

Methodology for Evaluation of the Lifecycle of Buildings with a Focus on the Private Sector

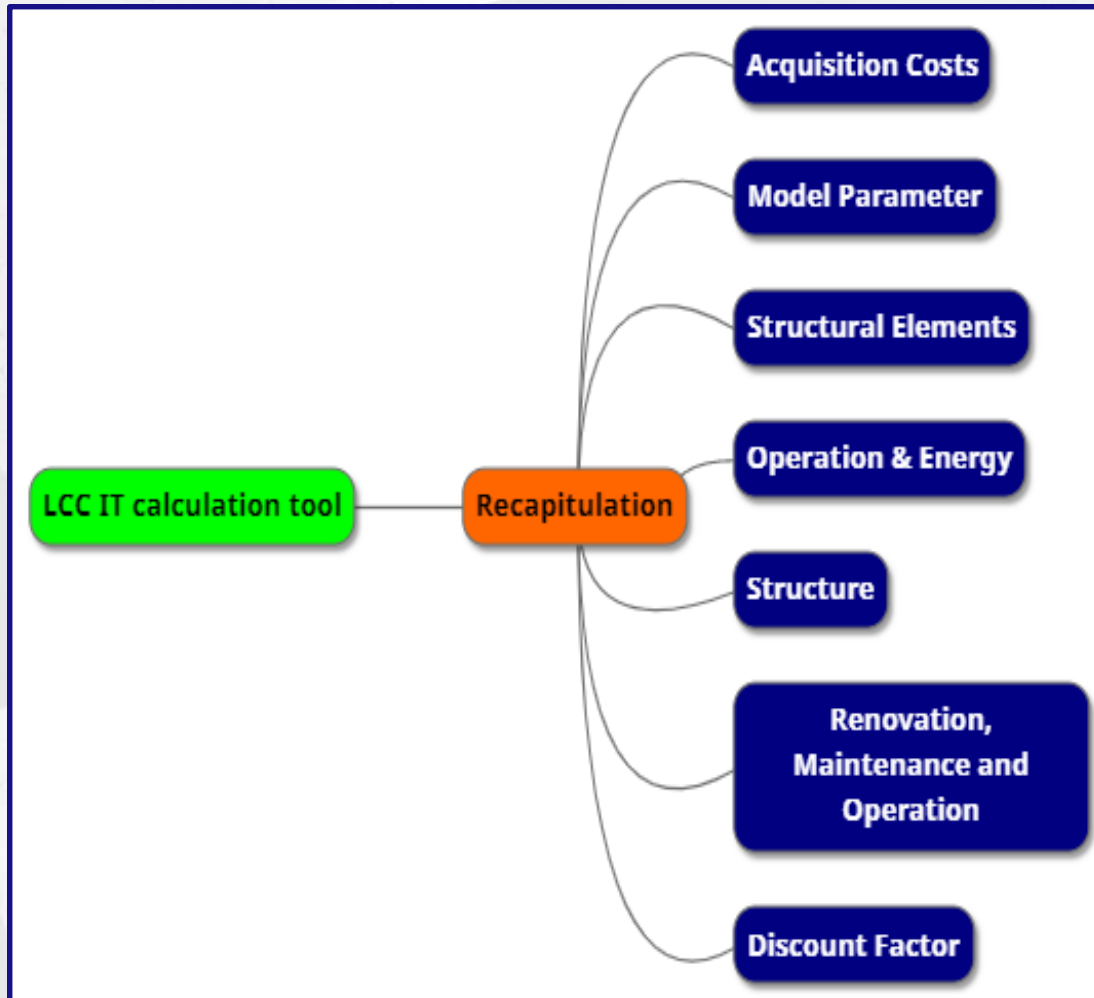
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Life cycle costs (LCC) = Initial costs + Future costs

- **Life cycle costing** is particularly useful for estimating total costs at the early stage of a project.
- The operating, maintenance and renewal costs that will be incurred during the life cycle of the building represent a multiple of the original construction costs.
- Decisions in the construction preparation phase significantly affect the total life cycle costs. Key cost factors include, in particular:
 - the size of the building,
 - the number of structural elements,
 - technical and mechanical service equipment and
 - the choice of construction materials.



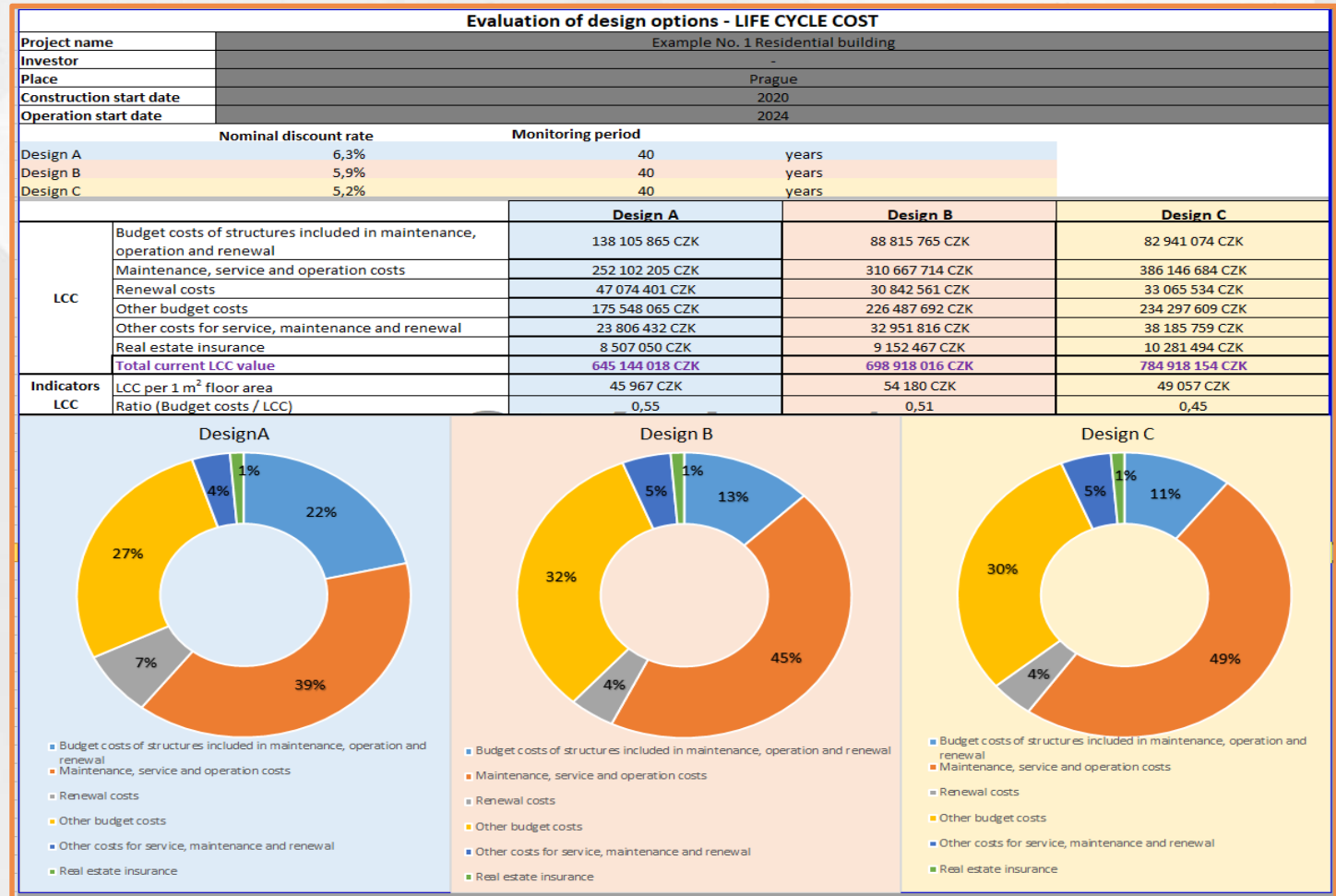
LCC calculation tool



- A benefit of the SW tool is **the possibility to model the life cycle costs for individual design options** with different input parameters.
- The user can choose the more efficient solution for him/her.
- The user may find out what will be the impacts of a more expensive but energy saving option like not only on energy costs but on the total LCC, too.
- Similarly, if the user includes a “maintenance” free equipment that requires higher acquisition costs, there is an apparent impact residing in the reduction of the maintenance costs but also in the value of the total costs of this project design option.
- The developed tool is therefore designed as an aid for those company workers who are in charge of the preparatory phase of the project.

Case study

- Life cycle costing is a **tool for informed decisions**. It involves the evaluation of several investment scenarios in the pre-investment phase, the choice between variants of the design of the entire building or its parts and the choice of variants of structures and equipment with acceptable parameters.
- What stems from this comparison at the first glance are **LCC per 1 m²** of the building. This index may be operatively monitored when optimizing future buildings designs.



Thank you for your attention!

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