



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

Everyone's Smart University

Project (Spring 2021)

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Section

Master

Date

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Course Code

(PMG510)

Project Risk Management

Instructions:

- اخر موعد للتسليم هو يوم الخميس 2021-05-20 في تمام الساعة ٩ مساءً.
- الإجابة متاحة باللغة الإنجليزية أو اللغة العربية مع مراعاة أن تكون المصطلحات العلمية باللغة الانجليزية.
- يتم تسليم المشروع في صيغة ملف . pdf مع الالتزام نموذج الجامعة ولن تقبل أي مستندات أخرى.
- يجب مراعاة أقسام البحث الرئيسية (مقدمة Introduction، دراسات علمية سابقة Literature Review، طريقة البحث Methodology، النتائج والمناقشة Results and Discussion ، وأخيراً المراجع References . وان كان هناك ملحقات Appendices يتم إضافتها)
- يجب الالتزام بـ Theme موحد كما يلي:
- حجم الخط 12.
- نوع الخط Arial.
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Instructor's Name: Eng. Mosaab M. Hamed

Aziz non-Governmental Housing Foundation (ANGHF)

Risk Analysis and Management

The entire affordable housing project risk management was carried out in a step-by-step approach. The stages were as follows;

1. Scope Definition

The project board defined the necessary deliverables and milestones of the Project. All contractors' information was collected and any key stakeholders in the process identified and consulted. The complete risk analysis was to be conducted all along with the project construction.

2. Risk Identification and Description

The project board: the executive members of ANGHF and the elected project manager outlasted a list of risks anticipated through the project life cycle. The risks were in the following sub-categories:

- Risks associated with land/site
- Personnel/ expertise risk
- Operations risk
- Design and construction risk
- Regulatory risk
- Financial risk
- Demand risk

All the above risks were cost-estimated and probabilities established.

3. Opportunities Identifications

The Project was predisposed to two opportunities: the demand and land acquisition opportunities. Affordable and sustainable houses were in high demand in the cities following existing high rates of rent. Acquiring land in the city was expensive, but the resident's occupation was expected to return the total investment in five years.

4. Risk Rating

All the risks were also rated and their potential magnitude estimated. The probabilities, impacts, and severity factors were categorized in low, medium, and high ratings.

5. Risk Response Strategies

The project board was expected to avoid regulatory risks, mitigate operations, design and construction, and financial risk. Risks associated to expertise and project operations were transferred to the project manager. The demand and acquisition opportunity risks were accepted but to monitored closely.

6. Risk Register

The board agreed that the project manager would maintain a risk register and report to the project board and other stakeholders involved. The register will include the risk description, probability of occurrence, owner, risk ratings, and advice on relevant response strategies.

7. Regular Project Risk Reviews

Lastly, the project board agreed to conduct monthly risk reviews and report to the project sponsor, the chief executive officer of ANGHF.

Actors in Project

- Sponsor; the chief executive officer of ANGHF.
- Project board; CEO ANGHF, Project manager, and three executive members.
- Project manager; project board designated one project manager who will operate with the help of one assistant.
- Project team; the Project was estimated to involve around twenty skilled workers and fifty-two non-skilled laborers.

Types of Risk in Each Phase of the Project

1. Definition

a. Land Acquisition Risk

b. Site Risk

c. Financial Risk

d. Force Majeure Risk

2. Planning

- a. Site Risk b. Financial Risk c. Force Majeure Risk

3. Execution

- a. Site Risk b. Financial Risk c. Force Majeure Risk
- d. Subcontractor Risk e. Design, Construction, and Commissioning Risk
- f. Operations and Maintenance Risk g. Regulatory Risk.

4. Delivery

- a. Site Risk b. Force Majeure Risk
- c. Design, Construction, and Commissioning Risk
- d. Operations and Maintenance Risk. e. Demand risk

Risks Register/Analysis in ANGHF Affordable and Sustainable Housing Project

Risk Name	Risk Description	RISK Triggers/Indicators	Preferred Response Strategy (mitigation action)	Owner Person who will manage the risk)
1. Land Acquisition Risk	The risk that the procedure necessary to acquire land/space is complex and overly expensive since the contemplated project's location is in an urban settlement.	- Communal demonstration on land ownership concerns - Strict government terms on ownership of the land.	- Thorough diligence on land certificate and resettlement through the public office act. - Ensuring the land contractor delivers a site free of settlers and encumbrances.	Project manager
2. Subcontract or Risk	The risk of that the project board may designate unqualified contractors..	- Low-quality outcomes. - Missing credentials of the subcontractors.	The project board to undertake a thorough research on qualifications of	Project manager

			the subcontractors. The contractors to be liable for any poor performance by subcontractor.	
3. Site Risk	The conditions of the site may render the construction, and maintenance of the Project more costly than estimated.	- Land terrain issues - Floods, landslides, history.	Provide the land contractor with sufficient time to conduct a sufficient site search and analysis.	Project sponsor
4. Design, Construction, and Commissioning Risk	The Project's risk insufficiently meets the design and construction standards set out for affordable and sustainable guidelines.	- Poor ventilation. - Interior collapse - Non-aligned doors, windows, floors, stairs.	- regular construction performance reviews to ensure enforcement of standards - The board to approve designs and question any deviations	Project board
5. Financial/Costs Risk	The risk that the estimated budget may not sufficiently meet the operations and construction of the Project.	- Negative solvency ratio - Negligible profitability ratio - Budget Deficit balance	- Daily liquidated damages for delay - Pre-project execution agreement on costs/budget with the developer.	Project board
6. Operations and Maintenance Risk	The risk that that the maintenance operations will not be operated and maintained under the standards set by Aziz non-Governmental Housing foundation (ANGHF)	- Frequent tenants complain. - Inadequate repairs and maintained initiatives.	- Enforce clear performance standards and specifications - Enforce penalties in case of failure	Project manager
7. Regulatory Risk	The risk that the project board may insufficiently implement any single government regulation.	Negligence in adherence to standard construction laws.	The project board to closely monitor and report policy changes..	Project board

		• Lawsuits concerning licensing, tax, and other trade policies.	• institutional compliance assurance plan • audit	
8. Force Majeure Risk	The risk that a predetermined event occurs and hinders the project team's ability to operate and maintain the Project's objectives.	• Heavy rains • Pandemic • earthquakes	• Purchase of insurance policy for manageable risks until the Project is complete.	Project manager
9. Demand risk	The risk that the actual Project's outcomes will be lower than the resident's demand.	• Tenants offering to pay higher than the set rent.	• Prudent demand research and analysis	Project manager

Risk Probability/Impact Matrix

type of risk	Probability of the risk occurring	Impact	.risk rating	Probability percentage (%)	Impact (USD)	EMV (Probability *Impact)
1. Land Acquisition Risk (opportunity risk)	Medium	high	high	40%	1,500,000	600,000
2. Subcontractor Risk (control risk)	Medium	high	high	20%	-250,000	-50,000
3. Site Risk (control risk)	medium	high	high	10%	-2,000,000	200,000
4.	low	high	high	25%	-600,000	150,000

Design, Construction and Commissioning Risk (control risk)						
5. Financial Risk (control)	medium	high	high	15%	-300,000	45,000
6. Operations and Maintenance Risk (control risk)	low	medium	high	20%	-250,000	50,000
7. Regulatory Risk (compliance risk)	Low	Medium	medium	10%	-150,000	15,000
8. Force Majeure Risk (hazard risk)	Low	High	high	30%	-1,000,000	300,000
9. Demand risk (opportunity)	Medium	Medium	medium	60%	3,000,000	1,800,000
Total						1,590,000

References

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