

## **Empowering the Next Generation of Surveyors: A Journey of Leadership, Mentorship, and Overcoming Challenges**

**By Nozipho Madlala**

As a leader in the profession, I have had the unique opportunity to witness the evolution of young professionals in our industry.

But more than that, I have seen the courage, the ambition, and the resilience of young people, despite challenging and uncertain times, who are shaping the future of surveying, not just by occupying roles, but by redefining them.

Surveying is an ancient profession, rooted in precision, science, and exploration. But what is its future? That future is in the hands of the young professionals I work with every day. And it is a future that requires innovation, adaptability, and an unrelenting pursuit of excellence.

Over the years, I have seen a fundamental shift in how young professionals engage with this field. We are no longer just waiting for opportunities - we are creating them.

In South Africa young surveyors are stepping into key leadership roles, including within the South African Geomatics Council (SAGC), various voluntary associations and industry bodies, in and in private and public sector institutions, where they influence policies and industry standards. Many are pursuing multiple qualifications - not just in surveying, but in data science, management, business leadership, innovation, to name a few.

This speaks to a growing realization that surveying is not just about maps and coordinates, it is about spatial intelligence, digital transformation, and solving real-world problems.

One of the most exciting trends we are seeing is the increasing number of young professionals becoming licensed drone pilots. This technology is revolutionizing how we collect and analyse data, pushing the boundaries of efficiency and accuracy.

But innovation does not stop there. I, too, am on a journey of discovery—exploring Building Information Modelling (BIM) and advocating for its deeper integration into our industry. Surveyors must not only be part of the conversation but lead it when it comes to BIM and its role in infrastructure development.

A question I often hear (especially from young surveyors), is this:

"Is surveying a dying profession?"

And my answer is simple: No, it is not dying- surveying is evolving.

Yes, automation, artificial intelligence, and technological advancements are changing the way we work. But instead of making surveyors obsolete, these advancements are expanding our role.

Think about it, mapping used to be about manual measurements with chains and theodolites. Today, we have drones, LiDAR, and real-time GPS networks that allow us to capture data faster and with greater accuracy. But who operates, interprets, and ensures the integrity of that data? Surveyors.

Surveying is no longer just about "measuring land." It is about spatial intelligence, smart cities, infrastructure development, environmental monitoring, and geospatial analytics. It is the foundation of industries like engineering, construction, real estate, and urban planning.

So, to young people who are unsure about their future in this field, I say:

- The profession is not dying- it is transforming.
- It is not shrinking- it is expanding into new and exciting areas.
- And it does not need fewer professionals- it needs surveyors who are adaptable, tech-savvy, and ready to embrace new challenges.

The key to staying relevant is continuous learning. If we do not evolve with the industry, we will be left behind- not because the profession is disappearing, but because it is growing beyond outdated skill sets.

We must ensure that young surveyors do not see change as a threat- but as an opportunity.

The rise of young professionals is not just about acquiring skills- it is about community, mentorship, and paying it forward.

Leadership, to me, is not about position. It is about responsibility. It is about lifting others as you rise.

As a Senior Manager in Geomatics Training, I am entrusted with shaping the next generation of surveyors, not just by teaching technical skills, but by inspiring them to see their potential, to challenge the status quo, and to step into leadership.

Beyond the classroom and the workplace, I make a conscious effort to connect young people to opportunities. Many young professionals who have worked under my supervision have used me as a reference when applying for jobs. I never take this lightly.

When I endorse someone, I ensure that their name is not just on a piece of paper but in the right rooms, in front of the right people.

So far, I know of at least six young surveyors who have secured permanent employment because of these connections.

But professional success is not just about employment, it is about access to the right networks, industry insights, and mentorship. This is why I remain committed to sharing every opportunity I come across, ensuring that young surveyors always have the information they need to thrive, not just survive.

Another area I am deeply passionate about is women's empowerment, both within and beyond the surveying profession. I have led and participated in numerous initiatives designed to uplift women in our industry, because representation matters.

True leadership is not about how far you go, it is about how many people you bring along with you.

One of the most profound ways to change an industry is through mentorship.

I have been involved in the FIG Mentoring Programme for Africa since its inception, first as a mentor, then as a committee member, and now as its Chair.

This programme has demonstrated something remarkable: when given the right support, people excel.

It began in 2022 with just 25 participants. In 2024, we had 250 participants across various geospatial disciplines, including Surveying, GISc, Construction, Valuation, and Planning.

But what truly stands out is the impact on underrepresented groups, especially women.

Despite being underrepresented in industry, women in our mentoring programme outperform their male counterparts in completion rates:

- 95% of female mentors completed their mentorship journey, compared to 68% of male mentors.
- 80% of female mentees completed their participation, compared to 69% of male mentees.
- The overall completion rate for all participants stands at 74%.

These numbers tell a powerful story: when women are given access to mentorship, they rise, and they rise together.

A personal success story that brings me great pride is Ms. Letwin Pondo, my very first mentee. Today, she is excelling and is a prominent young leader in the field, and we continue to collaborate on various initiatives. This is the essence of mentorship- it is about building lifelong professional relationships that create ripple effects in the industry.

Mentorship is not just about guidance- it is about transformation. It is about breaking barriers for the next generation, ensuring that no one feels alone in this journey.

Like many women in male-dominated industries, I have had my share of challenges. But let me be clear—I have never allowed my challenges to define me.

Early in my career, I faced scepticism. But I quickly learned that excellence is the greatest equalizer. If I delivered my work with precision and professionalism, no one could question my capabilities.

Growing into senior roles, I have faced new challenges, challenges that I believe are not unique to me but are part of leadership. Leadership demands strength, strategic thinking, and resilience.

However, I have been fortunate to have a career that has been largely fulfilling. And I know that for every challenge I have faced, there is another young woman looking at me, hoping to see what is possible.

That is why I do not dwell on obstacles- I break them.

We stand at a defining moment in our industry.

As young professionals, we must recognize that we are not just the future of surveying- we are its present.

We cannot afford to sit back and wait for change. We must be the drivers of innovation, the champions of mentorship, and the architects of inclusion.

To my fellow young surveyors:

1. Stay curious and keep learning: surveying is evolving, and we must evolve with it.
2. Build meaningful networks: who you know can be just as important as what you know.
3. Lift others as you rise: mentorship and leadership are not about self, but about legacy.

To the women in this field- know that you belong here. You are capable, you are powerful, and your voice matters.

And to everyone in this room, I leave you with a poem that I wrote last year. It speaks about leadership, and I wrote for all leaders, irrespective of gender, race, age, etc. it is titled “The call of the flame”

A leader is not born in quiet rooms,  
But in the forge of restless storms.  
Where silence splits and chaos sings.  
A leader rises like dawn through fractured skies,  
Not seeking power, but purpose-  
A steady hand in the quake of change.

Leadership is no crown of gold,  
But the weight of unspoken stories  
Pressed upon the spine of vision.  
It is not the thunder of commands,  
But the quiet force that steadies a storm.

A leader is the weaver of worlds,  
Threading hope through the frayed edges of despair,  
The alchemist of the human spirit,  
Turning doubt into resolve,  
Fear into flight.

Leaders stand, not on pedestals of marble,  
But in the trenches where dreams are sown.  
Their hands, scarred from the thorns of progress,  
Their voices, seasoned by the winds of dissent.  
For what is a leader if not a bridge,  
A living paradox of strength and surrender?

To lead is to walk the razor's edge,  
To carry the fire while feeding the flame in others.  
It is to kneel before the storm,  
To bear the burden of decisions that cut both ways,  
And still dare to whisper: Follow me.

True leaders are not idols;  
They are mirrors.  
They reflect not perfection but purpose,  
Not glory but grace in the face of uncertainty.  
They do not command; they invite.  
They do not conquer; they inspire.

And when they are gone,  
Their legacy is not statues or songs,  
But the gardens they have left behind:  
Fertile soil where courage blooms,  
Where those who once followed  
Now lead with a light of their own.

So ask not for a map to leadership,  
For the path is carved by each step,  
Each choice, each fall, each rise.  
The world needs no perfect leaders.  
It needs flames, fierce yet tender,  
Guiding us through the dark.