

# Construction Management and project process



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International Business Process



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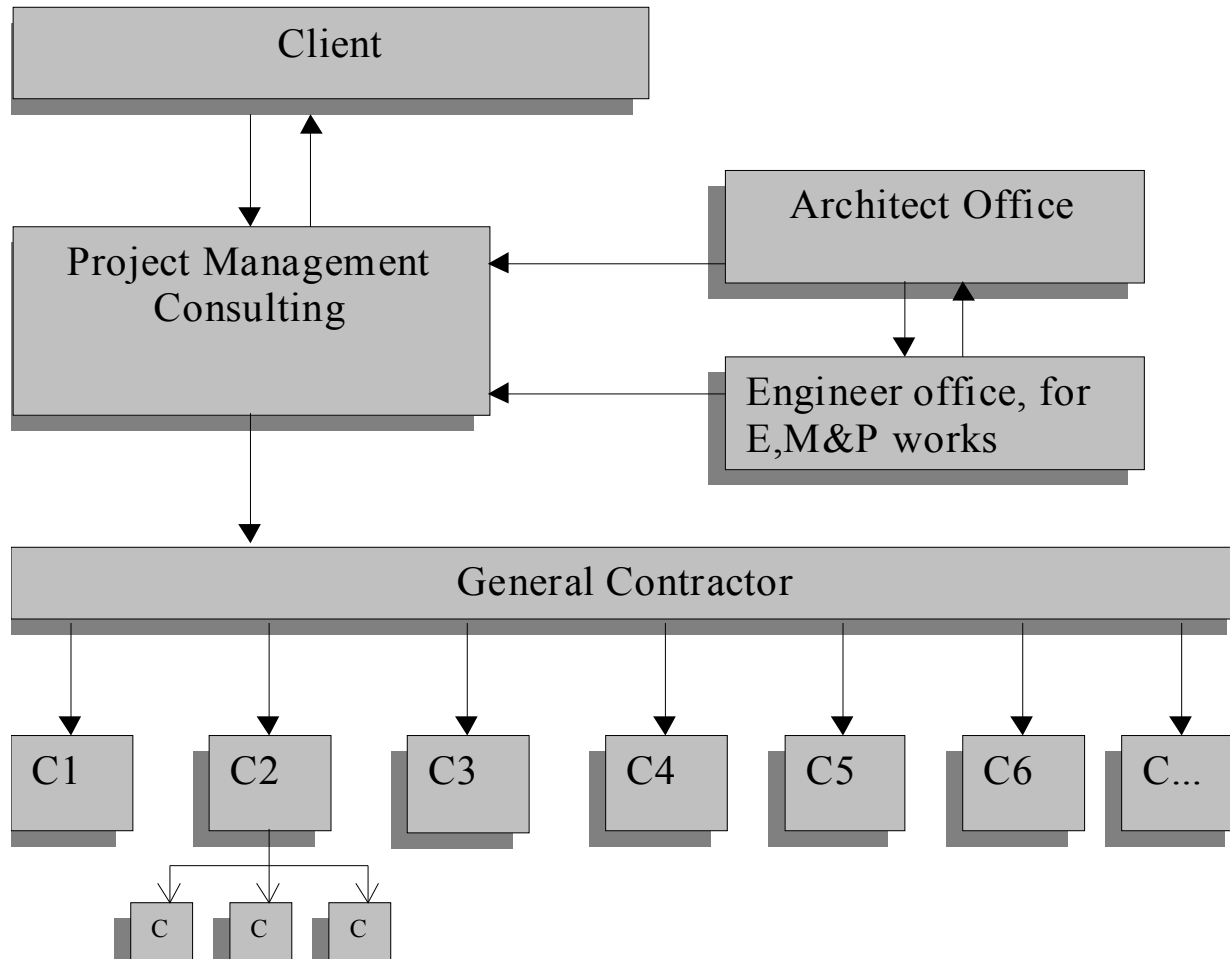
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# Construction Management and project process



	Process	Management
<b>Planning Stage</b> Project Master Plan	_____	<b>1 CM at Planning Stage</b> Feasibility Decision Making Process Project Planning Operation Planning
<b>Design Stage</b> Drawings Specifications	_____	<b>2 CM at Design Stage</b> Design Review Building Permits Cost Planning Construction Planning
<b>Bidding Stage</b> Contract Documents Alternatives	_____	<b>3 CM at Bidding Stage</b> Bidding Evaluation of Proposals Negotiation, Contracting Procurement
<b>Construction Stage</b> Construction Report Buildings	_____	<b>4 CM at Construction Stage</b> Quality Assurance Schedule, Cost, Safety Negotiate Additional Works, Claims Authorities Relations
<b>Maintenance Stage</b> Maintenance Manual Renovation	_____	<b>5 CM at Maintenance Stage</b> Facility Management Maintenance Training Building Diagnosis Renewal Planning

# Construction Management Model



# Construction Management at Planning Stage



- Needs Assessment, project requirements and needs
- Project planning, the project scope, budget, schedule, methods and procedures to be followed
- Management process, responsibilities of the team, levels of authority, decisions systems
- Decision making process, develop procedures for approvals by the owner
- Collection for all information at the planning stage
- Master schedule, a rough estimate of the cost of construction

# Construction Management at Design Stage



- Selection of the architect
- Review of the Progress Payment
- Obtain the required Permits
- Cost control, to ensure that the budget is met as the design is developed
- Recommendations for owner's direct purchase materials
- Monitoring of design stage, to ensure that complies with the master schedule
- Value engineering, analyze the project and operation functions to achieve the necessary functions and performance at the minimum life cycle cost
- Coordination with the neighbors

# Construction Management at Bidding Stage



- Preparation of Bid packaging, and list of potential, bidders
- Bidding, preparation of questionnaires, interviewing potential bidders and advertisement to solicit bids for the project
- Prequalification, setting criteria for bidding selection
- Providing alternatives for building specifications
- Evaluation of the proposals
- Communication with contractors
- Negotiations and contracts with contractors
- establish a strategy and standards for evaluation of subcontractors

# Construction Management at Construction Stage



- *Quality control, inspection and instruction*
- *Construction photo, video and record management*
- *progress payment to contractors*
- *negotiations for additional works*
- *Handling of claims*
- *Control of master schedule*
- *Safety management*
- *Handover agreement, final inspection and owner's certificate of acceptance*
- *Commissioning and testing, to assure that the performance of M.E;P works complies with the specification*



# Construction Management at Maintenance Stage



- Establishment of maintenance organization
- Negotiation for maintenance contract
- Maintenance training
- Action program for emergencies
- Management of works related to maintenance and renovation
- Building diagnoses
- Security planning

# Outline of success factors in Construction Management



- Human factor. Agreement among the team, high motivated and initiative members of the team.
- Project planning as more detailed as it is possible with focus on the cost and time of implementation.
- Ensure that the budget is met as the design is developed.
- The main contract as well as contracts for additional works are important factors
- Constant, effective communication between all the actors involved in the project. Controlling, replying and quoting as fast as possible.
- Keep on schedule as close as possible by controlling quality and the progress of the project according to the time-plan.