### DAY 1: Monday 12 June

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<td><strong>Special Session with a Keynote Speech: Aging Society and Urbanization</strong></td>
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<td>Challenges and Opportunities for Global Governance</td>
<td>Futures of Education</td>
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<td>Futures Education</td>
<td>Resilient Futures: Food Safety</td>
<td>Innovation in Future Energy</td>
<td>Futures Technology in Health and Well-Being</td>
<td>Methods and Methodology of Futures Research</td>
<td>Curating the Complexity Futures Workshop</td>
<td>The Role of Visions in a Scenario Process - Case “Winland”</td>
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<td>10:45–12:00</td>
<td>Futures of Education, Art and Cultural Studies</td>
<td>Resilient Futures: Water Safety</td>
<td>Complexity in Future Cities</td>
<td>Case Studies: China and Other Countries Outside Europe</td>
<td>Gaming and Virtual Reality in Futures Research</td>
<td>Curating the Complexity Futures Workshop</td>
<td>Hallituksen tulevaisuusselonteko työn murrroksesta (in Finnish)</td>
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**13:00–13:30** Chaired Poster Session

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<td>13:30–15:00</td>
<td>Futures Research, Cognitive Neuroscience and Transformation</td>
<td>Complexity and Systems Thinking in Governance</td>
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<td>The Future of Work: An Interactive Workshop on Perspectives among Europe</td>
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MONDAY 12 JUNE

SESSION I

**Complexity and Systems Thinking**

*Time:* Monday 12 June at 13:00–14:30  
*Room:* Katariina  
*Chair:* Professor Markku Wilenius

**Complex systems studies and predictability of sociopolitical phenomena**  
Czeslaw Mesjasz  
Management Process Department, Cracow University of Economics, Poland

**Will the future of public administrations be innovative though disruptive? Insights from Wallonia**  
Vincent Calay\(^a\), Jean-Luc Guyot\(^b\) & Maxime Petit Jean\(^c\)  
\(^a\) Foresight and Statistics, Walloon Institute for Evaluation, Belgium, \(^b\)Foresight and Statistics, Catholic University of Louvain and Walloon Institute for Evaluation, Belgium & \(^c\)Political Science Department, University of Liege, Belgium

**The future of deliberative policy-making in Finnish welfare services**  
Hanna-Kaisa Pernaa  
Faculty of Philosophy/Administrative Sciences, University of Vaasa, Finland

**How to overcome barriers for innovations in organizations from the public sector – the Local governments for the future**  
Karolina Mackiewicz  
Finland Futures Research Centre, University of Turku, Finland

**Futures of Energy: Methodologies**

*Time:* Monday 12 June at 13:00–14:30  
*Room:* Eerik  
*Chair:* Dr. Jyrki Luukkanen

**Strangers in the night? Analysing the developer - User nexus in scenario practice through concepts of plausibility**  
Ricarda Scheele  
Stuttgart Research Center for Interdisciplinary Risk and Innovation Studies (ZIRIUS), University of Stuttgart, Germany

**Understanding smart energy transition: Tapping into experts’ views on future energy market disruption in Finland**  
Tatu Marttila\(^a\), Tero Ahonen\(^b\), Mikko Jalas\(^a\) & Mikko Rask\(^c\)  
\(^a\)School of Arts, Design and Architecture, Aalto University, Finland, \(^b\)School of Energy Systems, Lappeenranta University of Technology, Finland & \(^c\)Consumer Society Research Centre, University of Helsinki, Finland

**What are the conditions for scenarios to configure policy making? A comparative analysis of four energy foresight studies for Wallonia (Belgium)**  
Aurore Fransolet  
Center for Studies on Sustainable Development (IGEAT), Université libre de Bruxelles, Belgium
Synergies and trade-offs between energy efficiency and sustainability indicators: The EU-28 study of sustainable energy use
Jari Kaivo-oja, Jyrki Luukkanen & Jarmo Vehmas
Finland Futures Research Centre, University of Turku, Finland

Education in Futures Studies
Time: Monday 12 June at 13:00–14:30
Room: Kristiina
Chair: Dr. Tamás Gáspár

When futures meets engineering: Pedagogical journey and learning
Mei-Mei Songa & Shang-Hsien Hsiehb
a Graduate Institute of Futures Studies, Tamkang University, Taiwan; b Department of Civil Engineering, National Taiwan University, Taiwan

Educational foresight-event and personal-resource mapping as methods of developing future thinking
Tatiana Yakubovskaya & Tatiana Kovaleva
a Head of Scientific-Educational Centre for Foresight-competence development, National Research Tomsk State University, Russia; b Moscow Pedagogical State University, Russia

Future scenarios: A tool to make students and citizens more aware of future technological change
Cristina Pozzi & Andrea Dusi
a Impactscool, CEO and Founder, Italy; b Impactscool, Chairman and Founder, Italy

Strategic foresight as experiential education
Tamás Gáspár
Budapest Business School, College of International Management and Business, Hungary

Futures Organizations and Businesses Innovation
Time: Monday 12 June at 13:00–14:30
Room: Pietari
Chair: Director Vicente Marrama Zorrilla

Future software organizations – Agile goals and roles
Maarit Laantia & Petri Kettunen
a Nitor Delta, Finland; b Department of Computer Science, University of Helsinki, Finland

From interactions to cocreation. A systems view on digitalisation and the thereby changing management practices
Sanna Ketonen-Oksi
Information Management and Logistics, Tampere University of Technology, Finland

How strategic foresight is used in strategy implementation: Exploring cases of business model innovation
Christina Bidmon, Kirstin Bosbach & Anne-Sophie Brillinger
a Department of Management, Aarhus University, Denmark, b Technische Universität Berlin, Faculty of Economics and Management, Germany & c Chair for Organisation and Human Resources, Fh ingolstadt school of Management, Germany
FUTURING - the future intelligence for organizations
Vicente Marrama
La Escuela de Futuring, Barcelona & Florida Universitaria, Valencia, Spain

Methods and Methodology of Futures Research
Time: Monday 12 June at 13:00–14:30
Room: Juhana
Chair: Dr. Ted Fuller

No theory, methodological chaos in scenario planning
Matthew J. Spanioła & Nicholas J. Rowland
aDanish Maritime, Dept of Philosophy, Roskilde University, Denmark & bSociology and Science and Technology Studies, the Pennsylvania State University, USA

Methods for sustainability assessments of future scenarios
Eléonore Fauré, b, Yevgeniya Arushanyan, b, Elisabeth Ekener, a, b, Sofiia Miliutenko, a, b & Göran Finnveden a, b
a KTH Royal Institute of Technology, Division of Environmental Strategies Research, Sweden & b KTH Royal Institute of Technology, Centre for Sustainable Communications (CESC), Sweden

The past and the future are both foreign countries
Carlos López Galviz
Institute for Social Futures, Lancaster University, United Kingdom

A discussion on the complex consequences of Anticipatory Systems theories on futures methodologies
Ted Fuller
Professor of Entrepreneurship and Strategic Foresight, University of Lincoln. Brayford Pool, Lincoln, Lincolnshire, the United Kingdom

Special Session with Keynote Speech: Aging Society and Urbanization
Time: Monday 12 June at 13:00–14:30
Room: Kustaa
Chair: Professor Sirkka Heinonen

Plenary Speech:
Towards multi-generational cohabitation in the era of matured aging society; from the perspective of S&T foresight in Japan
Naoki Saito
Deputy Director General, National Institute of Science and Technology Policy (NISTEP), Japan

Critical futures of aging in society- enabling futures of intergenerational knowledge creation
Nourhan Hegazy,
Strategic Foresight and Innovation, OCAD University, Toronto, Canada

Engineering future cities – The value of extreme scenario methodologies
Christopher D. F. Rogers
Department of Civil Engineering, School of Engineering, University of Birmingham & UK Government Foresight Future of Cities Project, United Kingdom
**Futures of University and Scientific Knowledge Workshop**

Time: Monday 12 June at 13:00–14:30  
Room: Dining Room & Library  
Moderator: Education Manager Leena Jokinen

Åbo Akademi University’s present role in the Nordic scientific community and its future prospects  
Nina Kivinen, Åbo Akademi University, Finland

Tampere New University - Guidelines for remodeling the university  
Pirjo Kuhanen, Tampere New University, Finland

The session will include an idea workshop of the future universities and scientific knowledge in society. We wish to see to the future of knowledge-production, the ways in which science can and will change, and challenge the notion of the university. In other words, we want to imagine and re-imagine the university in numerous ways.

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**SESSION II**

**Complexity and Systems Thinking**

Time: Monday 12 June at 15:00–16:30  
Room: Katariina  
Chair: Dr. Osmo Kuusi

Systems analytics: what is it? And why is it necessary?  
Veerendra K Rai  
Tata Research Development and Design Center, Tata Consultancy Services, India

Complexity, systems thinking and the development of new business models to support investment in municipal solid waste infrastructure  
Christopher J. Bouch & Christopher D. F. Rogers  
Department of Civil Engineering, School of Engineering, University of Birmingham, United Kingdom

Using systems thinking to design actionable futures: a nuclear weapons example  
Leon Young  
Future Strategic Thinking, Australia

Why do firms engage in forward-looking search? Performance, slack resource, and environmental determinants  
Tymen Jissinka, René Rohrbeck & Eelko Huizingh  
\(^a\)Department of Management, School of Business and Social Sciences, Aarhus University, Aarhus, Denmark \(^b\)Department of Strategic Innovation Management, faculty of Economics and Business, University of Groningen, Groningen, Netherlands
Futures of Consumption and the Economy

Time: Monday 12 June at 15:00–16:30
Room: Eerik
Chair: Dr. Tuomas Kuhmonen

Scenarios of consumption and wellbeing in the EU to 2050: exploring the missing dimension of transition
Tadhg O. Mahony & Jyrki Luukkanen
Finland Futures Research Centre, University of Turku, Finland

The role of governments in a circular economy, a transition narrative
Peter De Smedt\textsuperscript{a} & Kristian Borch\textsuperscript{b}
\textsuperscript{a} Transition Lab, Belgium \textsuperscript{b} DTU Department of Management Engineering, Denmark

Managing complexity - the cultural dynamics and change linked to temporal processes
Anna Kirveennummi & Katariina Heikkilä
Finland Futures Research Centre, University of Turku, Finland

The future of consumer decision-making
Hanna Willman-Iivarinen
Miratio (Marketing research company), Finland

Futures of Education, Learning and Work

Time: Monday 12 June at 15:00–16:30
Room: Kristiina
Chair: Dr. Maria Höyssä

The Cogitaire 5 model – Thinking our way into the future
Jude Walker, FutureWorking, Australia

Human-centric organisations and the culture of work in a complex world
Sofi Kurki
Finland Futures Research Centre, University of Turku, Finland

Exploring the future of work in drama workshops
Mikko Dufva, Minna Halonen, Mika Kari, Tapio Koivisto, Raija Koivisto & Jouko Myllyoja
VTT Technical Research Centre of Finland Ltd, Finland

Envisioning future innovative experimental ecosystems through foresight approach- How Design Factory educates students/ change makers by year 20x6, \( x = \{2, 3\} \)
Vikram Munigala
Design Factory, Aalto University, Finland
Foresight in Technology
Time: Monday 12 June at 15:00–16:30
Room: Pietari
Chair: Professor Sirkka Heinonen

Participatory foresight and the future internet: Building futures through communication
Mario Guilloa, Ana Bosslerb & Enric Basc
aIMEP-University Miguel Hernandez, Spain, b Bossler and Bourscheid Associates, Brazil & cFUTURLAB, University of Alicante, Spain

The strategic transformation for future societal vision – Japan’s innovative approach
Miki Kuribayashi, Kazuhiro Hayashi & Shinichi Akaike
Ministry of Education, Culture, Sports, Science, Technology (MEXT), National Institute of Science and Technology Policy (NISTEP), Japan

To understand creativity in virtual work: identification of leadership toward creativity in different types of companies
Iris Humala
Faculty of Education, University of Tampere, Finland

The capability of Strategic Foresight – A cultural approach
Stefan Josef Marquart & Michael König
b  INVENSITY GmbH, Business Development, Germany
b  Department of Strategy and Innovation, Vienna University of Economics and Business, Austria

Methods and Methodology of Futures Research
Time: Monday 12 June at 15:00–16:30
Room: Juhana
Chair: Kaisa Oksanen

Methods and tools to place foresight at the forefront of democratic renewal
Alun Rhydderch
Soif-Horizons, United Kingdom

Learning from mistakes – A modified backcasting approach to investigate success and failure in reaching the preferred future
Liisa Haapanen & Petri Tapio
Finland Futures Research Centre, University of Turku, Finland

The participation paradox. Critical reflections on the design and conduct of participatory foresight interventions in organizations
Christina M. Bidmon & René Rohrbeck
Aarhus University, Department of Management, Denmark

Future dreams of young people – Tools to promote young people’s civic participation
Katariina Heikkilä, Tuulia Nevala, Ira Ahokas & Liisa Hyttinen
a Finland Futures Research Centre, University of Turku & b Helsinki-Uusimaa Regional Council, Finland
Security Forecasting in a Complex World
Time: Monday 12 June at 15:00–16:30
Room: Kustaa
Moderator: Mikko Lappalainen, Defence Research Agency, Finland

Presentation
Rhett Hatcher and Simon Cole, UK MOD DCDC

Panelists:
PhD Vesa Valtonen, Security Committee Secretariat, Finland
Dr. Olaf Theiler, Future Analysis, Bundeswehr, Germany
Joachim Isacsson, Futures UK DCDC (Armed Forces, Sweden)
Jasmin Diab, Future Concepts, Department of Defence, Australia
Björn de Heer, Land Warfare Centre, Netherlands

This session will focus on the long-term strategic security foresight. The session will begin with an introduction of a current best practice: UK MOD’s Global Strategic Trends (GST) program. The International panel will then give prepared comments sharing their latest national insights. The researchers in the audience will gain knowledge about the evolving customer needs in the times of complexity and will be informed about the joining opportunities in various security foresight programs.

Futures of Democracy, Society and Values
Time: Monday 12 June at 15:00–16:30
Room: Dining Room
Chair: Dr. Katriina Siivonen

The future of Belgian democracy according to political science students
Sébastien Brunet\textsuperscript{a}, Jean-Luc Guyot\textsuperscript{b}
\textsuperscript{a} University of Liege (Political Science Department) and Walloon Institute for Evaluation, Foresight and Statistics, Belg

Transdisciplinary agenda setting for future research and innovation - Comparing results of expert based foresight to large scale citizen centred forward-looking
Niklas Gudowsky\textsuperscript{a}, Philine Warnke\textsuperscript{b}, Aaron Rosa\textsuperscript{a}, Nora Häuser\textsuperscript{a}, Walter Peissl\textsuperscript{a},
\textsuperscript{a} Institute of Technology Assessment, Austrian Academy of Sciences, Austria & \textsuperscript{b} Fraunhofer Institute of Systems and Innovation Research ISI Karlsruhe, Germany

Utopias, dystopias and atopias in Jerusalem 2060
Julia Lampert
Institut Futur, Institute for Educational Science and Future Research, Germany

Deconstructing survivalism as futures knowledge
Marjukka Parkkinen
Finland Futures Research Centre, University of Turku, Finland
SESSION III

Challenges and Opportunities for Global Governance
Time: Monday 12 June at 16:45–18:00
Room: Katariina
Chair: Dr. Juha Kaskinen

Reaching zeitgeist: on complexity, decision making and participatory foresight
Enric Bas\textsuperscript{a} & Michal Pazour\textsuperscript{b}
\textsuperscript{a} FUTURLAB-University of Alicante, Spain & \textsuperscript{b} Department of Strategic Studies at Technology Centre of the Academy of Sciences, Czech Republic

(A)Political futures: Examining the rise and role of fiscal councils in global governance and policy making
Stuart Connor
Faculty of Education, Health and Wellbeing, University of Wolverhampton, United Kingdom

The science of laws: Impact on 21st century governance
David G. Schrunk
Science of Laws Institute, USA

Exploring the future of science and innovation diplomacy
Jos Leijten & Daniel Gehrt
Joint Institute for Innovation Policy, Belgium

Futures Education
Time: Monday 12 June at 16:45–18:00
Room: Eerik
Chair: Senior Advisor Sari Söderlund

Ugly and its interpretations in craft
Ana Nuutinen, Textile and Clothing Design, University of Lapland, Finland
Riikka Räisänen & Päivi Fernström, Craft Studies, University of Helsinki, Finland

Particularities of educational practice for developing futures and foresight literacy in Finland and Russia (comparative analysis)
Tatiana Yakubovskaya
Head of Scientific-Educational Centre for Foresight-competence development, National Research Tomsk State University, Russia

On futures of geographic information
Toni Ahlqvist
Geography Research Unit, University of Oulu, Finland
Futures of Consumption and the Economy

Time: Monday 12 June at 16:45–18:00
Room: Kristiina
Chair: Dr. Riel Miller

Measuring tomorrow’s economy: Which tools for measuring and analyzing circular and collaborative economies?
Sébastien Brunet, Vincent Calay & Jean-Luc Guyot

Political Science Department, University of Liege, Foresight and Statistics, Walloon Institute for Evaluation, Belgium; Walloon Institute for Evaluation, Foresight and Statistics, Belgium & Catholic University of Louvain and Walloon Institute for Evaluation, Foresight and Statistics, Belgium

What future for businesses in Visegrad countries?
Anna Kononiuk, Anna Sacio-Szymańska & Judit Gaspar

Bialystok University of Technology, Poland; Institute for Sustainable Technologies – National Research Institute, Poland & Corvinus University of Budapest, Hungary

Longevity – postmoney – immortality: Value function in the domain of postmoney
Boyan Ivantchev
Economics, University of National and World Economy, Bulgaria

Future studies of tacit knowledge innovation in exploring generational change and enterprise development in family business
Lee Kean Yew
Asia Europe Institute, University of Malaya, Malaysia

Technology Foresight: an Era of Transformation, Human and Technology Interaction

Time: Monday 12 June at 16:45–18:00
Room: Pietari
Chair: Dr. Fiona Kerr

Partnering with AI for a humane future
Fiona Kerr
Faculties of Professions, Engineering and Health Sciences, University of Adelaide, Australia

Options for future human evolution: Technology/transhumanist, sustainability, civilization, consciousness, and space-based perspectives
Linda Groff
Global Options & Evolutionary Futures Consulting, USA

The role of technology futures analysis in e-government: A systematic literature review
Jenny Marcela Sánchez-Torres & Ian Miles

Computing Systems and Industrial Engineering Department, Universidad Nacional de Colombia, Colombia & Manchester Institute of Innovation Research, Manchester Business School, University of Manchester, United Kingdom
Methods and Methodology of Futures Research
Time: Monday 12 June at 16:45–18:00
Room: Juhana
Chair: Dr. Tuomas Kuhmonen

Beyond internal consistency: An alternative technique to choose most relevant scenarios for cross-impact balance (CIB) method
Arash Shojachaikar & Wolfgang Weimer-Jehle
Stuttgart Research Center for Interdisciplinary Risk and Innovation Studies (ZIRIUS), University of Stuttgart, Germany

Axiom method for cross-impact modelling and analysis
Juha Panula-Ontto
University of Turku, Finland Futures Research Centre FFRC, Finland

Hybrid scenarios for the future
Petri Tapio & Akhgar Kaboli
Finland Futures Research Centre, University of Turku, Finland

Integration of trends monitoring and bibliometric analysis into technology road mapping: The case of unmanned aerial vehicles (UAVs)
Nadezhda Mikova
Department for Private-Public Partnership in Innovation Sector, National Research University Higher School of Economics, Institute of Statistical Studies and Economics of Knowledge, Russia

Futures Studies in Science and Technology
Time: Monday 12 June at 16:45–18:00
Room: Kustaa
Chair: Professor Piero Dominici

Beyond Turing? The notion of economic performance in the new normal
Michael König
Department of Strategy and Innovation, Vienna University of Economics and Business, Austria

Science and Technology: enablers or inhibitors of fairness and sustainability in a complex world?
Carlos Alvarez-Pereira
Innaxis Research Institute, Spain

For an Inclusive Innovation. Healing the fracture between the human and the technological
Piero Dominici
Department of political Science, University of Perugia, Italy
Futures Consciousness – Participatory Workshop
Time: Monday 12 June at 16:45–18:00
Room: Dining Room
Moderator: Sanna Ahvenharju, Matti Minkkinen & Fanny Lalot

The five dimensions of futures consciousness and how to measure them
Sanna Ahvenharju\textsuperscript{a}, Matti Minkkinen\textsuperscript{a} & Fanny Lalot\textsuperscript{b}
\textsuperscript{a}Finland Futures Research Centre, University of Turku, Finland, \textsuperscript{b}University of Geneva, Switzerland

The session presents and discusses a novel five-dimensional model and a psychometric test scale of futures consciousness. This conceptualization integrates theoretical thinking from futures studies with related psychological literature and relevant research-based psychological constructs.

TUESDAY 13 JUNE

SESSION IV

Futures Education
Time: Tuesday 13 June at 9:00–10:30
Room: Katariina
Chair: Conscious Future Designer Erica Bol, Teach the Future

ICT impact on the future of education
Reyhan Huseynova,
Azerbaijan Future Studies Society, Millennium Project Node, Azerbaijan

Plan Ceibal 2020: Future scenarios for technology and education
Matías Mateu\textsuperscript{a}, Cristóbal Cobo\textsuperscript{a} & John Moravec\textsuperscript{b}
\textsuperscript{a}Plan Ceibal, Uruguay & \textsuperscript{b}Education Futures LLC, USA

Futures guidance as a means to promote futures thinking
Leena Jokinen, Johanna Ollila, Sari Miettinen, Nina Pietikäinen & Katariina Heikkilä
Finland Futures Research Centre, University of Turku, Finland

Teach the Future
Peter Bishop & Erica Bol
Teach the Future, USA & EU

Resilient Futures: Food Safety
Time: Tuesday 13 June at 9:00–10:30
Room: Eerik
Chair: Dr. Maria Höyssä

Food safety and nutrition – How to prepare for a challenging future?
Anne-Katrin Bock & Laurent Bontoux
DG Joint Research Centre of the European Commission, Unit Foresight, Behavioural Insights and Design for Policy, Belgium
Institutional interventions to prepare Indian farmers for a complex future
M.V. Ashok
National Bank for Agriculture & Rural Development (NABARD), Mumbai, India

Transformative spaces for agriculture? Analysing how Finnish farmers discuss their work
Maria Höyssä
Finland Futures Research Centre, University of Turku, Finland

How to utilize resilience approach when constructing scenarios?
Titta Tapiola
Natural Resources Institute Finland, Finland

**Innovation in Future Energy**
Time: Tuesday 13 June at 9:00–10:30
Room: Kristiina
Chair: Dr. Jyrki Luukkanen

**Surprise as the new normal – Implications for energy security**
Sirkka Heinonen\(^a\), Joni Karjalainen\(^a\) & Karlheinz Steinmüller\(^b\)
\(^a\) Finland Futures Research Centre, University of Turku, Finland & \(^b\) Z-punkt, Germany

**Transition towards long-term sustainability of the Finnish energy system**
Michael Child & Christian Breyer
Department of Energy, Lappeenranta University of Technology, Finland

**The postnormality of renewable energy – Complexity, contradictions and chaos in a world of abundance**
Juho Ruotsalainen, Sirkka Heinonen, Joni Karjalainen & Marjukka Parkkinen
Finland Futures Research Centre, University of Turku, Finland

**Understanding smart energy transition: Insights to the future energy technologies and their market disruption in Finland**
Tero Ahonen\(^a\), Tatu Marttila\(^b\), Igor Dyukov\(^a\) & Mikko Jalas\(^b\)
\(^a\) School of Energy Systems, Lappeenranta University of Technology, Finland; \(^b\) School of Arts, Design and Architecture, Aalto University, Finland

**Key trends of energy efficiency in the EU-28 region**
Jarmo Vehmas, Jyrki Luukkanen & Jari Kaivo-oja
University of Turku, Finland Futures Research Centre, Finland

**Futures Technology in Health and Well-Being**
Time: Tuesday 13 June at 9:00–10:30
Room: Pietari
Chair: Dr. Fiona Kerr

**Drivers, trends and scenarios for the future of health in Europe: Impressions from the FRESHER project**
Susanne Giesecke & Beatrix Wepner
Center for Innovation Systems and Policy (Crisp), Austrian Institute of Technology, Austria

**Quantification of selves – The future of personal data**
Daniela Gutierrez
Universidad Pedagógica (UNIPE) & Argentina/Fundación Medifé, Argentina
Nursing and technology foresight in futures of a complex world
Mohammad Reza Dawuodi,
Turku University of Applied Sciences, Finland

The future of drug development and pricing
Philippe Vandenbroeck, Irina Cleemput & Lydia de Heij
\textsuperscript{a}shiftN, Belgium, \textsuperscript{b}Belgian Healthcare Knowledge Centre (KCE), Belgium & \textsuperscript{b}Zorginstituut Nederland (ZIN), The Netherlands

Methods and Methodology of Futures Research
Time: Tuesday 13 June at 9:00–10:30
Room: Juhana
Chair: Dr. Juha Kaskinen

Futures knowledge management in and after a futures workshop
Hanna Heino
Department of Geology and Geography, University of Turku, Finland

Towards a larger Delphi panel: Delphi study of 200 experts completed with futures workshops on lake restoration
Nina A. Nygrén & Petri Tapio
Finland Futures Research Centre, University of Turku, Finland

Experiencing insight: Engaging complexity with 'scalable fruit'
Amos Taylor
Finland Futures Research Centre, University of Turku, Finland

Methods mashup for generating visions of a good anthropocene in Southern Africa: From seeds to scenarios
Tanja Hichert
Centre for Complex Systems in Transition (CST), Stellenbosch University, South Africa

Curating the complexity – Futures workshop session, part 1.
Time: Tuesday 13 June at 9:00–10:30
Room: Kustaa
Moderators: Katriina Siivonen, Pasi Hario, Marjukka Parkkinen & Satu Tuittila
Finland Futures Research Centre, University of Turku, Finland

Futures workshop will be organised on theme Futures Museum. It focuses on the methodological possibilities of a participatory futures processes in tackling the complexity of the world. What could be the possibilities of museums to curate people to understand and create everyday activities in order to be able to tackle our current, rapidly changing and complex world?

** The capacity of the session is limited **
The Role of Visions in a Scenario Process – Case “Winland”
Time:  Tuesday 13 June at 9:00–10:30
Room:  Dining Room
Moderators: Dr. Burkhard Auffermann and Dr. Marko Keskinen

Introduction to the session: what visions, what scenarios, what Winland?

Winland research project – Introduction to the case study
Marko Keskinen
Aalto University, Finland

Scenario process and future visioning in Winland
Matti Minkkinen, Burkhard Auffermann & Riikka Saarimaa
Finland Futures Research Centre, University of Turku, Finland

Visioning Winland from the point-of-view of the relationship of human agency to planning and complexity – Comment speech
Riel Miller, UNESCO, Paris

Presentations are followed by discussion and facilitated participatory workshop on the role of visions in the scenario process and values.

SESSION V

Futures of Education, Art and Cultural Studies
Time:  Tuesday 13 June at 10:45–12:00
Room:  Katariina
Chair:  Senior Advisor Sari Söderlund

Learning entangled empathy with trees: Experiences from the joint drama educational arts-science project concerning connection of climate change and loss of biodiversity
Heli Aaltonen
Department of Arts and Media Studies, Theatre and Drama Studies, Norwegian University of Science and Technology (NTNU), Norway

Political and cultural transformation in an accelerated warming world
Christopher Burr Jones
Core Faculty, School of Public Policy and Administration, Walden University, USA

FUTURES of learning and negotiation, policy-making, and awareness/consciousness
Heiner Benking
Journalist, futurist, activist, tutor
Member of the Advisory Board of the European Citizen Sciences Association (ECSA)
Future Worlds Center (FWC), Re-Inventing Democracy project, UN-Democracy Fund (UNDEF)
Academic Board member of the International Encyclopedia of Systems and Cybernetics
Resilient Futures: Water Safety
Time: Tuesday 13 June at 10:45–12:00
Room: Eerik
Chair: Dr. Jarmo J. Hukka

Global water ecosystem – Past, present, future?
Tarja Meristö & Jukka Laitinen
Laurea University of Applied Sciences & FuturesLab CoFi, Finland

Ignorance of economics undermines water services – and our resilient future
Jarmo. J. Hukka
Construction Management and Economics, Department of Civil Engineering, Faculty of Business and Built Environment, Tampere University of Technology, Finland

How complex technological systems act as a mediator between City’s socio-technological system and nature’s materiality – A case study of the Helsinki’s water supply system
Lassi Lemponen
Politics of environment and -regions department, University of Tampere, Finland

Complexity in Future Cities
Time: Tuesday 13 June at 10:45–12:00
Room: Kristiina
Chair: Dr. Sari Puustinen

Fast forward: Multimodal transportation in the Greater Golden Horseshoe
Helen Kerr
Strategic Foresight and Innovation, OCAD University, Canada & Kerr Smith Design, Canada

Do cities need systematic futures thinking?
Waltraut Ritter
Knowledge Dialogues, Hong Kong, S.A.R. China

People and mobility in Turku: Futures of mobility as a subsystem of a complex city
Nicolas A. Balcom Raleigh, Anna Kirveenummi, Ellinoora Leino-Richert, Hoa Nguyen, Sari Puustinen & Markku Wilenius
Futures of Cities and Communities Research Group, University of Turku, Finland

Case Studies: China and Countries outside Europe
Time: Tuesday 13 June at 10:45–12:00
Room: Pietari
Chair: Professor Petri Tapio

China 2030 or the way towards a viable cooperation with China
Epaminondas Christofilopouloua, Stavros Mantzanakisb, Tomas Larssonc & Constantine Styliarasd
a Foundation of Research and Technology & Millennium Project Greek Node, Greece; b Phemonoe Lab, Greece; c KAIROS Future, Sweden, d University of Macedonia

Economic growth and gross domestic expenditure on R&D in G7-countries and BRICS –countries: A long run comparative synergy analyses in 1997–2014
Jari Kaivo-oja, Jyrki Luukkanen & Teemu Haukioja
University of Turku, Finland Futures Research Centre FFRC & University of Turku, University Consortium of Pori, Finland
Disruptive factors affecting the E-Commerce industry in China up to 2030: A consumer Delphi study
Yuan Qi\textsuperscript{a} & Petri Tapio\textsuperscript{b}
\textsuperscript{a} Graduate in Futures Studies, Turku School of Economics, University of Turku, Finland & \textsuperscript{b} Finland Futures Research Centre, University of Turku, Finland

The application of Causal Layered Analysis to understand the present conditions & possible futures of media politics in Iran
Sara Talebian\textsuperscript{a} & Hamed Talebian\textsuperscript{b}
\textsuperscript{a} Media and Global Communication, University of Helsinki, Finland
\textsuperscript{b} International Relations, University of Kharazmi, Instructor of Culture, Art & Communication Research Institute, Iran

**Gaming and Virtual Reality in Futures Research**

**Time:** Tuesday 13 June at 10:45–12:00
**Room:** Juhana
**Chair:** Professor Markku Wilenius

**Virtual reality in future studies: Chances and risks of using VR-technology for and in future studies**
Aileen Moeck & Markus Meißner
Free University, Institut Futur, Freie Universität Berlin, Germany

**Gaming, a non-linear method to think and navigate the current complex world**
Camille Souhard
proGective & LAMPA, France

**Narrative gaming - gaming narratives**
Nele Fischer & Sascha Dannenberg,
Freie Universität Berlin, Germany

**Curating the Complexity – Futures workshop session, part 2.**

**Time:** Tuesday 13 June at 10:45–12:00
**Room:** Kustaa
**Moderators:** Katriina Siivonen, Pasi Hario, Marjukka Parkkinen & Satu Tuittila
University of Turku, Finland Futures Research Centre, Finland

**Hallituksen tulevaisuusselonteko työn murroksesta (in Finnish)**

**Time:** Tuesday 13 June at 10:45- 12:00
**Room:** Dining Room
**Moderator:** Dr. Kaisa Oksanen

**Hallituksen tulevaisuusselonteko työn murroksesta**
Kaisa Oksanen
Prime Minister’s Office, Finland

Tulevaisuusselontekojen tehtävä on tunnistaa tulevaisuudessa huomiota vaativia asioita yli hallituskau- sien ja niissä linjataan valtioneuvoston yhteistä tahtotilaa tulevaisuuden rakentamiseksi. Sessiossa kes- kustellaan hallituksen tulevaisuusselonteosta, jonka aiheena on työn murros
**CHAIRED POSTER SESSION**

**Tuesday 13 June at 13:00–13:30**

**Higher education is at a crossroads of globalization, social changes and technical developments**

Krisztina Némethy\(^a\) & Dr. József Gátib

\(^a\) University Research and Innovation Center, Óbuda University, Hungary & \(^b\) Rector Office, Vice Rector, Óbuda University, Hungary

**Students are the future of experts**

Johanna Hautamäki & Tarja Mäkitalo

Research and Development, Centria University of Applied Sciences, Finland

**Futures guidance and tools in Omasi and Utua projects**

Leena Jokinen, Johanna Ollila, Sari Miettinen, Nina Pietikäinen & Katariina Heikkilä

Finland Futures Research Centre, University of Turku, Finland

**Futures of lake restoration**

Nina A. Nygrén & Petri Tapio

Finland Futures Research Centre, University of Turku, Finland

**Energy security analysis and future recommendations to enhance energy security based on expenditures for R&D and education and levels of rule of law and democracy**

Abdelrahman Azzuni & Christian Breyer

Energy Technology, School of Energy System, Lappeenranta University of Technology (LUT), Finland

**Futures Platform – Strategic foresight tool**

Tuomo Kuosa

Futures Platform Oy, Finland

**Diagnosis process in foresight research using network visualization**

Alicja Ewa Gudanowska

International China and Central-Eastern Europe Institute of Logistics and Service Science, Faculty of Management, Bialystok University of Technology, Poland
SESSION VI

**Futures Research: Cognitive Neuroscience and Transformation**

*Time:* Tuesday 13 June at 13:30–15:00  
*Room:* Katariina  
*Chair:* Dr. Osmo Kuusi

Towards the scientific integration of futures research and cognitive neuroscience  
Osmo Kuusi  
Aalto University & University of Turku, Finland

Towards a society of living: Connecting transformation, complexity theory and life sciences  
Joséphine von Mitschke-Collande  
Innaxis Research Institute, Switzerland

Cultivating physiological coherence with possible futures  
Tyler Mongan  
Heart Lab LLC and Quantum Medicine University, Hawaii, USA

Only human: Towards a neuroscience-based understanding of future-facing organizational culture  
Medina Abdelkader  
OCAD University, Canada

**Complexity and Systems Thinking in Governance**

*Time:* Tuesday 13 June at 13:30–15:00  
*Room:* Eerik  
*Chair:* Professor Czesław Mesjasz

The future of government workforces: Serving the people in the 21st century  
Katherine LY Green\(^a\), Jennifer Jarratt\(^b\) & John B. Mahaffie\(^b\)  
\(^a\) Green Consulting Group LLC & \(^b\) Leading Futurists, LLC, Jennifer Jarratt

Business and Peacebuilding: Towards a framework for mapping governance linkages  
Aviva Silburt  
University of Waterloo & Balsillie School of International Affairs, Canada

Ignorance and politically correct worst case scenarios of sociopolitical phenomena  
Czesław Mesjasz  
Management Process Department, Cracow University of Economics, Poland

**Futures of Energy**

*Time:* Tuesday 13 June at 13:30–15:00  
*Room:* Kristiina  
*Chair:* Dr. Juha Kaskinen

Future for bio-fuel consumption and energy security: India’s policy advocacy  
E. N. Ashok Kumar  
Centre for Foresight Studies, Solapur University, Maharashtra State, India

Futures images of a bioeconomy  
Päivi Pelli\(^a\), Teppo Hujala\(^a\), Elena Kulikova\(^b\) & Timo Karjalainen\(^a,c\)  
\(^a\) School of Forest Sciences University of Eastern Finland, Joensuu, Finland, \(^b\) European Forest Institute EFI, Joensuu, Finland & \(^c\) Natural Resources Institute Finland, LUKE
Can we overcome complexity with anticipation for climate compatible governance?
Joni Karjalainen & Juho Ruotsalainen
Finland Futures Research Centre, University of Turku, Finland

Clean transformation as a complex endeavour – The case study of Chile
Noora Vähäkari, Joni Karjalainen & Sirkka Heinonen,
Finland Futures Research Centre, University of Turku, Finland

Strategic Thinking and Security Foresight
Time:  Tuesday 13 June at 13:30–15:00
Room:  Pietari
Chair:  Dr. Burkhard Auffermann

Navigating the great transition: Futures for a complex world
Fabienne Goux-Baudiment
proGective & University of Angers, France

Cyber security is likely to fail because we architect on the wrong assumptions – The flip side of exponential Internet growth will lead to massive security challenges
Michiel Jonker, Grant Thornton, South Africa

Strategic foresight in the German armed forces
Henning Hetzer, Dr. Annika Vergin & Dr. Olaf Theiler
Bundeswehr Office for Defence Planning, Branch Future Analysis, Germany

Rethinking the unthinkable – Revisiting the classics of nuclear strategy
Jan Hanska
Finnish Defence Research Agency (FDRA) Doctrines and Concepts Division, Finland, & Faculty of Social Sciences, University of Lapland, Finland

Methods and Methodology of Futures Research
Time:  Tuesday 13 June at 13:30–15:00
Room:  Juhana
Chair:  Dr. Ted Fuller

Grasping the future of digital society
Tomi Dufva\textsuperscript{a} & Mikko Dufva\textsuperscript{b}
\textsuperscript{a} The School of Arts, Design and Architecture, Aalto University, Finland; \textsuperscript{b} VTT Technical Research Centre of Finland Ltd., Finland

Dancing with a wicked problem – Approaching designer’s deeper understanding of multisensory user experience through design diaries
Laura Mononen, Rebekah Rousi, Johanna Silvennoinen, Emma Vuorenmaa & Tiia-Elina Kokko
Faculty of Information Technology, University of Jyväskylä, Finland

How futures thinking can benefit from design thinking and strategic thinking
Leon Young, Future Strategic Thinking, Australia

A recipe for making deep, meaningful images of the future
Akhgar Kaboli & Petri Tapio
Finland Futures Research Centre, University of Turku, Finland
The Future of Work: An Interactive Workshop on Perspectives among Europe

Time: Tuesday 13 June at 13:30–15:00
Room: Kustaa
Moderators and panelists: Cornelia Daheim\textsuperscript{a}, Epaminondas Christofilopoulos\textsuperscript{b}, Sirkka Heinonen\textsuperscript{c}, Ondrej Valent\textsuperscript{d}, Ole Wintermann\textsuperscript{e} & Ibon Zugasti\textsuperscript{f}

\textsuperscript{a} Future Impacts Consulting, Germany
\textsuperscript{b} Phemonoe Lab, Greece
\textsuperscript{c} Finland Futures Research Centre, University of Turku, Finland
\textsuperscript{d} Technology Centre ASCR, Czech Republic
\textsuperscript{e} Bertelsmann Foundation, Germany
\textsuperscript{f} Prospektiker, Mondragon Corporation, Spain

The Millennium Project, an international think tank on global future perspectives, has developed long-term scenarios on the future of work and technology until 2050. This workshop brings in different perspectives on the scenarios and the question how work might develop, by contrasting different national or regional perspectives and facilitating an interactive discussion.

City of Turku, Foresight System Round Table

Time: Tuesday 13 June at 13:30–15:00
Room: Dining Room
Moderator: Education Manager Leena Jokinen

The development process of the foresight and innovation system for city of Turku
Tarja Vuorinen, City of Turku, Finland

The case study of foresight capacity amongst leaders within the city of Turku
Anna Einola, Turku School of Economics, University of Turku, Finland

Comment the foresight system elements and methods for enhancing foresight culture in organizations
René Rohrbeck, the Aarhus School of Business and Social Sciences, Aarhus University, Denmark

In the special session Project Manager Tarja Vuorinen will present the development process of the foresight and innovation system for the city of Turku. A masters’ student Anna Einola will present her study of foresight capacity amongst leaders within the city of Turku. The conference key note speaker René Rohrbeck will comment the foresight system elements and methods for enhancing foresight culture in organizations. The round table discussion welcomes attendee’s questions and reflections on the development of foresight systems in different organizations.