Predicting the Unpredictable:
Assessing your NPD project process

The table below sets out common hidden project losses when delivering new products or capital projects. Assess your current processes using a 1 to 5 scale. (1= Happens regularly, 2 = Can happen, 3 = Seldom happens, 4= Formal processes in place to highlight and avoid, 5 = Failsafe processes supported by cross project training.)

	Loss	What is it	Why is it bad	How can we find it early	How can we reduce it
Define	Weak Design Specification	Incomplete or flawed specification where the consequences of early decisions are not understood.	Results in late changes to specifications or unrealistic requirements for the funds/resources available or project under delivery	Look for unstructured assessment of impact of design concept on commercial, operations and technical targets.	Formal technical, operational and commercial assessment of strategic risks and opportunities prior to concept sign off. Structured review/collation of best practice and relevant knowledge using checklists to ensure clarity and cross project learning.
	Poor Project Structure	Lack of resources Poor or missing project information and change control	Increases the risk of error time spent searching for information and poor project delivery	Confirm earl understanding of team brief. Look for poorly run project meetings, documentation and cost control. Poor project structure/management process	Clear project roles, accountabilities and briefing/training process. Standards for project administration and problem analysis. Use of 5S focus for workplace and information organisation.
Problem Prevention	Lack of Design Effectiveness Standards	Lost opportunities to prevent known problems and improve process capability	Designs based on technical standards alone will not ensure easy to operate and maintain processes which require minimum intervention.	Look for limited or no modularisation of design and lack of process to evaluate the suitability of design alternatives	Use of a modular design approach and structured problem prevention of critical factors and life cycle cost concepts. Formal design standards supported by audit plan/targets for areas of high risk or limited understanding
	Lack of Value Enhancement	Latent problems or incomplete/ untested assumptions	Adds to time pressure when issues are discovered at commissioning or production stages.	Look for weak or limited focus on optimising the project value, Disputes with vendors, frequent late revisions of timing plans	Ensure cross functional development of project plan, establish win/win vendor relationships and contract terms. Build close working relationship between key vendors and the complete project core team.

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	Loss	What is it	Why is it bad	How can we find it early	How can we reduce it
Flawless Operation	Design Weaknesses	Operability, maintainability, safety and reliability weaknesses	Poor effectiveness will add to operating costs and return on investment increasing overall life cycle costs	Look for poor critical analysis of design at key stages. No measurement process for effectiveness, efficiency or adaptability.	Set standards for problem prevention. Use visualisation techniques to ensure that the design constraints are understood by all team members from an early stage.
	Extended Project hand over	Time taken debugging during full operation stage	Late debugging is the most costly approach and indicates poor project management	Look for poor project ownership outside of technical team. Checklists incomplete or with action points outstanding or poorly addressed.	Cross project milestone review at key decision points. Ensure joint ownership of commercial, operations and technical team members throughout the project

Record your scores in the table below. Low scores in points A to C indicate problems with the project definition processes, low scores on points D to F indicates problems with project execution.

	Hidden Loss	Assessment	Notes/Actions
A	Design Specification		
B	Project Structure		
C	Design problem prevention Focus		
D	Project problem prevention Focus		
E	Design Effectiveness		
F	Project Handover		

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