

SBQ 2423

Type of Estimation Rates

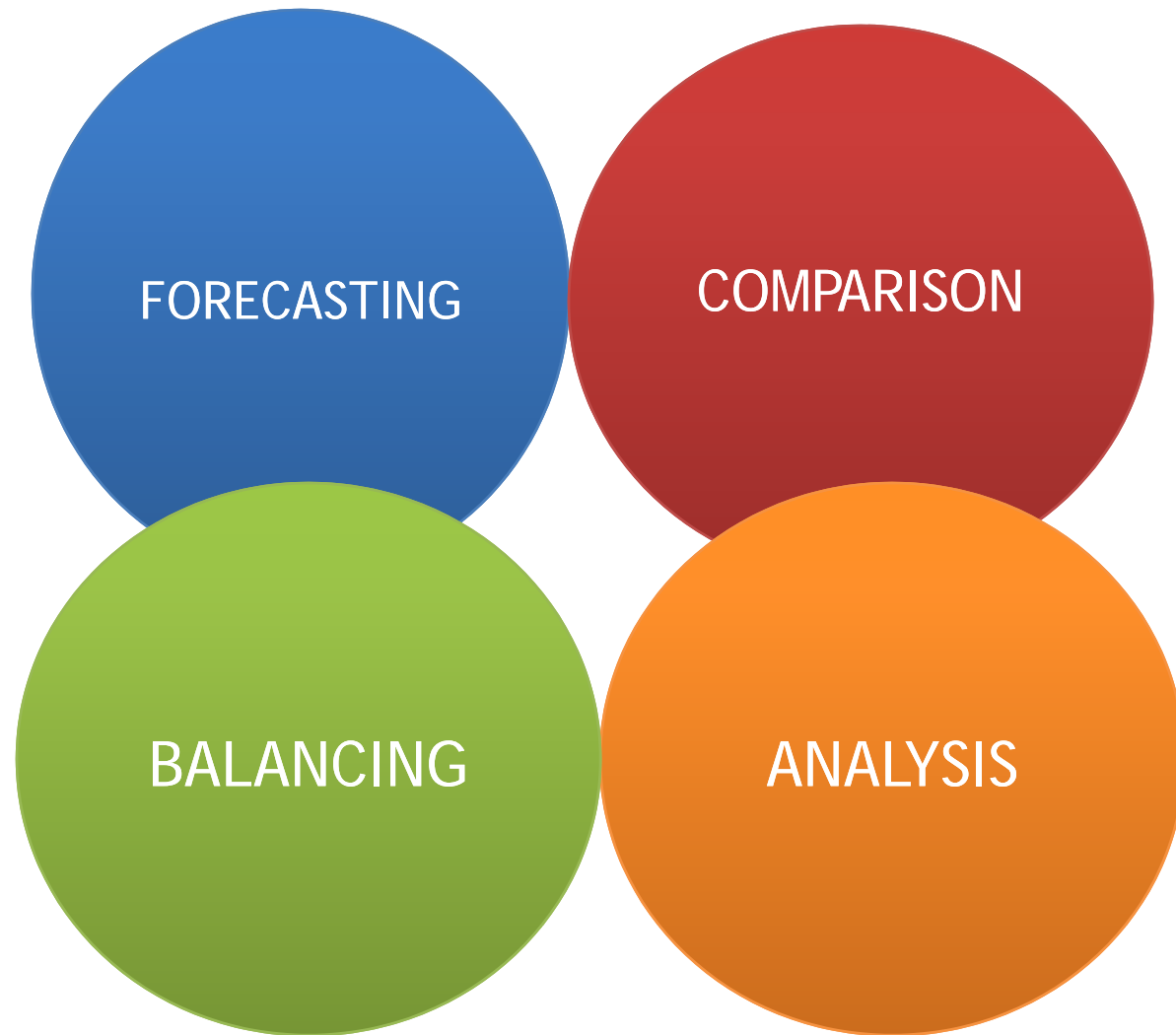
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General rule in estimating process

Process Involve



Forecasting

Process Involve

Information such as:

- Cost per m² for various type of building
- Elemental unit rates
- BQ rates
- All-in unit rates applied to quantity

Forecasting

Process Involve

These information would arise from an analysis of past project used to be updated to current cost using the cost index for the proposed project.

Comparison

Process Involve

To make a comparison between item with **similar function** between different design in order to make decision

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Balancing

Process Involve

Breakdown of cost into **smaller units** ie. How money are allocated to the various components of building in accordance with the clients requirement

This is important for checking purposes and **cost strategy** for development which can be obtained from past project.

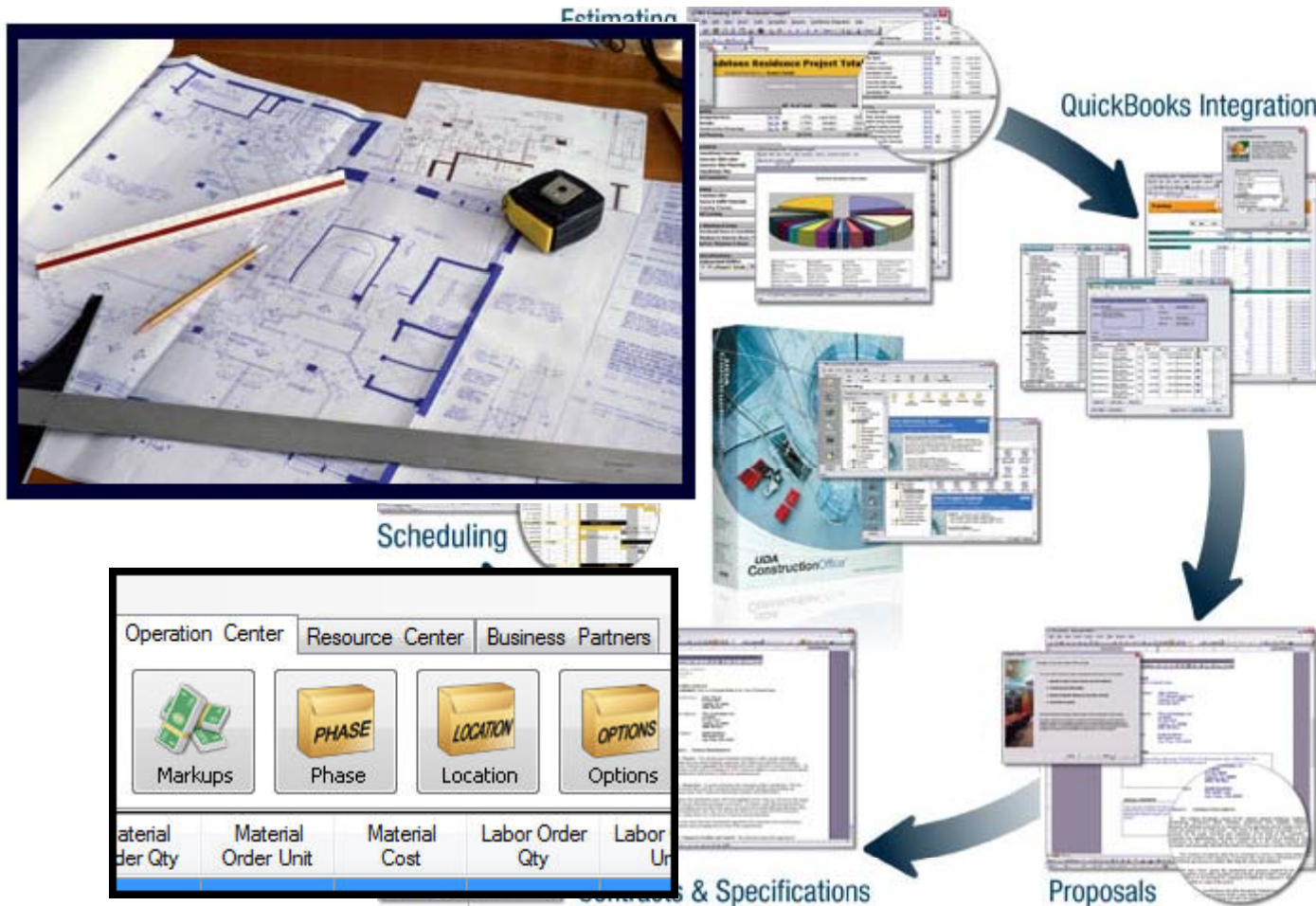
Analysis

Process Involve



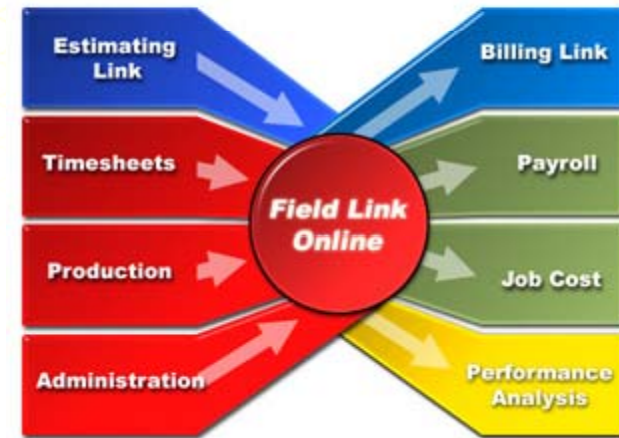
Type of construction estimates

Alternatives estimating techniques



ALTERNATIVE ESTIMATING TECHNIQUES

- Spot Items
- Operational Estimating
- Extension of Bills of Quantity
- Prime cost of day works



Construction Estimating



Spot Items

- A lump sum estimate of an item was calculated by doing some taking off from the approximate quantities and the unit rate
- The description of work within the bills are analyzed into its constituent operations and trades and estimated for costing purposes
- Upon having described the work and it is found to have a predominant trade, then a gang or operational assessment can be made on time, plant and material basis so that overall cost can be calculated. This is similar to the construction project management tools known as Work Breakdown System

Spot Items (cont'd)

- From the 3 previous method explained, the cost of labour, plant and materials should be separated in accordance to the general principle described for unit rates.
- The work should have been inspected thoroughly at the site visit and where necessary, a construction method aka method of statement should be established
- Adequate allowances should be made for the following items;
 - Storage
 - Temporary work including support
 - Access
 - Double handling
 - Small deliveries
 - Making good and;
 - Reinstatement

Operational Estimating

- In some cases, it is preferable not to use normal estimating procedure for calculating the unit for particular items contained in BQ
- Estimator may prefer to consider the inter-relationship of the trades involved in the whole operation
- This is frequently the case with R/C concrete structures, where the cost of placing concrete will depend on the ratio of formwork, reinforcement and concrete, the chosen method of placing concrete and the total duration of operation rather than the unit cost of placing individual sections or parts of the concrete.
- Based from this method of estimating, the plant, labour and materials rate are calculated based upon the total quantity of work and the total time available to perform the task.
- Example of the calculation can be referred at Appendix 1 Lecture 5

Extension of Bills of Quantity

- After all the net unit rates have been completed, the draft Bill should be totalled before the additions are made for project overheads and other allowances. Such extensions are normally made with separate sub-totals being produced for 4 basic elements namely the;
 - Labour
 - Plant
 - Materials and
 - Domestic sub-contractors

Extension of Bills of Quantity (cont'd)

- Further sub-totals are usually produced of any discounts contained within the unit rate in respect of materials, plant, sub-contracted items and PC Sums.
- The extension of the draft bill rates to produce net rates should be carried out in a manner to reduce clerical error and also to allow establishment of various sub-totals relating to elements of the work or trades as necessary

Prime Cost of Daywork

- The composition of the total day work charge will include the following costs:
 - Labour
 - Materials and goods
 - Plant
 - Incidental costs, overheads and profit (this addition will vary between labour, plant and materials)

This rate usually used to calculate any additional or omission work that is not stipulated in the contract but causes delay to the contractors.

Details of its definition and sample of calculation can be referred in Appendix 2 Lecture 5

Reference and further readings

- Ahamad Abdullah – Anggaran Kos Kerja Bangunan, 2nd Edition, Pearson Prentice Hall, 2011.
- Edition, Peurifoy, R.L and Oberlander, G.D. – Estimating Construction Costs, 5th Edition McGraw-Hill, 2002.
- Popescu, C.M, Phaobunjong, K, Ovararin, N – Estimating Building Costs, Marcel Dekker Inc 2003.