



Nigerian Institute of Civil Engineers

[NICE]
(A Division of the Nigerian Society of Engineers)
Port Harcourt Branch

7th Prof. Y. O. Beredugo Annual Lecture

**THEME: The Challenges of Managing Civil Engineering
Firms in Nigeria: Management of Clients**

to be delivered by: **ENGR. NATH IBOROMA MNSE, MNICE**

VENUE: Eastern Garden Chinese Restaurant, Port Harcourt, Rivers State

DATE: Thursday, 9th October, 2014

TIME: 5:00pm Prompt



1.0 PREAMBLE

This is neither a research nor position paper on such an important topic. It is rather the observations of one who has seen a little in the management of one of the foremost indigenous civil engineering firms in Nigeria. A definition of the key words will be helpful.

□ Challenge:

Challenge is defined by the Advance learner's dictionary as a difficult task that tests somebody's ability and skill. Wikipedia says challenge is a general term referring to things that are imbued with a sense of difficulty and victory.

□ Management:

Lawrence Appey says management is getting things done through other people. It is a process that has four major steps – planning, organizing, leading and controlling.





□ Civil Engineering

Wikipedia says Civil Engineering is a professional engineering discipline that deals with the design, construction and maintenance of the physical and naturally built environment, including works like roads, bridges, canals, dams and buildings. It is traditionally broken into several sub-disciplines including: environmental engineering, geotechnical engineering, geophysics, geodesy, control engineering, structural engineering, biomechanics, transportation engineering, earth science, atmospheric sciences, forensic engineering, municipal or urban engineering, water resources engineering, material engineering, coastal engineering, surveying and construction engineering.





Civil engineering takes place on all levels: in public sector from municipal through to national governments and in the Private Sector from individual home owners, partnerships through to international companies.

□ Firm

Firm means business or company in this case engaged in engineering. For time constraints this presentation will dwell mainly on the civil engineering consulting firm. The consulting engineer applies his knowledge of science and technology to design, specify and supervise the construction and maintenance of facilities to improve the quality of life of people. Clients who engage the services of civil engineering consulting firms in Nigeria are in the main governments and their parastatals or agencies.





2.0 CHALLENGES

In the geo-political entity called Nigeria, running the business of engineering as in other sectors is imbued with difficulties of manpower, mediocrity, lack of integrity, and adverse business environment among others. These very challenges are to be contended with by any one charged with the task of managing the business.

□ Manpower

The competence and diligence of the staff determine the firm's performance. There is no corresponding number of competent and experienced engineers to the upsurge of engineering firms which itself awkward as it may sound is a product of computer aided designs. The general attitude to work in Nigeria is not the best. The effective man hours put in by an average staff is far below the specified daily duration. This is the first challenge to management.





Competence should go beyond technical to human resources management, financial management, contracts administration and business strategy.

NICE may need to organize workshops in these areas handled by specialists. I will use the four major steps of management to tackle this problem – planning, organizing, leading and controlling.

□ Planning

Planning is predetermining a course of action. This involves clearly defined objectives. The civil engineering practice is obviously very diverse. There is the need to start with the specific area of competence and interest and grow from there. Many may want to run before they crawl.





□ Organizing

Organizing is placing people in a structure to accomplish objectives. It also involves the identification and grouping of the work to be done so that it can be effectively executed by the people. This means not just having an organogram, but correctly grouping the people most qualified to do a specific work with a clear job description. Often this requires prudent recruitment in the short term or further training of existing staff to meet specific need. We are talking of encouraging specialization – some on structures, some on highway, some on bridges, some on flood and erosion control etc. Etteh Aro & Partners has done a lot abroad and is still doing. This long-term measure is often 'abused' as such staff so equipped are not patient enough and want to go for greener pastures. Do you put them on bond for some years? But then this is like duress and you may not get the best output from such a staff.





□ Leadership

One Hendricks defined leading as causing people to take effective action. The manager-leader has a team mentally, meaning he delegates and motivates. Delegation is related to the staff's competence. Some can work on little supervision others cannot. Quality assurance in terms of checking and approval are steps that need to be taken seriously. Experts say the following needs amongst others if met will motivate a staff.

▪ Physiological

Physical body needs such as food, housing, etc. in other words financial motivation. This will be in terms of increased monthly remuneration, bonus, etc. But then how do we penalize the indolent so that he will not set a bad example for others.





- **Safety**

Protection of his job, which is job security. A permanent staff with spelt-out conditions of service is likely to give effective job delivery than a contract staff whose engagement could be terminated on a very short notice. But the reality is that all staff cannot be permanent and even contract staff's regular pay is under threat in this era when clients are relating a supervising consultant's pay with the performance of the constructing contractor.

- **Job satisfaction**

Every professional at least at the beginning of his career has a craving to acquire knowledge and skill that will give him confidence and self-esteem. This will mean deliberate exposure of staff to areas of their interest even at the risk of 'staff flight'.





Some contract staff, particularly younger ones placed on supervision feel they are losing out. They will want design experience. Design staff should be sent to site supervision for balanced experience.

- **Controlling**

This is the action a manager takes to ensure that performance conforms to plan. This will need a concise, accurate, specific and regular feedback from the staff given tasks. It may be weekly or monthly. It helps to make necessary changes or keeping the momentum to achieve set targets on time. Often the bigger boss's assignment gets the priority but if the management team as a whole draws up the work plan it will help.





□ Mediocrity

Many engineering firms are yet to enshrine excellence in their mission statement. However the following might have given the impetus to mediocrity in practice:

▪ Short Gestation Period

The major clients are governments and their parastatals influenced by politicians who are in a hurry. They want quick delivery of projects which normally should come to the construction stage after proper study and design. Under this pressure, the best of firms are forced to have short cuts with the attendant problems of faulty designs to inadequate quantifications. For example cross sections instead of at 25m become 50m or 100m intervals. Hand augers at 0.5km become 1km intervals. Flood seasons have not been adequately studied and taken cognizance of.





- It is not uncommon to hear of contract review and augmentation. The only solution to this is for clients to have a period of conception, study and design well ahead of the construction stage. This will be an uphill task as long as transit politicians and their constituency projects dictate the shots. If an engineering firm insists on its period of delivery considering the nature of the project and its resources, it risks the patronage of the client.
- Inadequate Funding
Another cause of mediocrity is inadequate funding either at the design or construction stage. Geotechnical investigations in the Niger Delta region for instance are capital intensive. A client whose stage payments do not consider this, risks a shoddy design. Many clients are undercutting the supervision fees-sidelining the provisions of the scale of fees. Even such fees are much delayed in payment. There is a great disparity in the fees of the indigenous and expatriate consultants. All these may compromise the integrity of the project.





□ Quality Control and Assurance

Not many firms are deliberately conscious of their corporate image based on the organization's culture and values which include technical thoroughness. We have alluded earlier that the issue of checking and approval of design and drawings should be the actual practice. This is quality assurance. For this, a competent person in that field should be the team leader. The Curriculum Vitae of key personnel to be involved in the project are normally submitted at the tender stage to be monitored closely at project implementation.





□ Adverse Business Environment

One will not bother to mention inadequate power supply, communication and other facilities that increase the cost of doing business in Nigeria. Management of firms face the unpredictable multiple taxation from Local, State to federal Governments. Safety in terms of security of life and equipment has become a major consideration. The financial provision for security being made for the contractor does not extend to the Consultant. Of course there is the obnoxious Nigerian factor. If the constructing contractor can build these into his rates, how does the consulting engineer allow for this as bad as it is? Proper tendering process and analysis inspite of the Due process put in place for government projects is fast becoming a sham.





Only in few places can one submit a financial claim and receive same without rigorous follow up. Some of these issues can only be addressed by combined effort of the institutions that regulate the engineering practice.

□ Integrity

This quality of honesty guided by strong moral principles in professional practice is not one engineers are sworn to uphold. The medical doctor has sworn to save life, the lawyer to defend justice and the engineer by his professional code is committed to act in the interest of the community. The community includes all groups in society who definitely benefit from his edifice. Lack of integrity of character will affect the integrity (thoroughness) of the engineering practice and the soundness of the project both at the design and construction stages.





At the design stage, apart from the short cuts in study earlier observed, there could be over quantification to either increase the design fees (where based on scale of fees), or satisfy the avarice of vested interests. The construction industry is littered with sharp practices of under specification, substandard workmanship and over-valuation especially in works subterranean. This is not honourable or reliable but falsehood. An engineering firm needs more than profit and professional recognition. It needs the desirable core values of thoroughness and good business ethics. It should be mentioned that there is a strong correlation between the individual's character and the firm's culture. Established assessment and monitoring units may not do much to eliminate this cankerworm of corruption in engineering practice. A conscience enlightened by the Divine and a pride for excellence which supercedes the love for money may be the real panacea.



3.0 MANAGEMENT OF THE CLIENT



The Client is the boss and he is said to be always right. We can only talk of management of the client in terms of relating to him to achieve project objectives. We have earlier mentioned that in Nigeria, the majority of the Clients of the civil engineering consultant are government or their agencies. The consultants relationship with the client (Employer) is usually at the two stages of design and supervision. Our interest in this discourse is the challenge the consultant meets in relating with the client. Some of the challenges have been mentioned above, under the headings – Short gestation period, Inadequate funding and Adverse business environment. I will highlight some challenges we have come across.





□ Study and Design Stage

Quite often the scope of works indicated in the award letter is not specific enough. It might have originated from political rather than technical considerations. Interactions with the engineering department of the Client at the beginning does not always give the necessary clarification. It may be worse if some personnel have opposing interests particularly for a road project. It is not uncommon for the same project to be awarded to two consultants – only a difference in names of origin and destination. Sometimes due to delay in the award of the construction contract, later physical developments will require a consultant revise part of his design at his own expense or outright reduction of his fees. In this part of Nigeria, community relation by a consultant who happens to be the first in contact with the benefitting community is expensive.





If the geotechnical and traffic studies do not follow in close succession with the topographical surveys, the community relation will be repeated. This expenditure and that of security are not allowed for in the fee computation. The solution to all these, is quick delivery from inception, preliminary to final design submission carrying the client's technical department along for field monitoring if so required.

□ Resident Construction Supervision

These days the consultant is hardly involved in construction contract bid analysis. He has no input in the selection of the contractor. The consultant is engaged by the client as a fair umpire to supervise the works described in the construction contract in accordance with the Conditions of contract, the Specifications and other documents notably agreement and drawings.





He is to ensure at all times that the works are free from defective materials and workmanship and they meet the requirements of the drawings and specifications. He may sometimes be required to vet and recommend payments due to the contractor. The agreement between the client and the contractor does not mention the consultant. The conditions of contract indicated that the contractor shall take instructions and directions only from the Engineer or from the Engineer's Representative. These days, both the Engineer and the Engineer's Representative may be from the Client's establishment. This limits the executive powers of the supervising consultant to almost nothing. He is expected to channel the instructions that matter through the Engineer & Engineer's Representative. When bad workmanship and unsuitable methods are used, the consultant's instruction for rectification or stoppage may be ignored.





In a good number of cases when assistance is sort from the client (Engineer or Engineer's Representative), it does not come. This is a dilemma. The Engineer or the project manager of the client is saddled with so much responsibility or the contractor concerned is in the good books of the powers that be. Perhaps the problem of relating the supervising fees with the contractors work progress earlier mentioned is more frustrating. The monthly enumerations paid by some clients for supervision are far below what is specified in the scale of fees and that very irregularly. When a construction project comes to a standstill for no fault of the consultant and without clear directive from the Client, the consultant is denied fees for that period. These issues can only be resolved by the engineering institutions. What we have done on own is seeking audience again and again with clients and contractor's higher authorities for intervention. What we cannot change we absorb.





4.0 CONCLUSION

The present vibrant developmental activities in Nigeria particularly in the Niger Delta Region due to the Oil and Gas industry has given birth to many micro engineering firms. A growth that is not in tandem with the professional development of the individual engineer. Pupilage is fastly disappearing in the profession because either the young engineer is in a hurry or there is no plan for his training. Micro firms tend to be personalized like founder/owner churches and fizzle out as soon as there are cash flow problems. This is more so when the founder/owner does not separate the firms account from his personal account and has no provision for running the firm in “the rainy day”. Macro to Mega firms with specialists in different fields given to professional development and business ethics are better equipped to face the challenges of mediocrity, integrity and the adverse business environment. The Engineering institutions need to confront client related problems.





One only hopes that officials of the institutions in vying for jobs for themselves from the establishments will have the courage to do so without compromise.

