# Sustaining the Geomatics Profession through Effective Professional Associations

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**Key words**: Professional associations, Surveying, regulatory framework

#### **SUMMARY**

The Surveying/Geomatics profession will either survive or die depending on how well professionals create professional associations that are relevant to the needs of society as well as the needs of the professionals themselves. Surveying/Geomatics as a profession is one of the oldest known professions but seems to be less attractive than for example, Law and Economics partly because the profession has not found voice in articulating the issues confronting society. This is because most surveying associations are poorly organised and do not show relevance to the needs of the society. This paper is premised on the understanding that a robust professional association will not only help rekindle the interest of the young and women in joining the profession, but will also create the necessary awareness of the purpose of surveying and why it is very relevant to the development of any nation.

Surveying is currently at a crossroad due in part to the "encroachment" of different professionals in the traditional area of providing land information. The development of new technology has meant that anyone can navigate to a location, determine an area of a piece of land and draw a nice cartographic map automatically. These and other issues challenge the very niche of a surveyor and his/her societal relevance.

The paper sketches the basic tenets of a professional association and how it can promote professionalism and redefine the roles of the surveyor in a changing environment. It proposes the need to continually realign professional associations and model them towards the greater goal of sustainable development in any given nation.

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## 1. INTRODUCTION

FIG (1998) identifies a professional to be one who has a mastery of a particular intellectual skill acquired by education and training. It further states that such a person should have characteristics to accept duties of society over and above the duties to clients and employers. The expectation of FIG is that such a person will render personal service to a high standard of conduct and performance. For this to happen the professional must work within a framework where he shall be regulated and meet the said standards. The needs of society although well served by the professional surveyor are often not articulated very well by the same surveyor because he is busy in his corner bashing pegs on the ground. And because he is not seen to articulate these issues out in the public domain he is not seen to be as relevant as other professions. The seeming lack of relevance has a bearing on the sustenance of the profession as young ones might not want to aspire to join a profession which is not considered relevant because of its invisibility. However, this invisibility is largely caused by the lack of effective professional associations that can articulate societal duties of the surveyor. Mogel (2001) for instance has argued that surveyors continue to play a part in sustainable land development and there is need to develop a specialist generalists whose education is still founded on geodetic principles but also have a broader view from the land, property and construction sphere. He states that this would increase the sphere of socio-economic influence of the surveyor. Coupled with this need for a more informed specialist generalist is the problem of the different "mapping" players treading in the surveyor's space. With ineffective regulation of this mapping space come problems of improper conduct of pseudo professionals which ends up tarnishing the image of the profession.

The bottom line therefore is to ensure that you have an effective professional association which will fundamentally regulate the profession.

## 2. EXISTING SITUATION

Botswana's Geomatics profession is governed by the Land Survey Act. The Land Survey Act provides for the establishment of the Land Surveyors' Board and its duties. This Board is composed of the Director of Surveys and Mapping, one Land Surveyor in the public service and a private land surveyor. The function of the Board is to set and carry out examinations for the purpose of registering Land Surveyors. The Act also spells out the duties of a Land Surveyor and sets rules and regulations on how Cadastral Surveys must be performed.

When a surveyor passes the examinations set by the Board s/he qualifies to be registered as a Land Surveyor and will practice in respect to the Act. Other persons that can be registered to practice as surveyors include those who are registered in neighbouring countries such as South Africa, Zimbabwe and Zambia as well as holders of qualifications of Fellow or Professional Associate of the Royal Institution of Chartered Surveyors (RICS). The Land Survey Act in essence sets out the registration and the practice of cadastral surveyors. It does

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not have any control of any other survey practice in the country. So, practitioners in the areas such as engineering surveying, mining surveying, cartography, GIS, photogrammetry and remote sensing do not have to register with anyone to practice in the country. Companies can employ persons with lower qualifications to practice as surveyors as long as they know how to use a theodolite or GPS.

## 2.1 Perpetual Licensure

Once one is licensed as a land surveyor s/he is licensed for life and does not need to renew her/his license. This has a fundamental flaw in that once licensed one does not need to keep abreast with the latest technology, with new developments in the profession and even to participate in the growth of the profession. But as stated by Allred (2002, p.8),

In this day of expanding technology no professional can expect to be licensed for life. In order to be able to continue to offer a high level of service to the public every practitioner must devote a considerable portion of his time to updating his knowledge and skills.

In a set-up such as this therefore there is little wonder that not much growth will happen. One becomes a registered as a professional surveyor without belonging to a professional body. This is remiss in the structure of the profession in Botswana. However, the *Land Survey Act* is currently undergoing review and therefore the professional body could take advantage of the revision and push for an enlarged board of examiners to provide for the new and expanded role of the surveying professional as well as the yearly renewal of licenses (Nkwae, 2008).

## 2.2 Botswana Surveying Mapping Association

To address this situation the Botswana Surveying and Mapping Association (BSMA) was created to address the issue of establishing professionalism in the Land Surveying/Geomatics profession. The association has three chapters: cadastral surveying; cartography, remote sensing and GIS; and thirdly engineering, topographical and mine surveying. At the moment the association has no student chapter, a very serious omission more so that the association is eagerly looking at growing the surveying profession. Its main objective is "to secure the advancement and facilitate the acquisition of that knowledge which constitutes the profession of surveying and mapping". Since its registration in 2001, BSMA seems to have failed to achieve this objective and the question that needs to be answered is "how should the association become effective to achieve its objective?" It is only through making it achieve its objectives that we shall begin to see growth and sustainability in the Geomatics profession. Since its inception in 2001, the association has managed to attract a membership of about twenty out of more that 225 professional and technical surveyors in Botswana.

### 3. EFFECTIVE PROFESSIONAL ASSOCIATIONS

An effective professional association is one which will not only promote the profession but will also protect the public from unethical professional practices. It should also be the voice of

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the profession in articulating the role of the profession in society. According to Allred (2006, p.6) the functions of a professional association should include at least one of the following attributes:

- 1) determination of entrance requirements;
- 2) provision of a system of registration;
- 3) licensing of professional practitioners;
- 4) maintenance of competence;
- 5) codes of ethics;
- 6) standards of practice; and
- 7) adjudication of complaints and discipline.

Herein lies the fundamental problem of an association such as the Botswana Surveying and Mapping Association. It is not able to do any of the functions stated here and therefore it is seen as an irrelevant body even by its prospective members.

## 3.1 Creating a Viable a Professional Association

Tembo(2006) indicated the following as key success factors for a viable professional association:

- An association is successful if members value their membership. As an addendum to this key success factor is the factor that the organisation must add value to its members. This can be done by ensuring that there is a list of benefits such as organising continuing professional development (CPD), networking, seminars and professional titles.
- 2) Successful association's have a strong marketing strategy to market to both the profession as well as the public at large
- 3) A successful association is one that regulates itself. It ensures who comes in and sets the standards for practice. A professional body must set up its code of ethics and commit its members to abide by it.
- 4) A successful association is one that will participate in the registration of its members. Registration of members must be done with the involvement of the professional

As long as an association is not valued by its members, it will not attract prospective members to it. It is critical therefore that in order for it to be valued it must have value addition to the professional lives of the members.

### 3.1.1 Value addition

Being a member of a professional association should signify one thing; that one is committed to one's profession and desires to contribute to its growth. However, such membership should also result in benefits to members. These benefits may include possibilities to regularly network with peers in the profession, participate in structured Continued Professional Development programmes organized by the association, societal recognition for those who are members e.g. being a Fellow or a Chartered Surveyor titled by the association confers one

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with honour and stature. Other benefits may include receiving any publications that the association publishes as part of the membership benefits.

## 3.1.2 Regulation of the profession

How an organisation regulates the profession has a bearing on its effectiveness. Bodies regulating any given profession can either be promulgated by law or can be by voluntary, non-legislated association. Reader (2002, p.12) states that a self-regulating professional body established by the legislature is fully empowered to:

- act in the public interest;
- Exercise delegated law-making powers (rules or bylaws enacted by the profession's governing body have similar status as public bylaws); and
- Exercise "public law" powers of enforcement over its members.

Any such association aims to regulate the profession by ensuring that whosoever is registered as such follows a code of ethics, and maintains minimum set standards. In the context of BSMA its presence in the professional scene in this regard is considered irrelevant and plays no meaningful role in the regulation of the profession. What is currently lacking in BSMA is the power or authority to regulate the surveying profession and that authority is usually delegated by the Legislature to a self-regulating professional body. Just like real estate profession, the land surveying profession should start lobbying government for self-regulatory status before the public interest is harmed.

## 3.1.3 Protecting the public interest

Protecting the public from professional misconduct and malpractice will enhance the value of the association and will give it a public face. The public would like to consult with a professional association which seems to protect public interest in the event of professional malpractice.

#### 3.1.4 Regulatory models that work

Professional regulation as stated earlier can either be through self-regulation without the law or through an Act of Parliament. Self-regulation is perceived to be the best in so far it obligates all the professions to abide by whatever creed they vow to abide by. There has be an element of censure in the event that any member does not abide by that creed. So even in a self regulatory environment the expectation is that there shall exist some laws that will have to be enforced against any erring member. Self-regulation will no doubt have its strengths and weaknesses. Its weaknesses might include: cases where other professional might not participate in the association and may adversely affect the sustainability of whole profession; tendencies for the professional body promoting self-interest over public interest, that is, a situation where there might be conflict of interest; cases of weak self-regulatory bodies exist worldwide; and chances of cartels, monopolistic or anti-competitive behaviours developing

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within the association. How do you bring these to book in a self-regulatory environment? The search for a model which works therefore suggest one model such as the one practiced in Nigeria. The Nigerian model of the Surveyors' Council of Nigeria (SURCON) and Nigeria Institution of Surveyors is a model that seems to have worked well. The SURCON is a self-regulatory professional body with legislated responsibility for licensing all land surveyors in Nigeria while the Nigerial Institution of Surveyors is a professional associtaion that represents the professional surveyors with the following objectives:

- 1. To represent generally the views of the Surveying Profession in Nigeria and to seek the professional well-being of its members;
- 2. To maintain the integrity of the profession and enhance its status;
- 3. To provide and support the medium for training Surveyors and improvement of Surveying techniques;
- 4. To maintain the highest standard of professional practice and conduct among members;
- 5. To interact with, and advise the Government on legislative matters as they affect the profession; and
- 6. To generally protect the interest of the public on surveying matters.

In order for one to be licensed by SURCON one must first belong to the Nigerian Institution of Surveyors. This ensures that all licensed surveyors belong to a non-legislated professional association and abide by the rules and conduct of the legislated self-regulatory professional body.

Unfortunately this is not the case with the BSMA although it has set its noble goals it has no regulatory authority over the licensing of land surveyors, the task that is currently by the government through the Land Surveyor's Board of Examiners and as a result is it suffers from a dearth of activity as well as interest and commitment of any prospective members. Professional associations can be evaluated for viability using different approaches such as the rational goal model in which the focus is to evaluate whether an association's goals are being met. No doubt the goals of the BSMA are not being met at the moment and therefore its effectiveness and viability is questionable.

#### 4. A WAY FORWARD

Our undying desire is to see a functional and effective association which will contribute to the growth and sustenance of the profession. This can happen at two levels. At one level is the recognition of all Land Surveying/Geomatics professions that an association or institute is an imperative in their professional lives. At another level, the recognition by government that without involvement of the profession the growth will be limited and the public remain unprotected by possible malpractices in the profession. With a strong professional association

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or self-regulatory body in place, the profession will be better placed to police itself and protect the public interest hence the argument towards the establishment of a self-regulatory body in Botswana.

## 4.1 Sustaining growth through the youth and women

Any profession which has to grow must attract among its midst the young and the women. However, in order to do this there has to be a deliberate program to attract these categories of our population. Attraction is but only one component of sustenance because while you might create marketing strategies of attracting new members into the profession there is every likelihood that those attracted might opt out if there are no incentives to stay in the profession. This is why there is need to have a strong attractive professional activism that society can recognise as being relevant to its needs. There is no denying that the surveying profession whether it is the land surveying, quantity surveying, valuation surveying is very important in the sustainable economic development of a country. However, because of the way the profession has been socialised it is the last to discuss issues of land and policy. More regularly, the lawyers and economists will be seen and heard in public media discussing the land issue. The land surveyor for instance is considered by many to be a technical person who must be called upon only when there is demarcation of land to be done. There is need to attract the youth who at University to join as student members as this will ensure that when they complete their studies they are most likely to continue to be members.

## 4.2 Sustaining the Geomatics profession through a revitilised and self-regulating body

In many smaller countries, surveyors can struggle to set up a viable and effective body to regulate their profession. Taking guidance from local and international best practice experience, Botswana is poised to regenerate its professional surveying association.

As a first step towards regenerating the surveying profession Nkwae (2008) suggested that a task force be set up with a mandate to investigate the operations and shortcomings of BSMA and make recommendations for renewing, revitalizing and transforming the association into a viable self-governing professional body.

A strategic and business plan is urgently required to enable the association to meet its goals and objectives in a cost-effective and sustainable manner. This approach should be given the highest priority, as it is the association's road map to success. A number of initiatives such as reviewing the constitution to be in line with the current needs should be embarked upon. There is need to also look into the issue of the name of the association as the current name is not inclusive of all the Geomatics sub-disciplines. In addition, the BSMA executive should embark on a recruitment drive to boost the membership of the association that is extremely low. Such a marketing strategy could include the use of information booklets, leaflets, launching of the association's website, Facebook and other social networks. This will have the potential to grow the surveying profession by attracting the youth and women.

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