

IT'S TIME TO THINK BIG

FINLAND DEFINING THE FUTURE

Spring 2022



The aim of the project was twofold with objectives both for Finland and Business Finland

For Finland

~ 10 growth opportunities
and related critical capabilities



For Business Finland

~ 3-5 thematic focus areas
to direct our activities

Focus areas for foresight
monitoring

**BUSINESS
FINLAND**



FINLAND DEFINING THE FUTURE

Our strategy for 2025



PROSPERITY

CUSTOMER

SOCIETY

--- PURPOSE ---

We generate prosperity for Finland by accelerating our customers' sustainable growth globally.



Economic Growth ▶

Globally thriving companies

Productive economy



Sustainability ▶

Developers of new sustainable solutions and operations

Superpower in sustainable development



Competitiveness ▶

Bold reformers of business

Attractive and resilient business landscape

--- VISION ---

We excel at developing and refining the best of Finnish potential and matching it with global opportunities. We create world-class success stories.

The identified significant future growth opportunities and the chosen thematic focus areas complement Business Finland's strategy and help us increase impact on all strategic core areas.

Strategic priorities ▶



Value-adding and proactive partner for our customers



Strong and proactive actor in society



Change agent for sustainable business



Best workplace for leading-edge expertise



Operationally excellent and agile organization

Values



With passion



Think big

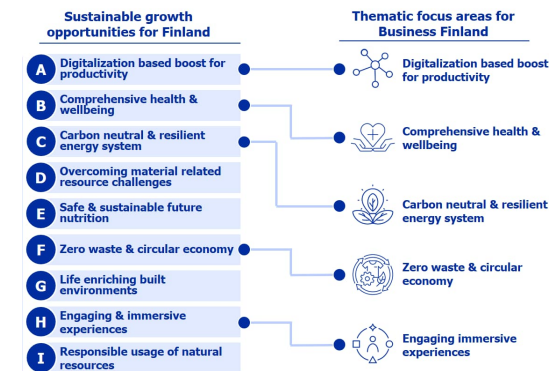
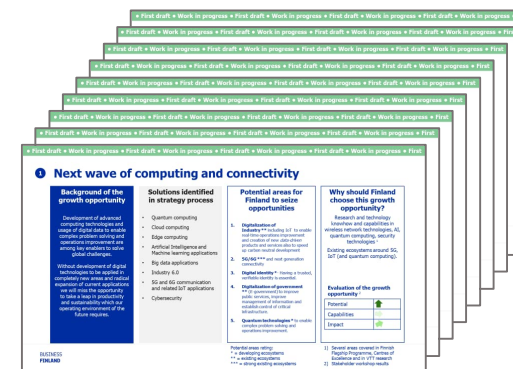


All together



With sisu

A four-phased project



Identification

Foresight & identification of market disruptions

We identified 12 future disruptions that create global market shifts

Description

Descriptions of market shaping disruptions

We described the disruptions and related 10 development paths as well as 11 critical capabilities

Evaluation

Evaluation of Finnish potential and capabilities

We gathered a long list of growth opportunities, and we identified 9 most significant future growth opportunities for Finland.

Selection

Selection of the most potential growth opportunities

Based on the opportunities identified as significant for Finland, we selected 5 thematic focus areas to steer Business Finland's activities

12 disruptions were identified together with international experts



Accelerated mitigation and adaption against climate change



The energy market shift into renewables



Deterioration of the living environments – biodiversity crisis



Race for resources



De-globalization



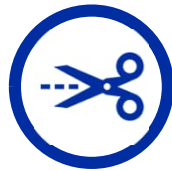
Interconnected and digital world



Shift in demographics



Shift in values



Challenges to prevalent societal systems and the world order



Erosion of shared experience and trust



Transformation and division of work



Global knowledge scarcity and race for talent

10 plausible, desired development paths towards 2035 were created based on the disruptions

Attention is shifting from mitigation to adaptation to climate crisis



Energy systems are becoming more resilient, fair and secure while we are moving to renewables



The quantification of biodiversity's impacts is initiating actions to save our living environment



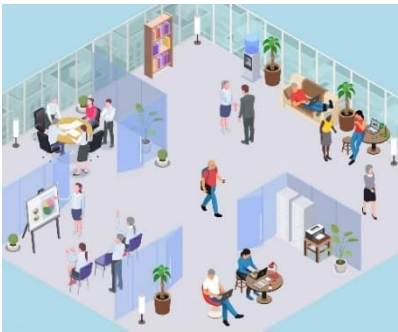
Circularity and more global systems are the solutions to the resource crisis



Digital transition enables a more transparent and equal world



Societies are becoming increasingly diverse demanding changes from companies and individuals



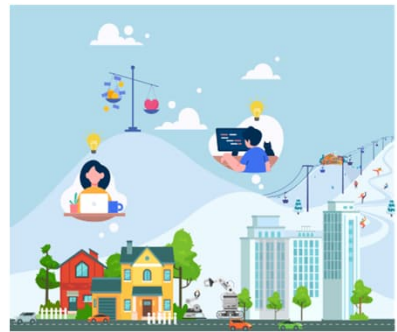
Climate crisis is uniting the world while technology is being harnessed to rebuild trust



Governments and companies are turning inwards while the power of individuals increases



Work is transforming to be an enabler for purposeful life



Knowledge is being redefined to solve world's complex problems



Nine growth opportunities were identified as the most significant for Finland

Digitalization based boost for productivity through the next wave of connectivity

A

Boost productivity through digitalization of industries and expansion of next wave of connectivity to novel applications.

Comprehensive health & wellbeing through prediction, prevention and technological advancements

B

Utilization of health data and implementation of new health technologies to spark new health and wellbeing related innovations and improve patient and clinician value.

Carbon neutral & resilient energy system through sector integration & system approach

C

Development of resilient, flexible, reliable and stable energy systems.

Overcoming material related resource challenges through new bio-based materials & materials for carbon dioxide capture

D

Seize nature-based innovations and side streams to find substitutes for current materials, thereby enabling the transition to carbon neutral industries.

Safe & sustainable future nutrition through food innovations

E

Development of new value-added food innovations, transparent and data-based food chains and food security and safety to shape future proof food systems.

Zero waste & circular economy through eliminating usage of virgin & fossil materials

F

Create solutions to eliminate the usage of virgin material by circulating products and optimizing material chains through AI and digital applications.

Life enriching built environments through nature-inspired and Nordic urbanism

G

Design and create increasingly livable built environments based on Nordic, nature inspired living with services for diverse groups of citizens.

Engaging & immersive experiences through accelerating a paradigm transition in virtual frontiers

H

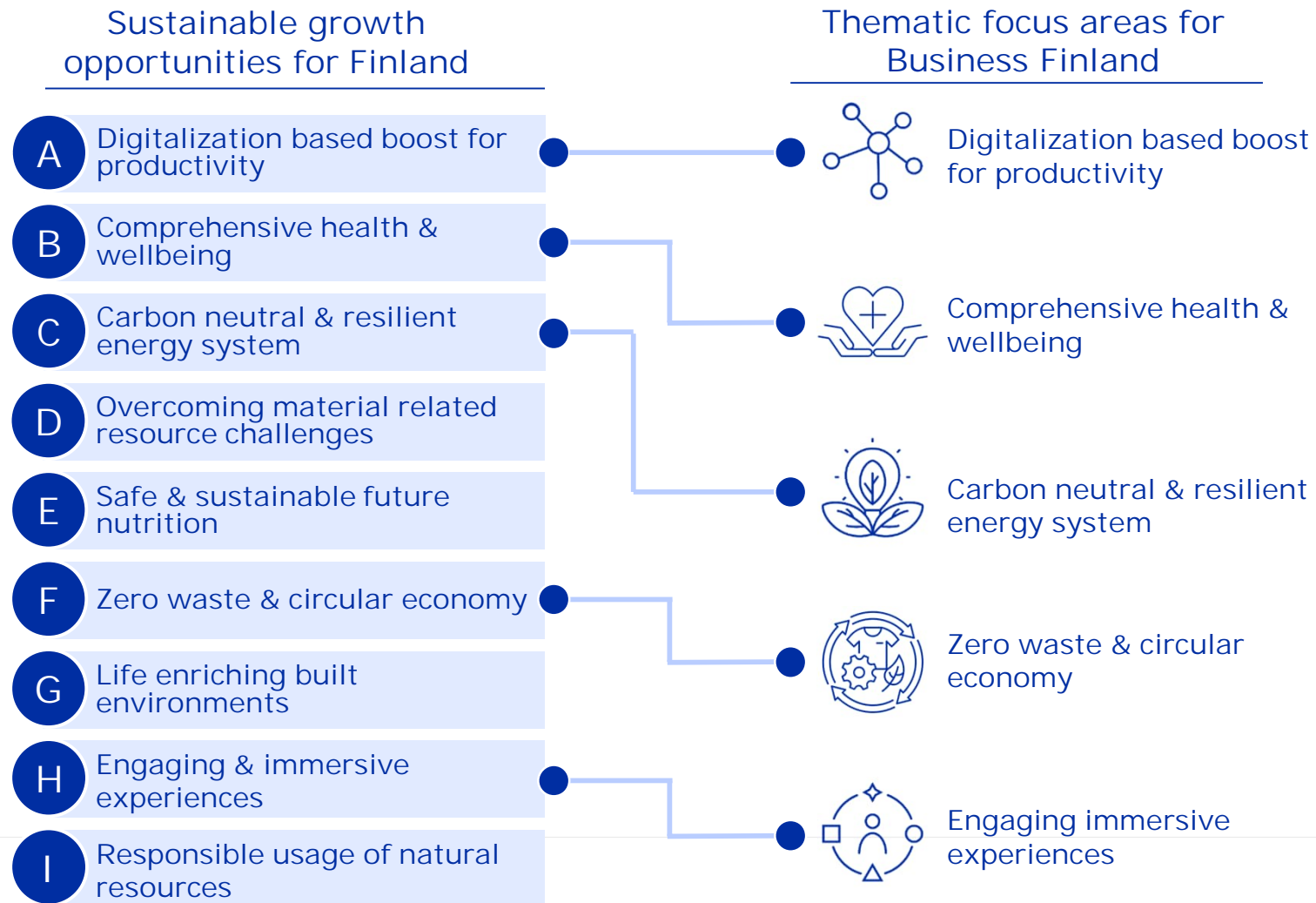
Exploit the opportunities presented by the metaverse by developing new ways to create, engage in and share virtual experiences.

Responsible usage of natural resources through data-driven & green innovations

I

Develop sustainable forestry practices as well as climate smart and socially sustainable mining, extraction and minerals processing solutions.

Most significant sustainable future growth opportunities for Finland and thematic focus areas to steer Business Finland's activities





II. Future development paths

Attention is shifting from mitigation to adaptation to climate crisis



Development path towards the year 2035

The world is in a partial transition to renewables; some countries are further than others, but real breakthrough innovations have already been found.

During the transition, the role of Europe has become stronger. Yet, the global balance has shifted, and Europe has had to defend its values.

Individuals are taking more responsibility in the fight against climate change. Younger generations paved the way for new consumption models and now local sourcing and circular models are widely utilized.

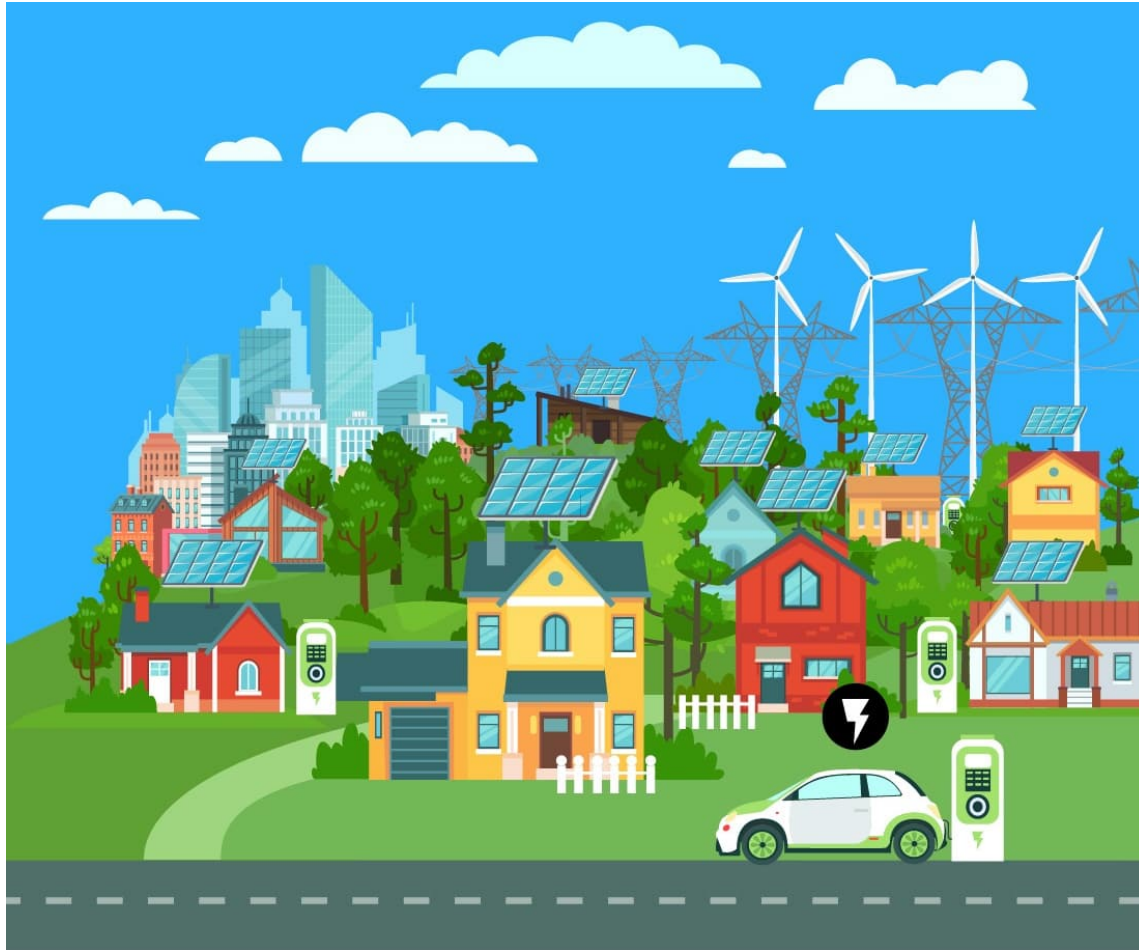
As the climate crisis has progressed, the world has moved from mitigation to adaptation. Individuals and companies have learned to understand the impact that the climate has on businesses and individual lives.

Education is a focal point to tackle the rapid changes; schools have adapted the new normal into their curricula.

Diversification of talent is more appreciated and accepted in solving wicked problems.



Energy systems are becoming more resilient, fair and secure while we are moving to renewables



Development path towards the year 2035

We have a resilient, fair and secure energy system which is based about 75% on renewables.

At the beginning of the 2020's, the transition brought a severe increase to energy prices that drove up inequality.

Towards 2035 the prices have levelled off. Breakthroughs in green hydrogen technology and increase in wind energy have supported steady price development.

Regulation has played a significant role in controlling prices and keeping societies' eye on renewables.

Moving to renewables has created a power vacuum for completely new energy companies. Digital solutions have provided opportunities for smart companies and there are several types of companies present in the markets.



The quantification of biodiversity's impacts is initiating actions to save our living environment



Development path towards the year 2035

There is a global consensus on the urge to preserve biological diversity. Investor pressure on companies has been the key influencer on the paradigm shift.

Economics of biodiversity is a major topic, and biodiversity is being measured to understand the relationship between different ecosystems.

Through the measurement systems, societies better understand the health of the ecosystems and have been able to plan their actions in a way that causes no harm to the environment.

Land has been preserved to act as carbon sinks and protectorates. More efficient agriculture practices in terms of resource and land use are in place to promote biodiversity.

An efficient global carbon market has been successful in combatting climate change and a similar system is being implemented for biodiversity.

Particularly the importance of biodiversity in urban areas is emphasized. Urban planning has ensured that cities have more green spaces and corridors. Additionally, data is utilized to manage these sustainable cities.



Circularity and more glocal systems are the solutions to the resource crisis



Development path towards the year 2035

Toward 2035, there has been a strong emphasize on circular economy to improve resource efficiency and to ensure that material resources continue to be available for production.

Gradually, the utilization of resources has become detached from economic growth as well as people's wellbeing. Environmental and societal costs are no longer externalized but accounted for and paid for by the organizations who cause them.

Glocal systems are at the forefront of economies. We have decentralized and localized the use of natural resources through innovative technology.

Resilient and decentralized energy supply has also stabilized the geopolitics around energy.

However, the world resource crisis is not solved. There is an increased search for new innovations to solve e.g., water scarcity.

To support the transition, new participatory models strengthen the cooperation between private and public sectors, on both the local and global level.



Digital transition enables a more transparent and equal world



Development path towards the year 2035

Digitalization plays a key role in solving social challenges.

The world has experienced a dramatic increase in digital skills on a global level.

In 2035 Metaverse holds true. Trusted and transparent interactions and transactions are made possible without third party intermediates. New innovations prosper from accelerated online interaction.

Flexible regulation has been a key enabler to the emergence of a blockchain based web 3.0, which led to a massive increase in the power of consumers. Multisided marketplaces that enable customer-to-customer interactions are prominent.

Metaverse also redeems its promise of equity. Different societal groups and demographics find place in the shared virtual reality. The gap between developed and developing markets has started diminishing, leading to a less polarized world.



Societies are becoming increasingly diverse demanding changes from companies and individuals



Development path towards the year 2035

Societies have adapted to rapidly aging populations. However, countries are not progressing equally in their transformation, which is increasingly recognized.

Work environments have adapted to the shifts in demographics and generational influence. People in the workforce are offered more flexibility and personal freedom, whereas robots and AI has replaced labor intensive, manual work. All people irrespective of their employment status are actively participating in the society.

The role of the welfare state strengthens as people are actively participating in society and using their abilities for the collective good – inclusiveness becomes a norm.

Digital development has been widespread and different demographics have been forced to adopt the use of digital services to participate in society.



Climate crisis is uniting the world while technology is being harnessed to rebuild trust



Development path towards the year 2035

World is increasingly united in saving the planet. Nature and cultural values are at the forefront; Respecting human rights, freedom, democracy and equality.

The struggle between competing values has diminished as people have united in the fight against climate change.

Technology is utilized to improve wellbeing and transparency in the world. This has enabled increased awareness among people and led to decreased polarization.

The role of social companies in shaping values and moving masses is recognized. Strong legislation has ensured that technology companies are held accountable in managing information ecosystems.

The unity of among people is being strengthened by the revision of educational systems that has put critical-thinking center-stage as a core competence already at the primary education.



Governments and companies are turning inwards while the power of individuals increases



Development path towards the year 2035

Regionality is being strengthened by an increased focus on national interests. In the polarized world resilience thinking and securing supply chains is important.

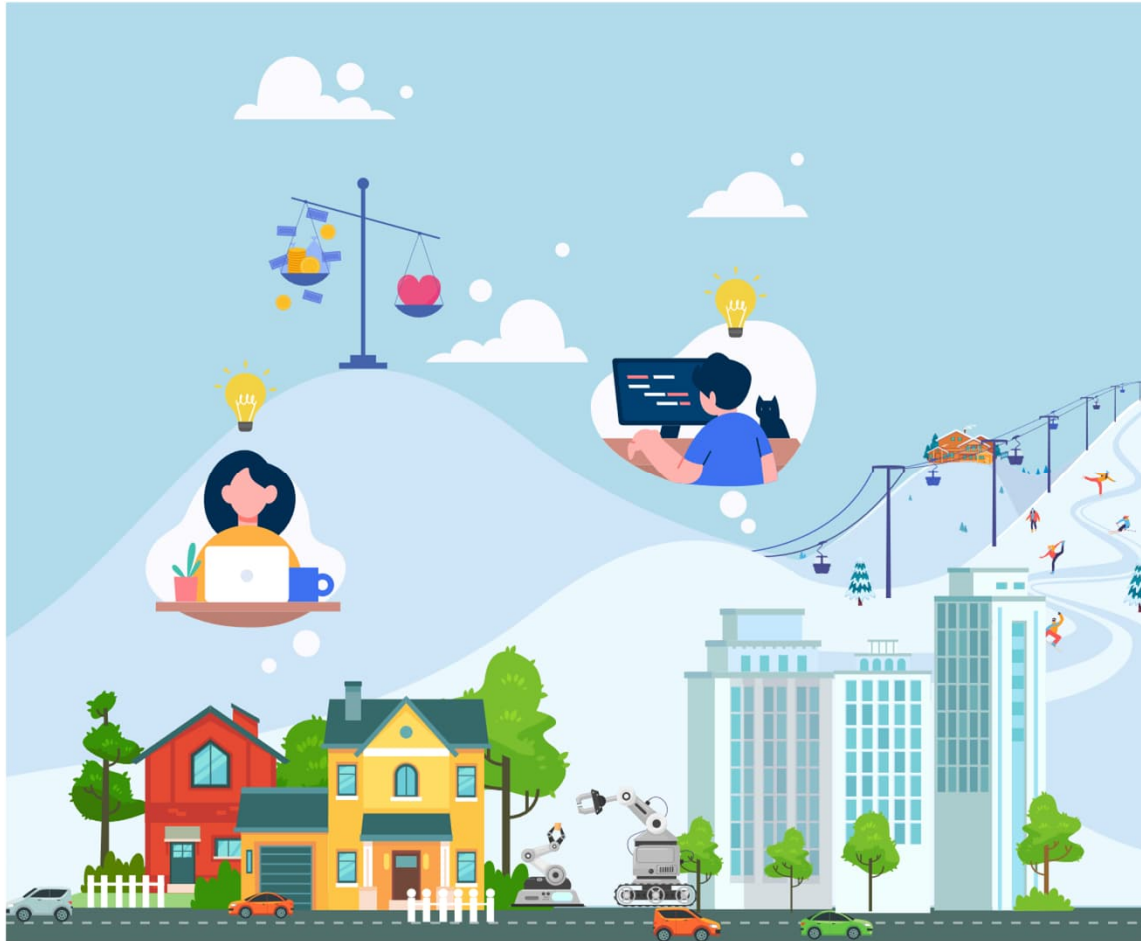
The world is gravitating from larger institutions toward smaller entities. International institutions and organizations are replaced by new blocks and regional initiatives (e.g., BRI). As a result, the UN is losing its power.

However, the definition of a nation is separated from geography as increasingly more interaction is occurring in the metaverse. Decentralized architecture enables that the metaverse is not controlled by one corporation.

Prevailing societal systems are increasingly decentralized, which allows more power to individuals. Cryptocurrencies are replacing traditional money issued by central banks. Then again, consumer activism is on the rise and people are moving away from bigger tech platforms that do not meet their values.



Work is transforming to be an enabler for purposeful life



Development path towards the year 2035

Toward 2035, a decreasing number of people work in “dangerous and heavy” work conditions, which has refined what “work” means. As a result, people have been able to focus more on building a purposeful life.

Younger generations have questioned the relationship between happiness and economic well-being. Simultaneously, mental health crisis has changed people's value base. This has forced companies to make work environments more sustainable.

As a result, the nature of work has become more flexible. There is more personal freedoms in terms where people work and under what terms – hybrid is the new normal.

There are new opportunities and frontiers of making a living such as gig economy, smart contracts and life-long work.

New virtual technologies have enabled greater connectivity and cooperation, as creativity is no longer limited to face-to-face interactions.

Education addresses the new work requirements where collaboration skills and personal development needs are at the frontier.



Knowledge is being redefined to solve world's complex problems



Development path towards the year 2035

In order to address wicked problems such as climate change, cross-over knowledge has become a dominating approach to solving global issues.

Education has also transformed to apply system thinking. Problems are solved collaboratively in cross-functional and cross-technical groups.

System thinking also influences traditional university degrees. New cross-functional degrees and ways of completing degrees have emerged.

Firms are seeking cross-over knowledge by supporting the movements and recruitment of nomads.

Shifted demographics has led to a development of new skill sets – a new workforce with skills suited for emerging challenges is in place.

Gender-equitable education, especially in developing countries, gives societies access to more skills. Education is understood to be the cornerstone of more sustainable and inclusive societies.

