

**Structural Failure** | Engineers decry capture of profession to aid transformation, but also to ease oversight of contracts

# 'State weakens the foundations of engineering'

CHRIS BARRON

THE CEO of the South African Institution of Civil Engineering (SAICE), Manglin Pillay, says the engineering profession is the latest target of state capture.

The SAICE and 14 other engineering associations have taken on Public Works Minister Thulas Nxesi and the Engineering Council of South Africa (Ecsa) to court, six months after the minister appointed a new council. The engineering profession says the appointment of the council was without consultation and illegal.

Manglin says the process of state capture through government control of Ecsa has been happening for 12 months "under the guise of transformation".

The engineering associations, which submit engineering graduates to stringent tests before they can be registered, have been "marginalised" as the government and a now compliant Ecsa attempt to control the registration process. If the government is allowed to get away with it, South Africa's world-class engineering standards will fall and local engineering qualifications will not be internationally recognised, he says.

"The capture of the council is really to fast-track transformation with a view to pass on more engineering projects to black professionals."

He's all for this — provided they meet the highest standards. "Our concern is about the lowering of standards."

He doesn't know if that is the goal but says it is the obvious inference. "The council has been complaining that we're anti-transformation. If you want to

take the voluntary associations out of the registration process and do the testing yourself, then the implication is you want to change the testing process to deal with your transformation imperative."

"That leaves it open for anybody to draw conclusions about what you're really trying to do. "Certainly the inference is that they wish to drop the standards to achieve their transformation imperatives."

The repercussions for the engineering profession of marginalising the voluntary associations can hardly be overstated, he says. "They're the knowledge centres, they're about the upkeep of the technical proficiency of the profession."

**Outcome will be more collapsing bridges, malls, hospital roofs**

Ecsa is where graduate engineers go to register. But it is the associations which decide if they are competent to practise as professionally registered engineers.

Pillay says this role has been taken over by the council. "The voluntary associations have been cut off from the testing, which is done by some of the most experienced engineers in the profession. They do the interviews, review the reports produced by the candidate engineers and ask the tough questions. They mark the test that is then written. Their report goes to the Ecsa, which then registers the person or not."

"But now, the Ecsa wants to do the testing. They don't want the associations involved; they want to disband them. "If they do, our peer review system collapses and we lose our international status. Our engineers will not be able to work or study overseas. They will not be recognised internationally."

"Pillay says transformation is happening as fast as a defunct schooling system allows. "Based on the challenges — and we all know what the quality of basic education is like at public schools — we have done very well in the built environment."

"Everyone knows that to get into engineering at university you need to have done well in maths and science. That's a basic requirement. You need to get As in those subjects."

In spite of this, the numbers show "remarkable progress" considering that it takes another 10 or 12 years after starting at university before individuals are ready to register as professionals.

"There is no quick-fix solution." Nevertheless, he says, 70% of members of the SAICE under the age of 40 are black.

"I speak to about 12 000 engineering students at our engineering universities and can tell you first-hand that between 80% and 90% of them are black."

According to the statistics, black engineering practitioners increased from 35% to 46% of engineers in the country between 2011 and March 2016. In the same period, the number of white engineers has fallen from 65% to 54%. In that time, 9 194 black professionals registered with Ecsa, compared to 2 225



**HIJACKED:** South African Institution of Civil Engineering CEO Manglin Pillay says Public Works Minister Thulas Nxesi has seized control of the Engineering Council of South Africa from engineering associations, threatening the integrity of the industry

Picture: ROBERT TSHABALALA

white professionals.

Pillay says the voluntary associations were approving more black engineers for registration than white engineers before the new engineering council began marginalising them.

The SAICE has tried to present these figures to the minister and been rebuffed, he says.

When the minister eventually agreed to meet, he gave them 10 minutes. "He said he wasn't close enough to the issue, he didn't understand anything, we must give him time to think about it," says Pillay.

"What we find frustrating is that at the meeting was the minister, the deputy minister, the

director general and eight advisers. How can you say you don't have sufficient insight into the matter?"

This was last September.

"Every week thereafter we wrote to them, we called, we texted. We are yet to receive a formal response from the minister's office."

He says the failure of the government to honour its infrastructure spending and implementation commitments has delayed transformation. "We rely on project roll-out from the public sector to train graduate engineers, to give them on-site experience, project management experience, construction experience."

Because of insufficient technical capacity in the public sector, there is insufficient project roll-out and work, he says.

"So this on-the-job training is

**Big money to be made, but politicians need compliant engineers**

not happening. There is not enough work. Where there is work, the open-tender system stuffs it up because it's the lowest price." If companies tender on lowest price, it leaves no money

profession, "rather than putting their heads into the council". This is why he believes it is more about state capture than transformation. And he is not alone. "A lot of senior professionals who have the interests of the profession at heart are using 'state capture' terminology to describe what they see happening."

It is no different from what happened at the SABCO and has been attempted at the National Treasury, he says.

Municipalities have come under pressure for using unregistered engineers. Pillay says unregistered engineers are easier to influence.

This doesn't only impact on service delivery. It leads to massive cost overruns on infrastructure projects. "A R100-million project is going to scope creep and become a R200-million project. It's already happening."

He says most of the R22-billion overspend, flagged in the auditor-general's report, involves infrastructure projects where there's been scope creep.

"Investigate them and you'll see that the people managing and administering these projects are non-engineers. People who are adjudicating on infrastructure tender processes are non-engineers."

There is big money to be made, but officials and politicians need compliant engineers. "Fewer professionals means less monitoring, more overspending. Where are all these excess funds going?"

A staggering 150 out of South Africa's 278 municipalities have no professionally registered engineers at all, he says.

This is partly because of cadre deployment appointments and partly because professional engineers refuse to work in an unprofessional environment. "They don't want to work in what they regard as an unprofessional environment with too much political interference, corruption and flouting of the rules," says Pillay.

He says that if state capture of the profession succeeds, the outcome will not be faster transformation but less service delivery and more collapsing bridges, malls and hospital roofs. "You're going to have a lot of poor-quality engineers doing work on public infrastructure in the country."