

Strengthening the professional pipeline for the future of the minerals industry



At the recent SAIMM Banquet and Awards Evening, I had the opportunity to share an update on the evolving SAIMM value proposition and strategy, one that is directly focused on addressing the challenges and constraints facing our industry.

The event was a full house, with over 350 industry leaders in attendance, alongside more than 40 students representing the next generation entering our profession.

I had the privilege of sponsoring a table of students for the evening, which, going forward, is something I will be challenging companies and individuals across our industry to support.

What stood out for me was the impact that a single evening can have.

For many of these students, it was their first opportunity to engage directly with industry leaders and to meet leaders like Ms Mogaleadi Seabela, President of Women in Mining South Africa, Ms Connie Chijara, Chairperson of the SAIMM Young Professionals Council, and the incredible innovator Mr Tebogo Kale, Chairperson of the Southern African Coal Processing Society. The occasion offered these students a glimpse of what is possible in their own careers. It showed them that exposure matters.

It builds confidence.

It creates aspiration.

And it connects students to the professional community they are about to enter.

This is how the professional pipeline starts, not only in lecture halls, but through meaningful engagement with the industry itself. It is a simple but powerful example of how we can all contribute.

"The future of our industry will not be constrained by the minerals in the ground, but by the depth of professional capability required to develop them."

It was from this perspective that I shared a broader reflection on the state of our professional pipeline and the role that SAIMM can play in strengthening it.

An emerging capability challenge

I have spent the last six months actively engaging with industry leaders, heads of academia and research institutions, and other key stakeholders. Across the industry, there is a growing concern that the depth of experienced and competent professionals is becoming a constraint.

We have an ageing cohort of experienced technical professionals, while at the same time the complexity of our industry continues to increase. Modern mining and metallurgy require a broad range of multidisciplinary capabilities, from mining and metallurgical engineering through to environmental, mechanical, mechatronics, electrical and industrial disciplines, as well as data science, automation, and systems thinking.

At the same time, we continue to produce graduates.

This highlights an important reality: The challenge we face is not simply one of numbers, it is a skills mismatch.

Graduates are entering the system, but the pathways that once developed them into capable, industry-ready professionals are fragmented and inconsistent. The structured progression from graduate to experienced professional is no longer clearly defined or consistently supported.

A fragmented professional ecosystem

When viewed across the full journey, from students entering university, to graduates, to candidate professionals, to registered professionals and to industry leaders, it becomes clear that we are dealing with a fragmented ecosystem.

Universities are facing funding pressures and challenges in attracting and retaining academic capability. Industry training pathways vary significantly. Workplace learning opportunities are inconsistent. And the institutions that play a role in this system—universities, industry bodies, regulators, and training organisations—often operate independently rather than as part of a coordinated whole.

The result is a system where graduates may struggle to enter the industry, while at the same time the industry experiences a shortage of experienced professionals.

"This is not simply a pipeline problem. It is an ecosystem problem."

Professional registration and industry expectations

Overlaying this challenge is the increasing importance of professional registration.

The Engineering Council of South Africa's Identification of Engineering Work (IDoEW) has gazetted the requirement that identified engineering work must be performed by registered professionals, including key activities within our industry, aligning with global engineering best practice.

I have written about this in more detail in a previous President's Corner article, but the implication is clear:

If we do not develop a sufficient pipeline of professionals progressing towards registration, we will create a constraint in the industry's ability to operate and grow.

This further reinforces the need for a coordinated and functioning professional ecosystem.

President's Corner (continued)

The role of SAIMM – steward of the ecosystem

The question we have been asking is simple: What role should SAIMM play in addressing this challenge?

The answer that is emerging is that SAIMM is uniquely positioned to function as a steward of the professional ecosystem.

We sit at the intersection of industry, universities, and professionals. We have access to industry leaders, we support technical knowledge sharing, and we engage across the full professional pipeline, from students through to industry leaders.

This is not a departure from our traditional role, but an evolution of it.

Strengthening the foundations – MEESA

A key step in this journey has been the establishment of MEESA, with SAIMM as the industry facilitator.

This initiative brings together the heads of mining schools across our universities and creates a platform for structured collaboration between academia and industry. This is just the beginning, as it will extend to include metallurgy and other disciplines as we learn and expand the initiative.

The importance of this cannot be overstated.

For the first time, we have a coordinated structure that enables alignment on curriculum, industry requirements, funding challenges, student throughput, and the broader development of future professionals.

This is a critical foundation in rebuilding the professional pipeline.

Building the ecosystem

Alongside this, we have initiated the SAIMM Academy, which focuses on strengthening learning pathways from graduation through to professional competence. The objective is not to reinvent what already exists, but to coordinate and integrate the capabilities that are already present across universities, industry, and service providers.

Our continuous professional development (CPD) structures are being strengthened to support mentoring, coaching, and progression towards professional registration.

The SAIMM Young Professionals Council continues to play a critical role in representing early-career professionals and strengthening the transition from university into industry.

And our technical programme remains central to knowledge sharing and professional development across the industry.

Importantly, we are also strengthening our internal operating model. For example, every SAIMM meeting now has a clear purpose, defined outcomes, and a structured agenda aligned to achieving those outcomes. This focus on operating discipline is essential if we are to deliver consistently and effectively.

A system that must be built together

This is not something that SAIMM can deliver alone.

Building a strong professional pipeline requires alignment across universities, industry, regulators, and professional bodies.

It requires industry to take an active role in developing professionals, not only within their organisations, but across the broader ecosystem.

It requires experienced professionals to contribute through mentoring, coaching, and knowledge sharing.

And it requires young professionals to take ownership of their own development.

Rethinking the value model

As we continue to develop this value proposition, we will also need to consider how it is funded.

If we are to build an integrated ecosystem that supports professional development across the full pipeline, we will need to explore alternative funding models that better align with delivering value to the industry.

This may include greater industry participation, new partnership models, and mechanisms that enable broader access to development opportunities.

The objective is simple: To create a system that delivers real value while strengthening the long-term capability of the profession.

Looking ahead

The opportunity for our minerals industry is significant. Global demand for critical minerals continues to grow, and Southern Africa is well positioned to respond.

But realising this opportunity will depend on our ability to develop and sustain a pipeline of capable professionals.

This is the challenge before us.

And it is one that requires collective leadership.

I am reminded again of the students who joined us at the SAIMM Banquet and Awards Evening.

For many, that evening was their first real connection to the professional community they are entering.

What we do next, as an industry, as professionals, and as SAIMM, will determine whether those students become the capable, experienced professionals our industry will depend on in the future.

"*What we do next will determine whether today's students become the capable professionals our industry depends on.*"

SAIMM will continue to play its role as the home of the professional.

I encourage all members to get involved and contribute.

Because the future of our industry will be determined not only by the resources we have, but by the people who develop them.

G.R. Lane
President, SAIMM