

## **SOWING EXECUTIVE SUMMARY**

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### **Preliminary results from the research project: "Information Society, Work and the Generation of New Forms of Social Exclusion" (SOWING)**

1.) The appropriate distinction is not between industrial society and information society but between two forms of information and knowledge-based production. It is not the use of modern ICTs that characterises the modern information and knowledge-based production in the first place, but the increasing interpenetration of all social and economic processes with information work: collecting, processing, interpreting, and disseminating information. Informatisation of work, in this sense, results from a general trend towards increased specialisation. ICTs are more and more used to rationalise, accelerate, and support information and communication activities.

2.) Modern ICTs can play a key role in restructuring social relationships – interpersonal, intergroup and institutional, they have a transformative potential. But the simple fact that they diffuse throughout the economy does not necessarily lead to economic transformation; decisive is how modern ICTs are applied and developed. We can no longer analyse technology; instead, we have to start analysing forms of their application.

3.) Typical of modern ICTs is that they are multi-functional; they can be applied to serve different functions. They can be used as tools to support work processes, as automation technology, as a device for surveillance of individual work behaviour, and to control and monitor production processes, as an organisation technology, as an information producing and as communication technology. The use of modern ICTs is not determined by an internal technological logic; instead, it is influenced by socio-economic factors.

4.) While modern ICTs increasingly interpenetrate work processes and become an important shaping factor of organisational renewal processes, the toolbox of organisation devices has also broadened at the same time. New organisation forms and strategies such as group work, cross-functional design teams, flat hierarchies, profit centres, virtual organisations, or strategic alliances are nowadays applied in companies, which also leads to the embeddedness of modern ICTs in a new way.

5.) There is no deterministic relationship between modern ICTs and organisation forms; instead, they mutually influence each other. ICTs create new organisation forms, and new organisation forms in turn provide new opportunities for technology design. Neither technology nor organisation forms are fixed, but both are changing in relation to each other. Modern ICTs offer 'occasions' for manipulating the technology and the organisation structure according to other drivers of change. As ICT applications and

organisation forms always express a specific organisational culture, we can also assume cultural changes to take place in the emerging information economy.

6.) Companies, however, do not apply a coherent restructuring strategy. The application and use of modern ICT and the introduction of new organisaiton forms do not always follow the same restructuring logic. This is due to the fact that techno-organisational restructuring cannot be perveived of as a one-shot undertaking but needs to be understood as a continuous learning process with often incremental changes and adjustment processes.

7.) Due to the globalisation of markets, the key driver of change, companies must be capable of producing high-quality products on a low cost base, selling them for a reasonable price and delivering them in time. But, at the same time, companies have to embody a philosophy of continuous improvement and innovation. Organisational restructuring, however, does not take place due to objective economic pressures. It is always based upon organisation members' interpretation of these pressures, which draws on a specific techno-organisational 'Leitbild'. The 'network economy' or 'network firm' can be seen as the new 'Leitbild' in the emerging information economy.

8.) Cultural changes related to techno-organisational restructuring cannot be understood as a linear transformation from distrust into trust relationships in the network type organisation; instead, we can identify the emergence of a kind of 'virtual' business culture, which is less stable.

9.) Organisational restructuring also includes new forms of co-ordination. In a more network-like organisation, discursive co-ordination becomes the new form of co-ordinating production processes.

10.) There is, however, no linear development process from Fordism to network economy. First, not all companies are exposed to global innovation competition to the same extent. For many companies, costs are still the dominant competition criterion. Therefore, we might see an ICT-based neo-Fordism emerging, parallel to the network economy. Furthermore, as companies need to combine innovativeness with quality, time, and low costs, they will make use of the multi-functionality of modern ICTs using them as automation and control devise and as communication technology concurrently. This makes it unlikely that the restructuring of production processes will be dominated by only one (new) organisation logic.

11.) Companies still focus on internal restructuring in most countries, but a significant number of companies have given priority to the restructuring of external relationships. Actually, inward and outward orientations are not contradictory, as most of the restructuring companies apply a holistic approach conerning organisational restructuring.

12.) Under such conditions of uncertainty, we cannot interpret the selection and use of modern ICTs as a strategic decision-making process. Instead, techno-organisational restructuring becomes an open-ended process of trial and error; techno-organisational changes may be better characterised as bootstrapping reforms based on learning processes.

13.) The de-skilling thesis and the re-skilling thesis, both related to the widespread use of modern ICTs, are missing the point. It is not more or less

particular skills or competencies that count. Instead, ICT-based restructuring processes demand a number of new skills and competencies. Technical or digital skills represent only one dimension of a new profile of skills and competencies needed in the information economy. There is a great demand for social competencies, including capabilities to communicate and to manage emotions; furthermore, not only for management skills, practical knowledge, international skills but also work virtues, such as reliability and trustworthiness as well as creativity and entrepreneurship.

14.) The information economy does not abolish traditional forms of social exclusion nor dissolve traditional risk groups. Instead, it may also lead to new forms of segmentation and social exclusion. Due to decentralisation, functional integration, and direct communication, supported by the use of modern ICTs, middle management and functional specialists become new risk groups. The growth of a group of highly skilled and very flexible knowledge workers, on the one hand, and the increasing codification of knowledge on the other, may lead to a process of increasing segmentation in society. Furthermore, not being linked up to information networks also implies being locked out of the efficiency gains associated with the use of ICT. Whole regions are at risk to become excluded from the information economy.

15.) In general, companies try to avoid dismissing people as a consequence techno-organisational restructuring. But some people have to accept to be transferred to new positions.

16.) There is not just one way into the information society, which all regions or countries have to follow, but there are different options of designing the emerging information economy depending on the institutional setting. Furthermore, we cannot equate the information economy with the broad diffusion of modern ICTs. Instead, there are other non-technical strategies to transform the current economy, as, for example, to increase the society's learning potential and its capacity to create and distribute knowledge.

17.) ICT-based processes neither support nor hinder a new regionalism from emerging. Instead, they bring about a multitude of spatial possibilities. Through ICT-based network configurations it becomes easier for companies to shift functions from one place to another; they afford a new mobility to globally acting companies. The collapse of spatial barriers, however, does not mean that the significance of space is decreasing. On the contrary, in a global economy companies are searching for even small local advantages all over the world to improve their competitive position. The less important the spatial barriers, the greater the sensitivity of companies to the variations of place within space and the greater the incentives for places to be different in ways attractive to local and foreign investment.