

## Workshops for SAIIE 29, October 2018



### Clemens Dempers

Blue Stallion Technologies

**Workshop title:** *Exploring Wolfram Multi-paradigm data science*

Clemens Dempers obtained his BSc and Honors degrees from Stellenbosch University and then completed an MSc in physics at the University of Natal.

While pursuing his post-graduate studies, he became involved in importing technical and scientific software and was involved with a number of software and consulting companies before starting Blue Stallion Technologies in 2001. Blue Stallion have the sole agency for a number of products including Wolfram Mathematica, Lingo and Anylogic. He is currently enrolled in a PhD at the University of Pretoria with the Industrial Engineering department.

He has been involved in a number of consulting projects, both in South Africa and internationally.

### Workshop Outline

Data Science, Neural Networks, Machine Learning, Internet of Things (IOT), Natural Language Interface - these are all very popular terms mentioned in literature and even popular press. Join us for a practical workshop where we provide practical examples and interactive applications covering these technologies, with the emphasis on how it can assist the OR professional, Data Scientist, or Industrial Engineer with their research or projects.

We will use the Wolfram Technical computing platform, from Wolfram Research USA, allowing participants to focus on principles and applications rather than getting bogged down with low-level coding. Wolfram proposes an interesting vision of giving the practitioner a multi-paradigm approach, drawing on multiple disciplines within one integrated environment. One can combine GIS information with statistical methods to create interactive dashboards, or use image analysis and machine learning techniques to read instrumentation remotely, and then do automated carbon footprint calculations.

Requirements: This is a hands-on practical workshop. No prior experience or subject knowledge is required. Please bring a notebook computer (running under Windows or Mac OS X) and charger. You will need to install the Wolfram application to be able to actively take part in the exercises



## **Rose Heathcote**

CEO, Lean Institute Africa

### **Workshop title:** *Cutting Edge Lean Thinking*

Rose Heathcote is Lean Institute Africa's CEO. She is dedicated to helping African organisations advance their learning and application in Lean Thinking. For more than 20 years, she has focused on raising the performance of enterprises in most industry sectors in Africa, Middle East, UK and India through the integration of Lean techniques into a management system to ultimately create a Lean culture. She has been privileged to work with 100+ companies, from micro through to large internationals, supporting them with:

- Strategy and Execution in Lean Thinking
- Corporate and Individual Learning and Development

Rose has a background in Industrial Engineering and is the author of 'Clear Direction' and 'Making a Difference'.

### **Workshop Outline**

#### ***Cutting Edge Lean Thinking - 2 hour workshop***

An evolutionary journey to enhancing global competitiveness

When we talk Lean, we begin with the Purpose of the organisation and interrogate how it delivers value to its customers. This opens up our perspective on “the problem we’re trying to solve” and gives clarity to capability building and process improvement needed to take the organisation to the next level. It also makes us think about the basic underlying principles and the current management system, and how this will need to develop over time to help the organisation survive and thrive. But how does this change as we enter a new era of working? A new age? Join me for a practical, interactive workshop where I will share with you our perspective on Lean and how this is likely to evolve over time.



## **Ms Sisakunga Pasiya**

MMI Holdings (Multiply)

**Workshop title:** *The quest for operational excellence*

Sisakunga has an Industrial Engineering degree obtained at TUT and is Six Sigma Green Belt certified through BMGI. Sisakunga has 8 years working experience which she gained through working in multiple industries such as manufacturing and banking fulfilling various roles and skills. She has recently joined MMI as a Continuous Improvement Specialist. She has applied herself various projects using Lean Six Sigma and Agile principles and methodologies.

She strives for high performance and achievements in continuous improvement by through adding value to business (cost saving, time and process), ensuring that businesses are efficient and effective in their performance and operations.

### **Workshop Outline**

#### ***The quest for operational excellence***

Why is it that some companies are more innovative, have more loyal customers and more engaged employees? What do they do differently? [Simon Sinek](#) says that all the great and inspiring leaders and companies take inspiration from knowing why they exist, not what they do or how they do it. The why is the driver for everything you do, this controls behaviour. People don't buy what you do, they buy why you do it. If your employees and customers understand why you do what you do, they trust you, they become loyal and their behaviour proves this. But where do we then start if things don't go as we assume it should? And how do we get to be the company that defies all of the assumptions? If you look at the [law of diffusion of innovation](#), there is a tipping point which you need to cross to take your business to the next level.

But how do you close the gap to get to the other side of that tipping point? How do you change the setup and way of work in an organisation that started in an era that is very different from the one in which we have to operate now? How are traditional roles and titles impacted to move from specialised functions to cross-functional teams? What is required to function in an era of digital disruption?

[Multiply](#) has embarked on a journey to challenge some aspects of the conventional corporate culture in a quest for operational excellence. This includes the way in which the focus of existing employees are aligned, how new employees are on boarded into the business, the implementation of meeting free days in the midst of meeting filled days and allowing people the opportunity to play to their strengths on a daily basis in cross-functional teams.

The opportunities to move towards execution excellence are limitless! You just need to take a step back to get some perspective and start moving forward.



## Dr Harry Teifel

Disruptas

**Workshop title:** *4th Industrial Revolution: Implications and Implementation Roadmap for organisations*

Harry is a specialist in initiating, designing and supporting Strategy with a particular focus on ensuring the alignment between Business outcomes, Technology and Enterprise Systems. Harry has extensive experience in Strategy and Technology having worked in various roles and having been responsible for Strategy in local and overseas organisations. He has supported a great number of organisations in dealing with complex strategic and business issues – with Technology usually playing a key role in the solution formulated. Harry has inter alia worked in the IT, FMCG, Automotive, Rail, Logistics and Aerospace / Defence Sectors.

### EDUCATION

Bachelor of Industrial Engineering (UP)

Master of Commerce (RAU)

Doctor of Commerce (RAU)

Certification as IBM Professional Consultant

### MEMBERSHIP

International Council of Systems Engineering (INCOSE)

### PUBLICATIONS AND OTHER MEDIA

Harry has published articles or appeared in other Media related to the 4th Industrial Revolution for the following: Financial Mail, Business Day TV, ENCA TV and Engineering News.

### Workshop Outline

#### ***4th Industrial Revolution: Implications and Implementation Roadmap for organisations***

The 4th Industrial Revolution is set to dramatically change the way most organisations operate and holds both tremendous opportunities and risks. The adoption of 4IR Technologies and – Best Practices is not an automatic process, but requires dedicated focus and investments. Given the multiple factors considered and the need for 4IR to be approached with optimal business / organisation outcomes there is a need for organisations to be well prepared and build the necessary competence and capacity.

Attend his workshop if you wish to:

- Understand the key aspects to be considered in developing and leading a 4IR Strategy initiative from an Industrial / Systems Engineering perspective
- Learn about an approach to assess and determine the value-add of 4IR-related Disruptive Technologies as part of the 4IR Strategy process

- Learn from case-studies on how the potential of Technology is converted into value for companies

*Benefits of attending:*

- Brief overview of 4IR and implications for companies / organisations
- Systems Engineering and Industrial Engineering perspective of 4IR related to such technologies as Product Life Cycle Management tools, Digital Twinning and Industrial Internet of Things (IIoT)
- Categorisation of 4IR into primary response approaches
- Overview of primary Disruptive Technologies and areas of value-add
- Key principles / concepts to know in a 4IR environment
- Major areas of business benefits to be pursued through 4IR Technologies
- Business Enterprise System implications arising from 4IR