

Risk Management in Construction of Megahousing Projects in Egypt

Mohamed Ibrahim^{1,2}, George Ofori¹, Maged Morcos²

¹School of Built Environment and Architecture, London South Bank University, 103 Borough Road, London SE1 0AA, United Kingdom

²Department of Civil Engineering, The British University in Egypt, El-Sherouk City, Cairo, Egypt

Motivation



Slum Urbanisation Crisis
Constructed with 95% delays, high cost, and poor quality buildings.



Slum vs. Mega Housing
Recently, Egypt strategy 2030 is targeting successful delivery of mega housing.



Risk management framework is an ideal solution to **reduce the impact on delivery of mega housing projects**

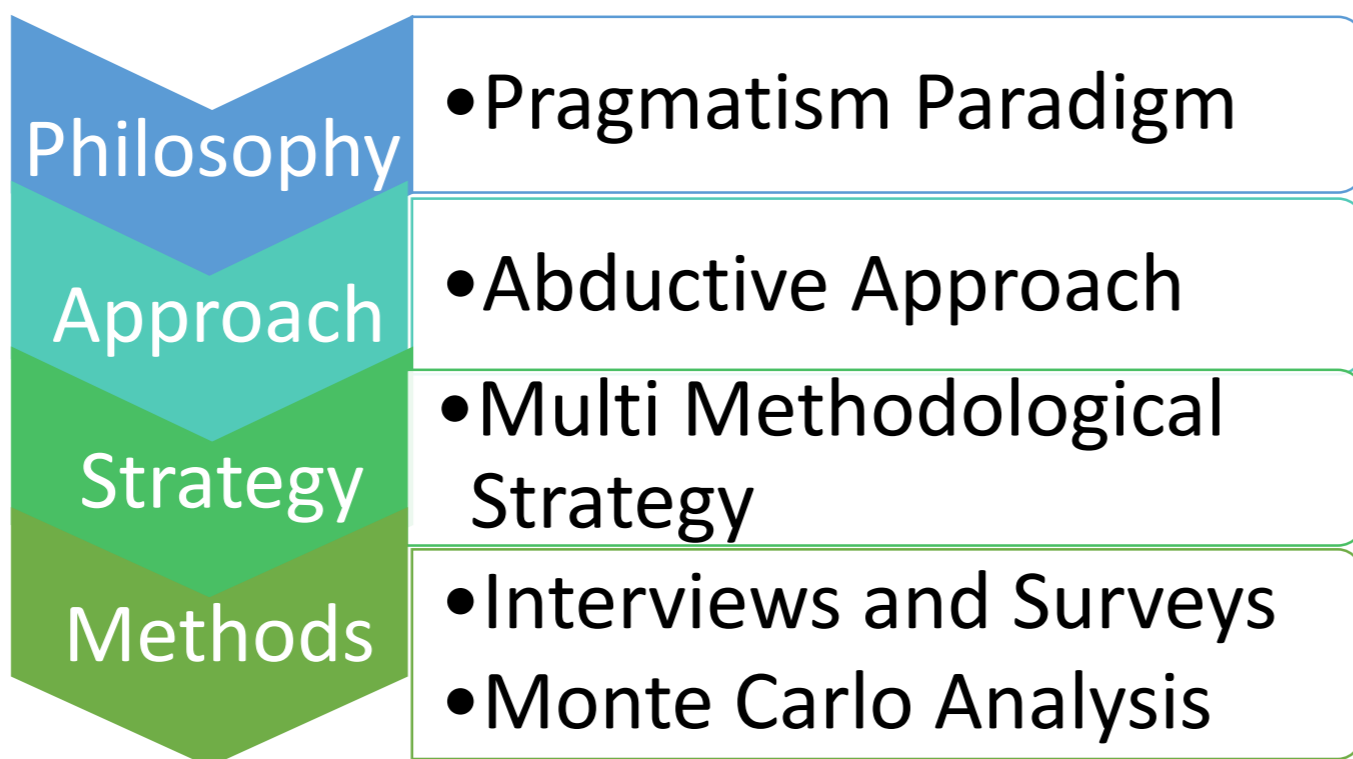


Risk Management Framework is developed using **the Risk Management Standard ISO 31000**

Methodology



methods



- Qualitative risks are identified using **interviews**. **Survey** results allowed the recognition of impact scales. **Monte Carlo analysed** the impact of risks on delivery time and cost.

Aim

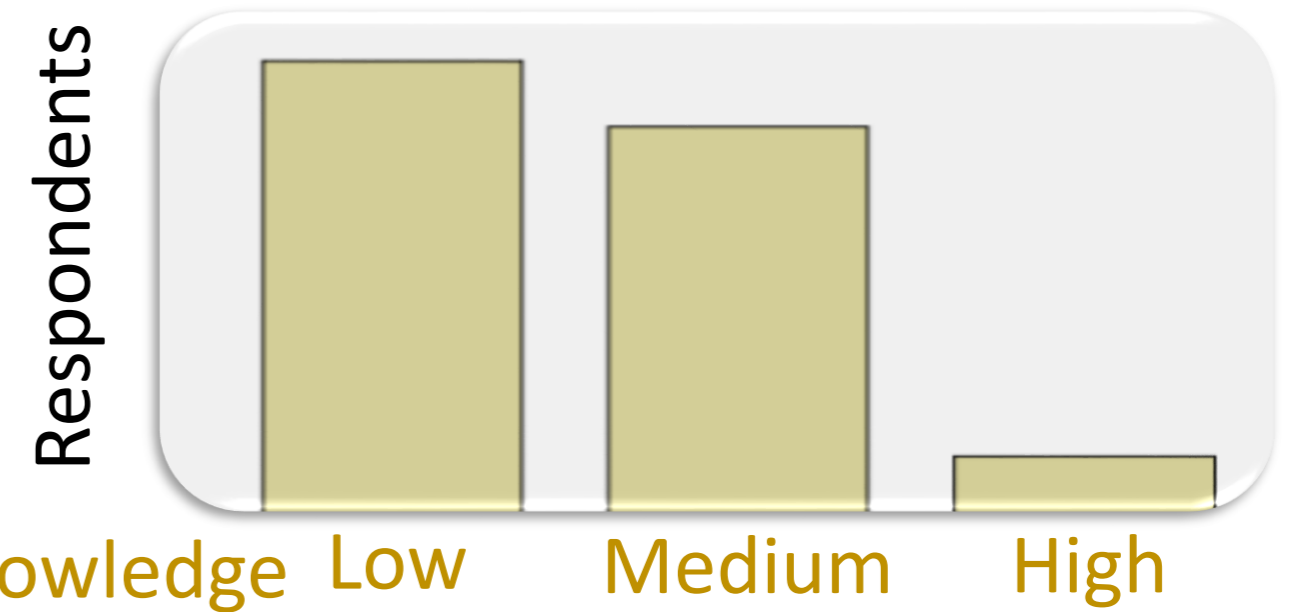


- To develop a risk management framework to improve risk management practices and success in delivery during construction of Mega housing projects in Egypt.

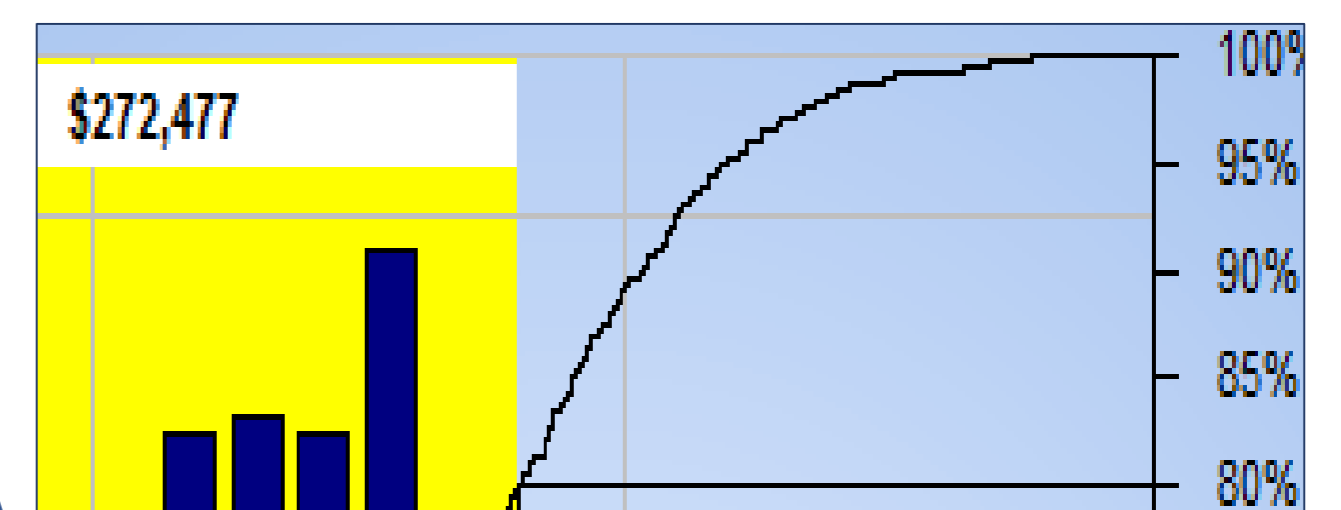
Conclusions

- Risk categories included **financial risks, safety risks, and government support risks**.
- The Risk framework is in **line with the International Standardisation (ISO31000)**.
- The cost of a Mega housing project in Egypt "New Capital" ranged between **\$125,687,351 and \$126,183,808**. After implementing mitigations the cost ranged between **\$125,687,351 and 125,917,868** this means that the maximum **completion cost is reduced by an amount of \$265,940**. This reduction is due to the implemented responsive actions.

Results



- Low risk knowledge was observed, 45% of project team **do not participate** in the process of **risk management**.



- Monte Carlo highlighted that **\$273,000** are to be added to the **construction budget**.
- Risk Management Framework



Researcher Contacts

M.ASCE – Member of the American Society of Civil Engineers, USA.
MAPM – Member of the Association of Project Management, UK.



Researcher Mail: Ibrahim63@lsbu.ac.uk

For better future in delivery of mega housing projects.



For better EGYPT