MANAGING COST, CONTRACTS, COMMUNICATION AND CLAIMS: A QUANTITY SURVEYING PERSPECTIVE ON FUTURE OPPORTUNITIES

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ABSTRACT

In future, the pro-active and effective management of cost, contracts, communication and claims - the four Cs - will consistently become more important to developers and facilitators involved in physical structures and property.

The quantity surveyor and cost engineer should understand the challenges and opportunities presented by the needs of clients in relation to cost, contracts, communication and claims and perhaps focus their development on the important links between these functions.

Changes and developments in the industry and market will also influence the way in which these functions are managed. For those professionals who deliver these services to the industry, the focus should be on client satisfaction and a positive experience for all concerned. Establishing a link and effectively managing the process to ensure success should be the primary aim of the manager. This should be done in close partnership with all functionaries, engaged in the process.

Planning, controlling and co-ordinating budgets and **cost** plans, as well as **communicating** results will limit **claims** and facilitate the processes of contract management. The **contract** should also facilitate partnerships and the system should be aimed at satisfying needs, seeking opportunity and pursuing growth.

The arguments above are currently the object of this research, and the results are outlined in this paper.

Key words: Cost, contracts, communication, claims

1. INTRODUCTION

This paper deals with the importance and the role of costs, contracts, communication and claims, as well as the influence of procedures related to the latter elements, in cost management, project management and quantity surveying.

The management of the elements will be discussed in respect of the following:

- Goals: The main aims and goals of the four elements mentioned above.
- Methods, tools and techniques: The most effective methods, tools and techniques that may be used in construction projects which are related to the four elements.

- Results: The expected results of the implementation of procedures related to cost, contracts, communication and claims will be addressed and how these may positively influence the property development and construction process.

2. THE MANAGEMENT OF COST

"He that counts all costs will ne'er put plough in the earth" (Scottish proverb in Browning, 1982: 378)

2.1 Aims and goals of cost management

The basic goals of cost management and the pricing of a project or product relate to the link between price and intrinsic value, affordability in relation to needs or investment, and managing the procurement process.

Cost managers (cost planners) should therefore understand that they need to work with clients (investors) from the very inception of a project, even earlier, and then throughout the process to ensure the best results. This does not mean that a cost planner or cost manager is a "cost cutter", far from it, a cost manager should take responsibility (with designers, the client and other role players) to ensure that the interests of the client, community and environment are served (Ferry and Brandon, 1991: 5).

Grover Cleveland (cited in Nel, 1992: 43) stated the following about property investment**:** "No investment on earth is so safe, so sure, so certain to enrich its owner".

However, one also has to take best value into account as well as the principle to put available funds to best use. This includes gearing, cost design or design-to-cost, cost planning, cost control, architecture, location, environment, etc.

Sound investment has proven its value, been a safeguard against ill fortune, produced income, provided security and shown itself to be a way of producing wealth (Nel, 1992: 43). Utilising funds to best effect will improve these benefits even further.

The cost manager needs to understand that the type of construction required for a building will also influence the performance of the building over time, including the functional performance of the users' environment (Mole, cited in Venmore-Rowland, Brandon and Mole, 1991: 307).

Ashworth (2002) proposes that the emphasis should always be on securing developments that best satisfy the criteria identified by the developer (client) at inception, including the type, scale, standards, funding, cost and timing of a project. Different tasks need to be performed by different people involved in respect of design, cost, forecasting, planning, organizing, motivating, as well as controlling and co-ordinating the management functions (Ashworth, 2002: 5).

The cost managers should be continuously involved from the design to the co-ordination and auditing, to ensure best cost results, specifically in commercial property, where investment is required to yield the best financial returns.

Other areas of cost management that need attention are cash flow, the timing of payments, interest rates and the availability of funds at specific times. These aspects also influence the total financial outlay and eventual returns on a property investment.

Kenley (2003: 3) stresses the potential value of improved and strategic cash flow to enhance the profitability of the construction industry, with the further potential to offer reduced costs to the client and improved contractor performance.

Cash-flow forecasts and management should therefore be part of the cost manager's service to ensure that the developers receive the full benefit of pro-active attention.

The cost manager's (Quantity Surveyor's) involvement must go beyond a re-active service. It should also include a service that takes the following aspects of value into account:

- Physical: a quality building
- Psychological: a pleasant-looking building which is good to live in, "places of the soul"
- Real quality: cost effective but with specifications that fit the purpose
- Durability: taking life-cycle costs and whole-life costs into account
- Design: design-to-cost, cost design and appearance
- Affordability: budget and returns are important
- Timelessness: short-term fashions as opposed to design that will withstand the pressures of current whims

The cost manager, while communicating alternatives and options to the designers and the client, should remember the role of relative quality, affordability, returns, as well as the latter's link to design and specification.

2.2 Quantity surveying and cost management methods and tools

Although cost management may be seen as an obvious and simple process, in reality it is not. All aspects associated with a project have a direct impact on costing and how it is managed (Knipe et al., 2002: 257).

The quantity surveyor is ideally placed to manage this complex process. If the methods are followed diligently and the tools used effectively, cost management may produce exceptional results.

2.2.1 Design-to-cost (cost design)

This process is based on design aimed at satisfying the parameters dictated by cost, cost of acquisition, operation and management.

The process may also be described as cost design where such design is defined as designing a project in economic terms, taking into account the cost and cost benefit of each element of the project in an effort to balance the interrelationship of all cost elements and the reason for its existence (Knipe, 2002: 276-277; Verster and Berry 2005: 20-40).

2.2.2 Value Management

Value Management is a systematic approach and process earlier referred to as value engineering, to ensure delivery of a function or product at the lowest cost without detriment to quality, performance or reliability (Ashworth, 2004: 409-421; Green, 1992).

Value management is a continuous process that should occur throughout the project but is most effective when implemented right from the inception of the project. Moreover, it should also include the following aspects:

- Orientation: Understanding the issues
- Information: Identification of functions, needs, budgets, project constraints and timing
- Speculation: The creative development of ideas and alternatives
- Analysis and evaluation: Elimination and filtering of ideas
- Development: Examination in detail
- Selection: The final proposal
- Conclusion: Presenting the findings to the client

The most common approach to a value engineering study is the 40-hour workshop usually initiated when 35% of the design has been completed (Ashworth, 2004: 412-413).

Value management is one of the effective tools available to quantity surveyors who are in a position to play an important role in ensuring that the client and designers actually consider all value- and cost-related aspects of construction, design specification and development options.

2.2.3 Cost planning

Cost planning is used to ensure that the developer knows in the early stages of a project what the anticipated final cost of the total development may be, including the cost of land, legal issues, demolitions, buildings, professionals, furniture, connections, tax, financing and management. Building cost is only one of these items, but the quantity surveyor or cost manager should include all costs in the cost plan or estimate of final cost. The cost planner should have a clear understanding of cost and budget targets to enable him to advise the developer about possible future over-runs and pro-actively to provide alternative solutions (Ferry and Brandon, 1991: 9).

A complete system of cost planning must comprise cost planning and control during the design process as well as the construction procurement stage. During the design stage, the system includes finalizing the brief, investigating solutions and developing the design (Ferry and Brandon, 1991: 183).

One of the most effective tools that the quantity surveyor uses to assist with the planning and design process is the elemental cost plan. The theory behind the analysis of building costs per element is that the total cost is a sum of the cost of individual "so-called" elements such as walls, roofs, foundations, etc. (Morton and Jaggar, 1995: 41-43).

The model for cost plans, endorsed by the Association of South African Quantity Surveyors (ASAQS), includes 10 sections and 68 elements.

The ten sections are:

- Primary elements
- Special installations
- Alterations
- External works and services
- Training
- Preliminaries
- Contractor's fee
- Contingency allowances
- Escalation
- Value added tax

The primary elements of the structure of a building are the following: foundations, ground floor construction, structural frame, independent structural components, external envelope, roofs, internal divisions, partitions, floor finishes, internal wall finishes, ceilings and soffits, fittings, electrical installation, internal plumbing, fire services, balustrading and miscellaneous items (Association of South African Quantity Surveyors (ASAQS), 1998: 1-6).

Effective cost advice will place the client in a position where strategic budgeting can be performed based on sound knowledge of all influences (Knipe et al., 2002: 276-277). The estimating process according to Knipe et al. (2002: 257, 276-277) should add to a more comprehensive understanding of all benefits and associated costs.

2.2.4 Cost control

Linked to auditing, cost control is an activity that is aimed not only at reactive reporting of decision results, but also at accounting for the decisions and visions of the client and advising the client how best to achieve desired outcomes (Knipe et al., 2002: 257).

Cost control happens throughout the deployment process, from the briefing stage to completion. Benefits are derived during all stages including the briefing, sketch plan, approved sketch plan, production drawing, receipt of tenders, and construction stages (Ferry and Brandon, 1991: 181-185).

2.2.5 Cost Checking

This process is necessary to ensure that the client is always informed about the actual performance of the building in cost terms in relation to the budget or cost plan.

The actual cost of each element or section of the building as the detailed designs are developed is checked against the cost target or cost plan, or specific elements in the cost plan (Seeley, 1983: 14).

Cost checking is a continuous process and should be an important element of pro-active cost management.

One needs to understand that cost management methods and tools are integrated and do not stand on their own. Every method used is part of the bigger picture to ensure the most effective support to the developer.

2.2.6 Cost analysis

Cost analysis supports the quantity surveyor's service to the client and can provide the quantity surveyor with useful cost information and data. Three forms of cost analysis are identified by Ashworth (2002: 69), namely:

- Identification of major cost items
- Analysis of the annual user cost of building ownership
- Identification of those groups of items (elements) of cost importance.

The identification, analysis and comparison of costs and items, as well as element-related costs, enable the quantity surveyor to assist the developer and designer in investigating more cost-effective alternatives, enabling them to deliver a project that yields the best results.

2.2.7 Cost-benefit analysis

The aim of cost-benefit analysis is to establish the real benefit of expenditure, not only in financial terms, but also in terms of time and energy expended by human resources, and the social benefits (Ferry and Brandon, 1991: 12-13), or in the words of Ashworth (2002: 4), "… to evaluate the economics of costs incurred with the benefits achieved".

Although this technique is largely discredited, it still provides support to evaluate aspects which have a monetary value, while intangibles, such as social benefits are merely assessed and shown separately to be decided upon in objective terms (Ferry and Brandon, 1991: 13).

2.2.8 Whole-life appraisal (life-cycle costing)

Whole-life appraisal or life-cycle costing, also known as "cost-in-use", describes the modelling technique aimed at coping with the mixture of capital and running costs of buildings and the effect on ownership of a building. This technique does not only analyse the effect of using different materials, finishes and equipment over time, but also investigates running cost in terms of water, energy, maintenance, electricity, heating, etc. It also takes the future value of money into account (Ferry and Brandon, 1991: 43-44).

The quantity surveyor must be very sensitive to the influence of all cost factors so that the client receives advice that is practical, applicable, timeous and effective.

In respect of whole-life appraisal, it is important to remember that the end result should be value for money that will flow from giving full consideration to maintenance aspects and possible future costs at the design stage (Seeley, 1983: 207).

2.2.9 Cost reporting

The quantity surveyor should ensure that continuous, accurate cost information, analysis, cost results and cost influences are reported to the client and design team. The report must be based on sound information and data, ensuring continuous pro-active action and effective management of the whole process.

2.3 Results

The effective implementation of the above tools, techniques or methods should result in a better product at a better price (or cost), with lower maintenance cost and an increased return potential over a longer period of time.

The quantity surveyor is the cost expert on the development team – indeed, he is the usual source of cost information and should always be a viable source of critical information (Havard, 2002: 225).

To be most effective, the services of a quantity surveyor should be used proactively from the earliest stage to the final stage of a project.

Of all resources, money is probably one of the most limited, and the real challenge is to utilize this resource optimally. The quantity surveyor is ideally positioned continuously to play an active role, but should also become more involved in strategic decisions to empower clients even more.

Regardless of what the Scots say, one needs to be sure that all cost-related risks are considered.

3. CONTRACTS AND THE QUANTITY SURVEYOR

*"**A verbal contract isn't worth the paper it's written on**"* Samuel Goldwyn in Peter, 1991: 121)

3.1 Aims and goals of construction contracts

A contract is a document that spells out the rights and obligations of parties and the administration of this interaction while protecting the parties against the risks that emanate from various relationships, actions and production.

Many alternative ways to procure contracts exist, but experience has shown that a partnership approach as opposed to a two-sided procurement method is preferable. The secret of success may be in the organization of rights, obligations and administration, in such a manner that mutual support by the parties and effective professional service to the contracting parties are important factors to be included in the contract.

Although the legal systems in countries are very specific to each country, there are important aspects that need to form part of any construction contract in any country to

ensure harmony, the parties' understanding of duties and the effective administration of obligations:

- Objectives: Offer acceptance and performance
- Preparation: Documents
  Design responsibility
  Agents
  Site representation
  Regulations
  Works Risk
  Indemnities
  Insurances
  Securities, guarantees etc.
- Execution: Preparation
  Access to the works
  Contract instructions of variations
  Setting out of the works
  Assignment
  Nominated and selected sub-contractors
  Direct contractors
- Completion: Practical, works and final completion
  Defects liability periods
  Sectional completion
  Revision of dates
  Penalties
- Payment: Interim payments to the contractor
  Adjustments
  Recoveries
  Final accounts
- Cancellation: By the employer or contractor and the rights related to
  Default and disaster
- Disputes: Litigation, arbitration, adjudication and mediation [Joint Building Contracts Committee (JBCC), 2005]

The above headings taken from an agreement show the general terms that should be included in a construction contract, but one needs to remember that many project-specific variables also need to be included in the agreement. The contract documents, apart from drawings and specification, should also include the following:

- Preliminaries - the management of the contract
- Trade preambles - basic standard specifications
- Bills of Quantities - depending on the method of procurement used, but compiled in accordance with an acceptable and agreed standard
- Guarantees

3.2 Procurement options

Although the quantity surveyor's service is traditionally linked to the production of bills of quantities, the profession has evolved to play a pro-active role in any procurement alternative and contractor selection process.

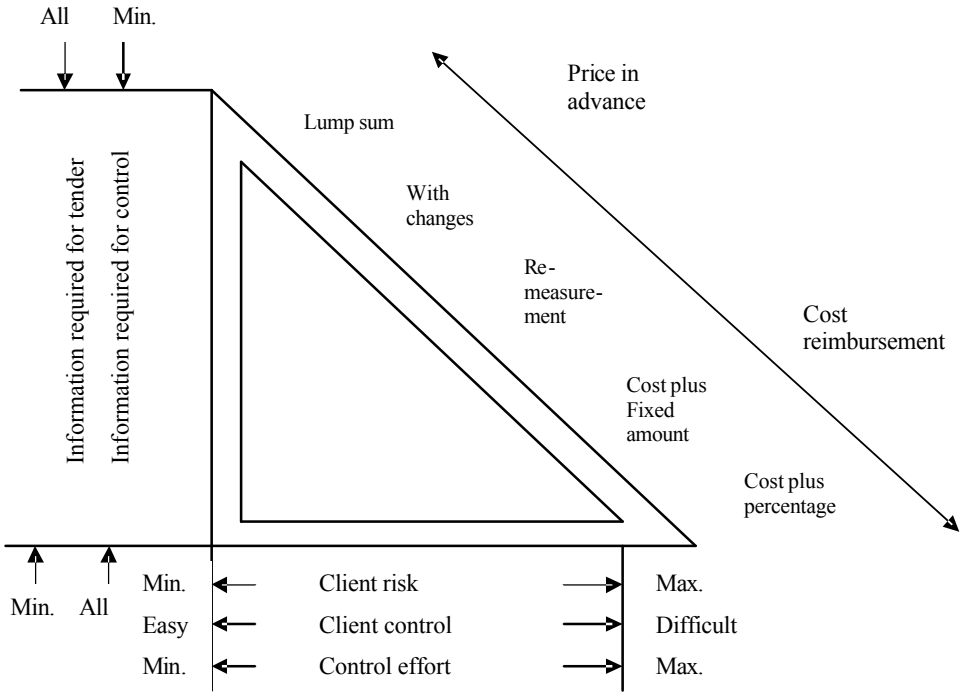
Once the quantity surveyor's service, in relation to pre-contract cost advice, is concluded, the very important next service phase of procurement advice and action should be addressed.

Basically, procurement can be divided into two main alternatives, these are:

- price-in-advance methods
- cost-reimbursement methods

The following diagram shows the various risks and related considerations that the procurement professional should understand to enable the client to make a sound decision regarding the procurement method to be used.

Diagram 1: Risk and control: Procurement types



Source: (Willis, Willis and Ashworth, 1996: 131)

The above clearly shows how important it is to understand the client's profile, needs and abilities and to match these with the best procurement method. The services of a quantity surveyor in this regard could be of vital importance.

The following should be considered by the procurement professional when advising the client on procurement alternatives:

- Traditional - the time available
- Design and build - design input by the contractor, time reduction and direct contact between producer and client
- Package deal - where time is of the essence
- Turnkey - for industrial buildings
- Management contracting - where contractor management inputs are needed (Ashworth, 2002: 308-312)

Research results show that measurement or approximate quantities still constitute almost 81% of procurement acquisitions in the UK and 93% in South Africa, which proves that some type of quantification action is needed to ensure satisfactory procurement results (Verster, 2004: CD Rom).

Various other procurement methods for diverse needs and reasons are used, such as cost plus, construction management, design and manage, and measured term contracts (Ashworth, 2002: 308-312). The primary considerations for contractor selection or procurement, however, are the following: the influence of cost, time and design as well as the client's needs and budgets. For this reason, the quantity surveyor may promote the multi-procurement method to enable the client to control the effects of time and cost, continuing to allow space for sustained design, development , effective professional service and contractor involvement. The method relies on producing procurement documents timeously, on a provisional basis, based on provisional design information. This enables the procurement of a main contractor who will manage many other selected or nominated sub-contractors who will be procured during the development of the building, as detailed information becomes available. The secret of this method is that mutual understanding and a very close working relationship between all role players must exist. The quantity surveyor performs a very important task in the execution of the project.

3.3 Results

The proper selection of an appropriate procurement method and the introduction of effective contract terms that will enable the contracting parties to focus on the work at hand should derive from pro-active, knowledge-based advice to the client, taking all aspects and circumstances of the proposed project into account.

Contracts, ensuring a partnership approach and imposing order on the rights and the obligation in proper manner, generally cover all risks and ensure effective contributions by the client, contractor and professionals.

4. THE MANAGEMENT OF COMMUNICATION

"Today, if you're not confused, you're just not thinking clearly" Irene Peter in Peter, 1991: 295)

To the quantity surveyor, the procurement and contract documents form the basis of communication with the client, the contractor and other professionals. However, an integrated communication strategy is necessary so that continuous communication is ensured, enabling the parties involved to manage their various functions well and achieve expected results.

4.1 The goals of a communication strategy

4.1.1 Contract communication

Contract terms should be communicated to parties and people involved so that they have no or little doubt about the meaning of words or terms. For this reason, the following aids are used by courts to interpret contracts:

- Avoidance of absurdity
- Upholding the contract or clause as opposed to ineffectual or void interpretations
- Equitable interpretations
- The intentions of the parties
- The recitals are subordinate to the operative part of the contract
- The grammatical meaning of the words used
- The contract will be interpreted as a whole in respect of the purpose and scope
- The technical meaning of words
- The written contract itself as opposed to verbal explanations (McKenzie, 1994: 13-16)

It is clearly understood that the contract guides the official communication related to rights, obligations and administration of the contract and by all the parties involved. It is therefore important that the quantity surveyor should understand all issues related to contract communication.

4.1.2 General communication

"… In the information era, however, the strategic resource is information, knowledge and creativity. There is only one way a corporation can gain access to these valuable commodities … through people … its most important resource" (Naisbitt and Aburdene in Puth, 1994: 25)

The above quotation illustrates how important it is to work with people, not only informally but also formally by means of contract documents, and in the process communicate well with them. People are the most important resource and thus the most important aspect and source of success.

4.2 Communication using management and leadership methods

While contract communication is generally used as a formal and official communication method to ensure that the rights and obligations of parties are protected and enforced, management and leadership communication, as an approach or method, are very important elements in ensuring results.

4.2.1 Management communication

Management communication is the number one problem in business today. While technology … has advanced in leaps and bounds, managers' and academics' understanding of the substance of the process has not (Ewing in Puth, 1994: 3).

Communication is seen as the life-blood of organizational management; therefore, the manager and professional must have an adequate knowledge of the nature and role of communication although it is difficult to do well or understand the influence of communication (Ewing in Puth, 1994: 3).

The effective communicator should have a well-founded understanding of substantive transformation as a basic approach.

Management is inherently a problem-solving job (Whetten and Cameron in Puth, 1974: 109), indicating the importance of communication while obvious criteria for solving problems are expertise, knowledge, skills and experience, using sound management principles to transmit function-and-outcome expectations.

4.2.2 Leadership communication

"Leadership is action, not position" Donald H McGannon in Peter, 1991: 296)

Leadership is based on communication. Leaders communicate not only information, but also attitudes and assumptions (Emshoff and Denlinger in Puth, 1994: 146).

Since professionals often find themselves in leadership positions where clients and other parties rely on their expertise and skills, the professional must also be able to communicate and be concerned with:

- Coping with change
- Understanding competition and markets
- Be able to inspire followers
- Be a good example and influence people to achieve goals
  (Emshoff and Denlinger in Puth, 1994: 147)

Emshoff and Denlinger in Puth (1994: 147) suggest that many corporations today are over-managed and under-led. Professional leadership is needed and should be the concern of all professionals.

Autry and Mitchell (1998: 214) suggest that a wise leader should embrace the paradox of:

"By not forcing, he leads
By not dominating, he leads
By not leading, he leads"

Leadership asks for communication with subordinates, partners, professionals and other functionaries. Leadership is expected of any professional because of his position, knowledge and pro-active service. The lessons to be learned from the above is that communication is not forceful, not dominating, but accommodating.

4.3 Communication for result

Colin Bower warns against a specific form of leadership, in his words:

"*Leadership is never a neutral value – far from it, it polarizes and divides ...*" he continues "*the cult of leadership is not more than the most thinly and inept disguised cloak of tyranny*". He argues that we do need leaders in battles and expeditions, but because of these times, it should not mean that they are always needed and that *"... leaders fudge issues and paper over cracks by substituting evangelical qualities for good organization, agreed objectives and rational propositions*". He concludes with an idealistic picture of competent individuals acting as his or her own leader (Bower, 2005: 2)

It remains clear that leadership could be all of the above, but that effective communication and partnerships with individuals may lead to success.

5. MANAGEMENT OF CLAIMS AND DISPUTES

Litigate for a jacket, but keep your trousers ready for the legal costs (Own translation of Langenhoven in Schannell, 1993: 49)

5.1 The goals of claims and dispute resolution

The goals of claim and dispute resolution are firstly to establish the right of any party to submit a claim, and secondly to enable the other party to consider the claim in terms of its validity, contractual terms and possible outcome.

Lodging or considering a claim does not mean that a dispute exists, but should the rejection of a claim occur, a different interpretation of a claim exist, a difference of opinion obtain, one has to note that a dispute may then be lodged. Dispute resolution should then assist the parties in resolving such an impasse in a cost effective, satisfactory and timeous manner.

5.2 The methods used to resolve disputes

For the purpose of this paper, the methods to be discussed are cancellation, adjudication, mediation and arbitration.

5.2.1 Conciliation

In an effort to resolve a dispute, satisfactory results are never guaranteed, not even in a court of law. It is therefore perhaps important to use inexpensive ways and methods to try and resolve a dispute.

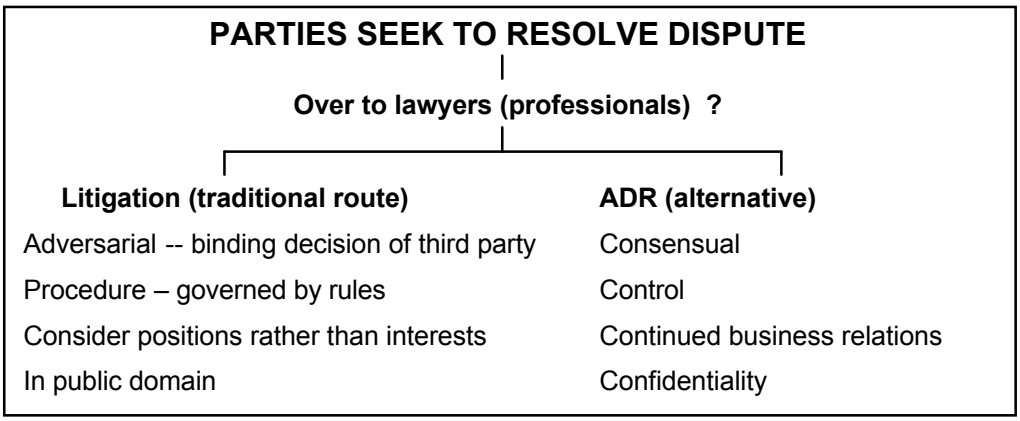
Results have shown that conciliation does have a remarkable measure of success in regard to solving differences before they can become disputes.

The parties decide who the conciliator will be. The conciliator should, however, be a person with good communication skills and knowledge. The objective is to bring the parties together in a forum to investigate their contentions and assist the parties to formulate their own settlement, by indicating the consequences. Improved communication should be ensured through joint and separate meetings. The conciliator may also be requested to formulate an own opinion. In the end, parties are still left with the option to continue with litigation or arbitration. Conciliation, however, has the following foci and advantages:

- Control - the parties control the process
- Consensus - the parties aim at the best commercial solution
- Continuity - the relationship will continue
- Confidentiality - no harmful public exposure (Loots, 1991: 8-13)

The following diagram illustrates the difference between litigation and all ADR (Alternative Dispute Resolution) processes:

Diagram 2: Difference between litigation and all ADR processes



Source: (Adjusted from Loots, 1991: 10)

The quantity surveyor, with good communication skills is ideally positioned to play an important role in respect of conciliation because disputes usually revolve around payments, valuations, certificates and penalties.

5.2.2 Adjudication

Adjudication is an accelerated form of dispute resolution in which a neutral, impartial and independent third party deals with the dispute as an expert and not as an arbitrator, and whose determination is binding unless and until invalidated or overturned by an arbitration award. The adjudicator shall not give advice to the parties or their representatives concerning any aspect of the Agreement in respect of which he has been appointed other than in accordance with stated Rules [Joint Building Contracts Committee (JBCC) 2005 4.1 Adjudication rules, cl. 1.1, 3.2]

The procedure may be as follows:

- Either party shall submit full details of a dispute arising in terms of the agreement, together with copies of all relevant documents
- The other party may submit a written response
- The adjudicator shall:
  - act as an expert and not as an arbitrator
  - adopt the most cost- and time-effective procedure
- The adjudicator may also:
  - convene and conduct a hearing
  - determine the payments and costs of the dispute on the basis of the submitted documents only
  - meet with the parties
  - decide on his own jurisdiction
  - make use of specialist knowledge
  - open up documents related to the dispute
  - refuse admission to any persons other than the parties

The adjudicator's written determination of the dispute shall:

- be delivered to the parties, and
- outline reasons for his decisions (JBCC, 4.1, 2005, Adjudication Rules, cl. 6.0-7.0).

It is important to note that an adjudication award is not binding on the parties, but is most definitely a process that will limit the costly processes of arbitration and litigation. Quantity surveyors and cost engineers are ideally positioned to play a very active role in adjudication.

5.2.3 Mediation

Mediation means different things to different people, but in the construction industry, it usually denotes a procedure in which a neutral third party seeks to resolve a dispute between contracting parties, by conducting an enquiry, similar to arbitration, but less formal and by giving a non-binding opinion. The parties represent themselves without calling in legal professionals. The mediator should know the details of the dispute and should give each party the opportunity to state their case. The mediator should decide which procedure is the best, based on circumstances (McKenzie, H.S and McKenzie, S.D., 1994: 174).

Quantity surveyors often perform mediation tasks for clients or other parties, be it informal as a quantity surveyor - mediator or formal by appointment. However, in terms of many contracts (JBCC series 2000, Ed. 4.1), the parties shall agree on the appointment of a mediator and meet with the mediator in an effort to reach a settlement. If a settlement is reached, the mediator shall record such an agreement which shall become binding on the parties on the signing thereof (JBCC, 2005: 27-28).

5.2.4 Arbitration

In some countries, arbitration is a process provided for by an act of law, adopted by parties through mutual agreement stipulating that they will submit any dispute that may arise between them to the impartial judgement of some third party of their choice and that the award by this impartial person will be final and binding. Arbitration is not a new process; in fact, it was known to the Romans, used by the Dutch and English in the days of colonial expansion and is currently widely used in the construction industry and further a field (Finsen, 1999: 203-204).

Arbitration is a more formal process than the dispute-resolution processes mentioned earlier, but arbitration has many advantages. Some of these are:

- Expert knowledge of a selected arbitrator
- Possible savings in legal representation costs
- Flexibility of the process
- The decision is final and binding
- Time and money are saved
- Arbitration is a private matter (Finsen, 1999: 203; McKenzie, H.S and McKenzie, S.D., 1994: 161)

Quantity Surveyors perform or can perform an important role in arbitration, as cost advisor, expert, representative, witness or even arbitrator.

5.3 Result

A knowledgeable professional, utilizing the claim- and dispute-resolution methods available to best effect, may assist the parties by means of these methods, to save money, time and effort.

Quantity surveyors may be in a good position to assist the parties and professionals in this manner, because of their knowledge and skills in relation to determining costs, tariffs, rates, prices, certification, contract terms and contract related communication.

6. RECOMMENDATIONS

It is recommended that quantity surveyors should position themselves to perform a more dynamic role in respect of cost, contracts, communication and claims (or disputes):

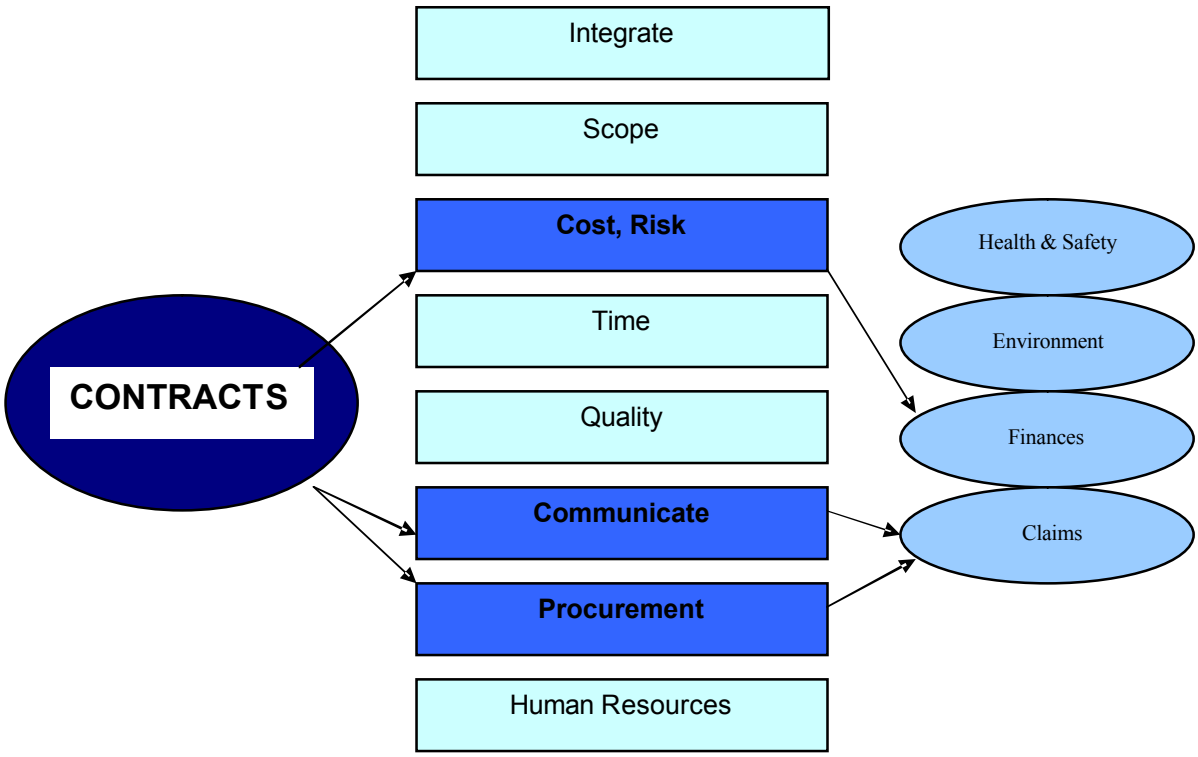
- **Cost Management**: The quantity surveyor is educated and trained to perform an effective cost-management function, but should be able to utilize all the methods, tools and techniques to best effect and to the advantage of the project as a whole. An integrated approach, utilizing all the methods, is suggested.
- **Contracts**: Quantity surveyors should be able to analyse the client's needs as well as the designer's approach and the environmental influence when suggesting alternative procurement methods. Quality contract documentation remains a non-negotiable part of future services. Although many new methods may be used in the future, the quantity surveyor should continuously ensure that contractual expertise remains part of the service provided. This can only be a reality if they remain sensitive to changes in the industry and the real needs of the client. Training remains a key performance area.
- **Communication**: This is an area where the quantity surveyor may need development, but effective communication with all role players will be a major part of future day-to-day activities. One has to note the importance of communication aimed at achieving results as one negotiates for client- and also contractor-satisfaction in an industry which is known for its claims, disputes and conflict.
- **Claims and disputes**: The quantity surveyor must know, understand and be able to advise, use and apply claims-adjudication and dispute-resolution methods. This is an area of growth because an effective dispute-resolution process will enable the parties and all role players to spend more time, money and energy on the project. The dispute-resolution process to be implemented should allow for various alternatives, but be based on a real understanding of how the effective management of costs, contracts, communication and claims may limit the frequency of disputes and maximize project-directed energy.

The model shown in Diagram 8 suggests that professionals manage the four C's pro-actively and effectively:

6.1 Costs, contracts, communication, claims and project management

Diagram 3 shows the relation of the four elements as determinants of the model to project management knowledge areas.

Diagram 3: Project management, knowledge and skills areas

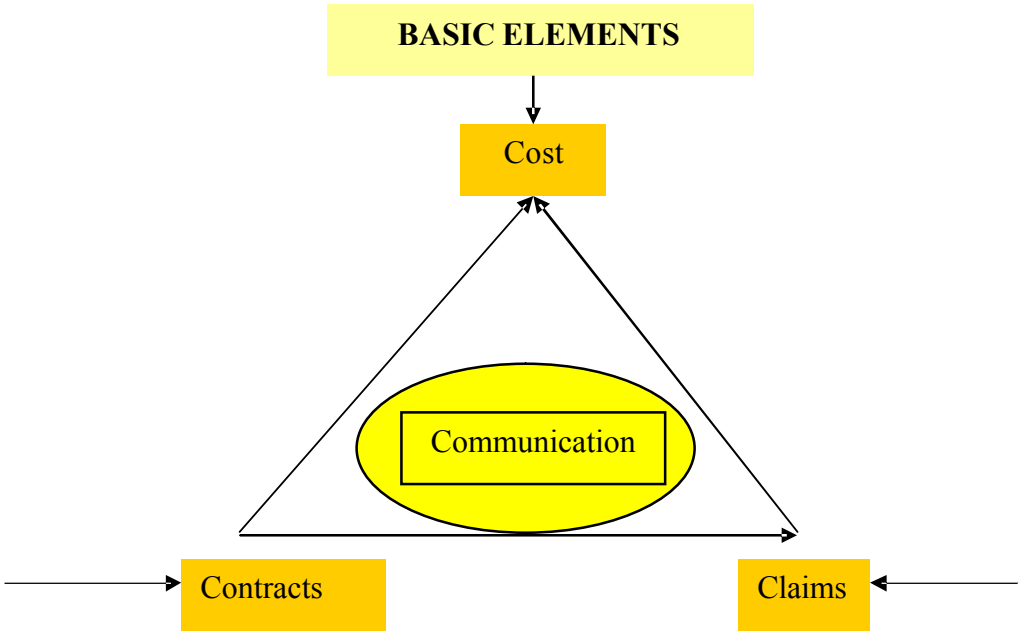


Source: (Verster, 2005a: own diagram)

The above diagram shows the importance of cost, contracts, communication and claims within the body of knowledge of project management.

The basic elements of the proposed Quantity Surveying Model are cost, contracts, claims and communication as shown in Diagram 4.

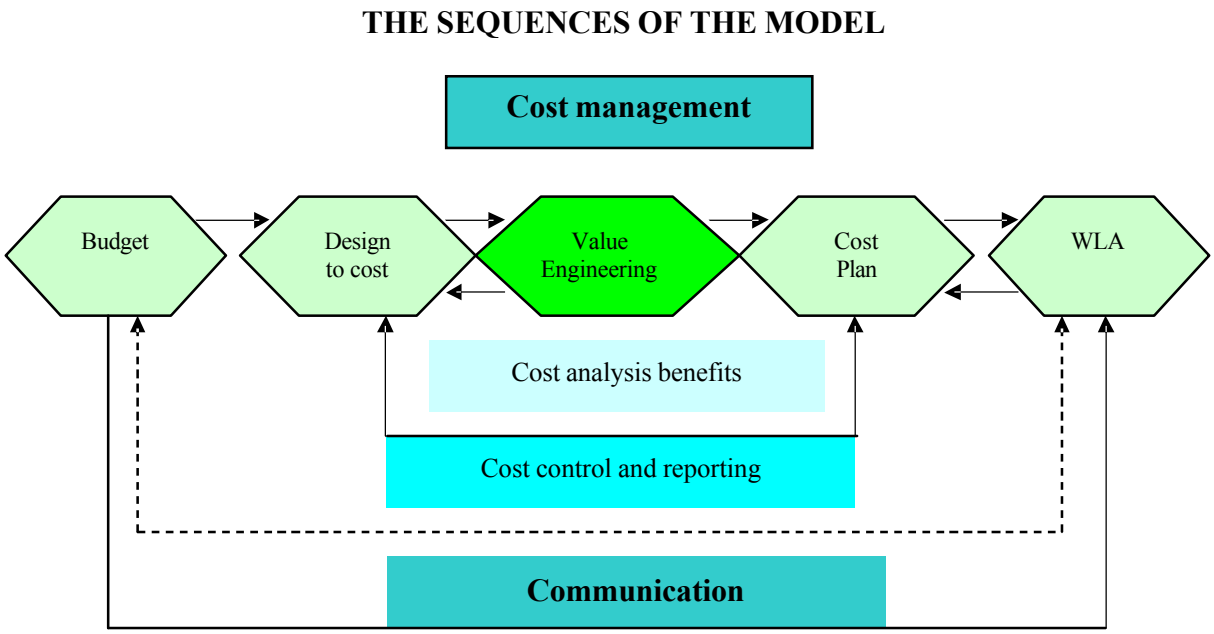
Diagram 4: Basic elements of the proposed Quantity Surveying Model



Source: (Verster, 2005b: own diagram)

Diagram 5 shows the sequence of the various functions within cost management as determinants of the model.

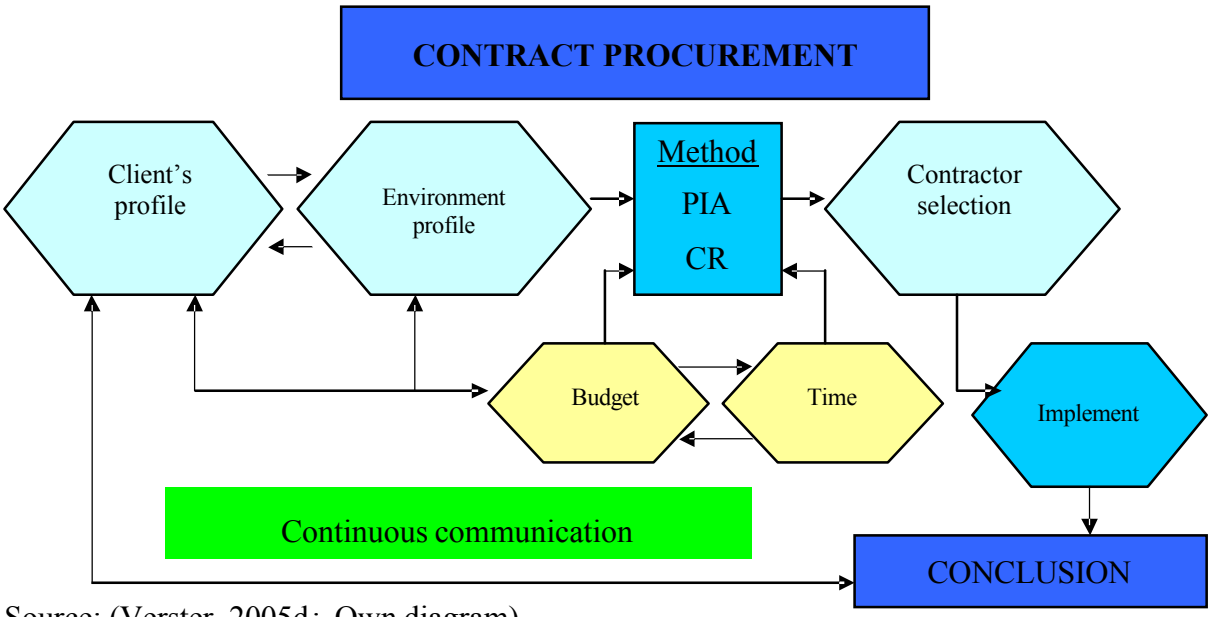
Diagram 5: The sequences of the model



Source: (Verster, 2005c: Own diagram)

The links related to contract procurement as part of the model are shown in Diagram 6.

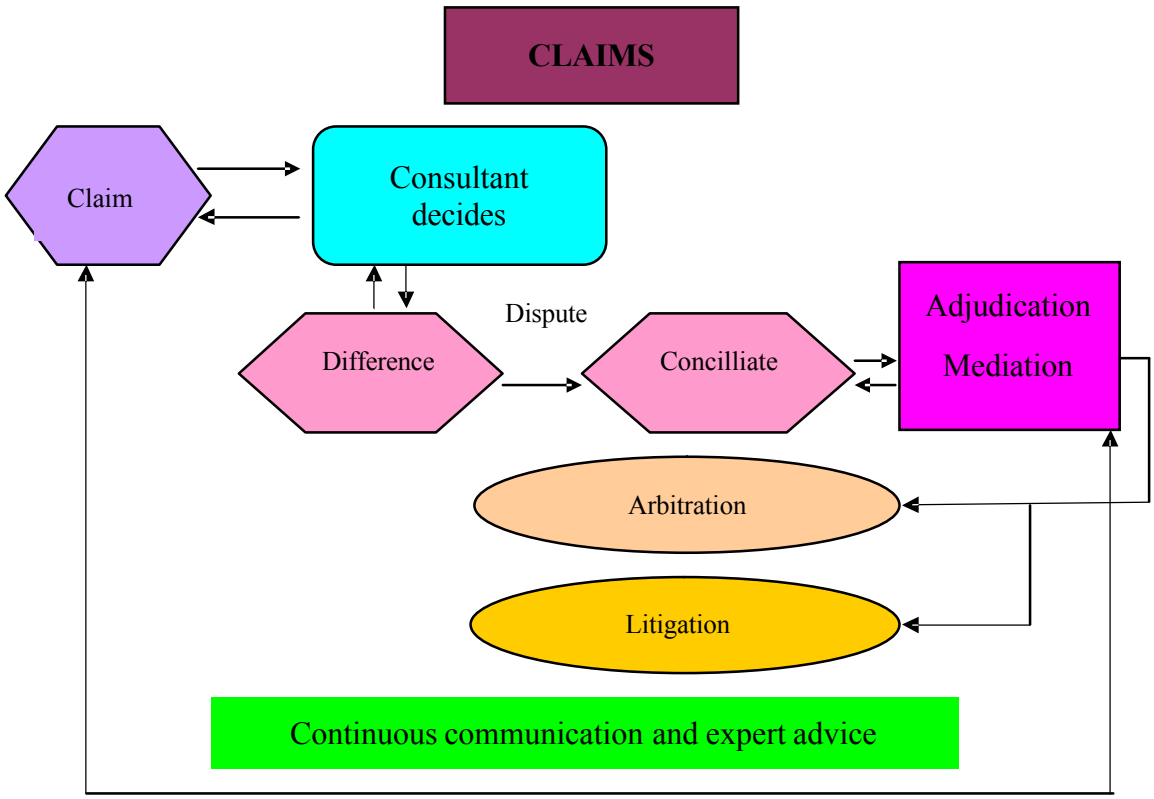
Diagram 6: Contract procurement



Source: (Verster, 2005d: Own diagram)

Diagram 7 shows the various dispute-resolution methods and purposes, as well as the position of each.

Diagram 7. Claims

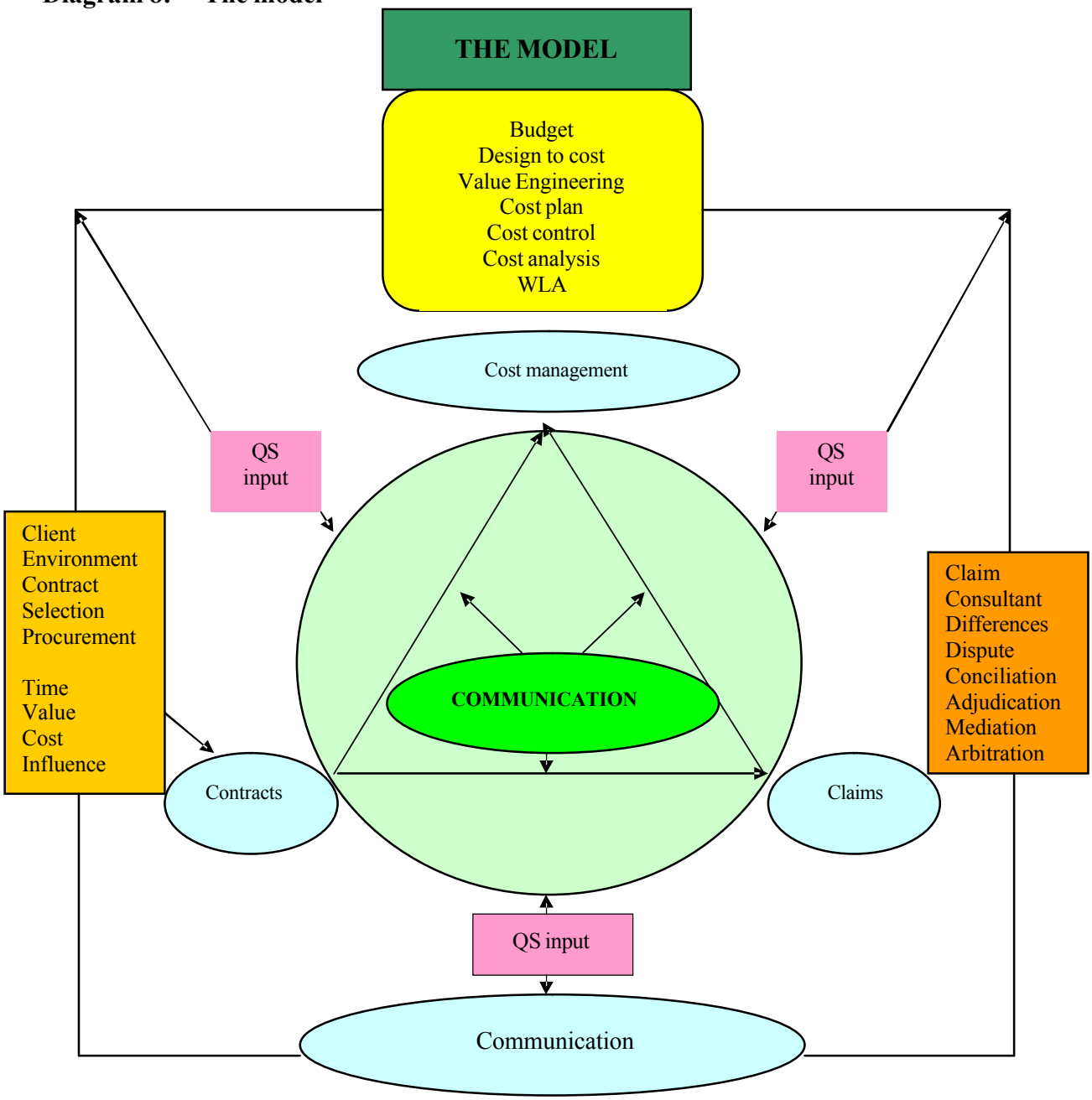


Source: (Verster, 2005e: Own diagram)

The above diagrams show the sequence of events and the roles captured in the proposed model in respect of cost management (Diagram 5), contract procurement (Diagram 6), and claims (Diagram 7).

The model (Diagram 8) combines the four elements and links the most important functions to ensure that the product/project is successfully produced/completed. The model proposes that the efficient management of cost, contracts, communication and claims, the strong links between these elements and the continuous attention to leadership, based on knowledge, skills and a positive attitude are fundamental values informing the pursuit of a satisfactory and positive outcome.

Diagram 8: The model



Source: (Verster, 2005f: Own diagram)

7. CONCLUSION

The aims of this paper were to discuss the general functions of cost management, contracts management, communication and claims, as well as the role that the quantity surveyor usually performs or may perform in respect of functions relevant to the management of cost, contracts, communication and claims.

The outline of the proposed future roles and model may assist the quantity surveyor and cost engineer better to position themselves in providing a pro-active and more effective service in construction in the property industry.

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