ROCHOLZ
LOGISTIK-ARBEITSPLÄTZE

ComputerMyoGraphy

Understanding processes, measuring health and creating solutions

Improvement starts with understanding

Most logistics companies around the world are in the midst of a far-reaching transformation process. Buzzwords such as digitalisation and sustainability have become an integral part of day-to-day business. But what does this actually mean? Basically, it's about achieving environmental, economic and social goals through technology. But in the midst of this solution-orientated approach, people are often forgotten. How will people deal with technology in the future? How will my processes work today and in the future? What place will people have in the warehouse of the future? How will processes in logistics change and for which applications does which technology make sense? What are the biggest challenges that the warehouse of the future will have to overcome?

Many companies do not know the answers to these questions, but if you do not know your operational processes from an economic and social perspective, you cannot make any targeted optimisations. To make matters worse, a lack of transparency means that a lot of time is spent testing measures that inevitably lead to costs, inefficiencies and wasted potential. Without clearly defined, healthy and efficient processes, companies are unable to increase their capacity for day-to-day business, carry out the planned continuous improvement processes and prove themselves in the changing market.

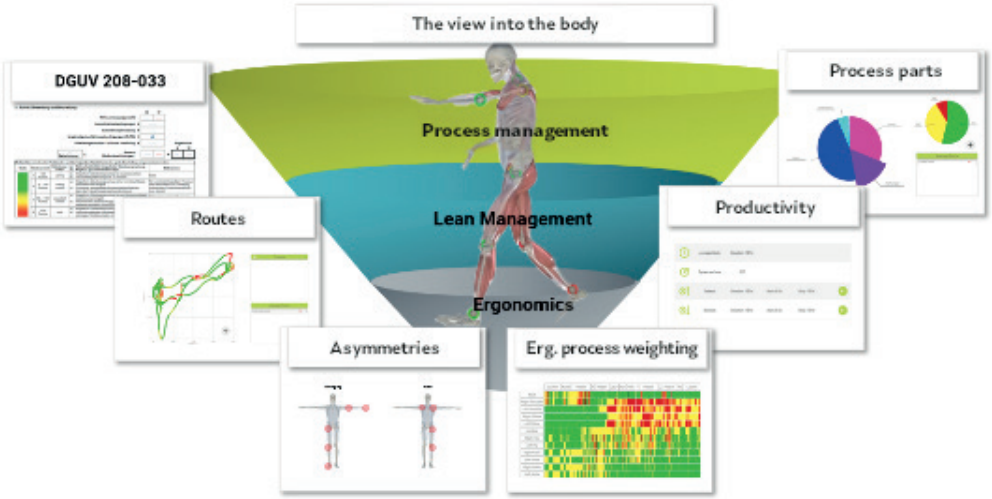
The human factor

To get to the bottom of their processes, companies could ask the respective departments how the employees there map the processes. The answers are likely to be very different and the various departments would have different perspectives on processes, as they all have their own areas and interfaces. Without a standardised analysis of the physical logistics processes, the internal research effort required to gain the necessary process knowledge is unnecessarily high and this lack of transparency causes considerable additional costs.

ComputerMyoGraphy

ComputerMyoGraphy is a way of digitally analysing workplaces and work processes. The mechanical strain on muscles and joints is calculated on the basis of the unique digital twin of the human being. The digital method can be used quickly and effortlessly for any movement and in any location (indoor & outdoor). It is scientifically based and validated - for lab quality without a lab! It combines the most important capabilities of a cross-functional analysis tool.

It combines simplicity and comprehensibility through user-friendly visualisation and enables in-depth analysis. ComputerMyoGraphy is characterised by quick overviews through colour highlighting of the individual stresses (view into the body), a complete process analysis through to a strong involvement of the people examined. Everyone from the department manager to the warehouse worker can interpret the data and derive sustainable recommendations for a healthy, efficient and effective process and adapt the workplace. The recommendations for action range from ratio adjustments and behavioural training to personal aids that make daily work easier.

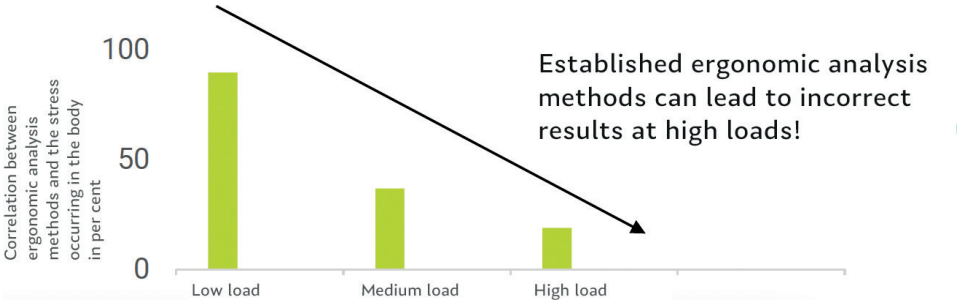


This means that the load and overload can be shown as a key figure for the first time!

What distinguishes ComputerMyoGraphy from other ergonomic analysis methods?

For the first time, ComputerMyoGraphy can visualise the strain and overload on individual joints and muscles (view **into** the body). The method thus provides a direct indicator for determining the forces responsible for muscular complaints. Previous ergonomic analysis methods (looking **at** the body) attempt to visualise these loads approximately using joint torques or joint angles. A higher joint angle is often rated as worse in relation to the human neutral position, but this is no longer correct according to current scientific knowledge.

The following diagram shows the relationship between the load on the body and the ergonomic analysis methods (EAWS, RULA, guiding feature method, RUBA, NIOSH, etc...). The result shows that at low load values, a statement about the view of the body is usually completely sufficient. The higher the loads on the body, the less accurate the individual ergonomic analysis methods become. This can lead to up to 80% of the methods analysed to date producing an incorrect result.



Your healthy process

Productivity and health are closely linked: We need **healthy**, fully **operational people** and **good working conditions** with **suitable packing workstations** so that people remain healthy and productive in order **to achieve the defined key figures in the long term**.

Our procedure

1. **Preliminary discussion & recording of work movements and processes**
using the latest IoT-based sensors

2. **Analysis of musculoskeletal stress and processes**
with a validated human digital twin

3. **Creation and evaluation**
concrete workplace and process profiles

4. **Customised recommendations for action**
for ergonomically optimised and efficient work processes and suitable workstations

- ✔ Improving health, reducing absenteeism and counteracting the effects of demographic change
- ✔ Increase employee satisfaction, motivation and loyalty
- ✔ Increasing employer attractiveness and the company image
- ✔ Increasing productivity and the long-term success of the company
- ✔ Complete transparency of the human-centred supply chain
- ✔ Fully automatic DGUV 208-033 for the regulatory requirements of statutory occupational health and safety

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