



*Life Cycle Models in Indoor Environment and Building Services*

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## **CUBENet – Life Cycle Models in Indoor Environment and Building Services**

TKK Heating, Ventilating and Air-Conditioning	ABB Current Ltd	Kiinteistön Tuottoanalyysit Oy
TKK Construction Economics and Management	Are Group	Puzair Oy
VTT Industrial Management	Helsinki Energy	Skanska Oy
VTT Building and Transport.	PWD Construction Management	SOK Real Estate
Motiva Oy	HUS-Kiinteistöt Oy	SRV Group Plc
Tekes CUBE program	ISS-Facility Service Group	City of Turku
	JP Building Engineering Group	Uponor
		YIT Kiinteistötekniikka Oy

## Background

- Life cycle models in this context means procurement models with longer and wider liability of service provider
- Procurement contains design, building and operating. Contract period is 3-5 years
- Feasibility comparison: Life cycle costs and quality of building services, not primary costs of systems
- Demand exists, because current approach does not lead to optimal solutions in all cases

## General aims

- To develop basics to life cycle services to better fulfill the needs of customers and end users (on schedule, on budget and of maximum quality)
- To create solid fundamentals to future life cycle service business of companies

## Detailed aims

- To create and demonstrate several working life cycle models with different kind of guaranties during operating phase
- To compare life cycle services and traditional models
- International benchmarking of the models

## Detailed aims

- To create a toolbox to life cycle models usage
  - A set of target IEQ classes and services
  - Guidelines for the procurement and bidding process and selection criteria for bids
  - Guidelines and examples for contracts
  - Verification and risk assessment methods
  - LCC-calculation considerations
  - Business concepts

## Life cycle models

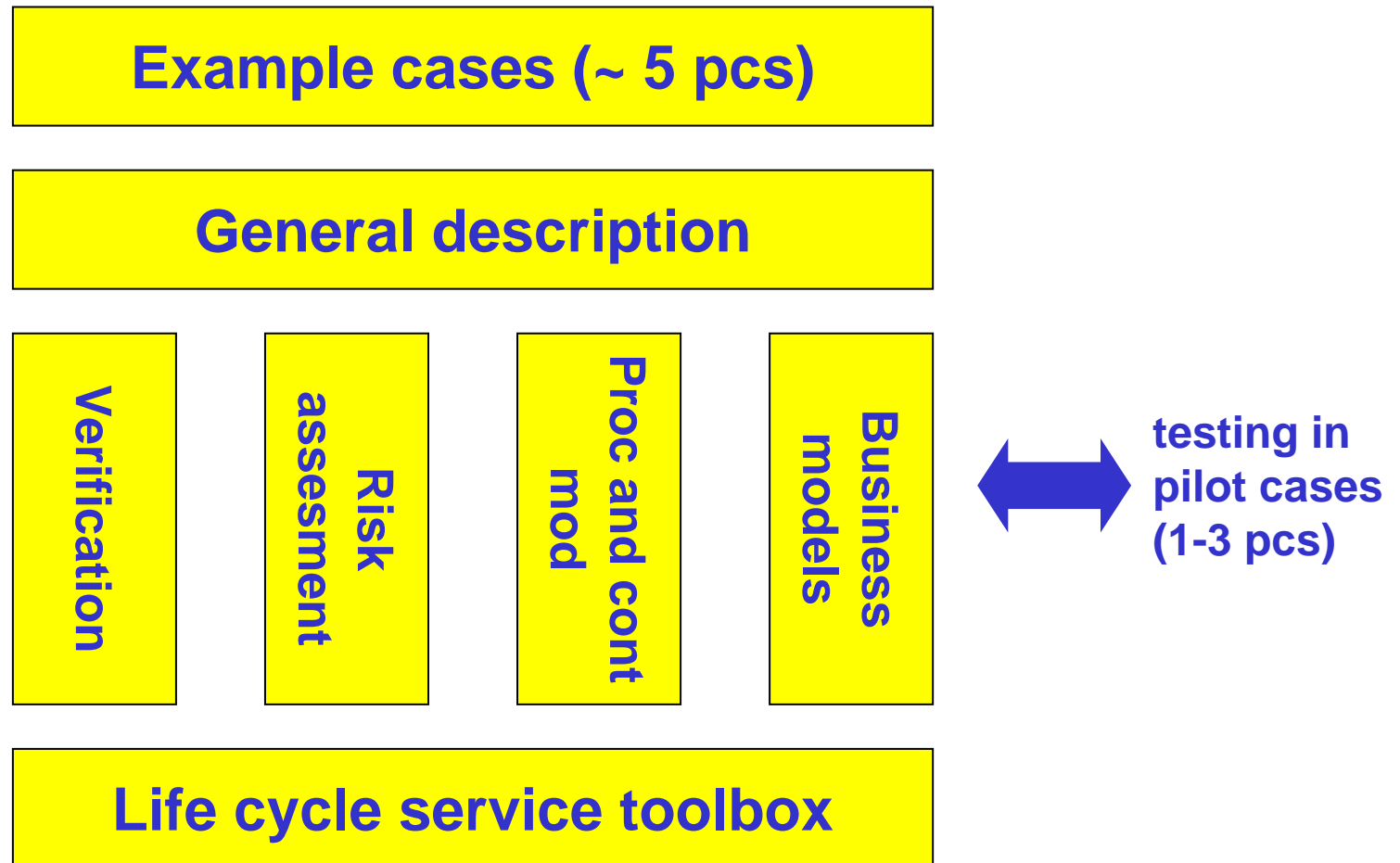
Life-cycle models are divided into three general categories:

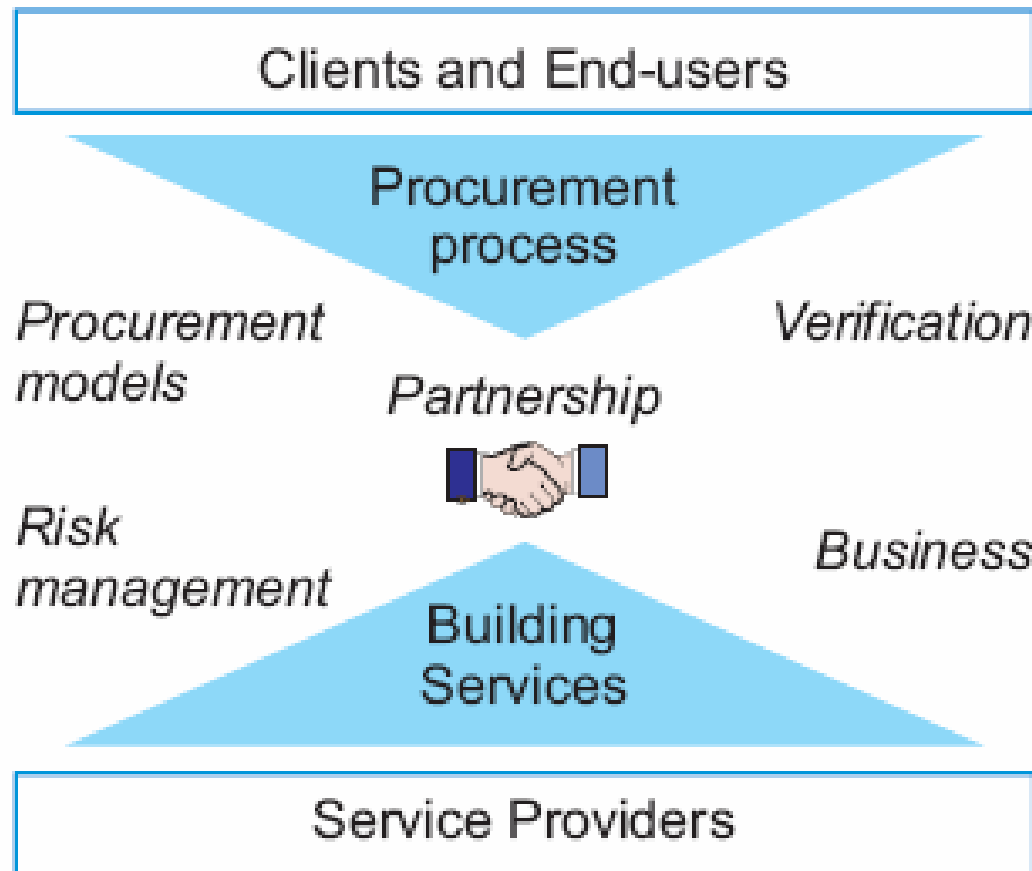
1. Whole building life-cycle projects including building envelope and building services
2. Building services life-cycle projects
3. Life-cycle projects of a single system or repair, such as Life-cycle ESCO

## Guaranties and services during the operational phase

- level of indoor environment
- efficiency of system functionality
- level of energy consumption
- level of repair and maintenance costs
- savings, deployment of building and its services
- improvement of service levels and quality

## Project





## Contact information

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