

# 95 years of consulting

Transportation, water and power are key national priorities – dovetailing with core socio-economic objectives – and areas where Knight Piésold Consulting leads in the infrastructure sphere.

**A**LMOST 10 DECADES have passed since Knight Piésold Consulting was founded on 21 April 1921, and the legend continues. It's proud history of excellence began in its home base of South Africa, which has subsequently expanded over the years to cover most of the developed and developing world, through the establishment of a series of global offices.

Founder Dr Francis Edgar Kanthack retired at the age of 78, in 1950, and would have been proud and amazed at the progress achieved by the group in subsequent years. Today's focus is on mining, power, water resources, infrastructure, and oil and gas.

"This wealth of experience has been exponentially expanded in terms of the skills base through the recruitment of engineers, engineering technicians and scientists that work as integrated project teams to plan and execute just about any engineering challenge in the infrastructure field, together with an evaluation of their actual and potential environmental impacts," says Vishal Haripersad, managing director, Knight Piésold.

The company is the oldest consulting firm in South Africa, and one of the longest serving on the African continent, which provides a unique perspective of the evolving consulting engineering landscape.

Early clients included South African Railways, Victoria Falls Power Company, Electricity Supply Commission (Escom, now Eskom), Anglo American Corporation, Industrial Steel Corporation, various municipalities, and other industrial and mining companies.

The 1960s and 70s saw a global boom period, and Knight Piésold was at the forefront, expanding into the UK, Canada, Australia and South America. At every stage, though, Haripersad says the group has been firmly entrenched at home and the company remains 100% locally owned, and the benchmark for its global operations. Quality assurance is governed by ISO 9001, 14001 and 18001 accreditation and standards.

"In a nutshell, we've weathered the storms of the past 95 years and are ready for the next era, based on our solid project track record and our extensive experience in public

and private sector consulting. In fact, we're '95 years young'; our journey has only just begun," asserts Haripersad.

Power generation, particularly for hydro-electric schemes, was a focus from inception and remains a key specialisation. Earlier examples include the Victoria Falls scheme, originally commissioned around 1938 (at just 1 MW initially) and serving Zambia and Zimbabwe, and, more recently, Eskom's 1 332 MW Ingula Pumped Storage Scheme.


The thermal coal market is an allied focus, with Knight Piésold appointed as design consultants on aspects of Eskom's Kusile and Medupi greenfield power station roll-outs. These projects will serve South Africa's evolving industrialisation needs.

## Engineering, as a preferred profession, starts at school

A key question, though, is what will South Africa's prospects look like in the next 95 years and where will the engineering profession fit into the picture?

"Consulting engineers are design and project management specialists and their role increasingly takes them into the sphere of business brokerage: linking private and public sector entities so that common objectives are met. This coordination is essential for investor confidence and commitment. In South Africa, this needs to be dovetailed with the country's transformation goals so that every sector of society is a meaningful participant," explains Haripersad.

That means addressing socio-economic imbalances. This is an area where Knight Piésold is making a meaningful difference. States Haripersad, "We always ask ourselves: what can we do as an organisation to make



A perspective of the Berg River Dam in South Africa's Western Cape, where Knight Piésold formed part of the Berg River Consultants JV appointed for the project

this change happen? In response, we have positioned ourselves and committed to being a social change catalyst. This gives us a real sense of purpose. We want to awaken the passion for a career in engineering across all its facets, inspiring young minds, where we invest a great deal of focus to assist the South African government in meeting its objectives.”

Knight Piésold begins this process with its primary and high school programmes to address the priority issue of science and mathematics education. “We know that government, on its own, cannot fill the gaps and that private sector involvement is needed,” says Haripersad.

Knight Piésold partners with schools nationally and Haripersad continues to be personally involved. In addition to tuition, the company also supplies books and equipment, and learners have the opportunity to experience the world of engineering first-hand by understudying professionals at their offices. The company has an active bursary programme in place for aspiring applicants.

“We’ve seen measurable improvements through these programmes. It’s very important to elevate the importance of engineers in our society. In South Africa, the focus on lowest cost tendering has tended to relegate engineers to a lower status. So their prestige has been diluted,” he adds.

Haripersad points out that South Africa’s NDP has placed a high priority on SMME development. In response, Knight Piésold has introduced structured mentoring programmes to support emerging consulting engineers. He explains, “Consulting engineers cannot practise and function without foundational business skills. That’s why we place so much emphasis on entrepreneurial partnerships where we can learn and grow together. Our priority is to target companies with competent leadership. We then assist with financial management, HR and IT implementation.”

### **African operations: Nekartal Dam and other key projects**

Knight Piésold’s base in South Africa is a launching point for its African expansion, with

**The Ingula Pumped Storage Scheme comprises the upper Bedford Dam and the lower Braamhoek Dam (seen here). They are 4.6 km apart and connected by waterway tunnels**

offices already established in countries that include Namibia, Zambia, Swaziland, Ghana, Botswana, the DRC and Mauritius.

“As in South Africa, as we grow, we want to make a positive impact. That means ensuring local skills transfer in all the countries that we operate in. Of course, emerging markets have more pressing priorities,” says Haripersad.

Zambia, where Knight Piésold has been from the onset outside South Africa, continues to be a key market for water and energy – particularly renewable energy, both for solar and wind. Across the African continent, there is huge potential, where scalable projects extend from just 1 MW to 500 MW. “The public-private partnership model does work here for independent power producers and all our projects are fit for purpose.”

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**Vishal Haripersad, MD, Knight Piésold**



Knight Piésold is also well established in Namibia, where the firm is the designer of the estimated R4.5 billion Nekartal Dam on the Fish River. This is the largest infrastructure project undertaken by the country. Works commenced in September 2013. The dam will have a final crest length of 520 m and a wall height of 80 m. The reservoir is designed to store approximately 857 million m<sup>3</sup> of water, primarily used to irrigate 5 000 hectares of agricultural development in the area.

“Namibia provides a good platform for expansion north into Angola – where we have yet to establish a presence – while, closer to home, we are optimistic about our involvement in Phase II of the Lesotho Highlands Water Project, namely the construction of Polihali Dam. We were also extensively involved in Phase I, which became operational from 2004.”

Other water-related projects include Durban’s approximately R1.5 billion Western

and Northern Aqueduct pipeline projects, where Knight Piésold is the lead engineer. The project scope is the largest to date in South Africa’s KwaZulu-Natal region and involves the installation of over 100 km of large-diameter steel pipeline.

### **The next 95 years starts now**

“There is so much potential in the world. And for us, as a local company, we want to make sure that South Africans are part of that future, especially, as I’ve said, in engineering.

“That means addressing the pre-1994 landscape, where infrastructure planning divided communities. Johannesburg’s Alexandra township, for example, lives in the shadow of the Sandton CBD, Africa’s largest economic hub, but remains

marginalised. We are looking to work with government agencies to address these and other needs,” Haripersad states.

As a Level 2 BBBEE company, Knight Piésold sets an example for modern-day South Africa. “We are what government intended a consulting engineering firm to look like. It’s not artificial: this is real transformation and not paper”-based. We are South Africa’s oldest firm, and the most transformed.

“That’s actual development. And to the investment agencies out there: we understand the realities on the ground. So, along with government, let’s work together to find solutions. Even if we unlock just 10% of the potential, this will translate into enormous gains,” he concludes.

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