Risk Management Plan for DATARASOV'S Data Center Project

DATARASOV' S Mor occo TEAM

DATARASOV

Contents

Step 1: Risk Identification

Categories of Risks

External Risks:

Environmental Changes: Coastal humidity impacting cooling systems.

Economic Factors: Currency fluctuations affecting procurement costs.

Regulatory Risks: Delays in obtaining permits or meeting Moroccan standards.

Internal Risks:

Technical: Cooling or energy systems underperforming.

Organizational: Delayed decision-making or resource allocation.

Human: Insufficient skilled local workforce for specialized roles.

Methods for Identification

Brainstorming with the project team.

Lessons learned from other data center projects in similar regions.

Consulting Moroccan construction and IT experts.

Using structured tools like the 5M Framework:

Machine: Server reliability, cooling systems.

Manpower: Workforce skill level and availability.

Methods: Project execution plans.

Medium: Coastal environment of Tangier.

Materials: Quality and availability of local construction materials.

Step 2: Risk Evaluation

Qualitative Analysis

Impact Nature:

Cost: Over-budget risks from delays or unexpected equipment failures.

Delay: Missed deadlines due to supply chain disruptions or regulatory approvals.

Quality: Non-compliance with energy efficiency or safety standards.

Severity Scale:

Unserious: Minimal financial or time impact.

Serious: Moderate cost/time impact.

Very Serious: Critical impact on project objectives.

Likelihood Scale:

Unlikely: <10% chance.

Likely: 10-50% chance.

Very Likely: >50% chance.

Quantitative Analysis

Using a scoring system for Criticity:

Criticity = Severity × Likelihood

Example:

Regulatory Delay:

Severity = 3 (Very Serious).

Likelihood = 2 (Likely).

Criticity = 6 (High Priority).

Risk Prioritization Matrix

Likelihood ↓ / Severity →	Unserious (1)	Serious (2)	Very Serious (3)
Unlikely (1)	Low (1)	Low (2)	Medium (3)
Likely (2)	Low (2)	Medium (4)	High (6)
Very Likely (3)	Medium (3)	High (6)	Critical (9)

Step 3: Risk Handling

Approach

Avoidance:

Use pre-approved suppliers for critical equipment to eliminate supply chain risks.

Conduct thorough environmental studies to preempt cooling inefficiencies.

Reduction:

Incorporate AI-based predictive maintenance to reduce equipment failure risks.

Train the local workforce to bridge skill gaps before the project starts.

Retention:

Allocate contingency funds for minor risks like temporary labor shortages.

Transfer:

Purchase insurance for equipment damage during transit.

Partner with experienced contractors to share responsibility for construction delays.

Detailed Risk Summary Table for Tangier Data Center Project

Risk ID	Risk Description	Category	Root Cause	Likelihood	Severity	Criticity	Mitigation Plan	Owner	Status
R01	Cooling inefficiency	Technical	Humidity and coastal climate	Likely (2)	High (3)	6	Use Free Cooling and adiabatic systems and install AI-based energy optimization tools.	IT Team	Planned
R02	Permit delays	Regulatory	Complex Moroccan regulatory process	Very Likely (3)	High (3)	9	Pre-engage local regulators; assign a dedicated permit management team.	Project Manager	Active
R03	Supply chain disruptions	External	Reliance on international suppliers	Likely (2)	Medium (2)	4	Use local suppliers where possible and maintain buffer stocks for critical equipment.	Procurement Team	Active
R04	Skilled labor shortage	Human	Lack of specialized workforce in Tangier	Likely (2)	High (3)	6	Partner with universities for training programs and recruit regionally.	HR Department	In Progress

R05	Power outages during setup	Operational	Unreliable power grid connections	Likely (2)	Serious (2)	4	Secure agreements with Noor Solar Plant and deploy backup generators.	IT Team	Planned
R06	Construction material delays	Supply Chain	Long lead times for prefabricated materials	Likely (2)	Medium (2)	4	Identify alternate suppliers and maintain safety stock for key materials.	Procurement Team	Planned
R07	Environmental compliance issues	Regulatory/External	Non-compliance with Moroccan environmental laws	Likely (2)	High (3)	6	Conduct an Environmental Impact Assessment (EIA) and adhere to ISO 14001 standards.	Project Manager	Active
R08	Budget overruns	Financial	Unexpected costs in equipment or labor	Likely (2)	High (3)	6	Implement financial tracking systems and allocate contingency funds.	Finance Team	Active
R09	Cybersecurity breaches	Technical	Insufficient security measures	Unlikely (1)	High (3)	3	Deploy robust firewalls, encryption, and conduct regular security audits.	IT Security Team	Planned

R10	Delayed hardware procurement	Supply Chain	Vendor delays or logistical issues	Likely (2)	Serious (2)	4	Diversify suppliers and negotiate priority shipping terms.	Procurement Team	Active
R11	Workforce safety incidents	Human/Operational	Lack of safety protocols during construction	Unlikely (1)	High (3)	3	Develop safety plans and train workers on construction site protocols.	Safety Manager	In Progress
R12	Cooling system failure post-launch	Technical	Design flaws or maintenance issues	Likely (2)	Very High (3)	6	Perform stress testing and implement predictive maintenance using AI tools.	IT Operations	Planned
R13	Negative community perception	Reputational	Noise or traffic disruptions during construction	Likely (2)	Medium (2)	4	Communicate with the community and implement measures to minimize disturbances.	Community Liaison	Active