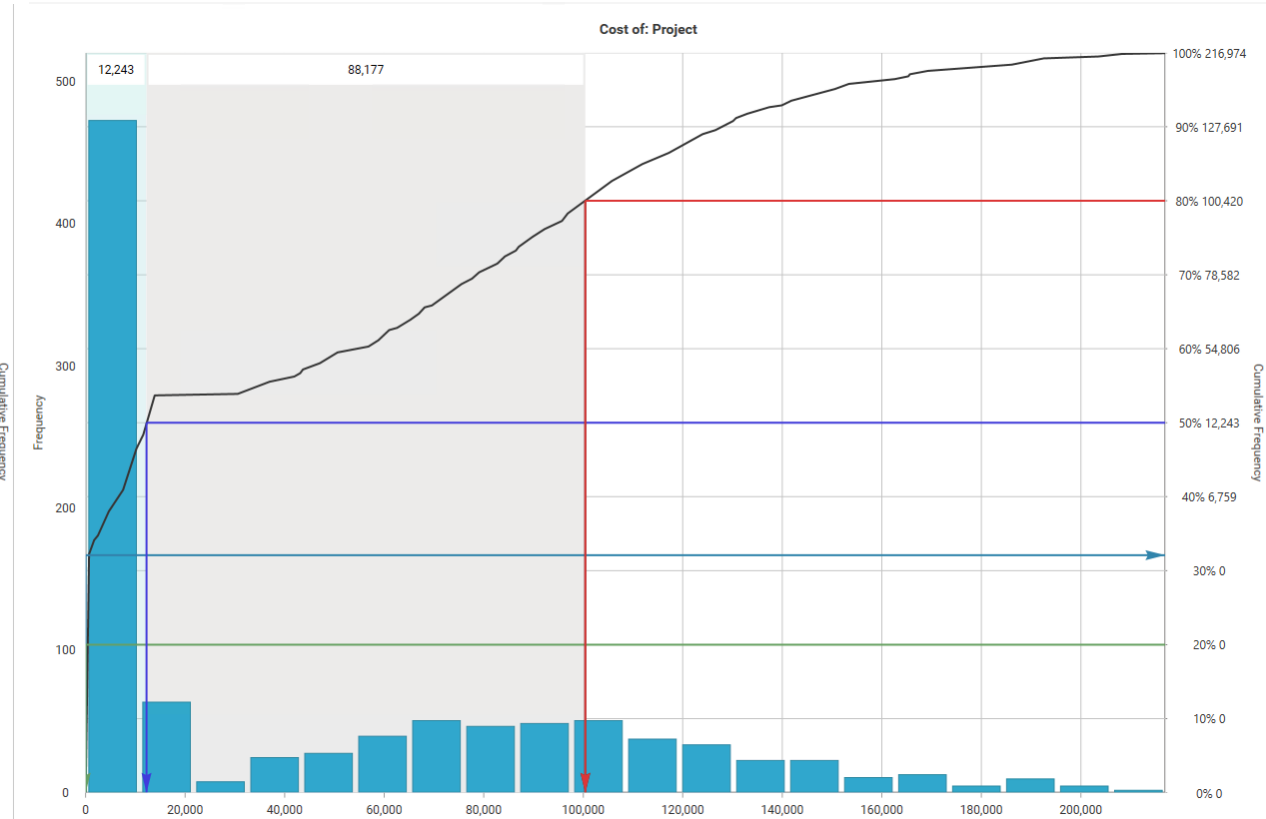
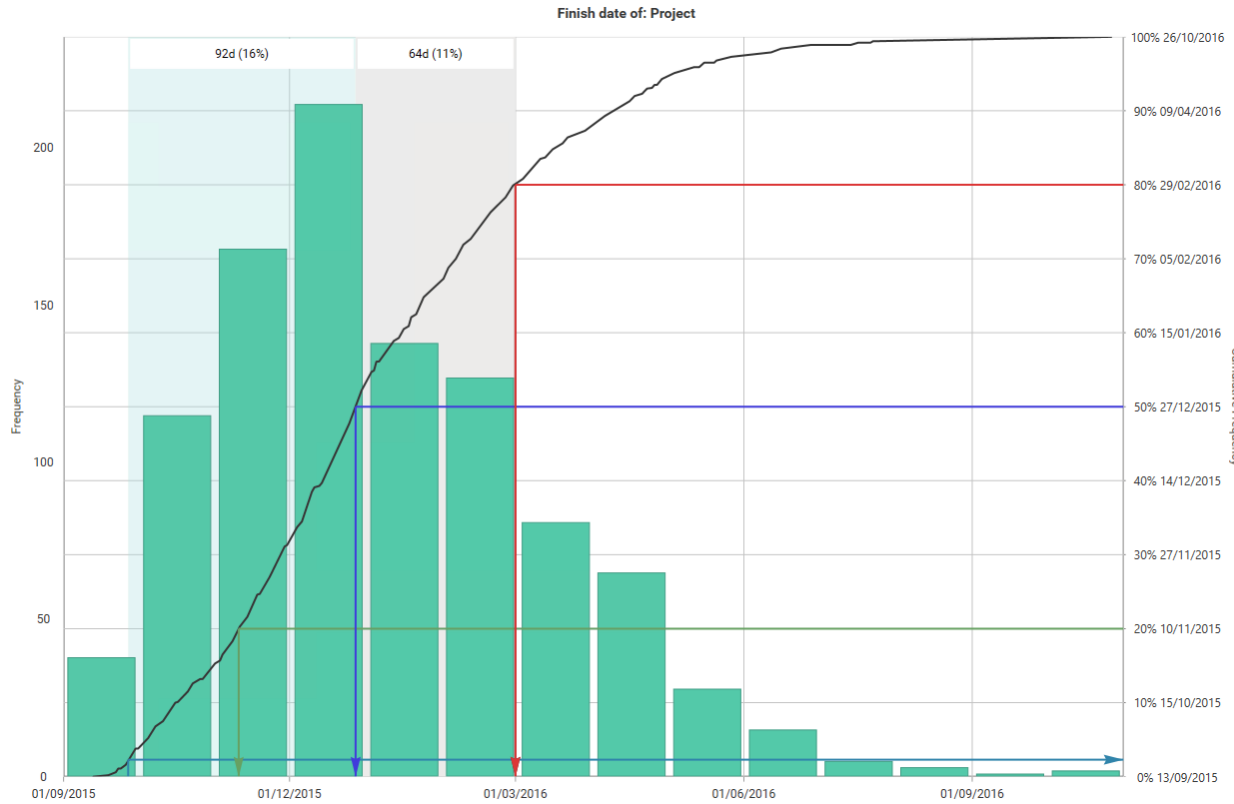
Consider the elements that affect Time and Cost estimates for your project.

Duration:	Time Dependent Costs:	Fixed Costs:

Examples



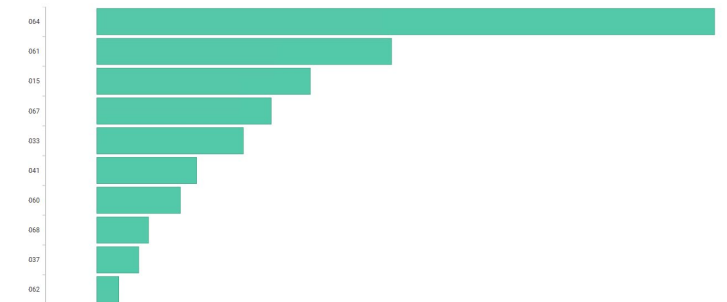
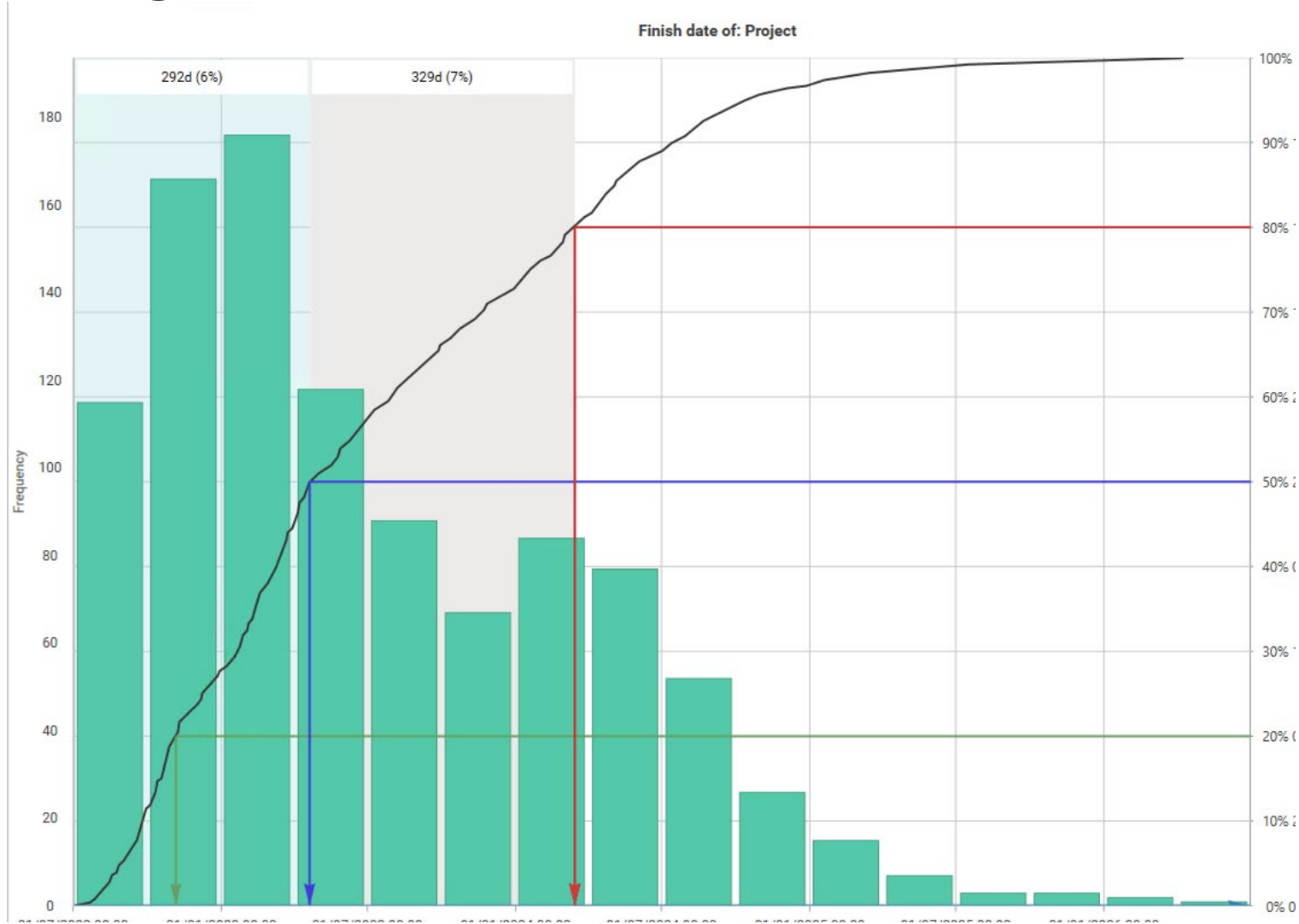
Forecast the Future: Project Time and Cost



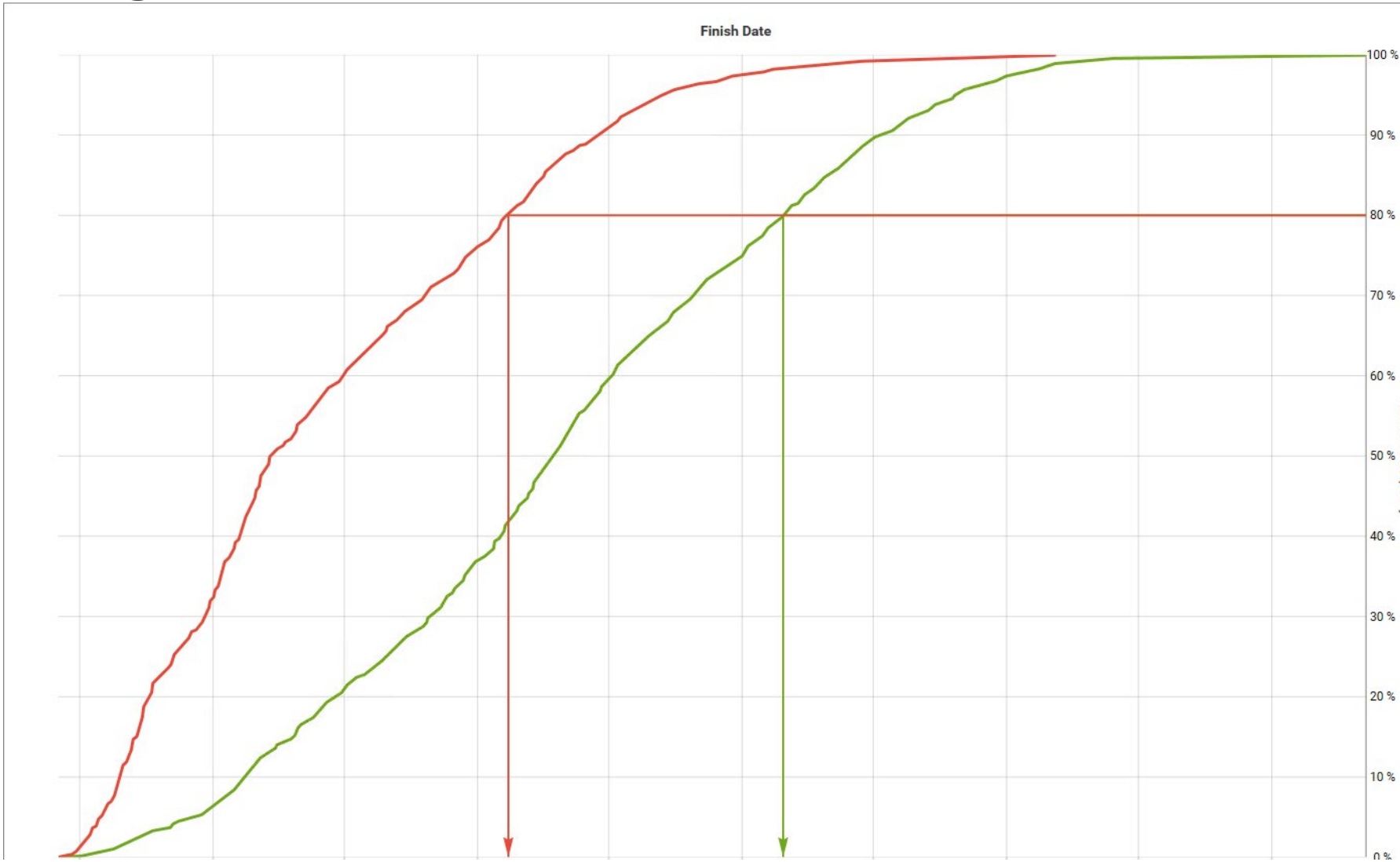
Forecast the Future: Project Time and Cost



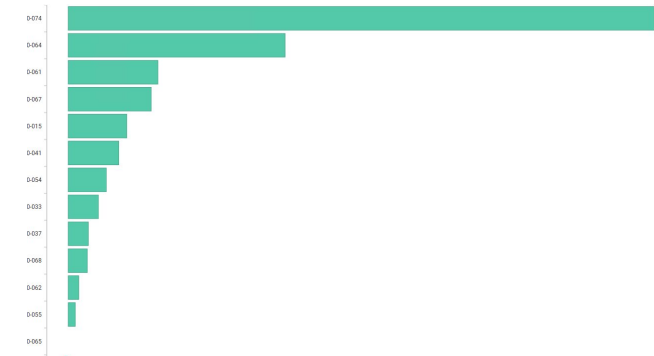
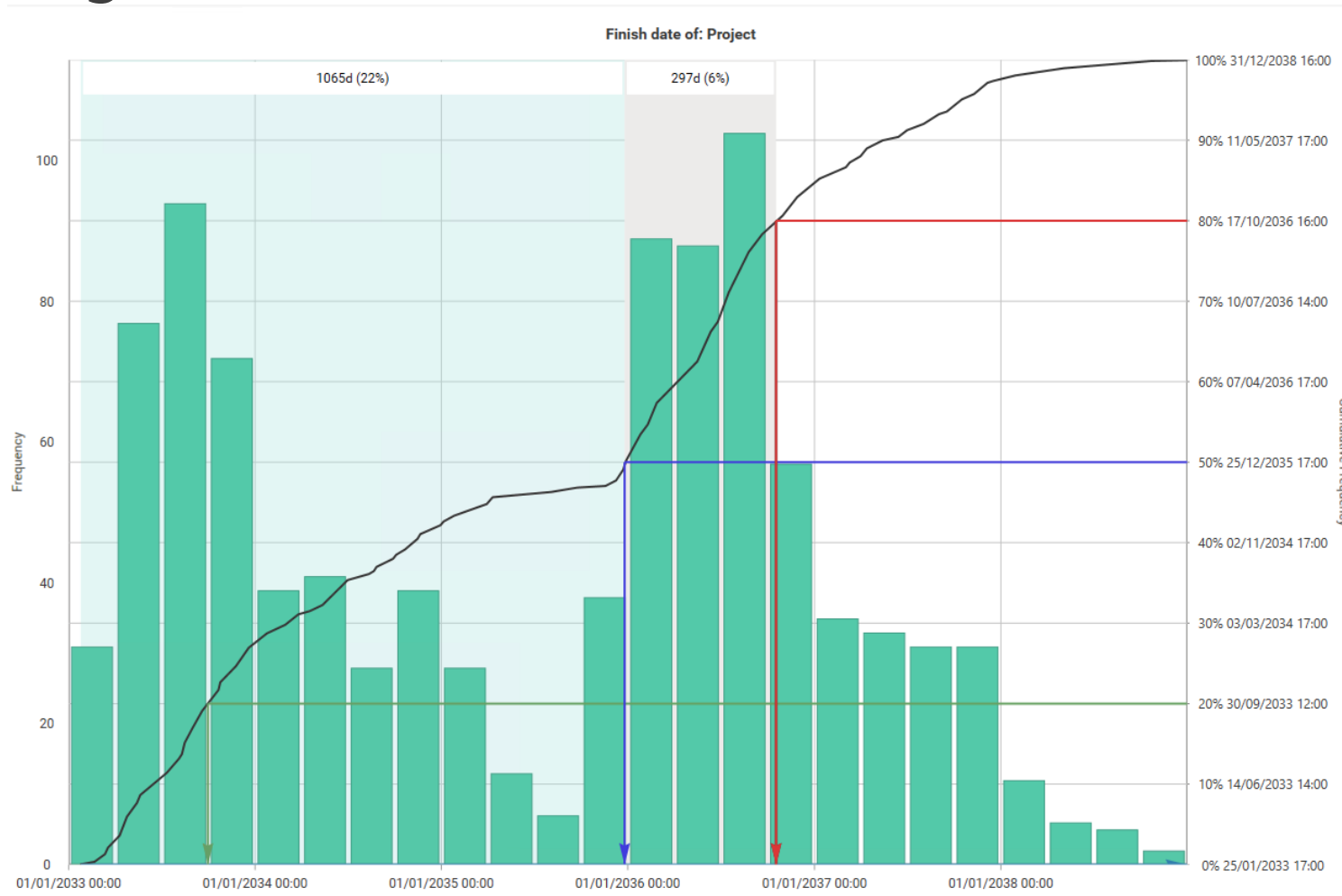
Forecast the Future: Project Time



Forecast the Future: Project Time



Forecast the Future: Project Time



Q&A

