Healthy individuals in healthy companies through Life Long Learning

Employability and Productivity for Industrialisation

Teaching tomorrow's technology, today.

Bridging Industry and Education

Healthy individuals in healthy companies through Life Long Learning

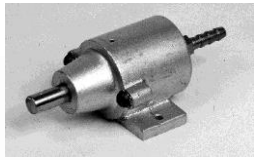
- Festo, Industry and Education
- Festo long experience of further education/informal learning
- Change in working life
- COVID 19 impact
- Q & A

The History of Festo

1925

Foundation of Festo, a woodworking machine building company, by Gottlieb Stoll in Esslingen

1955



A new technology came up: pneumatics. FESTO quickly became a leading provider

1965

Festo Didactic, the education company, was founded to qualify people in new technologies

2014

Festo Didactic merged with US-Canadian LabVolt Inc.

2020

Festo Didactic is leading provider of technical training and education in automation technology and Industry 4.0

Festo Group

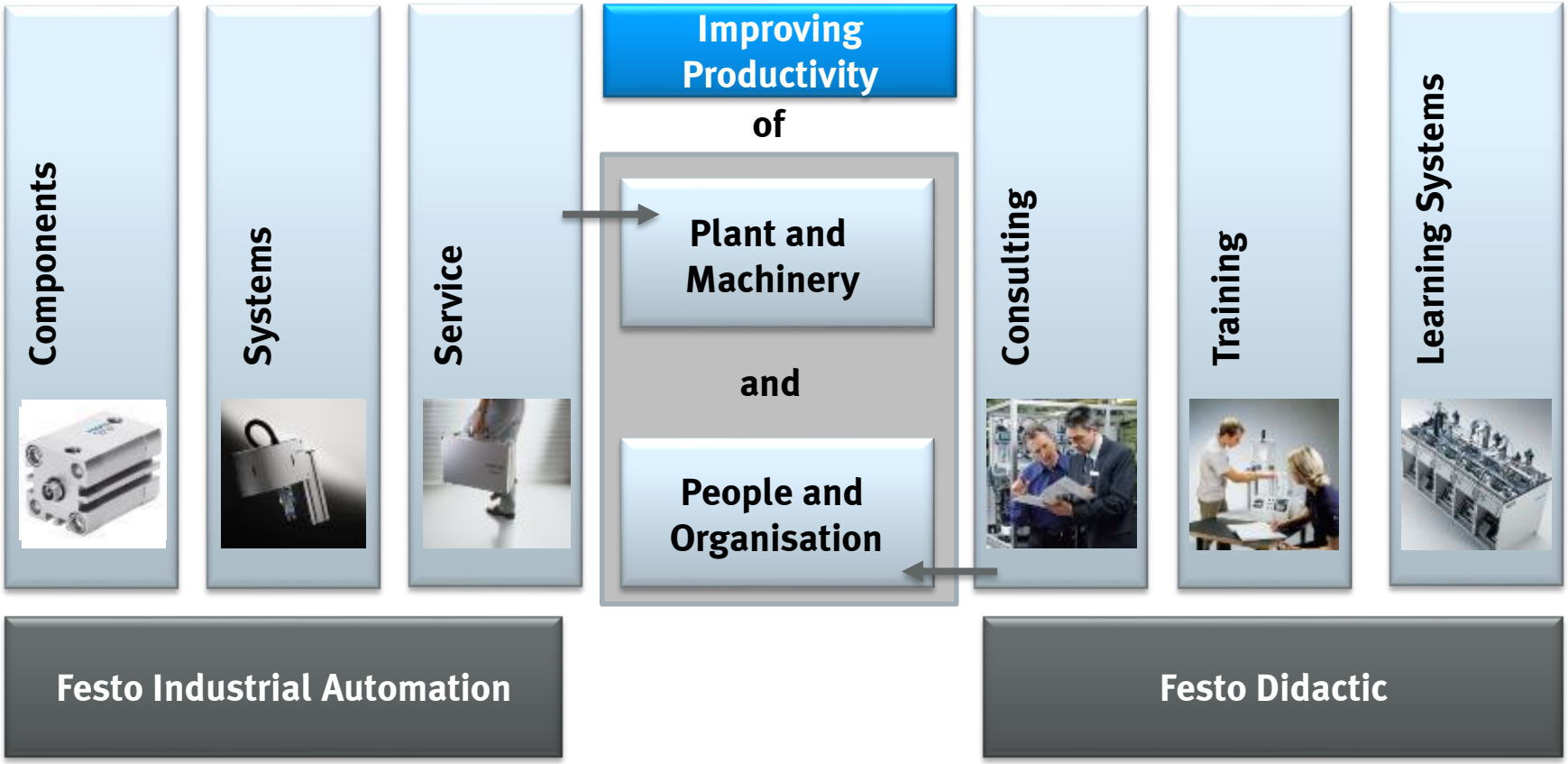
Turnover 2018: 3,2 billion Euro / 20.000 employees worldwide

61 subsidiaries / active in 176 countries for 300.000 clients

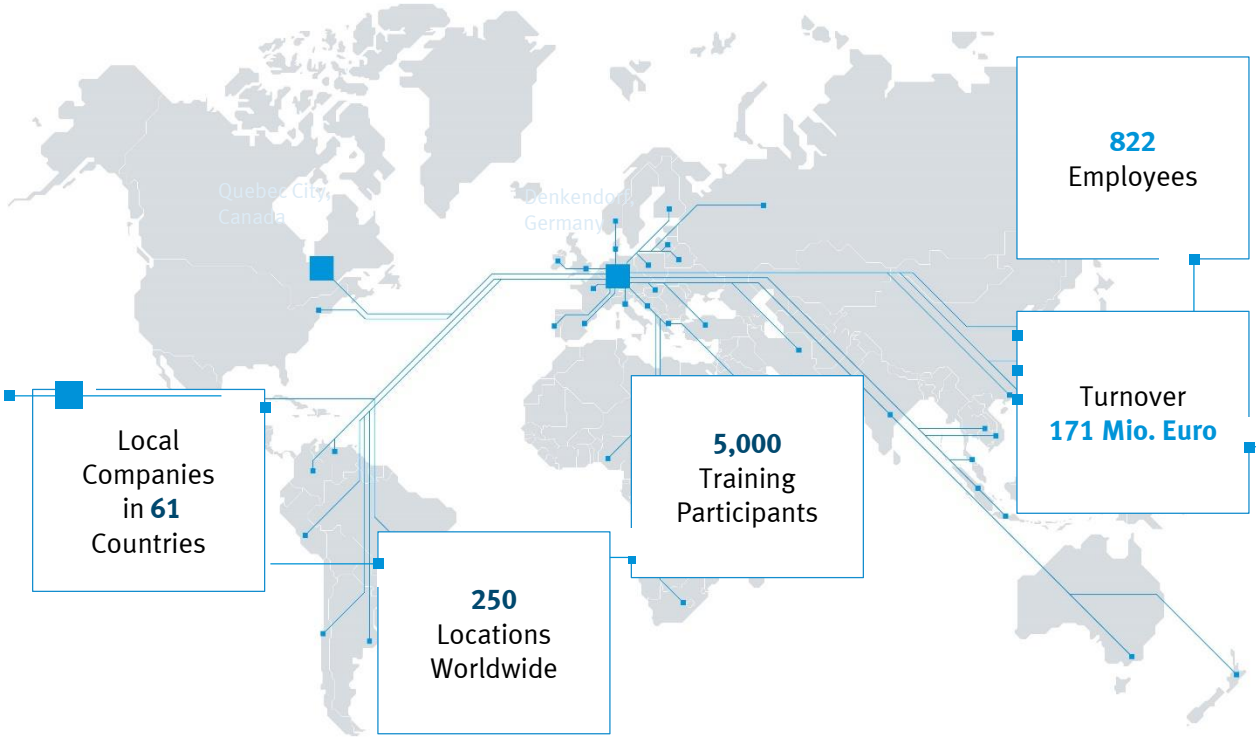
Innovative and self-learning: 3,000 patents, more the 100 innovations/year

Education investments: 1,5% of sales

Festo is Industry and Education



Festo Didactic Facts & Figures



822
Employees

Customer s
› 56.000

- Vocational schools
- Colleges
- Universities
- Research Institutions
- Vocational schools
- Private education institutions
- Governmental Organizations
- Non-Governmental Organizations
- National Ministries
- Industrial companies

Turnover
171 Mio. Euro

Local Companies in **61** Countries

5,000
Training Participants

250
Locations Worldwide

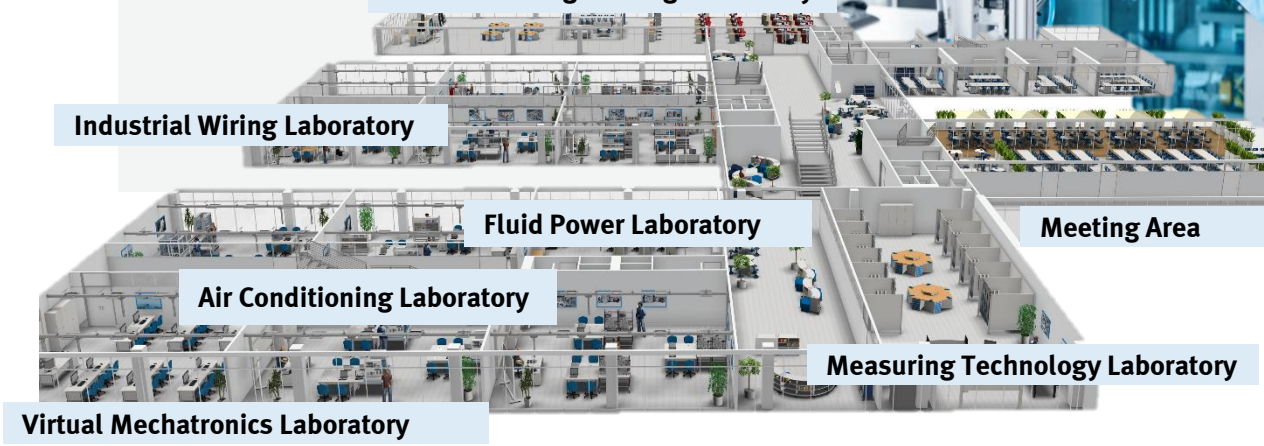
Family-owned company

Implementation of Dual Education System at F-CN, F-US, F-IN, F-HU

Festo Didactic. The Education Solution Provider

Inspiring technical education and training

- Leading solution provider of technical education and training with strong industrial DNA
- State-of-the-art didactic approach for employability and productivity



Festo Didactic Concept – Enabling the Best Environment for Efficient Learning Experiences

Didactics is the DNA of every Festo Learning Solution

Didactic Needs
Customer & Market Analysis

Didactic Development
Festo Didactic Methods Toolbox

Learning Solution
Hardware and Software for Hands-on Learning

Learning Success
Targetted Competence Development

Learning environments developed by industry and education experts for education and industry

For education institutions
Most efficient learning for on-the-job success

For the industry
Solve workforce competency requirements to realize strategy goals

For learners
Motivating learning experience tailored to individual needs

We Empower People from Vocational Education up to Lifelong Learning

Machine Design Engineer
Automation Engineer
Mechanical Engineer (Machine) Operator
Controls Technician **Maintenance Technician**

Sys./App. Programming Specialist
Electrician **Production Planner**
Programming Specialist **Electrical Engineer**
Data Scientist/ Analyst IT Professional

Mechanical Engineering studies
Mechatronics Engineering studies

Electrical Engineering studies
IT Engineering studies

Mechatronic
Industrial Mechanic

IT Specialist
Industrial Electrician

Festo Didactic cooperating with educational athorities

- Curricula development, job profiles
- Teachers training
- Lab design
- National and international skills competitions
- International donor projects

A Global Partner of worldskills international

FESTO

Festo and WorldSkills

worldskills Africa

National/Regional skills competitions across Africa for:

- **Mechatronics** **Industry 4.0**
- **Water Technology** **Mechanics**

worldskills 2005 HELSINKI

worldskills Shizuoka2007

worldskills Calgary2009

worldskills London 2011

worldskills Leipzig2013

worldskills SãoPaulo2015

worldskills AbuDhabi2017

worldskills Kazan 2019

worldskills Shanghai2021

4 QUALITY EDUCATION

Festo and WorldSkills

Global Partner

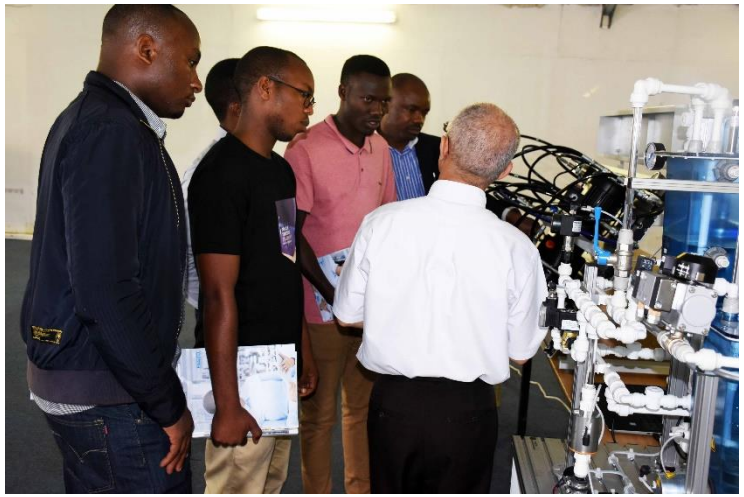
- Festo is a **founding global industry partner** of WorldSkills, collaborating since 1991
- Festo **supports skills** in: Mechatronics, Water Technology, Industrial Control, Polymechanics-Automation

Why are we involved?

- Closing the widening gaps between **industry and education**, since we are both.
- **Industrialisation** is driven by highly skilled technical people.
- The better the skills, the larger the **manufacturing economy**, the bigger the market.
- WorldSkills is a **powerful and unique platform** to bring together Education, Government and Industry, in a very productive way.
- Showcase the worldwide **importance of skilled artisans** for economic growth.
- The WorldSkills networking allows us to get and give feedback and benchmarking on what technology is needed in curricula, **create standards**, and assist in building a skilled workforce.

Festo, long experience of further education/informal learning

- Technical short courses since 1965 – Today 40000 participants/ year
- Courses cover technical and organisational (industrial production) topics
- Computer Based Training courses since the 90-ties
- Distant learning piloting in 1994
- Simulation software actively used since the end of the 90-ties



Healthy individuals in healthy companies through Life Long Learning

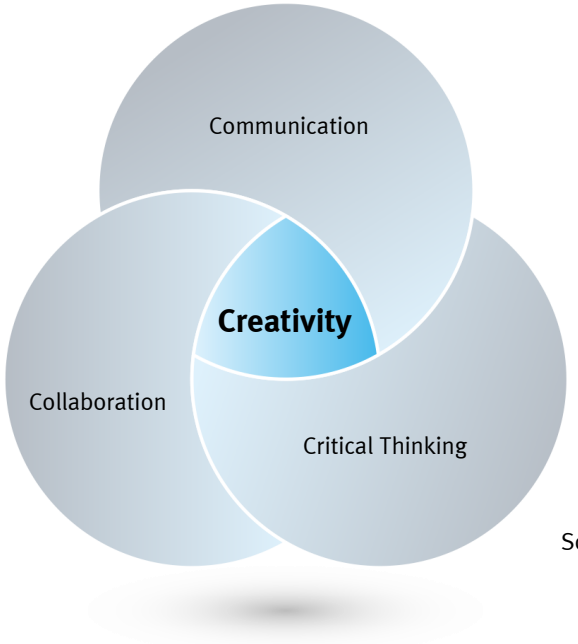
Employability and Productivity for Industrialisation

Teaching tomorrow's technology, today.

Bridging Industry and Education

Development of New Competencies Starts at School

4C-Competencies



Personal Development

- Curiosity
- Initiative
- Resilience
- Ability to adapt
- Management skills
- Social and cultural awareness

Source: World Economic Forum https://www.weforum.org/agenda/2016/03/21st-century-skills-future-jobs-tudents/; March 10, 2016

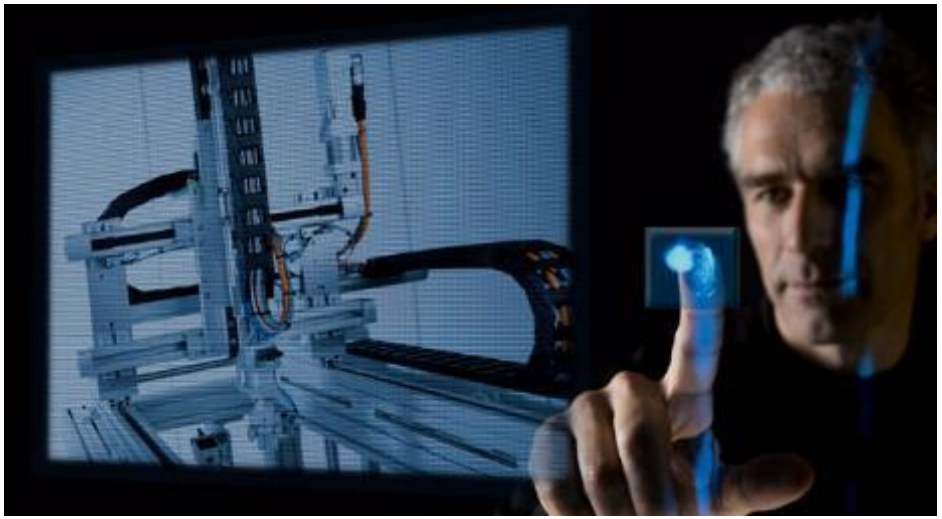
Employability – what does industry want, certificates or competences?

Industry Needs…

- **Practical Qualifications**
- **Relevant Technology**
- **Multi-Disciplinary**
- **High Productivity**
- **Global Competitiveness**

…are you competent to

- **run this factory?**
- **trouble-shoot this machine?**
- **design any improvements?**
- **bring costs down?**
- **beat the cheap imports?**

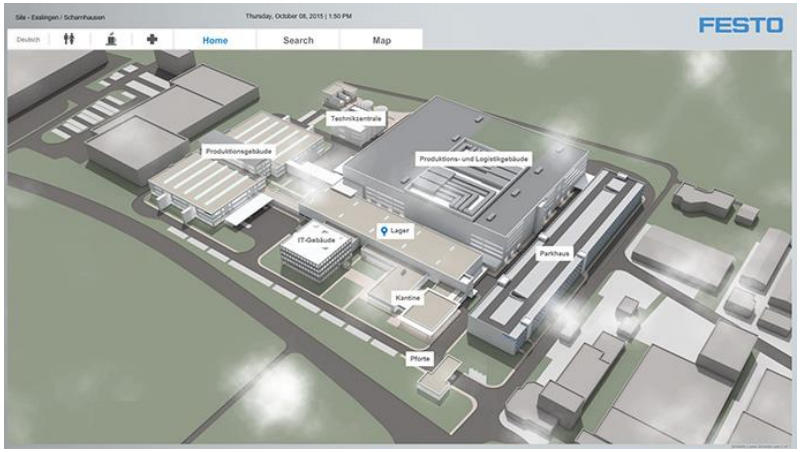


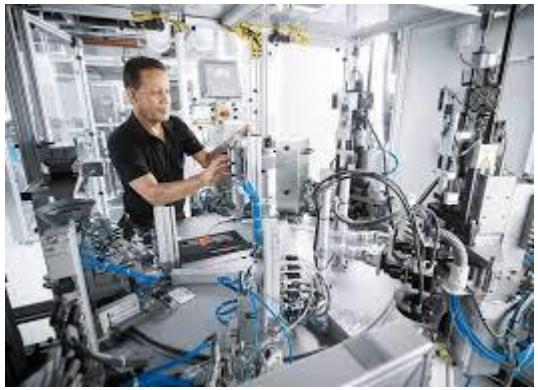
Change in working life

Change in working life

A fully digitalized production plant in Scharnhausen, Germany

Demand for new skill sets.
Mapping existing skills vs needed in the New production environment





Change in working life

Trainings for the Digital Transformation and Lifelong Learning
Where should we focus

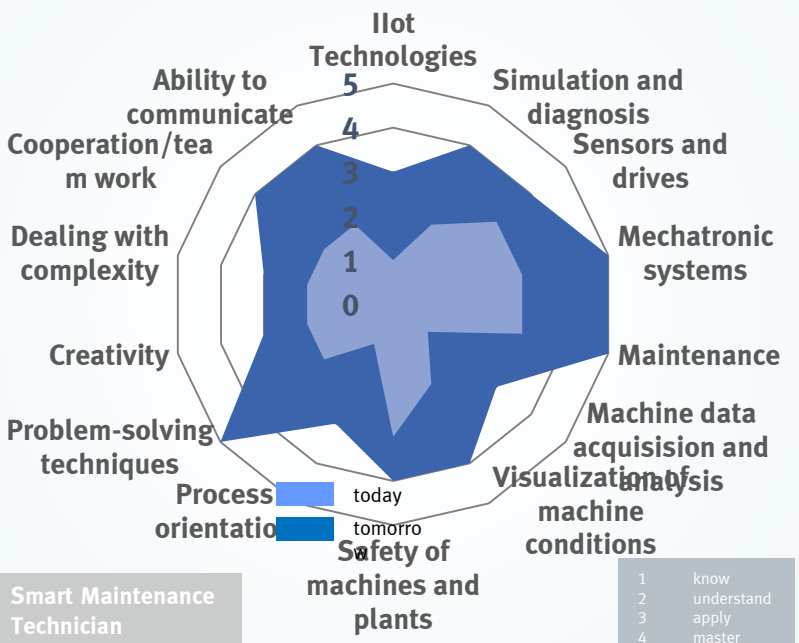
Digitalization and new technologies change the work environment as well as the tasks of different roles.

The consequences are the further development of existing competence profiles and the establishment of new work roles like Smart Maintenance Technician.

Qualification processes have to follow a holistic approach. That means promoting professional as well as interdisciplinary skills.

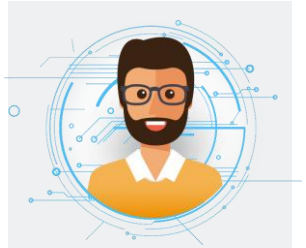
Learning on the job and near the job is gaining importance.

The learner takes responsibility for his or her personal development.
He becomes the designer of his individual learning path.



Change in working life

New Professions and Occupational Profiles

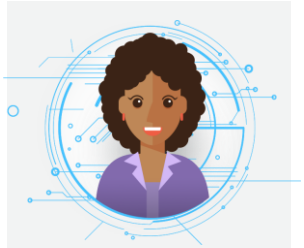


Industrial Big Data Scientist

- Responsible data handling
- AI statistics
- Data management
- Cloud computing
- Edge computing

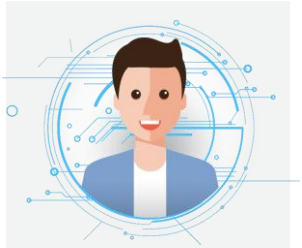
Collaborative Robots Expert

- Robotics / autonomous systems
- Software development
- Insight in HMI (human-machine interface)
- User psychology



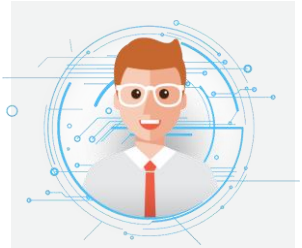
IT/OT Integration Manager

- Knowledge of ERP/MES and production systems
- Cyber security
- Networks, 5G
- Safety technologies



Digital Mentor

- Digital architectures
- Digital business models
- Change management
- Design Thinking & Agile



Digital Ethics Officer

- Data protection regulation
- Data processing
- Communication with customers and stakeholders
- Ethic norms

Lean 4.0 Engineer

- Technology and processes
- Process analysis
- Project management
- Business management and economic processes

Source: World Economic Forum

Change in working life

There are numerous studies that prooves that Life Long Learning is good for your health.
It is also good for the productivity in any company

Impacts of lifelong learning upon emotional resilience, psychological and mental health: fieldwork evidence, Cathie Hammond

Lifelong learners are motivated to learn and develop because they want to: it **is a** deliberate and voluntary act. **Lifelong learning can** enhance **our** understanding of **the** world around us, provide us with more and better opportunities and improve **our** quality of **life**. ... **Learning** for its own sake brings its own advantages.

”Once you stop learning, you start dying” Albert Einstein

COVID 19 impact & Challenges

Class room teaching, Hands-On training had to be rearranged
Festo arranges 3000 short courses per annum worldwide
Eaxmples of the new normal

- In Germany 328 participants on different events. 3-4 hours events preferred
  2 - 3 day events not popular.

- Festo South Africa started in April to offer virtual courses. There have been participants
  from all over the world.

- Festo offered Schools Worldwide E-learning courses and Simulation Software free of charge
- Challenges:
  =› Students could not afford to take advantage beacuse of high price on Airtime ☹
  =› Negotiations with providers lead to limited free Airtime for students ☺
  =› The awareness on how to benefit from digital learning
  and when to use it not always in place.

Festo is Industry and Education

You want to support a world-class economy

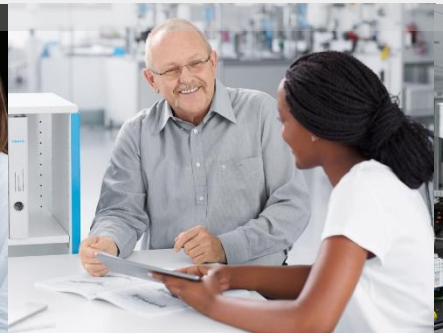
You drive industrial employability

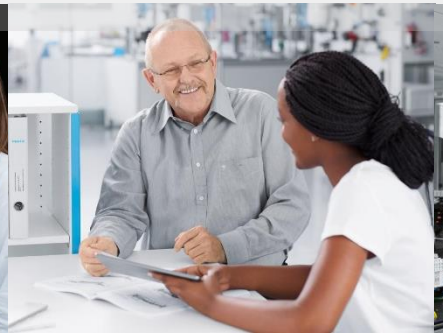
We bring real skills into your classroom

→ WE ARE THE ENGINEERS
OF PRODUCTIVITY.

Together with you on the Path to Success

Q & A



Together with you on the Path to Success

Thank You