Challenges for Developers in Earthquakes-Resilient Construction Projects

Presented By **U Khin Maung Kywe**
Max Highway Co,Ltd
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Project Highlight



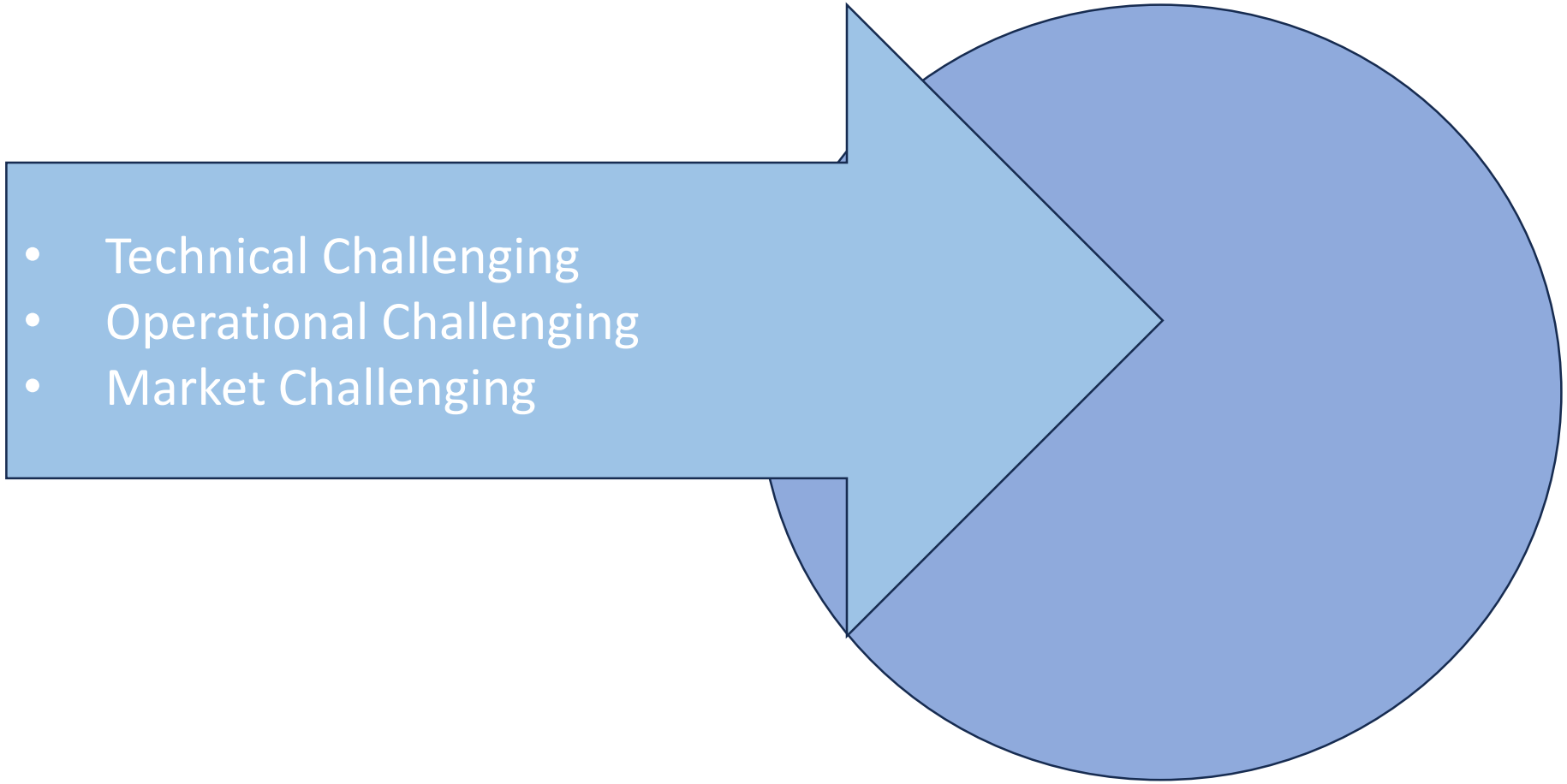




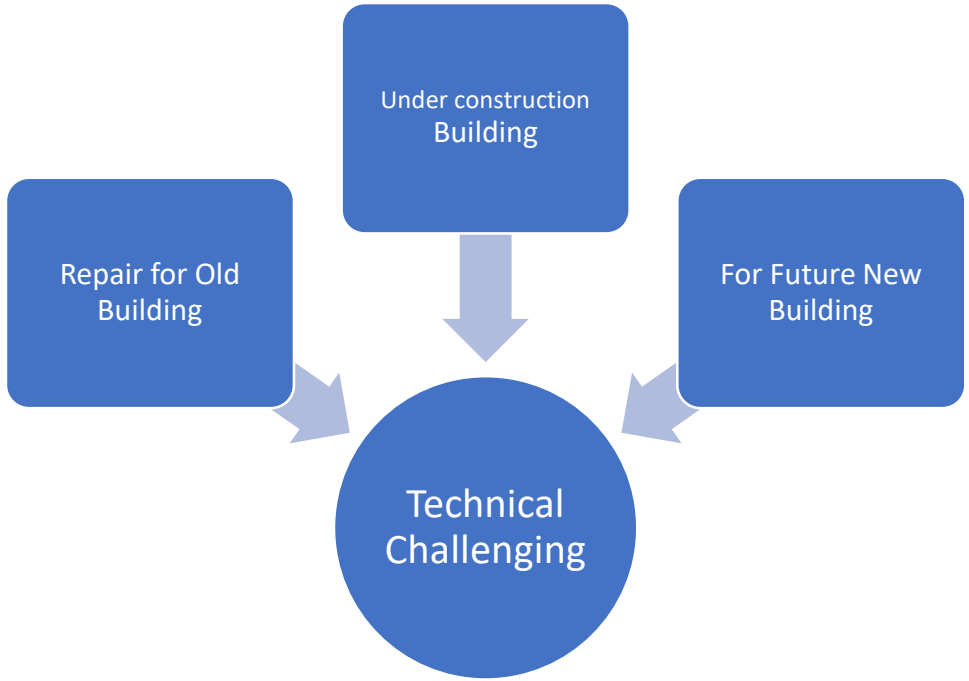




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Technical Challenging



Old Building

- After assessing the damage, Which reconstruction method will be used Restoration or Retrofitting ?
- Future potential natural disasters should be considered.

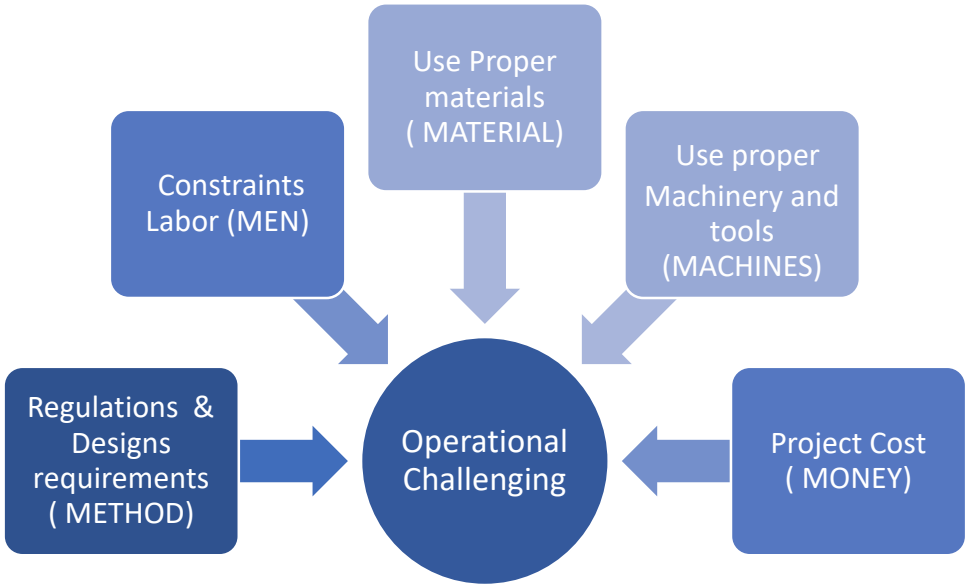
Under Construction Building

- Check the current conduction of building
- Verify compliance with new MNDC
- Necessary repairs and modifications should be made

Future New Building

- Create more disaster- resistant designs
- Designs should be calculated and developed based on potential natural disaster risk
- Designs must be follow to MNBC

Operational Challenging



Regulations and Design requirements

- Necessary to review the current structure designs for compliance with MNBC 2025 regulations,
- The structural design review process may take longer due to constraints professionals.

Constraints Labor

- Due to concurrent reconstruction projects, labor shortages may occur
- Especially In the earthquake-affected areas, labor costs have risen significantly due to high demand.
- Need more skilled workers to meet regulatory standards.

Use Proper Materials

- The construction projects may face material shortages.
- As some materials must be imported from overseas, we anticipate delays and price fluctuations.

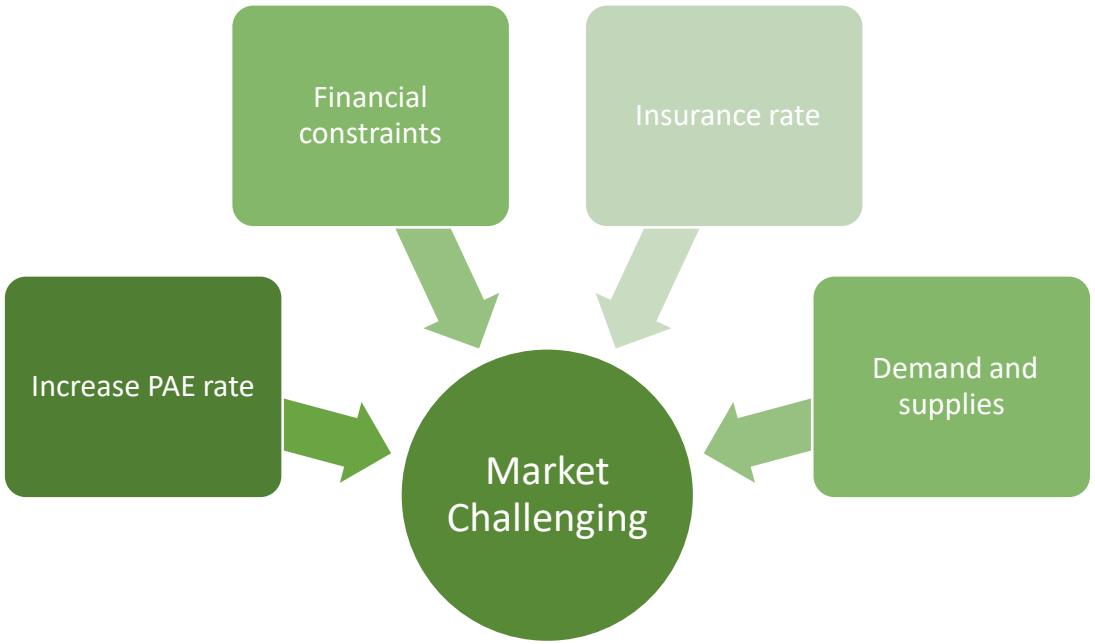
Use Proper Machinery and tools

- Advanced technological structures necessitate the use of specific construction machinery and precision tools

Project Cost

- Prioritizing on quality and safety, project cost may increase.

Market Challenging



- **Increase PAE rate**
  - Due to technical and operational challenging, PAE rate will be increased.
- **Financial constraints**
  - Construction projects may face funding issues, due to heavy financial commitments in other critical sectors.

. Insurance rate

  - Due to increased exposure to natural disasters, insurance rates in the construction industry are likely to rise.

- **Demand and supplies**
  - Post-earthquake, investors tend to shift their focus to other areas rather than invest in high-rise properties.
  - Demand for high-rise properties has declined significantly due to post earthquake safety concerns among buyers.

Strategic Approaches to Post-Earthquake Challenges for Developers



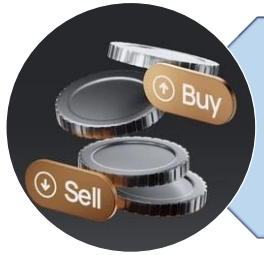
Supply Chain and Labor management

- Strengthen local supplier networks for seismic-grade materials to reduce import lead times.
- Upskill workers for earthquake-resilient construction practices.



Regulatory Compliance

- Engage seismic design specialists and collaborate with engineers certified in disaster-resilient standards.



Market Confidence and Demand

- Rebuild consumer trust through transparent risk mitigation and seismic performance assurance.



Financial Solution

- Introduce flexible financing schemes (E.g. Low interest loans, tax incentives, streamlined approvals, PPP & etc.) for reconstruction projects and future developments.



Thanks for Your Attention