Land Surveyors Association of Jamaica

"MISCLOSURES"
NEWSLETTER

Website: www.lsaj.com

Land Surveyor's Association of Jamaica Newsletter October, 2022

Diane Dumashie Elected as New President of FIG

Dr. Diane Dumashie

Dr. Diane Dumashie won the final vote at the FIG Congress 2022 in Warsaw and will serve as the next president of FIG for the next four years. She stated that she is looking forward to four years of fruitful collaboration ahead, with this year's successful edition of the FIG Congress as an excellent starting point. In an interview with *GIM International* earlier this year, Dumashie shone her light on the future of the surveying profession, the role FIG should play within the geospatial community and how our sector worldwide can be encouraged to become actively involved in solving the societal challenges with our knowledge and innovation

How do you foresee the surveying profession changing?

As the biggest international society representing the geospatial and surveying profession, FIG offers a global platform of exchange and influence for our stakeholders. Over recent years, I've had the pleasure of holding the Council remit on some of the strategic stakeholder engagements and I can see that above all our profession needs to remain relevant, serve the public interest and leave no one behind in a world of rapid and dramatic change.

To continue to provide leadership in society we must be ready to innovate, to adapt and to lead the response to change. To remain impactful over the coming decades, our work will be shaped by the major global forces affecting societies. These include climate action, rapid urbanization, environmental and resource stewardship, technology revolution and demographic influences. By way of example on the how, I'll draw on two of these forces.

First, the ongoing digital transformation. Our profession has been in transition for some time, but we can't stand still; we must be prepared for the future by

Continued on Pg. 10

In This Issue

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Editor's Notes

Timothy A. Thwaites BA, MSc., CLS

Dear readers, we appreciate you joining us for this quarter's edition of our Misclosures newsletter.

Almost as imperceptibly as COVID-19 entered our existences, it appears that we made a collective decision to free ourselves from its vice grip, and started charting a new way forward. To our benefit, this position seems to be generally supported by the current science and epidemiology of the pandemic; however guards should not be let down carelessly.

Invariably many will try to revert to 'the way it was', ignoring the reality that so many aspects of our lives are no longer as they were! How we establish and maintain relationships, transact business, learn, and exchange information have changed along remarkable and rapid trajectories, and these new paradigms are insensitive and unaccommodating to traditional customs and comforts.

Surveying is no exception. The pandemic laid bare which components of our professional ecosystem were essential, and which were not. Restrictions on time and movement forced choices and decisions that may have otherwise been consumed in the cut and thrust of our regular, hectic operations. Now is our chance to look at those essentials practices, services and institutions honestly and objectively, and to restructure and bolster them to best serve surveying into the future. Anything to the contrary would be to waste the opportunities of a once-in-a-generation phenomenon.

As we transition into the busy end of year period, let us ensure we take the steps to provide ourselves, our families, businesses, staff and other dependents with due rewards for the efforts and sacrifices that have helped bring us through this extraordinary period. Let us also remain mindful of the broader realities around us that are indicating that the world may be heading into another cycle of economic and geopolitical uncertainty, and that many look to us Surveyors as pillars of stability and safe refuge in difficult times.

I hope you enjoy this publication, and as always feel free to share and contribute how we can continue to improve the offering.

Timothy A. Thwaites, Newsletter Editor

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The LSAJ continues to be more environmentally responsible! Our Misclosures newsletter will now only be circulated in electronic format.
This will increase our reach through e-transmission to a wider readership, and also drastically reduce our collective carbon footprint!

The President's Notepad

Charles Johnson, CLS - LSAJ President

Dear Colleagues,

As we enter the final quarter of the year I am sure many of you join with me in the disbelief that it seems to be going by so very quickly. Over the past nine months we have seen the slow but inevitable return to 'normal life', that is, life before Covid-19. We have transitioned out of the regular curfews and no movement and we can access services more easily than just a few months ago. Let me hasten to remind everyone that the disease is still with us and that we should all remain cautious, but we can be encouraged by the fact that its spread is not as prevalent as it was before and that it does not seem to be claiming as many lives as it did in the not-too-distant past.

As a profession we can count ourselves lucky for having been spared some of the debilitating economic effects of the pandemic. By most accounts our colleagues continued to work throughout the period and continue to find themselves engaged as we transition towards pre-pandemic normalcy. If there is any complaint that is commonly heard it is that surveyors cannot find employees to fill the positions within their practices. Though our profession has long struggled with attracting and retaining student surveyors and technicians, the complaint of finding good, reliable staff now seems to run the gamut of possible vacancies within our offices. Some light was shed on some of the possible reasons for this in our July LSAJ Masterclass on Human Resources and the Modern Land Surveying Firm. The feedback after the seminar indicated that there was a greater understanding of the way of thinking of employees and highlighted the need to understand their mindset in order to garner the most from them while not compromising professional and ethical standards. We must recognize too that in addition to identifying where there is need for change with the times, there is also the need to ensure that employees are compensated sufficiently. This therefore means we need to ensure that we, as professionals, are compensated well enough to take care of all our obligations.

Student surveyors are now in the midst of the practical tasks portion of their professional examination. I extend to them best wishes and encouragement on behalf of the LSAJ members and associate members. Our LSAJ 'Surveyor School' has commenced engagement with the candidates in guiding their preparation for the practical task. Engagement has been through online interaction with the candidates and their principals as well as follow-up direct one on one interactions. Though they all have encountered challenges, they have expressed confidence in being able to surmount them. They have all expressed gratitude for the intervention and guidance of the LSAJ as they face this first real hurdle in their professional lives. Lectures and workshops will continue for the candidates up until the viva voce and support will be offered going into the plan interview.

The end of 2022 is upon us. I remind you colleagues to make application for your practicing certificate for 2023 before the end of December. The process for registration is set out in the Land Surveyors Registration Handbook which can be found on the National Land Agency website. (https://www.nla.gov.jm/sites/default/files/LSAJ%20Registration%20Handbook.pdf)

Charles Andrew Johnson, President

Refining Measurement—A land surveyor unpacks the concept of accuracy

"Accuracy is addictive," my friend David Doyle once said.

Doyle is a geodesist by trade. For someone in his line of work, this addiction has a rich tradition.

Geodesy is the study of Earth's shape, rotation, and gravity field. The discipline involves an eternal quest to refine measurements and calculations that date back to the ancient Greeks.

Doyle spent much of his career with the National Geodetic Survey, a program within the National Oceanic and Atmospheric Administration (NOAA) with roots in Thomas Jefferson's efforts to survey the coastline during his presidency.

Jefferson considered the effort crucial to improving shipping and commerce for the young nation. Today, accurate coastal surveying is still crucial, especially as climate change and sea level rise change the physical parameters of coastlines.

Doyle worked on the National Spatial Reference System, one of the program's cornerstones. It consists of reference points that serve as the authoritative source for measurements such as latitude, longitude, and height.

You may not require this kind of accuracy during your daily routine, but the work of geodesists lurks in the background every time your map app determines your position. These calculations are always based on an ellipsoid—a mathematical conception of Earth's shape and dimensions—and a datum, a coordinate system that creates a virtual grid of reference points wrapped around the globe.

So Doyle's addiction does not require an intervention. Because the planet's dimensions are always in flux and new applications require even more exact calculations, one might even say it's a job requirement.

Defining Accuracy Accurately

For surveyors, whose livelihoods depend on the ability to make authoritative geographic measurements, the need for accuracy is a given. At the same time, the concept is chimeric, with requirements that differ depending on the job.

For centuries, the surveying profession changed very little. Until recently, we still used tools like chains, tapes, transits, and theodolites to triangulate positions.

For the past few decades, we've become more reliant on positioning based on signals from global navigational satellite systems (GNSS) like GPS. We make extensive use of geographic information system (GIS) technology to gather, store, and display our work—using phones and apps on location.

As a surveying tool, GIS is somewhat agnostic, valuable for its ability to serve as a kind of container for innovation. A GIS can integrate and create map layers from different sources of information, including previous surveys, satellite images, lidar, and drone imagery.

This ability to compile data in layers has made GIS an enormous boon to surveyors, transforming what we can achieve for clients. But not every job calls for maximum extreme precision. Constraints of time and money often force us to think critically about what we need for a given assignment.

In the past, accuracy was something we all strived for without considering what the concept really means. Now we have to ask a question all addicts must inevitably face.

How far will I go to satisfy my addiction?

Continued on Pg. 7

Transforming the Surveying Profession

By: Linda Duffy

Surveying is experiencing a surge of technology that to some might seem detrimental, while others see it as an opportunity to expand into new service areas and achieve higher levels of productivity and profitability. In 2022 and beyond, the trend toward faster, more accurate data collection will continue, with a corresponding increase in the volume of data being handled requiring more storage and high-performance processing to keep up.

Advances in technology are impacting every facet of our lives, and surveying is no exception. The increasing capabilities of GPS/GNSS, laser scanners, robotic total stations, 3D software, mobile mapping and drones, among other things, are driving a shift in expectations related to workflows and deliverables. Projects that used to take weeks can now be completed in days, and survey-grade accuracy is defined in millimeters instead of centimeters. Although sometimes difficult to keep pace with the changes, the benefits are far-reaching and offer new opportunities for those interested in exploring the possibilities.

Shift in Resources—Innovative Services

Attracting the next generation of surveyors is critical to the future of surveying. With the average age of surveyors hovering around 60, a significant loss of experienced surveyors over the next five to 10 years is expected. The Bureau of Labor Statistics in the U.S. Department of Labor predicts 4,000 openings for surveyors per year between 2020-2030.

New technology and the innovative products and services being developed with these tools are a key selling point for the younger generation that has grown up with video games, simulations, virtual reality, smart phones, etc. As demand for 3D models, BIM and digital twins continues to increase, surveyors will have to step up to provide the necessary data; however, as data collection becomes more automated in the field, there will be a shift in resources to the office where the bulk of processing and production of deliverables takes place.

Second-generation surveyor Tim Burch, president-elect of the National Society of Professional Surveyors (NSPS), has big plans to leverage new technology to expand the range of professional services offered by surveyors and to attract the next generation of surveyors.

“Technology is really driving so much of surveying,” says Burch. “Over the past 35 years I’ve had the opportunity to watch new technologies come into the profession and have a profound impact, not just from a performance, productivity, and accuracy standpoint but also from a cost perspective, and cost affects implementation and barriers to entry.”

Burch likes to compare the changes occurring in surveying to the evolution of the automobile. “Technology has improved the automobile almost to the point where anybody can drive with literally any skill level or no skills, thanks to automation and GPS, GNSS, and other built-in sensors. That is what some of the surveying equipment is like now—highly automated. We’re sending UAVs in the air, unmanned vessels across the ocean, and underwater vehicles to scan the sea floor. They are collecting data autonomously, however, it’s still crucial for the humans involved to understand the science behind surveying to recognize good data from bad data.”

One of the arguments against adopting new automated technology is the loss of math and science knowledge and the technical aspects of what surveyors do. Without understanding the process, an operator may not be able to catch mistakes that could have serious consequences. A surveyor needs to relate the horizontal and vertical coordinates to legal descriptions or construction and engineering plans and translate them from paper to the ground correctly.

“On the pro side, technology is making things more efficient and more accurate and reducing costs in some places,” says Burch. “But on the con side we might be putting this technology in the hands of people that know just

Continued on Pg. 6

Transforming the Surveying Profession
(cont'd from pg. 5)

enough to get the drone in the air or to hold a GNSS receiver and collect points. There's a fine line between maximizing efficiency with technology and losing valuable expertise in the field and in the office because of the automation."

By using advanced technology, a licensed surveyor can manage a larger number of technicians than in the past, maybe three to five crews each instead of one or two. There is a trend for less-experienced technicians to be conducting field work without supervision by a licensed surveyor, which lowers cost but may sacrifice accuracy and effectiveness of the data. With proper verification processes in place, firms should benefit from lower costs while maintaining data quality.

Education for an Evolving Profession

To make the most of new technology, educational programs must incorporate relevant material and stay current on the latest tools [see Sidebar]. Even though future drone pilots and 3D drafters have been developing spatial skills and computer skills through gaming and programming from a young age, they need to learn to relate that knowledge to surveying.

Many young people do not consider surveying an appealing career because of a lack of understanding of the job. Public perception is that a data technician is a blue-collar occupation, partially because they are not compensated at a level that reflects the responsibility they carry. In reality, they are handling $150,000 worth of equipment and collecting measurements that will impact ownership boundaries and multi-million-dollar construction projects. A lot of knowledge is required to ensure the accuracy of the data.

"We need to educate everyone about the importance of the work and the technical aspect of the work, and we need to pay technicians accordingly," says Burch. "Licensure is not the only path to a successful career in surveying. An experienced technician can hold various certificate levels that show mastery of certain equipment. They should be promoted and compensated based on their value within the surveying profession."

Office and field technicians do the bulk of surveying work, so they need continuing education to stay abreast of the technology. It's important to understand the science rather than just pushing the buttons, which raises this occupation above a typical entry-level hourly wage job.

Construction Relies on Surveying

Surveyors play an integral role during all phases of infrastructure and development projects, starting with the raw ground survey, followed by the engineering design, then staking and translating the information into instructions that fit the terrain. The construction industry has embraced new surveying technology that provides faster and more accurate data collection and streamlines the entire process, while helping stay on budget and on schedule.

"It's been amazing to see how survey technology is being used in the construction industry," says Burch. "It is the surveyor's responsibility to integrate and disseminate all the information. Technology has revolutionized construction with digital models that get loaded into the GPS-equipped construction equipment, so they follow the design exactly."

There are also drones flying the sites to get progress updates and additional spatial data so more analysis is possible to make a better end product. There is so much surveying and engineering data being collected, it is inevitable that surveyors will move toward cloud-based storage systems, which is another area of technology growth.

"Surveying and construction go hand-in-hand, and I don't see that stopping anytime soon," says Burch. "NSPS intends to bring the professional community together with the key industries that we support, including construction. In the future we want to be the provider of news about professional surveying and provide valuable information about what's going on and advocate for promotion of the profession to the business world and the general public."

Source: https://https://www.xyht.com/surveying/transforming-the-surveying-profession/ (Accessed 06-10-2022)

Refining Measurement—A land surveyor unpacks the concept of accuracy

(cont'd from pg. 4)

Check the Map

At the recent Survey & GIS Summit, Jan Van Sickle described a thought experiment he conducted. A geospatial engineer with decades of experience who now works on mapping systems for autonomous vehicles, Van Sickle wanted to quantify the accuracy required for driverless cars to function safely.

Van Sickle explained that he began with the premise that digital mapping is the foundation of all other systems in an autonomous vehicle. Every other part of the architecture that allows a car to function safely without a driver—cameras, lidar, and control systems, to name just a few—depends on the functionality of this ingrained map.

"How accurate would this map have to be?" he asked, addressing his audience. "Well, that's a hard question."

A High Bar

For guidance, Van Sickle explained, he consulted a paper published in 2020 that examined how recent GNSS developments could impact the evolution of autonomous vehicles. The authors had attempted to quantify the acceptable safety of an autonomous vehicle's wayfinding apparatus.

Van Sickle translated their findings, which were presented in the language of statistics—how close to 100 percent confidence must any calculation inspire to be safe—into radial distances. In other words, how much could a car's actual position be off while staying safe?

The results were sobering. For instance, at any given moment while traveling on a normal (non-highway) road, a car would need to know its position inside a lane to within 10 centimeters.

"Wow," Van Sickle told his audience. "They are proposing a very high bar." Van Sickle described that bar as "safety-of-life accuracy."

We can think of Van Sickle's concept as representing a kind of "hyper-accuracy." The tools of land surveyors can easily hit those benchmarks, but we are typically dealing with static measurements, not speeding vehicles.

For some time now, I've thought about the different ways surveyors define the concept of accuracy in our work. My formulation breaks down into six definitions.

I believe everything we do involves at least one. Furthermore, I think if we tease apart safety-of-life accuracy as it applies to autonomous vehicles, we find that it includes all of them.

1. Absolute Spatial Accuracy: This is the big one, the gold standard, the kind of accuracy that gets the world's David Doyles out of bed in the morning.

To achieve this accuracy, we need to express our findings in an objective way that compares them to every other point in the world. That means latitude, longitude, and vertical height.

We achieve that by basing our readings on GNSS signals—not just GPS, but also Russia's GLONASS, China's Beidou, and the European Union's Galileo satellites. The large number of reference points helps us refine our calculations.

GNSS satellites transmit time-stamped signals. Every GNSS receiver (including the GPS chip in your smart phone) calculates position by measuring the elapsed time since the signal left the satellite. If it can do this with at least four satellites simultaneously, the receiver can calculate position in three dimensions to a high degree of accuracy.

Alas, not high enough for some surveying jobs. The problem is that the signal, when it reaches the planet's lower atmosphere, encounters interference that can delay its journey.

Continued on Pg. 8

Refining Measurement—A land surveyor unpacks the concept of accuracy
(cont'd from pg. 7)

The delays are very small—just a few microseconds—but because the signals are traveling at light speed, those delays can result in large positioning errors. Surveyors needing absolute spatial accuracy use methods that determine the signal error at their current location.

An autonomous vehicle's digital map will also contain some component of absolute spatial accuracy, a calculation of where in the world the car is.

2. Relative Spatial Accuracy: This is the most common type of accuracy sought by land surveyors. Relative accuracy doesn't mean a surveyor achieves a lower level of quality, however. It just means measurements are local.

If you own a piece of property and want to know if there is enough room to add an addition to the house, you don't need to know latitude and longitude. You just need to determine if the addition will encroach on your neighbor's property or meets regulatory setbacks.

Accuracy is vital for these jobs—but not in a way that requires relating it to these objective coordinates.

Relative spatial accuracy is enormously important for autonomous vehicles to operate safely. When the system determines the distance between a car and a highway guardrail, the result must be accurate to a high level of dependability.

3. Temporal Accuracy: You say you already have the surveyed results of an area? Well, when were they done—and do you know for sure that nothing significant has changed since then? The need to guarantee temporal accuracy can sometimes mean the same area is surveyed many times over the years, but it's often better to be safe than sorry.

If a city wants to put in a new waterline on one side of the street, surveyors may be called to measure the distance between the line and nearby utility poles. It could replicate a survey done several years before, but unless planners and engineers are absolutely certain nothing has changed in the interim, the costs an error could incur justify re-surveying.

One of the great advantages of integrating GIS into the surveying ecosystem is that it can help maintain this temporal accuracy. Surveyors can consult old plans, saved in a GIS, that contain notes and metadata (data about data) that provide crucial information.

Temporal accuracy is of course important for autonomous vehicle systems, to ensure the road matches the map.

4. Topological Accuracy: Topological accuracy is about how features of the same landscape relate to one another.

For instance, a building is located on a certain street. The building and the street appear on a map, but the building is shown on the wrong side of the street. This is an example of topological inaccuracy.

Questions about topological accuracy often arise in the context of zoning. A database may describe a certain land parcel as existing in a zone designed for, say, commercial activities, when in fact it is in a residential zone. [Is the type of cadaster work we've written about in places like Azerbaijan and Colombia an example of this kind of accuracy?]

For an autonomous vehicle, topological accuracy could mean understanding that a right turn will take it onto a footpath, not a road. Or it could be knowing when it has entered a school zone with a reduced speed limit, similar to the way geofencing firmware in most commercial drones prevent the aircraft from flying too close to airports.

5. Feature Identification Accuracy: A map or database may accurately note that there is something at a given geographic coordinate. But that doesn't mean that this something is the thing the map/database says it is.

Perhaps at some point in the past, a data-entry error turned a fire hydrant into a mailbox—or a utility hole for a sewer system into one for a watermain.

Continued on Pg. 9

Refining Measurement—A land surveyor unpacks the concept of accuracy
(cont'd from pg. 8)

This is often the case with aerial imagery, which can be very detailed while still obscuring the identify of some objects.

Feature identification is obviously of huge importance for autonomous vehicles, which need to recognize, for example, a stop sign.

6. Attribute Identification Accuracy: This involves accuracy that is not geospatial. An object may be correctly identified in a map or database, while still containing incomplete or inaccurate information about it.

Is the fire hydrant one installed in a city's early days or more recently? That can be crucial detail for a firefighter as it has implications for the tool used to turn them on.

Is the building that is listed in a city's tax records as having two units actually a triplex? This matters greatly to the city tax assessor as it's tied to the revenue that can be collected.

Surveyors tend not to collect much attribute data. We've typically been more concerned with noting correct locations—for us, a fire hydrant is a fire hydrant. But one of the advantages of the turn toward GIS in the profession is that it's easy for us to add descriptions or other useful information that can be called up on the map.

For wayfinding, point-of-interest data detail types of places, such as restaurants and then further classifies that data, such as Chinese restaurant. When telling your autonomous car where to take you, you might get annoyed if you want Chinese food and end up at a burger joint. If you need to arrive at the hospital but instead find yourself at a veterinarian's office, that's more than an inconvenience.

Accuracy In a Dynamic World

Van Sickle concluded his presentation at the Survey & GIS Summit by noting that mapping is becoming more of a globally unified endeavor, while the need for high-level accuracy continues to increase.

"I have a worry on this subject that I'd like to share with you," he said. "How will we maintain high-accuracy safety-of-life mapping at a global scale?"

The primary challenge, he suggested, is not building this kind of mapping—it's maintaining it.

He quoted the latest iteration of the National Geodetic Survey's strategic plan for the National Spatial Reference System: "Earth is dynamic, and NGS must track temporal changes to the defining points of the system to continually maintain its accuracy."

He was describing a particularly challenging form of temporal accuracy that surveyors know well.

The planet's tectonic plates are in constant motion. That means that a point surveyed one year is actually in a different location the next.

For certain long-term infrastructure projects, such as the years it takes to build the new San Francisco–Oakland Bay Bridge, this difference matters because construction from both sides must meet exactly in the middle. Fortunately, we know enough about how fast and in what direction every part of the world is moving to make the necessary corrections using GIS.

Surveyors who need to account for this movement must know when a point was first surveyed. The where is directly correlated with the when. "To know a coordinate," Van Sickle said, "you must define a moment of time."

This is a huge challenge for autonomous vehicles. Van Sickle demonstrated how two cars using two different coordinate systems that align in one year diverge by more than a meter 20 years later.

This year, the cars pass each other safely. Two decades later, they're on a collision course.

The problem is not insurmountable, but solving it will require vigilance. Like our planet, achieving accuracy is a dynamic process, never static.

Source: https://www.https://www.xyht.com/core-articles/refining-measurement/ (accessed 06-10-2022)

Diane Dumashie Elected as New President of FIG
(cont'd from pg. 1)

adapting now. Our societies are more connected than ever and geospatial is underpinning a lot of what we do as real-time services become society's expectation and demand is growing across all our FIG professional disciplines. We do not have a monopoly over this abundant data that is richer and more complex than ever before, and we have to better appreciate that the increasing convergence between our sector and tech sectors is happening now and we must claim our relevance.

Second, adaptive organization and adaptive skills. Crucially, our profession crosses four generations. Those of us already in the workforce are now employed in ways we could have hardly imagined. Inevitably for our younger people, their work view has already changed. This was demonstrated in the round table of young professionals that I chaired at the FIG WW 2021 entitled 'Reimagining the future of the surveying profession post 2020'. We are stepping-up to meet the challenge, but we need to do much more and we have to attract and develop talent with the key people skills to take up the ambassadorial, collaborative and engaging leadership roles of the future.

How will FIG continue to represent the interests of surveyors in the future

FIG brings together the broad and diverse field of survey disciplines. Drawing on my history of senior roles in FIG, the best means to represent the diverse interest of surveyors is to ensure that FIG leads, listens and collaborates.

It is an imperative to bring positive changes to the built and natural environments in the face of global forces; we must be trusted by our stakeholders and society and as a sustainable 21st-century professional body. This raises the question whether our profession is prepared and resilient to engage in developing a better world for society and the planet.

Foremost, having chaired the FIG Governance Task Force 'Our profession: Fit for the future in how we work and organize' (FIG WW 2021), I have listened and learnt first-hand from FIG members about the increasing need and desire for resilience and sustainability within our profession. I can see that the ongoing geopolitical changes mean that our profession needs to maintain an influential voice at all levels to continue our beneficial society impact. It is imperative that FIG leads and advocates to raise awareness for our members to step up and respond to this impetus for change.

How *would FIG contribute to the implementation of the SDGs under your presidency? How can surveyors and geospatial experts worldwide be encouraged to become actively involved in these goals?*

The 2030 Agenda (SDGs) united global policy to transform the social, economic and environmental dimensions of humanity and our planet. Importantly, the UN mantra – to leave no one behind – highlights our own professional expertise in land and geospatial data seen in many of the SDGs.

2030 will soon be upon us, and meeting the goals requires ambition and leadership and a clear pragmatic plan. Taking action using the SDGs along with climate change action is underpinning everything we need to do now; to walk the path to climate equity we need action in cities and to secure and manage our planet's natural resources.

Sustainability and resilience are not business as usual; there are readily accessible options with emerging innovative technology. Having been involved in the 2030 Agenda for over a decade, my presidency would advocate for an Environmental, Social and Governance (ESG) agenda. I'd seek to build on the very good work of the FIG Task Force on the SDGs[2] to encourage speed and scaling up into our professional activities and to adopt a fresh view of the SDG project. Understanding the big agendas and proactively advocating issues allied to professional excellence is important, as explained in my webinar in the RICS Value the Planet series[3] which concludes with actions that individual members can take in their own professional work.

Continued on Pg. 11

Diane Dumashie Elected as New President of FIG
(cont'd from pg. 10)

What do you think of the current developments in land administration, fit-for-purpose, IGIF, FELA and so on? How can FIG play a role in this?

Land administration is at the heart of all FIG activities. As former Commission Chair and Chair of ACCO, I've seen clearly how this is addressed in various ways in all the FIG Commissions. Land Administration is the operational engine within Land Governance and is rooted in the cadastral area.

The recent developments in land administration are significant for managing the built and natural environment. The fit-for-purpose concept has been developed in recent years by some prominent members of the FIG community and provides an approach to closing the cadastral gap, especially in developing countries, by building frameworks that meet today's societal needs. FIG promotes this, thereby supporting poverty alleviation, empowering the poor, and meeting the SDGs. The surveying profession will be the key custodians of maintaining and constantly improving such nationwide systems.

In the same way, FIG supports the work of UN-GGIM. The IGIF provides an operational framework for building such interactive data management systems, along with supporting the efforts of the UN-GGIM and the World Bank to develop the practical guidelines for implementation and economic impact assessments. FELA is a more general framework building on the same structure as the IGIF. FELA is a great framework for referencing and FIG encourages the building of comprehensive land administration systems.

Which main goals would you hope to see achieved during your presidency?

My agenda for action is underpinned by sustainability and resilience in the professional sphere and society space, to enable our professionals to take action on the most important issues of our time.

To navigate the decade of transformation, one thing is certain; we must act together. Given FIG's unique structure with a GA of member associations, my overriding goal is to respond to the global challenges at both the council and national level. I'd also emphasise professional development, to be filtered back to the individual member associations for local implementation.

What is clear to me is the certainty about context and connectivity. I foresee this is a time of opportunity if we embrace the adaptability mindset. My headline goals include:

Climate action and the SDGs: Sustainable development is at the heart of developing resilience to climate change and achieving net zero emissions; Build on the importance of SDGs, poverty alleviation and social equality

Digital transformation: Claim our relevance in data and technology; Advance the role of the Geospatial Knowledge Infrastructure (GKI) in society and economy; Provide user-friendly, low-cost land administration and property systems

Community diversity and inclusion: Resilience of our profession for attracting new recruits, encouraging succession plans and upskilling all generations

Governance in the FIG organization: Member communication, collaboration and value added

As a global professional body, we need to respond to these challenges if we are going to ensure that our members deliver confidence in the years ahead. My tenure will work for:

- Clarity and collaboration;

Continued on Pg. 12

Diane Dumashie Elected as New President of FIG

(cont'd from pg. 11)

- Purpose and reliability; and

- Action and courage.

About Dr Diane Dumashie

Dr Diane A Dumashie. FRICS, CEDR, Director of Dumashie Ltd; Trustee of LionHeart Benevolent Fund, RICS Standards and Regulation Board. A fellow of the RICS, Dumashie delivers strategic projects that have a clear social, economic livelihood agenda linked to land. Works in the UK and internationally helps the public sector and donor multilateral and bilateral agencies to generate benefits to society. Adept at enabling, facilitating and bringing people and resources together to achieve organizational objectives. Dumashie leads and innovates to manage change, energizes and resolves complex issues in the areas of land management, land administration, gender rights, land and coastal property regeneration. A passionate ambassador of professional development, Diane has throughout her career held voluntary roles to serve the profession worldwide.

Source: https://www.gim-international.com/content/news/diane-dumashie-elected-new-president-of-fig (accessed 06-10-2022)