

Symposium "Digital Transformation"

Timeline

- 09:30 Welcome
PROF. DR. KURT MATYAS, VICE RECTOR FOR ACADEMIC AFFAIRS
PROF. DR. HANNES WERTHNER, DEAN OF THE FACULTY OF INFORMATICS,
- 09:45 Keynote: Digital Roadmap Austria
A common digital strategy for Austria
STATE SECRETARY MAG. MUNA DUZDAR
- 10:00 Democracy in a Networked Society
PROF. DR. JAN VAN DIJK, UNIVERSITY OF TWENTE
- 11:00 Health, technology, and automation
PROF. DR. ERIC T. MEYER, OXFORD INTERNET INSTITUTE
- 12:00 Lunch break
- 13:00 Manufacturing Work of the Future
DR.-ING. SCHLUND, FRAUNHOFER IAO
- 14:00 Transforming the Digital by Media Education
PROF. DR. CHRISTIAN SWERTZ, UNI WIEN
- 15:00 Coffee break
- 15:30 Digital Transformation and Political Economy
PROF. DR. GERHARD HANAPPI, TU WIEN
- 16:30 Panel Discussion
MODERATION: MAG. BARBARA WIMMER
- 17:30 Buffet

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Talks

Democracy in the Network Society

THE DIGITAL TRANSFORMATION OF POLITICS

PROF. JAN VAN DIJK, UNIVERSITY OF TWENTE

Van Dijk will strike a balance of 25 years of promises and achievements of digital democracy. Promises in the 1980s and 1990s were better political and government information, more public debate and community building, enhancement of citizens in the media and in decision making ('teledemocracy'). What are the achievements so far?

The conclusion is sober: except for information exchange, only new forms, but no structural changes have occurred in our political systems and democracies. Recently, a number of negative effects have occurred, such as the rise of 'filter bubbles' and polarization in online discussion, 'fake news', hacking election campaigns and a complete merger of fact, opinion and fiction in information provision, especially in the social media.

How could we be so wrong about the splendid opportunities of the digital media for democracy? Four pitfalls in ideas about technological transformation will be discussed:

1. The idea of a total revolution
2. The assumption of social continuity (old wine in new bottles)
3. A technical fix for complex problems
4. Instrumentalism (digital media as good or bad tools)

Health, technology, and automation

CONNECTING PERSONAL HEALTH, THE HEALTH SECTOR, AND SOCIETY

PROF. MEYER, OXFORD INTERNET INSTITUTE

We are increasingly enmeshed in human-machine networks which influence our relationships, our activities, our behaviours, and most aspects of our lives in some way. The internet connects us together, and a vast network of devices mediate our interactions with each other, and also interact with other devices and the pieces of software running on them. In recent years, there has been growth in tools for tracking our personal health and well-being, but these have largely remained within the personal realm. An interesting emergent challenge is understanding how these tools can, will, and should connect to official health records. At the same time, health systems in many countries are under pressure to use technology to increase efficiency, enhance patient safety, reduce the burden of paperwork and repetitive tasks for health care professionals, and support innovation in health care. In this talk, we will explore the use of data and technology in health and healthcare, from the points of view of individuals, of organizations, and of society.

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Manufacturing Work of the Future

DR.-ING. SCHLUND, FRAUNHOFER IAO

Volatile markets, new global players, fast-paced markets, customized products and complex manufacturing processes require from companies to be more flexible and responsive than today. At the same time, it is important to maintain the high level of productivity and quality of today. Recent advances in machine learning, mobile robotics and social media fire up fantasies and expectations of how manufacturing could look like in the future. The headline "Industry 4.0" subsumes these new opportunities due to intelligent automation and digitalization.

Regarding the future of work possible scenarios and forecasts of more automated and digitalized manufacturing are discussed. In order to widen this public discourse the FUTURE WORK LAB opened this spring in Stuttgart. This innovation laboratory shows future workplaces and concepts of work organization for manufacturing and manufacturing-related industries. Relevant trends in industry and society, application areas, use cases and their potential for employers and employees are presented. Questions regarding the prospective work design, the future of employment and qualification issues are addressed.

Transforming the Digital by Media Education

PROF. SWERTZ, UNI WIEN

Encourage students to become self-responsible for their actions as sovereign decision making agents is a challenge for education in general and for media education in particular. In media education, this challenge is discussed with the term media literacy. Media literacy includes critical thinking about and the creative design of one's relations to oneself, to others, and the world. Critical thinking and creative design require a transformation of digital tools from cybernetic control systems to designable assistant systems for self-determined learning. In the talk, suggestions for the design of this transformation are developed by the example of inconsistent knowledge.

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Digital Transformation and Political Economy

PROF. HANAPPI, TU WIEN

The current global political crisis rests to a considerable extent on the drifting apart between the technical possibilities to enhance the mechanisms of democratic participation on the one side, and the way some of these technological capacities are used by local nationalist demagogues to replace democracy by high-tech authoritarian regimes. This contradiction so far only surfaced in some elections and a referendum, but has an undeniable tendency to result in a 3rd World War. To avoid the latter, the pivotal element, i.e. the use of our technical capabilities, has to be urgently further developed.

From the technical point of view, a democratic digital transformation thus has to include some disciplines that go beyond pure hard- and software questions: (1) From mathematics (in particular game theory), modern voting theory becomes an elementary tool to explore democratic participation, e.g. of half a billion Europeans. (2) From social psychology and agent-based simulation results in the mechanics of mass-learning and mass-manipulation are to be studied. (3) Empirically oriented sociological and economic research has to uncover the powerful global networks based on global value chains, financial ties, and military alliances - in particular the tightly interwoven structure of the corresponding three information networks.

As a guiding vision of a democratic digital transformation, what should be envisaged is the design of a global central nerve system of the human species. A system that allows for a peaceful global reproduction in a finite (no-growth) world, where innovation is compatible to growth of utility only.