

## Developing New Manufacturers

### **Advancement in machine learning and industrial innovations vital to boosting South Africa's manufacturing sector.**

**Johannesburg, 9 April 2018;** Following the 2008 financial crisis, which caused many industrial sectors around the globe to dwindle, South Africa's manufacturing industry experienced a similar downturn and almost a decade later, its recovery remains a work in progress.

To revive the ailing South African economy, ambitious growth targets have been implemented along with government-led initiatives, such as The Manufacturing Circle's 'Map to a million jobs in a decade plan' which aim to boost the manufacturing sector. The programme focuses on creating between 800 000 and 1.1 million jobs (with five to eight times as many secondary jobs in the process) and increasing manufacturing's input of South Africa's economy by 30%. It's therefore imperative to understand how recent manufacturing dynamics have changed to introduce policies that are successful in developing new manufacturers.

Professor Joseph Stiglitz, a Noble Prize-winning US economist and professor at Columbia University, recently remarked at the Redi 3X3 Summit: A Strategy for Inclusive Growth and Economic Transformation in South Africa hosted in Cape Town by the Economic Research Southern Africa and the Bureau for Economic Research, that while many countries aspire to drive their economic strategies according to those modelled by the East Asian economies of China, Japan and South Korea, such a scope of achievement cannot be replicated easily unless countries integrate today's innovations whilst systematically improving the output of their public education sector to achieve this goal.

Next generation technologies such as big data, IoT, machine learning and robotics, also present potential growth opportunities for a nation's manufacturing sector. Insight into the complex information related to processes, standards, procedures, productivity, schedules and machine performance allows improvements in quality and respective unit output levels.

Notably, not all manufacturing units across an economy share similar patterns however, certain uniform operational data can be collected across a vast number of facilities to identify and trace patterns relating to productivity, cost and compliance with quality standards. This solitary view of all operational data simplifies the challenges associated with managing complex data and supports the automation of manufacturing operations through the development of prescribed standards.

Herein lies the opportunity for experienced data scientists to make a positive contribution to the manufacturing sector by extracting and processing credible and valuable information.

The above-mentioned benefits of machine learning have been observed and recorded in real-world manufacturing scenarios, specifically at one of the largest foundries in the Southern Hemisphere. Here, integration of innovative practices yielded a 0% external scrap rate, thereby contributing towards a R10 million cost saving for the manufacturer every month and eliminating the cost of defects and errors. These savings were reinvested to further increase productivity, thereby enabling the company to tender for projects against some of the world's most progressive manufacturers.

To rebuild its manufacturing industry, South Africa currently faces two major challenges: Firstly, there's the task of acquiring machine learning capabilities that are on par with nations having established benchmark manufacturing sectors; and secondly, the upskilling of a high-performance workforce capable of tackling the complexities associated with the development of innovative capacity.

The formulation and employment of a specialised approach favouring skill enhancement over mass job creation is a fundamental step in driving the progress of manufacturing in South Africa. This mechanisation of manufacturing support requires significant investment in STEM fields – science, technology, engineering and maths – readily priming workers for the skills necessary to incorporate and execute these exponential technologies.

A new age manufacturing strategy that dually serves the nation's economic interests as well as works in alignment with the growth of other sectors, should demonstrate how leveraging technology, education and skills appropriately can yield benefits in the long term. To achieve this goal, strong cooperation is required on part of government entities, academic institutions, manufacturing associations, investors and the private sector, all of which share the common objective to develop new and advanced manufacturers across Sub-Saharan Africa.

The Manufacturing Indaba 2018 is hosted with the joint support and strategic partnership of the Department of Trade and Industry (the dti) and the Manufacturing Circle, the industry's voice. This year's event will underline the development of new manufacturers by empowering prevalent, innovative technologies with the objective of enhancing the South African manufacturing sector to a level that is relatively competitive with other nations. This discussion will enlighten anyone vested in the manufacturing sector to keep abreast of the rapidly-changing technological realm confronting the industrial sector.

ENDSPRESS RELEASE ENDS

#### **MORE ABOUT THE MANUFACTURING INDABA**

The 5th annual Manufacturing Indaba will be hosted at Sandton Convention Centre, Johannesburg from the 19 - 20 June 2018. The event will comprise a two-day conference and exhibition and is hosted in partnership with the Department of Trade & Industry (**the dti**), the Department of Science & Technology, the Manufacturing Circle and the NCPC-SA. The event is designed specifically for private and public company representatives to



hear from industry experts as they unpack challenges and find solutions for growth across the manufacturing sectors and explore regional trade into Africa. The 2018 event will launch the IoT / Industry 4.0 Conference aligned to the Manufacturing Indaba as an official side event.

For more info on this event, or to register for the Indaba, visit [www.manufacturingindaba.co.za](http://www.manufacturingindaba.co.za)

Facebook: <https://www.facebook.com/manufacturingindaba/>

Twitter: <https://twitter.com/IndabaManufact>

Hashtag: #MFGIndaba

**FOR MEDIA ENQUIRIES**

Issued by: Siyenza Management

For media enquiries contact: Thembisa Bambathi: [Thembisa@siyenzaevents.co.za](mailto:Thembisa@siyenzaevents.co.za) or 073 788 6044 or 011 463-9184

