

## Press release

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### **McKinsey and the Technical University of Munich open Model Factory for Energy Productivity**

**German companies can reduce energy costs by 30 percent – Savings in the billions – First training and continuing education facility worldwide**

Garching/Munich. Starting now, at Germany's first Model Factory for Energy Productivity (*Lernfabrik für Energieproduktivität* or LEP), industrial companies can learn how to reduce their energy costs by up to 30 percent and thus significantly lower their CO<sub>2</sub> emissions.

"Added together up to 2020 and thereafter, German companies can save ten billion euros annually – and without reducing jobs or having to make major investments," McKinsey partner Detlef Kayser said on Tuesday at the official opening of the Model Factory in Garching near Munich. Many companies are aware that they still have considerable room for improving their energy costs. However, they often lack concrete knowledge of the methods to substantially decrease their energy consumption. This is the gap that the Model Factory is designed to close. The factory was set up in a cooperative effort by the management consulting firm McKinsey and the Institute for Machine Tools and Industrial Management (*Institut für Werkzeugmaschinen und Betriebswissenschaften* or iwb) of the Technical University of Munich.

With a complete, full-scale production process covering an area of 200 square meters, the Model Factory demonstrates not only how to recognize energy waste but also how it can be avoided and overcome. With training and continuing education modules that can be individual tailored to learners' needs, the Model Factory targets engineers and managers as well as university students. "Our future engineers should learn how to think about the aspect of energy productivity from the start and receive practical training in doing so," said Prof. Gunther Reinhart, head of the Institute. With its holistic approach, the Model Factory offers excellent conditions for research and teaching.

The Model Factory currently produces various models of a gear-shaft assembly of the kind used in various transmissions. All of the typically energy-intensive elements of a production process are

included: machining, assembly, thermal treatment, and robotic handling apparatus as well as an in-house compressed air and steam network. Participants in training programs at the Model Factory analyze the individual production steps to detect possible forms of energy waste. Next they develop an optimized process requiring much less energy to make the gearwheel and implement it directly in the Model Factory.

A sophisticated system to measure energy consumption generates a dataset for each phase of the training. It can record the energy consumption of each piece of machinery and each process step individually. The savings can thus be concretely measured and analyzed for each activity. Short theoretical modules between the practical exercises round out the training program.

The Model Factory is sponsored by the following industrial companies: Bosch Rexroth, deZem, Druckluft effizient GmbH, Fluke, RiwoTech, and Zeitlauf Antriebstechnik. In explaining the company's commitment to the Model Factory, Bosch-Rexroth sales director Dr. Karl Tragl said, "The Model Factory is an excellent initiative to strengthen Germany as a global center of production through sustainable solutions for industrial automation," adding that the sponsors' common goal is to spread know-how and technology for reducing costs and hazardous materials without compromising performance and productivity.

More information.

[www.energielernfabrik.de](http://www.energielernfabrik.de)

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