

THE ROLE OF FORESIGHT IN GUIDING GOAL-ORIENTED TRANSFORMATIVE CHANGE PROCESSES

Attila Havas, University of Debrecen; CERS; & CIAS
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Foresight in a rapidly changing world

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MOTIVATION

Major challenges need to be tackled with concerted efforts

Goal-oriented transformative change processes require:

- considering a broad range of possible goals by key stakeholders
- selection of relevant, feasible, and ambitious goals
- strong commitment of the full spectrum of relevant actors to act

Hence, we need to consider

- the role of foresight (and other FLAs) in guiding and implementing GOTCs
- the relevance of various types of (extant, known) foresight (and other FLAs)
- the need for devising (piloting) new types of foresight (and other FLAs)

GOAL-ORIENTED TRANSFORMATIVE CHANGE: A DEFINITION

A closely interrelated set of *radical changes* at the level of a *socio-technical or an entire socio-economic system*, with changes simultaneously affecting its underlying technologies, business models, cognitive frames, institutions, business and social networks, as well as business and social practices, *initiated* by a set of – possibly various types of – actors to achieve *a major overarching goal*.

These radical systemic changes are complemented by radical innovations “below” the system level, as well as millions of incremental changes at all levels.

Whether the intended overall goal has been accomplished is not part of the definition.

OVERVIEW

Analytical approach and methods

Illustrative cases

Tentative conclusions

ANALYTICAL APPROACH AND METHODS

CONCEPTUAL FRAMEWORK

Innovation can be a driving force of change or a possible response to current or expected future societal challenges

In the former case, normative orientations are needed to guide and frame the innovation-driven change process (OECD 2024)

e.g., early regulatory experimentation related to emerging technologies

In the latter, innovation is conducted to deliver novel solutions to help address major societal challenges of other origins, e.g., “missions”

Intended and unintended change processes: it is essential to

- anticipate possible sources and consequences of change
- consider normative issues and dilemmas

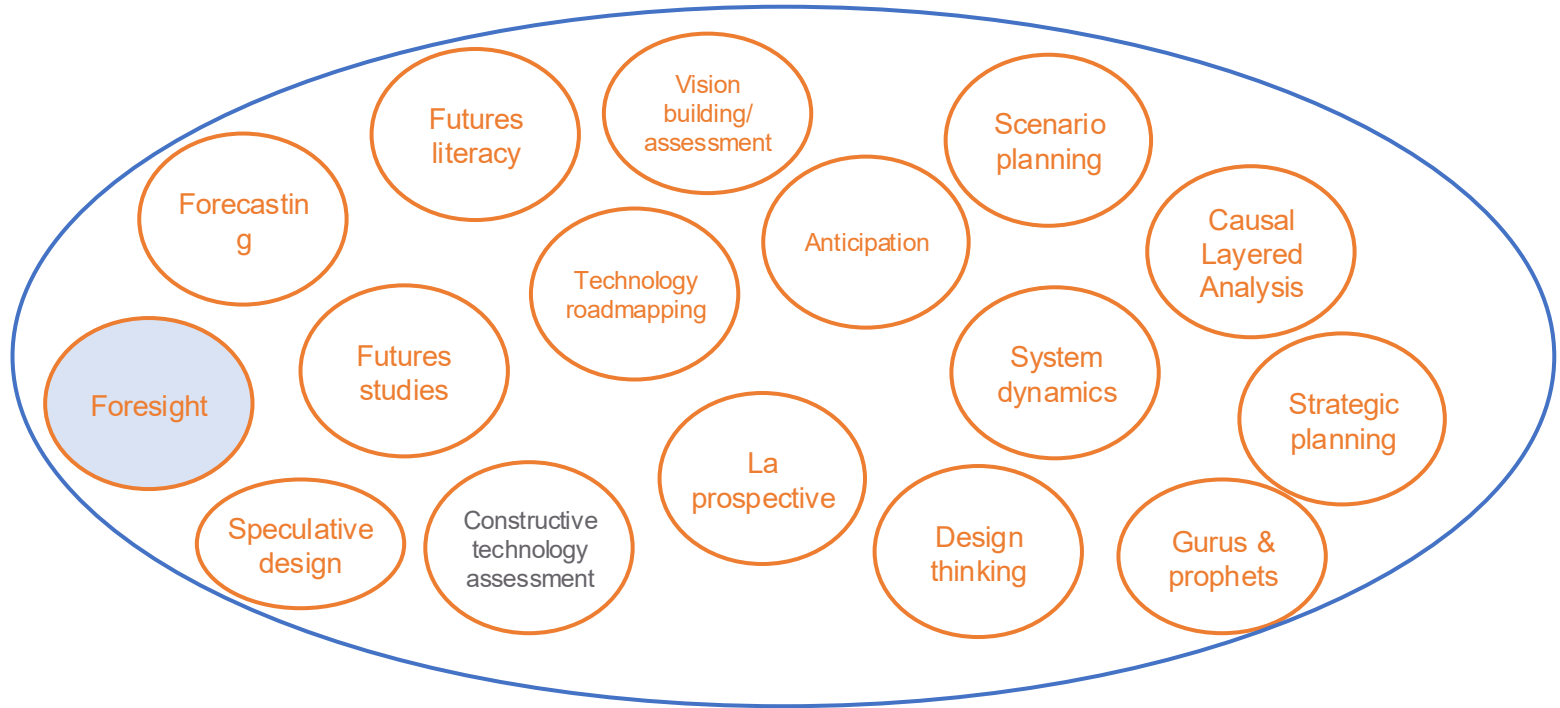
This is a demanding strategy-setting process ⇒ innovation systems thinking and foresight are needed

INNOVATION SYSTEMS THINKING

We need a thorough understanding of the dynamics of change processes:

- how system level changes are set in motion (by what actors and factors, through what mechanisms);
- ‘below’ the systemic level, what actors can develop and introduce business, social, and hybrid innovations to tackle the above challenges and create new opportunities;
- how these various types of innovations are diffused;
- how knowledge necessary for these innovations is created, utilised, and diffused in an innovation ecosystem and generalised across innovation ecosystems;
- how various other resources are produced and exchanged;
- how the interactions (especially co-operation and competition) among the actors are guided by institutions (‘the rules of the game’);
- how institutions are crystallised and then change;
- how new innovation ecosystems and new ‘nodes’ of innovation systems emerge;
- how the innovation policy governance sub-system works and changes;
- how entire innovation systems evolve, get stabilised and then transformed

FORESIGHT AND OTHER FORWARD-LOOKING ACTIVITIES



All concerned with the future ⇒ future-oriented or forward-looking activities

Different objectives and communities of practice ⇒ different points of departure into (the) future(s)

FORESIGHT

Foresight is a “(...) systematic, participatory process, collecting future intelligence and building medium-to-long-term visions, aimed at influencing present-day decisions and mobilising joint actions” (EC HLEG 2002)

It considers multiple futures

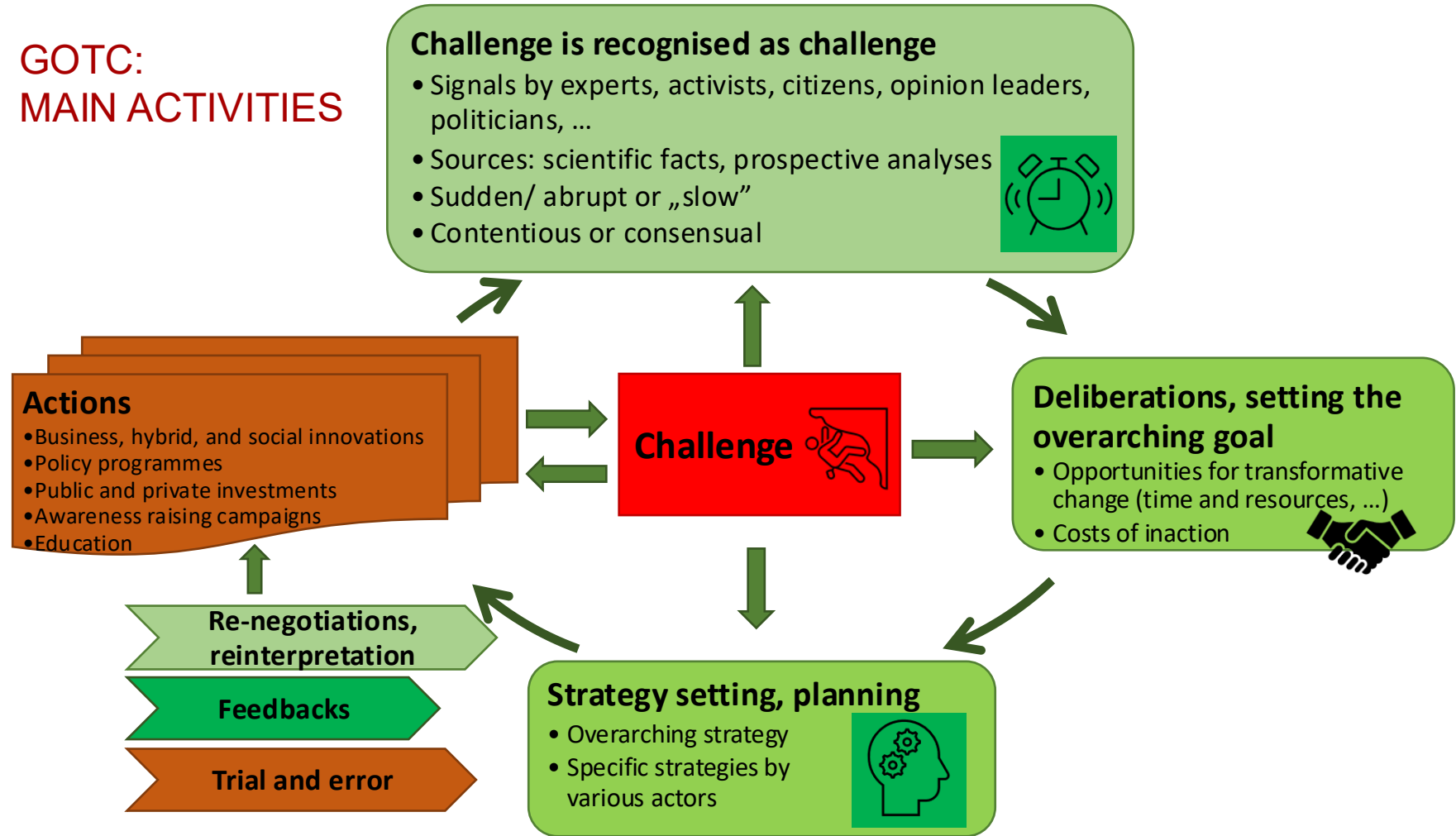
A governance tool (conducted to underpin decisions)

Not an academic exercise, not a discipline

Transparent

Creates “ownership” ⇒ Reduces uncertainty

GOTC: MAIN ACTIVITIES



MAIN ASSUMPTION AND RESEARCH QUESTIONS

In the GOTC context, foresight needs to be applied in a connected manner both at the level of (business, social, and hybrid) innovation processes and at the level of societal transformations at different system levels (from global to local)

At what stages of GOTCs can (should) foresight (and other FLAs) play a role (and what roles)?

What types of (extant, known) foresight (and other FLAs) are relevant at what stages of GOTCs (for what roles)?

Do we need to devise (pilot) new types of foresight (and other FLAs) or combine extant types of foresight (and other FLAs) in a novel way?

∑ Our main objectives:

- offer new building blocks for an integrative conceptual framework to devise and implement GOTCs (cf. Havas et al. 2023)
- initiate a dialogue on the role(s) of foresight (and other FLAs) in GOTCs and the need for new types of foresight (and other FLAs)

THE RELEVANCE OF FORESIGHT TO GUIDE GOTC

Expected impacts/ benefits

- Process benefits
 - new networks created
 - existing networks strengthened
 - shared vision(s)
- More effective policies
- Uncertainty reduced
- Joint/ orchestrated actions (for the desired GOTC)
- Transformed systems (incl. governance sub-systems)
- Strengthened/ adapted (sub-)systems when transformation is not needed or not possible (for the time being)

OUR APPROACH

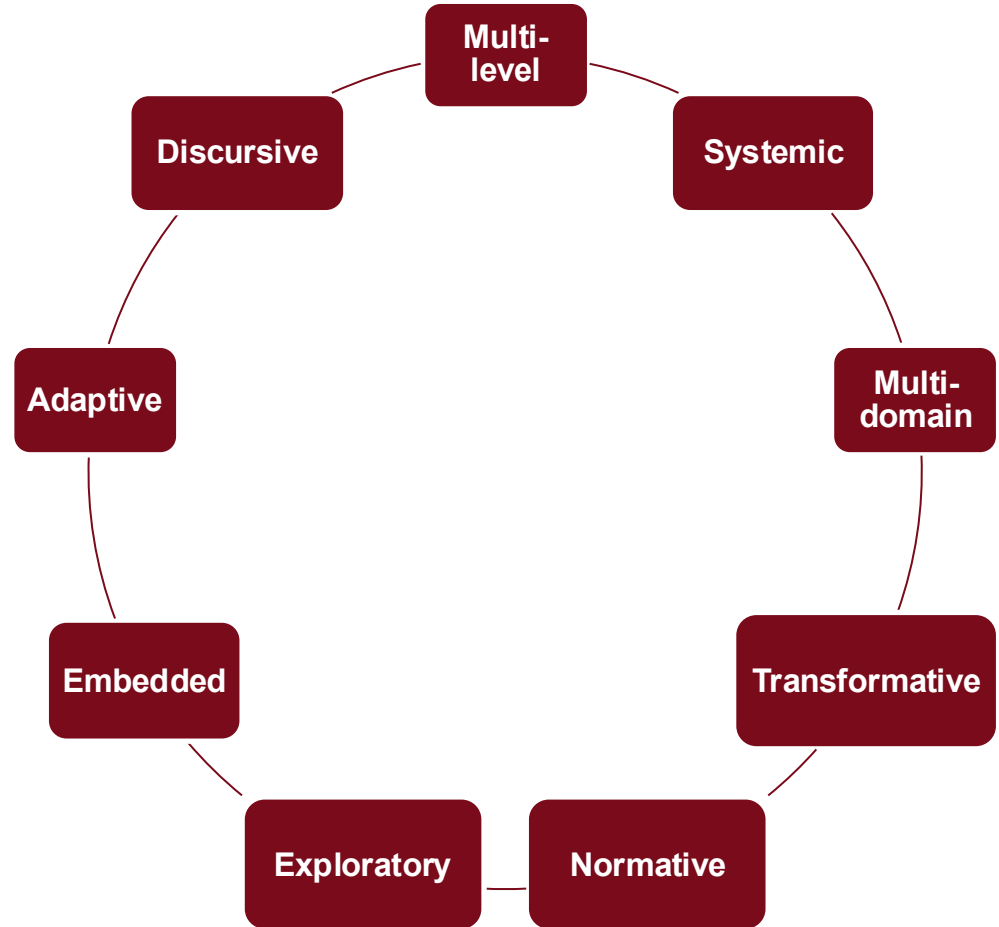
Systematic ‘speculation’ about the need for, and the main features of,

- new type of foresight processes to inform and guide GOTC
- nested policies aimed at steering transformative change processes towards normative, jointly set goals

We have identified

- key features of extant foresight (and other FLAs) in light of GOTCs
- real-life cases as starting points to pilot with new types of foresight (and other FLAs) to contribute to GOTCs (at various stages, in different roles)

KEY FEATURES OF
MULTI-LEVEL,
AMBIDEXTROUS
FORESIGHT



DO WE FIND THESE FEATURES TOGETHER IN EXTANT PROCESSES?

Illustrative cases

FOD: FORESIGHT TOWARDS THE 2ND STRATEGIC PLAN OF HEU

Focus on potentially disruptive social, geopolitical and technological developments

Purpose: “Informing” and “Future-proofing” of the proposal for 2nd Strategic Plan

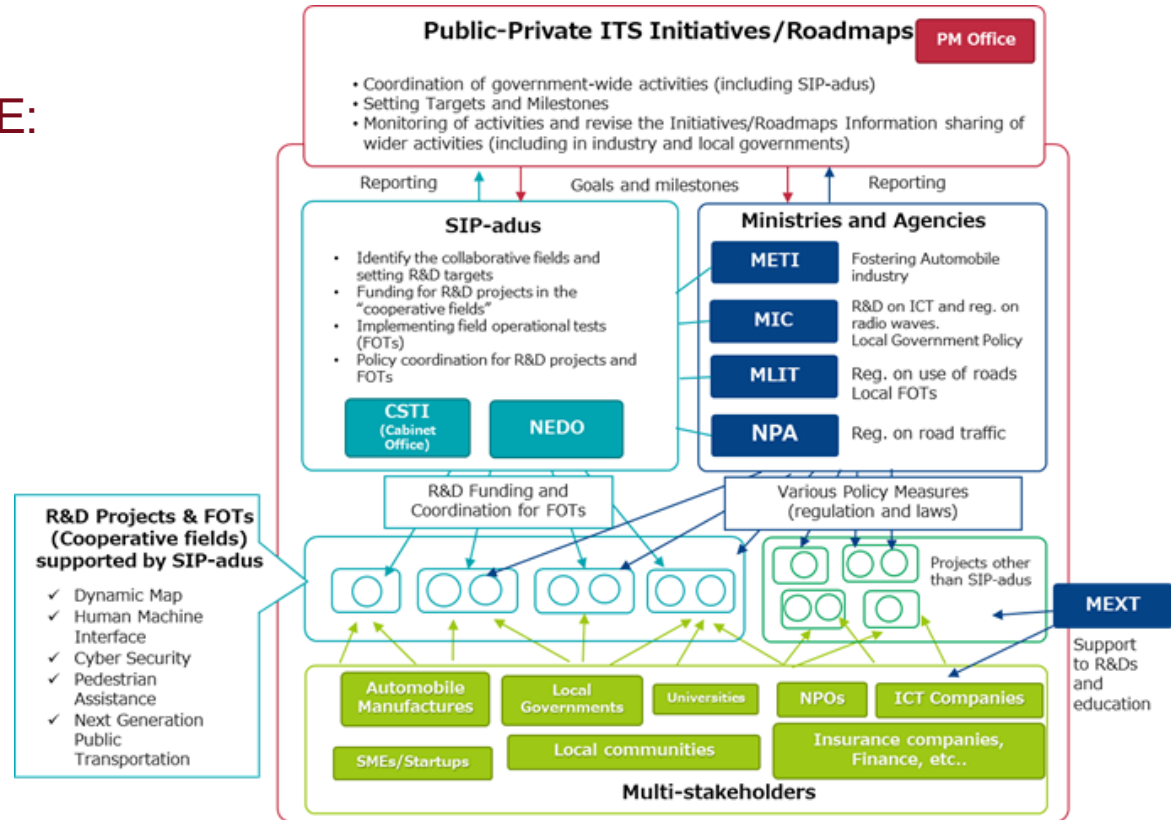


FOD: FORESIGHT TOWARDS THE 2ND STRATEGIC PLAN OF HEU

Multi-level	Explicit multi-level context scenarios (global/ EU)
Systemic	Systems thinking underpinning scenario development, combining technological, social and institutional change at multiple levels
Multi-domain	Nine domains addressed in parallel, with some interactions and exchange between them
Transformative	Focus on disruptive developments and their (transformative) consequences
Normative	Major normative issues addressed in some domains (GAI, human enhancement, global commons, climate change/ geoengineering), but no clear normative guidance
Exploratory	Exploratory scenarios developed in most domains
Embedded	Close and regular interaction with the EC Services policy implications: thematic priorities, instruments, and governance
Adaptive	Tailored to a specific client organisation's position (i.e., EC), but no time for re-adjustment
Discursive	Futures4europe online platform for wider stakeholder involvement, online workshops, policy dialogues

JAPAN'S STRATEGIC INNOVATION PROGRAMME: AUTONOMOUS DRIVING

- ADUS: Autonomous Driving for Universal Services
- Part of national Strategic Innovation Programme
- Multi-Stakeholder Roadmapping
- Multi-site pilot implementation



NEDO=New Energy and Industrial Technology Development Organization
 METI=Ministry of Economy, Trade and Industry
 MIC=Ministry of Internal Affairs and Communications
 MLIT=Ministry of Land, Infrastructure, Transport and Tourism
 NPA=National Police Agency
 MEXT=Ministry of Education, Culture, Sports, Science and Technology

JAPAN'S STRATEGIC INNOVATION PROGRAMME: AUTONOMOUS DRIVING

Multi-level	National vision and roadmap, but regional implementation
Systemic	Integrated systemic perspective on regional pilots; social, behavioural, technological, institutional, organisational innovations
Multi-domain	National SIP programme covers several areas, but largely independent from each other
Transformative	ADUS aims at place-based pilot implementation, based on roadmapping
Normative	Regional implementation offers space for normative deliberation
Exploratory	Largely technology-driven national programme exploring alternative options
Embedded	National programme closely tied to national policy strategy, involving several ministries
Adaptive	Several iterative loops of adapting plans
Discursive	Discursive spaces at regional level, while at national level government-industry fora dominate

TENTATIVE CONCLUSIONS

SUCCESS FACTORS OF FORESIGHT

An appropriate governance sub-system

Committed client/s

Sound and flexible project plan

Devoted participants

Relevant methodological support and skills development

Professional facilitation and implementation

DRAWBACKS OF FORESIGHT

Time-consuming

Costly

Demanding and complex \Rightarrow many factors and actors can 'fail' it

FORESIGHT AND OTHER TYPES OF FLA

Foresight at the systemic level

Foresight at organisational levels

Foresight on “components” of GOTC

by public bodies in various policy domains, civil society organisations, businesses

Other types of FLAs can be useful, given the drawbacks of foresight

e.g., expert-based FLAs: faster, cheaper, and easier to align with the clients' needs

BUT i) cannot replace foresight; would be against the ‘spirit’ of GOTC in democratic societies

ii) do not expect process benefits

TENTATIVE GOVERNANCE, POLICY, AND OTHER PRACTICAL IMPLICATIONS

Orchestrate the above foresight processes and FLAs

Create communication channels across levels (global, international, national, regional, and sectoral) and domains (interrelated issues)

Establish interconnected fora for dialogues among stakeholders

Develop new, 'frugal' methods to run foresight processes; not at the expense of process benefits

Devise methods for monitoring GOTC and for real-time and ex post evaluation [does ex post make sense in the GOTC context?]

Devote resources to translate foresight implications into actionable recommendations

Be ambitious but remain practical

DIRECTIONS FOR FUTURE RESEARCH

Identifying and analysing more cases

EU Mission Boards, other EU level strategy-setting processes, national mission policies, Estonia, Finland, Germany, Korea, Singapore, ...

Comparing these cases

Devising modules and 2–3 ideal type process models for multi-level, ambidextrous foresight (for different contexts)

Compiling evaluation criteria for multi-level, ambidextrous foresight

Enriching and refining policy and other practical implications

THANK YOU!

Attila Havas

attila.havas@krtk.hu

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