

# Project management strategic issues construction essay

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Delays and over budget are inevitable in building industry irrespective of the type and complexity of the undertaking undertaken which could be contributed due to ineffective project direction among other factors. Project Management is the “ The art of directing and organizing human and material resources throughout the life of the projecta^|a^|a^| to accomplish preset aims of range, cost, clip, quality and participant satisfaction ” ( PMI ) . The highlighted key words are the critical factors which determine the success of the undertaking.

It has to be kept in head that excessively much focal point on one factor can take to compromise on the staying which can in turn lead to unwanted results. In add-on though “ Participant satisfaction ” chiefly implies on client satisfaction, in ideal undertaking direction system it is preferred to take for cooperation from other stakeholders in order for smooth closeout of the undertaking. The aim of this study is to analyse a undertaking in footings of undertaking director ‘ s function in happening the right balance between these cardinal factors for successful undertaking.

## **Undertaking Brief**

The undertaking was envisioned to supply a commercial /office edifice in premier location opposite Deira metropolis centre. It consists of G+10 edifice and the demands were to supply salesrooms in the land floor and offices in the floors above along with necessary belowground parking as per the local ordinances ( estimated and provided in three cellars ) . The cardinal characteristic of the edifice was the full 10 storey height atrium flanked by two office blocks on either side. The glass facade of the atrium was to let full

position of the inside of the edifice with its bird's-eye lifts providing to the office blocks.

Plot and Project countries Plot country 3993 sq. mt.. Show suites country 3993 sq. mt. Office country 9024 sq.

mt. No. of showrooms/shops 10 No. of offices 71 Entire built-up designed is 36,000 sq. mt. Early Cost Estimates The initial estimation of the undertaking sing three cellars was Dhs. 79 million and subsequently was modified Dhs. 91 million when extra cellar was added into the design as per client 's demand.

Organisation chart demoing related stakeholders

## **Client Representative**

### **Representative**

### **Adviser**

Undertaking Architect/Project Manager Site Supervision squad

## **Main Contractor**

### **QS Consultant**

### **MEP Consultant**

MEP Contractor ( Sub- Contractor ) Shoring Contractor ( Sub-

Contractor ) Aluminum Glazing and Space frame plants ( Nominated

Contractor ) Other Nominated and Sub Contractors /Suppliers Duties of the

Client Representative and Consultant With mention to RICS 1999 the duties of client representative were identified as follows: Site choice Project analysis &

A ; feasibility surveys Agency, rating & A ; proposal of required support Brief and critiquing of design Attending all meetings and raising their concerns Cash flow Construction economic sciences & A ; fiscal direction Statutory conformity in footings of ownership duties Occupancies Consultant Project squad was noted to hold following issues for which he was responsible for: Design and quality control Other adviser assignments Statutory conformity in footings of design and building demands Contract process Contract Management It is noted that Client representative function is closely related to the demands of Project Manager though in this undertaking their chief standards and focal point has been on commanding cost. Even though adviser undertaking squad duties included contract process and contract direction client representative reevaluated all of the adviser ' s recommendations before doing any fiscal determinations. This might hold been cost effectual method harmonizing to client but this lone lead to insistent work, misgiving and defeat among the parties involved. Due to extreme examination on cost, less focal point was made towards clip and quality direction holding the undertaking a failure on these facets. Consultant ' s function was chiefly to carry through the FIDIC ordinances based on which the contracts was made. Project Key events April 2005 Concept start of the undertaking June 2005 Concept design sign-off by client with 3 cellar parking September 2005 Client informing that they require extra parking more than the local Regulation ' s demand taking to redesign of the belowground construction to increase to 4 cellars November 2005 Tender issue and Local authorization blessing entry February 2006 Receipt of Tender commands April 2006 Receipt of Local authorization blessing May 2006 Award

of contract to Main contractor by client Construction period confirmed as 16 months July 2006 Nomination of Shoring contractor August 2006 Notification of start of tube plants on one side of the secret plan taking to redesign in shoring plants ( a more complex system ) and decrease in basement country. September 2006 Start day of the month of undertaking on site reciprocally agreed by client and contractor shoring the holds due to metro plants.

September 2006 Bursting of H2O line mains running along the secret plan during digging taking to impermanent halt at site issued by governments until necessary rectifications. October 2006 Shoring plants stopped on side of secret plan due to metro plants November 2006 Issue of lift stamp January 2007 Issue of Glazing stamp May 2007 Award Of contract to Lift contractor. Client besides informing their demand of extra lift catering to office edifice. This would besides take to alterations in the form of the atrium.

June 2007 Award of contract to Aluminium, glazing and infinite frame works to Nominated Sub-contractor. Authority blessings received for the lift and atrium alterations September 2007 Building making the land floor. May 2008 Termination of the site squad from the adviser squad due to hapless supervising in footings of quality September 2008 Demolition plants in office floors instructed by client as per the demands of possible renter. March 2009 Re-awarding of contract of glazing and infinite frame works to 2nd Nominated contractor due to hapless public presentation of 1st sub-contractor.

Dec 2009 Project constructing blessing received by governments. June 2010 Building tantrum for business after major fixes of faulty glazingplants.

## **Time Delays and Cost Overruns**

Time DelaysThe undertaking incurred assorted holds chiefly due to hapless procurement systems and hold in determination devising by client for nomination. The undermentioned issues can be accounted for the Time holds in the undertaking. Requirement of extra cellar by the client months after design sign-off taking to redesign of the foundations. Metro plants plans begin next to the secret plan coercing redesign of conventional shoring plants to more complex shore system.

Due to incompetence of shoring contractor there was hold in having authorization blessings and building. Damage of the H2O chief line running along the secret plan during digging doing deluging into the secret plan and work arrest until the lines were repaired and rerouted. Requirement of extra lift, alteration in shaft size and redesign of construction nucleus. Extreme hold in nomination of the Aluminium, glazing and space-frame plants by the client representative even after the Tender was released good in progress. Delay by nominative glazing contractor in subjecting relevant stores drawings which besides lacked in quality for adviser blessing.

Nominated contractor did non hold local piecing mill doing it more hard for mill reviews. The quality of work at site was besides non up to the grade.

Due to hapless public presentation by the glazing contractor there was demand of rigorous supervising from the adviser side in which they failed to

make so. This led to expiration of the site squad and replaced by more experienced building directors and safety officers from adviser side. Due to hapless supervising many plants which were non up to the grade had gone unnoticed and subsequently had to be redone. As the glazing contractor was unable to bring forth choice stuff for the atrium, determination was made to take atrium from their range of work and nominate new contractor for this work. Though de-scoping is non as per FIDIC, complete expiration of the glazing contractor could non be carried out as per ordinance as they were transporting glazing plants at the office block. This de-scoping of plants if contested by the glazing contractor would hold lead to inauspicious consequence and set client at contractual hazard.

Hesitance by the adviser to transport out this determination due to this ground further delayed the undertaking continuance. Even after new glazing contractor was appointed, at several occasions they claimed to be unable to transport out the plants due to difficulty in design and short building period allotted to them. Client had issued instructions for extra range of work in footings of destruction of walls in the office block as per possible renter 's demands along with other extra plants. Increased fire combat demands as per new authorization ordinance besides lead to increase in range of work and drawn-out building period.

Client hold in release of payments to contractors coercing them to decelerate down their work. Poor appraisal of fluctuations carried out by the QS adviser required re-analysis by Client representative further delaying in

the release of payments for work done. This besides resulted in contractor to decelerate down their work.

Due to initial hapless site supervising many of cladding plants were built outside the secret plan bound which is against authorization ordinances and these plants had to be rectified. During concluding authorization reviews there were assorted design ordinances overlooked necessitating rectifications and extra work. Undertaking building start day of the month was considered as 3rd September 2006 and planned for completion 3rd January 2008 ( 16 months ) but was completed merely on 31st December 2009 taking to detain of about two old ages. There was hold of farther 5 months due to mend plants before the edifice was ready for business. Construction of cellars entirely took 12 months. Overall plan of the undertaking including design was 5 old ages. Cost Overproductions Though chief focal point of the client representative was to cut down cost this lone lead to detain in clip and via media on quality of constructing being constructed. Initial estimation of the undertaking was considered as Dhs.

91 million, Tender contract monetary value was finalized as Dhs 114 million out of which Dhs. 24 million was devoted to Client nominative contractors/suppliers. The concluding contract value has been estimated to Dhs.

128 million, an addition by 40 % more than the design estimation. This is due to inaccurate appraisal of client nominated bundles and client holding to



counterbalance the Main contractor for hold in undertaking. Nominated contract value had increased by Dhs 9 million.

Variations were extra Dhs 3 million and Dhs. 2 million was awarded to contractor against Extension of clip and cost claims. The concluding contract value does non include the extra fees incurred by the client for extra resources and advisers fees for the hold in undertaking. Besides due to detain in undertaking client lost valuable renter for whom the fluctuations in edifice were carried out doing these re-works redundant.

## **Relationships Between Project Management and Project Delays and Cost Over Run**

Effective Project Management is non merely presenting undertakings within the budget, on clip along with acceptable quality but besides good client and contractor direction." In general, cost overproduction and clip holds are normally a consequence ofIn efficient design: as some of the design characteristics can be really dearly-won and difficult to build. Tension and adversarial civilization: Lack of trust and assurance between the undertaking squads ( client, contractor and adviser )Discontinuity of squads consequences in the lag of the advancement of work as it takes clip for squad members to construct trust.

"( Kaka 2003 )Lack of good defined functionsThere was no clear limit between the functions of the Consultant Project Manager and the client representatives. Consultant undertaking director was besides the Undertaking designer therefore more focal point on design and quality. Time direction was non given precedence. There was deficiency of formal

undertaking direction systems. In this undertaking, " Undertaking Champion " had function of the undertaking director and " Undertaking Sponsor " made determinations which ideally should hold been carried out by the undertaking director. Ineffective Project Communication HierarchyThe Project squad hierarchy was fragmented such that client had communicating at several cases straight with contractors short-circuiting undertaking director. Many determinations were made which the undertaking director was incognizant of making many troubles for the Project Manager to command public presentation of the contractor.

In effectual methods of Tender command and analysis procedureThough most of the stamp issues were prepared and released on clip by the adviser, all stamp commands were submitted straight to client representative office and stamp analysis was carried out without the engagement of undertaking director. During monetary value dialogues assorted via medias were made to the specifications with no written certification. Supervision was carried based on initial specifications doing major struggle between contractor and adviser with client being wholly unmindful to the state of affairs. Poor Design Management and Sub-contractor SelectionProject Manager failed to choose the suited sub-contractors for two of the important and hard portion of the undertaking. In both instances the construct designs were hard to grok for readying of acceptable item design and farther more due to incompetence of the contractors really hapless quality public presentation was observed. Shoring contractor prequalification was non scrutinized because it was portion of Main contractor ' s in house company despite shoring plants being

critical activity in the building programme. The first Glazing contractor in malice of being new to the state was selected through lowest command procedure. They were besides appointed because of personal connexion to client ' s top direction.

The competence of the glazing contractor was non questioned by the undertaking director in malice of several warnings issued by the Main Contractor which showed complete carelessness on undertaking director ' s and client ' s portion. Environmental Issues - Metro plantsIt has been old pattern to construct shoring outside the secret plan bounds ( allowable by governments ) to supply client added advantage of doing full usage of their secret plan country for the cellars. But due to recent substructure developments governments have been rigorous with their ordinances " All buildings on private belongings impermanent or lasting have to be within secret plan bounds " . This ordinance was over looked by undertaking director during design phase doing demand for redesign and holds in having necessary authorization blessings. In accurate appraisal and contractor ' s Billing IssuesChoice of the QS was made based on the lowest command and non competency. Design cost appraisal was in accurate particularly in client nominated bundles. Client ' s obsessional accent on cost resulted in excessively much clip spent on measuring the measures and fluctuations submitted ensuing in hold of release of payments and contractor protesting this by decelerating down their work. Though client achieve enormously in cutting down cost claims they merely managed to decelerate down the undertaking as the grudges raised among the contractors.

Project director failed to happen effectual solution to guarantee timely payments and accurate fluctuation computations. Poor SupervisionAs attending was chiefly on non-performance of the subcontractors, site squad slacked in their work and attempts to better the building quality and clip direction. Their competency was non questioned during undertaking startup and their public presentation was non monitored. Due to which sculpt issues such as building cladding outside the secret plan bound which is against ordinance was overlooked and had to be rectified after punishment was imposed by the governments detaining the undertaking by several months. Besides though the information of H2O lines brinies running through secret plan was passed on to the contractor during the start of the undertaking, proper monitoring and safety steps were non taken consequently. Design FeasibilityIt is indispensable that constructing aesthetic characteristics add value to the edifice and have functional quality.

The atrium though added ocular sweetening, the functional facet is questionable particularly after sing the attempt put into building of the same. Undertaking direction squad had failed to carryout design feasibleness survey to guarantee all facets of the undertaking basically added value to the undertaking. Besides many ordinance demands were overlooked during design phase doing fluctuations during building.

## **Analysis of Strategic and Operational PM Actions for Successful Delivery**

Project Team Communication ProtocolIt is the Project Manager duty to set up proper hierarchy of communicating in order to guarantee that no information

bypasses the notice of Project Manager. Direction should hold been made that all stamp commands to be analyzed by the undertaking director and building director so that they could rede the client representative for effectual nomination of sub-contractors and providers. If cost was standards so project director should hold allowed for monitored value technology.

This manner quality is non compromised and there is no struggle between the involved stakeholders. Design and Procurement ManagementIn traditional procurance for specializer plants, it is normal pattern for design adviser to publish construct proposal to specialist contractors during stamp. They check the design for buildability before subjecting their command. The stamp command becomes inaccurate with the design demands is non good defined.

It is necessary for Project Manager to guarantee that the construct design is easy apprehensible and specifications are clearly stated by affecting specializer interior decorator. This will do certain that Nominated contractors have sufficient information based on which they can give accurate quotation mark and clip frame for building. Further as the traditional procurance method " Design Bid Construct " has failed for the specializer plants, they should hold been carried by agencies of " Management Contractor Procurement method " with Main contractor taking the duty of the Management Contractor.

In both traditional procurance system and direction catching method the Main contractor is entitled to per centum payment of the specializer work, it

is preferred that the specializer contractor is appointed by chief contractor instead than client as in this instance the Main contractor is responsible to name suited specialist contractor and client shall non necessitate to counterbalance the chief contractor in footings of clip and cost if the specializer contractor does non execute. Besides Management contractor ensures effectual incorporation of specializer programme into the chief building programme. Undertaking Manager should besides guarantee choice of experient contractors particularly for critical activities. Appointment of effectual Technical and Supervision Team Undertaking Manager to take rigorous determinations in guaranting the right resources in footings of design, supervising and wellness and safety are provided harmonizing to complexness of the undertaking. Monitoring of work public presentation to be carried out by readying of day-to-day and hebdomadal studies, QA/QC reviews, regular briefing meetings to guarantee the site supervising squad are cognizant of the demands and alterations to be carried out at site. Regular safety and quality audits steps would hold prevented work slack.

Besides employment of QS experienced for the demands of this undertaking should hold been carried out in order to avoid mistakes in analysis of interim measures and fluctuations and insistent rating due to misgiving of the client. Knowledge about environing developments Probes of the surrounding development and authorization ordinances updates if carried in frequent and regular intervals, information sing beginning of tube plants and new regulations sing shoring within secret plan bounds would hold been passed on to plan squad for incorporation into their design during the item design

phase. Other PM actionsTransporting a elaborate Work Breakdown Structure particularly for the specializer works in order to place the troubles and arrange for solutions from the right expertness. Carry out regular hazard appraisal and advise contractor sing recovery plans or back-up programs. Contractual direction in footings of more rigorous contract clauses and punishments against hapless quality work and holds in order to guarantee contractors are kept in cheque.

Advise client sing the debut of fluctuations in progress before the work is carried out to avoid redesign or destruction and reworks, both which have repeatedly occurred in this undertaking. Stronger specifications and prequalification demands for nominative contractors to guarantee quality public presentation. If the client required cost film editing, supply value technology solutions. Carry out quality and feasibleness appraisal of the undertaking design before executing for thin design and building.

## **Decision and Lessons Learnt**

Lessons learnt and experience gained is built-in portion of Project direction procedure to let for public presentation measuring. On analysing this undertaking we can reason that: Though the Project Manager function works towards client satisfaction it is besides duty of the undertaking director to inform them when their actions are non profiting the undertaking and even take rigorous actions if required. Client direction is really indispensable for such scenario.

Experienced Project Manager to be employed to guarantee complete and successful direction of undertaking from origin phase. Effective application of direction and planning tools required to transport out clip, cost and quality direction and avoid dependence on building programme entirely. This helps to rede the client for speedy but prudent determination devising in procurances and successful bringing of undertaking.

Stringent control of cost is non needfully advantageous for the undertaking and perfect balance has to be found between quality, clip and cost. Little addition in budget can easy increase work public presentation quality and salvage clip. Involve experts advise for critical activities even if it is seems conflicting with client involvements as it will turn out beneficial at ulterior phase.

Employment of experient advisers for undertaking and non yield to lowest command choice. Project direction should use effectual and suited procurance system for the undertaking and non automatically follow methods which have been on a regular basis practiced. Common pattern is non ever the best pattern.

Adopt cognition gaining control methods in order to update assorted alterations in environment and authorization ordinances which might impact the undertaking. Executing and following proper communicating hierarchy protocol. Undertaking Manager to be individual point of communicating between the chief stakeholders as in the organisation chart. Reding the client that regular hard currency flow is indispensable for the advancement



of the undertaking and hold of payments as agencies of punishment for bad work public presentation is non best solution to better the building public presentation.