

RISK REGISTER

Risk Identification			Risk Analysis				Response Planning						
Risk ID	Risk Category	Trigger Point	Impact	Prob-ability	Matrix Score	Qualitative Impact	Risk Strategy	Response Notes/Plan	OWNER				
									Sp	ETC	PM	GC	
1.1	PM & Processes	No formal implementing organization of the project	0.2	0.9	0.18	High	Mitigate	Owners' to select official representative	RA	I	C		
1.2	PM & Processes	Project Manager's capability	0.2	0.5	0.10	Moderate	Avoid	Hire PM with related experience	I	I	RA		
1.3	PM & Processes	In-effective and in-efficient communication system	0.4	0.7	0.28	High	Avoid	Enhance Communication Plan	C	I	R	RA	
1.4	PM & Processes	PMO's lack of control over monitoring	0.2	0.3	0.06	Low	Avoid	Devise system for monitoring & controlling	I	C	RA		
1.5	PM & Processes	Poor mangement of changes	0.2	0.3	0.06	Low	Avoid	Create Change Control Board	I	C	R	RA	
2.1	Stakeholders	Owners' delayed descision- making process	0.05	0.3	0.02	Low	Avoid	Owners' to select official representative	RA	I	C		
2.2	Stakeholders	Geographical locations of the owners and their availability	0.05	0.9	0.05	Low	Mitigate	Regular virtual meetings	RA	I	C	I	
2.3	Stakeholders	Adversarial relationship between project stakeholders	0.05	0.1	0.01	Low	Avoid	Resolution by negotiation/ facilitation/ mediation	I	I	AR	R	
3.1	Scope	In-accuracy of estimates	0.8	0.5	0.40	High	Avoid	Consult SME or Technical Service Provider	I	R	C	RA	
3.2	Scope	Requirements that evolve and mutate as the project runs	0.8	0.9	0.72	High	Mitigate	Sponsors' approval	C	R	R	RA	
3.3	Scope	Specifications or activities added to the project late	0.4	0.9	0.36	High	Mitigate	Sponsors' approval	C	R	C	RA	
3.4	Scope	Inputs or other needs not anticipated at the start	0.4	0.9	0.36	High	Mitigate	Sponsors' approval	C	R	R	RA	
4.1	Finance	Lack of start-up fund by Owners	0.8	0.9	0.72	High	Mitigate	Sharing of capitals or source-out	RA	I	I		
4.2	Finance	Insufficient operational expenses	0.8	0.9	0.72	High	Mitigate	Sharing of capitals or source-out	RA	I	I		
5.1	Contract Procurement	Collusion between bidders (DBFOM)	0.05	0.1	0.01	Low	Avoid	Re- Bid	I	C	C	I	
5.2	Contract Procurement	Ambiguity and/or vagueness of provisions in the contract	0.4	0.3	0.12	Moderate	Avoid	Consult SME or Legal Advisor	I	C	R	RA	
5.3	Contract Procurement	Not well- defined considerations between parties	0.4	0.3	0.12	Moderate	Avoid	Consult SME or Legal Advisor	C	C	R	RA	
5.4	Contract Procurement	Failure to adequately address enquiries from bidders	0.05	0.1	0.01	Low	Avoid	Queries to be finalized during Bid Conference only	I	RA	C	I	
5.5	Contract Procurement	Few responses to bid	0.1	0.5	0.05	Low	Mitigate	Set limit for the number of bidders to pursue	I	C	R	I	
6.1	Concepts & Design	Unviable concepts	0.05	0.1	0.01	Low	Avoid	Brainstorming, consult SME	C	R	C	RA	
6.2	Concepts & Design	Impractical design	0.1	0.1	0.01	Low	Avoid	Re-design	I	R	I	RA	
6.3	Concepts & Design	Errors, Omission & Discrepancies in Design & calculation	0.8	0.3	0.24	High	Avoid	Third party review	I	R	I	RA	
6.4	Concepts & Design	Repeated changes on design by Owner and/or Consultant	0.4	0.5	0.20	High	Avoid	Proper review of design	I	C	R	RA	
7.1	Construction	Low performance of the concessionaire	0.8	0.5	0.40	High	Avoid	Impose penalty clauses in the contract (LD)	I	I	R	RA	
7.2	Construction	Shortage of Resources (manpower, material, equipt)	0.4	0.7	0.28	High	Avoid	Provide contingencies, reserves or back-up	I	C	R	RA	
7.3	Construction	Market price flactuation	0.05	0.3	0.02	Low	Mitigate	Provide contingency fund for price fluctuation	I	C	C	I	
7.4	Construction	Force Majeur or unforeseen natural disaster	0.8	0.5	0.40	High	Accept	Insurance	I	C	C	R	
7.5	Construction	Weather Interference	0.4	0.9	0.36	High	Accept	Strategize work	I	C	C	R	
7.6	Construction	Behind schedule performance	0.4	0.7	0.28	High	Avoid	Impose penalty clauses in the contract (LD)	I	I	R	RA	
7.7	Construction	Excessive Change Orders	0.1	0.7	0.07	Moderate	Mitigate	Provide thresholds for Change Order	I	R	C	RA	
7.8	Construction	Adverse impact to the environment	0.05	0.1	0.01	Low	Mitigate	Minimize, restore, compensate	I	R	R	RA	
7.9	Construction	Poor workmanship	0.2	0.5	0.10	Moderate	Avoid	Deploy competent workers only	I	C	R	RA	
7.10	Construction	Substandard materials quality	0.4	0.5	0.20	High	Avoid	Material testing prior usage	I	C	R	RA	
7.11	Construction	Health and Safety hazards	0.4	0.5	0.20	High	Avoid	Training of workers, proper methodology, etc.	I	I	R	RA	
8.1	O&M	Seasonality of customer in the industry	0.2	0.7	0.14	Moderate	Mitigate	Alternative business during off- peak season	RA		C	RA	
8.2	O&M	Waste product hazards	0.05	0.1	0.01	Low	Mitigate	Implement Reuse/Redude/Recycle	I		C	RA	
8.3	O&M	Deterioration of structures and facilities	0.2	0.5	0.10	Moderate	Transfer	sub-contract the Repair & Maintenance	I		C	RA	
8.4	O&M	Mis-management of business operation/ buncraftcy	0.4	0.5	0.20	High	Transfer	Register buisiness as corporation	R		C	RA	
9.1	External	Government Red Tape & Bureucracy	0.05	0.3	0.02	Low	Mitigate	Constant follow-up	I	C	R	RA	
9.2	External	Competitors disadvtages	0.2	0.7	0.14	Moderate	Mitigate	Blue Ocean tactics, uniqueness of business	R		C	RA	
9.3	External	Political and/or social change	0.05	0.1	0.01	Low	Mitigate	Adopt to changes, support social sustainability	R		C	R	
10	Secondary	Risks developed from addressing the priamry risks	0.05	0.7	0.04	Low	Mitigate	Iterate the process of performing integrated change	I	C	R	RA	

SP - Sponsor
 ETC - Eng'g & Tech'l Consultant
 PM - Project Manager
 GC - General Contractor/ Concessionaire

R - Responsible
 A - Accountable
 I - Inform
 C - Consult

RISK ANALYSIS MATRIX

Probability Values	Very High	0.90	0.05	0.09	0.18	0.36	0.72
	High	0.70	0.04	0.07	0.14	0.28	0.56
	Moderate	0.50	0.03	0.05	0.10	0.20	0.40
	Low	0.30	0.02	0.03	0.06	0.12	0.24
	Very Low	0.10	0.01	0.01	0.02	0.04	0.08
			0.05	0.10	0.20	0.40	0.80
			Very Low	Low	Moderate	High	Very High
Impact Values							

(Probability) x (Impact) = Matrix Score

THRESHOLDS			
RED	Greater than or equal	0.15	HIGH
YELLOW	In between	0.06 to 0.14	MODERATE
GREEN	Less than or equal	0.05	LOW