

# Business Process Oriented Safety and Health at Mobile IT-supported Work

## Introduction

Occupational Safety and Health provides for safe and healthy conditions within the work process. According to WHO the term 'health' refers to the overall physical, mental and social well-being of the working individual.

Practical experience shows that healthy working conditions within mobile IT-supported work merely depend on traditional OSH-factors like e.g. ergonomics of hardware and office equipment. Instead, appropriate business process designs seems to play a major role, especially for mental aspects of health (Table 1).

## Mobile IT-supported Work

Mobile IT-supported work refers to any kind of mobile work supported by mobile IT-equipment. In practice, mobile IT-supported work is a multi-dimensional complex space (Figure 1). This holistic view corresponds to the also holistic understanding of safety and health at work.

Appropriate refinement of the dimensions of this space reveals many business process aspects which are crucial to mentally healthy work (Figure 2 and Figure 3).

Scenario 1: **Mobile Insurance Agent**

Situation	Agent visits customer; agent uses laptop for making offers and creating a contract
Incident	Laptop "crashes" unrecoverably due to system failure
Effect	Meeting with customer aborts; agent is exposed to strong mental stress

Scenario 2: **Mobile Service Technician**

Situation	Technician visits customers product installation; uses laptop for accessing engineering data, service documentation, and configuration items
Incident	Laptops contains expired configuration items; thus agents installs wrong components
Effect	Customers product installation fails; technician faces unexpected additional work for repair

Table 1: Scenarios for Mobile IT-supported Work

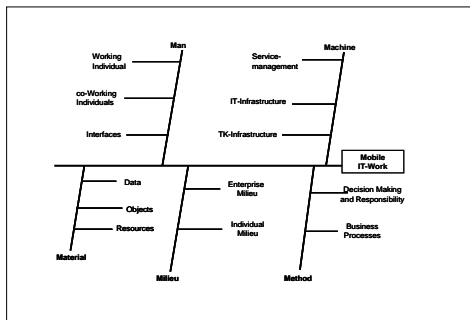


Figure 1: "Fishbone"-Diagram for Mobile IT-supported Work

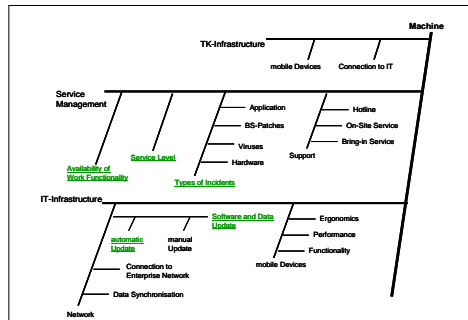


Figure 2: Refinement of the Dimension "Machine" (green items correspond to scenario 1)

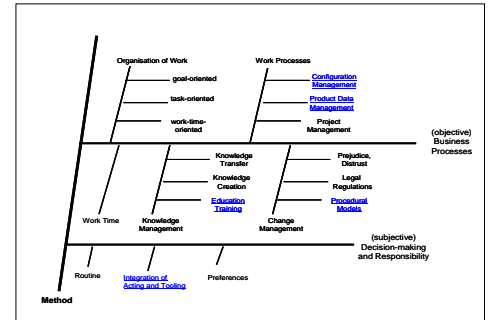


Figure 3: Refinement of the Dimension "Method" (blue items correspond to scenario 2)

## Invariants for OSH in Mobile IT-supported Work

Occupational safety and health in order to establish general principles needs a set of invariants which remain constant under different viewpoints to work. In mobile IT-supported work many traditional invariants become variable (Table 2, red items).

Nevertheless, new invariants arise in each dimension, many of them in the field of business processes (Table 2, bold items).

## Towards a new Understanding of OSH for Mobile IT-supported Work

Mobile IT-supported Work is a complex multidimensional workspace. It cannot be dealt with by simply applying traditional methods and notions of occupational safety and health. Instead, in addition methods of other disciplines like, e.g. systems analysis, quality management, process management and computer sciences have to be used.

In designing this workspace in the sense of a holistic notion of healthy work appropriate business processes design is a major part. Thus, the understanding of occupational safety and health must be extended by these new concepts and by adequate methodologies from other disciplines.

## Conclusion

Occupational safety and health plays a key role in enabling compound healthy work in the increasing area of mobile IT-supported work. Business process orientation and a holistic view to this kind of work as a multidimensional complex work space are the crucial factors for successfully fulfilling this important role.

Dimension	Invariants	Variables
Man	Working Individual	Co-Workers, Interfaces
Machine	Hardware and Software <b>Service Level Agreements, IT-Service Management</b>	Infrastructure
Material	Tools	Data, Objects, Resources
Method	<b>Knowledge Management, Change Management, Configuration Management, Product Engineering Management</b>	Personal Preferences, Routine
Milieu	<b>Corporate Governance, Corporate Code of Ethics, Organisation and Culture</b>	Spare Time and Family, Personal Perspective of Life, Further Education Place and Time of Work

Table 2: Invariants and Variables of Mobile IT-supported Work

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