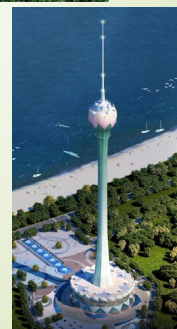
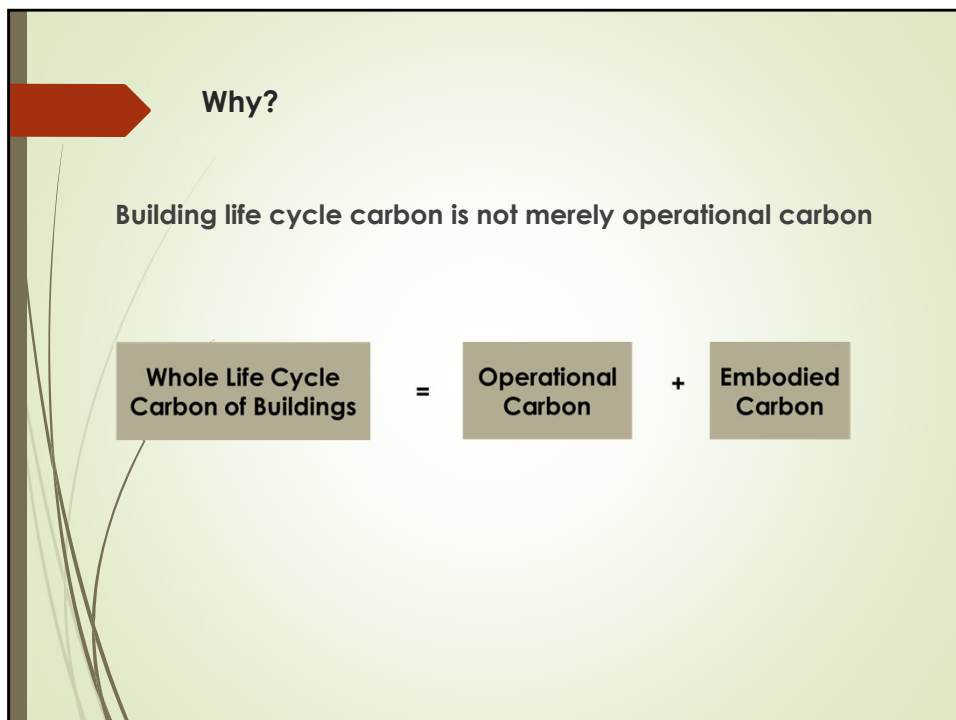
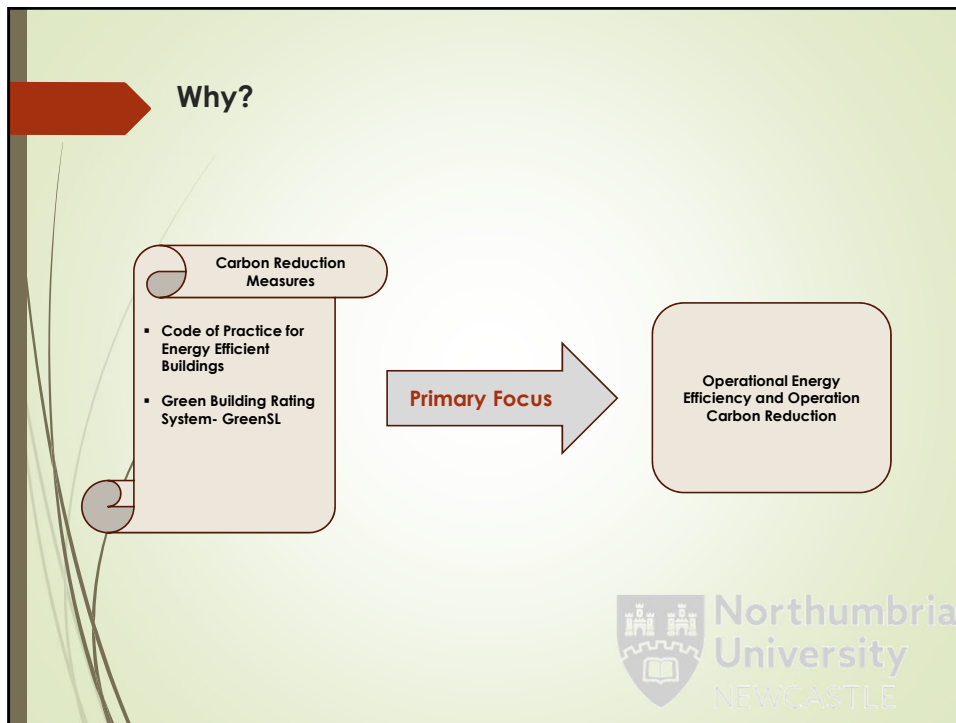



Estimating Embodied Carbon Emissions of Sri Lankan Buildings: An Early Design Stage Prediction Model

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Why?








Estimation is the main drive towards **Reduction**

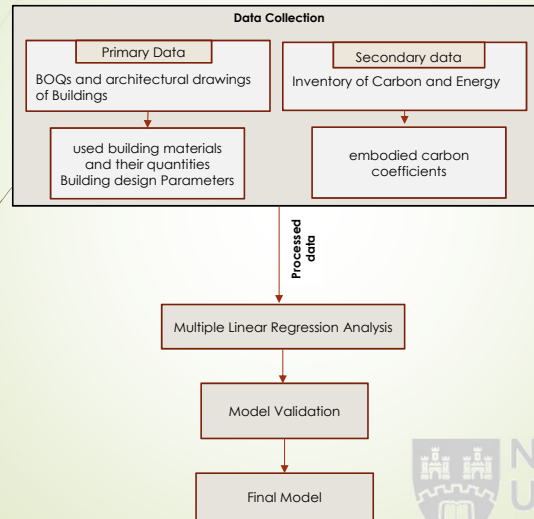


What?

Developing a contextualised **model** useful for **predicting** the **embodied carbon emissions** of **buildings in Sri Lanka**, during their **early design** stages



How?



Conceptual Model

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_p X_p$$

Where: Y is the estimated embodied carbon of the building,
 X_1, X_2, \dots, X_p are the independent variables such as height of the building, number of floors, wall to floor ratio,

β_0 is a regression equation constant

$\beta_1, \beta_2, \dots, \beta_p$ are the regression coefficients



Interpretation

- Embodied carbon in CO₂kg or CO₂kg/m²
- A representative value
- use in decision making process rather than deliberating on the level of accuracy of the numbers



Contribution to knowledge and practice

- A contextualised model useful for predicting EC emissions of buildings in Sri Lanka
- A base to convey the importance of EC estimation of buildings to policy makers, practitioners and decision makers
- A notion to the Government and Green Building Council to integrate EC estimation into building approval and awarding process as well to develop carbon reduction plans, policies and benchmarks
- An example that can be replicated for other developing countries

