To be(come) #1 Technical Training Provider
Post School Education and Training(PSET)

By Gideon Potgieter

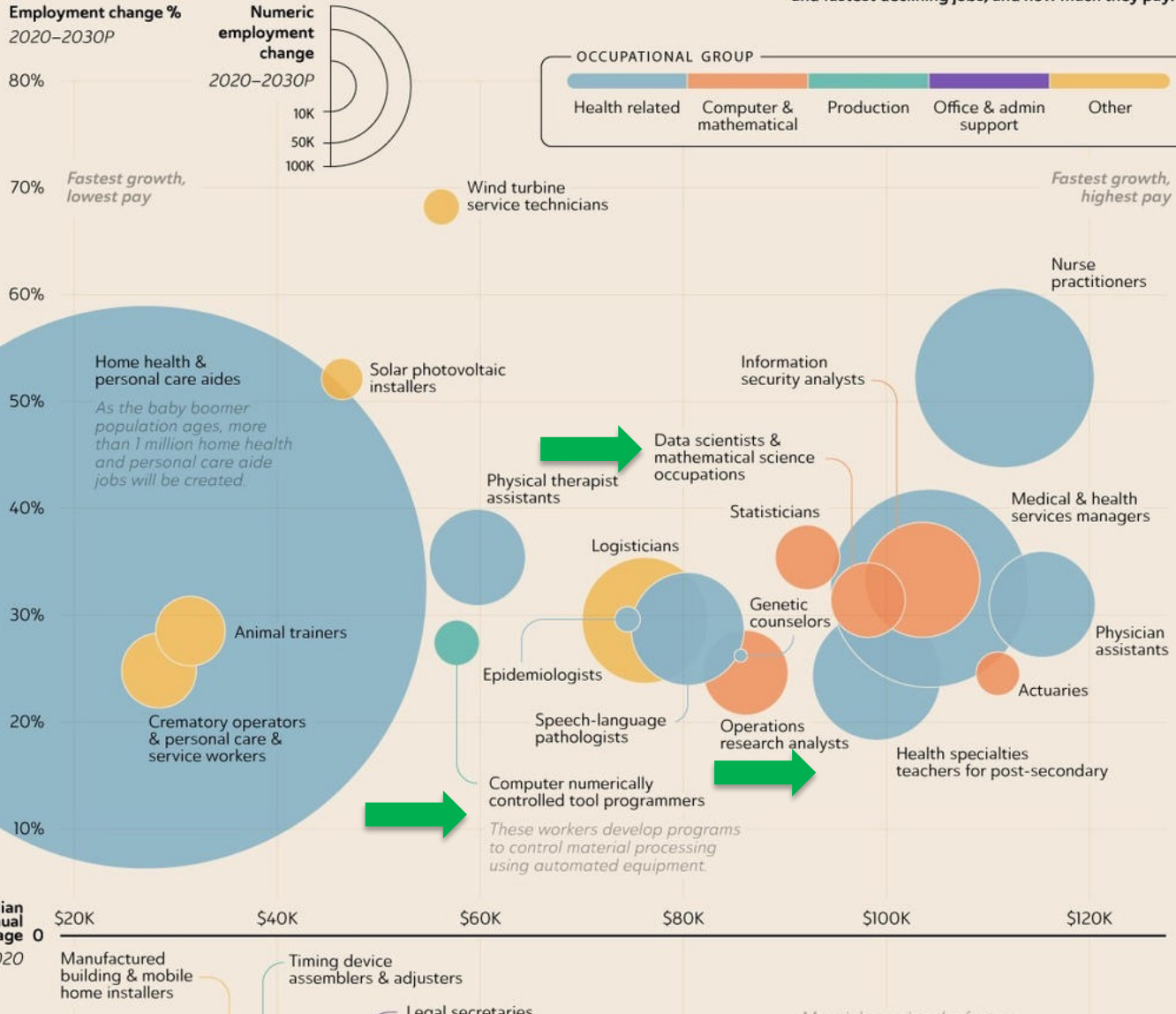Chief Executive Officer

Digital Twin

Sensor sending data to be analyzed. Real time information about status of operations

The 20 Fastest Growing + Declining Jobs

OVER THE NEXT DECADE

The U.S. Bureau of Labor Statistics predicts that 11.9 million new jobs will be created from 2020 to 2030— a growth rate of 7.7%. **Below, we show the fastest growing and fastest declining jobs, and how much they pay.**
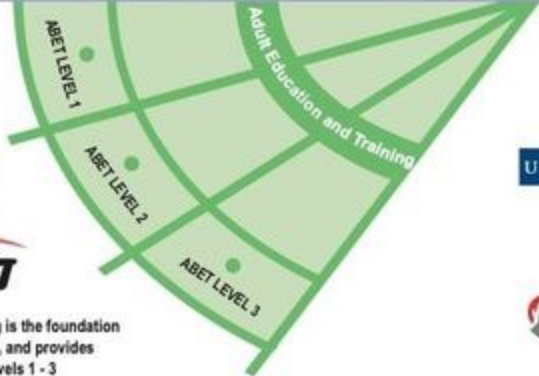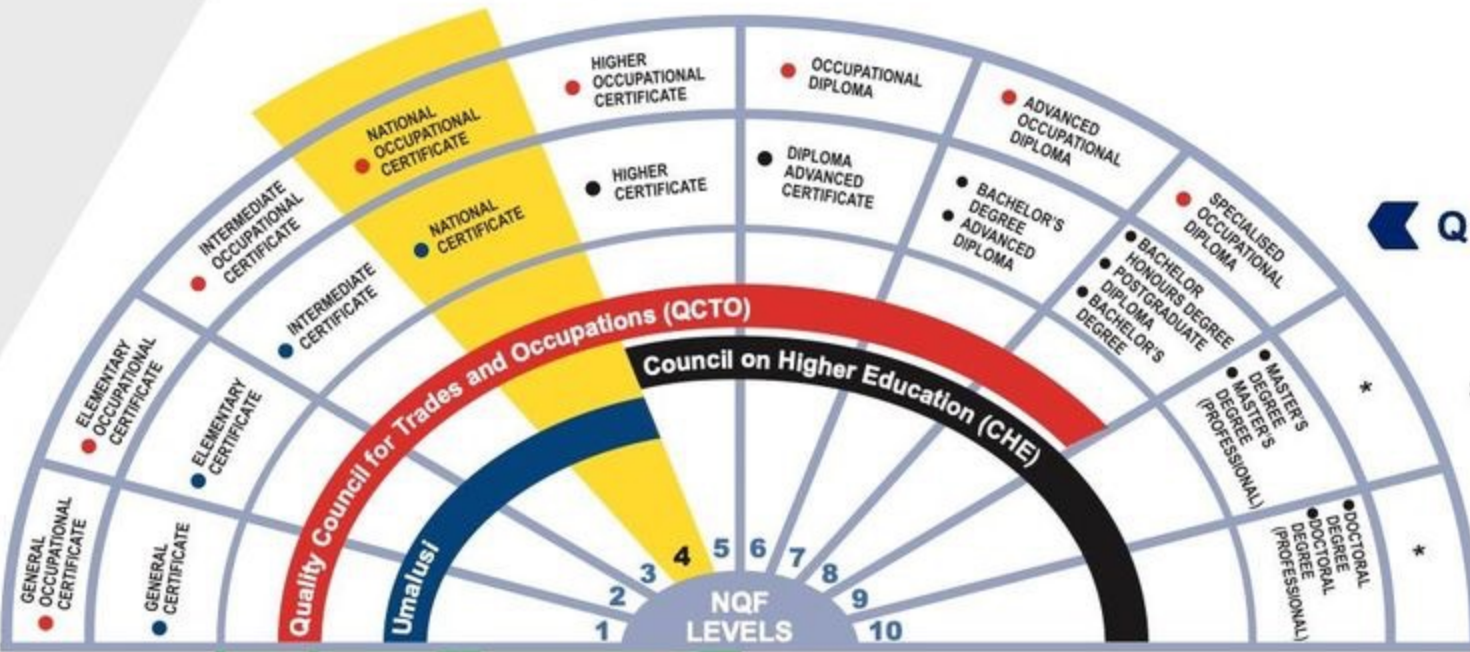
Employment change %
2020–2030P

Numeric employment change
2020–2030P

10K
50K
100K

80%

70%

Fastest growth, lowest pay

60%

50%

40%

30%

20%

10%

OCCUPATIONAL GROUP

Health related | Computer & mathematical | Production | Office & admin support | Other

Fastest growth, highest pay

Wind turbine service technicians

Nurse practitioners

Home health & personal care aides

As the baby boomer population ages, more than 1 million home health and personal care aide jobs will be created.

Solar photovoltaic installers

Information security analysts

Data scientists & mathematical science occupations

Physical therapist assistants

Statisticians

Medical & health services managers

Logisticians

Genetic counselors

Physician assistants

Animal trainers

Epidemiologists

Speech-language pathologists

Operations research analysts

Actuaries

Crematory operators & personal care & service workers

Computer numerically controlled tool programmers

These workers develop programs to control material processing using automated equipment.

Health specialties teachers for post-secondary

Median annual wage
2020

0    $20K $40K $60K $80K $100K $120K

Manufactured building & mobile home installers

Timing device assemblers & adjusters

Legal secretaries

Needs STEM

Instrument Mech/ Mechatronics Tech

Relevant World Skills categories (1000/62/58)

- Additive Manuf (x) SG, CN, IN
- Aircraft Maint (10/11) UK, KR, SG
- Automobile (16/23) TW, DE, CH, IT
- CNC Milling (x) CN, VN, JP
- CNC Turning (x) CN, VN, TH
- Digital Construction(x) IE, TW, FR
- Heavy vehicle (11/11) CN, LV, CH
- Industrial Control (x) CN, PT, KR
- Industrial Mech (x) JP, AT, KR
- Industry 4.0 (x) DE, CH, UK
- Mechatronics (22/25) JP, TW, CH
- Mobile Robotics (14/17) CN,KR,JP
- Prototype model (x) TW, JP, IN
- Robot Sys Integr (x) DE, TW, PL
- Water Technology (7/7) SG, IN, JP

- Autodesk, Creality, Ultimaker
- Cardiff college, Fluke, Mitutoyo
- Electude, Fluke, JohnBean
- DMG Mori, Mastercam, Mitutoyo
- DMG Mori, Mastercam, Mitutoyo
- Autodesk, Saint Gobain
- None (Bell ?)
- Fluke, StanleyBlack & Decker
- StanleyBlack & Decker
- Festo
- Festo
- Studica
- Autodesk, Mitytoyo, Stanley
- Fanuc
- Festo

Seeing: Improvement
IT systems feed the results of analysis back into the production site

IT systems

Observing: Analysis
Primary processing of data collected using FA (edge computing)
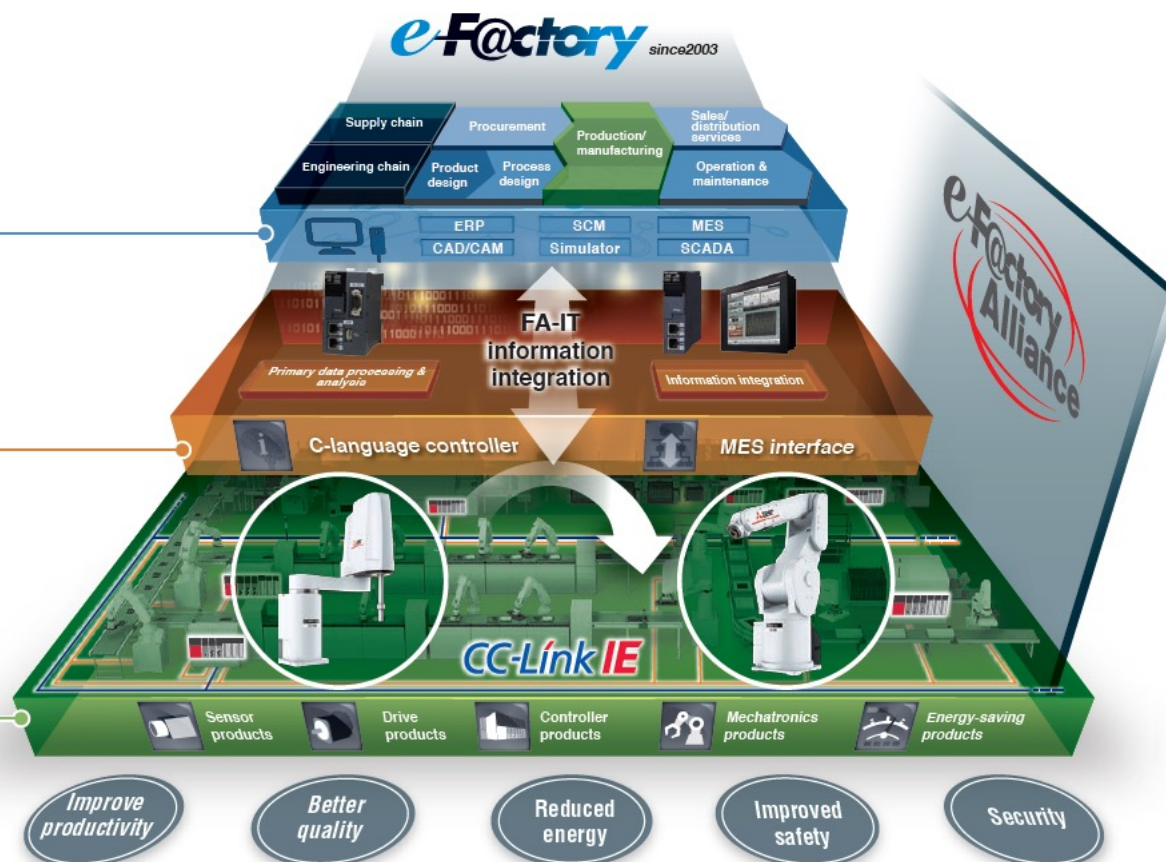Seamless integration with IT systems

Edge computing

Watching: Visibility
Collecting production site data in real time

Production site

Helping to increase corporate value through "Visibility^3 (cubed) — seeing, observing, watching" and "Usability"

Future of Work – Industry 4.0

- Factory- & Process Automation (Internet of Things)
  – Arduino/ Rasperry Pi / PIC
  – Programmable Logic Controller or PLC
- Coding(Programming) – Linked to Arduino, Rasperry Pi
- Design for Additive Manufacturing(DfAM) – Digital Twin
  – CAD/CAE/CAM/CNC Programming/3DP/Tool & Die Making
- Robotics (future link to Artificial Intelligence or AI)
  – Festo Didactic (linked to factory automation)
  – Industrial Robots (from one of the Top 10 Manufacturers)

The end