

SAMPLE - Safety Management System Risk Matrix

Risk Probability	Risk Severity				
	Catastrophic A	Critical B	Moderate C	Minor D	Negligible E
5 – Frequent	5A	5B	5C	5D	5E
4 – Likely	4A	4B	4C	4D	4E
3 - Occasional	3A	3B	3C	3D	3E
2 – Seldom	2A	2B	2C	2D	2E
1 – Improbable	1A	1B	1C	1D	1E

Assessment Risk Index	Criteria	Accountable Organizations
5A, 5B, 5C, 4A, 4B, 3A	Unacceptable under existing circumstances requires immediate action	Risk Review Board (RRB) and / or VP Corporate Safety, Security, Quality & Environment
5D, 5E, 4C, 3B, 3C, 2A, 2B	Manageable under risk control & mitigation. Requires RAB & management decision	Managing Directors and / or Risk Analysis Board (RAB)
4D, 4E, 3D, 2C, 1A, 1B	Acceptable after review of the operation. Requires continued tracking and recorded action plans.	Managing Directors, Managers and / or Accountable Org. Levels
3E, 2D, 2E, 1C, 1D, 1E	Acceptable with continued data collection and trending for continuous improvement.	Department Managers and / or Accountable Org. Levels

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Probability of Occurrences		
Qualitative definition	Meaning	Value
Frequent	<ul style="list-style-type: none"> • Likely to occur many times (occurred frequently) • Will be continuously experienced unless action is taken to change events 	5
Likely	<ul style="list-style-type: none"> • Likely to occur some times (occurred infrequently) • The activity or event expected to occur 50-99% of the time. • Will occur often if events follow normal patterns of process or procedure. The event is repeatable and less sporadic • Auditor / Regulator likely to identify issue with minimal audit activity • Process performance failures evident to trained auditors or regulators 	4
Occasional	<ul style="list-style-type: none"> • Unlikely, but possible to occur (occurred rarely) • An activity or event occurs infrequently, or irregularly, or 25-50% of the time • Potential for infrequent occurrence. Events are sporadic in nature • Auditor / Regulator have potential of issue discovery during focused or specialized review. • Process has higher degree of latent system errors discovered with adequate controls 	3
Seldom	<ul style="list-style-type: none"> • Very unlikely to occur (not known it has occurred) • An activity or event that occurs intermittently, or 1-25% of time • Not likely to happen (but could) • Regulator / Auditor have low likelihood of issue identification during any general or focused review 	2
Improbable	<ul style="list-style-type: none"> • A remote likelihood, being almost inconceivable that event will occur 	1

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Severity of Occurrences		
Aviation industry definition	Meaning	Value
Catastrophic	<ul style="list-style-type: none"> • Equipment destroyed • Multiple deaths • System-wide shutdown and negative revenue impact. • Fine potentials >\$1M / Criminal penalties • Large environmental Impact • Loss (or breakdown) of an entire system or sub-system. • Security criminal investigations and penalties to groups or individuals • Willful violation of any safety regulation that could result in serious injury or death • Potential of suspending airline operation • Potential for uncontrollable public relations event(s) 	A
Critical	<ul style="list-style-type: none"> • A large reduction in safety margins, physical distress and/or workload such that operators cannot be relied upon to perform their tasks accurately or completely • Serious injury or death, multiple LTIs and personal claims • Accident or Serious Incident with injuries and/or major to moderate equipment damage • Fine potential \$1m < \$100k • Potential criminal penalty • Medium environmental impact • Potential moderate damage to an aircraft (out of service \geq 5 days). • Hazardous spill into airplane • A non-compliance finding that resulting in major system, process, or operational degradation • A security finding requiring immediate corrective action prior to continued operation • Reoccurring violation of any safety regulation resulting in serious injury • An employee/customer injury/broken bone. Injury resulting in hospitalization (other than observation) • Moderate Enterprise risk involving executive management involvement • Very large public relations impact requiring resources to manage information • System Deficiencies leading to poor air carrier performance and chronic disruption to the air carrier schedules • Potential loss (breakdown) of entire sub-system or divisional operation • Production errors containing regulatory violations that pose direct consequence to the operation • Shutdown of Larger Operation or Hub 	B

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Moderate	<ul style="list-style-type: none"> • Accident or Incident with minor injury and/or minor aircraft damage • Non-life threatening employee/customer injury, with recording of Lost Time Injury • Fine potential \$100k < \$0 • Small environmental impact • Security finding requiring a Corrective Action Pla • Production element errors that may pose indirect consequences to the operation • Aircraft damage resulting in out of service < 5 days. • Potential to cause sustained irregular operations until issue is resolved • Complete shutdown of smaller operations or divisions • System Deficiencies leading to poor air carrier performance and /or sporadic disruption to the air carrier schedules. • Partial breakdown of an air carrier system • Additional public relations efforts and resources required 	C
Minor	<ul style="list-style-type: none"> • No regulatory action anticipated. • No environmental impact anticipated • No evident security threat affected • Minor errors in completed Company policy & procedures • Production errors containing quality system and / or opportunities for improvement • No equipment damage to slight damage – outcome deferrable with no operational impact. • \$0 regulatory fines • No public relations impact • None to slight aircraft damage - no operational impact. 	D
Negligible	<ul style="list-style-type: none"> • No regulatory violation • No environmental impact • No security element affected • CI initiative delivered against Company policy & procedures • \$0 regulatory fines • No public relations impact • No aircraft damage - no operational impact. • Finding elements present limited opportunities for improvement 	E