

**eurac**  
research

**Wer erklärt uns die heutige Welt?**  
UNESCO und OECD geben Antworten

**Chi ci spiega il mondo oggi?**  
UNESCO e OCSE offrono risposte

**Who Explains Today's World?**  
UNESCO and OECD Provide Answers

23.01.2020, ore 15.00 – 19.30 Uhr  
Auditorium, Eurac Research



# eurac research

15.00

**Welcome and Opening**

Roland Psenner, President of Eurac Research



# eurac research

15.05 – 15.30

## Einleitung

*Die heutige globale Situation und die Notwendigkeit von Zukunftsbildung (Futures Literacy)*

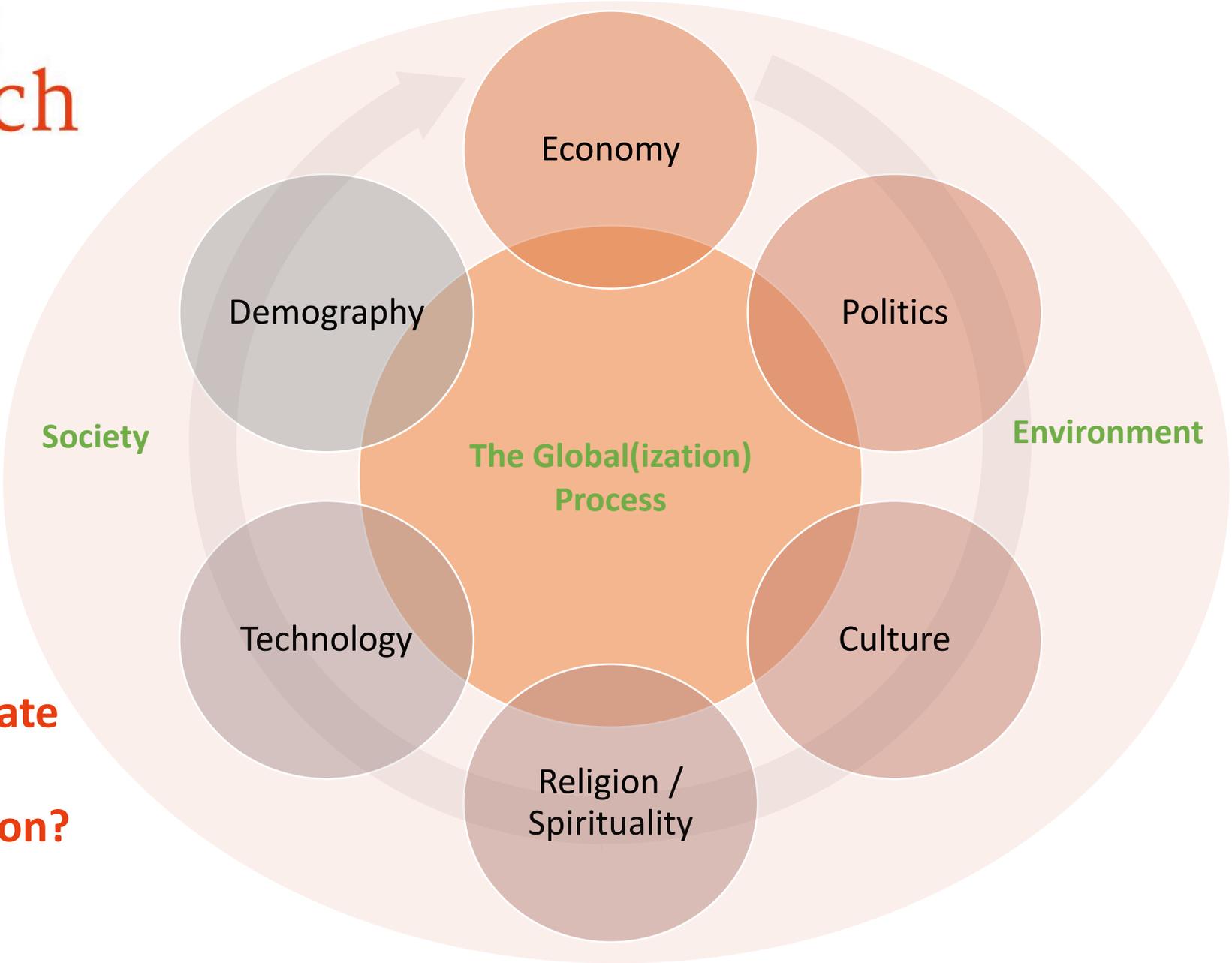
*La situazione globale attuale e la necessità di un'educazione sul futuro (Futures Literacy)*

*A Basic Framework of Today's Global Situation and the Need for Futures Literacy*

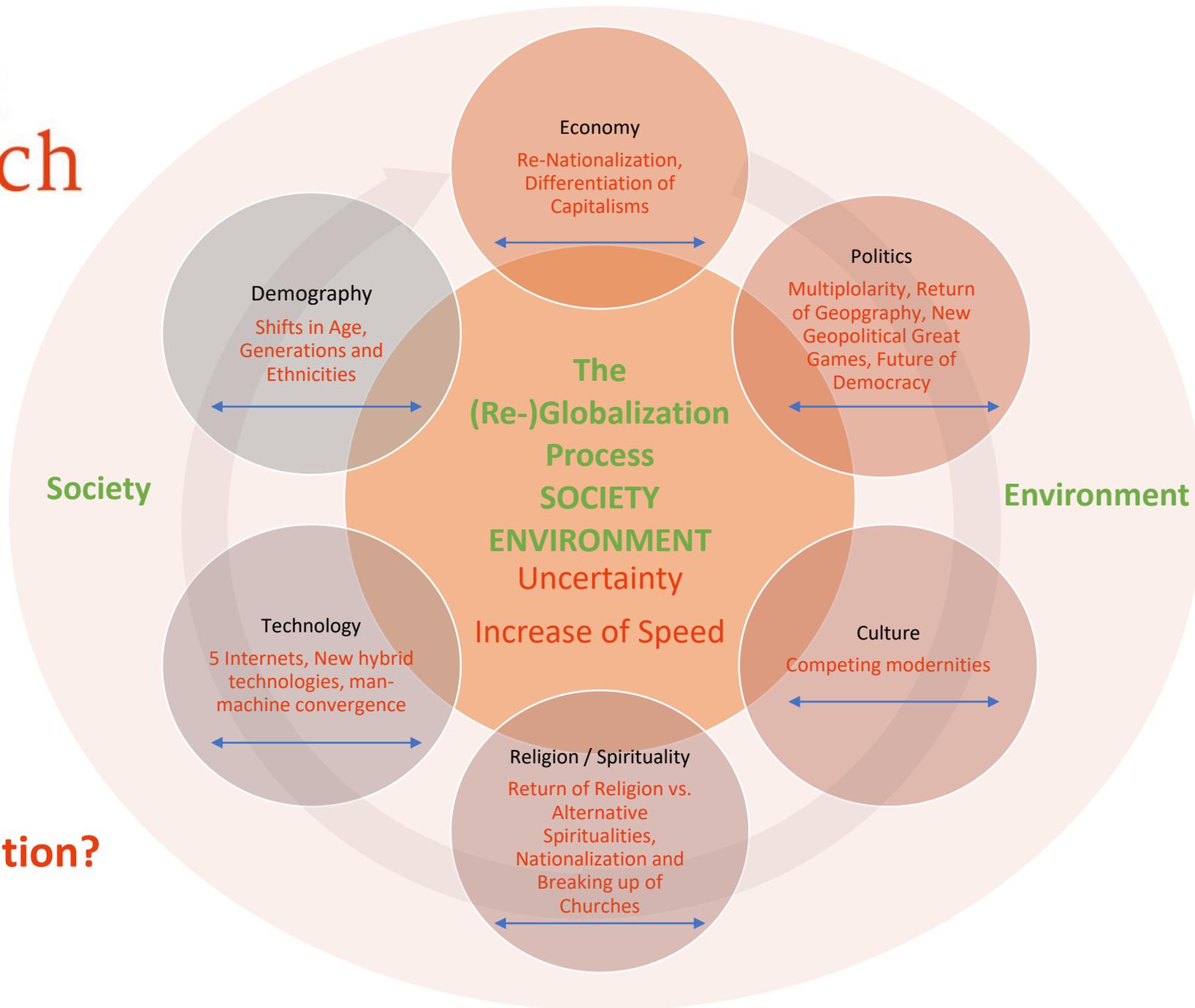
**Roland Benedikter**, Co-Head of the Center for Advanced Studies, Eurac Research



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research



**The current state  
of the world:  
Re-Globalization?**



**What is  
Re-Globalization?**

## **„Global Systemic Shift.“**

### **How To Understand The Present Phase of Globalization?**

#### **The rise of a multipolar and multidisciplinary global order**

There is a comparatively broad agreement in the Cultural, Social and Political Sciences today that we are living through a “Global Systemic Shift” that involves all known fields of societies both in the democracies of the West and in the illiberal societies in other parts of the world. What is arising on a global scale is an epoch of “competing modernities”, where different global civilizations will be similarly evolved, but will interpret the notions of what a “good life” is and should be in different ways, not necessarily tied anymore to the Western core notions of democracy, open society or human rights. Connected with this are demographic and technological developments which will increasingly shape the overall future of social processes made of politics, economics, culture and religion. While the different specialized sciences have produced noticeable knowledge about the overall process in their single disciplinary areas, what is still missing is a reasonably balanced framework of how to read the ongoing in a multidisciplinary and integrative manner, capable of bridging theory and application. It is time to integrate crucial insights of both Political and Economic Sciences, and to consider the effect of Cultural and Religious Change, as well as the interdependency of all parts of the system. This is also necessary due to the fact that the current "global systemic shift" will most probably not remain an "event" isolated in history, but will rather become a permanent “state of things” because of the increasing speed of global transformation, the impact of the so-called “second modernity” and its “fluidification” of order patterns (Zygmunt Bauman) as well as the “shrinking of the present” (Hermann Lübbe) as a general civilizational phenomenon. In short, the attempt must be made to integrate elements delivered by System Theory with elements from Action Theory. It can be assumed that the possibilities to anticipate the outcomes of the overall process and to handle it appropriately will depend of the possibility to develop a synthetic macro-picture which must identify the core developments behind the very different single phenomena. Our approach tries to identify some of these core elements by investigating the - very different, but coalescing - roots and streams of the “Global Systemic Shift” within the increasing interweavement between political, economic, cultural and religious symptomatology, and to present a methodological attempt of integration that in addition takes into consideration the increasing impact of demography and technology.

- Request: Complexity reduction
- Effects: Populism, Rise of authoritarian regimes and AI surveillance
- Antidoton: Taking a grip on uncertainty, complexity and potential futures
- Working on futures for instilling an “Ethics of Participation” and an “Ethics of Reversibility”

## **Unesco and OECD – The two leading global think-tanks**

- Explore the future for everybody's benefit
- Integrating science, research, education and policy to create peace and a common world
- Global and international foresight and best practice integration between states, institutions and organizations
- Unesco: founded 1945, 195 member states, 2800 collaborators, 1.2 billion US\$ budget (2018 and 2019)
- Oecd: founded 1948/1961, 35 member states and more than 100 advised through collaborations, 390 million Euro budget (2019)
- Both lay the science, research and education bases for international agreements, contracts and cooperations
- International advisory for governments, institutions and civil society

- Method of how to learn and systematically handle the future autonomously and independently
- Integrating ambiguity
- Taking away fear
- „Using the future“ for the present (Riel Miller; difference of Futures Literacy to forecasting and foresight: anticipation)
- Thinking about the future alters the present - in any case
- There is not one future, but many
- Futures literacy is a capacity like reading and exercising freedom (Miller)
- Since 2012 more than 30 Futures literacy laboratories (Unesco)
- 8 Unesco Chairs for Futures Literacy, many additional planned

- Futures Literacy Education through Laboratories in Civil Society and Schools (Unesco)
- Spatial Productivity (Oecd)
- Inter- and Transdisciplinary Anticipatory Strategy for the Present (Using Futures)
- Culturo-Sensitive Policy: Combining Contextual Politics with Imaginal Politics
- Youth-centred policies
- Precision Politics („Glocal“ and Regional Art of Governance)

- Impacting questions of vital importance in a regional, autonomous and multiethnic „futures economy“
- Mobilizing the youth, increasing spatial productivity, refining precision politics, avoiding populism through participation and by “futurizing the present“
- Single questions: NOI Technology park? Future technologies (5G)? Future of Glocality and Locality? Ethnic and Autonomy futures?
- South Tyrol needs Futures Literacy Laboratories
- South Tyrol needs Futures Literacy Education in Schools
- South Tyrol needs international cooperations on Futures Literacy and data sharing

# eurac research

15.30 – 16.45

**Discussion**

*Where Stands the World Today? The Perspective of the UNESCO*

*Moderation:* **Harald Pechlaner**, Head of the Center for Advanced Studies, Eurac Research

**Riel Miller**, Head of Futures Literacy, UNESCO

**Edgar Göll**, Institute for Future Studies & Technology Assessment and FU Berlin

**Epaminondas Christofilopoulos**, Foundation for Research & Technology - Hellas, UNESCO

Chair on Futures Research

**Hanns-Fred Rathenow**, Professor emeritus, former Director at the Institute for Social Sciences and Education in History and Politics, TU Berlin



# eurac research

15.30 – 16.45

## Discussion

*Pillars of Contemporary Global Development and Futures Literacy*  
*Die Säulen zeitgenössischer globaler Entwicklung und Futures Literacy*  
*I pilastri dello sviluppo globale contemporaneo e della Futures Literacy*

Riel Miller, Head of Futures Literacy, UNESCO



# eurac research

15.30 – 16.45

## Discussion

*Die Zukunft verstehen: Wie sind die aktuellen globalen Tendenzen zu lesen?*

*Capire il futuro: Come leggere le attuali tendenze globali*

*Understanding the Future: How to Read the Current Global Trends?*

**Edgar Göll**, IZT – Institut für Zukunftsstudien und Technologiebewertung und  
Freie Universität Berlin



# ***Understanding the Future: How to Read the Current Global trends?***

**Who Explains Today's World?  
UNESCO and OECD Provide Answers**  
International Conference  
Jan. 23, 2020  
at EURAC Research, Bozen

**Dr. Edgar Göll**  
Head of Research  
Institute for Futures Studies and Technology Assessment  
Berlin | [www.izt.de](http://www.izt.de)



# Institute for Futures Studies and Technology Assessment

established 1981

- 40 scientists with different disciplinary backgrounds  
economy, sociology, political sciences, social geography,  
engineering, physics, biology, communication sciences,  
future studies ...
- Supranational Network „Futures Research“
- Master program at the Free University Berlin
- Member of WFSF and ecornet
- Intention to establish a UNESCO Foresoght Chair with FU  
Berlin



# Benefits of good Future Research

**FR enables extensions of knowledge creation:**

**Content:** additional perspectives (what?)

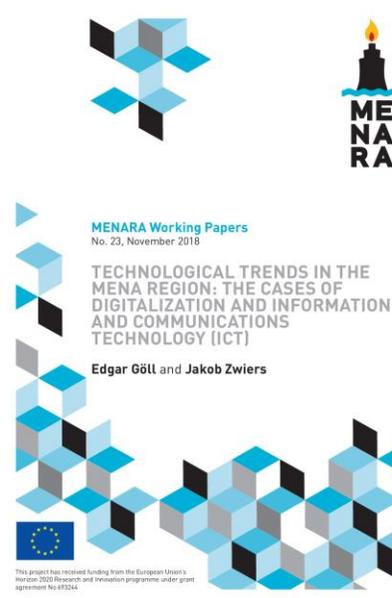
**Social:** additional actors (who?)

**Temporal:** additional time(s) (when?)

- Transparency and orientation (visualization of the situation, trends, development opportunities)
- Explain implicit assumptions (transparency)
- Administrative level (individual/family ... global)
- Holistic and complex (multidisciplinary, etc.)
- Expansion of options and new solutions (out of the box)
- Extend/supplement traditional patterns of thought (innovation)
- Status and relevance (influence potential)

# Online Real-Time Delphi

- ▶ **139** experts and researchers invited  
71 of the invited experts participated at the survey
- ▶ July 2 – August 24, 2018
- ▶ Participants were able to see the responses of all the other experts (anonymously) at all times, and they were able to change and adjust their answers as often as they liked.



# Scenarios 2050

- Unstoppable climate change
- Post-oil world
- An urbanized region
- Digitalization and automation
- Religiosity, individualization and citizenship
- Strong or fierce states
- Managing the effects of today's conflicts
- China: primus inter pares
- Game-changing Africa
- Europe and the MENA region: A family issue

(all including: *Characteristics, Opportunities and Risks*)

# Conclusions

- States that continue to present themselves as US allies are also willing to strengthen links with Moscow and Beijing. Egypt, Saudi Arabia, Turkey, Israel are able to play external powers off against each other. Middle Eastern governments have even succeeded in maneuvering global powers to do what they otherwise might not have done.
- **The EU has no choice but to engage with the MENA due to proximity and the importance of the external-internal nexus**
- EU should (1) widen the scope of its outreach and policies to accommodate to the region's shifting centres of gravity (towards Africa and the Gulf); (2) develop a more forward-looking political strategy; and (3) place greater emphasis onto reconciliation and intra-societal dynamics



Thank you for your attention!

[www.izt.de](http://www.izt.de)

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15.30 – 16.45

## Discussion

*Avant-garde Technology as a Timely Force of Global Development*  
*Avant-garde-Technologie als treibende Kraft globaler Entwicklung*  
*La tecnologia all'avanguardia come motore dello sviluppo globale*

**Epaminondas Christofilopoulos**, Foundation for Research & Technology - Hellas,  
UNESCO Chair on Futures Research



# Avant-garde Technology as a Timely force of Global Development

Work & Technology towards 2050



WORK/TECHNOLOGY  
**2050**  
SCENARIOS AND ACTIONS

Dr Epaminondas Christofilopoulos, Futurist  
Chairholder, UNESCO Chair on Futures Research  
Foundation for Research and Technology - Hellas (FORTH)

# Contents

- UNESCO Chair on Futures Research
- Work:Tech 2050
- Next Technologies
- Skills
- Futures Literacy



United Nations  
Educational, Scientific and  
Cultural Organization



UNESCO Chair in Futures Research, PRAXI Network, Foundation for  
Research and Technology - Hellas, Greece

# UNESCO Chair on Futures Research

● Hosted in the Foundation for Research and Technology (FORTH)

● Futures studies (e.g. scenarios for the future of China)

Development of foresight tools (e.g. serious games)

Futures education material & Workshops

Futures Literacy

● [www.futures.gr](http://www.futures.gr)



**Teach the  
Future .**

# What await us?

## What are the main trends?

### What they mean for Europe & South Tyrol?



**FUTURES**



**DECOLONIZING  
THE FUTURE**



United Nations  
Educational, Scientific and  
Cultural Organization



**praxi** »  
help-forward network

UNESCO Chair in Futures Research, PRAXI Network, Foundation for  
Research and Technology - Hellas, Greece



# 2050

## The Future of Work.Tech



# Millennium Project



Cyberspace



Arts & Media



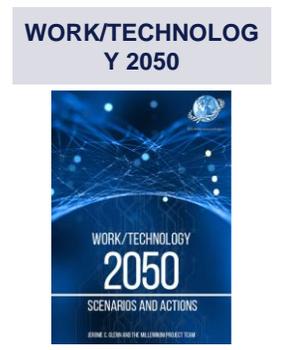
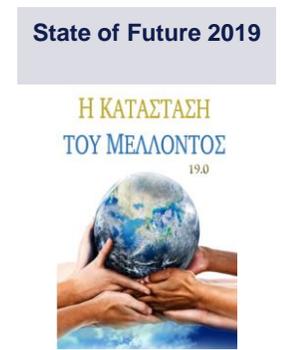
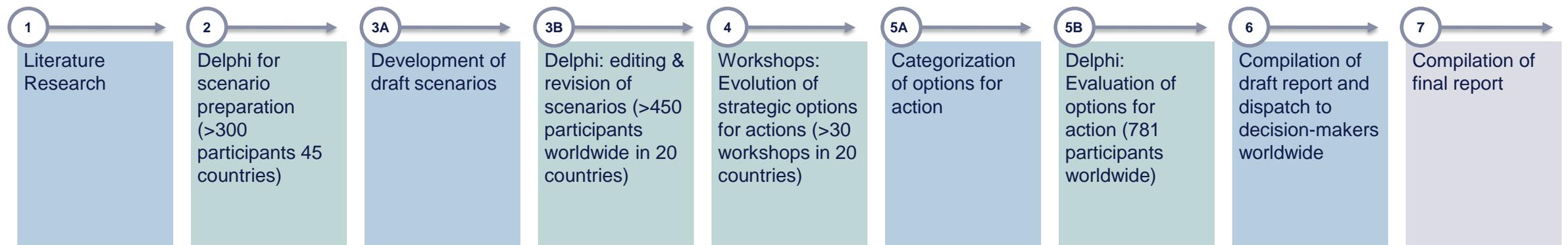
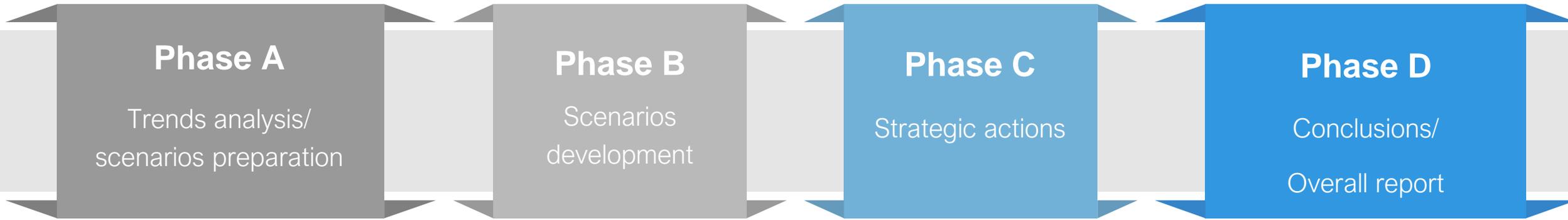
# Many handicaps

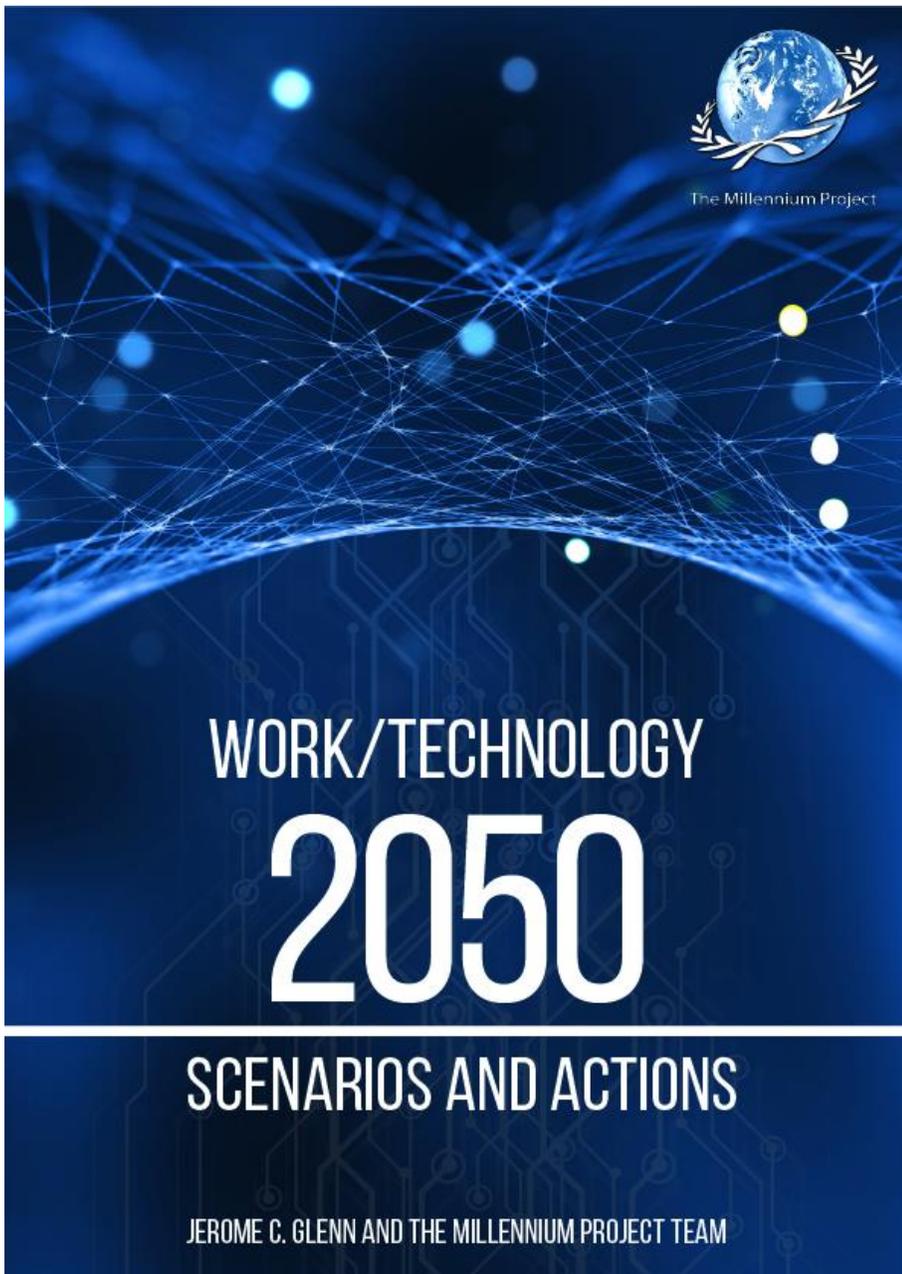
- Limited focus on specific technologies (usually robotics and A.I.)
- Limited geographical coverage
- Limited scope (focusing on specific aspects of the future)
- Limited time-horizon (such topics require long-term focus)



<http://www.millennium-project.org/>

# Future Work/Tech 2050





1 It's Complicated - A Mixed Bag

## 3 Scenarios for 2050

2 Political/Economic Turmoil - Future Despair

3 If humans Were Free - The Self-Actualizing Economy

# Next Technologies (NT) in Synergy



Artificial Intelligence  
Augmented Brain



Robotics



Synthetic Biology



Supercomputer  
Cloud  
Big Data

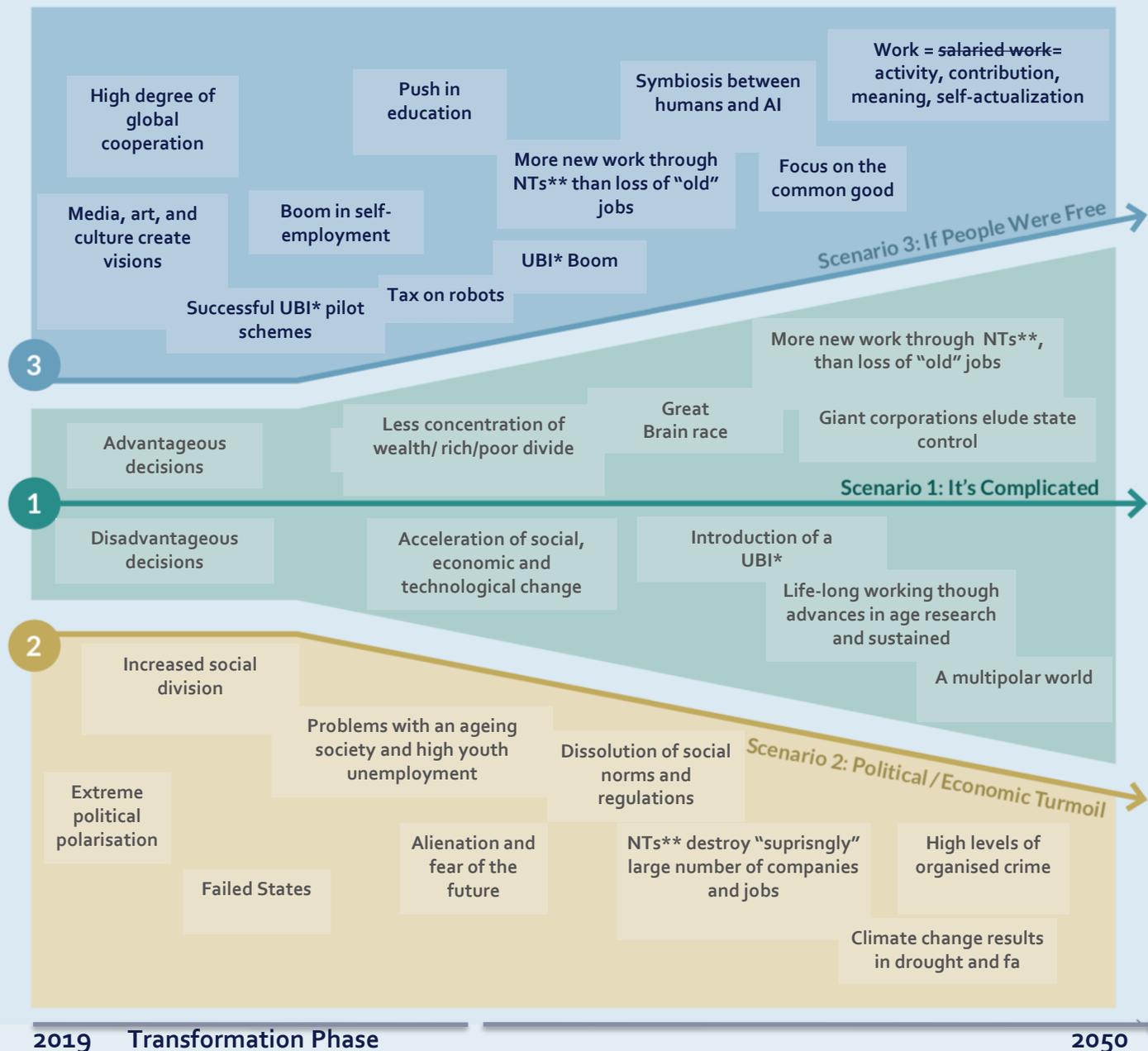


Internet of Things  
Semantic Web



Augmented Reality  
Tele-everything  
Holographics

# The three Scenario Paths at a Glance



\* UBI= universal basic income, \*\* NT= Next Technologies

Source: Future Impacts/ Bertelsmann Stiftung, Glenn et. 2018

# Composition of Employment 2050

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## Millennium Project scenarios

	Scenario 1 It's complicated	Scenario 2 Political/ Economic Turmoil	Scenario 3 If humans were free
Employed	2 billion	1 billion	1 billion
Self-employed	2 billion	1 billion	3 billion
Unemployed / or in transition	1 billion	2 billion	1 billion
Informal economy	1 billion	2 billion	1 billion

3 billion workforce today -> 6 billion 2050

# Composition of Employment 2050

35

## Millennium Project scenarios





Artificial General Intelligence (AGI)  
Artificial Narrow Intelligence (ANI)

Data has a better idea

# Artificial Super Intelligence (ASI)





# Skills

# STEM beyond 2030 ?

Science



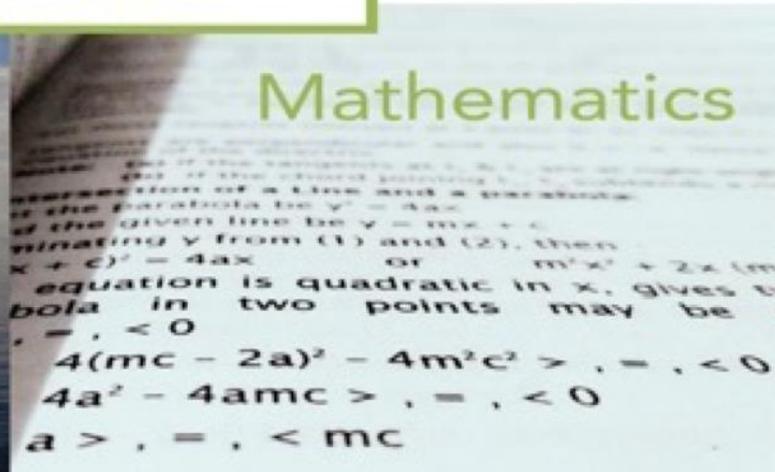
Technology



STEM Education



Mathematics



Engineering



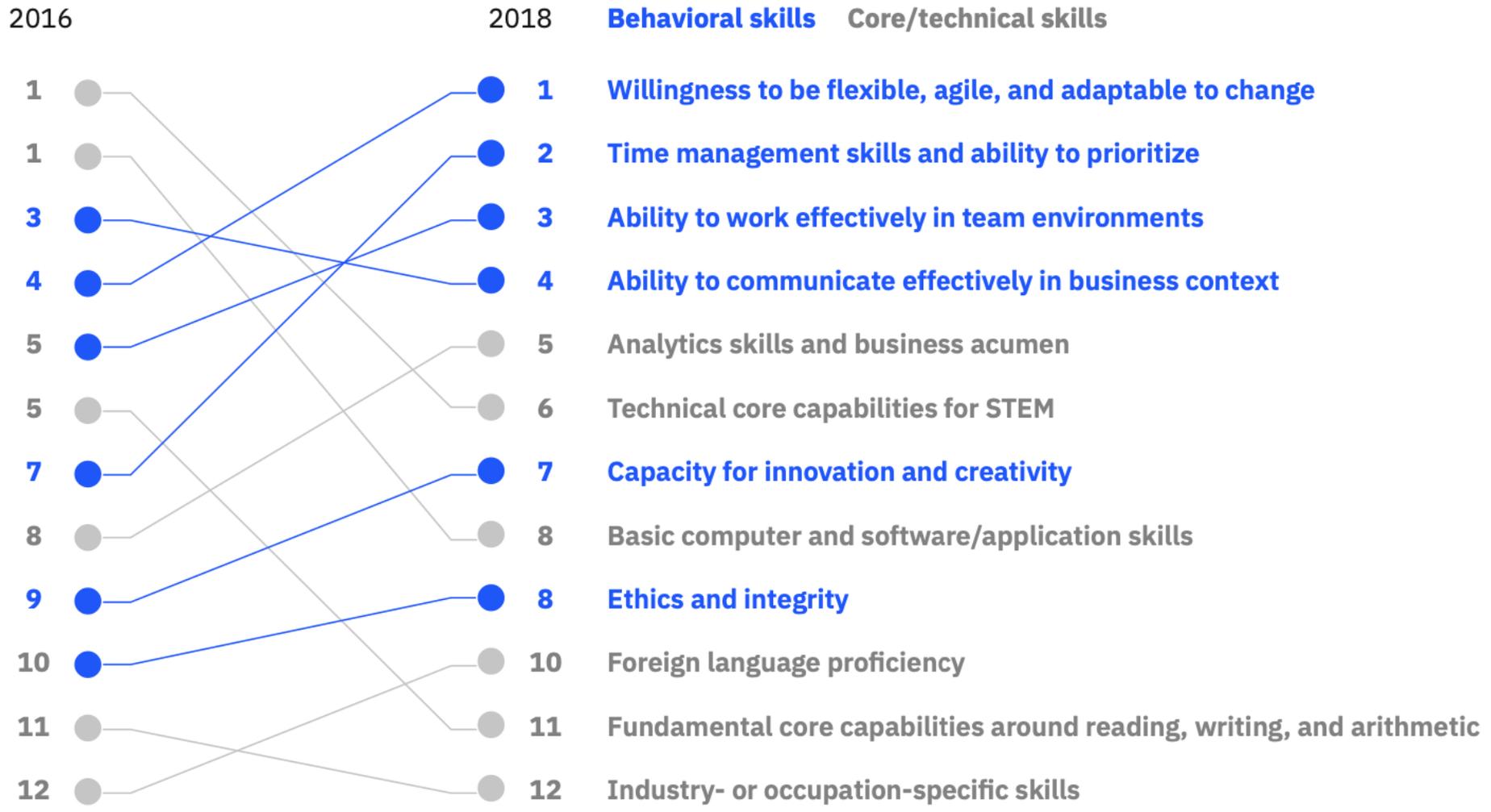
# STEM after 2030 ?



Millennium Project

Picture source: <https://liberationist.org/the-metaskills-you-need-to-thrive-in-the-21st-century/>

# Changes in 3 years ...

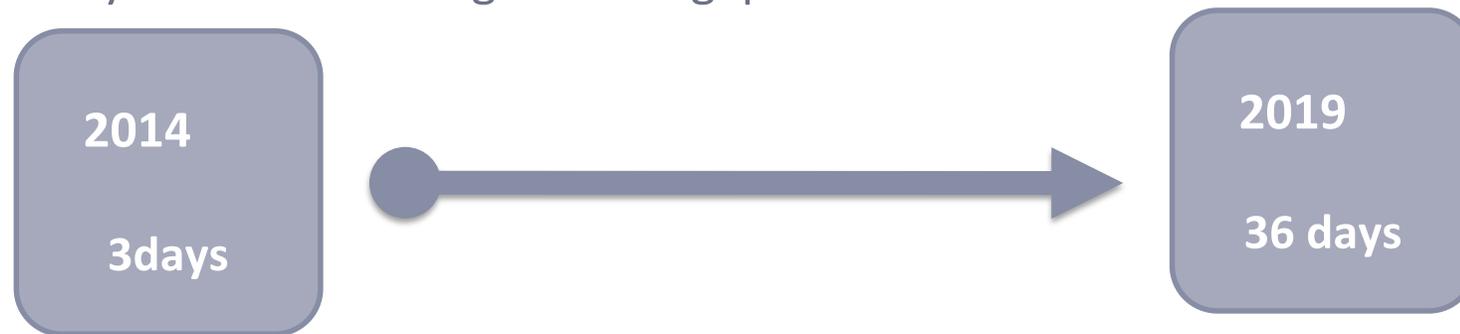


IBM Institute for Business Value

# How easy can executives keep-up with technological developments?

42

- ★ Only 41% of CEOs of big companies and organisations have the knoweldge, skills, and resources to apply the corporate strategies.
- ★ Days to cover the digital skills gap:



**Skills are temporary; meta-skills are permanent**



IBM Institute for  
Business Value





MORTON STREET, CORNER OF BEDFORD, LOOKING TOWARD BLEECKER STREET,  
MARCH 17, 1893.

*Regent Street, London*





## TRANSFORMING THE FUTURE

ANTICIPATION IN THE 21ST CENTURY

# Futures Literacy

“

Futures Literacy is a capability. A soft skill that allows people to better understand the role that the future plays in what they see and do.

”

UNESCO



United Nations  
Educational, Scientific and  
Cultural Organization

# UNESCO

IN BRIEF

WHAT WE DO

WHERE WE WORK

PARTNERS

JOIN US

RESOURCES

*"Building peace in the minds of men and women"*

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Home › Futures Literacy

## Futures Literacy

### Futures Literacy: A Skill for the 21st Century





***FUTURES***



**DECOLONIZE  
THE FUTURE!**

## UNESCO Chair on Futures Research



[futures@praxinetwork.gr](mailto:futures@praxinetwork.gr)



+30 2310 501148 (Thessaloniki)  
+30 210 3607690 (Athens)



[www.futures.gr](http://www.futures.gr)



# eurac research

15.30 – 16.45

## Discussion

*Zukunftsfähigkeit als Querschnittsaufgabe ganzheitlicher Schulentwicklung*  
*Futures Literacy come compito trasversale dello sviluppo olistico della scuola*  
*Futures Literacy as Part of a Whole School Cross-Curricular Approach*

**Hanns-Fred Rathenow**, Univ.-Prof. (a.D.), ehemaliger Direktor des Instituts für Gesellschaftswissenschaften und historisch-politische Bildung, TU Berlin



# Mögliche – sowohl wahrscheinliche als auch wünschenswerte/vermeidbare Zukünfte (wahllos herausgegriffen)

- 2028: Leitner erfindet Kunstschnee ohne Wassereinsatz.
- 2027: neuer Chefredakteur bei den „Dolomiten“ gesucht.
- 2028: Gründung der gemeinwohlorientierten T.+M.-E.-Stiftung für Medien- und Meinungsvielfalt.
- 2022: Internetkonzerne wissen mit Big Data noch genauer, was wir morgen mögen werden.
- Russisch/Chinesisch wird in Südtirol zweite Fremdsprache.
- 2025: Produktionsanlagen kommunizieren untereinander eigenständig, reparieren sich, vernetzen sich und bestellen Material selbstständig (Industrie 4.0, Internet der Dinge).
- Internetkonzerne zahlen dort Steuern, wo sie genutzt werden.

# Mögliche – sowohl wahrscheinliche als auch wünschenswerte/vermeidbare Zukünfte (wahllos herausgegriffen)

- 2027: Selbstfahrende PKWs am Stilfser Joch erfolgreich getestet.
- Multilingualer Habitus in Bozener Schulen erfährt didaktische Aufwertung.
- Steuerung selbstlernender Maschinen nach demokratischen Grundsätzen
- 2023: Digitalisierung wird am Leitprinzip eines konsequenten Datenschutzes ausgerichtet.
- 2025: Gemeinwohlorientiertes Internet - Commons, Open Source, Kooperative Plattformen
- 2022: Sharing Economy breitet sich rasant aus.
- 2024: SASA gewinnt Ausschreibung und führt kostenlosen ÖPNV in ganz Südtirol ein.

## persönliche Zukunft

- Schulwechsel
- Schulabschluss
- Berufsausb. / Studium
- Familiengründung
- ...
- ...
- ...

\*  
|  
GEB.

20.20

persönliche Zukunft

mögliche Zukünfte

## mögliche Zukünfte

- Wahrscheinliche
- Wünschenswerte
- Vermeidbare

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*Moderation: Roland Benedikter, Co-Head of the Center for Advanced Studies, Eurac Research*

**Sergio Arzeni**, President of INSME - International Network of SMEs Brussels and Rome, former Director of the OECD Centre for Entrepreneurship, SME and Local Development, Paris

**Barbara Ischinger**, Associate Professor of African Studies at Cologne University, OECD Director of Education and Skills (PISA) 2006-2014, UNESCO Director of Cultural Communication 1992-1994, Vice-President of Humboldt University Berlin (International Relations and Communication) 2000-2005

**Nicola Brandt**, Head of the OECD Berlin Centre



# eurac research

17.00 – 18.00

## Discussion

*Imprese medie e piccole nel contesto globale di oggi: ruolo, situazione e prospettive*

*Small and Medium Enterprises in Today's Global Framework: Role, Situation and Perspectives*

*Klein- und Mittelbetriebe im heutigen globalen Umfeld: Rolle, Situation und Perspektiven*

**Sergio Arzeni**, Presidente dell'INSME - Rete internazionale delle PMI, Bruxelles e Roma, ex direttore del Centro per l'imprenditorialità, le PMI e lo sviluppo locale dell'OCSE, Parigi



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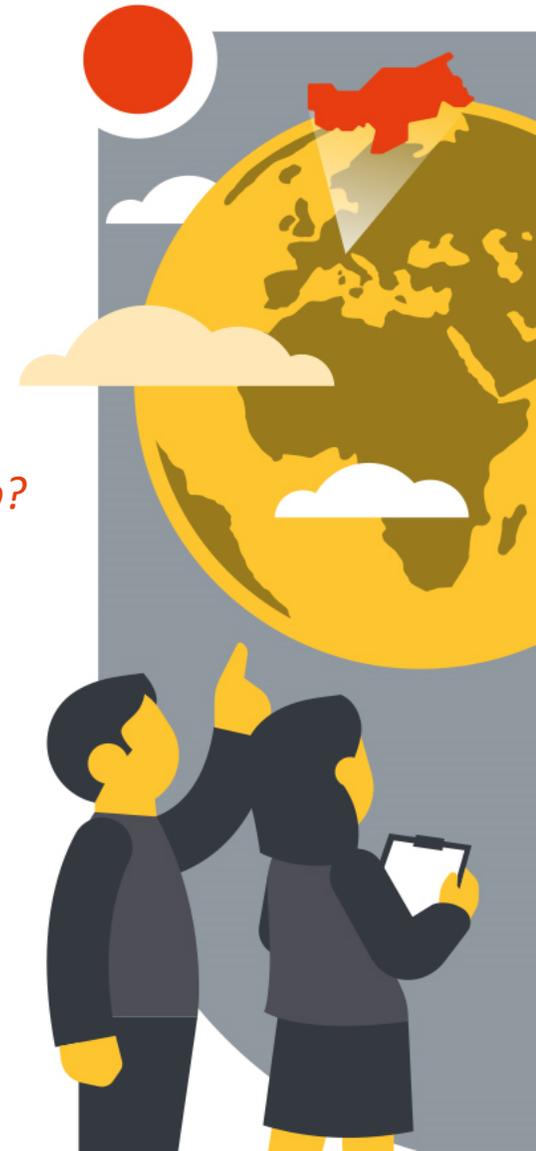
*Bildung, Forschung und Wissenschaft im Kontext der aktuellen globalen Entwicklung: Was ist möglich, was nicht?*

*Istruzione, ricerca e scienza nel contesto dell'attuale sviluppo globale: cosa è possibile, cosa no?*

*Education, Research and Science in Contemporary Global Development:*

*What Is Possible, What Is Not?*

**Barbara Ischinger**, Associate Professor für Afrikastudien an der Universität Köln, OECD-Direktorin für Bildung und Kompetenzen (PISA) 2006-2014, UNESCO-Direktorin für Kulturkommunikation 1992-1994, Vizepräsidentin der Humboldt-Universität Berlin (Internationale Beziehungen und Kommunikation) 2000-2005



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## Discussion

*Frauen, Ungleichheit und Umwelt: Kernthemen der heutigen Politik?*

*Le donne, la disuguaglianza e l'ambiente: I temi centrali della politica di oggi?*

*Women, Inequality and the Environment: The Core Issues of Today's Politics?*

Nicola Brandt, Leiterin des OECD Berlin Centre



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*Today's Main Global Trends and Perspectives*  
*Le tendenze e prospettive globali più importanti di oggi*  
*Die wichtigsten globalen Trends und Perspektiven der heutigen Zeit*

**Yves Leterme**

Prime Minister of Belgium 2009-2011, OECD Deputy Secretary-General 2011-2014



# eurac research

18.30 – 19.30

*Today's Main Global Trends and Perspectives*

*Le tendenze e prospettive globali più importanti di oggi*

*Die wichtigsten globalen Trends und Perspektiven der heutigen Zeit*

## Yves Leterme

Prime Minister of Belgium 2009-2011, OECD Deputy Secretary-General 2011-2014

*Discussion:*

**Paweł Karolewski**, Professor of political theory and research on democracy,  
University of Leipzig

**Andrea Billi**, Director of Sapienza Innovazione

*Moderation:* **Ingrid Kofler**, Senior Researcher, Center for Advanced Studies, Eurac Research



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