The scenarios as a part of strategic work in the region

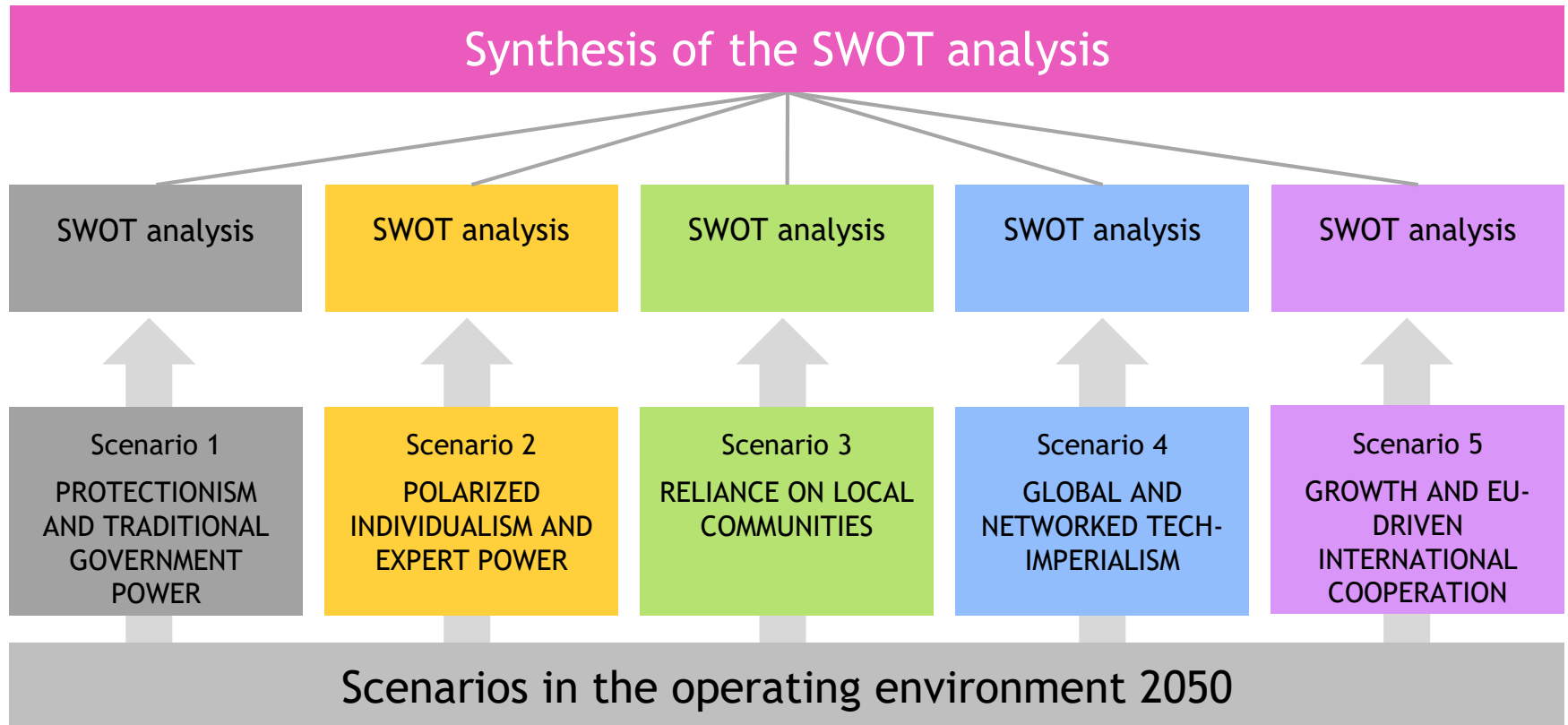19.03.2018
Liisa Hyttinen
Kristiina Heiniemi-Pulkkinen

Smart-up BSR, WP2

- In WP2 the regions will revisit their RIS3 strategies, roadmaps and implementation plans.

- In order to do this work **all the partners will conduct the SWOT analysis of the scenarios.**

- Scenarios are provided by us.

- In this presentation we will show you the scenarios and quidelines how the the SWOT analysis of the scenarios can be done.

- **All the partners will present the results of SWOT in the Lithuanian camp** and they are used later in revisiting your RIS3.

- **The Lithuanian camp is in June**

Scenario work

- The scenarios have been developed in co-operation with Helsinki-Uusimaa Regional Council, Capful Oy and regional experts in 2016-2017

- Scenarios are edited for this project.

Process

Synthesis of the SWOT analysis

| SWOT analysis | SWOT analysis | SWOT analysis | SWOT analysis | SWOT analysis |

| Scenario 1 PROTECTIONISM AND TRADITIONAL GOVERNMENT POWER | Scenario 2 POLARIZED INDIVIDUALISM AND EXPERT POWER | Scenario 3 RELIANCE ON LOCAL COMMUNITIES | Scenario 4 GLOBAL AND NETWORKED TECH-IMPERIALISM | Scenario 5 GROWTH AND EU-DRIVEN INTERNATIONAL COOPERATION |

Scenarios in the operating environment 2050

How to interpret scenarios?

The different scenarios as presented on the following slides are descriptions of alternative future development in the operating environment around the region by 2050.

In the scenario work, a number of uncertainties have been identified, and the scenarios have been built on alternative cases and combinations of these. Among these uncertainties are adequacy and sustainable use of natural resources, regional and community structure, accessibility, mobility and logistics, change in the nature of work and competence, and intelligent systems and machines. In addition, the following trends have been taken into account in each scenario: climate change, urbanization, aging and multiculturalism.

The idea is not to predict the most probable future, but to develop strategic thinking, future visions and interaction between actors in the region. Based on the scenarios, we are not trying to argue with certainty what is going to happen in the operating environment. The purpose of the scenarios is to make people better prepared to understand current phenomena and their alternative development, and to improve the preparedness and readiness for change among actors in the region.

The scenarios described may seem more or less likely. However, the purpose is not to select one particular scenario by ranking scenarios by preference or probability, but instead to look at the whole set of different scenarios. Actual events are often a combination of different scenarios.

Drivers in the operating environment

Climate change and
scarcity of resources
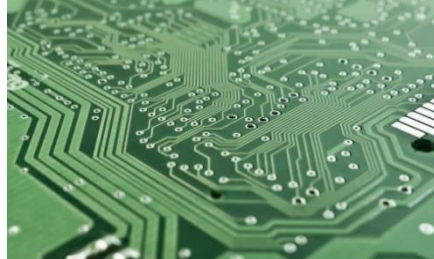
Technological advancement
and digitalization

Platform economy and
servitization

Change of work

New forms of globalization

Plurality of lifestyles and
values

Inequality

Urbanization

Migration and mobility of
workforce

Ageing population and
dependency ratio

Summary of the Scenarios 2050

SCENARIO 1	SCENARIO 2	SCENARIO 3	SCENARIO 4	SCENARIO 5
PROTECTIONISM AND THE TRADITIONAL STATE	**POLARIZATION, INDIVIDUALISM AND EXPERT POWER**	**RELIANCE ON LOCAL COMMUNITIES**	**GLOBAL AND NETWORKED TECH-IMPERIALISM**	**GROWTH AND INTER-NATIONAL AGREEMENTS LED BY THE EU**

• International conflicts and climate change creates massive global migration streams from Africa and Middle-East to Europe.	• Individual values strengthen: freedom and responsibility create the backbone of politics and behavior.	• Uncontrollable automatization and crash of the global financial system create vast unemployment.	• Virtual society becomes reality.	• International cooperation is considered to be the best way to fight against terrorism, and prevent climate change.
• Governments role strengthens and protectionism and nationalism rises.	• Traditional work is replaced by micro-entrepreneurship and platform economy.	• Governments' possibility to create public services collapses.	• Artificial intelligence is considered to be more reliable than human mind.	• Massive migration streams rise from polluted and auto-cratic Asia to democratic Europe and USA.
• EU diminishes and its only role is to protect area's outside borders.	• Society divides into highly educated specialist and easily replaceable individuals → polarization	• People resort to local communities, extended family, and networks	• Global virtual societies are formed on digital platforms.	• Welfare-state model ex-pands the public sector and services in many countries.
• Development of technology faces challenges and slows down.	• Everything is produced "as-a-service" – No need to own anything.	• Voluntary sectors' role increases in producing social services.	• Global giant tech-companies increase their power over national governments.	• EU's role strengthens in the new world order. EU becomes a federation
• Conservatism, family centricity, and religion are highly valued.	• Meritocracy and experts takes over political governments and traditional democracy.	• Political decision making is done by local communities.	• Society spreads into people who only buy services and people who only supply services (task-rabbits).	• Energy revolution: energy production is clean and is almost free for everyone.
		• Livelihood, energy production and food production is dispersed.	• Global migration directs from Europe to megalopolis situated mainly in highly-developed Asia.	

Scenario 1:
Protectionism and traditional government power

- International conflicts and climate change creates massive global migration streams from Africa and Middle-East to Europe.

- Governments role strengthens and protectionism and nationalism rises.

- EU diminishes and its only role is to protect area's outside borders.

- Development of technology faces challenges and slows down.

- Conservatism and family centricity are highly valued.

Scenario 2:
Polarized individualism and expert power

- Individual values strengthen: freedom and responsibility create the backbone of politics and behavior.

- Traditional work is replaced by micro-entrepreneurship and platform economy.

- Society divides into highly educated specialist and easily replaceable individuals → polarization

- Everything is produced "as-a-service" – No need to own anything.

- Meritocracy and experts takes over political governments and traditional democracy.

Scenario 3:
# Reliance on local communities

- Uncontrollable automatization and crash of the global financial system create vast unemployment.
- Governments' possibility to create public services collapses.
- People resort to local communities, extended family, and networks
- Voluntary sectors' role increases in producing social services.
- Political decision making is done by local communities.
- Energy production and food production is dispersed.

Scenario 4:
Global and networked tech-imperialism

- Global virtual societies becomes reality.

- Artificial intelligence is considered to be more reliable than human mind.

- Global giant tech-companies increase their power over national governments.

- Society spreads into people who only buy services and people who only supply services (task-rabbits).

- Global migration directs from Europe to megalopolis situated mainly in highly-developed Asia.
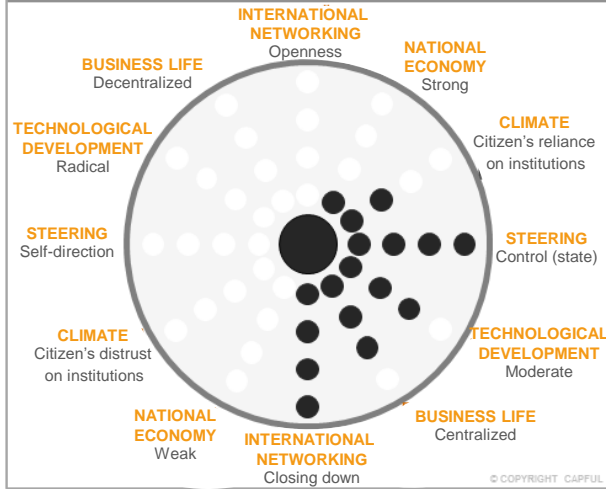
Scenario 5:
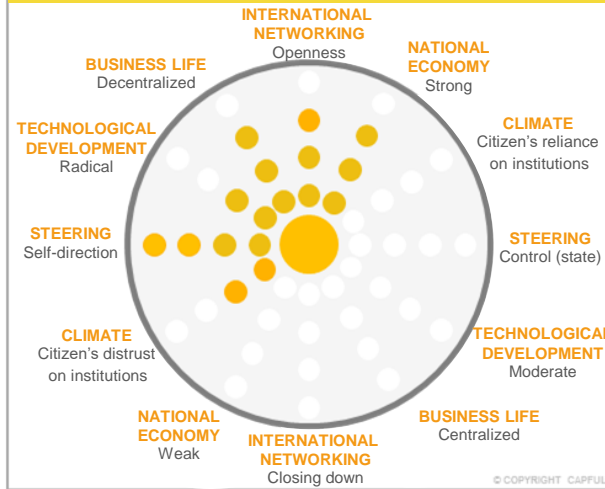# Growth and EU-driven international co-operation
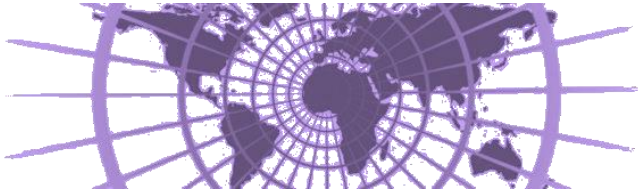
- International cooperation is considered to be the best way to fight against terrorism, and prevent climate change.

- Massive migration streams rise from polluted and autocratic Asia to democratic Europe and USA.

- Welfare-state model expands the public sector and services in many countries.

- EU's role strengthens in the new world order → EU becomes a federation

- Energy revolution: energy production is clean and is almost free for everyone.
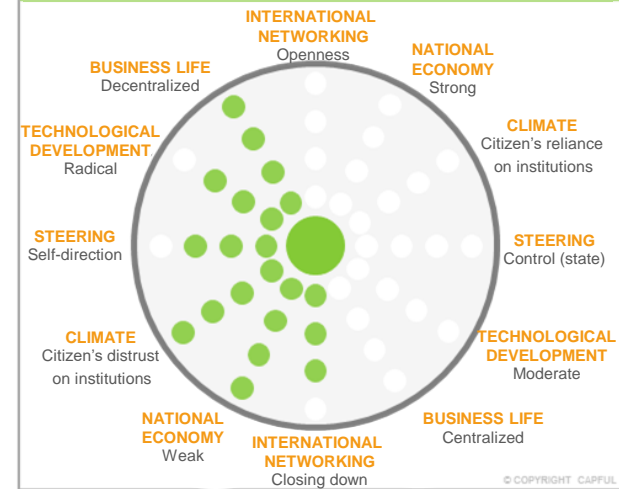
Scenarios 2050 in an nutshell
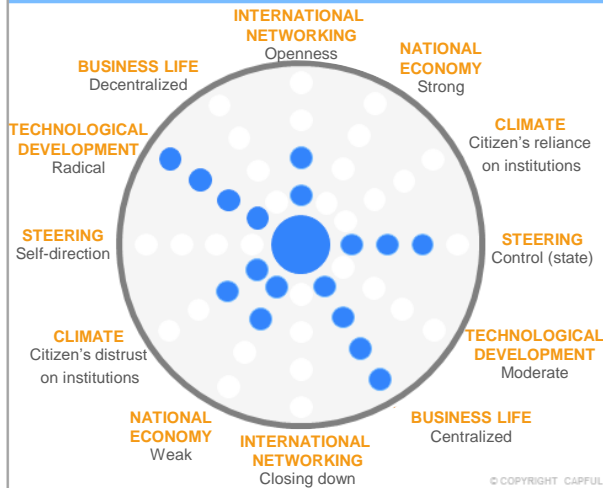

Protectionism and traditional goverment power

INTERNATIONAL NETWORKING — Openness
NATIONAL ECONOMY — Strong
BUSINESS LIFE — Decentralized
TECHNOLOGICAL DEVELOPMENT — Radical
CLIMATE — Citizen's reliance on institutions
STEERING — Self-direction
STEERING — Control (state)
CLIMATE — Citizen's distrust on institutions
TECHNOLOGICAL DEVELOPMENT — Moderate
NATIONAL ECONOMY — Weak
INTERNATIONAL NETWORKING — Closing down
BUSINESS LIFE — Centralized
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Polarized individualism and expert power

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Reliance on local communities

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Global and networked tech-imperialism

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Growth and EU-driven international cooperation

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Interreg
Baltic Sea Region
EUROPEAN UNION
EUROPEAN REGIONAL DEVELOPMENT FUND
Helsinki-Uusimaa Regional Council
Smart-up BSR

Scenario 1: A description of 2050

We are in the middle of what might be the biggest migration wave in the history. Natural disasters and wars caused by climate change are driving people towards Europe. Borders are closed, the airspace is restricted and the world is split up in blocks.
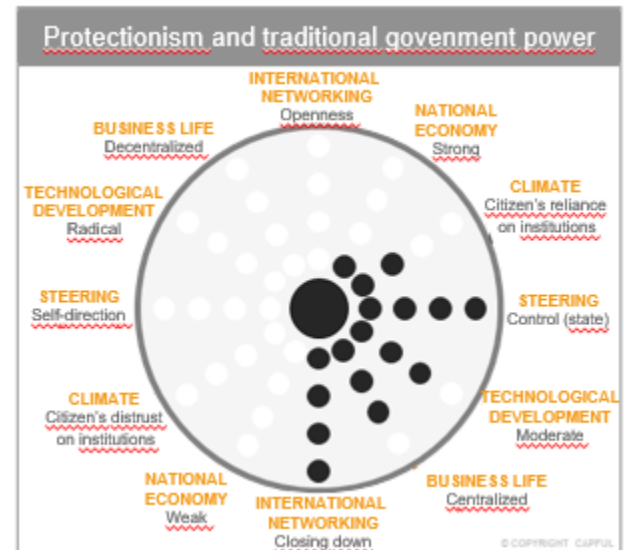
Traffic in the Baltic Sea is limited after the disintegration of the Euro and high tariffs are common. Government holdings in key companies with respect to national security and self-sufficiency are growing. At the same time, authorities are trying to prevent private capital from escaping the region. A strongly regulating and controlling state relies on a simplified party politics driven by emotions.

Within the country, traditional values and family priority are on the rise. The integration of immigrants has not been fully successful. Individual municipalities are struggling to respond to the challenges of immigration. Nationalist thinking is gaining more and more foothold, and under the pressure of internal riots immigration is nearly being suppressed. Terrorism can no longer be avoided and destructive attacks have already taken place in a few cities.

However, the economic downturn has been stopped by supporting domestic primary production and industry with tax reliefs. Society is still active, but with more limited resources and with the support of the third sector (NGOs). Among positive signals are the growing internal market demand and the growth in Russian trade. The world is divided into blocks, which has hampered the rise of the circular economy and the export of clean tech solutions.

Due to weakened data security, the unreliability of the Internet, and resource scarcity, robotization has not changed the way we work as much as was predicted. There is still enough work in basic industry, although the scarcity of and difficult access to natural resources is a challenge. An introvert approach and a tight control of data have stifled the climate for innovations. In addition, deteriorating network security affects business as well as people's everyday behavior. For example, the international e-commerce has decreased due to customs and Internet problems.

Family sizes are bigger, people prefer small-scale single-family houses and live mainly around major cities. The population is aging and the dependency ratio is becoming skewed. Nation-wide public transport is maintained and commuting from suburbs to the city is easy. Private car-use is expensive and difficult.

Scenario 1: Stages

Crises and mass migration increase nationalism and protectionism	The Euro zone breaks down	The approach and the business structure remain surprisingly traditional
2016 - 2025	**2025 - 2035**	**2035 - 2050**

2016 - 2025

- Growth in the world economy is slowing down due to the scarcity of natural resources, poor productivity growth and international conflicts. The influx of refugees to Europe is increasing.

- Weak economic growth and uncontrolled immigration shift focus from global problems to national interests. Protectionism is growing and some states withdraw from international agreements.

- Nationalism is getting strong globally and nationalist parties enter governments. In France, Le Pen's victory leads to a referendum and exit from the EU. Also, the Netherlands resigns from the EU, and the remaining weak EU is lead by Germany. The Schengen Agreement is terminated.

- The depletion of raw materials, cyber attacks, data security issues, and the unreliability of the Internet slow down technological development. Data security is emphasized and information is kept in the hands of organisations and the state.

- In different regions the economic downturn continues, but ultimately it creates a consensus on the necessity of reforms. Structural reforms are implemented and the labour market flexibility is increased. The national government focuses on supporting the national economy.

- Traditional values are emphasized. Focus on family, religion and conservatism.

2025 - 2035

- States cannot reach a consensus on resolving armed conflicts. There are also disagreements between the NATO countries, and no common front can be formed. In the end, NATO will break up as it cannot cooperate anymore.

- Russia is taking advantage of the situation and improving its position in the Middle East through alliances.

- Global mass migration will accelerate due to climate change and the depletion of natural resources. Regional conflicts further increase refugee flows. Internal riots in regions are becoming more common.

- The EU will regulate the influx of refugees into the continent. The allocation of refugees is agreed upon, but individual countries are trying to disengage from their responsibility and outsource the reception of refugees to states that they support financially. Sea traffic in the Baltic Sea is restricted.

- Growing criticism of financial transfers within the euro area, and decreasing solidarity between the EU countries. Countries with economic problems are no longer supported. One by one, economies are leaving the Euro, and ultimately the euro zone is falling apart.

- The devaluation of the national currency and labor market reforms improve the competitiveness of the traditional export industries. Industrial investments are growing.

- The rise in raw material prices has boosted the Russian economy.

- The focus in nations is on regional policy, and urbanization affects many cities. Investments in public transport and infrastructure. It is difficult for individual municipalities to solve the major challenges of immigration.

- Traditional employment and paid work persist. However, flexibility targets in the labor market undermine redundancy protection, which reduces the risk for companies to hire new employees. The employment rate will rise moderately.

- Automation and robots replace routine jobs mainly in the manufacturing industry.

2035 - 2050

- States are trying to recover from the collapse of the euro zone and protect their own economies, for example through customs, tariffs and national grants. The aim is to limit capital flight from the nations.

- The European Union focuses on managing the refugee crisis and protecting the external borders of the region. The EU becomes a border alliance, to which Britain, France and the Netherlands will return.

- Within Europe, regional alliances are created between national states of similar national interests.

- A weakened security situation has prompted the state to take a strong hold of communication. The transparency of databases is restricted and data security is increased. The weight of state-owned media is growing. Strong belief in mainstream media and meritocratic knowledge remains strong.

- Weak economic growth, social closure, and a strict control of information and data have limited the creation of new innovations and business models.

- Digitalization and technological development have not significantly altered the work patterns and boundaries of sectors or the public sector.

- Traditional representational democracy and tripartite have remained the starting point for social policies, agreements and legislation.

- State and regional level control is emphasized in the development of regional and urban structure.
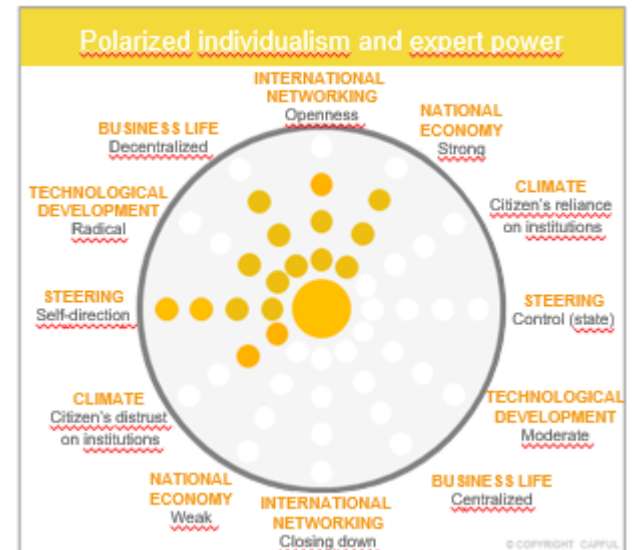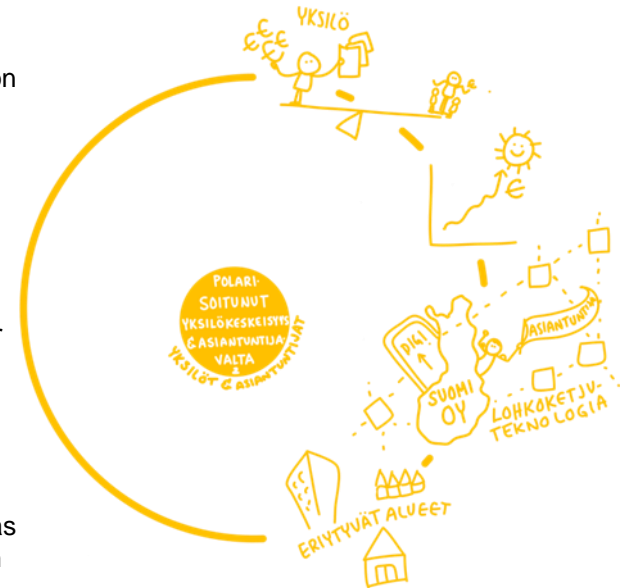
Scenario 2: A description of 2050

The time of individualism is here! Everyone is responsible for their own future, and personal needs have become more important than the need of the state. Only low basic income, education and the most important basic services are financed through the common tax base. Leisure and recreational opportunities become more fragmented as everyone who has the money, have access to services – everything has a price! Who else would finance playgrounds, recreational areas or road networks than their users?

Large companies and banks are in trouble as advanced block chain technology enables individuals to trade with each other. At the same time, people also value everything they buy in real time, and individuals can develop the service they are offering or become a service provider themselves. Progress stops if skills are not up-to-date. The importance of networks is emphasized as they act as a key within society: you are the people you know.

The country is lead like an enterprise. Expertise is valued and the state is led by top experts in their respective fields. Research, development and education are growth sectors and experts within these fields are admired and respected all over the world. Among winners is also nature as the sustainable use of natural resources promotes circular economy fuelled by economic growth and high technological know-how. Consumers can buy food directly from producers, which, in addition to teleworking (remote working) supports the maintenance of the rural population.

Cities are segregated with respect to price levels and services; high-quality libraries are moved from poor neighborhoods to better residential areas where resident experts can afford to pay for the services they use. Family sizes are small and many live in single households. However, various cameras, sensors and tracking systems make life easier for the elderly, and the development of genetic information and related medication personalize healthcare. Enhanced social virtual services and robots are aimed at combatting loneliness. Transport is based on low-emission small vehicles, and public transport is only active in the areas of core transportation networks. On the other hand, safe and efficient car pools are used with different applications.

As servitization increases and 'gig economy' becomes more popular, the labor market is divided into two: on one hand, there are the top experts who live in their own neighborhoods, and on the other hand, the easily replaced basic workers who are mainly offered so-called 'modern servant jobs' as digital platforms allow high-income people to purchase services with just one tap on the smart phone. However, low basic income offers a minimum safety net designed to mitigate the main risks of inequality.

Scenario 2: Stages

Privatization and citizens' freedom and responsibility is increased	Renewal of business models through digitalization and block-chains	Polarized economic growth and individual choices
2016 - 2025	**2025 - 2035**	**2035 - 2050**

Privatization and citizens' freedom and responsibility is increased (2016 - 2025)

- Individual freedom and responsibility are emphasized in citizens' values, in social ideology and in decision-making. Personal needs and well-being are considered more important than other ideologies.

- The desire and the ability to build one's own skills and career strongly affect one's social status. This increases life-long competition between individuals. Some are already as a child given access to the best knowledge and education.

- Differences and abilities are taken into account in education and in working life, and putting everyone on an equal footing is no longer considered an absolute value. Development brings forth talents, but also polarizes society. Distinguished individuals are admired.

- States are lead like an enterprises. The power of officials and other professionals increases with respect to party-political decision-makers.

- In the labour market, there is a lot of competition for specialized experts. Individuals who lack special skills often have to settle for underpaid short-term jobs or are excluded from the labour market. Unemployment rises when digitalization replaces traditional work.

- As the working life changes, the mismatch between the need of workforce and training is solved by rapidly changing the fields of education, their content and the number of study places. The development of platform economy is strongly supported.

- The society will significantly reduce public services, and services - with the exception of education – will become needs-based. Acquiring many services requires own funding - either directly or through insurance.

- Growing income disparities, and differences in skills and consumption between social classes. The share of the middle class is smaller than before. In the financing of society, the importance of capital income increases and the importance of wage income decreases.

Renewal of business models through digitalization and block-chains (2025 - 2035)

- Technology is rapidly evolving and is widely used in society, working life and people's everyday lives. The ability to use and absorb new technology creates inequalities.

- The importance of ownership diminishes, servitization is strengthened and everything is produced as-a-service. Platform economy and micro-entrepreneurship override traditional employment. Block-chain technology enables trading between micro-entrepreneurs and individuals without large companies and banks getting their share.

- The widespread use of platform economy can be utilized through tax reforms and the creation of a low basic income that to all, which will replace other social security.

- The public sector uses private subcontractors in order to offer the remaining public services more efficiently. Economic aspects are emphasized in the selection of subcontracting partners.

- Cities are segregated with respect to price levels and services. The urban structures of metropolitan regions are differentiated, and services are based on the market and payment capability. Residential areas are divided into emerging areas, fenced communities and abandoned areas. Private parks are becoming more common.

- Infrastructure is built on market terms and regional policy becomes less important. Infrastructure is transfers to private ownership, whereby toll fees become more common..

- Transport is mainly based on zero-emission small vehicles that are integrated to each other through digital platforms. With the exception of city centers, public transport is marginalized as a means of transport for weaker societal classes.

Polarized economic growth and individual choices (2035 - 2050)

- Expertise and decision-making through block-chain have replaced party politics and representative democracy.

- Specialists in their respective fields and generalists on multiple fields are doing microenterprise-like expert work with the aid of AI. New industries and job descriptions have emerged.

- However, not everyone are part of the change of work. They are dependent on basic income, short-time jobs, and the minimum services provided by the society.

- Different social groups live in society alongside, but separated from each other.

- As a result of the development of platform economy and gig economy, the number of servant workers has increased. Performance and people are valued, which contributes to increasing polarization. The value of a social network is more important than before.

- Although the top universities' qualifications remain relevant to the social status, individuals are required to strengthen their competence throughout their lives. Various trainings and university courses are 'shopped' around the world and they contribute to unique skills portfolios.

- Individuals take advantage of the opportunities offered by digitalization and trade with their personal data. Various networks shop around with operators to get the most suitable services for their needs.

- The family size is very small and single living is the most common form of living. Technological development (cameras, sensors, monitoring systems) make it a lot easier for the elderly to live alone.

Scenario 3: A description of 2050

Europe is in deep economic recession, jobs have disappeared due to the global financial crisis and rapidly growing automation. Economic difficulties have led to a drop in demand, and people resort to smaller local communities instead of public institutions. The exchange of things and services between people and the resulting black economy have decreased public funds. Paid labor, banking and public services no longer exist in their traditional form.

But from a human perspective, the situation is better. In response to the technological development, a sense of community and interaction between people have increased as the family and one's own networks have taken on the role of the state. But information flows slowly between individual communities, which has led to a decline in R&D.

Trade is being conducted and work is done on a network basis. Large mass production plants have been replaced by co-operative local production, which enables communities to survive economically and to acquire the products and technology needed. Even barter economy is easier in a familiar setting: sharing, renting, recycling and pooling are everyday activities. Communal crowdsourcing has also become more common. The work consists largely of small services to other members of the same community. The decision-making process takes place in municipalities and smaller regional communities; people no longer trust public institutions or experts. The mainstream media is struggling to survive.

The role of non-governmental organizations in the provision of public services has become increasingly important and their carrying capacity is being tested, despite the increase of charity. Information on how to prevent and treat illnesses is sought from friends and acquaintances, and personal experiences are considered more important than the views of experts with an official degree. The care of the elderly and the sick is relying more and more on family members.

Local communities and distinct thematic areas emerge. Some of them emphasize slowness as a way of life, while others embrace various subcultures. The identity of nation is replaced by a variety of local identities. Inexpensive solar panels installed in buildings, small-scale farming fields as well as bartering economy have made food and energy production and business life more fragmented. Therefore, the importance of transferring people and goods has decreased.

However, there are worries, because land ownership is subject to large disputes: it is a question of making a living. As the public infrastructure fails, power shortages are common, rarer foods run out, and even getting clean water is sometimes difficult. Community housing is popular despite the fall in housing prices. Families are big. Communities also grow in cities where large concentrations have broken into small urban communities

Reliance on local communities

Scenario 3: Stages

This tells how the different stages might follow each other in order to end up as described on next page at 2050

Robotization-driven mass unemployment and deep recession	The collapse of the financial system and emphasis on the role of regional communities	Strongly differentiated local communities in decentralized country
2016 - 2025	**2025 - 2035**	**2035 - 2050**

2016 - 2025

- The development of robotization and automation accelerate in goods and service production. Uncontrolled robotization increases unemployment.

- Government debt continues to increase and the financial crisis in emerging economies also raises financial problems in Western countries.

- People's values vary. Increased differences in ideologies between parties and citizens. Unemployment and dissatisfaction lead to extremist movements.

- Trust in institutions is lowered and anyone can act as a source of information. Instead of expertise, the relevance of knowledge is evaluated based on how it is suited to one's situation: whether it responds to my unique question and whether it is in line with my outlook on life (meta ignorance). People tend to get out of touch with the mainstream media.

- Information on the prevention and treatment of diseases is sought from networks. People tend to trust increasingly in popular medicine. Individual experience becomes more important than the views and diagnoses of expert with formal qualifications.

- In a weak economic situation and in the wake of political disagreements, regional government reform is buried as impossible to implement. Power and responsibility are transferred back to the municipal level, the third sector and the communities. Competition between municipalities is getting harder.

- Direct democracy is increased through regional referendums and new tools and models for facilitating participation and dialogue.

- Sharing, changing and hiring is emphasized. Commodities and services related to daily life are shared more.

2025 - 2035

- New virtual currencies, global mass unemployment, and a rapid rise in government bond interest rates will lead to a crash of the global financial system. Weaker production and demand will lower commodity prices to all-time-low. The Russian economy, based on export of raw materials, collapses.

- Citizens' confidence in the state is turning downward, and the relationship to society is changing.

- The role of the civil society is emphasized in Europe, leading to the division of some states. In many countries, economic and cultural disparities between regions will be strengthened. Catalonia, Scotland and The Åland islands will become independent states.

- Instead of relying on public institutions and services, people rely on their family and other networks. In response to the rapid technological development and AI, human interaction and slow life are getting more important.

- Local communities are taking advantage of the bartering economy to increase self-sufficiency. Communities are brought together by a similar set of values, know-how and way of life.

- Business life, housing and food and energy production are decentralized. The importance of ownership is diminished. Sharing and recycling of commodities is seen as a cheap and communal way of spending, not so much as value judgment.

- Localization of society and business, as well as technological development (teleworking, virtuality, 3D printing) have reduced the importance of mobility.

- Citizens make agreements with each other and many of these jobs are part of the black economy. This further undermines the state's and local authorities' ability to provide public services.

- Since the decision-making power has been transferred from the state level to the municipalities, the possibility for the state to pursue regional policy has been weakened and the differences between regions are increasing.

2035 - 2050

- The concept of work has changed completely. Work is seen as a collective thing, and as collective services to other members of the network or community. The line between work and play is blurring.

- At a regional level, the activity of citizens has increased, but politics at a national level is not seen as something interesting and the turnout has declined to a record low. Active citizenship has increased even beyond formal decision-making as citizens are responsible for their local communities.

- On the other hand, cooperation between similar public, private and third-sector organizations is increasing. Information is shared because there is a need to make services more cost-effective.

- Significant regional differences in the income level and in the values of individuals have led to internal riots, rise of extremism and territorial divisions within nations.

- Housing and consumption have become more communal, and, for example, houses are hardly owned anymore.

- The competition on skilled people between regions is getting harder. We see geographically very unequal areas and specialized thematic areas in Finland. Digitally-free areas are seen as a sign of higher quality of life.

Scenario 4: A description of 2050

Machines are reality. Human hands are involved in fewer and fewer processes because machines have been designed and constructed to be infallible. The data produced by analytics is perceived as pure and impartial, and with the help of dataism, unnecessary emotions produced by evolution are rejected in political decision-making.
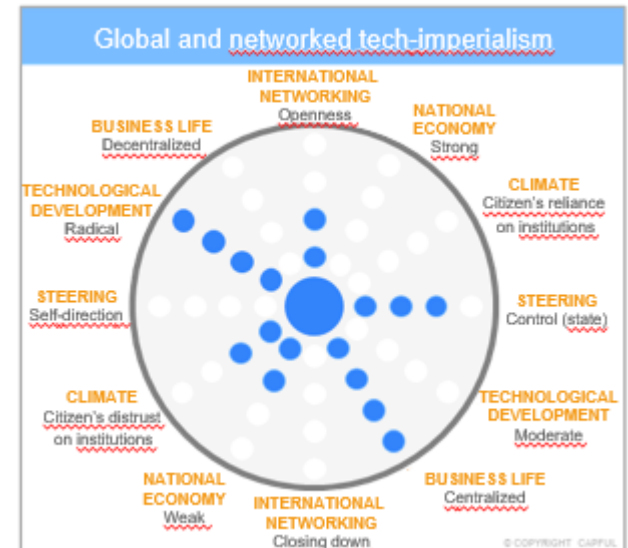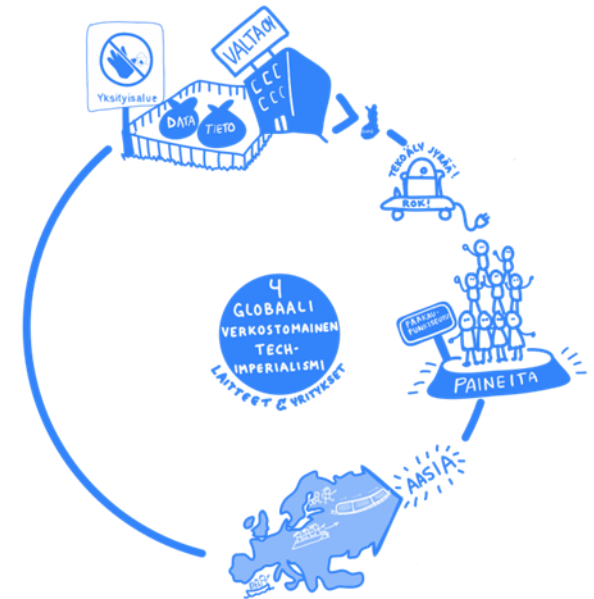Democracy is co-operation between states and corporations, the tireless work of techno-freaks. Representatives of multinational corporations, communities and intelligent machines sit at the most important decision-making tables. In many fields, AI has displaced the views of experts, and sensors mounted on humans and systems measure the pulse of society non stop.
Intelligent machines have almost replaced human routine and expert work. Work is purchased as individual performances from self-employed workers when robots do not know how to do the work or if human work is more affordable. Individual micro-entrepreneurs sell their know-how on the platforms of gigantic corporations whose ownership is in the hands of few. The added value and power of technology are in the hands of a few global corporations. The same platforms and virtual reality also create supranational tribes around professional fields, hobbies or lifestyles, and enable new innovations. E-citizenship reduces the importance of state and traditional citizenship.

In the ubiquitous society, intelligent devices, systems and people connected to a network form a real-time ecosystem. Meetings, meeting friends, even the existence of households become irrelevant when we can virtually handle both our needs and our relationships, however, wherever and whenever. Also in tourism and leisure, virtual reality (VR) is utilized extensively. The need for recreational and cultural opportunities increases as people have more free time and machines do most of the work.

Advanced health technology has lead people to a healthier life through sensors, personal measurement and self-care, and increased life expectancy. Public healthcare is fully robotized, and regrowth of organs and cell culture are becoming more common.

Young talents move to the more vibrant metropoles where the nerve centers of large enterprises and devices are located. Globally, large metropoles with more than 10 million people, or megalopolises, are becoming more common. Inside nations migration is focused on the high-technology metropolitan areas while the countryside becomes desolate. For example in the capital regions, people live densely together using a grid network efficiently optimizing a variety of modes and tools of transportation.

Global and networked tech-imperialism

Scenario 4: Stages

Digitalization shakes up the old patterns - the EU will not keep up with the pace	The power era of global technology companies	Ubiquitous society and reversed migration
2016 - 2025	**2025 - 2035**	**2035 - 2050**

Digitalization shakes up the old patterns - the EU will not keep up with the pace
2016 - 2025

- Intelligent systems and devices change work patterns, and society and business models faster than expected. States free from traditional systems and regulations are quickly adapting to new technologies.

- Work assignments become part-time and international and freelance work communities become more common. International micro-entrepreneurship is growing, but almost all operations are carried out on platforms owned and operated by large companies (cf. Uber, AirBnB).

- A new era of tech-imperialism (GAFA = Google, Apple, Facebook, Amazon) takes over Europe. Large companies reserve the sole right to data ownership and regulation of business sectors. The importance of data as a competitive advantage is emphasized and power is concentrated. Large companies invest billions to strengthen their cybersecurity

- Some EU countries also lag behind the emerging Asian economies. In the EU, the regions are progressing at a different pace. At large the economic development in EU will not keep up with the pace of global economy, and economic growth will remain around zero growth.

- Migration flows turn towards emerging economies. Europe is often perceived as a stranger place compared to the own continent. It is also more expensive, has weaker prospects for success and little job opportunities. Even immigrants living in Europe start moving elsewhere.

- The EU encourages people to get a personal health insurance instead of a large public sector and occupational health care.

The power era of global technology companies
2025 - 2035

- Robotization and an economic system based on real-time tendering lead to marginalization of work done in employment. Work is purchased as individual performances from self-employers if robots are not able to do the work or if human work is more affordable.

- Digital platforms enable supranational communities and "tribes" to become stronger – in good and in bad. In addition to the networks consisting of a lifestyle, ethnicity, work or ideology, transnational communities operating in the 'grey zone' or criminally are increasing.

- Corporate power, virtual communities and e-citizenship diminish the importance of state and traditional citizenship.

- Representatives of important multinational corporations and communities sit at the most important decision-making tables together with heads of state and make important and influential decisions.

- Around global conglomerates is a network of smaller companies and self-entrepreneurs who are dependent on the ecosystem of a conglomerate. Co-operative network companies also exist alongside companies.

- Changes in working life and real-time global work ultimately force states to reform their taxation and government funding. However, public revenue is decreasing, and GDP is no longer an indicator of success.

- Modes and tools of transportation and traffic are efficiently optimized through big data from intelligent machines and systems. Virtual meetings are becoming more common.

- The increase in health insurances increases the role of privately produced and funded social and health care services.

- Education is divided into very profound and long-lasting (expertise) and very efficient and short-term (lifelong learning) training.

- The power of corporations and technological development have forced Russia to renew its operating models and to open up its market. Russia rises up to the EU level, but is not able to compete with Asian economies due to its business structure.

Ubiquitous society and reversed migration
2035 - 2050

- Routine processes are fully automated, and analytics replaces people in expert work.

- The ubiquitous society is reality and connected services, devices and people form a real-time ecosystem. People work and live their lives mainly virtually. Also in tourism and leisure, VR (virtual reality) is utilized extensively.

- A handful of global companies have a significant economic, political and social power. These companies are widespread in various sectors of business and society, ranging from medicine, infrastructure building and space travel.

- Technology is not perceived as a separate concept, it has become an integral part of our homes, ourselves, the environment and consumption. This development has challenged our family, housing, sex, lifestyle and food patterns.

- Traditional Western countries are no longer seen as competitive regions with respect to their living standards and potential. People move from Europe either physically or virtually to the technology centers in Asia and the US in order to reach a better standard of living. The importance of state and nationality has almost disappeared.

- Aa a result of advanced neural networks and huge data volumes, the role of people as decision-makers has decreased. Independent systems and devices are believed to be more reliable than the human mind. Machines are programming themselves to become more developed.

- With the technological development, professions and the substance of professions have radically changed. For example, "doctors" are mainly guiding research and analytics, bringing "human touch" to certain situations and controlling the ethics of work.

- While technology enables teleworking, people and businesses want to work at top-notch centers. Skilled workers move to more vibrant metropoles where nerve centers of large enterprises and devices are located. Finland focuses on the capital region, but emigration leads to a situation where the population is shrinking.

Interreg
Baltic Sea Region
EUROPEAN REGIONAL DEVELOPMENT FUND
EUROPEAN UNION
Helsinki-Uusimaa Regional Council
Smart-up BSR

Scenario 5: A description of 2050

To calm down regional conflicts, climate change and the refugee crisis, most states agree to an international dialogue. Managing the economic situation and regional security bring the EU Member States together. The European Union federation becomes a world leader for international agreements. It works closely together with its partner countries in security, economic and climate policy.
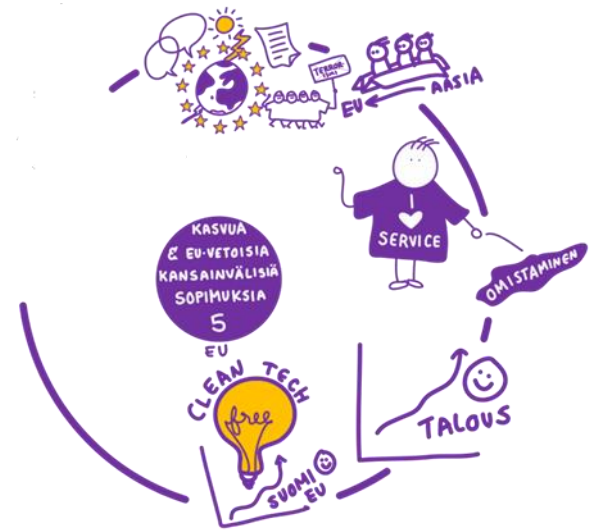
The EU is united, and decision-making is effective. Controlled development maintains people's confidence and creates a positive twist. The world economy and export are rising fueled by the rise of the middle class in emerging countries. This will enable the EU to extend the welfare state model to all its citizens!

On federal soil, the power of large corporations is restricted. Organizations are required to open their databases and interfaces, and an international agreement on digital ethics is concluded. The movement of people and goods is organized by an EU level network - one "ticket" gives access easily and quickly all over Europe and the world, irrespective of the means of transport. EU citizens are looking for and using the best services customized for their needs in various Member States.

The radical effects of the climate change are contributing to a rapid development of energy technology and storage, which ultimately leads to an energy revolution: electricity is, apart from reserving fees, free and fuel dependence from other countries disappears. In the EU, renewable energy technology and almost free electricity are fully utilized in mobility, heating and food production. Countries that previously did well in exporting fossil fuels are now in trouble. Russia, which has excluded itself from international cooperation and faces financial crisis, increases military activity in its nearby areas.

A democratic, progressive and clean EU interests highly educated immigrants from Asia and Russia. However, large masses of people also cause concern; they will expose our country to pandemics, traffic congestion, inadequacy of jobs and housing, and cultural clashes.

The degree of urbanization is high but consists of a network of capital cities based on public transport with good connections. For example travelling in Europe is very fast and easy – by using Hyperloop, the trips between the capital cities only take a few minutes.

Growth and EU-driven international cooperation

Scenario 5: Stages

Security from international co-operation	Federalization of the EU	Economic growth and migration from the East put sustainability to the test
2016 - 2025	**2025 - 2035**	**2035 - 2050**

Security from international co-operation

2016 - 2025

- To calm the Syrian war, regional conflicts and the refugee crisis, most states agree to an international dialogue. The war against terrorism is wider than before. Russia, however, almost without exception draws out of the negotiations.

- Economy and regional security bring the EU member states closer together. The majority sees cooperation as a better alternative to isolation in security and economic policy.

- Central political power is transferred from the national level to the EU. In order to hold down economically weak countries, the major budgetary lines must be approved by the Commission.

- The aim is to limit corporative power through international agreements. The EU obliges companies to open up customer interfaces and some of their data to the public sector and other operators. The aim is to speed up the development of digital services and increase competition.

- Opening up public and private organizations data and interfaces creates new business opportunities and breaks industry structures. High-quality information is available to the public when many acclaimed actors from top universities to space organizations open up their content. Smart systems combine the data as needed into matching and compact entities.

- The Paris Climate Agreement is interpreted strictly in the EU. Ambitious climate and environmental requirements force companies to innovate and intensify not only energy consumption but also the use of raw materials. Significant policy and investment support is being addressed to promote clean tech technology.

- Developing countries will benefit from the technological development, and globally the middle class grows. The global economy is on the rise.

- Immigration to Europe continues to be steady. The primary cause of immigration is the standard of living and the availability of interesting work.

Federalization of the EU

2025 - 2035

- International agreements are experiencing a renaissance as the world economy is increasing. Significant international agreements are concluded around the market economy, peace and climate issues.

- The EU takes on the role of a driver for international co-operation.

- However, the geopolitical actions of Russia expand from Ukraine and Syria to Georgia, and we see increasing stir close to the Finnish territory. Finland and Sweden join NATO, where the decision-making power of the EU Member States has grown significantly.

- Political problems in Asia and the weak economy in Russia weaken the sense of satisfaction and security among citizens. Immigration to Europe is increasing.

- The federalization of the EU strengthens and the Union also gives itself a taxing right.

- Within the EU, social and health care shopping has increased. Well-informed consumers are looking for the best and most specialized services for their needs amongst the EU Member States. Financing is often carried out in combination with vouchers, personal finance and insurance policies.

- Innovation efforts are starting to give results. By reforming practices and business models, the positive development in the world economy can be exploited, and the EU export is on the rise.

- Clean tech technology enables us to solve issues related to the scarcity of resources. The load and dependence of the Baltic Sea on imported fertilizers has also been reduced.

- Public and private sectors merge through different partnerships. These partnerships will allow large, long-term public projects, such as water supply, to be built.

Economic growth and migration from the East put sustainability to the test

2035 - 2050

- Innovations within energy technology, market orientation of renewable production, decentralized production and the development of storage technology create an energy revolution. Energy is almost free for most of the year. Consumers only pay reserve fees to secure the supply of energy during the darkest and the longest cold periods.

- Energy revolution and the breakthroughs of resource efficiency have dropped raw material prices. The situation will further complicate the situation in Russia, and the country will finally begin to reform its political and economic system.

- Globally, income disparities between countries have leveled out. Economic growth and the expansion of the middle class have increased consumption and also the use of natural resources.

- The EU has strengthened the role of dialogue with citizens and voting in its decision-making. Citizens' opinions are dealt with directly in the Parliament, which further reduces the role of national decision-making in the Member States.

- Social and health care shopping within the EU has expanded to include other services, such as infrastructure.

- The EU-level grid network utilizing data provides different modes of transport by optimizing mobility and transportation. Automated public transport combined with intelligent small vehicles handles people's individual and logistics-related transport needs as comprehensive service packages.

- New health technologies and treatments, together with increased wealth, have increased health and longevity. This lead to an ageing population and a difficult situation in many countries in terms of public funding.

SWOT analysis of all five scenarios

- All the partners will evaluate the strengths, weaknesses, opportunities, and threats (SWOT) for each scenario in relation to their region.

- Imagine that you live in the world described in the scenario, and analyse what attributes in this world are strengths, opportunities, weaknesses and threats) in your region.

- Write down all of them to the template, try to be as short as possible.

- Fill out 5 templates, one for each scenario.

- Collect the strengths/weaknesses/opportunities/threaths which appear 3-5 times in one category to one template, which is your synthesis.

Letters = Describe shortly strengths, weaknesses/opportunities/threaths (e.g. Bad economic situation, High education level etc.)
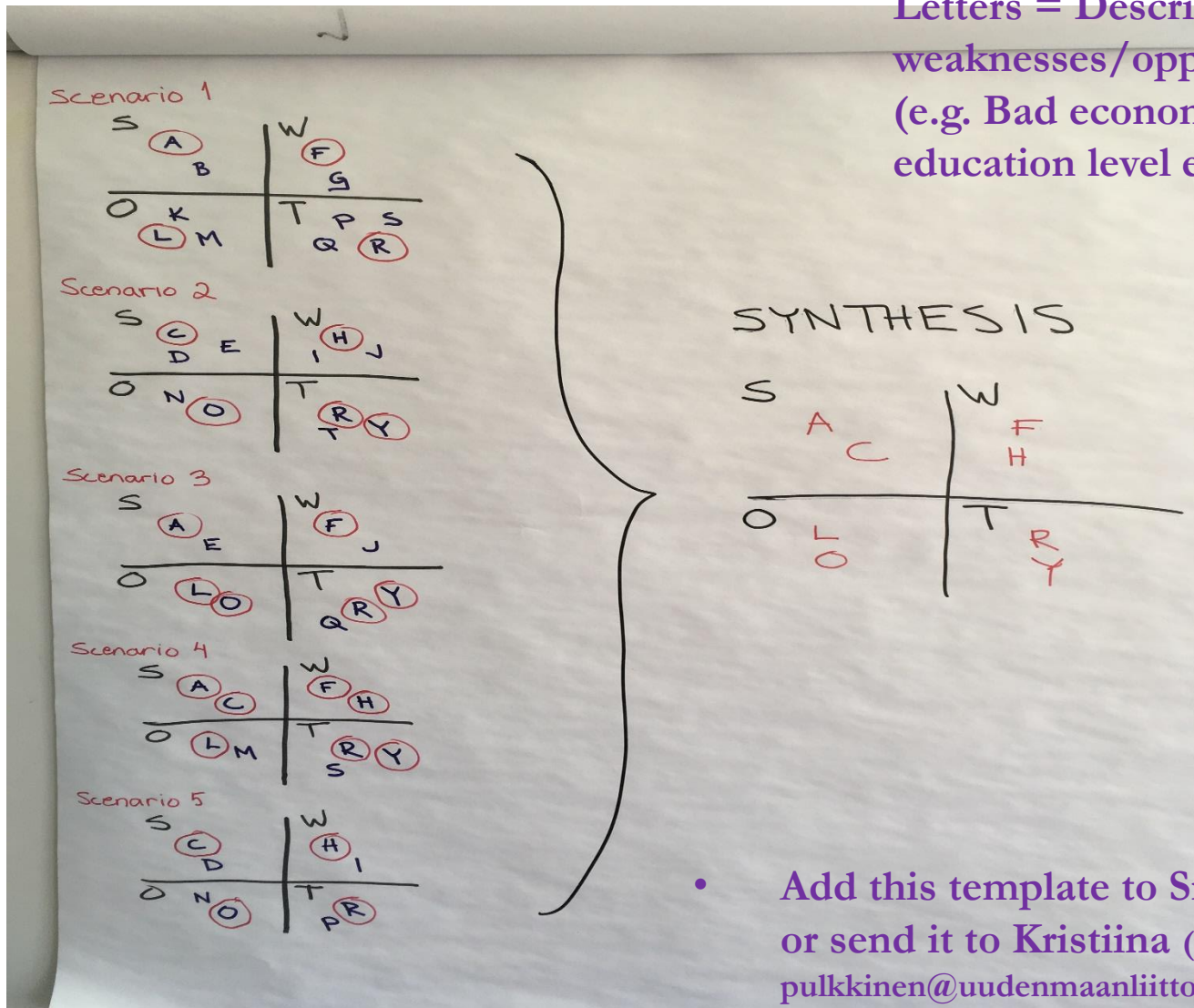
- **Add this template to Smart-up Googledocs or send it to Kristiina** (kristiina.heiniemi-pulkkinen@uudenmaanliitto.fi)
- **Prepare to present it in the Lithuanian camp**
- **For your own use you can make a more detailed synthesis**

How?

Participants

- Minumum: with your hadpicked colleagues
- Maximum: a group of relevant stakeholders
    - you can collect a group of key stakeholders
    - or you can use an already existing stakeholder group
    - In Helsinki-Uusimaa we plan do to this with our Regional Management Committee (MYR)

Process

- If you choose minimum amount of participants, you can organize brainstorming session at your office where you fill out the templates
- If you choose maximum amount of participants you can organize a workshop and use e.g. learning cafe –method or some other simple group working method

Timeplan

- All the regions will make the SWOT analysis in the coming months (Finished by the end of May).
- All the partners will present their synthesis in the Lithuanian camp in June.
- We will collect the synthesis and present the overall synthesis in the Estonian camp in August.

- The results can be used as background in the next step when considering the updating of RIS3 strategies.