

Knowledge Work in ICT-Services – Adverse Health Effects as Threat to Innovation Capacities

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Overview

- 1. ICT-Services in Germany – Frontrunner of the ‚Knowledge Economy‘**
- 2. Core Features of Organised Knowledge Work in German ICT-Services**
- 3. The Downside of Innovation in ICT-Services: Depletion of Health Resources**
- 4. Workplace Health Promotion in SMEs of ICT-Services**
- 5. Conclusion**

1. ICT-Services in Germany – Frontrunner of the ‚Knowledge Economy‘

➤ ‚Knowledge Economy‘

- Application of Economic Principles to the Generation and Exchange of Knowledge
- Knowledge as a specific Form of Economic Capital: Not to be fully appropriated
- Knowledge as core Factor of Firms‘ Innovativeness

➤ German ICT-Services

- Economic Importance: 46 billion € as annual turnover in 2006, i.e. 30 % of the entire IT-Industry
- Variety of Organisational Forms and Economic Activity
- Knowledge-intensive Firms as Hybrids

1. ICT-Services in Germany – Frontrunner of the ‚Knowledge Economy‘

➤ Composition of Workforce in ICT-Services

- 372.000 Employees and Self-Employed (Freelancers)
- Highly qualified Experts
- Gender Gap
- Juvenile Image, but ‚Aging Workforce‘
- Self-Representation of Interests → Collective Forms only as Complementary Mechanisms
- Standard Employment Relationship, but enhanced Job Instability
- ICT-Services: No more ‚Co-Determination-Free Zone‘
- ICT-Services as Frontrunner in Self-Employment: 20 % of the entire Workforce

2. Core Features of Organised Knowledge Work in German ICT-Services

➤ Knowledge Work in ICT-Services

- **Definition:** Generation, application and recombination of explicit and tacit knowledge to creative and innovative technological solutions to complex and novel problems, tailored to clients' demands
- Transforming unspecific problems into job tasks
- **Fluidity**, i.e. instable job demands, shortened innovation cycles, continual revision of knowledge base → ‚Knowing‘ or ‚doing knowledge‘
- **Core organizational form:** Cross-functional and inter-professional project-teams with limited duration
- Knowledge Work as intense process of communication and **social interaction** → external and internal collaboration

2. Core Features of Organised Knowledge Work in German ICT-Services

➤ Knowledge Work in ICT-Services

- **HRM-Strategies:** Entirely mobilising human subjectivity to attain economic goals by self-regulation of work and indirect control
- **Employees‘ self-images and work-orientation** → innovative and stress-proof technological problem solvers, high professional quality standards, willingness to high performance and to experiment at work
- **High Performance Cultures**
 - High level of performance as unquestionable normality
 - Permanent Demand of Innovativeness
 - Firms‘ Expectations: High Commitment to goals, company culture, positive attitude towards change, ‚entrepreneurial spirit‘
 - ‚Pragmatic production community‘ based on participation, trust, interdependence and informality
 - Normative forms of control: Strengthening cohesion and loyalty

3. The Downside of Innovation: The Depletion of Health Resources

- **Work-related stress and burnout as risks to knowledge workers‘ health and innovativeness in ICT-Services**
- **Chronic Work-related stress:**
 - Transaction process between individuals and their work environments
 - Stress arises from environmental demands that exceed individual’s resources
 - Intermediate Factor: Individual Appraisals of demands and resources
- **Burnout:** ‚crisis in one’s relationship with work‘ (Schaufeli/Greenglas 2001: 501)
 - *Emotional Exhaustion*: Depletion of emotional energy, fatigue
 - *Cynicism*: Indifference or distant attitude towards work
 - *Professional Inefficacy*: Feelings of reduced personal accomplishment at work

3. The Downside of Innovation: The Depletion of Health Resources

➤ Indicators and Research Results

■ IAQ-Study, University Duisburg-Essen

(n = 331 Knowledge workers in ICT-services)

→ Ability to relax after work: 29 % (indicator of exhaustion)

→ Personal prospects ‚work continuation until retirement age‘: 37 %

→ Evidence of psycho-somatic disorders: 72 % chronic fatigue, 58 % nervousness, 41 % indicators of chronic exhaustion

■ Risk Groups:

→ ‚Project-Rookies‘

→ Employees with career advancement

→ Mobile Knowledge Workers

→ Knowledge workers with multiple projects

→ Project managers with multiple-project responsibility

3. The Downside of Innovation: The Depletion of Health Resources

➤ Explanations for the emergence of psychic disorders

■ Tighter economic demands on project work

→ Enhanced economic pressure on project work: tight budgetary limits, and deadlines, strictly limited personnel capacities, permanent pressure to innovate

→ Coping with unanticipated events and imponderables at work

▶ Work intensification, avoidance of breaks, informally extended working hours, sickness presence at work

■ Conflicting job demands and ambiguous resources

→ For example: Innovativeness and / or Quality vs. Velocity

→ Health-related resources are no universal resources, e.g. job control

The Example of Project Work

Job Characteristics

Completeness



Task Variety



Social Interaction



Job Control / Autonomy



Opportunities to learn



Working-Time Flexibility



Risk Potentials

Psychic Overcharge

Psychic Overcharge

Enhanced Conflicts at Work

Boundlessness

Permanent Pressure to Acquire new Knowledge

Extended working hours, ‚work-life‘-imbalance

3. The Downside of Innovation: The Depletion of Health Resources

➤ Explanations for the emergence of psychic disorders

■ Multiple Project Work

- Enhanced pressure to self-coordination
- Balancing conflicting demands
- High demands of mental concentration and social interaction
- Knowledge acquisition in free-time, i.e. restriction to recreational ability

■ Intense Social Interaction at Work

- ‚Meeting Culture‘: Experienced as time consuming → extension of working hours
- ‚Egalitarian spirit‘: Extension of meeting times
- ‚Interaction stress‘ by conflictual co-operation between different professional cultures
- Demands of recurrent adaptation of work organisation
- Gaps in the distribution of responsibilities, related to organisational change

3. The Downside of Innovation: The Depletion of Health Resources

➤ Explanations for the emergence of psychic disorders

■ High Performance Cultures

- Normalising work-related stress: Exceeding personal limits of endurance
- Tabooing psychic disorders by work-related stress
- Anxiety to be socially excluded or stigmatized as ‚low performer‘
- Problematic coping patterns: Sickness presence at work, taking psycho-active drugs

■ Decrease of Employment Stability

- Experienced as disturbance or violation of the ‚psychological contract‘
- Decline in occupational status control: Lack of well-being, enhanced emotional stress, psychic disorders or mental diseases
- Adverse health effects due to an effort-reward-imbalance

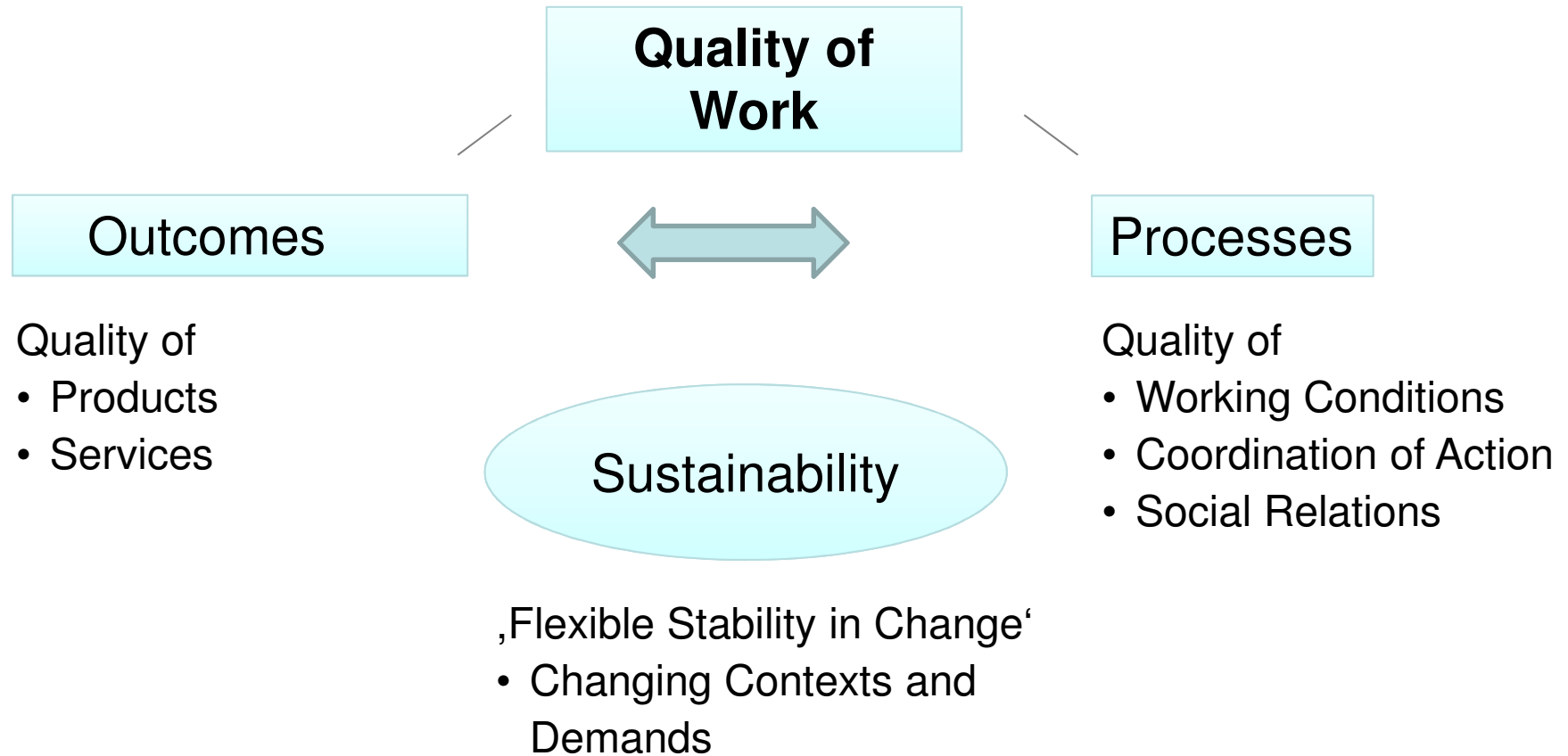
4. Workplace Health Promotion in SMEs of ICT-Services

➤ Workplace Health Promotion (WHP)

- Integration of promoting positive health and preventing ill health
- Bio-psycho-social concept of health
- Continuum between health and disease
- Double Focus: Stressors and Risk Potentials as well as health resources at work

➤ Obstacles to WHP in SMEs

- WHP-focus on larger production firms
- Suitable for flexible and dynamic work structures and processes?
- ‚Disentanglement‘ of stressors and resources at work
- Normalising and tabooing work-related stress and psychic disorders as blindspots



4. Workplace Health Promotion in SMEs of ICT-Services

- **Alternative Approach of Workplace Health Promotion**
 - a) Creation of ‚Spaces of Dialogue‘
 - b) Integrative Strategy of WHP
 - c) Application of Salutogenesis-Framework

4. Workplace Health Promotion in SMEs of ICT-Services

➤ ‚Spaces of Dialogue‘: Objectives

- Reflection of problematic coping-patterns of work-related stress and of available health resources
- Development of negotiated initiatives to WHP
- ‚Spaces of Dialogue‘ as a meta-dialogue to promote sustainable quality of work

➤ ‚Spaces of Dialogue‘: Two Stages

- Dialogue as ‚protected space‘ → focus on voluntary employee participation
- Dialogue-conference: Consent-based Agenda of WHP → Variety of perspectives and interests

4. Workplace Health Promotion in SMEs of ICT-Services

➤ Integrative WHP-Strategy

- Continual self-reflection of SMEs in respect to WHP
- Utilizing existing structures, procedures, routines and instruments for WHP-purposes → Integration of WHP-perspective
- Establishing a locus of WHP-co-ordination as ‚steering committee‘
- Sensitizing of managers → Role models

4. Workplace Health Promotion in SMEs of ICT-Services

➤ Application of Salutogenesis-Framework

- Interdependence of behaviour- and structure-oriented measures, but focus on work design
- Organisational Mindfulness to the reproduction of health-related resources
- Model of Salutogenesis as complementary approach to Pathogenesis-Model
- Comprehensibility, Manageability and Meaningfulness as organisational resources

4. Workplace Health Promotion in SMEs of ICT-Services

Examples of Salutogenesis at Establishment Level

Salutogenesis Quality of Work	<i>Comprehensibility</i>	<i>Manageability</i>	<i>Meaningfulness</i>
<i>Process-Quality</i>	Transparent Responsibilities	Avoidance of unanticipated Interruptions of Work by Clients	Recognition by Feedback
<i>Quality of Outcomes</i>	Reliable Agreements with Clients	Modern Technical Equipment	Identification with Products