# Project Report #31: Cost estimating and BIM


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# Background

- Project initiated at ICIS DA 2015, Brno
- Preable:
  - “This report seeks to investigate cost-estimating systems in general, and how these systems are or can be BIM compatible”
- We have worked separately and exchanged information via emails/online meetings
- The project group had a workshop in Prague April 10th. Very useful

# Definition

- “A cost estimate is the approximation of the costs of the resources needed to complete the project activities. The accuracy will increase during the iterative loops of the planning phase”

# Different types of cost

- Construction cost
- Life-cycle cost, LCC, whole-life cost
- Environmental cost (carbon footprint, energy usage, sustainability)

# Description of cost estimating systems

- Czech Republic:
  - URS Praha - Providing cost data to the building and construction industry for more than 50 years.
- Norway:
  - Norconsult Info.systems:  Developing cost estimating software for both early project stages and contractors cost calculation incl. life-cycle cost, LCC, whole-life cost
- Finland:
  - Cost estimating solution “Taku system” based on the “Target price method”

# Cost estimating with BIM

- BIM are based on objects, cost data are usually not
- Methods of connecting cost estimates to BIM:
  - Standards
  - Object libraries
- Maturity of BIM
  - Levels from 0 to 4

# Cost estimating and BIM

- Challenges in Cost estimating with BIM
- The process of BIM Based cost estimating
- A survey of current cost estimating practices in the UK

# A survey of current cost estimating practices in the UK

- The study shows that the major causes of inaccuracy in cost estimating continue to be the lack of practical knowledge of the construction process by those responsible for the estimating function, insufficient time to prepare cost estimates, poor tender documentation and the wide variability of subcontractors' prices.
- Main factors relevant to cost estimating practice are complexity of the project, scale and scope of construction, market conditions, method of construction, site constraints, client's financial position, buildability and location of the project

# Thank you for your attention

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