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FINLAND FUTURES RESEARCH CENTRE

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GOFORE

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Welcome to exploring futures!

Welcome to Futures Day! We're delighted that you have decided to join us on this journey of exploration of futures!

The future is constantly present in our daily life, influencing our actions and our decisions, whether consciously or subconsciously. We all affect how the future is going to be like as employees, employers, customers and citizens. For this reason it's important that we keep an open mind when imagining the future and that we critically follow the public debate about the future and prevailing images of the future.

The Futures Day provides useful tools for the development of personal futures consciousness and futures literacy. These cards are intended to help you to design your very own Futures Day. They provide guidance and direction in imagining and visualising different kinds of futures or in organising a group discussion about some specific theme, such as circular economy or the future of work. One of the most important questions in futures thinking is What if. The question enables stretchen one's thinking and imagine alternative futures. The exploration of futures can indeed be seen as a game of possibilities and probabilities where our imagination and creativity are allowed to run free.

The Futures Day is a global event and therefore we hope you will share your impressions and experiences on social media under the hashtag #futuresday.

We wish you an inspiring Futures Day!

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How to use the Futures Day cards

We have produced this set of cards to make your journey of exploration into futures as successful as possible. This does not mean to say that you have to follow these cards literally, or that there is just one right way to organise your Futures Day. On the contrary, you can and should use all the Futures Day materials to fit your own needs and interests.

The cards are divided into **four** categories and **colour coded** as follows:

The orange cards explain how the cards work and give tips on constructive futures dialogue.

The pink cards provide an introduction to the basic principles of futures thinking.

The green cards will run you through the process of studying futures, from scanning the horizon to creating a vision. You should dedicate at least 4 hours to running through this process. % in each process cards describes how much time it is recommended to use in each phase considering the entity. However each phase can be done solely as well.

The blue cards provide an introduction to five different future phenomena. You can use these cards in shorter term work, for instance during a coffee break discussion at your workplace. The methods described in the green cards are useful for a more in-depth exploration of these blue-card phenomena, but there are also set of assignments that you can use in whatever manner that suits you best.

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Tips for exploring futures

When exploring futures please bear in mind the following principles of constructive futures work:

* It's both possible and worthwhile to study futures because only through exploring and becoming aware of alternative futures it's possible to choose and aim towards the preferred one.
* There's no such thing as right and wrong in futures thinking. All the ideas that are generated during the discussions are important.
* A climate of trust and confidence, playfulness and experimenting are all central to exploring futures.
* The future is open to countless possibilities, so there should be no restrictions on the imagination.
* One size does not fit all: freely apply the methods of futures thinking according to your own needs and interests.

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Tips for futures dialogue

When exploring futures please also bear in mind the following principles of constructive futures dialogue:

* It's also important to share and exchange views and experiences, otherwise thinking about the future may seem all too overwhelming.
* The purpose is not to debate, persuade or win others over about one's own views, but to give equal space to different points of view and to build new understandings about the matter in hand.
* Futures thinking is not based on hard facts alone, but emotions, tacit knowledge and intuition have an equally important role.
* Respect each other and show equal appreciation for everyone's futures thinking.
* Don't shy away from addressing emerging conflicts and try to search out issues that remain hidden.
* A good way to conclude might be to discuss the thoughts and insights elicited by futures thinking in each participant.

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Why is futures thinking so challenging?

We humans are not, by nature, very good at imagining the future. We tend to predict our own immediate future based on our immediate past. Our capacity for futures thinking is often constrained by various cognitive bias and often unconsciously held images and perceptions about the future and about what is possible and probable in the present and the future. Indeed the way we think about the future is typically too vague and too limited to be useful. As futures scholar Noel Gough has suggested, we often consider futures in terms of:

* tacit futures: we don't actually discuss the future, but assume that it will just appear all by itself;
* token futures: we discuss the future in terms of stereotypes and clichés, but these have very little real detailed content; and
* taken for granted futures: we discuss the future or a few alternative futures as if they were matters of course, as if there were no other options.

It's also good to recognize that we easily tend to ignore things in which we are not interested, which we don't understand or which are not socially acceptable. Indeed in futures thinking it is important to recognize the systemic nature of the world around us: everything is interconnected and nothing happens in a vacuum.

The aim in developing our futures thinking is to learn how to stretch our thinking, to take a broader view on the future and to exercise our capacity for imagining the future based on decisions that are made in the current moment.

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Principles of studying futures

The future is a fascinating subject. There are no rights and wrongs in futures thinking. All that is required is to keep in mind the key three key principles advanced by pioneer of futures research Roy Amara:

1. The future is not predictable because there does not exist any one specific future, but there exists always countless alternative futures.
2. The future is not a predetermined, fixed or inevitable fate – even when we are unable to see any alternatives to that future.
3. The future outcomes can be influenced by individual choices because it is shaped by our acts and choices in the current moment.

The future does not arrive ready-made, instead we make the future. What have you done today and how will it shape the future?

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Alternative futures

Futures research is not about predicting the future, but about trying to find out

1. what is possible,
2. what is probable, and
3. what is desirable and undesirable in the future.

The exploration of **possible futures** is by nature an open-ended exercise. The purpose is to break loose from the constraints of the current moment and to creatively and imaginarily explore what possibilities are open in the future. In the case of probable futures the focus is turned to examining which of the futures identified as possible are in fact probable. The next step is to discuss the values on the basis of which the future is defined as **desirable** or **undesirable.**

The utility of exploring futures is determined not on the basis of the "accuracy" of future predictions. Instead, the exploration of alternative futures can help to identify a wider range of possibilities in the present time, to seize these possibilities and to work for a better future. The exploration of alternative futures will also make us better prepared to meet the future because it will no longer take us by surprise to the same extent.

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Introducing futures

Aim To attune participants to futures thinking and to set the general framework, i.e. to define the focal theme, future horizon and level of analysis

Grouping Small groups or all together
Materials required Notebook if considered necessary

Examples of execution: Have a discussion in the group or set up an assignment
Choose a focal theme, level of analysis and future horizon

A good way to start the process is by attuning participants to the subject of futures. Engage your groups in a discussion about:
Can the future be predicted? What can we know about the future? How can we know about the future? Is it possible to shape and influence the future? Which aspects of the future can be shaped and influenced and which cannot? How do participants orient to the future? How does this personal relationship to the future affect them in the current moment?

After the warm-up discussion, the next step is to choose a specific phenomenon and to consider the future of that phenomenon.

1 Choose a focal theme or phenomenon

You can utilize the blue cards in choosing a focal theme.

2 Choose a level of analysis

- Own, personal future
- Future of immediate community and environment
- Future of the world and humankind

Choosing a level of analysis will help to narrow down the subject. In practice different levels intersect and overlap.

3 Choose a time horizon

All that has not yet happened belongs to the future. However it's quite a different matter to discuss what is going to happen 1, 10 or 100 years from now.
Perhaps the best way to gain a sense of the future horizon is to think back in time: to consider what the world was like 1, 10 or 100 years ago.

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Exploring futures

35 %
of total allocated time

Aim:	To introduce the concepts of weak signal, trend, megatrend and black swan and to work on finding these drivers of change
Grouping	Individual work, small groups or all together
Materials required	Own choice of method for identifying forces of change, Horizon scanning wheel -worksheet, post-it stickers
Examples of execution:	- Introduce different drivers of change and ways of identifying them to participants - Spend enough time searching for drivers of change - Compile drivers of change into Horizon scanning wheel -worksheet

Once you have chosen a focal theme, the next step is to **scan the horizon:** to identify the drivers of change that are impacting the focal theme at the current moment and that will shape it in the future. These forces of change include **weak signals, trends, megatrends** and **black swans.** Drivers of change can be identified by observing one's own living environment and the current debate on what is happening in society and the wider world.

Megatrend = a major path of development, an identifiable cluster of phenomena with a clear direction of development and global impact
Trend = long-term change moving in a clearly identifiable direction but with significantly smaller impact than megatrends
Weak signal = event or phenomenon that can be considered a first expression of change or a new trend in development. No trackable history.
Black swan = an unexpected and unlikely factor of change that has significant effects and that suddenly pushes a chain of events onto an uncertain path

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Interpretation of futures

Aim To identify desirable, undesirable and probable futures based on the collected drivers of change

Grouping Small groups
Materials required Futures table worksheet

Examples of execution: -Introduce the futures table & go over the concepts of desirable, undesirable and probable future with the participants
- Fill in the futures table worksheet one row at a time, considering the desirable, undesirable and probable futures of your focal theme

35 % of total allocated time

Once you have scanned the operating environment it is time to move on to consider the implications of the change factors identified for the future of your focal theme. Use the futures table to help with interpreting the change factors. The table is used as a matrix in which to enter alternative images of the future. For simplicity the alternative futures are here limited to a desirable, undesirable and probable future. The futures table makes it easier to examine these futures from different angles, in this case from the point of view society, the economy, people, technology and the environment.

For instance, the future of school in 2030 cannot be understood just by looking at the physical school building (environment), but it's also necessary to consider what is taught at school (society), what teaching methods are used (technology), who are being taught (people) and what teaching resources are available (economy).

Once the futures table has been filled in, select from each row one alternative future and combine them into a common image of future.

What kind of alternative futures are possible? Are some futures more probable than others? Which image of the future is the most desirable? Why and from whose point of view?

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Realizing futures

20 %
of total allocated time

Aim	To create a common vision of a desirable future and to consider how to contribute realizing the vision
Grouping	Small groups or all together
Materials required	Depending on the method chosen for representing the vision
Examples of how to arrange class	- Go over the concept of vision - Create your visions in the manner chosen - Consider what concrete steps are needed to realize the vision - Share the visions if possible on social media under the hashtag #futuresday

Once you have filled in the futures table worksheets and crafted different images of the future, it is time to develop a common vision based on the images. A vision is a description of a common desired state one wants to reach by the end of a selected time horizon, for instance in 2030.

Vision checklist:

- a vision is concrete and descriptive but not too detailed and prescriptive
- a vision is coherent, logical and realistic articulation
- a vision allows for rapid flexibility in a changing world
- a vision inspires everyone to push in the desired direction

A vision can be represented in any format, for instance by drawing or through "news headlines". In conclusion, you can create a roadmap and discuss what kinds of steps and actions are needed in the current moment in order to set the vision into motion. See questions:

How can the vision be turned into reality? What steps are needed in the current situation in order to move towards your vision – at the individual level, at company level, and more widely in society? What actions and choices can you make even today in order to promote the attainment of the vision? What kind of obstacles might there be to the realisation of your vision? How to overcome them?

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Future of work and skills

Work and skills requirements are in a constant state of flux in our society. Key drivers of this change include artificial intelligence, robotisation, automation and sharing and platform economies. Other underlying megatrends include climate change and population ageing. Some old jobs and occupations will change significantly, some will disappear altogether, and new ones will emerge to take their place.

Advances in technology are bound to reduce the number of routine jobs. People will be able to spend more time on creative problem-solving and collaboration with other people – whether via machines or without them. Rather than working for a traditional employer, people will increasingly share their skills and expertise via international digital platforms.

These changes in the world of work are not going to happen overnight: this is a long-term process of technological, economic, social and human change. But the need and demand for different skill sets may change quite rapidly. For individuals caught up in the whirlwind of change, the best source of security is provided by lifelong education, learning and skills development.

Topics for discussion

Work has always changed and will continue to change. Take some time to think about how work and occupations have changed in the past 30 years. What thoughts come to your mind when you hear mention of a robot police officer; an urban air traffic controller; a self-sufficiency consultant; a virtual restaurateur; an artificial intelligence lobbyist; a substitute traveller; or a happiness operator?

Work is about solving other people's problems. Explore some megatrends and reflect on the kind of new problems that will emerge in the future. How can these problems be solved? What kind of work do you expect will be needed in the future?

In the future skills and life-long learning will gain increasing importance at the expense of degrees and certificates. What does your own skills profile look life and in what fields might there be a demand for these skills in the future? And what skills should you and your company acquire in the changing world?

Circular economy

Content produced in collaboration with circular economy expert Anne Raudaskoski.

Our current economy is based on a wasteful take-make-waste model. A circular economy offers us a resource-wise economic model, which aims to decouple growth from the increasing use of raw materials and natural resources. In other words, we need to harness one-planet logic and learn to do much more with far less: at the moment we are using natural resources equalling around four planets. (we over-consume our resources at the speed that exceeds the nature's capacity to renew its stocks, thus resulting in a growing imbalance, see e.g.: https://www.overshootday.org/).
A circular economy is about holistic change both in mindset and operational model; this change affects all sectors, organisations and individuals.
The key towards a more circular world is design, which aims to eliminate waste out of the system through lifecycle thinking. No waste means all material should treated as raw material maintaining its value and cycling endlessly in biological (renewable) and technical (non-renewable) loops.
New circular business models and service concepts can maximise the utilisation and extend the life-span of products. This, in turn, enables creating a circular customer relationship and new revenue streams at multiple stages of the product's lifecycle.
A circular economy provides us a terrific future horizon: instead of minimising our negative environmental footprint, we can focus our efforts on maximising the positive environmental impact. It is important to remember that a circular economy plays a crucial role in mitigating climate change.

Topics for discussion

Discuss the differences between the linear and circular economy. Visualise how the take-make-waste model looks like compared to the circular model.

Where do you see a circular economy happening at the moment? Brainstorm companies that already operate in a circular way, for example, through sharing economy services, product life-span extension, minimising material leakages and/or using recycled materials.

Discuss your own consumption habits and "one-planet logic". What role do we play as individuals and what opportunities each of us have in furthering a circular economy.

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New forms of value creation

Content produced in collaboration with platform economy expert Tuukka Ylälahti.

What is going on when the world's largest media company is no longer creating its own content; the world's largest taxi company no longer owns a single car; and the world's largest accommodation provider no longer owns a single property? What's happening is a revolution in value creation brought about by digitalisation and the growth of a sharing or platform economy. This involves digital service companies conducting business on an unprecedented scale without having to invest in either means of production or labour in the same way as traditional value chain actors.

We know them by name and they control the Internet: Facebook, Apple, Amazon, Netflix and Google (FAANG). They have a combined value of around 3 trillion dollars – more than 10 times Finland's GDP.

The Internet platform giants once made the promise that they were going to democratise knowledge and make ownership redundant. But it seems that the exact opposite is happening. Instead of equality, it's a case of winner takes it all and power and affluence becoming ever more concentrated. To put it simply: you win if you own a desired property in the centre of Helsinki and you can exchange the right to use this flat with a corresponding one in Barcelona. And you lose if you're a student and want to rent a long-term home in either of these cities. Welcome to the golden age of the platform economy. This is where we're at now, but what follows next?

Topics for discussion

Barcelona, Amsterdam and Berlin have imposed restrictions on airbnb rentals because the income generated by tourists is driving up prices in these cities and making them unaffordable to local residents. Should Helsinki follow suit? And what about Savonlinna, whose population is dwindling?

The value of FAANG companies has been created by collecting data, selling that data to advertisers and paving the way to individually tailored commercial messages. Consumers have seen an improvement in the quality of services, but on the other hand the data generated in the use of these services can be purchased.

The reverse side of you receiving a tailored holiday package offer is the faltering of democratic society as a result of massive propaganda campaigns. Is it better to have a service that is free or one that you have to pay for? What if the value of the data you have produced were greater than the cost of the service and you'd receive cash payment for the difference?

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Artificial intelligence and ethics

Artificial intelligence has been under development since the 1950s, but in recent years these efforts have been greatly boosted by machine learning and deep learning. New AI applications are constantly being introduced in many different areas of life, and there are now applications that (among many other things) can listen, write, read and see. AI is also making more and more independent decisions on our behalf, which has prompted debate about various threats and opportunities. Major concerns have included the power of algorithms, algorithmic bias and hidden agendas.

The rapid development of artificial intelligence has created a need for regulatory ethical frameworks. Legislation is failing to keep pace with the technology because commonly accepted practices usually evolve with real-life uses. This can be problematic.

AI involves not only threats but also many opportunities. One difficulty is that people not seem to have a very clear understanding of what AI is all about. AI has huge computational power, which makes it a very powerful data processing tool. Indeed, AI is already being used by doctors, lawyers and creative professionals. It is expected that AI will be used to assist humans in jobs that involve processing large volumes of data and that can be performed much more rapidly by machines.

Topics for discussion

Artificial intelligence is being developed by people for people. What aspects should be given special attention in this development effort?

Where would you want to have AI working by your side, and what would you do with the extra time?

In which areas do you think AI can bring value to your company?

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Social robots

Content produced in collaboration with Futurice robotics designer Minja Axelsson.

Social robots are robots that have a principal function of interacting with humans, or other social creatures. Social robots combine social presence, the ability to move and influence their physical environment, as well as the computing power, data retrieval and storage capacity of computers.

Social robots are the user interfaces of the future: they interact in ways that are already natural to humans – speech and gestures.Social robots have been used for instance as receptionists in hospitals and in therapy for children with autism. As speech and gesture recognition technology continue to advance the roles social robots could take continue to expand.

Social robots are physical manifestations of data – they operate using collected data, according to pre-determined algorithms. Some of the most intelligent robots apply machine learning, which allows them to learn to perform a specific function more effectively.

Topics for discussion

Social robots are not yet capable of the kind of complex social interaction that is distinctive to humans. They are, however, highly effective in tirelessly and accurately repeating some specific function. What kind of functions and roles could social robots perform in our society?

Data collection makes robots more effective in their operation and can help them to adapt and personalise their behaviour towards users. However, data collection in sensitive environments can jeopardise the privacy of users. Where is it acceptable for robots to collect data? How should users be informed of data collection? Are there any places where robots should not be allowed?

Research has shown that subconsciously, people treat robots as if they were living creates, and that people feel empathy towards
robots. What kinds of opportunities and problems does this involve?

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We hope you have an inspiring Futures Day!

Don't forget to share your experiences in
social media with *#futuresday*

If you have any questions please get in touch at
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