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LEAN FUTURE

ACCORDING TO JAMES P. WOMACK, AUTHOR OF THE STANDARD LEAN WORK „THE MACHINE THAT CHANGED THE WORLD“, THERE IS ONLY ONE JAPANESE WORD THAT EVERYONE SHOULD KNOW. IT IS CALLED MUDA AND MEANS WASTE.

It refers to activities that consume resources but do not create value. For example, mistakes that need to be corrected. The production of things that cannot be sold. Or employees who cannot continue working because they are waiting for a certain workpiece.

The central principle that derives from this and to which all lean approaches, systematics and tools of the last 20 years can be traced is: Avoid everything that does not add value. But what if the understanding of what waste means and how added value is created has radically changed in the last twenty years?

For example, by starting to consciously waste resources instead of rationing them and thereby creating entirely new value creation opportunities: The graphical user interface, the Internet, cloud computing - all these innovations are based on the fact that scarce resources such as computing power or storage space are suddenly so cheaply

available that new business models emerge from wasting them. Will this disruptive power of Moore's law become the gravedigger of lean principles? What does it mean, for example, for the design of manufacturing systems when manpower in the form of robots is available so cheaply one day that it makes no difference whether an activity is performed by 5 or 500 machines?

The concept of industrial value creation has also undergone radical change over the past twenty years. Because in the age of digital services and changed business models, the concept of value creation is increasingly decoupled from the production of physical

goods. Value creation therefore no longer arises only in the classical manufacturing process, but lies in the networking of people, machines and objects, in the virtualisation of products and processes and in the provision of data and knowledge.

Whether and how these changes affect the principles of lean management is difficult to say from today's perspective. However, it is clear that lean must find answers to these questions of the future. At least it is doubtful whether they are in the guidebooks of twenty years ago.