

# Money, Dinero, Soldi, Geld

*In any language, project cost concerns are paramount*

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“How much will this project cost?” Always the first question asked when a new project is started, the answer can vary like night and day and is heavily dependent upon which costs are included in the calculation.

Most design consultants and builders consider design and construction costs to be *the* project costs. However, the comprehensive design and construction process includes many more components than just these expenses. Construction costs, regardless of building type, are tied to an extensive range of capital requirements —initial feasibility and due diligence, design and consulting costs, financing, construction, equipment, furnishing and maintenance costs, to name a few, each of which each carries its own associated cost components — that should be included in the project owner’s overall capital plan.

## MAJOR COST COMPONENTS

Capital costs for design and construction projects initially include expenses related to determination of the preliminary project scope. Each of these cost components varies significantly based on the project’s nature, size and location:

- Needs assessment development
- Due diligence, feasibility and market studies
- Land acquisitions, financing, closing costs and title work
- Environmental studies, site assessments and land improvements
- Planning studies and project strategy development
- Legal and accounting expenses
- Insurance and tax expenses
- Marketing, promotional and presentation expenses
- City utility capacity reservation expenses
- Internal overhead and staff expenses

Once feasibility has been established, design and construction costs may include:

- Consultants’ expenses, including architect, engineers, geotechnical, communications and information technology
- Construction expenses
- Permit and assessment/inspection fees
- Independent testing, inspections and lab fees
- Move management expenses
- Operational expenses, including property management, operating staff, security staff, utility consumption, maintenance and upkeep, continued insurance, taxes and other miscellaneous owner/operator expenses

## OFTEN-OVERLOOKED COST COMPONENTS

Cost estimates can be like comparing apples to oranges, and failure to include the true range of cost components results in a very misleading number.

Frequently overlooked in calculating true project costs is a building’s upkeep and utility consumption, which represent two of the most expensive long-term components. Contingencies for unforeseen events outside the control of the project owner or project team, such as acts of God or labor troubles, are also on the often-overlooked list. And sure to tick up the total are problems associated with incomplete documents, change orders and miscommunications between designers, contractors and project owners.

A good project strategy should acknowledge potential risks and include a risk management and contingency action plan. Failure to do so translates to an incomplete strategy and significant exposure to additional costs.

## THE BENEFITS OF A COMPREHENSIVE DESIGN + CONSTRUCTION STRATEGY

To address the often-asked cost question and address potential risks, a comprehensive project cost-modeling process must project, account for and track all costs throughout every phase of a project. This process must link with an all-inclusive milestone schedule and allow for real-time cost and spend updates while tracking all relevant project milestones.

A multi-phase, owner-centric matrix process constitutes a comprehensive design and construction strategy blueprint, covering the development, design, construction and commissioning of a total project from conception through completion. It also addresses one of the most common cost misperceptions in the design and construction industry: that project owners should pay for design deficiencies, incomplete documents, lack of schedule controls and unexplained third-party party expenses.

While most architects and contractors base project contingency on “historical experience” and a project’s difficulty, an customer-focused design and construction strategy company’s proven contingency for unforeseen events is administered with a comprehensive risk management plan and released back to the owner to either improve the investment or as clear project savings.

## STRATEGIC COST MODELING

Up-to-date cost modeling is one of the most important steps in the design and construction process, and the “cost plan” establishes the base line of the project cost. The project manager is charged with spearheading clear communications with all involved parties — the design team, contractor, project owner — and tracking costs for the duration of the project to leave no room for error.

A comprehensive matrix process has proven successful at accurately establishing project cost at the outset — when the owner relies on it the most — and providing an accurate tracking and projection capability to provide real-time cost information for key stakeholders as the project progresses. As a result, the project owner can make informed, timely decisions and assure compliance with the overall project budget throughout four phases:

■ **Production Function:** This phase formulates the relationship between a process’ output and the necessary resources.

■ **Empirical Cost Inference:** A statistical technique relates a facility’s design, construction or operation costs to the building’s important characteristics. Statistical inference estimates the best parameter values or constants in each individual project function.

■ **Unit Cost/Quantities:** A unit cost is based on actual cost information for labor and materials then projected against accurate quantities, and the total cost is the summation of product quantities multiplied by the corresponding unit cost. These cost methods appear to be straight forward in principle but are actually very time consuming and rely on accurate, up-to-date labor and material cost data.

■ **Allocation of Joint Costs:** Cost allocations from existing accounts may be developed to determine an operation’s actual cost function under the basic idea that each expenditure item within our cost plan can be assigned to particular characteristics of the operation. Ideally the allocation of joint costs should be casually related to the category of basic costs in an allocation process. For example, in the construction process, the accounts for basic cost may be classified according to labor, materials, equipment, supervision and fees. These basic costs can then be allocated proportionally to various tasks that are subsets of a project. The same can be accomplished when developing a comprehensive project cost plan that may include due diligence, design, legal and accounting, construction and operating costs.

## PLANNING FOR SUCCESS, CONTROLLING OUTCOMES

Estimating is necessary for the development or building of a project cost plan, and an accurate estimating process is critical to a project’s success. Since design and construction costs only constitute a fraction of the overall project budget, a comprehensive cost plan must be developed at the onset of every project in order to control the outcome. And in any language, a customer’s budgetary interests must remain paramount.

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