



# MEGATRENDS

### TRAVEL TO THE FUTURE

With the help of trend cards, one can make one's own thoughts nimbler and stretch them further while creating new ideas and visions about the possible future. You only need the trend cards, a pencil, paper — and a couple of friends! Further instructions can be found in the instruction card.

#### sitra.fi/megatrends

Sitra is a future fund that anticipates developments, analyses phenomena and gathers together partners from various sectors to participate in open-minded trials and reforms. Our future-oriented work is aimed at a fair and sustainable future — the next era of well-being.

### COME AND CREATE NEW IDEAS AND VISIONS ABOUT THE FUTURE!

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### **MEGATRENDS**

#### TRAVEL TO THE FUTURE

Welcome to a journey to the future! Sitra's megatrend cards contain various trends which we believe are already affecting our lives, society and thus also our future.

Predicting the future with the help of trend cards is not possible. Nevertheless, these cards enable us to make our own thoughts nimbler and to stretch them further; they allow us to create new ideas and visions about the possible future. You only need trend cards, a pencil and paper — and a couple of friends or colleagues.

**BON VOYAGE!** 

#### INSTRUCTIONS

**STUDY.** Read through the deck of trend cards and contemplate the thoughts that the trends provoke. Are they familiar to you? What trends can you already detect in your daily life? What seems surprising? Which trend would you like to challenge?

**RANK.** Pick up, at random, 3 to 6 cards from the deck and arrange them in order of importance according to your own understanding. If you work with others, discuss and compare the ranking of the trend cards with them. Are there common themes emerging in your discussion? Are you of the same opinion?

**VISION.** Pick up 3 to 6 cards or use those you've already picked up. Based on these, create a story about the future. Add to the story themes you work with or themes which are related to your own life. Share the story with others.

**BRAINSTORM.** Get the day's newspaper and select a news story that interests you. Pick up 3 to 6 trend cards and think what the news item would be like if the events your trend cards were part of daily life right now.

**DREAM.** Pick up 3 to 6 trend cards and, based on them, create the best possible future image by describing the future of something that is important to you and links to your cards.

**INVENT.** Pick up 3 to 6 cards and, based on the ideas derived from them, create a future service, solution, product or method related to your object of interest to improve its development

**CONCRETISE.** Move, step by step, from the future image backwards in the direction of the present. What kinds of concrete events have you noticed taking place on your backwards journey to the present?

**BE SURPRISED.** Pick up 3 to 6 cards and invent completely opposite development trajectories to them. What needs to happen in order for the opposite development trajectory to materialise? Can you identify any surprising viewpoints or black swans\*? Let others know your most important and astounding thoughts. Think about whether these trajectories could actually materialise.

Sitra's trend cards are based on Sitra's work on megatrends. Read more: sitra.fi/megatrends

<sup>\*</sup>By "black swan" we mean a surprising and sudden event that may radically change the way things happen.

### THE ROLE OF SKILLS WILL INCREASE

Skills challenge knowledge, since the internet enables easy access to enormous amounts of information and artificial intelligence helps in the management of information. At the same time, critical thinking and the ability to understand larger phenomena will be important. In education, there will be an increasing need to gain an understanding of our digitised society, and to deepen creativity and interactive skills.

### EXTENDING LIFESPANS AND AN AGEING POPULATION

People will live longer and there will be a shift towards older people in the population's age structure. Young people in Western societies will become a minority. Young people cannot be held solely responsible for the assimilation of new methods, technologies and sustainability in their activities. On the other hand, functional ability may become a more important factor than age in the future.

## THE COLLECTIVE POWER OF THE INTERNET WILL INCREASE

The sense of community created by technology and the ability to directly collaborate with others enables humans to participate and act in society in an unprecedented way. The sharing economy, crowdsourcing and crowdfunding are expanding the space for new forms of organisation and innovation. On the other hand, Western societies have been based on institutional principles andthe principles of rule of law. Ignoring the institutions and delivering "justice" in a network via collective power will create destabilising forces and fear in society.

#### **URBANISATION WILL CONTINUE**

Globally, people will continue to move from the countryside to the cities. In 2050, almost 70 per cent of the world's population will live in cities. The character and features of the megacities currently emerging in Asia and Africa will also determine our global future. The important question is: Will these cities be gigantic slums of millions of people or will they have a sustainable infrastructure, administration and operation?

### RADICAL OPENNESS AND NETWORK SURVEILLANCE WILL INCREASE

Alongside the internet, radical openness keeps on increasing. Information on the decisions and actions of governments, companies and individuals will be more and more openly accessible to everyone. Ideally, this will lead to better, more sustainable operating methods. The extent of network surveillance and the rights of the individual will be one of the great political issues in the near future.

#### **GLOBALISATION V. NATIONALISM**

Globalisation is gathering strength and the world is more and more interdependent as the human species increases its presence on an ecologically and spatially diminishing globe. Regardless of the constantly increasing need for global solutions, growing nationalism and introversion have emerged as counter-trends to this development.

# THE NUMBER OF REFUGEES WILL GROW AND MIGRATION WILL INCREASE

The number of refugees will grow and mass movements of people will become more common as a result of conflicts and climate change. The situation for people who come from regions of conflict and drought will become more difficult, and the international asylum system will come under intense strain.

#### STRENGTHENING LOCAL PRESENCE

Along with globalisation, local presence will become stronger with the help of new technological applications.

Internet applications also enable the fortification of a physical sense of community. For example, 3D printing and improvements in food and farming technology could in the future completely revitalise rural areas.

### EMPHASIS ON HEALTH AND WELL-BEING

People are increasingly better able to look after and improve their health with the help of various applications and data, and the development of gene technology. The scope of wellbeing also covers our experience of inclusion, meaningfulness and understanding our own possibilities. On the other hand, health and well-being may be the factor that is increasingly separating and dividing different parts of the population.

#### **EMPHASIS ON SOCIAL CAPITAL**

There is an emphasis on social capital, both from the viewpoint of well-being and from the perspective of working life. Social capital means social networks, and the trust and reciprocity created by them. Social capital is formed, among other things, from civic engagement, voluntary work, networks and the support and trust received from them.

# OUR UNDESTANDING OF THE GLOBE'S BEARING CAPACITY IS INCREASING

Our understanding of the globe's bearing capacity is increasing the earth is morphing into a small planet for the great human species, both ecologically and spatially.

#### **NEW FORMS OF FAMILY AND LIVING**

New forms of family and living are becoming increasingly common. Families are adopting completely new ways of arranging their life. For example, communal way of building is a growing trend. Rainbow families, families established with friends or cross-generational families are becoming more common.

### STRENGTHENING THE POSITION OF GIRLS AND WOMEN

The empowerment of girls and women is a growing global trend. We even hear about the "she-economy", where female-oriented consumption and trends are being strengthened further. Simultaneously, along with social media, new kinds of hate speech related to the position of both women and girls has surfaced in more equal societies.

### WORLD CITIZENSHIP WILL BE MORE COMMON

Some people identify themselves more as members of the global community than as citizens of any specific state. World citizens move smoothly from one country to another following work and opportunities. Often they are attracted by the world's largest metropolitan areas where global cross-sectoral urban culture is in the making.

### CREATIVITY BEGETS WORK AND WELL-BEING

As work becomes digitised, more jobs emerge in the creative areas where machines cannot be used as substitutes. Arts and experiences are areas in which most people look for meaningfulness.

### TECHNOLOGY DIVIDES THE POPULATION

With the rapid development of technology and the extension of human lifespans, there are more mutually exclusive technological realities in society. Different age groups use technology in ways that diff er a lot from each other.

There is no single solution for all.

#### **GOOD ENOUGH IS SUFFICIENT**

In prosperous populations, achieving the high water mark in material well-being is creating the "good enough" trend in thinking. Well-being is not increased by accumulating more material but by limiting it. The emphasis is on the value of a good life.

### EMPHASIS ON MEANINGFULNESS IN BUSINESS AND MANAGEMENT

As both consumers and employees, people want to commit themselves to a bigger purpose than to the mere seeking of profits.

#### **CULTURE OF EXPERIMENTATION**

More and more products, services and methods are developed in an agile manner and by experimentation. The direction can be quickly changed, and incompleteness is no longer regarded as a vice.

#### **INEQUALITY WILL INCREASE**

Many countries are wealthier than they've ever been, and in Western countries there is an ongoing struggle caused by growing differences in income and well-being.

The fundamental change in work and globalisation may divide people into winners and losers. If the differences become intolerable, social harmony may weaken. For this reason basic income is an interesting topic for many countries.

### HEALTH AND EXTENDING LIFESPANS WILL BECOME IMPORTANT BUSINESS

Further attempts will be made to increase people's lifespans with the help of gene therapy, new types of pharmaceuticals, food and other kinds of health technology. More and more people live longer, and those who can afford it will spend money on their health. Inequality will become more visible in health and in life expectancy.

## PEER AND SHARING ECONOMIES WILL BECOME MORE COMMON

Collaborative production and consumption and the peer and sharing economies will become more common operating models. Technology will enable the easy production, consumption and sharing of increasingly diverse things. Transformations and new operating methods will be seen in more and more fields, whether it be food, transport, tools, housing, hobbies or sports equipment.

#### **HYPERCONNECTIVITY WILL GROW**

The use of web-based services will increase and spread, and hyperconnectivity – the constant connectivity of everything – will continue to grow.

## SMART GOODS AND SERVICES WILL BECOME MORE COMMON

Ecological approaches combined with technology will create increasingly smart consumer goods and services with competitive quality and attractiveness. There will be an emphasis on the ease of use and on the user's perspective.

### THE SUSTAINABILITY CRISIS WILL BECOME MORE AND MORE ACUTE

The sustainability crisis is acute and related both to the increasing scarcity of natural resources and to climate change. The biggest challenge of our time is to find a solution for the overconsumption of natural resources and for de-linking emissions from economic growth. Technology offers many possibilities for this, but the most challenging thing is to change human behaviour and mindsets towards finding a solution to the sustainability crisis.

## THE STRUCTURES OF WORK WILL CHANGE

Platform economies and new organisational models will challenge the traditional employee–employer relationship. Work can be organised and its benefits shared in many ways. The traditional division between the unemployed, employees and entrepreneurs will not necessarily apply in the future as the number of retired people working as freelancers, people whose work is project-based and people in a variety of in-between situations will grow.

#### THE VALUE OF DATA WILL GROW

Access to data and the ability to make use of it and combine it are the trump cards in the development of new business models and effective management. Legal, human and ethical questions related to data will be among the hot political issues of the near future.

## THE USE OF ARTIFICIAL INTELLIGENCE WILL SPREAD

Artificial intelligence – the learning of algorithms – will be used in an increasing number of tasks. Artificial intelligence helps people interpret large amounts of data and act together, enabling a new way of taking advantage of collective intelligence. Ideally, artificial intelligence can be used to resolve the worst challenges faced by humanity. At the same time, there are a number of ethical questions associated with artificial intelligence, such as the transparency of the algorithms, the responsibility involved in the decisions, the ownership of the used data and distortions in the data.

#### **DIGITISATION**

Digitisation is the one form of technological development that has the strongest defining impact on the current radical change. Digitisation is about using digital technology to manage our affairs. This enables networked operating practices and the collection and analyses of vast amounts of data, something that was not possible before. Whereas the industrial revolution brought the muscle power into the economy, digitisation is creating a kind of nervous system and as a result changing the way we function.

## BLOCKCHAINS ENABLE DISTRIBUTED ACTIVITIES

Blockchain technology enables the generation and maintenance of a distributed database. In practice this means that a third party will no longer be required to verify payment transactions, the accuracy of information or the reliability of interaction in general. The best-known example of the use of blockchain technology is the virtual currency Bitcoin, but blockchains can also be used to implement smart contracts that monitor themselves or an entirely distributed transport service.

#### **INCOME WILL BE MORE UNCERTAIN**

As technology alters many familiar business fields and creates new ones, we do not yet know how work and the means of subsistence will materialise and divide in the future. It is possible that only relatively few people will be employed and even fewer will benefit from the result of work, but it is just as possible that technology and digitisation will bring about a remarkable number of new work forms, which will be available in abundance. The division of wealth and means of subsistence in the future should be at the core of future political thought.

# NO LONGER BE A VIRTUE BUT A NECESSITY

Lifelong learning should become a new basic feature of life, since life spans will continue to increase in the future. If an increasing number of people live to around 100, it is quite likely that the education acquired in the early stages of life will not support people throughout their working lives. Micro degrees or study accounts could help to achieve this.

### LOST DRIVE OF REPRESENTATIVE DEMOCRACY

Voter turnouts and the numbers of political party members have steadily decreased for several decades and the worldwide spread of democracy has slowed down, in some cases to the point of stopping. In order for democracy to work, it must be reinforced, new operating methods must be found and inclusion must be supported. It is possible that we will witness power being concentrated in even fewer hands, as well as increased disorder and social tension. On the other hand, it is possible that any signs of a crisis will trigger a golden age of democratic development and inclusion.

### DEMOCRACY WILL BE CHALLENGED BY INCREASING SOCIAL INEQUALITY AND A LACK OF TRUST

Examining the state of democracy always includes examining the well-being of society as a whole. The state of democracy is influenced by, for example, the level of trust in society, equality, the functionality of institutions, the economic situation and employment rates. Increasing social inequality has been a growing trend in OECD countries over the past few years. Trust barometers have suggested there are alarming signs of citizens losing their trust in institutions, business and governments.

### UNDERSTANDING TECHNOLOGY WILL BECOME A CIVIC SKILL

Learning and applying new technological skills will become essential, because an increasing number of affairs will be managed online on digital platforms. These skills may include, for example, the use of personal data, an understanding of the effects of algorithms on our media use or being prepared to encounter cybercrime.

### GLOBAL DECISION-MAKING AND GRASSROOTS DEMOCRACY NEED TO BE BOLSTERED

There are several serious global problems which cannot be solved within the borders of nation states. The benefits and adverse effects of globalisation and sharing natural resources, clean air, water and agricultural land are examples of issues which concern all people living on our planet. At the same time, the globally interdependent world needs functional grassroots democracy to maintain equilibrium. Developing both of these dimensions will become important in the future.

### DECISION-MAKING WILL BECOME PROBLEM SOLVING

In a world filled with information, it is increasingly difficult to find straight answers. In the future, decision-makers, information providers and solution providers should learn from each other. Instead of making one-off decisions on matters, we should be committed to taking a joint journey of learning and development.

### FRAMEWORK CONDITIONS FOR THE ECONOMY WILL BECOME STRICTER

The long period of slow economic growth is about to end, but future growth will be marked by uncertainty. The framework conditions for the economy will become much stricter because of the ageing population and the limits of Earth's ecological carrying capacity.

### NEW MEASURES OF ECONOMIC SUCCESS

n the future, the economy may be evaluated on the basis of success rather than volume or rate of growth. If both well-being and carrying capacity are to be regarded as attributes of a successful society, economic analysis will require new means of measurement that can take these objectives into account. Such means would be able to measure data on, for example, the prerequisites for well-being, democracy, health, climate change, sufficiency of water supplies and natural resources or the preservation of animal species.

# THE CIRCULAR ECONOMY WILL BECOME INCREASINGLY SIGNIFICANT

A circular economy is an economic model in which the production and use of goods or services minimise waste; materials remain in circulation and their value is maintained. A circular economy not only includes recycling, but also sharing, leasing, repairing and reusing, themselves practices that require new technologies.

### VIRTUAL AND AUGMENTED REALITIES WILL BE MORE COMMON

In virtual reality, people become immersed in a wholly simulated world, whereas augmented reality supplements the real visible environment. Both modify our experience of the environment we live in and enable new skills. For example, various kinds of entertainment, travel and cultural experiences can become possible in an entirely new way without the need to move from one place to another.

## FAST ANALYTICS WILL BECOME MORE COMMON

Modern laboratory techniques, such as taking blood samples, testing bacteria and viruses and even techniques used to investigate crime can be made less expensive, which also makes it possible to sell them also to consumer markets. Soon it will be feasible to buy products o ering various analytical functions, which when integrated to mobile devices will indicate the owner's state of health, the quality of the surrounding air, the freshness of fruit or the composition of any item.

#### **ROBOTISATION**

Robotisation enables services which are either wholly or partially automated or makes wholly automated production possible.

The synergies present in robotisation and arti cial intelligence allow robots to better carry out various tasks. Technology companies, for example, are developing personal robot assistants. Self-driving cars, seamless smart transport and drones are based also on robotisation.

## PROGRAMMING OF ORGANISMS WILL BECOME MORE COMMONPLACE

Genetic engineering and synthetic biology enable the creation of new kinds of organisms and the modification of existing ones for the desired purpose. Genetically modified yeast can be used to produce silk and fuel can be produced with the help of bluegreen algae. Similar applications can be used, for example, in food production, chemical processes, textiles, pharmaceuticals and construction. Personalised medicine and nutrition, as well as the conquest of many illnesses, can mean significantly longer life expectancies.

### RENEWABLE ENERGY WILL BECOME CHEAPER

The price of solar and wind energy has rapidly decreased. Similarly, battery storage technology has advanced at great speed. In some places, renewable energy is already cheaper than energy produced using fossil fuels. At the same time, energy production will become decentralised when more and more citizens produce their own energy and sell the excess.

## **MEGATRENDS**

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### EXTREME WEATHER PHENOMENA WILL BECOME MORE COMMON

Climate change will increase the frequency of extreme weather phenomena. Floods and droughts will become more common, as will increasingly strong storms. The changeability of weather conditions will put pressure particularly on agriculture and basic infrastructures.



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