

New efforts bring hope for Industry 4.0-ready SA workforce

Industry 4.0 - smart new automation tools and technologies - are rapidly changing the face of manufacturing and industry around the world. Without a concerted effort to change industry processes and infrastructure, and upskill the workforce, South Africa risks falling behind the world in its efforts to become a player in the global manufacturing market.



Source: pixabay.com

However, new industry initiatives are emerging to address the skills shortfall and help propel South Africa into a smarter era of manufacturing.

Speaking ahead of Africa Automation Fair 2019, automation industry stakeholders said aligning with the global Industry 4.0 revolution would demand a great deal of change and progress in South Africa. A key priority has to be skills, they say.

Dave Wibberley, managing director at Adroit Technologies, notes that Industry 4.0 in itself is not a 'silver bullet' that will change manufacturing.

"Industry 4.0 refers to a set of tools and services. To be effective, these tools and services depend on the necessary resources and knowledge being in place in processes. You need to achieve world-class manufacturing and tooling first," he says.

Frikkie Streicher, business development manager at process instrumentation manufacturer, Vega, says a greater effort is

needed to develop the automation engineering skills pipeline, to allow the South African industry to prepare for Industry 4.0: “Automation engineering is not yet recognised as a separate field in South Africa. We need to step up our focus on automation engineering if South Africa is to achieve its ambitions of becoming a manufacturing giant in Africa.”

Annemarie van Coller, president of the Society for Automation, Instrumentation, Measurement and Control (SAIMC), says that while automation presents massive economic growth opportunities, it does threaten the current environment’s workforce structure. “If you look at the current ‘triangle of training’, we have a small number of engineers at the apex, and a large number of artisans at the bottom. We need to invert this triangle, and produce a far greater number of engineers capable of supporting automation in future,” she says.

Introducing new learning models

Efforts are now underway to fast-track this process, developing new curricula for automation engineers and introducing new learning models to upskill employees.

SAIMC and other industry stakeholders are moving to introduce a skills development model for the automation sector, based on the successful model introduced in the tooling sector.

Driven by Johan Maartens – SAIMC director and COO, the initiative will see the launch of an education and training system for automation personnel modeled on the National Tooling Initiative Programme (NTIP) for the tool and die industry.

The launch of the new programme includes the renaming and rebranding of the tooling programme as the National Technologies Implementation Platform (NTIP) under the oversight of the Intsimbi Board. The programme is intended to serve as a fully-fledged 4th Industrial Revolution programme including training in robotics, mechatronics, and industrial maintenance, and involving over 500 companies.

Launching the new Intsimbi Future Production Technologies Initiative (IFPTI) NTIP's Centre of Excellence in Cape Town earlier this year, Trade and Industry Minister, Rob Davies said the government was committed to building capacity in response to the impact and opportunities that the 4th Industrial Revolution will bring about.

While funding models and curriculum development are still under discussion, van Coller is optimistic that the new initiative will drive the change the sector needs.

“We’re very excited about this, and its potential. It will bring new opportunities for upskilling – gone are the days of being too old, or living too far from a university. This model allows for free, flexible, home-based learning using online tools, along with some facilitator-led learning. Stakeholders are also looking at the necessary infrastructures for participants in rural areas with limited internet access. It presents the hope that we can develop our own advanced automation skills pipeline and stop relying on imported skills,” she says.

The Connected Industries Conference at Africa Automation Fair 2019 will focus on the challenges, opportunities and economic impact of the Fourth Industrial Revolution (Industrie 4.0 / IIoT) on South – and Sub-Saharan Africa.