

# Requirements Feasibility & Risk Assessment Guide

## Likelihood of Compliance (Probability of meeting requirement on schedule and within budget)

<b>(-) Requirement unassessed "Grey"</b>	--	Requirement is unassessed, default value.
<b>(X) Requirement is not feasible "Black"</b>	1	No technical solution exists within the project cost, schedule & tech constraints.
<b>(A) Almost Certain noncompliance "Red"</b>	1.0E-1	Understanding, integration or technology almost certain to impact achieving. Requirements not agreed.
<b>(B) Likely Non-Compliance "Amber"</b>	1.0E-2	Understanding, integration or technology likely to impact achieving. Requirement may be (or is) changing.
<b>(C) Possible Noncompliance "Yellow"</b>	1.0E-3	Understanding, integration or technology possibly impact achieving. Requirement performance criteria not credible.
<b>(D) Unlikely Noncompliance "Light Green"</b>	1.0E-4	Understood requirement, project plans in place, mature technology. Initial assessment not yet conducted but experience indicates problems are unlikely.
<b>(E) Rare Noncompliance "Dark Green"</b>	1.0E-5	Well understood, technology & project resources in place. Previous experience indicates high likelihood of compliance.
<b>(F) Compliant: Tested and Verified "Blue"</b>	0	Design has met or exceeded performance requirements levels. Reuse of known tested solution. Initial verification conducted.

## Contents of a Technical Risk Abatement Plan

- Statement of Problem and Risk
- Assessment of Risk and Problem
- Description of Consequences of Failure
- Recommended Countermeasure Method
- Impact of Implementing (Cost, Schedule, Technical)
- Responsible Organisation & Person
- Implementation Start Date and Key milestones
- Criteria for Closing Risk
- Decision Point
- Project Manager & Systems Engineer approval

## Requirements Achievability Risk Matrix

	0	1	2	3	4	5
X	X0	X1	X2	X3	X4	X5
A	A0	A1 (TPM/CTQ)	A2 (TPM/CTQ)	A3 (RAP)	A4 (RAP)	A5 (RAP)
B	B0	B1 (Review)	B2 (TPM/CTQ)	B3 (TPM/CTQ)	B4 (RAP)	B5 (RAP)
C	C0	C1	C2 (Review)	C3 (TPM/CTQ)	C4 (TPM/CTQ)	C5 (RAP)
D	D0	D1	D2	D3 (Review)	D4 (TPM/CTQ)	D5 (TPM/CTQ)
E	E0	E1	E2	E3	E4 (Review)	E6 (TPM/CTQ)
F	F0	F1	F2	F3	F4	F5

## Technical Consequences (Severity)

QL	Qn	Requirement is unassessed, default value.
5	1E+7	Critical (e.g. sink the project) performance, safety or regulator certification requirement not met.
4	1E+6	Significant degradation of performance, usage rates or major regulator certification issue, major crew usability issue.
3	1E+5	Some reduction in performance, moderately bad usability or OH&S issues. Minor regulator certification issues. Correctable with effort.
2	1E+4	Small reduction in performance, minor impact on operator satisfaction with product, easily correctable.
1	1E+3	Minimal consequence, minor design change or waiver.
0	1E+2	No effect

## Risk Countermeasures (See Matrix for Application)

- Review** – Review requirement status at control gates
- TPM** – Technical Parameter Management
- CTQ** – Critical to Quality monitored and managed
- RAP** – Formal Risk Abatement Plan