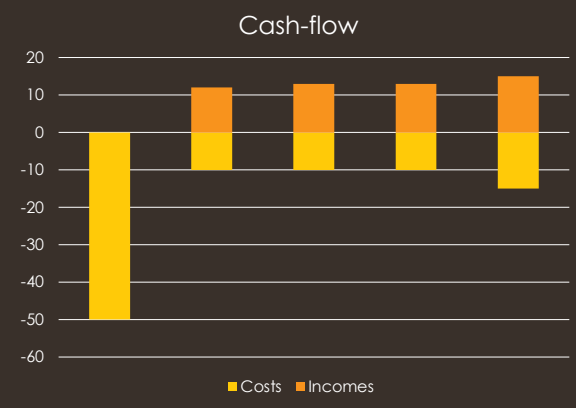
Financial questions of construction projects

How to think about money vs. architecture?

It's all about the money (?)

- Costs/expenses
- Incomes/revenues



What COSTS?

- Costs during the project
  - Building plot
  - Infrastructural facilities
  - Building
  - Outdoor constructions and installations
  - Furniture and artworks
  - Additional expenses
- Costs after the project:
  - Object management costs: (personal) costs in connection with the operation of the building
  - Operating costs
  - Maintenance costs

What COSTS?

- Cost estimation, calculation…
  - the accuracy depends on the details known
  - Basic budget →Cost plan →Cost estimation →Cost calculation →Cost check
  - preliminary estimation (based on samples)
  - cost estimation based on surface model (€/m2)
  - cost calculation based on technical specification (€/unit/work activity)

What COSTS?

- Preliminary cost estimation
  - Cost values of similar construction cases (functions)
  - Total cost / volume of an existing project (building) (m, m^2, m^3)
  - Currency unit / construction unit e.g. € / m^2
  - Planned volume m^2
  - Modifications based on technical/organisational/architectural aspects
  - ➔Estimated cost

What COSTS?

- Additional costs
  - Cost of the land/plot + Infrastructure
  - Preparation and organisation of the project (programming, surveying, management, PR, insurances, studies etc…) 2,5-15%
  - Designers (architecture & more..) 2-14%
  - Financing, legal costs 1-7,5%
  - Reserve and profit 5-20% (or more)
  - Interior design (Art, furniture, technology etc…)
  - Exterior (gardening, paving, etc…)

What COSTS?

- Future expenses
  - Management costs: salary of the staff, PR etc.
  - Operating costs: energy consumption (!), water, telecommunication, consumables
  - Maintenance costs: continuous maintenance and periodic refurbishments

Revenues at last

- Incomes
  - Based on the selling / renting prices of the different functions
  - Modifications based on the location, quality of the building, additional services etc…
  - Usage of the building
  - Risk
  - $NPV=-C_0+C_1/(1+r)+C_2/(1+r)^2+\ldots+C_T/(1+r)^T$
    (where C_0 is the initial cost, C_n is the cash-flow, r is discount rate and T is time)