The cost of improving existing housing

Liva Shrestha – Build Change

The Cost of Improving Existing Housing

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Background

1435 Retrofits → 223 representative designs → 67 Design groups

Cost Category	Category Description
Structural Condition Repairs	Repair or replacement due to damage
Habitability Upgrades	Basic health and safety standards
Finishings and Growth	Forward-looking interventions
Disaster Mitigation Measures	Mitigation of hazards in the event of an earthquake or windstorm

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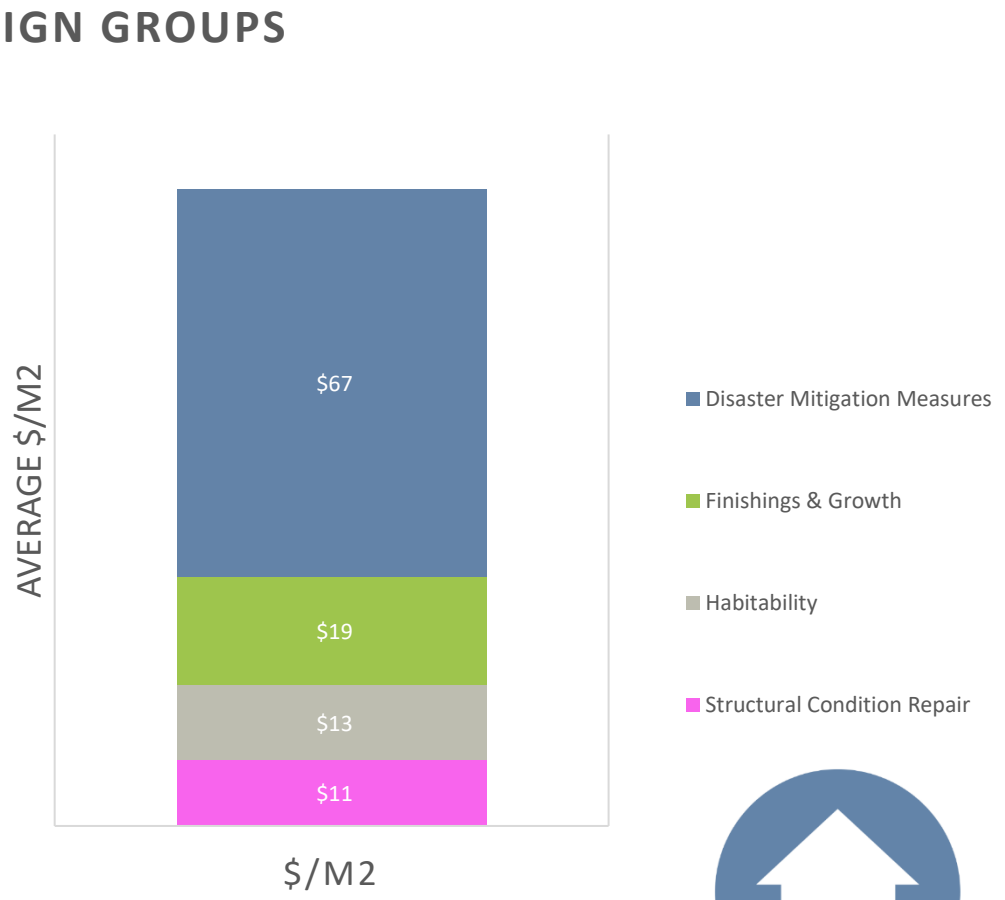
Overall Comparison

- 60% of the costs were associated with disaster mitigation measures and 40% of costs were invested in the other categories.
- Improving existing housing was on average one-fourth of the cost of new construction.



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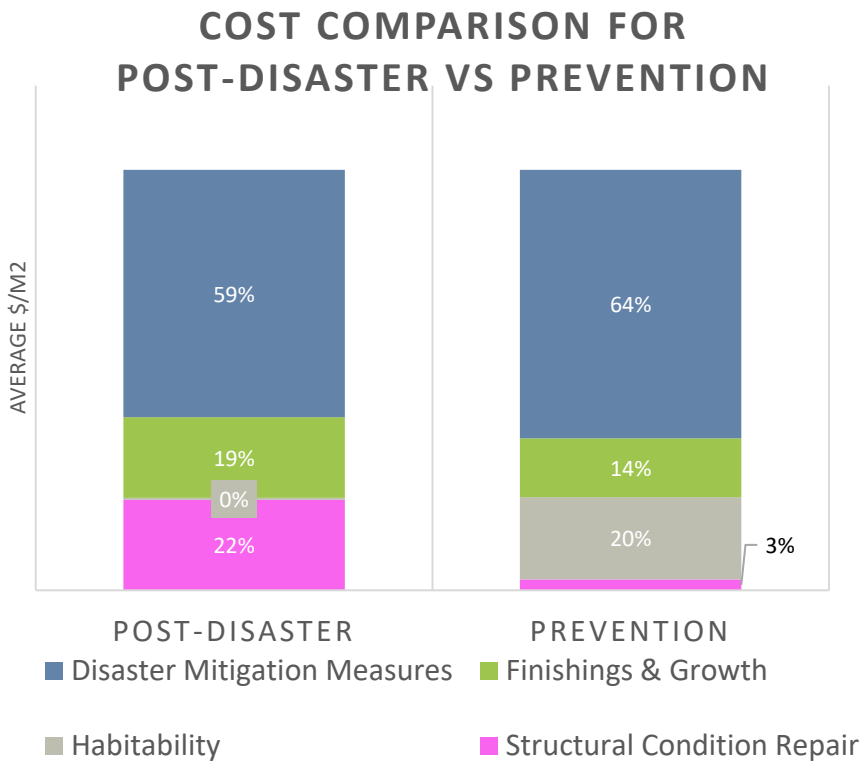
Comparison Based on Context

- Around 20-25% of the cost for post-disaster designs was in structural condition repairs, whereas for prevention, this was less than 5%.
- Around 30-35% of the cost for prevention designs was in habitability upgrades and finishings & growth, whereas for post-disaster, these were less than 20% together.
- The disaster mitigation measures were approximately 60% of the total cost for both contexts.



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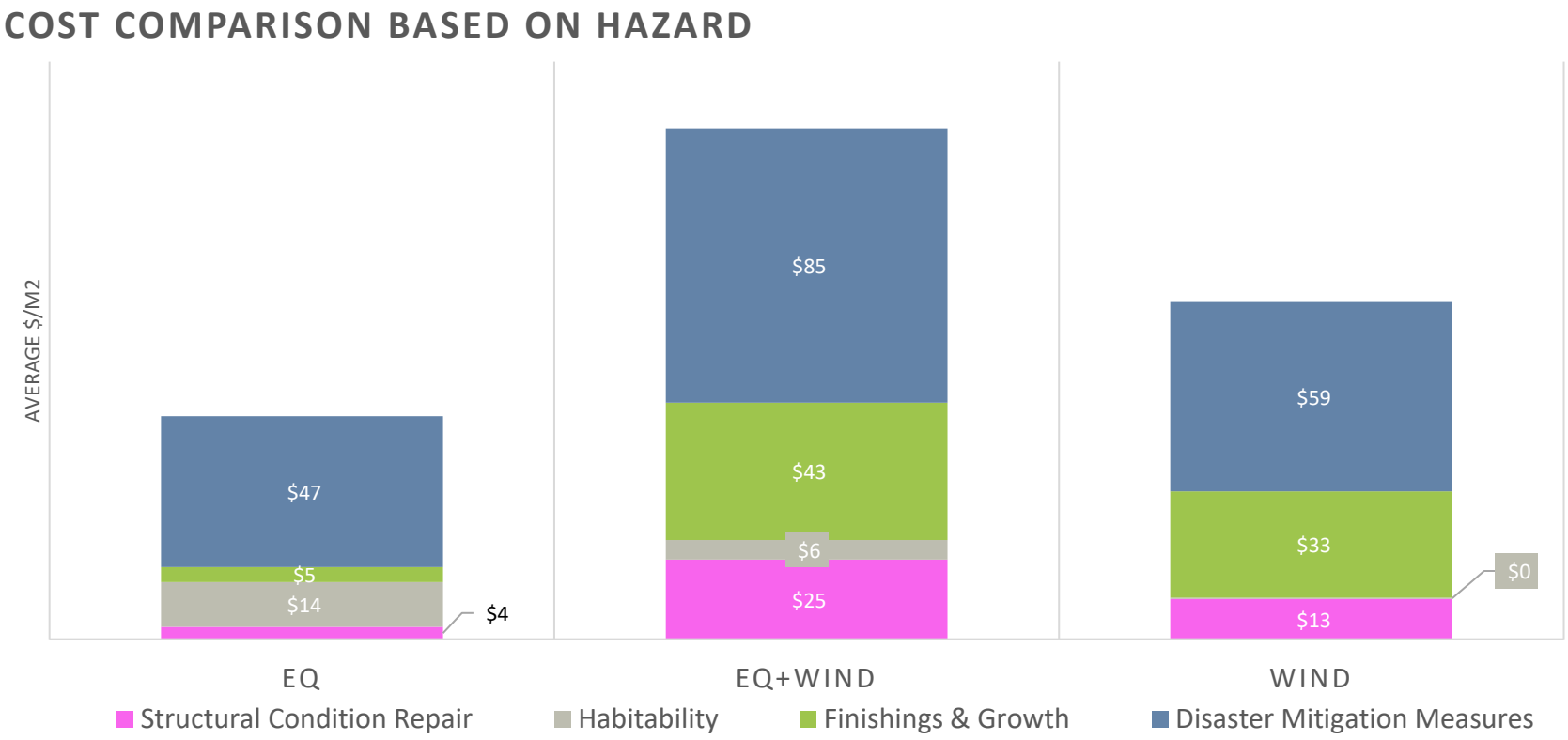
Comparison Based on Hazard

- Designs that were for both wind and seismic were approximately 80% higher cost for disaster mitigation measures than those designed solely for seismic.



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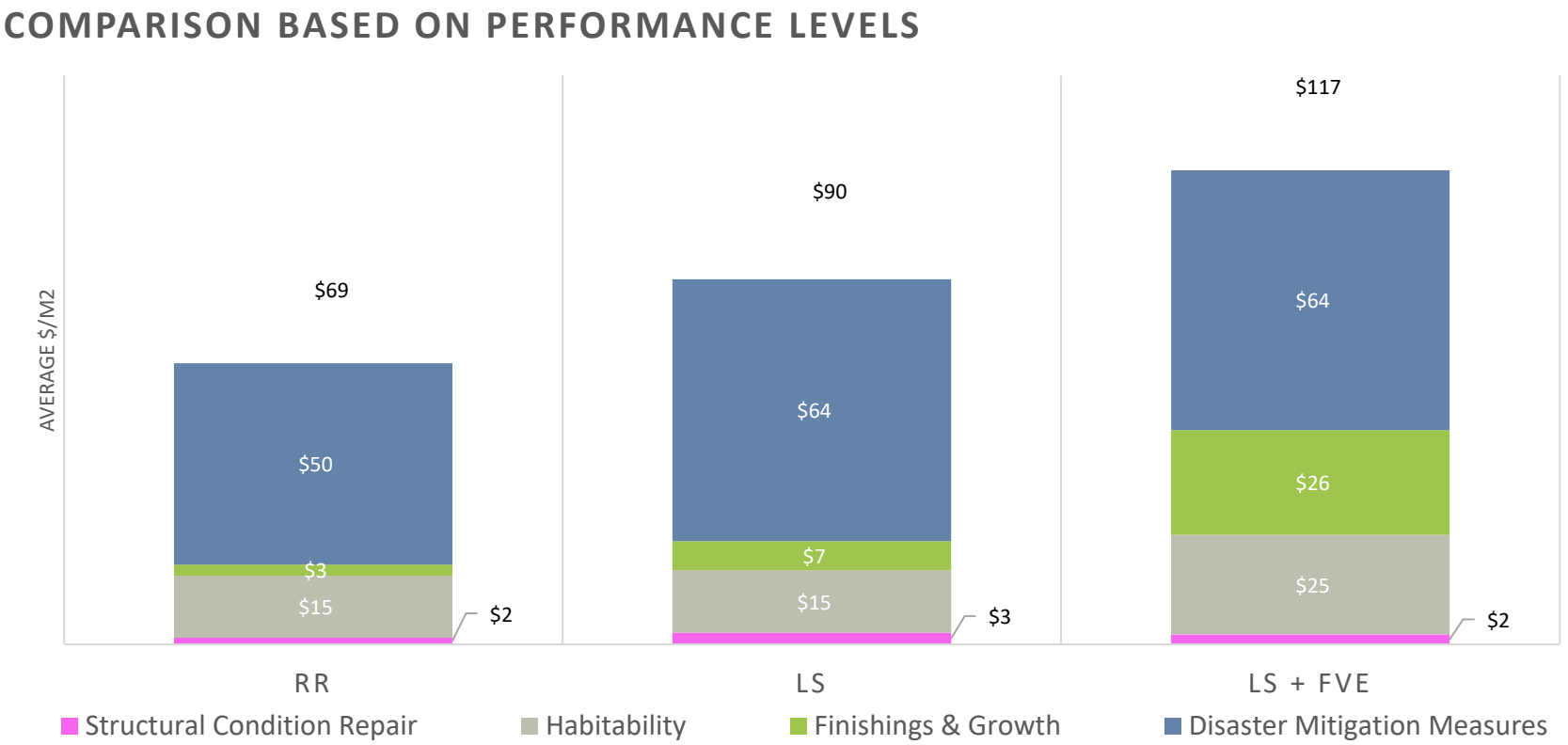
Comparison Based on Performance

- In prevention context, compared to a risk reduction intervention:
  - -Life safety code-level intervention costs 30% more
  - -Life intervention with future vertical expansion costs 70% more



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Thank You!

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