Mining contributed almost 16% of South Africa's gross domestic product (GDP) in 1994, but this has since declined to about half that amount. The country has not benefitted enough from our industry, which has huge potential even when having to compete in an increasingly efficient global environment.

There are many reasons for this, but I am now seeing encouraging changes afoot which lead me to believe that we may have turned a corner, and could well see positive growth going forward.

If this is the case, then we will need to import skills, and this will be at a premium. Many of our engineers have either emigrated or left the industry. The 2018/2019 Annual Report of the Engineering Council of South Africa (ECSA) revealed that nearly half of our 21 500 registered professionals are either retired or over the age of sixty, and that our candidate engineers don't seem to be progressing to registration as professionals.

The data also highlights the shortage of registered professional engineers, with only one being available for every 2 800 people living in the country compared to international norms of one engineer for 40 people. This must be a concern, because the ability of our captains of industry to exploit the full potential of our orebodies and supporting resources on a sustainable basis will depend on the quantity and quality of the professional engineers available to them.

We need to develop our own capacity, and this should start at the primary schooling level. There is not enough emphasis placed on enhancing the ability of our children, at this early stage, to properly benefit from the teaching of maths and science at the secondary schooling level. If we get this right, we will have a larger pool of talent to attract into the engineering fields at our tertiary institutions. I understand that there are a number of initiatives being developed to address the relatively low levels of maths and science literacy, including the ‘Stemulator’ programme, but a lot more effort is warranted.

Our universities are sound and they are working hard on producing engineering graduates, but graduates need to be put to work so that they can be developed into professionals in a reasonable time. It can take four to five years to produce a graduate, followed by the additional two to three years of internship and mentoring required before they are eligible for registration as an engineer.

This would be the shortest route, but our graduates can achieve this only if they are given an opportunity to work and learn. Unfortunately, many of our graduates remain unemployed and are struggling to find employment.

The SAIMM established the Young Professionals Council (YPC) to contribute to tackling this problem, but they need a lot more support from our industry's leaders. The Johannesburg Branch of the Institute is also committed to developing our youth and has agreed to work closely with the YPC to create linkages with key people in our industry, and to extend our reach into the rest of the Southern African region where we have branches that also need support.

If our industry is indeed turning the corner, surely we can, and should, do more to support the efforts of the YPC and Johannesburg Branch. I would ask anyone in a position to make a difference to do so by contacting either Shepherd Manjengwa (sfmanjengwa@gmail.com) of the YPC, or Danie Jensen (danie.xpm@gmail.com) of the Johannesburg Branch.