



PANEL #1

VALENCIA
November 2023

SocSys 2023 & SoftNet 2023

Theme

**Societal Well-being Impact of
Digitization, Virtualization, Industry 5.0,
and AI**



Challenges

VALENCIA
November 2023

Progress and benefits, Solow's paradox

Costs of de-skilling/re-skilling

Induced mental illnesses, human perceived freedom

Digital dependability, loss of privacy

Education challenges



CONTRIBUTORS

VALENCIA
November 2023

Moderator

Prof. Dr. Herwig Mannaert, University of Antwerp, Belgium

Panelists

Dr. Corné de Ruijt, Windesheim University of Applied Sciences, The Netherlands

Prof. Dr. Hirokazu Hasegawa, National Institute of Informatics, Japan

Emeritus Prof. Dr. Malcolm Crowe, University of the West of Scotland, UK

Prof. Dr. Petre Dini, IARIA, USA/EU



Chair position

VALENCIA
November 2023

The goal of technology should be to *contribute to society, to prosperity and well-being, so what about Digitization, Virtualization, Industry 5.0 and AI ?*

- In the digital industry
 - **Solow's paradox:** *slowdown in productivity growth* despite rapid development IT
 - Longer working hours, continuous resource shortages
 - **Lehman's law:** *ever increasing complexity* software systems
 - Stress and anxiety in operations and maintenance teams
 - Immense IT landscapes reducing *engineers to little cogs* in production systems
 - Ever-evolving technology platforms, often unnecessary, require continuous re-skilling
- For users and consumers
 - **Solow's paradox:** *slowdown in productivity growth* despite rapid development IT
 - Lower economic growth, ubiquitous budget shortages
 - Productivity seems often not the main driver, but rather *monitoring and control*
 - Ever-evolving digital tools, often unnecessary, require continuous re-skilling, imply an all too often unproductive *self-servication*, and entail *dulling* processes
 - Inevitable increase in dependability and loss of privacy often lead to uneasiness and anxiety
- Education challenges
 - Ever-evolving digital environment drives continuous and accelerating changes in education programs while at the same time *eroding the consolidation of conceptual knowledge and learning*



Herwig Mannaert
UA



Panelist position

VALENCIA
November 2023

- **Societal well-being...**
 - Digitization, Virtualization, Industry 5.0, and AI make Various things more convenient
 - Human Centric
 - > Humans are becoming more dependent on information technology

- **Issues: How to achieve safely**
 - Strong relationships influence each other
 - If something happens on one side, something can happen on the other side
 - IT security and human security need to be integrated



Hirokazu Hasegawa
National Institute of Informatics



Panelist position

VALENCIA
November 2023

Societal well-being: the common good

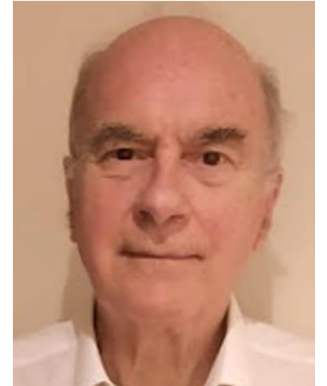
Benefits from: Digitization – like printing press, information

Virtualization – thought experiments, simulation

Industry 5.0 – robot assistants, resilience, sustainability

AI – simulated learning of models, needed for complex systems

Not the same as Economics, where the wrong things get measured (Solow)



Malcolm Crowe
UWS (retired)

Many issues are as old as humanity: many are selfish, greedy

Toxic and stressful employment, failure to value in-house skills

Vendors often misrepresent their products (buyer beware!)

Some students cheat, and interviewees hide their weaknesses

Privacy has never been assured: protections are needed

No free lunch: work, skills are required even with good tools



Panelist position

Valencia
November 2023



Corné de Ruijt
Windesheim UAS

- Societal Well-being Impact of Digitization, Virtualization, Industry 5.0, and AI:
 - > Everything is both better and worse than ever before
 - > Huge* if True vs being skeptical:
 - > Impact of these technologies tends to be very difficult to predict
 - > Underappreciation of blue-collar jobs, and its effect.



Panelist position

VALENCIA
November 2023

Well-being in Jeopardy! Stay alert! Be skeptical!

The development pace is too fast for humanity: there is no time to digest, prepare, and counter the side effects; there are conflicting interests, too!



Petre Dini
IARIA

- *Wireless*: Health-related Radiation impact (since '90s) (see France, level limit for mobile devices)
- *Social Platforms*: Bad Influencers, Indoctrination, Fake News, META for kids, self-control
- *Meta*: The Mental Health danger of (Augmented) Virtual Reality (swift mental perception changes)
- *All-digital devices*: Hidden features (privacy, 3rd party subcontractors) (fear of use); wearable devices side-effects
- *Virtualization/remoteness*: virtual/remote work leads to 7/24 workload, depression, anxiety, exhaustion, etc. (definitively, one of the worst)
- *No human-based activities & less direct socialization*: these are leading to aloofness (alteration of human behavior)
- *Lack of Academic curricula* and advanced Education on digital-fluency
- *Industry 5.0*: Skill gaps, Economic disparities (market monopoly), Ethics (privacy), Job loss, Over-reliance on technology (ChatGPT was mostly positive)
- *AI*: Any AI-flavor tool can be detrimental if not well-understood and properly used (caveat! too complex!)
- *Society*: over-awareness kills the confidence and truth by hypocrisy in shifting the responsibility and guilt (tobacco, media, medicine, online digital stress, over-exposure, over-work, etc.)
- **Be Skeptical**: The only solution to deal with over-awareness! [**Be Skeptical**: Test - Try - (then) Trust, (then) Try (again)]



OPEN DISCUSSION

VALENCIA
November 2023

OPEN DISCUSSION