

# ENERGY OF THE FUTURE | ENERGY 4.0

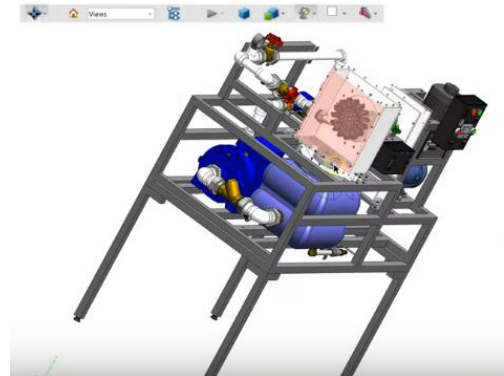
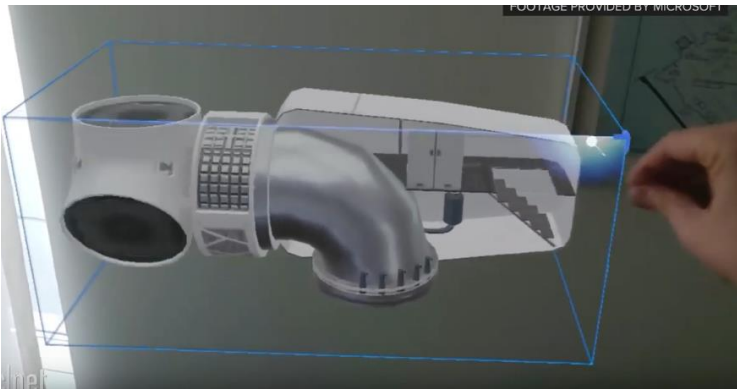
## Optional Features

Our solutions integrate the 4 leading industrial technologies:

### Augmented Reality

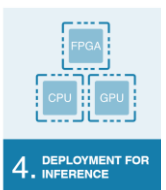
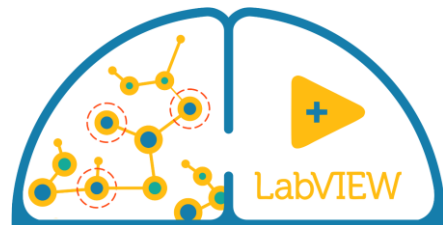
- 3D Models of the trainer's modules
- Digital Twin of the trainers
- AR for IIoT features
- AR User Manual
- Monitoring and Control from AR models

YouTube Playlist Link: <https://youtu.be/Ktgr5Load4>



### Artificial Intelligence (Machine Learning, Deep Learning, Neural Networks)

- Simple Regression
- Simple Classification
- 1D signal classification
- 1D Signal Regression
- Image Recognition
- AI based power quality analyses
  - Voltage, current – RMS, Frequency
  - Harmonics (up to 64th order)
  - Active, reactive and apparent power
  - Power factor
  - Vector diagram



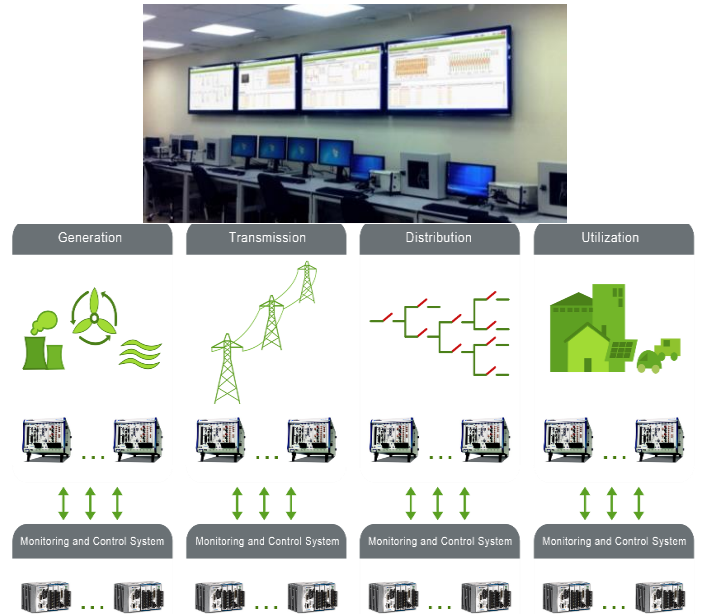
## Industrial IoT

- Introduction to Sensors and Actuators
- Introduction to Data Acquisition and Control
- Conversion of Sensor's Data to Physical Quantities
- Statistical Analysis
- Transmission and Reception of Data
- PLE Trainers bidirectional data communications with IIoT gateways



## Mixed Power Microgrids

- FPGA based Real Time HIL
- Simulation of various generation plants
- Simulation of power transmission and distribution
- Simulation of complex loads
- Simulation of a network grid
- Real Power In the Loop
- Mixed-grid trainer by mixed combination of PLE hardware trainers with HIL systems



## Mixed Microgrids

