

Education for Employment , Developing Skills for Vocation

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FESTO

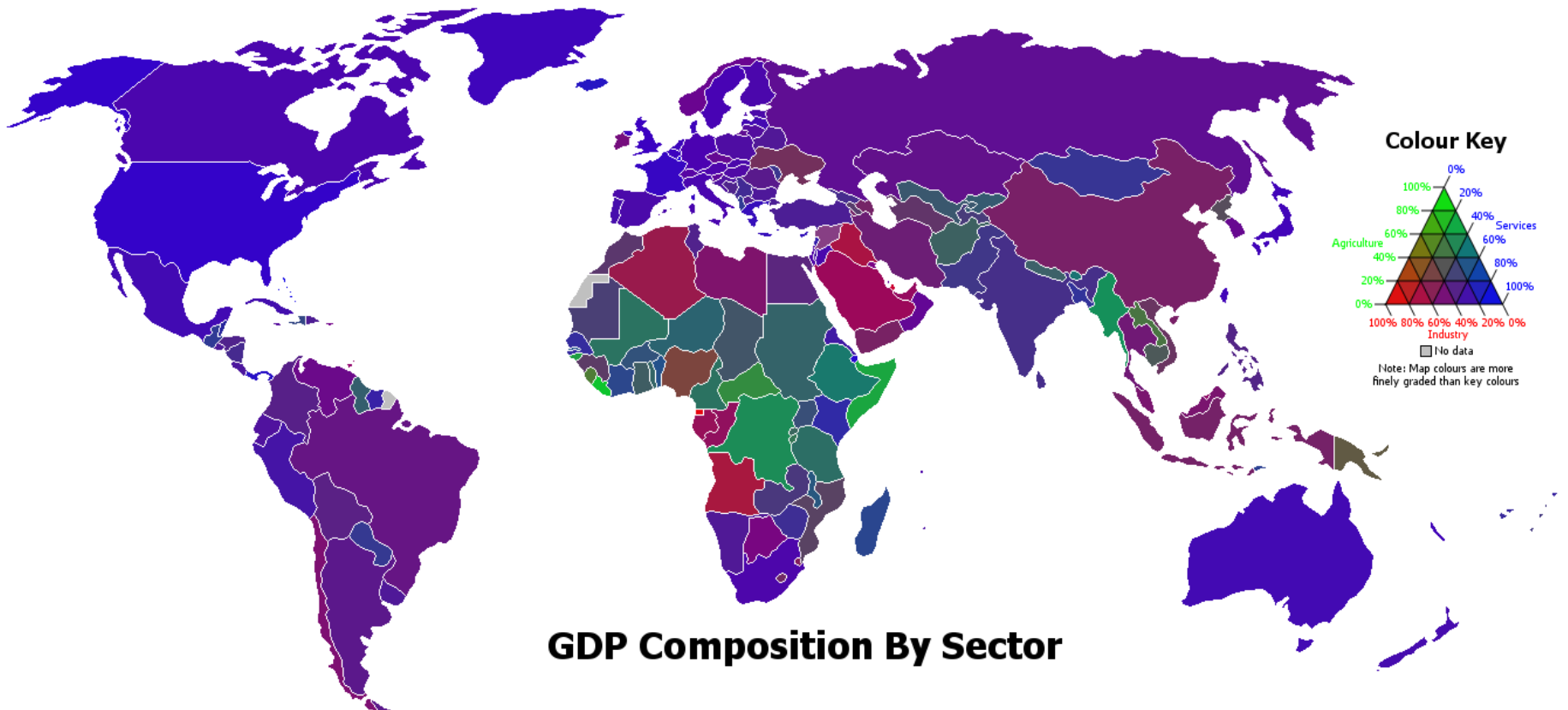
Educating for Employability

Industrialisation – Bridging the Industry/Education Gap



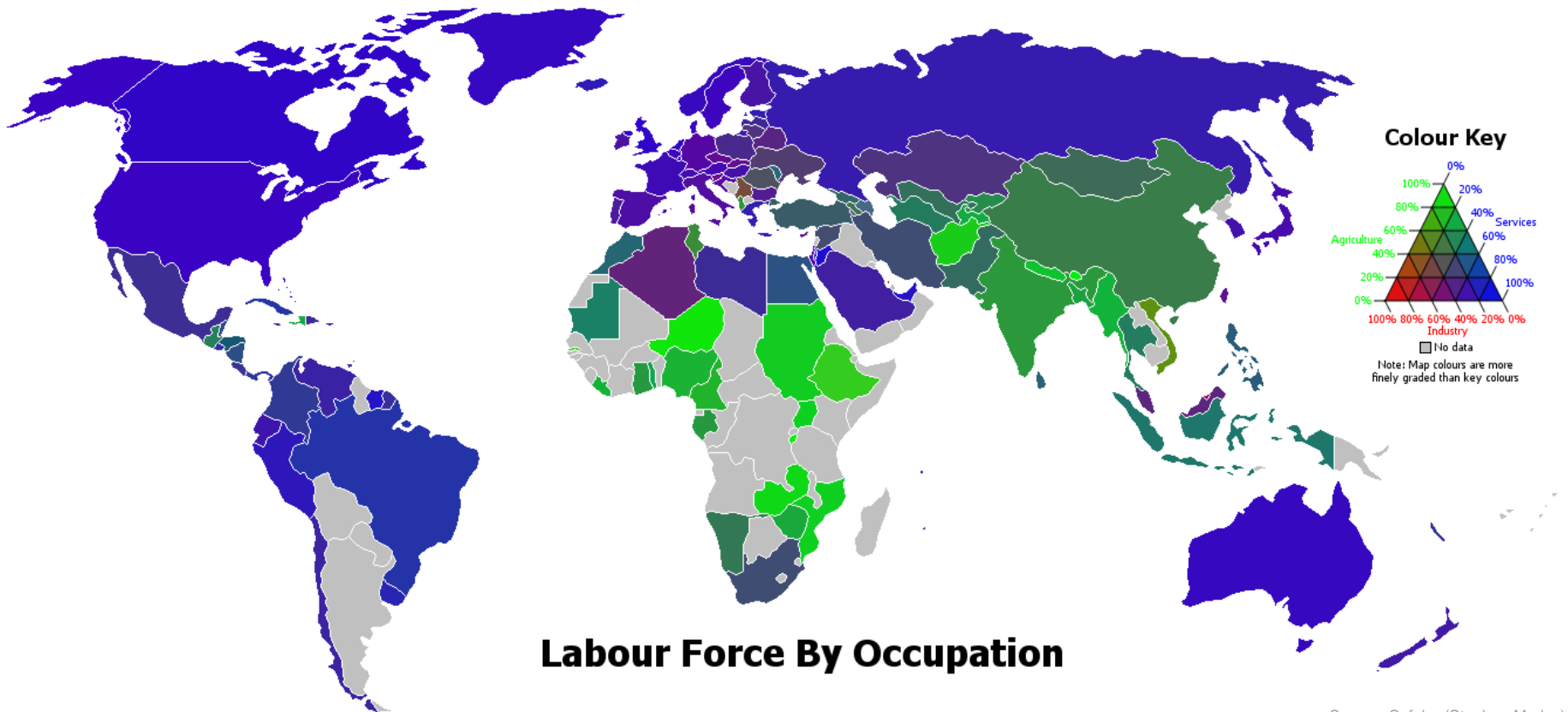
Industrialisation & Employment in Africa

- Services
- Industry
- Agriculture



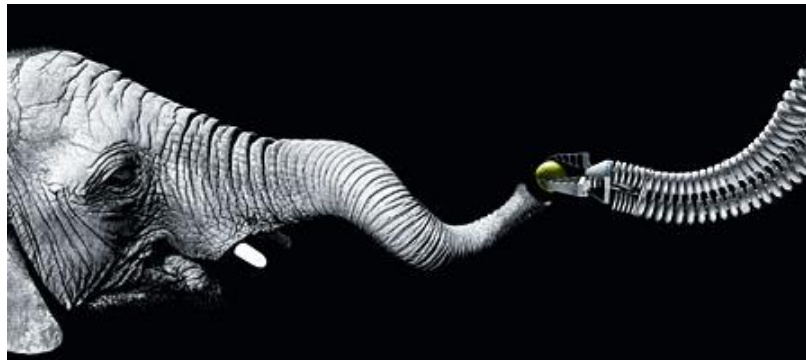
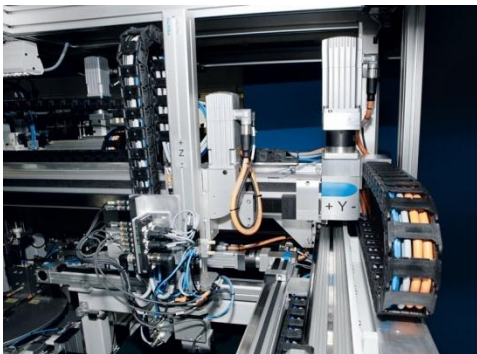
Industrialisation & Employment in Africa

- Services
- Industry
- Agriculture



Industrialisation & Employment in Africa

- **Developing nations, with developing sectors**
 - Agriculture ▶ Industry ▶ Services
 - Wealth creation requires strength in all sectors
- **High unemployment, but a large skills gap**
 - Thousands of job seekers complete schooling and studies every year.
 - Industry can't find skilled craftspeople, technicians and engineers.
- **The key to industrialisation is quality education**
 - Educating for employability, educating for industry



Employability – what does industry want?

I need...

- **Industry-Driven Qualifications**
- **Relevant Technology**
- **Multi-Disciplinary**
- **High Productivity**
- **Global Competitiveness**

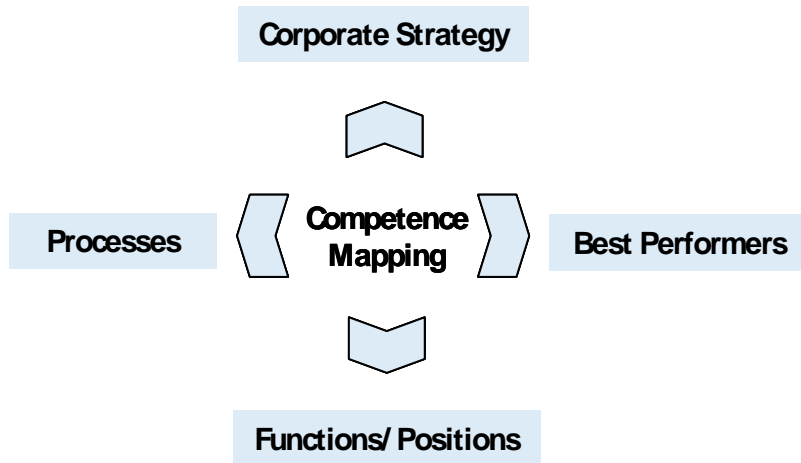
Can you...

run this factory?
fix this machine?
fix all the machines?
bring costs down?
beat the cheap imports?



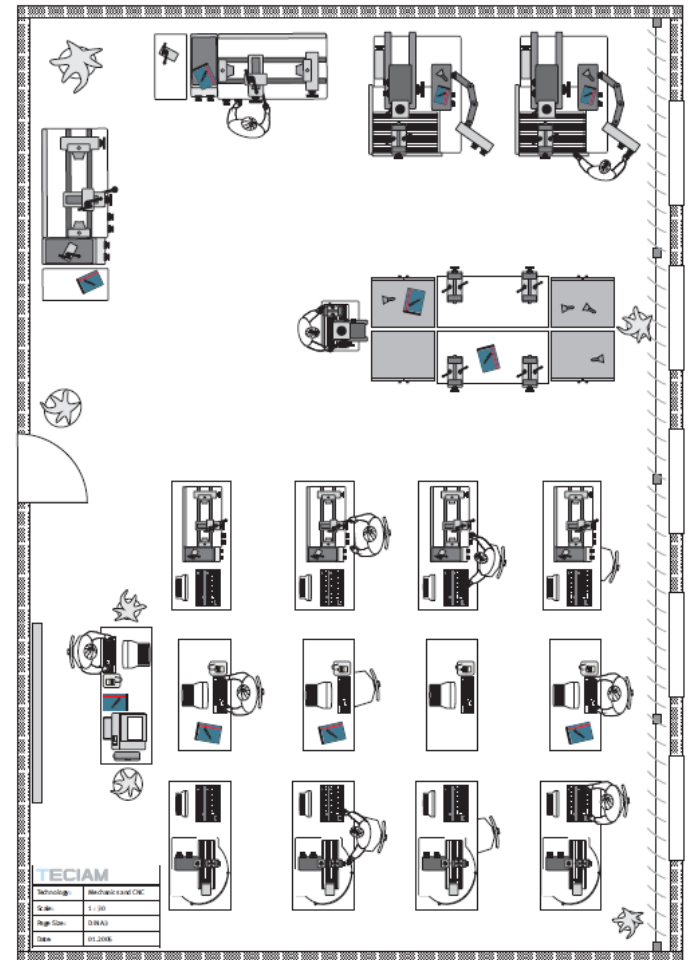
Educating for Employability – how?

- Competence mapping according to Industry Needs
- Workplace and Skills Gap Analysis



Educating for Employability – how?

- Competencies according to Industry Needs
- Workplace and Skills Gap Analysis
- Curriculum Design by Competencies
- Modular Laboratory Design



Educating for Employability – how?

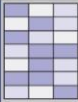


- Competencies according to Industry Needs
- Workplace and Skills Gap Analysis
- Curriculum Design by Competencies
- Modular Laboratory Design
- **Competency-Based Course Material**
- **Practical Industrial Equipment**



Educating for Employability – how?

- Competencies according to Industry Needs
- Workplace and Skills Gap Analysis
- Curriculum Design by Competencies
- Modular Laboratory Design
- Competency-Based Course Material
- Modular Practical Equipment
- **Assessment, Competence Scorecard**
- **Skills Modules: Theory + Practical**

Stellung: Vertrieb

	Entwicklungsbedarf	Absolvierte Maßnahmen	Geplante Maßnahmen
Basiskompetenz		Grundlagen Hydraulik Grundlagen Pneumatik Grundlagen Steuer- und Regelungstechnik	Grundlagen Steuer- und Regelungstechnik
Querschnittskompetenz			
Fachkompetenz			



Educating for Employability – how?

- Competencies according to Industry Needs
- Workplace and Skills Gap Analysis
- Curriculum Design by Competencies
- Modular Laboratory Design

- Competency-Based Course Material
- Modular Practical Equipment
- Assessment, Competence Scorecard
- Skills Modules: Theory +Practical

- Industrial Relevance
- High Skills – High Employability

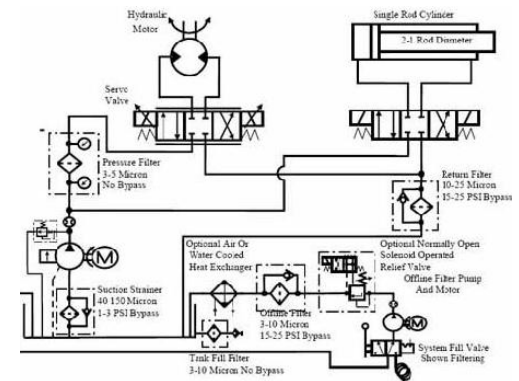
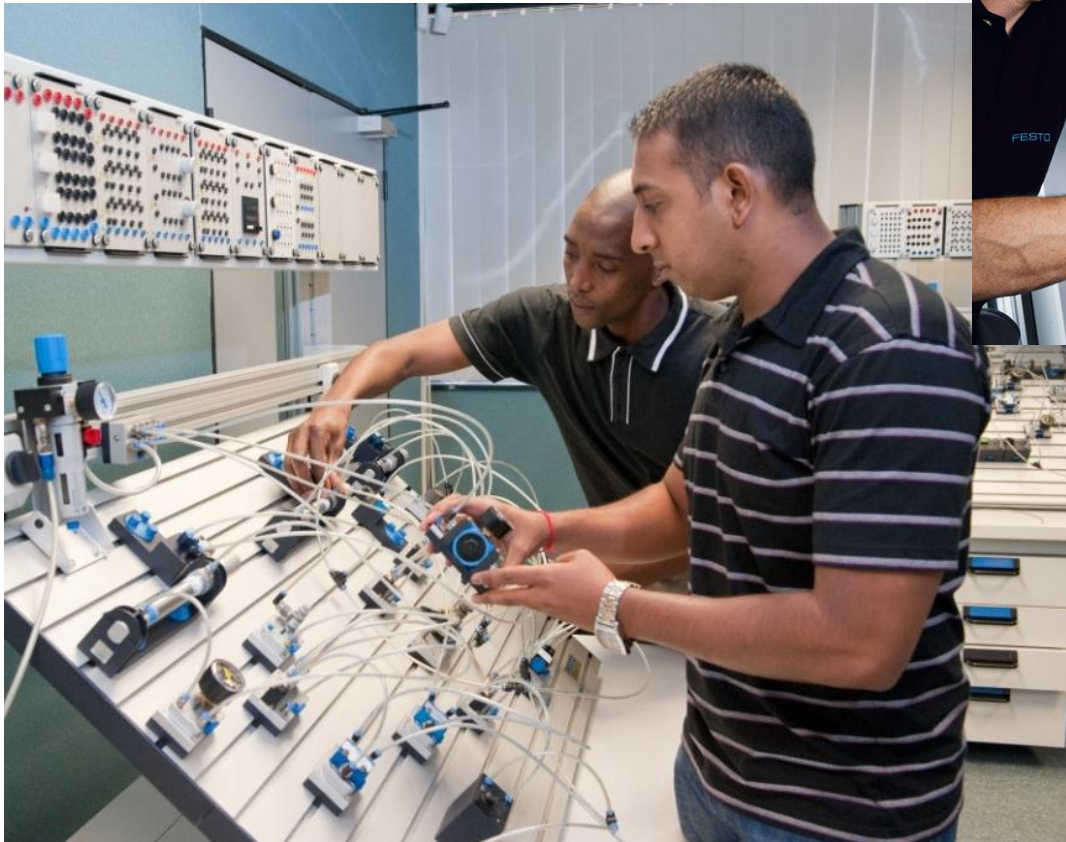


Employable Skills – what are they?

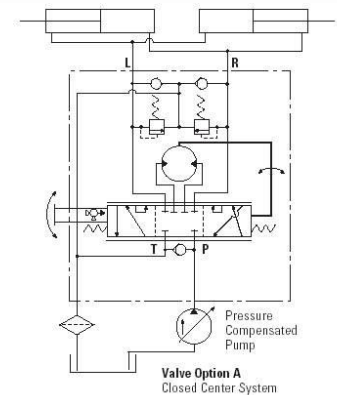
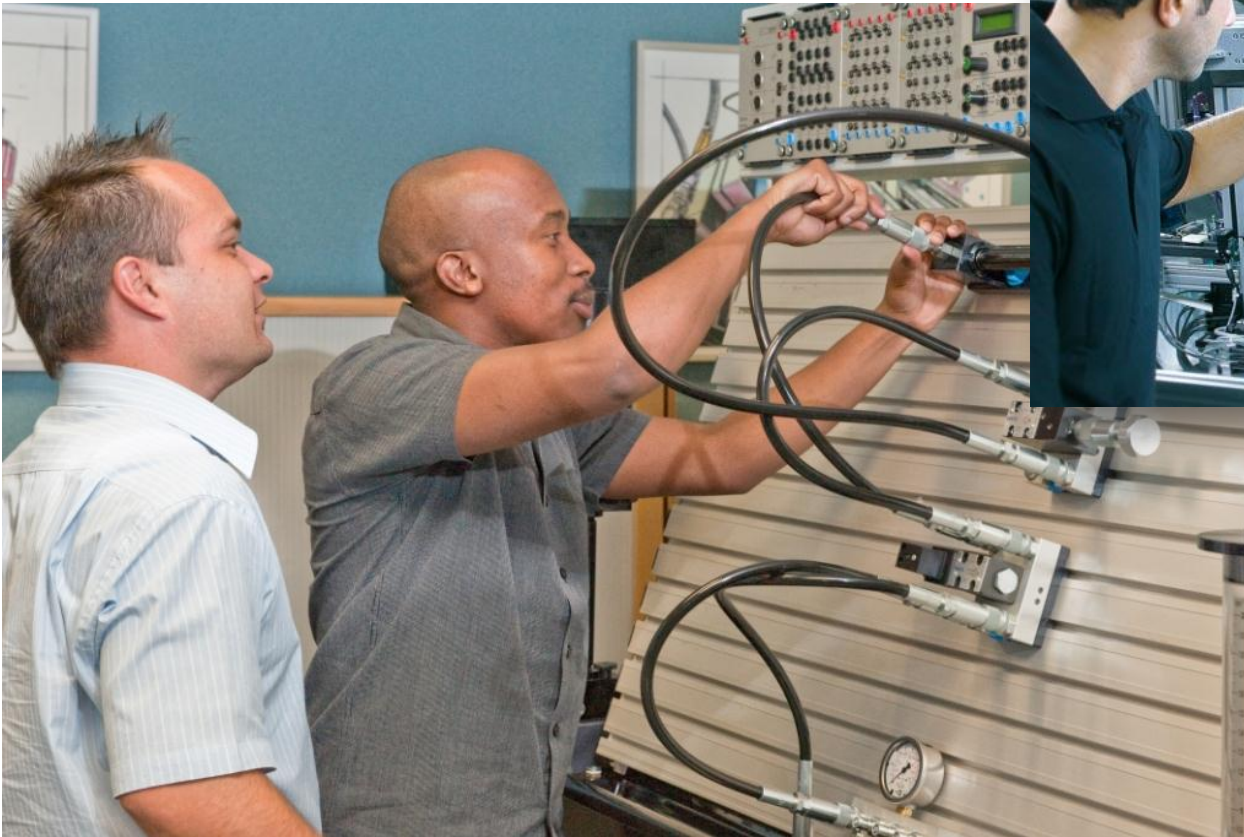
Industrial Technology Modules



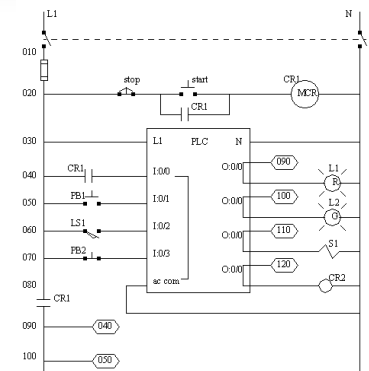
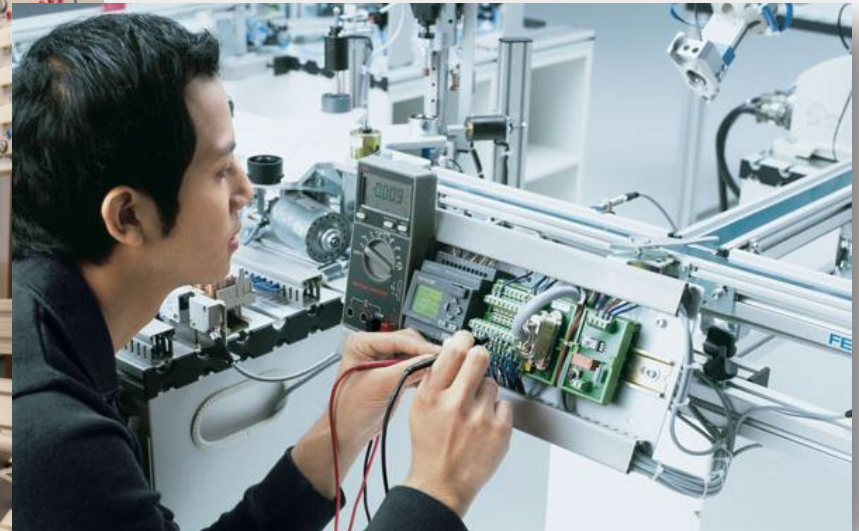
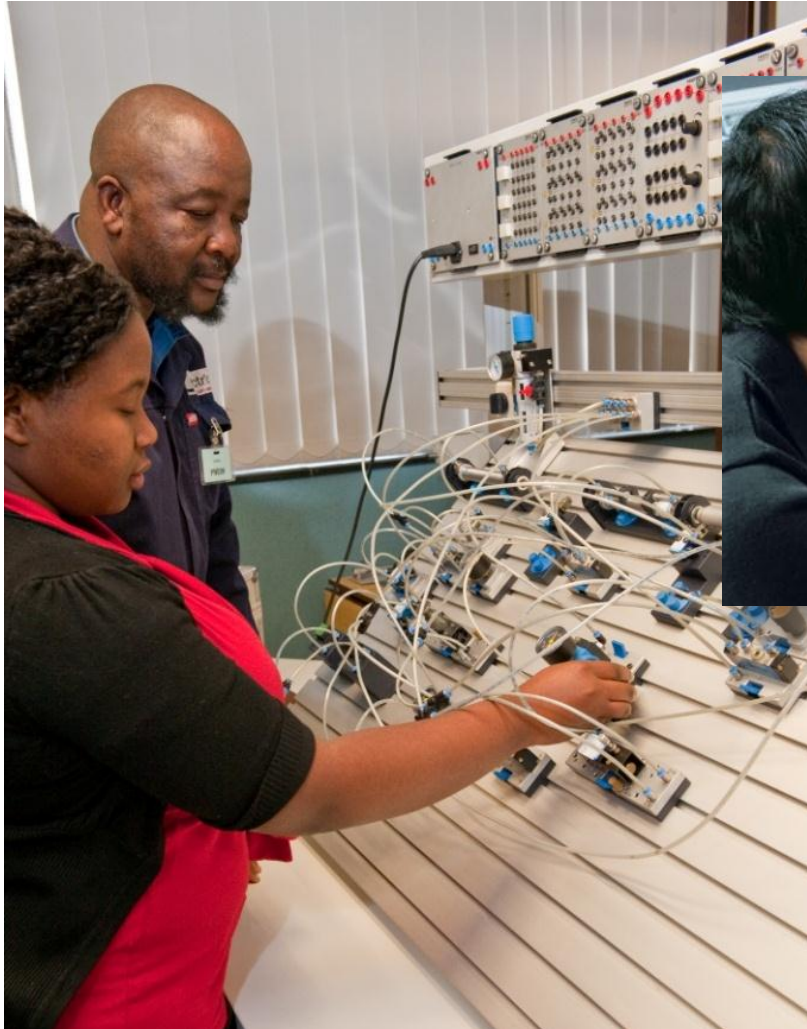
Employable Skill: Pneumatics



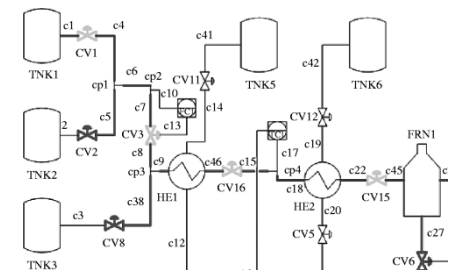
Employable Skill: Hydraulics



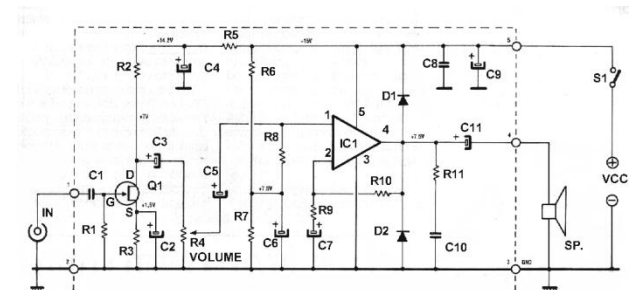
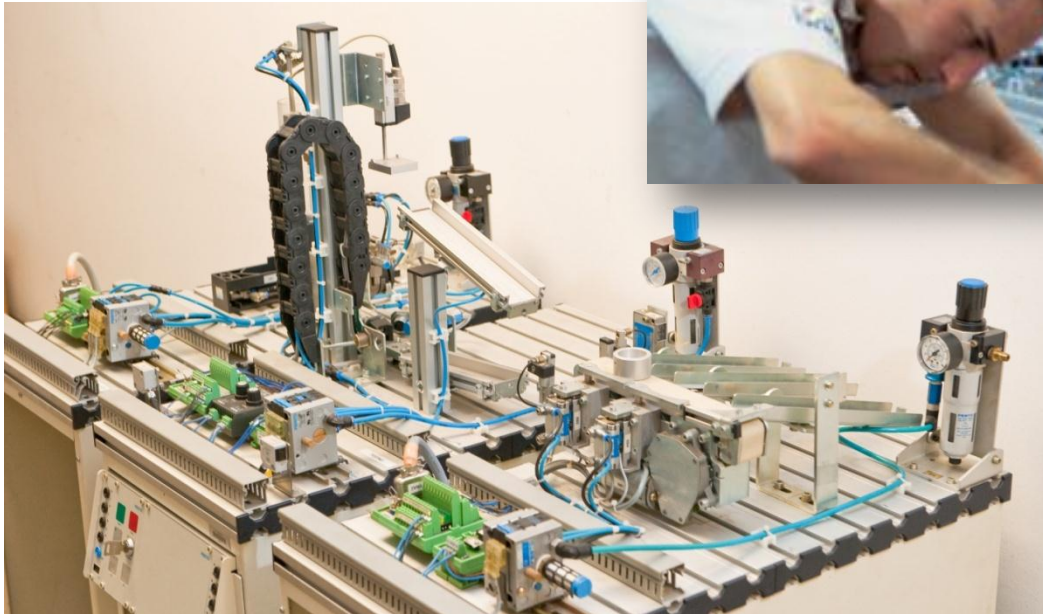
Employable Skill: Electrics, Controllers



Employable Skill: Instrumentation

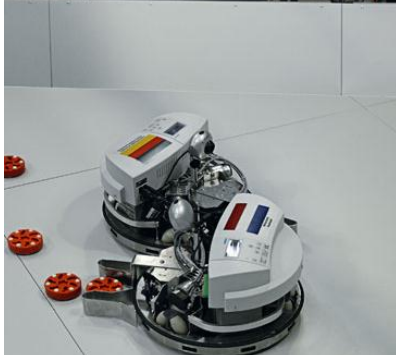


Employable Skill: Mechatronics



Employability – Benchmarking

- **International Competitions – WorldSkills**
 - The “Olympics” of Skills – showcasing excellence in vocational education
 - Local, National, Inter-Regional, International
- **Vocational skills for industrialisation – manufacturing cluster**
 - CNC Milling, Welding, Metalwork, Electronics, Industrial Control, Mechatronics, Mobile Robotics, Polymechanics, Automation, CAD Design



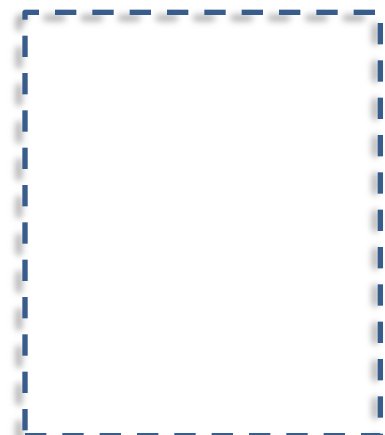
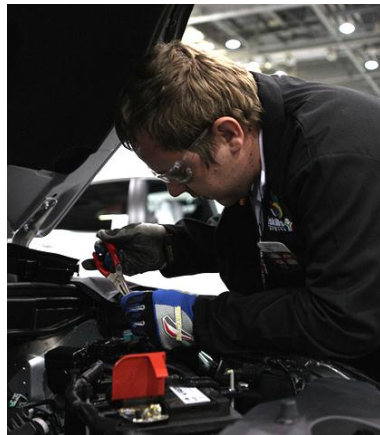
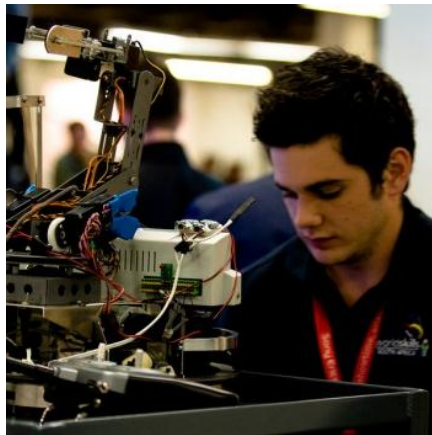
Employability – Benchmarking

- **Case Study – WorldSkills South Africa**

- Mechatronics, Mobile Robotics
- Educational growth

- **Participation**

- Calgary 2009, London 2011 ... South Africa was there
- Leipzig 2013, Sao Paulo 2015 ... Will your country be there?



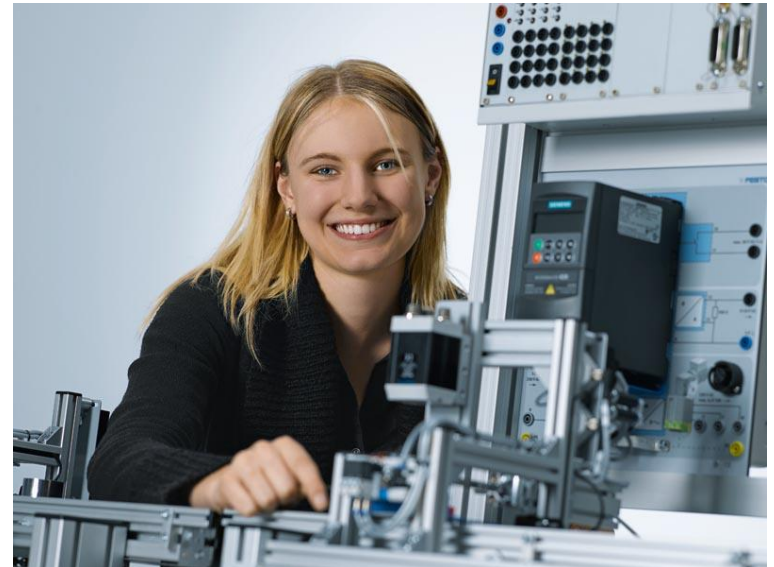
Educating for Employability

Bridging the gap between industry and education

Bring industry into the classroom.

Then the step from classroom to industry is easy.

A country's path to industrialisation is paved with technical skills.



Educating for Employability

“Today the most important power is not influence nor financial strength, but rather the ability to unleash one’s mental resources.”

Prof. Hubert Markl, President of the Max-Planck-Gesellschaft

What does this mean for your country’s education?



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