

Integrating cost and schedule modelling: experience from a complex project

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June 2013

Introduction

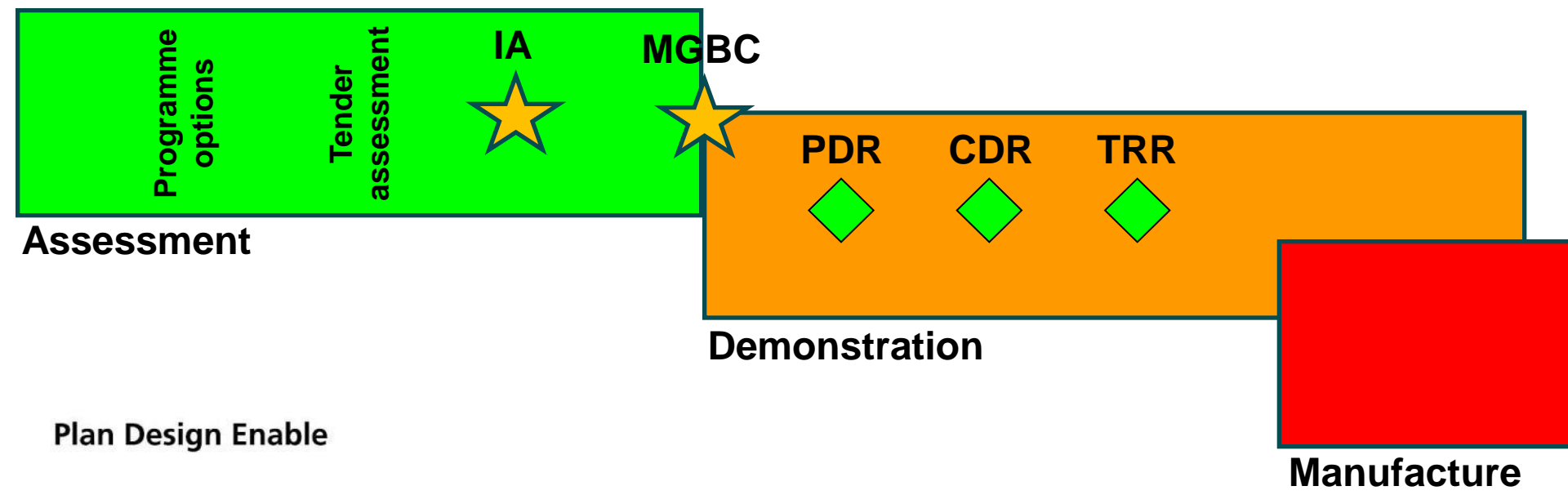
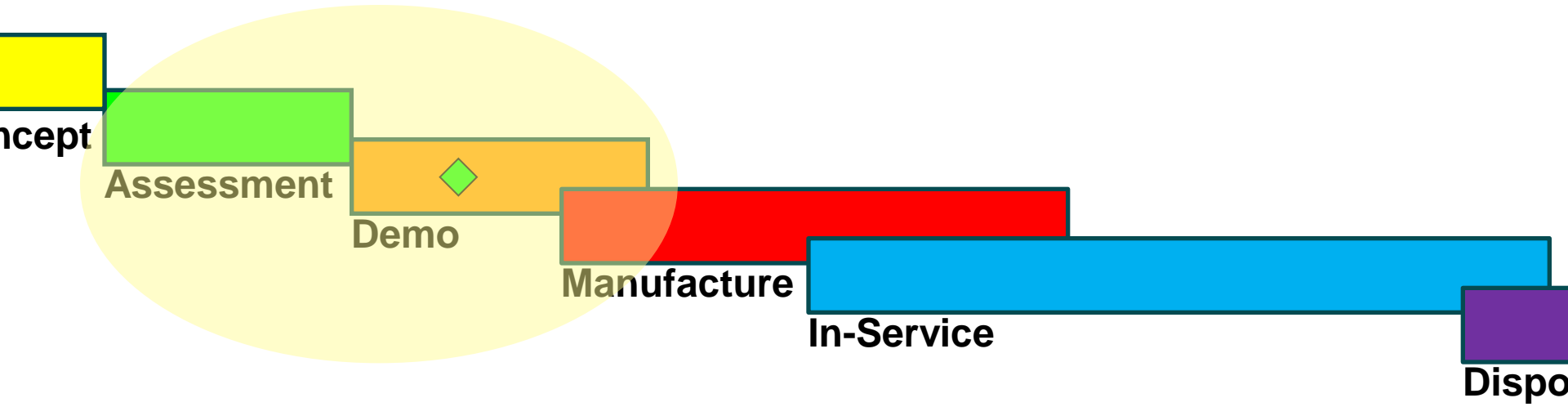
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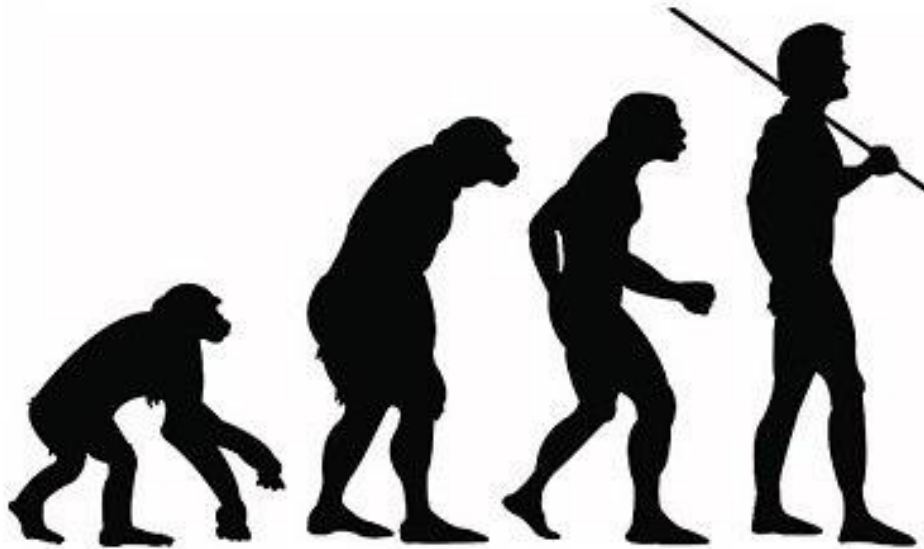
Timeline

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What happens in Demo?

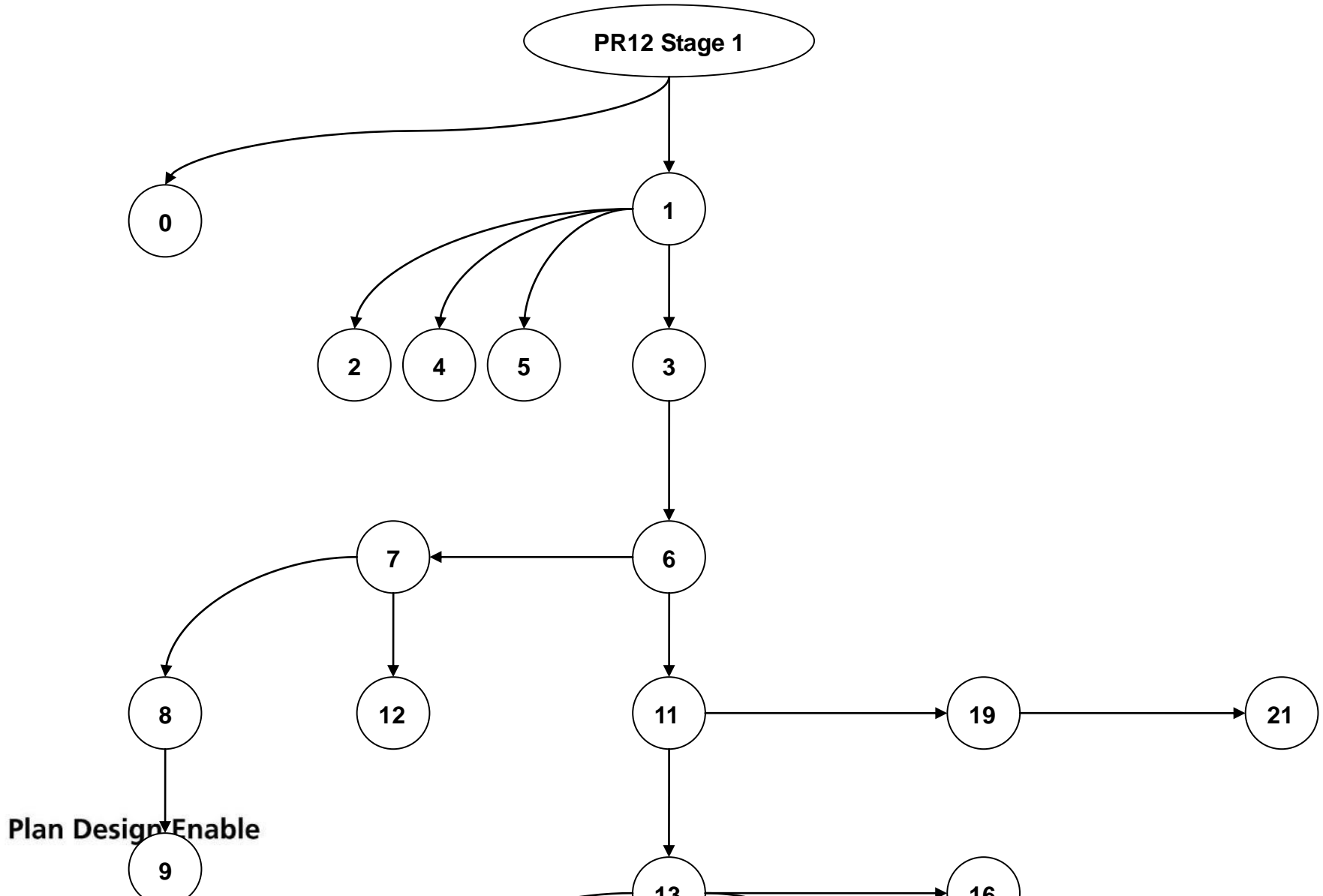
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Planning Rounds / ABC

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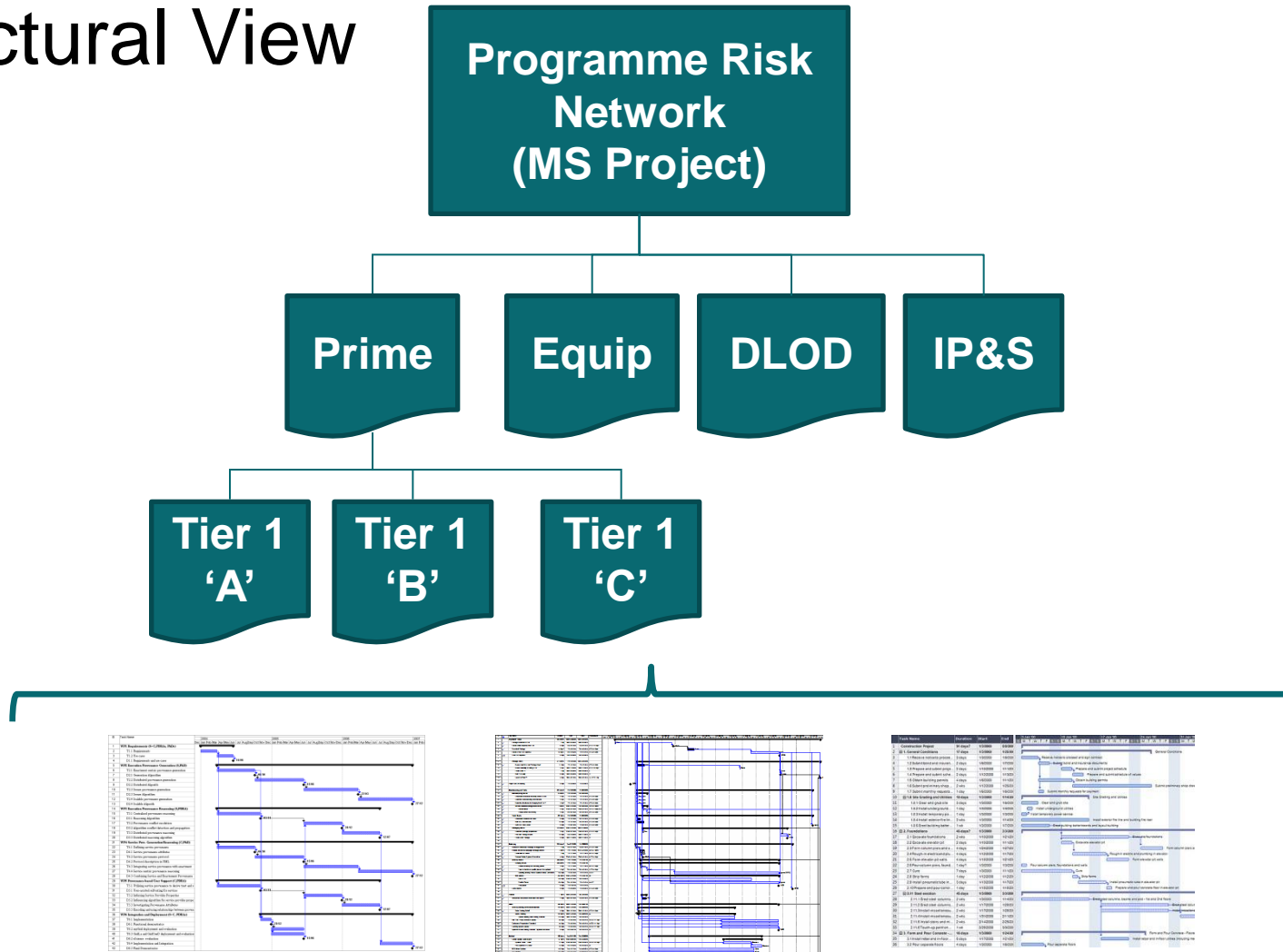
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SCHEDULE MODELLING

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Schedule Modelling

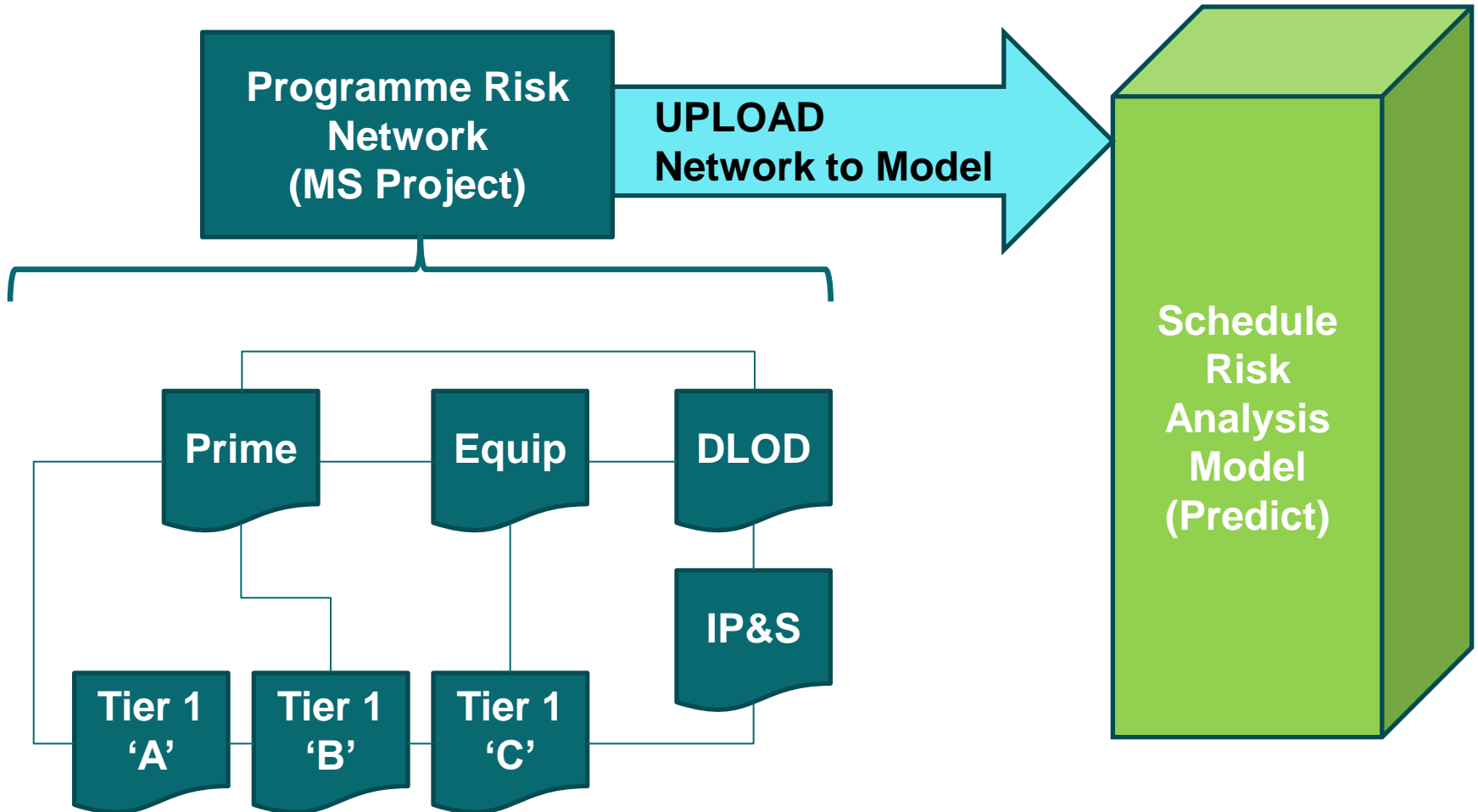
Structural View



Schedule Modelling

Logic View

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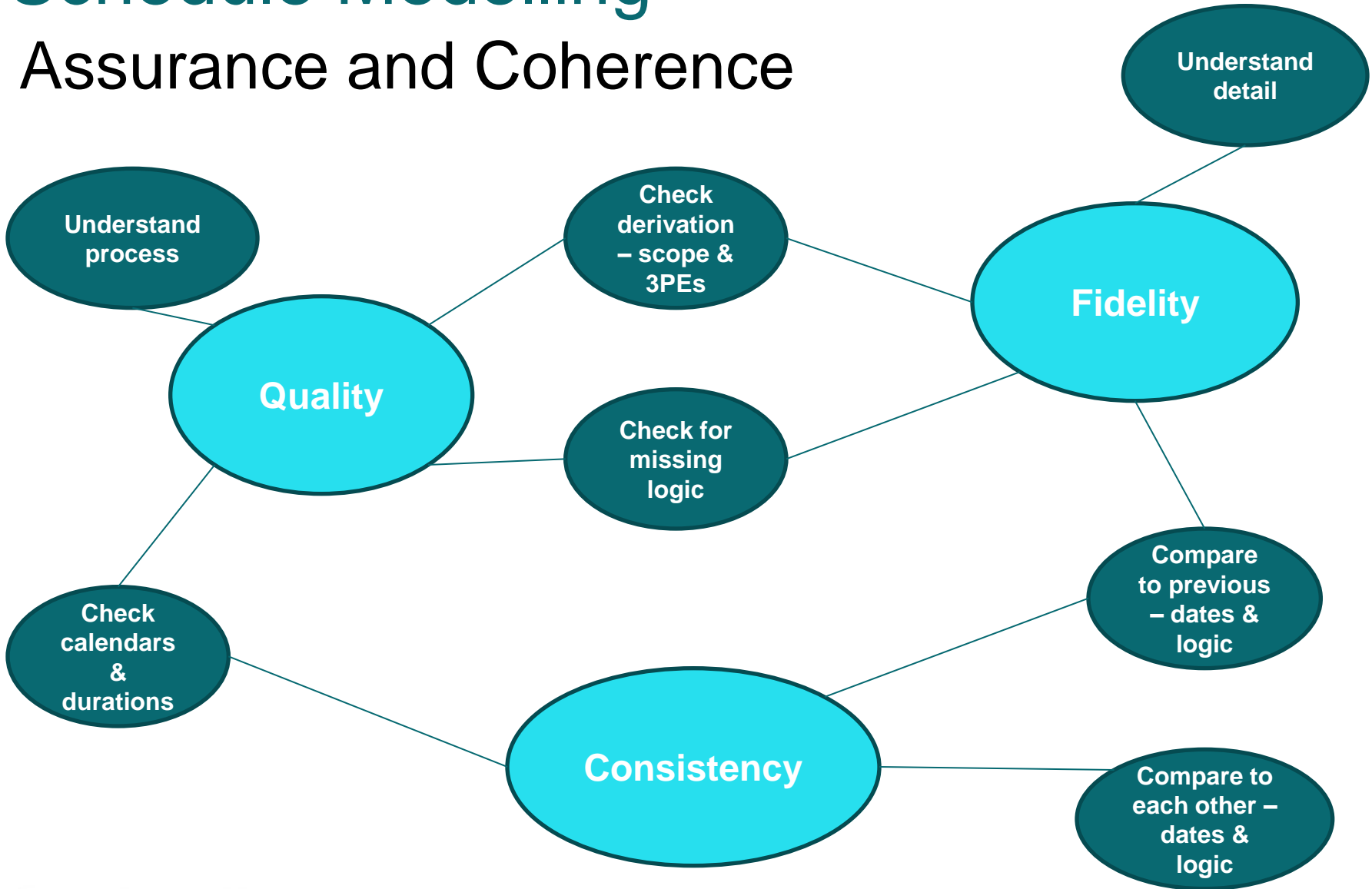


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Schedule Modelling

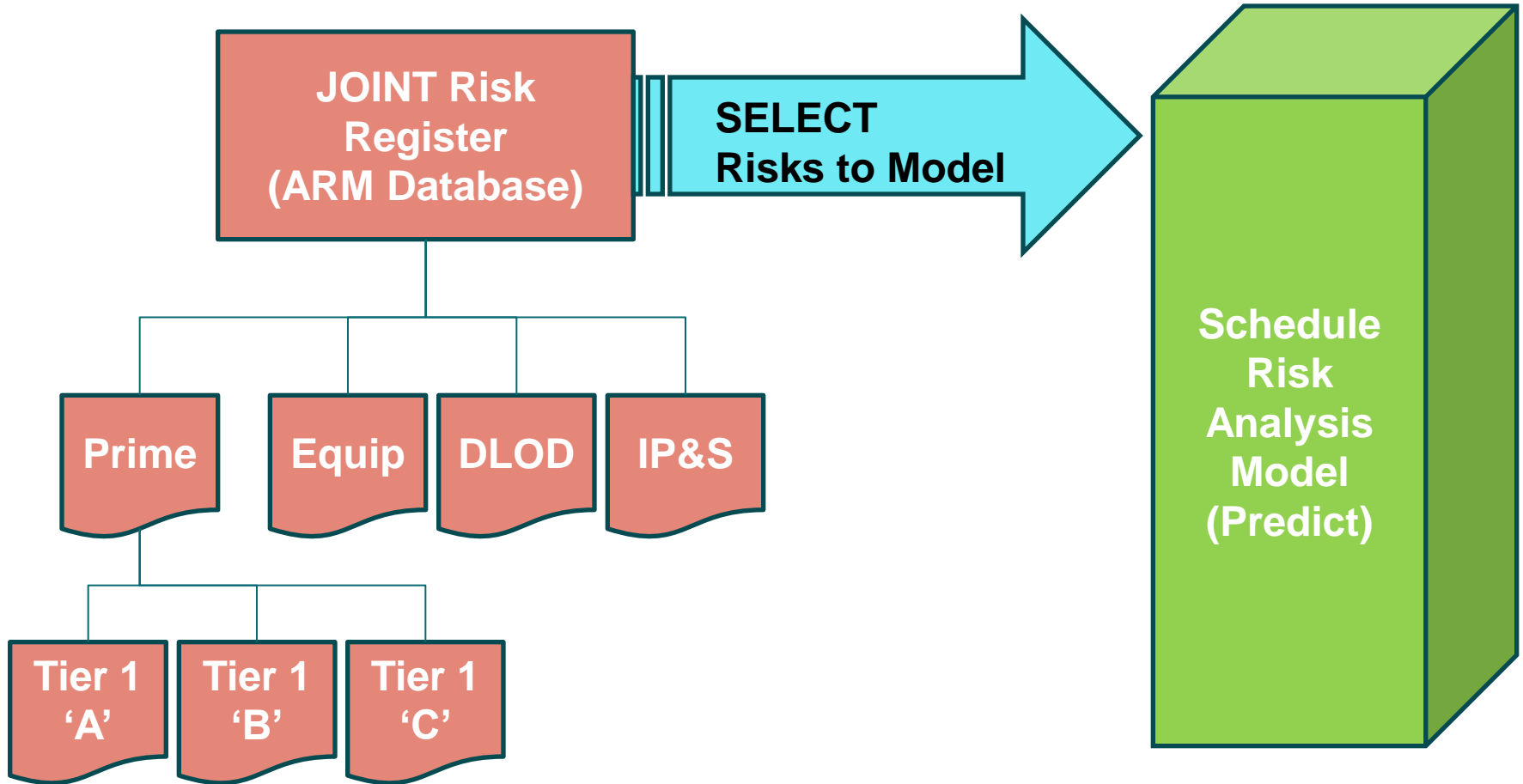
Assurance and Coherence

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Schedule Modelling Risk

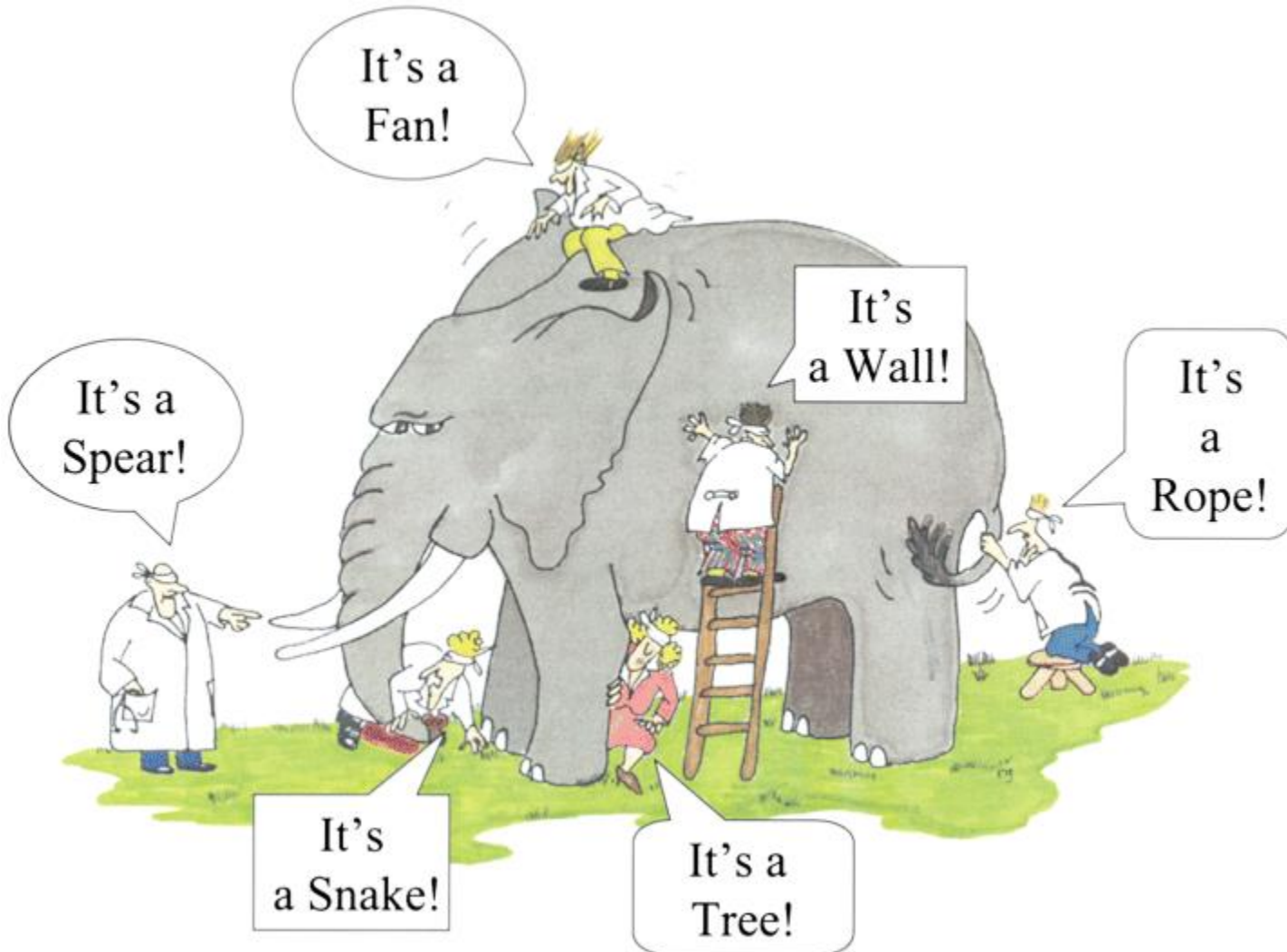
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Schedule Modelling

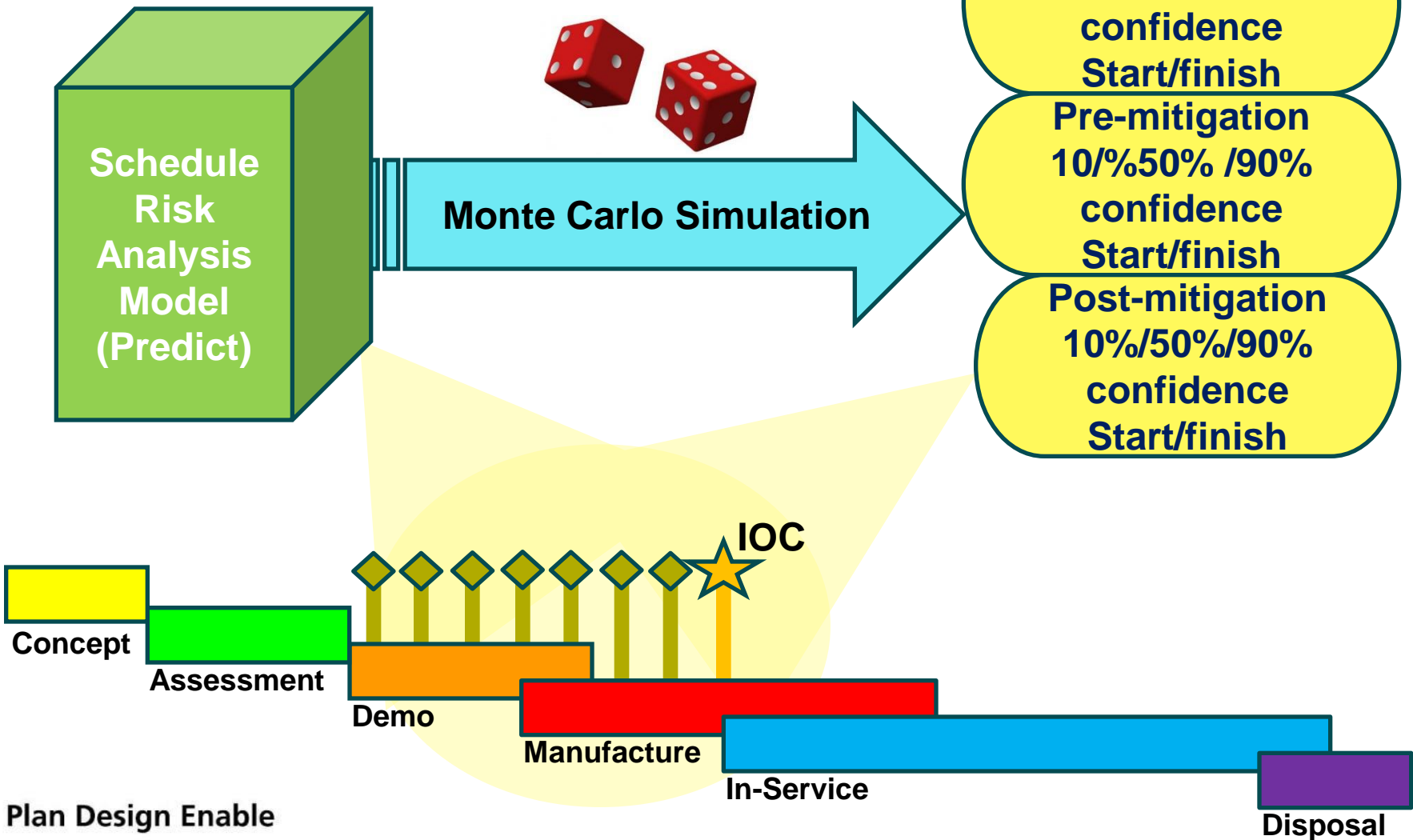
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Schedule Modelling

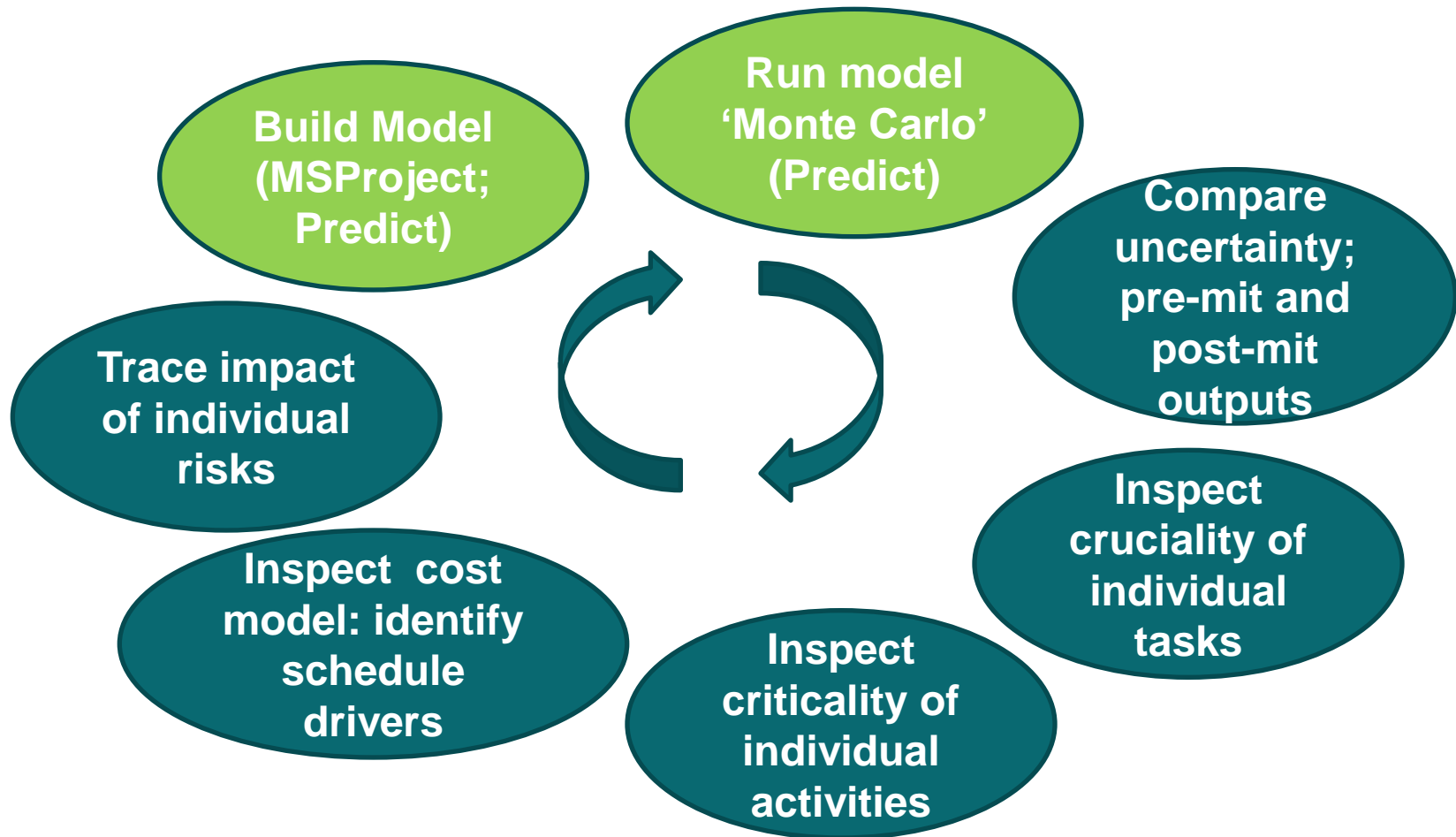
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What we get



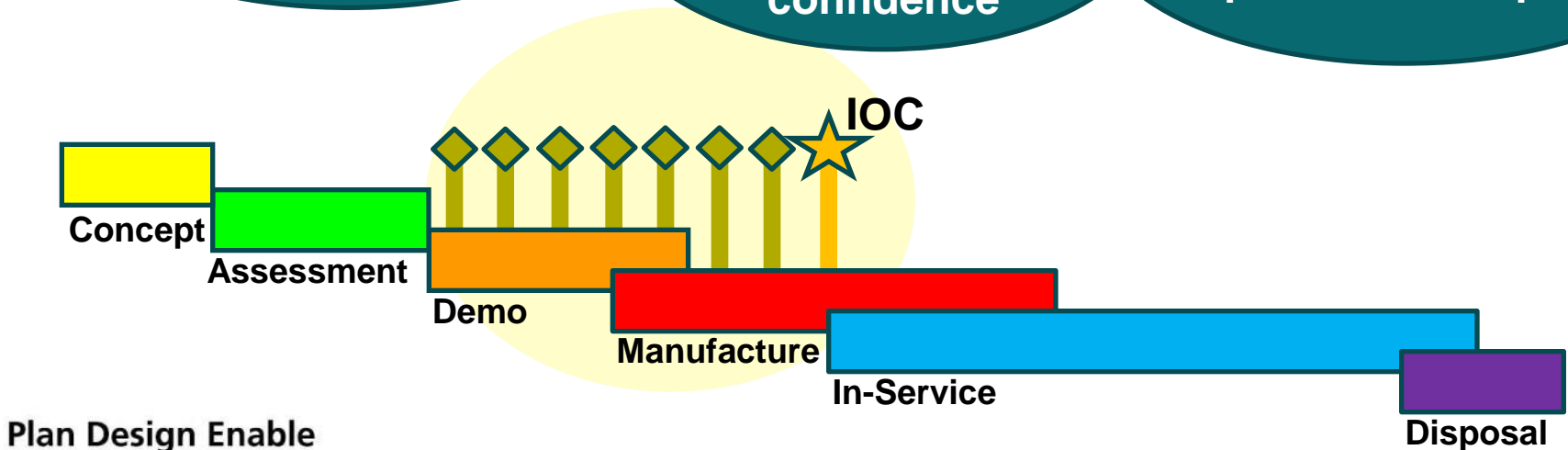
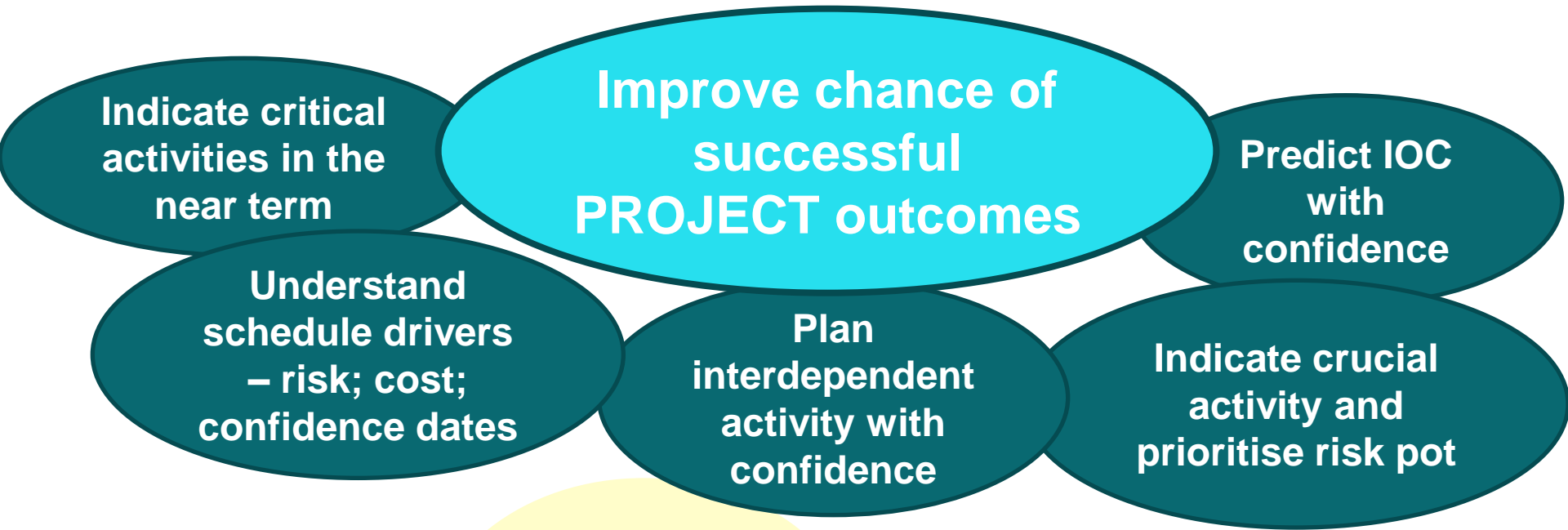
Schedule Modelling

Refining the model



Schedule Modelling

What we use it to do





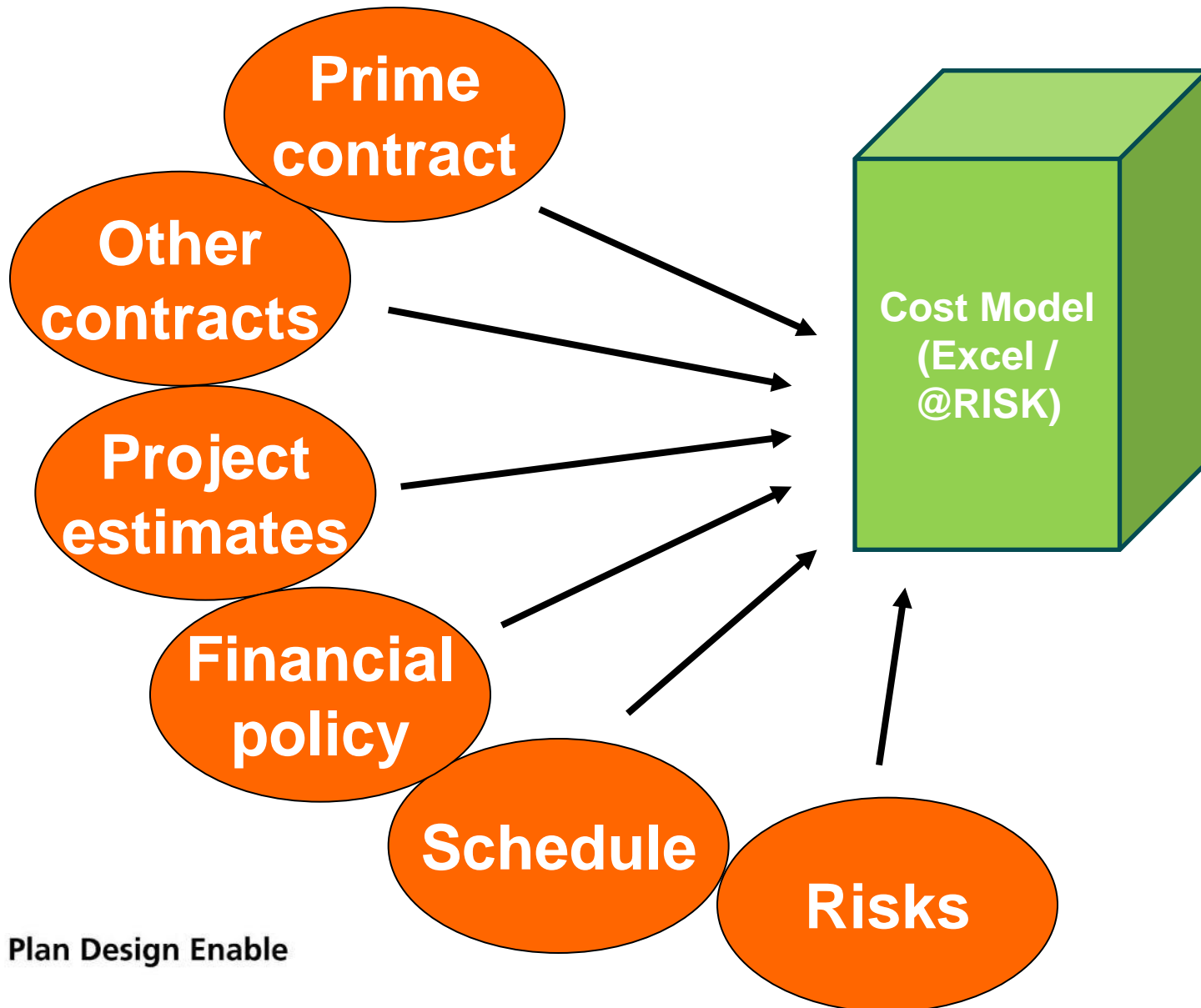
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COST MODELLING

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Cost Modelling

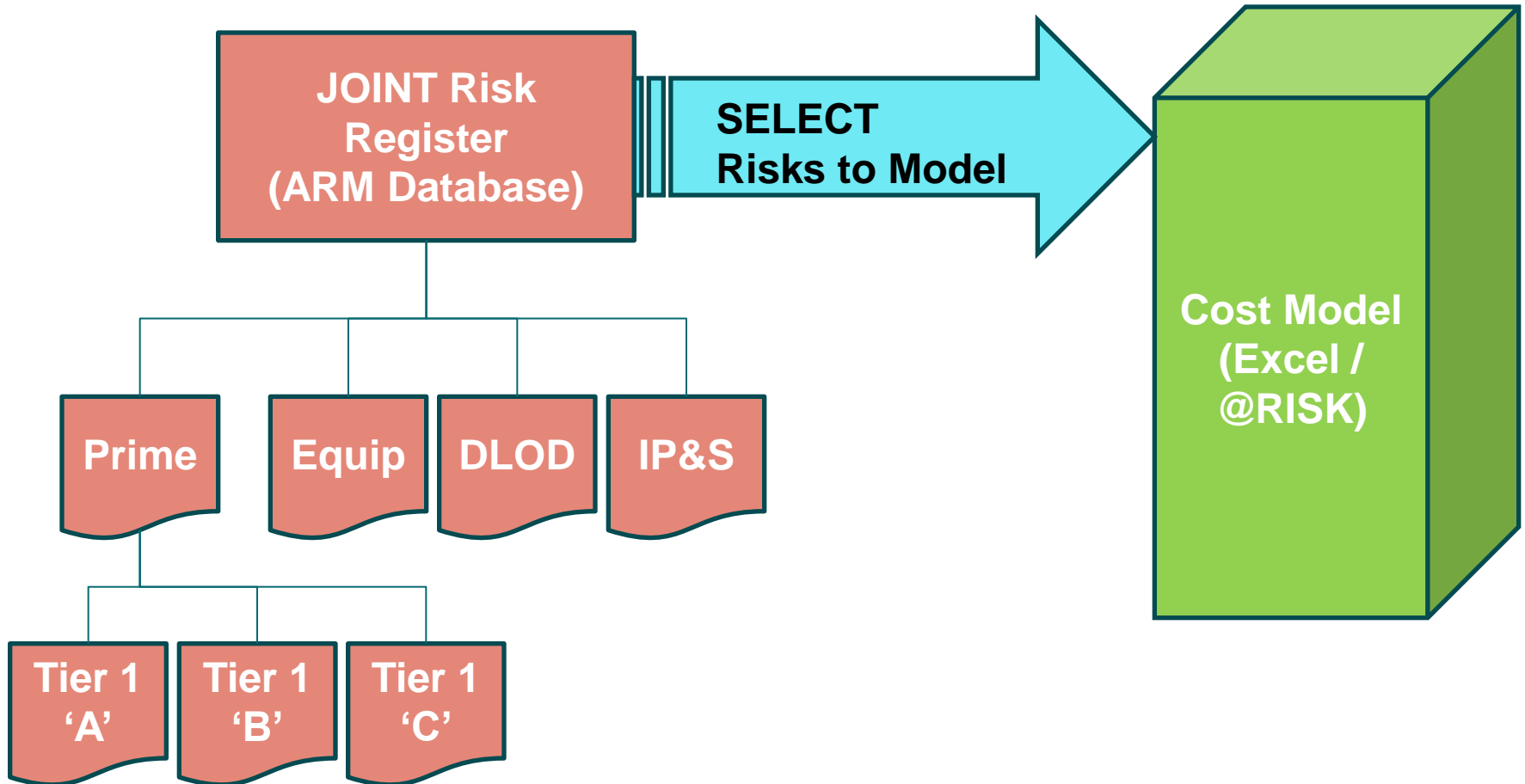
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Cost Modelling

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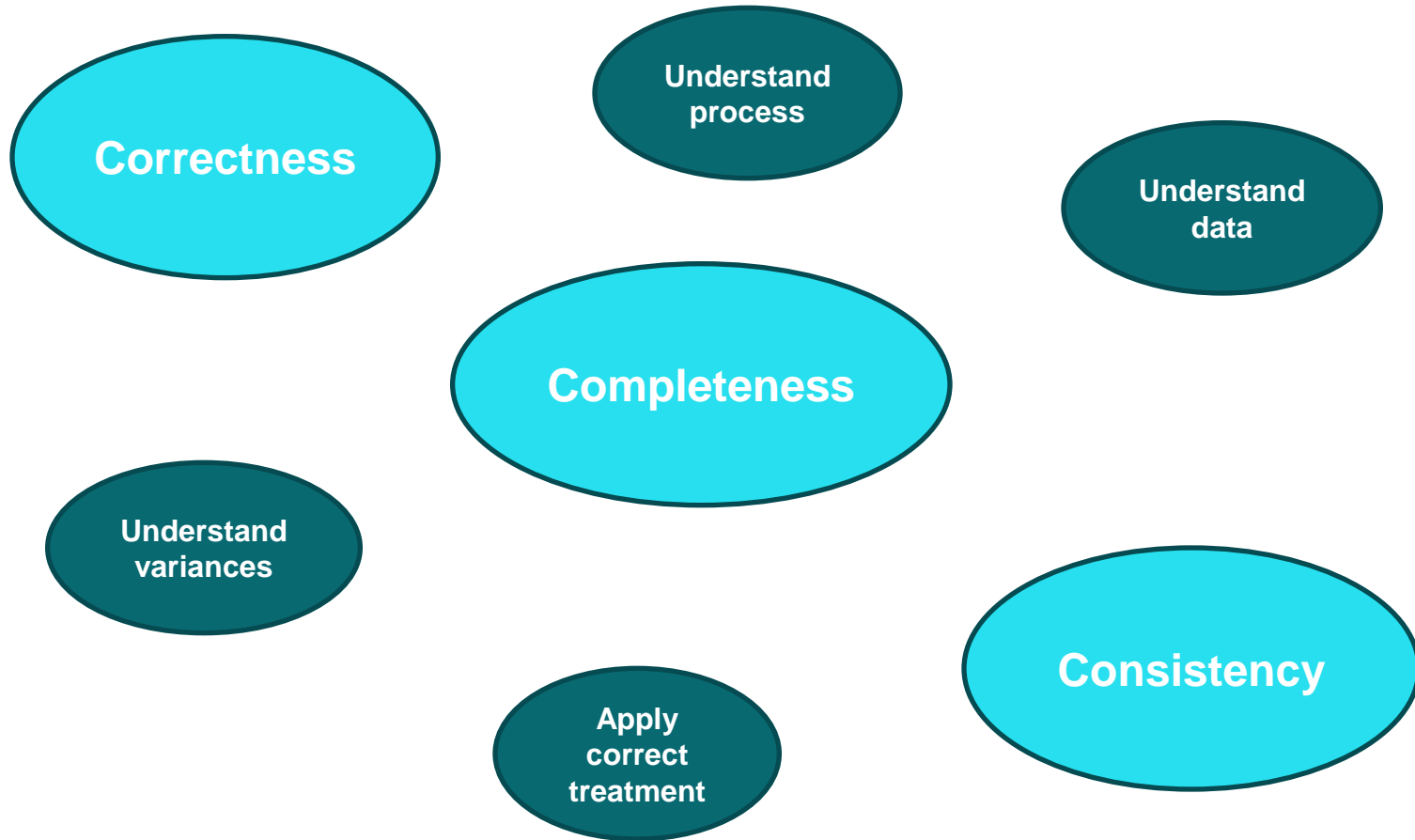
Risk



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Cost Modelling

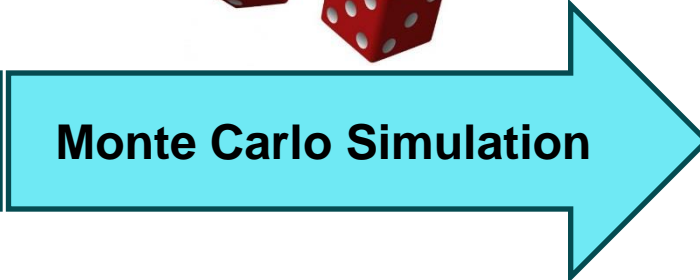
Assurance and Coherence



Cost Modelling

What we get

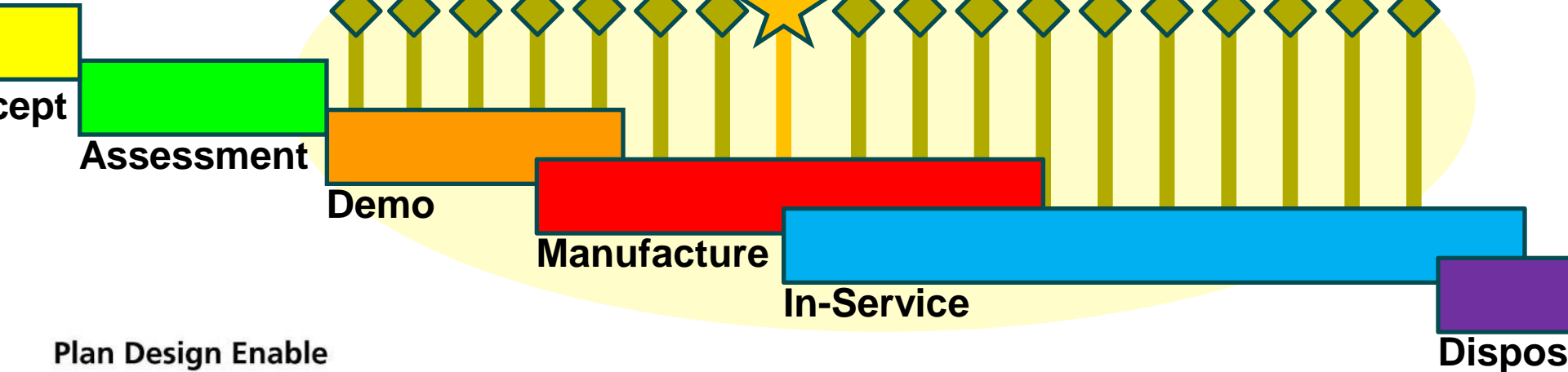
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10%/50%/90%
Whole life cost

50% Yearly
affordability

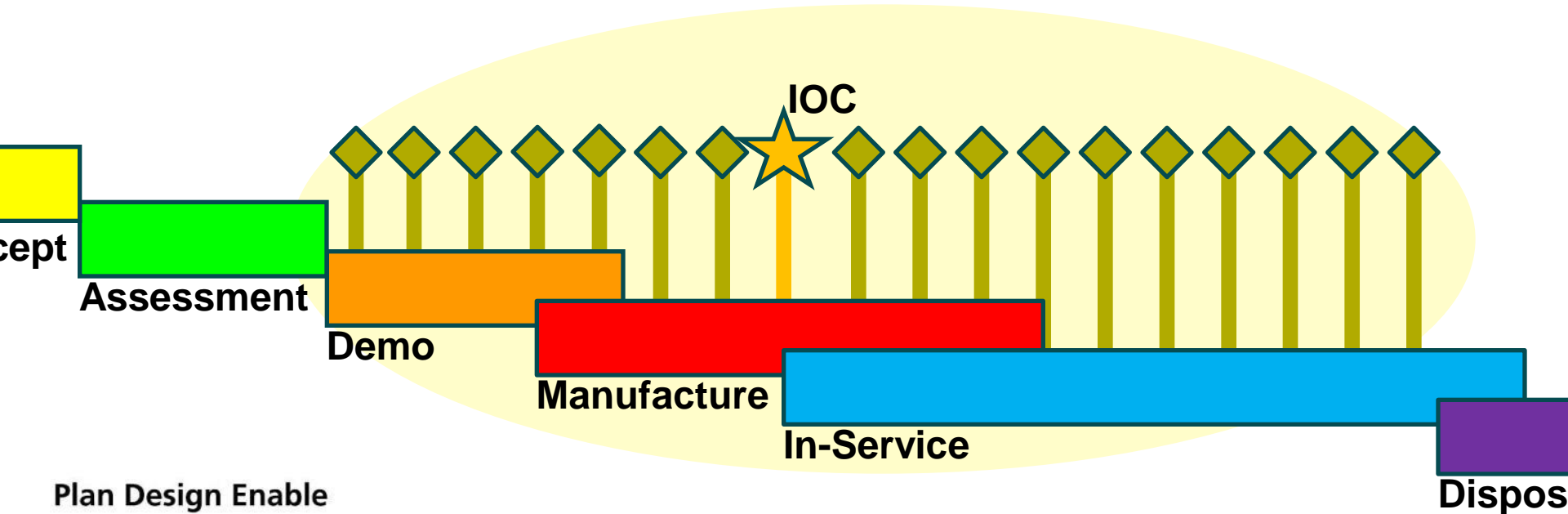
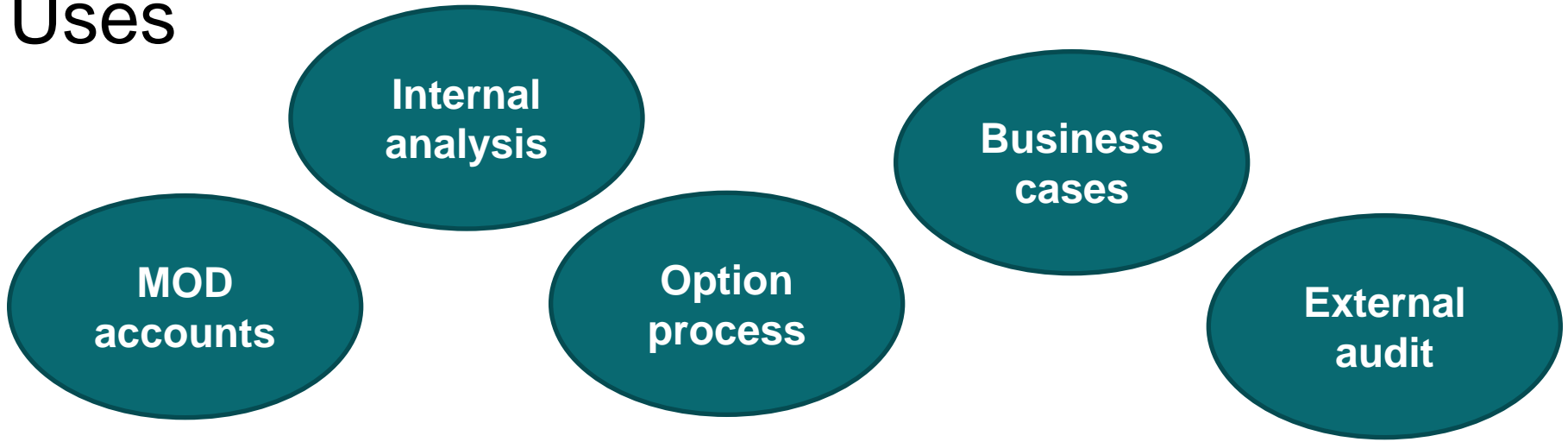
10 or 30 year
planning windows



Cost Modelling

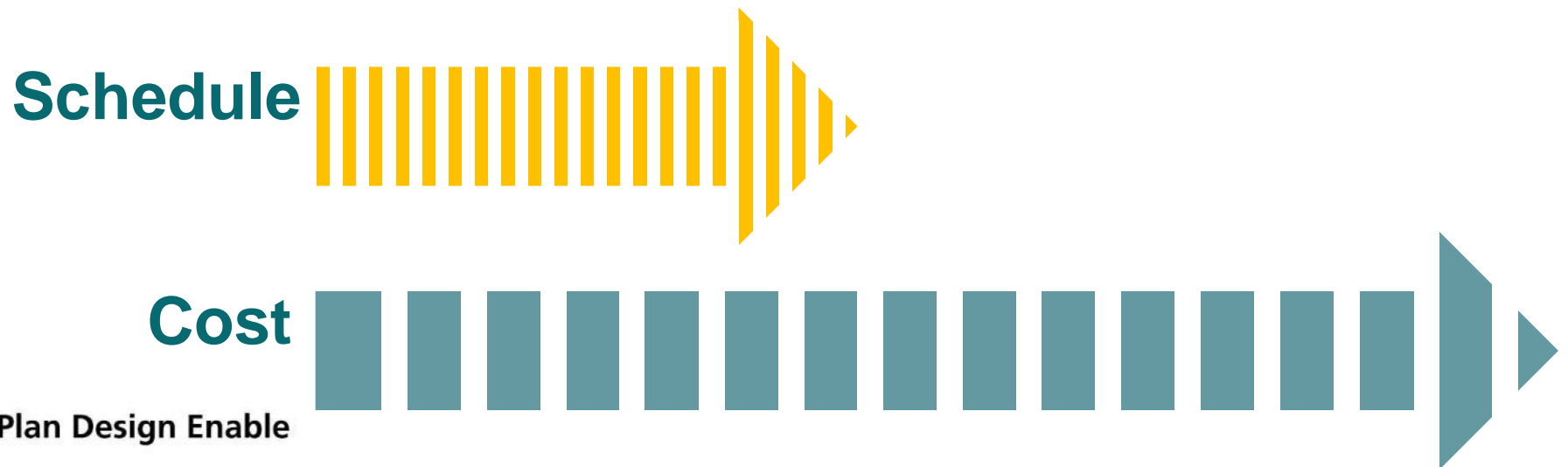
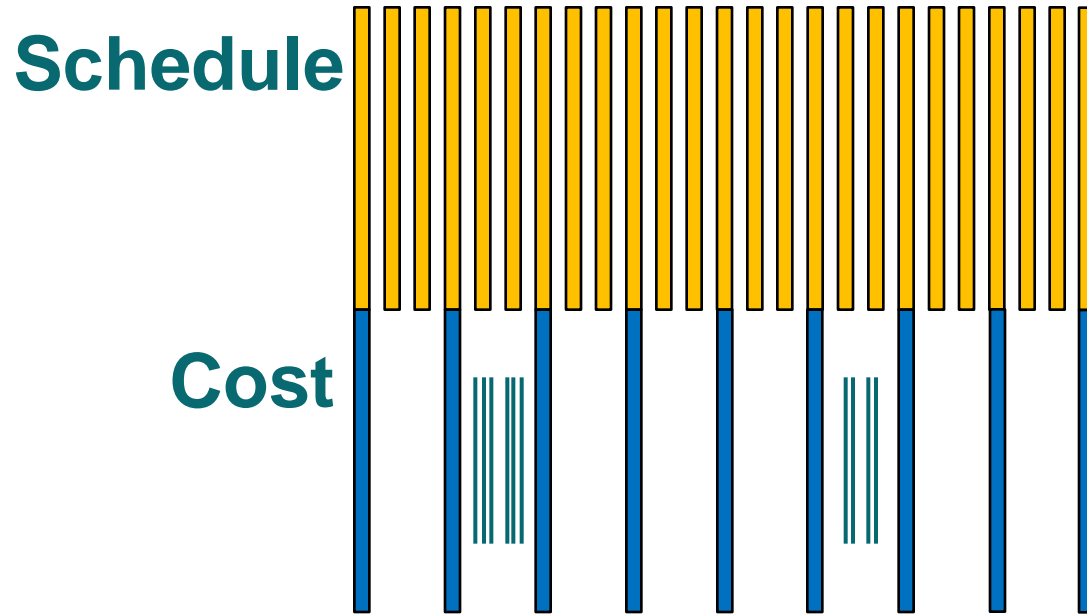
Uses

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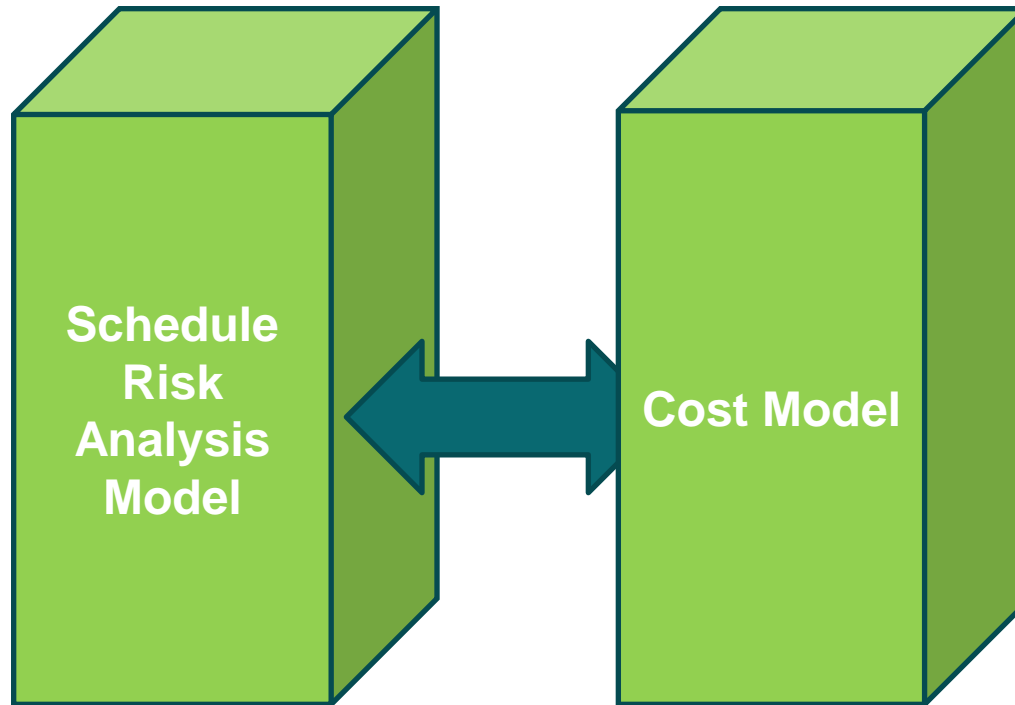
Cost Modelling - Timescales

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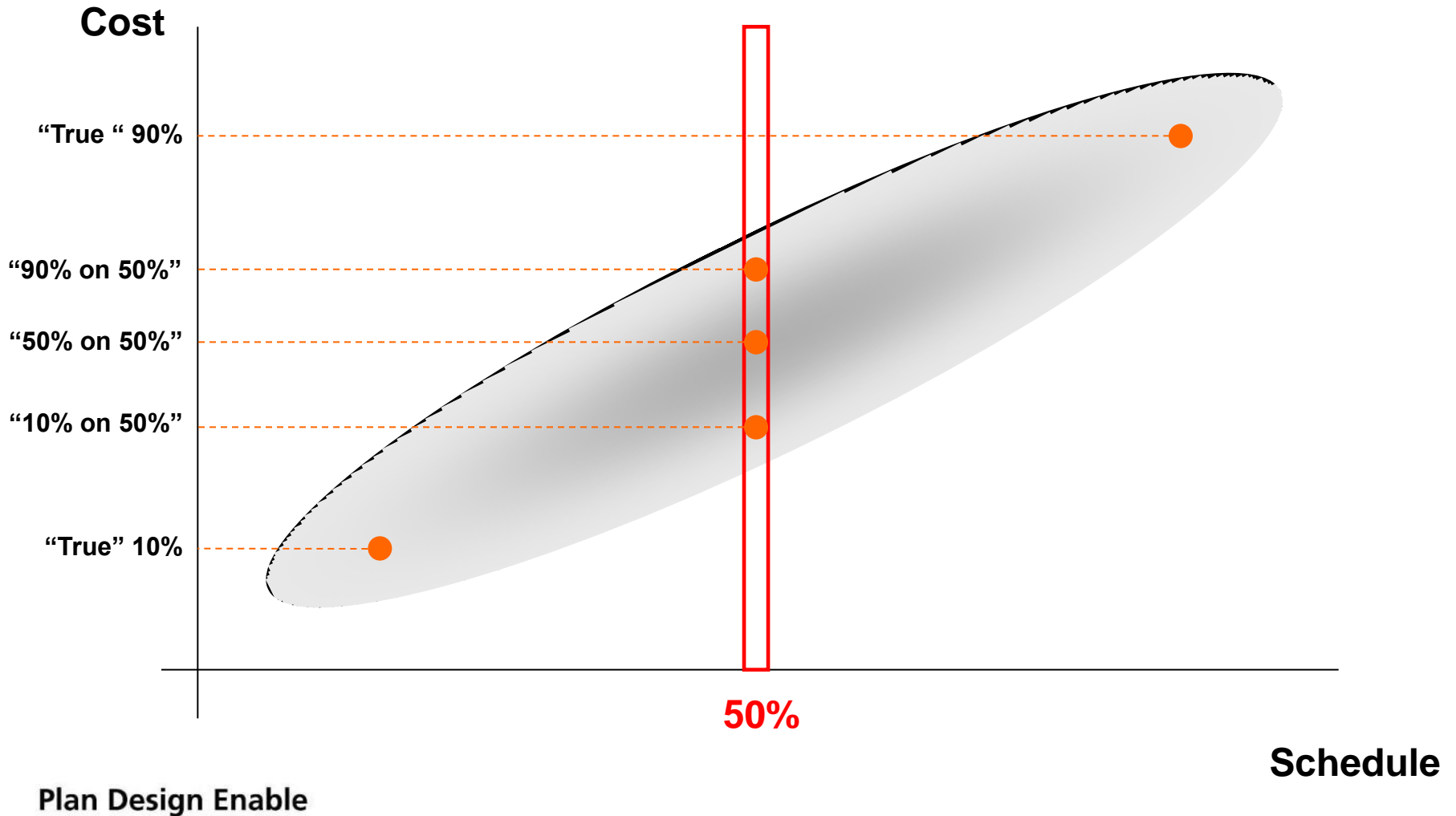
Cost Modelling

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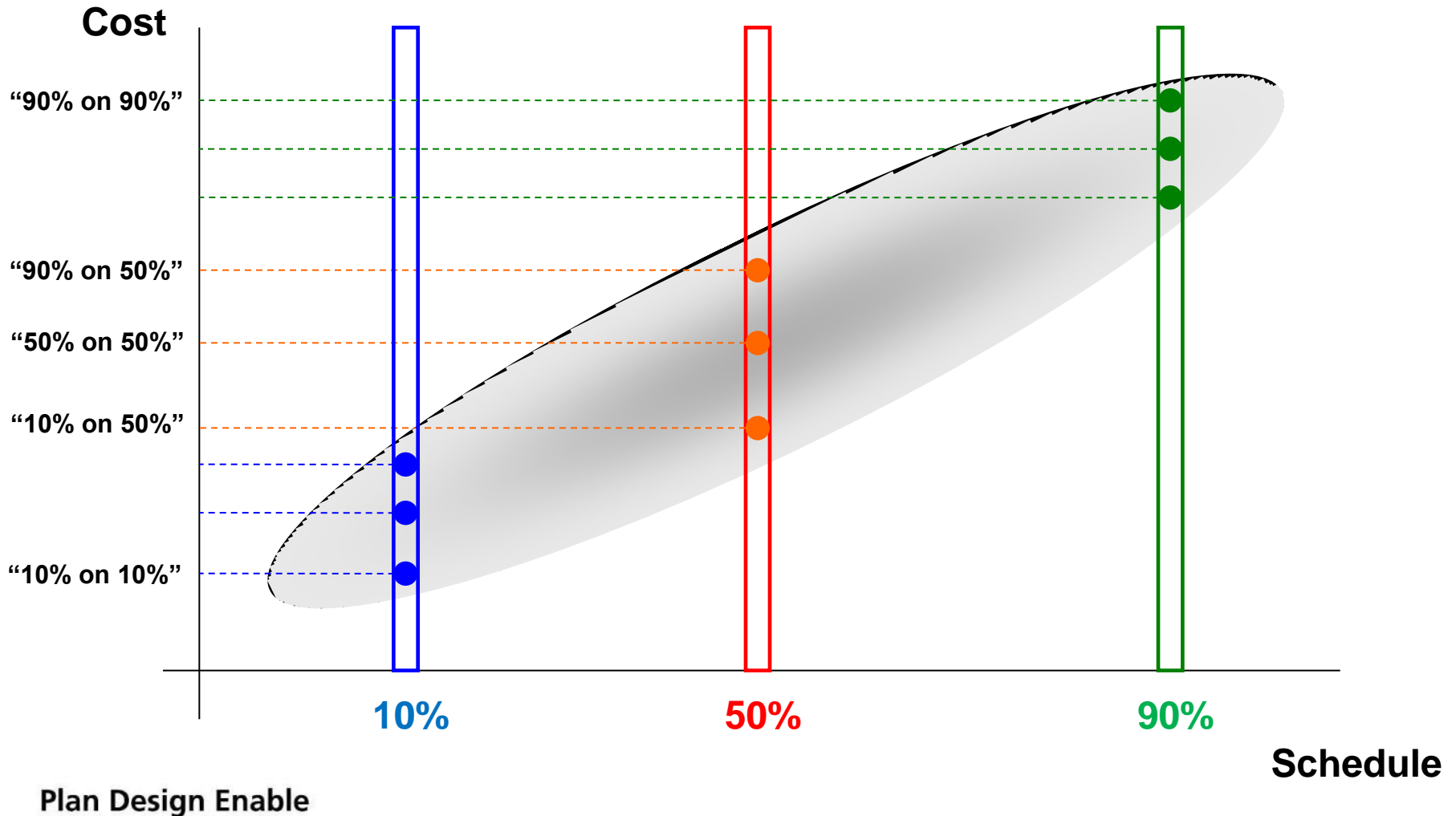
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Cost Modelling



Cost Modelling

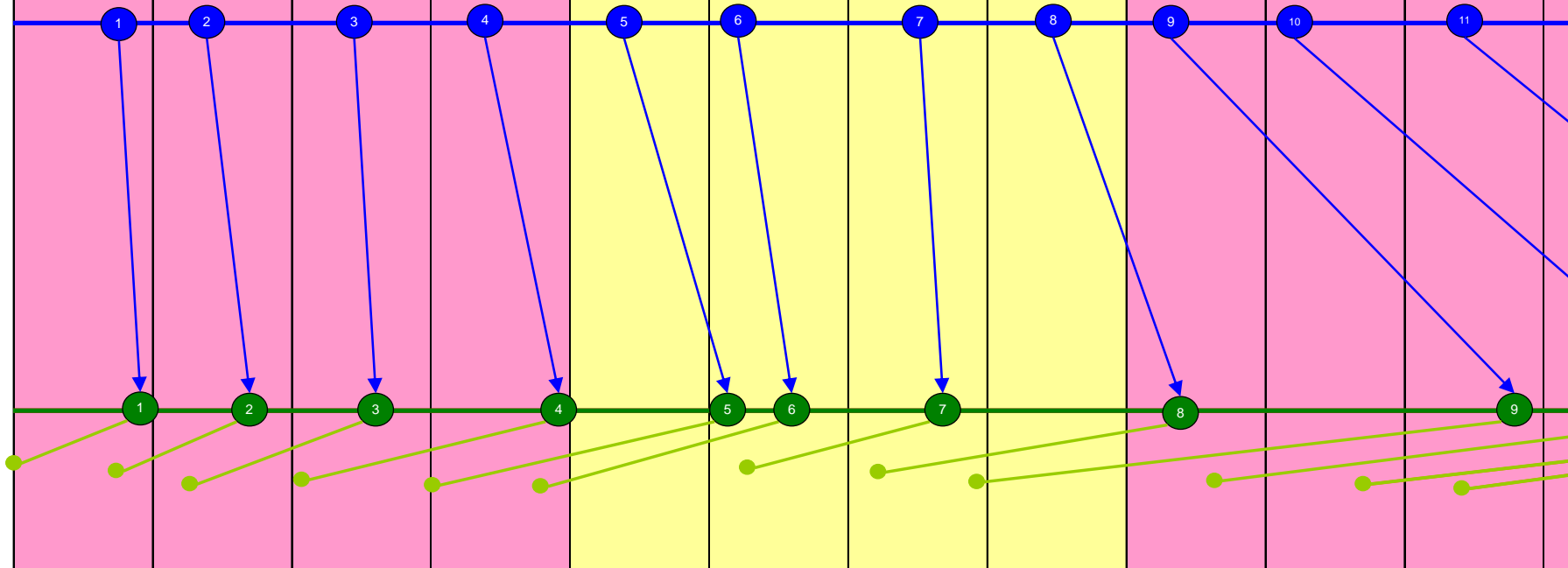
Multi-scenario modelling



Combining Cost and Schedule



	Year 1				Year 2				Year 3			
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
	Stage Payment 1	Stage Payment 2	Stage Payment 3	Stage Payment 4	Stage Payment 5	Stage Payment 6	Stage Payment 7	Stage Payment 8	Stage Payment 9	Stage Payment 10	Stage Payment 11	
Line Item 1	614,550	178,274	834,330	594,370	291,260	0	958,092	18,797	135,488	156,973	0	
Line Item 2	107,503	315,839	816,022	824,415	262,865	386,085	711,236	786,503	656,759	847,003	0	
Line Item 3	259,502	796,990	434,137	50,376	187,230	117,966	705,047	808,804	0	957,351	954,241	
Line Item 4	70,785	77,149	0	834,939	239,423	449,114	878,147	685,773	0	168,855	611,795	
Line Item 5	477,825	319,230	910,698	268,325	131,917	735,534	0	448,095	312,267	0	0	
Line Item 6	476,442	675,301	713,824	285,827	99,896	0	0	706,617	0	458,748	0	
Line Item 7	0	0	927,403	0	0	0	358,871	0	36,442	0	914,242	
Line Item 8	0	0	0	0	0	0	493,217	0	783,884	0	0	
Line Item 9	0	0	0	0	442,743	0	0	0	0	0	0	
Line Item 10	0	0	0	0	0	0	0	0	0	0	0	
Line Item 11	0	0	0	0	92,088	0	0	0	0	0	0	
Line Item 12	0	0	0	0	0	0	0	0	0	0	0	
Total	2,006,609	2,362,782	4,636,414	2,858,253	1,747,422	1,688,699	4,104,611	3,454,589	1,924,839	2,588,930	2,480,278	

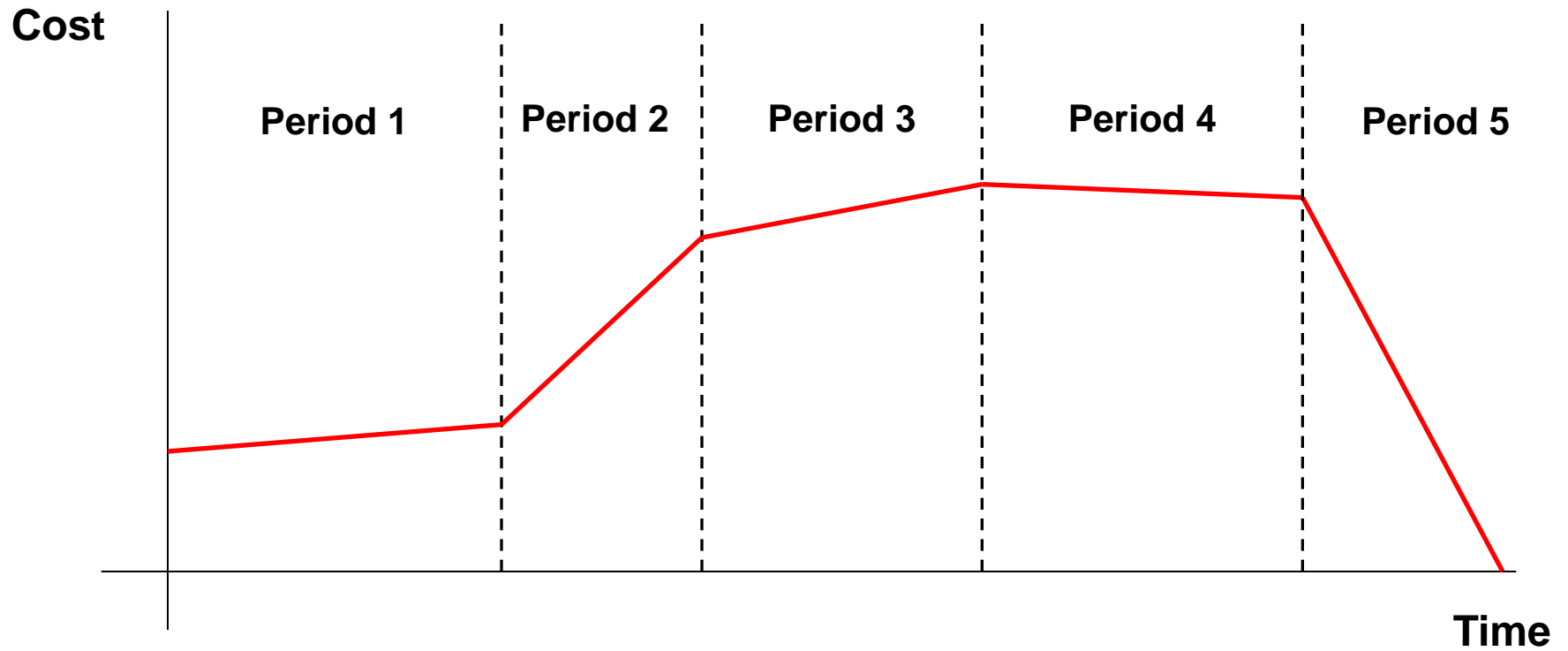


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Illustrative data

Bolt-on Schedule model

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INTEGRATION

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Integration?

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versus

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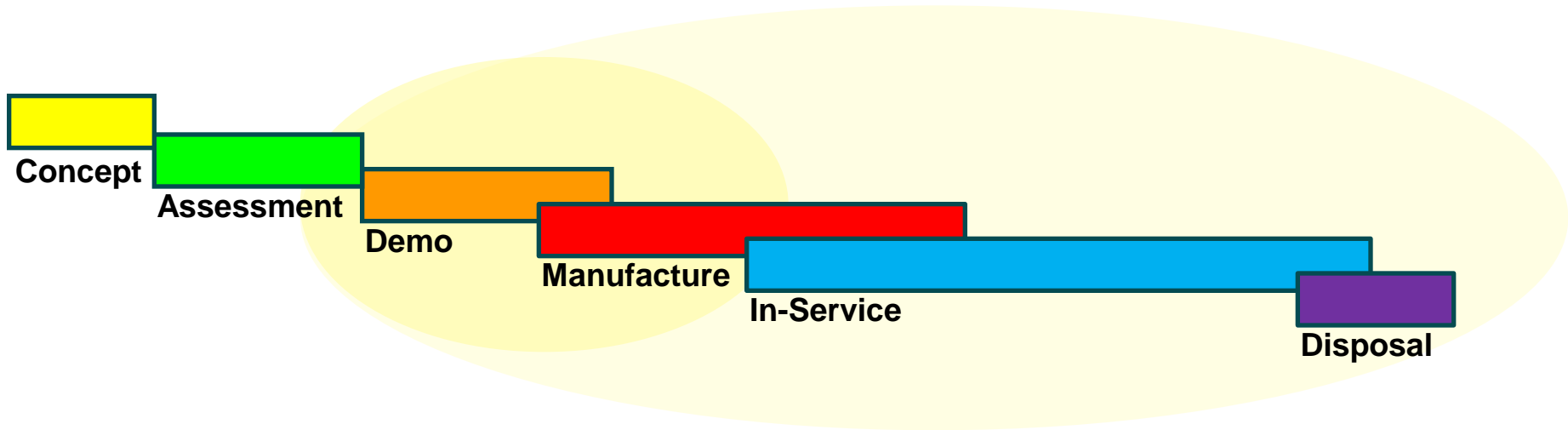
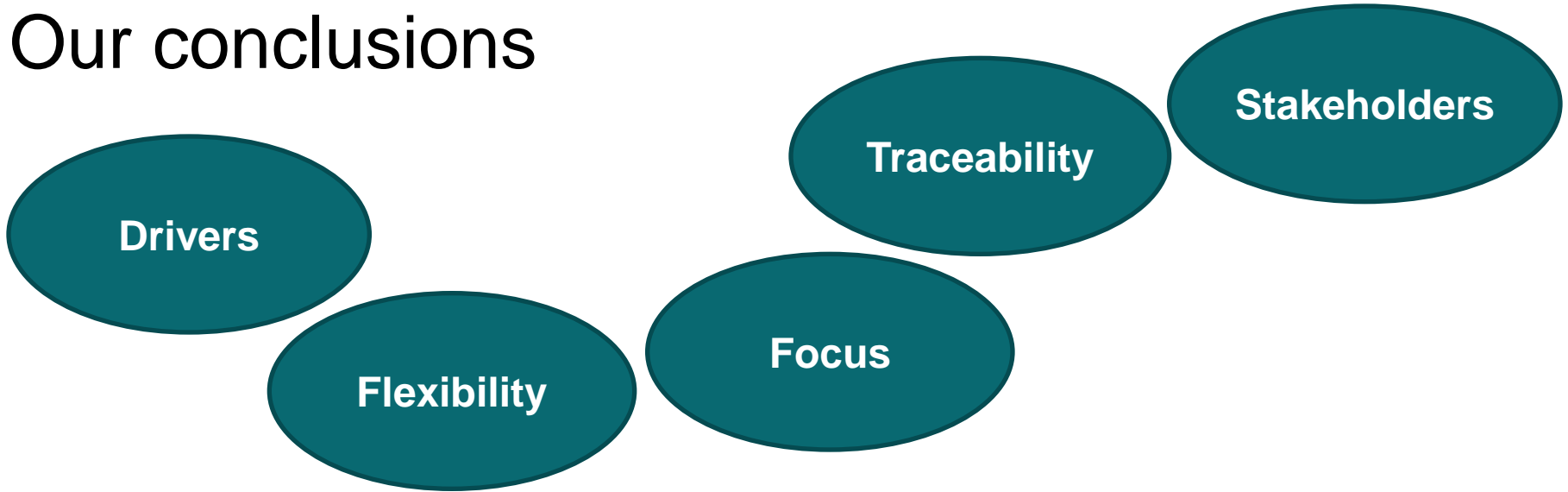


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Integration

Our conclusions

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Way forward

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Atkins in Defence

- ❑ 1,000 staff, all security cleared
- ❑ Largest independent engineering consultancy in UK Defence Market
- ❑ Key domains include Armoured Fighting Vehicles; Submarines; Communications & Intelligence and Defence Infrastructure
- ❑ Consultancy areas include Systems Engineering; Requirements; Supportability; Safety; Human Factors; Training; Costing; Programme and Project Management; Operational Analysis; Through Life Capability Management
- ❑ Major clients include UK MoD; BAE Systems; Thales; Rolls-Royce and Babcock

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