



Rwanda Quantity Surveying Students' Association

**November
2022**

**INKINGI JOURNAL
Seventh Edition**

**“The implications of running a construction
project without
a professional Quantity Surveyor.”**

In partnership with:



UNIVERSITY of
RWANDA



RIQS

RQSSA CHAIRMAN'S WORLD



Achilles DUSABUMUREMYI,
Chairman, RQSSA,
UR-CST; QS. CLASS 2022

I am blessed again to be one of the participants to the realization of the seventh edition of INKINGI JOURNAL of Rwanda Quantity Surveying Students' Association (RQSSA).

As it has been practiced since its establishment in 2010, RQSSA has realized the need for publishing an edition of INKINGI JOURNAL every year to help the general public understand the concept of the Quantity Surveying Profession.

Many Professional Quantity Surveyors have been contributing by providing us with articles about a wide range of topics, but also financial support. This edition of the journal focuses on witnessing what people are missing when they do not take advantage of the services of a Professional Quantity Surveyor. The theme of the current year is named "The implications of running a construction project without a professional Quantity Surveyor."

The Association aims to raise awareness of the Quantity Surveying Profession in Rwanda and consequently the construction industry in general. Since the establishment of the profession in Rwanda, tremendous Individuals, Companies, Firms, and Organizations have benefited from the services of the Professional Quantity Surveyors in the country at large.

A lot of books of Building Economics, researchers, and other experts in the industry argue that there is a difference between undertaking a construction project with and without a Professional Quantity Surveyor. It has been found that when a Professional Quantity Surveyor is engaged in a construction project, he/she saves huge money and time than engaging other Professionals such as Civil Engineers, Architects, etc.

A reference should be made on one of the articles of this edition whereby it clarifies that difference based upon a real-life experience. However, it is unfortunate that some of the private clients and as it can be stressed for the public institutions in Rwanda have not yet started engaging the Quantity Surveyors, yet their services are indispensable.

We are with strong hope that people from diverse sectors such as Public and Private who are practicing in construction industry will see this edition of the journal as a weapon to the effective and efficient management of their businesses and projects.

Finally, we encourage the readers to take a few minutes and look at different articles of this Edition as they will find it very useful. In addition, I am very honored to thank everybody not necessarily mentioning every single individual or entity that has contributed to have this edition of the journal realized.

Achilles DUSABUREMYI
Chairman, RQSSA & Co-Designer

EDITORIAL WORD



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2023

Dear appreciated Readers, Welcome to INKINGI journal 7th Edition!

It is a privilege to be a members of the editorial team of the Rwanda Quantity Surveying Students' Association (RQSSA), which is an Association of the Students at both the University of Rwanda (College of Science and Technology) and Rwanda Polytechnic; working to encourage the students who take the course without any thought of who a Quantity Surveyor (QS) is whatsoever.

It also helps in assuring the public that an engineer is not enough for a construction project whether a building or any other type of infrastructure. This is also for developing this profession in Rwanda, encouraged by the elders in the association, the leaders and professionals outside who already have their package to deliver to the land.

Clearly, when you hear the term Quantity Surveyor, you may think that it is just estimating works, and when you do not have one in your company or organization, you could think that it is okay, but that is a kind of unprofessionalism. Therefore, in this seventh edition of INKINGI journal, we bring you the reasons why you may keep losing by not involving Quantity Surveyors (QS).

This also provides you with the advantages and roles of a QS and why you should not take this profession for granted as it is mostly known by large Companies, Institutions and Firms. However, it is still on a lower level here in Rwanda.

Special Participants



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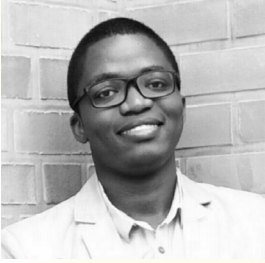
In our words, a Quantity Surveyor is trained and skilled with the professional experience to calculate the cost of an infrastructure, draft, administer or manage contracts without taking advantage of the client or the contractor.

Based on our experience in the construction industry to date, we know that every project needs a Quantity Surveyor to evade the implications of running construction projects without their involvement. Thus, as the editorial team of the Rwanda Quantity Surveying Students' Association (RQS-SA), we can bravely say that although the road may be long through cooperation, there is always a finishing line!

In this regard; we are calling your attention to this edition of INKINGI Journal as it will give you an insight into why a QS is irreplaceable on a construction project. We kindly ask for your time to read through the articles in this edition and we hope that you will definitely enjoy it.

Peace NIYONKURU, Boris Christian KWIZERA & Adolphe CYUSA KAYITARE

RQSSA PATRON'S WORD



Mr. Constant MAHAME, MRes (Cons. Proj. Mgt), BSc (QS)

The programme of Quantity Surveying in the University of Rwanda was started in line with vision 2020 after recognizing that the building and construction industry play a key role in realization of this vision. In that regard, the construction project management needed to be managed in such a manner that ensures satisfaction of the stakeholders, especially with regard to cost, quality, delivery and time management.

However, there existed a big gap for professionals in this area. The department of Construction Management under which Quantity Surveying programme is delivered, aims at providing the necessary cadre of professionals in the field of Quantity Surveying to bridge this gap. Quantity Surveying practice enables to provide advice on building design and management based on economic factors at various stages during a project's life-cycle. Consideration of building performance is also considered.

Speaking still, the Quantity Surveyor has a lead role in educating the public on the effective infrastructure development that provides high value for money with little or no disputes among parties. After a long campaign on the awareness of the profession, an important step was taken to integrate the functions of a Quantity Surveyor from projects planning to delivery in both the public and private sectors.

However, apparently more effort is needed on the side of legal framework to protect this profession specifically in the public sector where Quantity Surveyors positions can be awarded to civil engineers with no academic background of Quantity Surveying. We hope that the industry will welcome the current publication as it aims to shed light on the negative implications of running construction projects without involving Quantity Surveyors.

REVIEWER'S WORD



Dr. Oluwaseun Sunday DOSUMU
Senior Lecturer in Construction Management Department
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The construction industry has over the years proven to be an indispensable economic muscle of many nations. In East Africa, Rwanda's construction industry is one of the fastest growing sectors according to global and local statistics. The country is however being short-changed in many aspects due to its lack of recognition of the services of the Quantity Surveying profession.

Many huge sustainable and traditional construction projects are being committed to just the Architects and/or the Engineers. This portends an enormous mistake that is unknowingly costing the client, developer and the nation a huge loss. It has been proven that this practice has failed many clients who are ignorant of the existence of the Quantity Surveying profession as the fund saver, litigation expert and project documentation expert among others.

This journal is dedicated to the education of the citizenry which includes the clients, developers, contractors, policy makers and other government institutions on the need to embrace the engagement of Quantity Surveyors on construction projects to maximize individual and national savings. The journal exploited the professional views of the implications of not engaging a Quantity Surveyor on construction projects. It also obtained the testimonies of stakeholders like clients and developers on how Quantity Surveyors have saved them a lot of funds on their respective projects.

We do sincerely hope that your knowledge about the Quantity Surveying profession will broaden by the time you finish reading the minds of the writers in this journal. We do hope that you will join the Quantity Surveyors and other enlightened stakeholders to clamour for the autonomy and full engagement of Quantity Surveyors on every construction project in Rwanda. The call for the promulgation of necessary laws to back the Quantity Surveying profession is long overdue and requires a multifaceted approach.

Thank you!

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The Quantity Surveyor and the Public Institutions: Implications to the public Institutions



**Mr. Frederic NYAMINANI
(Freddy), MSc (Cons. Proj.
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About the Author:

Mr. Frederic Nyaminani (Freddy) is a registered Quantity Surveyor / Building Economist or a Construction Cost Engineer by the Board of Registration of Architects and Quantity Surveyors of Rwanda. He is also a Vice-Chairperson of the Governing Council for the Quantity Surveyors' Chapter under the Rwanda Institute of Architects (RIA).

QS. Frederic draws on skills acquired from different big organizations that he served during the last eight (9) years in Quantity Surveying and Construction Project Management aspects including Governmental Organization such as Rwanda Civil Aviation Authority, consulting such as Quest Africa Ltd, HICE CONSULT Ltd and contracting organizations Such As Real Contractors Ltd, HYGEBAT Ltd.

He is the Senior Quantity Surveyor and the founder of a Quantity Surveying & Project management firm known as COVENANT CONSTRUCTION SOLUTIONS LTD (CCS Ltd). He has Bachelor of Science (Honours) Degree in Quantity Surveying from University of Rwanda, former Kigali Institute of Science and Technology (KIST) and Master of Science Degree in Construction Project Management from Jomo Kenyatta University of Agriculture and Technology (JKUAT). From Education background and experience, he derives the profession of management consultancy.

1. Introduction:

Construction costs are known as key project performance indicators. An element of cost is very crucial and sensitive to every project stakeholder, be it project owners/developers, project beneficiaries, project designers or contractors.

The sensitivity of the construction cost is linked with the fact that, as far as the cost is concerned, it is tied to construction contracts, project quality and project timing. A Quantity Surveyor is an expert in all matters related to construction costs and contracts. A Quantity Surveyor plays a big role in advising on the alternative materials especially while conducting value engineering exercise.

Although the term 'Quantity Surveyor' is known under various names such as Cost Estimator, Cost Planner, Cost Manager, Cost Engineer, Cost Consultant, Project Controller or contract administrator, Estimator, cost analyst, project coordinator, project cost controller, Building Economist, construction cost professionals etc, the Quantity Surveyor's role rotates around construction costs and contracts.

• In French speaking countries, Quantity Surveyors are known as "Les gestionnaires des coûts et des Contrats de Construction" "Les Ingénieur économistes"

,” les Ingénieur métreurs “ or “Les Economistes en Construction”

2. How would you feel if your construction project encounters extensive cost overruns?

It is obvious to say that no one would wish to have cost overruns to his/her project. This is because, the cost overruns attract negative consequences resulting from unexpected additional resources to allow for the project completion. This is very crucial for the government projects which require intensive financial planning and audits.

It is impossible to run a construction project without having agreement/contract to reflect the client's affordability through the project budgeting and clearly determine the payment modalities. Whether it is a verbal or written agreement, an element of cost will always be of high concern by both parties.

Additionally, most of construction disputes result from misunderstandings related to the due payments as per the contract provisions. The Quantity Surveyor will keep advising the client to avoid possible dispute during the preparation of project documentation, contract negotiations and contract administration. Although the Quantity Surveying profession is undeniably unpopular in Rwanda

compared to the architectural and engineering professions, Quantity Surveying services are highly demanded by the construction industry practitioners despite the fact that such services are rendered professionally or unprofessionally.

3. Quantity Surveying Practice challenge in Rwanda.

The Quantity Surveying profession is not regulated in Rwanda. Consequently, any one in the field can practice the Quantity Surveying Profession. Clients are advised to be careful with people who are calling themselves Quantity Surveyors, yet they are not.

Think about a building project of billions and contracted on the basis of a preliminary cost plan or a BoQ of one page! I experienced cases whereby the clients were still looking for realistic cost estimates while the project is at a provisional handover stage!

During my last 9 years of practicing Quantity Surveying and Project management, I was privileged to serve both the Public/Government, Consulting and Contracting Organizations as a Professional Quantity Surveyor. In most of the cases, it was hard to have a smooth communication with a project party lacking the skills of a Professional Quantity Surveyor. This is because,

people with the same profession always communicate in the same language. Think about the scenarios below which I met on some construction projects in Rwanda:

i) A Construction dispute resulted from a misunderstanding of the term” ditto “in the Bills of Quantities and the contractor temporarily suspended the procurement of related materials and later on claimed for time extension due to lengthy discussion on this item!

ii) The consultant who prepared the BoQ was requested to summarize the descriptions of the BoQs by removing preamble clauses and preliminaries just to make one line of item description. The consultant was forced to do so and gave up.

iii) The contractor realized the underestimated rate of concrete in the contract’s BoQ. The concrete was the major item of the project scope. For the sake of boosting the contractor’s profit, the rate was claimed to be double with reason of only changing the specification of the aggregates (from hand crushed aggregates to machine crushed aggregate, the difference in cost was about RWF 3,000 per m3). The contractor’s QS wisely submitted details for rate’s breakdowns justifying why the rate should be doubled with expectation that he will be requested to discount his rate.

The contractor's expectation was to only have at least 20% increment. However, due to lack of a professional QS on the Consulting and client's side, the rate was blindly approved as it was claimed since there was no one to challenge the contractor's proposal.

From the scenarios above, I came to understand the meaning of the word "compassion" as it entails the recognition of the suffering of others and then taking action to help. Therefore, Professional Quantity Surveyors should be compassionate.

They should not only stand in the shoes of the client or contractor but also act as impartial without prejudice. Construction projects should be delivered in a win-win manner for both parties.

4. What would be the influence of the Quantity Surveying profession in the industry?

Quantity Surveying is a fascinating profession with plenty of excitements as it requires collaborating with other professionals but with also plenty of challenges depending on which side the Quantity surveyor is assigned to act. The Quantity Surveyor will significantly contribute to the sustainability of the business:

4.1 While working as a client Quantity Surveyor

The Quantity Surveyor will work closely with other consultant and challenge the consultant's works in the interest of the Employer/Client. He/she will have an adjunct certifying role in verifying that all certifications issued by the consultants are correct or if the consultant's recommendations are not in favour of the contractor. In simple terms, the client philosophy is "to get Value for his Money"

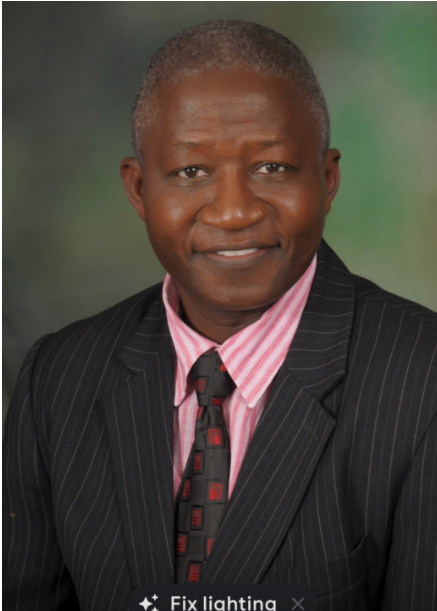
4.2 While working as a contracting Quantity Surveyor

The Quantity Surveyor will contribute in boosting the economic or commercial growth of the company's business. He/she will have to sustain the business concept of maintaining a positive cashflow and making a profit for the company. In simple term, the contractor's philosophy is "income / revenue maximization with minimization of the company's expenditure."

4.3 While working as a consulting Quantity Surveyor

The Quantity Surveyor will act with impartiality as a bridge between contractor and client. He/she will advise both client and contractor to smoothly execute the project. In simple term, the consultant's philosophy is "client's satisfaction with smooth project run."

The Quantity Surveyor and Financial Institutions: Implications against Financial Institutions dealings



Board member of Board of Registration of Architects and Quantity Surveyors (BORAQS).

Vice Chairman of College of Fellows of Architectural Association of Quantity Surveyors (AAK)

He has previously served as: Treasurer of Architectural Association of Kenya (AAK), Chairman of AAK QS Chapter, Vice Chairman AAK QS Chapter, Secretary AAK QS Chapter, among others.

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About the Contributor:

The Principal Quantity Surveyor of Miradi Consultants, a firm of Quantity Surveyors in Nairobi, Kenya. He is also the Secretary General of Africa Association of Quantity Surveyors (AAQS).

The Quantity Surveyor (QS) is a financial and legal consultant of the construction industry whose training and experience qualifies him/her to advise on the cost and contractual arrangements and to prepare contract documents.

The Quantity Surveyor acts in liaison with Architects, Consulting Engineers and contractors to safeguard the client's interest. The Quantity Surveyor obtains drawings from the Architect, Structural Engineers and Services Engineers and produces contract document called Bills of Quantities, a key document that contains all the quantities of works and various specifications from which the contractor prices those items when tendering for the job.

He is an independent expert who operates in a specialized area of the construction industry. Being a legal expert in the construction industry, he prepares the contract documents and is well versed with the legal requirements of the parties to the contract. He prepares the legal documents that are signed by both parties and guides the parties concerning the contract.

This signed document that may have been kept by the Quantity Surveyor during the implementation of the project is then surrendered to the client at the completion of the project. He advises the parties to the contract on their roles and obligations for the smooth flow of the construction process.

Quantity Surveyors are required to comply with the code of professional conduct so established, which includes responsibility to their employers or clients and to their profession having full regard to but not limited to, conducting themselves so as to uphold the dignity and reputation of the profession and discharging their duties to their employers and clients in an efficient and competent manner.

Some Services offered by a Quantity Surveyor

1. Estimating and cost advice

- The Quantity Surveyor estimates and gives cost advice during all stages of the development of a project to enable correct decisions to be made for the benefit of the client and other consultants so that designs are made to be within budget.

- Cost data bank from previous projects kept by a Quantity Surveyor plus intimate knowledge of building and construction economics enables Quantity Surveyors to provide reliable cost advice.
- The estimates could be made by the Quantity Surveyor even before the designs are made based on the preliminary information by the client. This include numbers like number of desks for a school, number of beds in a hospital etc.
- Another could be prepared from the preliminary drawings prepared by the Architect at the pre-contract stage of construction. For this we could be considering established areas or related quantities like volume.
- More refined estimate is available after detailed designs are made from more detailed designs are made. From these designs, estimates in the form of Bills of Quantities are prepared from drawings while at the post contract stage, working drawings may be used to inform the probable tender figure. These drawings can also be used to compile estimates in case of variations to the contract.
- Clients may want to know that they are receiving value for money, not only with regard to the capital cost but also in respect of the running and maintenance cost of a project. At the beginning of the project, the Quantity Surveyor produces the project cash flow progression which shows the various payments to be made at various stages of construction based on the works program of the contractor.
- Cost planning enables decisions on various design alternatives to be made with actual costs being constantly monitored against original budgets. The Quantity Surveyor produces the financial appraisals that help guide this process.

3. Property development advice

- A building should meet the functional, dimensional and technological requirements for which it was designed. It should also be aesthetically pleasing and meet the cost limits of the client's budget.

2. Cost planning

- A Quantity Surveyor is able to provide pre-design feasibility studies involving technical and/or economic investigations thereby enabling a client to decide whether, and in what form, to proceed.
- These types of contracts include Negotiated, Lump-sum, cost plus contracts, Package deals, turnkey offers, etc. While Bills of Quantities are generally regarded as the most economical and best method of obtaining a competitive price, the alternative methods and types of tender documentation available need to be carefully examined in consultation with the Quantity Surveyor, Architect and Engineers before a final decision is made.

4. Advice on tendering procedures and contractual arrangements

- The choice of an appropriate form of contract for any given project will depend on the nature of the project, the circumstances under which the work is to be carried out and the particular needs of the client.
- Quantity Surveyors, in collaboration with other professionals like Architects and Engineers are able to advise their clients on the most advantageous procurement methods available, including: Contracts incorporating bills of quantities, provisional Bills of Quantities and schedules of rates.

5. Valuation of work in progress

The Quantity Surveyor's duty is essentially of cost control. They measure and value work in progress, determine the value of variations ordered by the architect or engineer and ensure that a fair and equitable settlement of the cost of the project is reached in accordance with the contract conditions. In conjunction with the architect and other professionals, the Quantity Surveyor will ensure that the financial provisions of the contract are properly interpreted and applied.

6. Act in disputes; arbitrators

Quantity Surveyors in Kenya possess knowledge and expertise in the fields of costs and contracts, which equip them to prepare valuations for fire insurance, to advise in the settlement of insurance claims and to be called as expert witnesses or act as arbitrators in any court or arbitration on building disputes.

7. Facilities management

The Quantity Surveyor plays a role in the facilities management where he acts as the cost control expert with his knowledge of the market prices of building materials, he is able to advise on the costs incurred in the building facility and therefore the contractors are guided on what to price on items. In this way, the client's interests are safeguarded.

From the above summarized description of the work of the Quantity Surveyor, a Quantity Surveyor can work for government, corporate body, an individual or a contractor as his or her client. From the above, we also learn that if a Quantity Surveyor is not used in a project, various shortcomings will be experienced including:

- Proper contract documents called Bills of Quantities will not be produced.
- Proper specifications will not be available in the execution of the works leading to disputes as to what was the correct version of the product.
- Legal requirements, rights and obligations of each party will not be clear hence conflicts.
- The client will not be fully appraised on the cost of the project, hence financial planning will be a problem for the client.
- The client will not benefit from the market and the cost data of similar projects, which are usually kept by the Quantity Surveyor.
- Cash flow projections based on progression of works will not be accurately done.
- The client will not benefit from the advantages of cost planning that gives various design alternatives for the projects hence varying project costs.
- Feasibility study for the construction project, which is unique from other feasibility studies won't be available.

- The client will not benefit from various tendering methods that are available. Some are very expensive while others are cheaper.
- The valuations for regular payment for work done is bound to be inaccurate.

Financial institutions

The Quantity Surveyor is well trained to understand money market in the construction industry. He knows which financial institution can give what amount and at what cost. We have institutions that give mortgages. Hence the client could develop buildings that he could sell using mortgage institutions and can make such arrangements for buyers to access them.

There are other financial institutions that can provide finances for construction. The Quantity Surveyor is able to advise the client whether it will be profitable for the client to get such funds or not advisable.

With such finances from these institutions, the Quantity Surveyor is able to advise on minimum payments to charge those purchasing them and

repayments schedule to the lending institution giving the loan so that in the end, he may make reasonable profit. If they are financing the contractor, they assure stage payment hence the client is assured to get the end product in good time.

In this regard, the Quantity Surveyor will assist the contractor with the cash flow, especially in advice concerning material purchasing as he can know how much will be paid at what time. The contractor is able to promise the supplier when payments will be made.

In conclusion, it is a risky decision anywhere in the world including (Rwanda) to embark on a construction project without a Quantity Surveyor.

DID YOU KNOW?

**The first quantity
surveying practise
was established in
England in 1785 by
the firm of Henry
Cooper and sons.**

What you are missing by not involving a QS



**QS. Emmanuel M.
Wamalwa**

He is a Fellow of the Chartered Institute of Arbitrators and Institution of Surveyors of Uganda and a Member of the Rwanda Institute of Architects, Institution of Surveyors of Uganda, Institute of Quantity Surveyors of Kenya, and the Architectural Association of Kenya.

ABOUT THE AUTHOR:

The Author was a former Head of Department (Construction Management), University of Rwanda. He is a registered as quantity surveyor in Rwanda and Kenya.

I am honored again to be given this opportunity to describe a word or two in the periodic journal for the Rwanda Quantity Surveying Students' Association.

I would like to put pen to paper about the pitfalls of not involving a Quantity Surveyor (QS) on your project. Sometimes back, we used to talk about Contractor QS and Client QS to differentiate between those working for Contractors and those working in public and private organizations for Clients. Now the dividing line is so narrow that I am not to waste time splitting hairs. And hereinafter I will be referring to both.

Arguably, the most important job of a QS is that of quantification. Whether one is using 2D, 3D drawings or even BIM, a QS should be able to translate the drawings into resources required to complete the project. And this is not limited to material requirements, but also equipment, labour, and time requirements.

There are those who have argued that quantification is no longer a core competence for a QS because technology has made it so much easier. As much as that may be true with the advances in BIM and the myriad of other digitization technologies, I would still contend that quantification defines a QS.

All other competencies are merely tributaries. As the famous adage goes "If you can measure it, you can manage it". A properly quantified project will reveal an accurate cost of the project to the Client/Developer and the resources required by a Contractor to complete the project. To put it blankly, a Contractor loses money by not involving a QS on the project. And what about developers?

When you do not want to be taken for a ride with inflated bills and claims, a QS is absolutely necessary.

On a project where materials are obtained from other countries, the QS will use their expertise to identify the materials, to establish the delivery period, costs of freight, insurance, and customs charges and to work out an estimate or the Contractor's all-in cost which includes profits and overheads.

This information then feeds into a construction Programme and using techniques such as 'just-in-time' where the cost of holding material and equipment inventory is reduced. Therefore, naturally the role of the QS should not be limited to estimating only.

The resources worked out and the technology adopted for a project should determine the time required. Quite often, the time is fixed beforehand by the Client's or Developer's team, here the QS should be able to estimate the cost impact of the technology required to achieve the set time.

In a market that favours lowest bids / tenders, QS should use their experience to advise whether even participating in certain competitions is worthwhile. As the role of the QS applies throughout the entire supply chain, and in construction from inception to completion and maintenance, a QS will operate as a cost manager or commercial manager to Clients and Contractors respectively.

Their role is critical in keeping costs within established targets. Without them, you will not know where you are coming from and where you are going to.

These tasks will require knowledge in estimation, construction technology and law, economics, all which QSs are well endowed with. Clearly, projections for the demise of the QS profession are well off the mark and will continue to be so in the near future.

Why should you involve a QS?



ABOUT THE AUTHOR:

Pius TUKESIGA, MCIQB, MIC-CP, FCCM, MSc. CPM (Cand), BSc (Hons) Quantity Surveyor
— Horizon Construction

Jesus Christ could not imagine undertaking any construction projects without first engaging the services of a professional Quantity Surveyor and therefore queried (Luke 14:28 “Suppose one of you wants to build a tower, won’t you first sit down and estimate the cost to see if you have enough money to complete it?”). Quantity Surveying is thus a unique profession and an integral part of the development process in the construction industry.

In a nutshell, a quantity surveyor (also referred to as a ‘cost expert’ or ‘construction economist’) is indispensable where value for money is the watchword. In construction, the major objective is to deliver projects within a scheduled time frame, at a reasonable cost and in the set quality standards.

To achieve this, it requires bringing together all professionals (land surveyors, architects, quantity surveyors, engineers, etc) in the industry and their scope of services should properly be well-defined. In global best practices, the duty of the quantity surveyor on a project is to enable the developer get value for money.

Therefore, the non-participation, absence or non-involvement of a quantity surveyor may result into an undesired project outcome or project failure. A quantity surveyor is the most competent construction professional to provide cost expert advice. They may not necessarily be design experts, but are required to have acquired basic knowledge required to function in the respective fields to enable them provide the relevant cost advice. Quantity Surveyors are hence financial experts in all matters relating to costing of construction projects, right from the project inception to its substantial conclusion/completion.

Their absence at the design stage results in over or uneconomic designing, wrong tendering and inefficient contractual arrangements. Non-participation of quantity surveyors at post-contract stage also results into cost over runs, time over runs, unnecessary variations, poor cost controls, low profit margins or loss, unjustifiable delays, abandonment of works etc.

Unfortunately, the relevance of the 'Quantity Surveying' profession is still unappreciated and not well understood by clients/developers. It is viewed as a rather technically

based profession for preparing bills of quantities, providing a kind of backup supporting the activities of the far more important skills applied within the design and management of construction. This mindset has forced some, against acquiring the services of quantity surveyors.

What these clients forget however, is that the profession has grown beyond that, to providing value management, funding mechanisms appropriate to particular projects, oriented services in areas of optimum bidding efficiency methods and procurement methods that are basic to the entire design and construction process; all of which competences are never fully utilized during the project planning and execution with the non-involvement of the quantity surveyors' expertise.

The type of procurement arrangement, tendering process, standard form of contract adopted for the project and contractual arrangement strategy, all determine at what stage and scope quantity surveyors will get involved. Deciding to do away with a Quantity Surveyor will definitely jeopardize a desired outcome of any construction project.



Do you know the role of QS on construction project?

Known in the industry as a Construction Cost Consultant or Commercial Manager, their role is to keep a close eye on project finances and contractual relationships.

They make sure that the financial position of construction projects is accurately reported and controlled effectively. They manage the contractual relationships between the various parties involved in any particular building project.



Mr. Norbert GATERA

About the Author:

He invested in Housing Sector RE-BERO apartments Through NBG LTD. Norbert Gatera has also invested in other business fields; The Founder of Former Schilos Phones Boutique, The legal Retailer of iTel mobiles in Rwanda. Owner of Romantic Garden Gisozi, the Founder and Owner of NBG Ltd (Norbert Business Group).

TESTIMONY

When I began this business of Housing merchant, it was not easy. I could pass a number of weeks searching for a qualified engineer who holds a degree and of course the knowledge of the industry in Rwanda such that he could help me to make designs, structures, Bills of Quantities and making a scheduled calendar to represent works needed to be done on the site, where I wanted to start my actions mainly my first House for sale.

It was around 2015, I remember. Perhaps I meet one of the engineers of that time, he had a micro company which served a little role in construction, where they were just making cadastral designs and site supervisions, only that.

Then, I talked to him for some minutes and we agreed to meet at my place next weekend, because we had to plan together about the business that I was willing to do in Kigali.

It was Wednesday at that time. The time came, it was now the weekend. The young Engineer came to my house accompanied by a young man. I asked him “who is this gentle man?” This is my colleague, he is a Quantity Surveyor.

It was my first time to hear that profession in my whole life. I only knew about Engineers and Architects. I asked him what they do exactly in that Quantity Surveying. He told me that they do almost everything in construction. I was amazed and I asked him everything?

I did not even know that this career exists and now you are telling me that you do everything in construction how come? We all made loud laughs! He began to explain me confidently about Quantity surveying.

As I listened to him attentively, he said this profession is new in Rwanda. Material waste is considered as one of the most important problems in the construction site. Every type of construction project is accompanied by enormous heaps of construction waste causing huge adverse impact to the environment. The three major responsibilities for a Quantity Surveyor are:

1. To produce cost estimates, enabling budgetary and finance control; to provide advice concerning contract strategy and taxation; to prepare contract documents for procurement of consultants and contractors. In other words, the negotiation of contracts, prices, change orders and interim payments are being the responsibility of the Quantity Surveyor.

The quantity surveyor is responsible for calculating any variation and extra work on site as per requirement of the project. I was not convinced, because it was the first time to hear that. I told them that I prefer to work with the Engineer only. I called my family’s lawyer, and we had a legal contract agreement with the Engineer that day and started to make bills of quantities next Monday to mean a week before my final examination and approval.

When the Engineer handed me the bills, it was so expensive beyond my expectations! But I had enough money and said maybe I should accept it because prices could have increased in the past few months! I confirmed the execution to be done in next two months.

So, after the Engineer started executing the building, and got stuck before making the final finishes on the house, I asked him what was going on, he said that the budget was underestimated. I was amazed and shocked. Then, I asked him “ how come after all the money I gave you mister?” I was disappointed.

However, I did not take him to court. I rather gave him the extra money and then my house was finally built. In one of the next days after, I told the story to my family lawyer at a dinner, and he was also amazed!

He told me that I was supposed to work with the guy doing Quantity Surveying because, he could make accurate bills than those of the Engineers.

He advised me to employ the Quantity Sureveyor as my Construction Projects Manager and I did as he said. The Quantity Sureveyor signed for my company.

During the Planning of the second building which was a twin to the first , I handed the preparation of bills of quantities to the Quantity Surveyor and I saw the changes through the accuracy of the bills! We executed the buildings at a lower cost than the first one! It was positive! This saved my money and time at a high level! It was the work of the Quantity Surveyor. From that day , I understood the role of a Quantity Surveyor in Construction industry.

Legal matters:

The legal lens provided by a Quantity Surveyor on a Construction Project



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Unlike other industries, such as the manufacturing industry, where processes and parties are leaner, the construction industry has numerous 'moving parts'. For instance, a plethora of relationships, stakeholders, interests, expectations, etc., befall a typical construction project. Specifically, relationships amongst the various stakeholders (clients, contractors, suppliers, etc) can be adversarial.

This implies that mitigating contractual and litigation distress is necessary and involves the proper management of construction parties, in which case, effective drafting of construction contracts becomes paramount. Construction processes are complex and as such, are a hot bed of disputes that can be potentially litigious. Scholars argue that litigation, for instance, is primarily caused by factors that can be grouped under people and behaviour.

The way demand is put in the construction industry, through competitive bidding, often increases this adversity.

It is therefore important to have the right parties and professionals on a construction project.

Although construction is litigious and prone to disputes, rarely do construction projects directly involve Lawyers as part of the team; even if involved, Lawyers would not participate actively in the entire project cycle. Yet, construction processes involve a number of legal issues, right from the signature of the contract, to settling of the final account.

Therefore, it would be important for one of the construction parties to have competence in construction matters that are of legal implication.

The Quantity Surveyor (QS) is best suitable for this role. Besides the conventional role related to cost management, a QS offers a number of services that are, in their very nature, matters of the law.

These, among others, include:

- Advising on Contractual Methods
- Drafting of contractual documents
- Giving expert evidence in arbitrations, adjudications and legal disputes
- Preparing/defending against construction contract claims
- Advice on a variety of contractual and legal issues
- Offering arbitration services

A QS therefore provides a legal lens to explicate contractual matters. This is not surprising since Quantity Surveying training usually encompasses a number of legal modules such as Construction law, Administrative Law, Commercial Law, Law of Tort, Property Law, Business Law, Planning law, Arbitration and others.

In addition, some QSs have gone ahead to do advanced degrees in law and also acquired professional qualifications in arbitration and other alternative dispute resolution mechanisms. Indeed, regional and East African construction practices recognize the contractual role of QSs and some Forms of Contracts, especially for private practice, identify the QS.

By not hiring a QS, it would mean that you have no person to offer a bird's eye view on critical success factors of a project – Time, Quality and Cost – that are also always sources of disputes and legal wrangles. The initial decision of not engaging a QS on a project may seem to be a cost-cut, not until disaster strikes.

That said, a number of projects go on without formally engaging a QS. In other instances, QSs are either episodically engaged, or called for postmortem matters.

Having appreciated the legal grounding of a QS as briefly explained above, the implications of running a construction Project without a QS can be severe.

QS Bodies

SAQS

The quantity surveying profession has benefited by a governing institution in one form or another since 1908, the year that the Association of South African Quantity Surveyors (ASAQS) was inaugurated. The present Association was formed to achieve and maintain the following goals and ambitions for the profession and to:

- Advance and promote the science and practice of Quantity Surveying and cognate matters,
- Uphold the dignity of the Quantity Surveying profession
- Watch over, promote and protect the interest of its members
- Afford opportunity for the interchange and recording of the body of knowledge and experience of Quantity Surveying
- Promote the high standards of professional competence and integrity

QS Bodies

RICS

The Royal Institution of Chartered Surveyors promotes and enforces the highest professional qualifications and standards in the development and management of land, real estate, construction and infrastructure. The work of RICS professionals is hugely varied.

AIQS

Australian Institute of Quantity Surveyors (AIQS) has Chapters across Australia and an international chapter that is split into two regions - Asia and Middle East.

Our 5,000+ members work on construction projects in residential, commercial, civil, infrastructure, education, healthcare, and resources and have job titles including Quantity Surveyor | Cost Estimator | Cost Planner | Cost Manager | Cost Engineer | Cost Consultant | Project Controllers.

CIQS

The Canadian Institute of Quantity Surveyors (CIQS) is the gatekeeper of the ethics and standards for construction and infrastructure economics in Canada. It is a national professional organization which was founded in 1959 and currently represents over 2,000 construction cost professionals from across Canada as well as beyond our borders. CIQS owns and manages two professional designations, Professional Quantity Surveyor (PQS) and Construction Estimator Certified (CEC), which can only be used by qualified, certified members of the Institute.

AAQS

Africa Association of Quantity Surveyors (AAQS), aims at promoting the development and enhancement of education and training of quantity surveyors throughout the African continent.