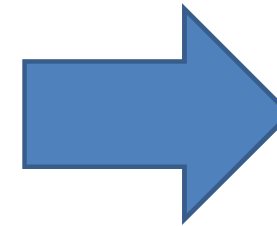
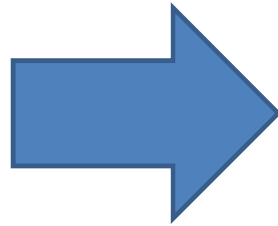


CHALLENGES FACING SOUTH AFRICA

SAIMC President: Annemarie van Coller (Pr. Eng.)

Traditional Approach

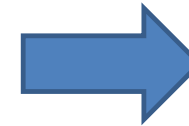
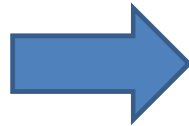


Product

Education

Training

Result in 2018



Education

Training

Gap between Education and Training too big

Examples of the Ravine

- Disconnect between Mathematics and analyzing Compressor Vibration graphs
- Disconnect between Chemical Reactions and Speed of those Reactions (for alarms and trips)
- Communication courses are often verbal communications instead of Profibus, Industrial Ethernet, Foundation Fieldbus and HART



Examples of Ravine

- “The Basics” taught can often be found on U-Tube instead of paying education fees
- Many graduates have never seen a P&ID
- Little Control Room design principles including Alarm Management, Ergonomics etc.
- Little knowledge of Equipment sizing and Equipment limitations
- Little knowledge of Area Classifications



Examples of Ravine

- Little exposure to the principles of HAZOP (Hazard and Operability) studies
- Little exposure to Cyber Security
- Little Exposure to Overall Equipment Efficiency (OEE)
- Project Management often does not include Risk Management based on Financial Calculations.

- And then we have not even touched IIOT, Industry 4.0 or Disruptive Technologies!



Progress

- The SAIMC approached ECSA to consider an Automation qualification with no success
- Some institutions are of the meaning that Automation forms part of Electrical even though automation is more important than the fact that automation equipment works with electricity
- Other institutions feel that Mechatronics addresses Automation. However, the SAIMC's role in the Automation Federation is to assist in defining Process- as well as Factory Automation
- The SAIMC received tremendous support from institutions like MUT, NWU, TUT, UJ and UNISA in investigating the feasibility of an Automation qualification.



Progress

- Then, at the Manufacturing Indaba the SAIMC was introduced to the DTI and the NTIP
- The SAIMC was so impressed with the results that it was decided to investigate the possibility of joining NTIP for Automation Education and Training
- The Minister of Trade and Industry renamed the NTIP to National Technologies Implementation Program addressing the requirements of SAIMC.
- Today we also hope to hear more about the NTIP program as well as its funding model.

