

SOCIETY, SKILLS AND SPACES

**– Curated Conversations on Futures of Work
with Foresight Experts**

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Cover photo: 'Powder Day', acrylic painting by Maria Lehtimäki, 2021

ISBN 978-952-249-623-2 (pdf) • ISBN 978-952-249-624-9 (print) • ISSN 1797-1322



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“The digital world is time-agnostic – it does not care nor necessarily even know in which time zone you are.”

Karlheinz Steinmüller

PREFACE

Around the world, for organisations of every kind, there can be no bigger question than how the future of work, jobs, skills, and workplaces may play out and the range of possible scenarios that could emerge. Hence, this is a very timely and important report providing an extremely valuable contribution to this dialogue around the future of business, organisations, work, skills, and work spaces in the face of an increasingly complex, fast changing world, and uncertain decade ahead. The credibility of the report is emphasised by the way in which it has drawn on the work of the Millennium Project and foresight experts representing this truly unique global network of future thinkers across 72 country nodes.

Based on what we already know, anticipate, and imagine, when we think about the future of society, skills, and spaces, we can expect continuous transitions in the nature of the work being done and the talent required to do it. The report highlights that a critical influence and disruptor here is the evolution of artificial intelligence (AI) which is becoming ever more capable by the day. We can also expect an accelerating transition to artificial general intelligence (AGI) and artificial superintelligence (ASI) which could match or exceed human levels of intelligence and cognitive capabilities over the next ten years.

The rise of AI in particular means that jobs may last only two years, and the nature of the underlying work tasks could evolve continuously. Hence, individuals will need to focus on developing and maximising their own capabilities throughout their lives. The report highlights powerfully this transfer of responsibility for capability development from the organisation to the individual. The ability of countries, organisations, and our training and development systems to facilitate this transition will be a critical determinant in the future success of nations.

The report provides powerful insights on how the emerging talent landscape will be driven by multiple factors from the expectations and attitudes of individual and societal through to the needs of business and the macro-economy. This will include changes in the nature of work, the meaning of work, and the value placed on it for those performing those tasks. These in turn will start to shape corporate expectations on the nature of talent it requires given the speed of change in the business and work environment and the impact of AI. As a result, workforce talent strategies could become redundant within a few months of publication as AI starts to take on more tasks at every level. Talent requirements will evolve from job specific skills towards a broader range of personal capabilities, mastery of AI tools, and the capacity for continuous and rapid learning.

The report emphasises how we will see an increasingly diverse spectrum of talent and work expectations based on individual and organisational desires and expectations. Of particular importance here are critical factors such as the continuous learning, desired level of self-expression, meaningfulness, humanness, contribution to results and the wider community, freedom, autonomy, flexibility, critical/holistic/futures thinking, collaboration, and creativity.

As we look to the next decade, it is clear that there are many possible futures and multiple possible iterations for our world, our societies, and the nature of organisations. These influences will turn shape the work we'll be doing, the skills required to do them, and how we can develop our talent to maximise its potential and create fulfilling lives and thriving societies. The report is an essential contribution to this continuing exploration of the future.

Rohit Talwar

Global Futurist and CEO – Fast Future
Co-chair – UK Node of the Millennium Project

ABSTRACT

This report is a compilation of expert insights on the futures of work – on the future organizing of work and work spaces as well as the competencies needed in the future digital meanings society. The experts' insights were obtained through structured interviews conducted for the T-winning Spaces 2035 project with six experienced foresight practitioners, all representing the Millennium Projects Nodes in three continents. The first part of the report discusses big picture questions concerning the futures of work such as a new paradigm of work, paradoxes of work, nature of work, motivations, meanings, and societal transitions, while the second part focuses on specific questions around work spaces and skills needed as well as the new leadership. Everything will be hybrid and much of knowledge work takes place independent of the location. Hybridisation represents the way people use their time. Work takes the aspects of leisure while leisure becomes more like work. It becomes more difficult to set clear boundaries between these aspects of life. Furthermore, values play an essential part in the futures of work. Work is not only for sustenance and for payment. Rather, people want to work in a way which accommodates their values. However, not everything will change. Work is still paid work even though voluntary work is something people may want to do after their workday. Futures awareness and critical thinking along with empathy and other soft skills will be required competencies for future worklife.

RESUME

Ce rapport est une compilation d'avis d'experts sur l'avenir du travail – sur l'organisation future du travail et des espaces de travail ainsi que sur les compétences nécessaires dans la future société numérique. Les avis des experts ont été obtenus grâce à des entretiens structurés menés pour le projet *T-winning Spaces 2035* avec six praticiens expérimentés de la prospective, tous représentant les nœuds du *Millennium Project* sur trois continents. La première partie du rapport aborde les grandes questions concernant l'avenir du travail, telles qu'un nouveau paradigme du travail, les paradoxes du travail, la nature du travail, les motivations, les significations et les transitions sociétales, tandis que la deuxième partie se concentre sur des questions spécifiques autour des espaces de travail et des compétences nécessaires ainsi que du nouveau leadership.

Tout sera hybride et une grande partie du travail intellectuel se déroule indépendamment du lieu. L'hybridation représente la façon dont les gens utilisent leur temps. Le travail prend des aspects de loisirs tandis que les loisirs deviennent plus proches du travail. Il devient plus difficile de fixer des limites claires entre ces aspects de la vie. En outre, les valeurs jouent un rôle essentiel dans l'avenir du travail. Le travail n'est pas seulement destiné à la subsistance et au paiement. Les gens veulent travailler d'une manière qui corresponde à leurs valeurs. Cependant, tout ne va pas changer. Le travail reste un travail rémunéré, même si les gens souhaitent faire du bénévolat après leur journée de travail. La connaissance de l'avenir et la pensée critique, ainsi que l'empathie et d'autres compétences générales seront indispensables pour la vie professionnelle future.

RESUMEN

Este informe es una recopilación de opiniones de expertos sobre el futuro del trabajo, futura organización del trabajo y los espacios para su desarrollo, así como sobre las competencias necesarias en la sociedad digital del futuro. Las opiniones de los expertos se obtuvieron a través de entrevistas estructuradas a seis profesionales representantes de los nodos del *Millennium Project* en tres continentes experimentados en previsión, realizadas como parte del proyecto *T-winning Spaces 2035*. La primera parte del informe analiza cuestiones generales sobre el futuro del trabajo, tal como un nuevo paradigma del trabajo, las paradojas del trabajo, su naturaleza, motivaciones, significados y transiciones sociales, mientras que la segunda parte se centra en cuestiones específicas sobre los espacios de trabajo y las habilidades necesarias, así como sobre el nuevo liderazgo.

Como resultado, todo será híbrido y gran parte del trabajo intelectual se realiza independientemente de la ubicación. La hibridación representa en sí misma la forma en que las personas utilizan su tiempo. El trabajo adquiere aspectos de ocio, mientras que el ocio se vuelve más parecido al trabajo. Se hace más difícil establecer límites claros entre estos aspectos de la vida. Además, los valores desempeñan un papel esencial en el futuro del trabajo. El trabajo no es solo para el sustento y el pago, sino que las personas quieren trabajar de una manera que se adapte a sus valores. Sin embargo, no todo cambiará. El trabajo sigue siendo un trabajo remunerado, aunque el trabajo voluntario sea algo que las personas quieran hacer después de su jornada laboral. La conciencia del futuro y el pensamiento crítico, junto con la empatía y otras habilidades interpersonales, serán competencias necesarias para la vida laboral en el futuro.

1. INTRODUCTION

In the field of futures studies, the approach for exploring futures through tapping into futures expertise is a frequently used approach. In Popper's foresight diamond (Popper 2008) there are four edges – 'expertise' and 'interaction' forming one axis, while 'creativity' and 'evidence' form the other (Fig.1). Expertise represents qualitative foresight and can be addressed through several methods such as interviews, expert panels, scenarios, roadmapping and Delphi technique. The three last mentioned ones also belong to the group of semi-quantitative foresight. Typically, expert insights are used in combination with some other methods. For example, they are employed to feed into another expert-based method such as Delphi technique, or they can be combined with scenario construction. In those cases, it is a hybrid method and approach that is being applied.

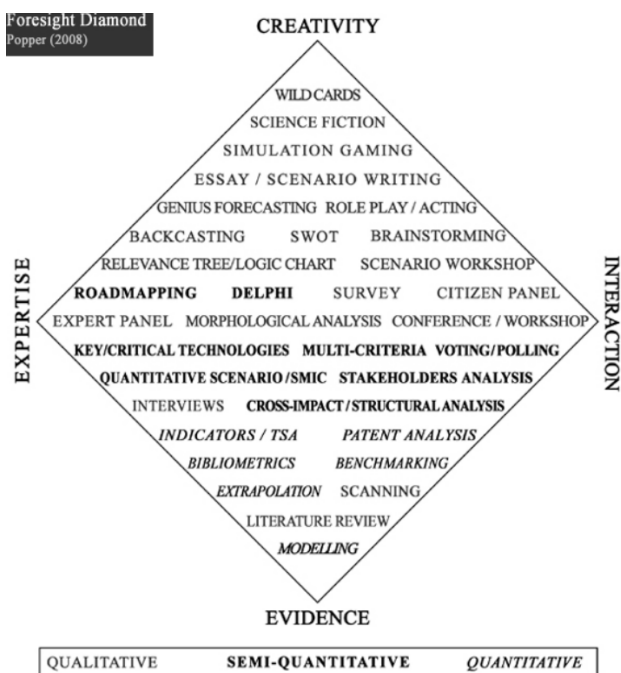


Figure 1. Expertise as one edge in Popper's Foresight Diamond (Popper 2008).

In a similar vein, in the Millennium Project's methods toolbox (Glenn et al. 2009), expertise is a key element in several of the methods described. Furthermore, in the methods book by the Finnish Society for Futures Studies (Heinonen, Kuusi & Salminen 2017), one thematic chapter is dedicated to expert-knowledge based evaluation – i.e. besides acquiring experts' insights of futures, also focusing on utilising it. The first Millennium Project Forum, that was organised in Finland in 2009, invited Murray Turoff as a keynote speaker to address the question of expertise and the use of experts in Delphi processes.¹ The title of the Forum was 'Experts as Carriers of Foresight Knowledge'.

In this report, foresight experts' views on specific questions concerning the futures of work and work spaces are conveyed. We acknowledge that the topic of futures of work covers an immense area and is a permanent issue

¹ The Millennium Forum was organised by the Helsinki Node (Sirikka Heinonen and Osmo Kuusi) of the Millennium Project at Helsinki University on 6th November 2009, chaired by Prof Ilkka Niiniluoto and Prof Sirikka Heinonen to promote MP Futures Research Methodology V 3.0 and to launch methodological discussion. The Forum attracted more than 80 participants who engaged in active conversations with the speakers. A Special Issue of FUTURA 4/2009, the journal by the Finnish Society for Futures Studies included papers by keynote speakers Glenn (2009) and Turoff (2009) in Heinonen & Glenn eds. 2009.

to be addressed in futures studies. It has been so for decades and adjusted within various industrial transitions. When addressing change in society, the field of work is in a central position. Work as a key sector in society is undergoing transformation, now especially within the twin digital and green transition which is EU's strategy (Muench et al. 2022). The topic of 'Futures of work' in futures studies is also inextricably intertwined with reflections on societal change and phase- or wave-shaped transitions. Work is often analysed in connection to changes in the economy, see for example Kondratiev's theory of cycles (Wilenius, 2017; Kondratiev, 1984). Studies on work in information society² following the past industrial society also abound. Recognised authors on the topic feature Alvin Toffler (see 1970; 1980), Frank Webster (see 1995), Jeremy Rifkin (2011) and Manuel Castells (1996; 1997; 1998). Some authors focus on innovations driving the change and data-oriented industries (Ross 2016).

Besides economic and technological perspectives, the futures of work are frequently anticipated in studies of future labour, jobs and workplaces, and of changes in the skills needed in them (World Economic Forum 2025). Several scenarios have also been constructed on the topic of futures of work, and many of them as reflected on technological trajectories (e.g. Glenn & the Millennium Project team, 2019). Scenarios also exist around the nexus of work and energy (see e.g. Heinonen, Ruotsalainen & Karjalainen 2017; Heinonen & Karjalainen 2019). Currently we are, however, again entering a next stage where new drivers and novel complex phenomena arise, such as a converged technological revolution, the effect of AI on work throughout and in all occupations, emergency of climate change, polarisation, and acerbating geo-political conflicts. Futures of work are uncertain and full of challenges. Schmidt (2017) underlines two interrelated problems standing out as the future of work is being addressed: the potential for emerging technologies' job automation and growing labour market polarisation.



Figure 2. A typical topic in future work reflections is the role of AI and technology vis-à-vis humans. Photo: Street art in Helsinki, photo by Sirkka Heinonen.

² The wide and somewhat outdated concept of the 'Information Society' is still in the global agenda, even though usually under different titles such as digital society, AI society, knowledge society etc. However, the President of the United Nations General Assembly's statement on priorities for the year 2025 includes this notion: "The World Summit on Information Society later this year presents a pivotal opportunity, to advance our efforts to create a free, open, and secure digital future for all".

This report is a compilation of expert insights on the futures of work – on the future organising of work and work spaces as well as the competencies needed in the future digital meanings society. We offer a continuation of a previous interview-based report written within the T-winning Spaces 2035 project (FFRC eBook 5/2023). This three-year project is funded by the European Union NextGeneration instrument and the Research Council of Finland (grant # 353326).³ The context for the project is an urgent need to maximise the potential that digital remote working can provide in the green transition. We aim at increasing the understanding of the sustainability challenges of future digital remote working and how those could be tackled with optimal spatial solutions and practices for households and employers. The work package that Finland Futures Research Centre (FFRC) at University of Turku is in charge of in the project, is also concerned with broader horizons embracing futures of work. The focus is, however, largely at the thematique of knowledge work, digital work, and remote work. The project brings together a unique team and methods from spatial planning, housing design, architecture and land use planning, facility management, urban physics, environmental impact analysis and policies, real estate and futures studies from Aalto University, Tampere University, and University of Turku.

The Millennium Project is a collaborating network in this project. CEO Jerome Glenn acts as a member in the Advisory Board of the T-winning Spaces 2035 project. The co-operation with the Millennium Project is also directly visible in the choice of the interviewees invited for this set of interviews.

The experts' insights for this second set of interviews were obtained through structured interviews conducted for the Twinning Spaces 2035 project with six experienced foresight practitioners.⁴ All the interviewees represent the Millennium Projects Nodes in three continents (Europe, Africa and Latin America). Table 1 depicts the interview constellation and implementation. The interviews have been transcribed and checked with the interviewees (see Appendix 1 and 2).⁵ The structure for the interviews was the same for all interviews excepting some modifications as deemed appropriate. The time reserved for the interviews also varied to some degree, depending on the prevailing conditions during the interviews. The mode of the interviews was intentionally adjusted to a conversational one.

Table 1. *The framework and details of the interviews conducted.*

Interviewee	MP Node	Time of Interview	Mode and Place	Conducted by
Mara di Berardo	Italy	3 September 2023	Video/f2f ⁶ Bologna, Italy	Sirkka Heinonen
Kacper Nosarzewski	Poland	26 October 2023	Audio/f2f Paris, France	Riku Viitamäki
Wendy Schultz	UK/USA	8 November 2023	Online	Paula Pättikangas
Karlheinz Steinmüller	Germany	14 November 2023	Audio/f2f Helsinki, Finland	Riku Viitamäki
Geci Karuri-Sebina	South Africa	12 December 2023	Online	Paula Pättikangas
Lala Deheinzelin	Brazil	18 January / 8 March 2024	Online	Sirkka Heinonen

³ For more information on the project, see T-winning Spaces website: t-winning-spaces2035.com and T-winning Spaces FFRC website: ty.fi/tws2035.

⁴ The first set of expert interviews is published as a FFRC eBook 5/2023 'Towards Twin Transformations and Spaces – Convolved Conversations on the Green and Digital Futures of Work'. The report comprises eight interviews, out of which six were conducted within the FFRC Conference in Turku 2023 (for the T-winning Spaces 2035 project), largely drawing on the conference presentations. The report is available at: www.utupub.fi/handle/10024/176094.

⁵ Paula Pättikangas participated in this process of conducting two interviews and making transcriptions of them while acting as a research assistant at FFRC, while the authors of this report have further edited and elaborated the findings into a document format with an analysis included.

⁶ Video (ed. by Heinonen & Haapasaari 2024) available for viewing at the end of the T-winning Spaces 2035 Project website: ty.fi/tws2035

The first part (Chapter 2) of the report discusses big picture questions concerning the futures of work such as a new paradigm of work, paradoxes of work, nature of work, motivations, meanings, and societal transitions, while the second part (Chapter 3) focuses on specific questions around work spaces and skills needed, as well as the new leadership. In other words, the first part is concerned more with the systemic level issues and the second part with musing on specific questions.

The choice of the questions for the interviews was based on one hand on the aims of the T-winning Spaces 2035 project and its research questions. On the other hand, they were elaborated on the tentative literature review findings (see Figure 3 for the modules within the research process of the project).

The interview insights are presented here as a synergetic mélange of reflections and statements anonymously and structured by the themes. Direct quotations are also occasionally given.⁷ Accordingly, this report is a product of collective intelligence of the foresight experts as interviewed.

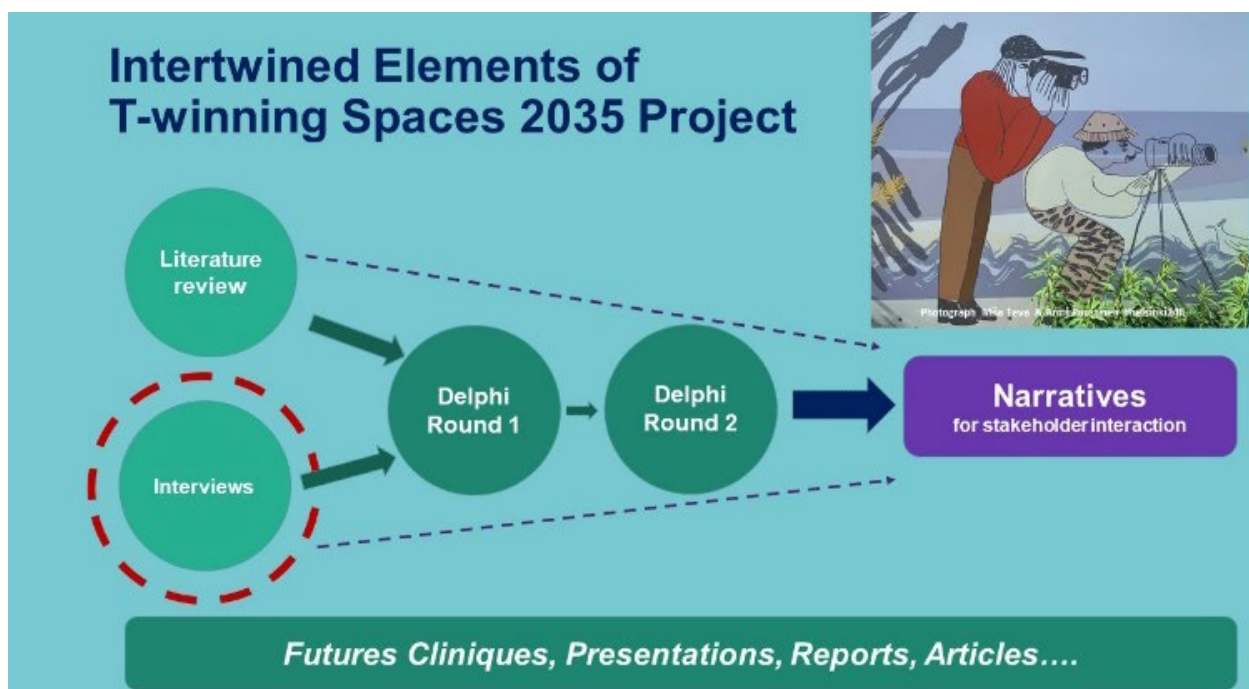


Figure 3. Interviews as part of the overall research project design and dynamics. Embedded picture by Miiia Teva & Armi Puustinen #helsinki24h.

These interviews are part of the overall research process within the T-winning Spaces 2035 and its FFRC work package – forming an entity *per se* and feeding into the design and implementation of a Delphi study within the project. The Delphi study was conducted anonymously in two rounds in March–November 2024 and is to be opened up in a forthcoming document. The ultimate goal is then to produce narratives on futures of work in digital and green transition to be deliberated with stakeholders.

Acknowledgements

The authors wish to thank cordially all the foresight experts who were interviewed for the T-winning Spaces 2035 Project. These interviews and the project at hand were made possible with the support of funding by the European Union NextGeneration instrument and the Research Council of Finland (grant #353326). We also wish to thank the Millennium Project for being a collaborating network, and Project Assistant Paula Pättikangas for participating in making and editing the interviews, as well as Project Planning Officer Anne Arvonen for editing the final report.

⁷ This means that the anonymity was not required in the interviews.

2. BIG PICTURE OF THE FUTURES OF WORK

This chapter is concerned with the big picture of the futures of work, i.e. systemic level issues. We wish to sketch out in broad brush strokes the landscape of futures of work. Therefore, we inquired our foresight experts about such questions and how they depict a new paradigm of work, what paradoxes of work they consider worth studying, how they characterise the future nature of work, motivations, and meanings within societal transitions.

2.1 Approaching a new paradigm of work

Perhaps the broadest question we posed to the interviewees was concerned with a new paradigm of work. A paradigm is a pattern or a mental model of something – in this case a mainstream model of work and worklife. Based on our interviewees' reflections we can indeed detect a new paradigm of work emerging. One interviewee remarked, though, that it is quite challenging to describe it, since the present paradigm is not quite clear either. According to the insights from the interviews, some general features can, however, be drawn. All in all, everything is **hybrid** and much of knowledge work takes place independent of the location. From the interviewees we received the following insights.

One interviewee highlighted that the new paradigm of work seeks for the balance of specialised and generic. There will be demand for more and more people that are renaissance-minded, in a sense of having multiple different skills simultaneously. The new paradigm was depicted to represent everything positively “Co” – co-operation, co-creation, communality, collectiveness etc. Competition and control should be turned into collaboration. The new paradigm is also hybrid in every sense. When we talk about future or about the world, we should always talk in plural – futures and worlds. Different worlds exist simultaneously and different times as well we can see that there are populations living in the end of the 19th century, some in the 20s whereas some in the 21st. This will continue for a while. However, the next decades were seen to bring about a huge transition. In one world there will still be stable jobs whereas in other worlds, numerous people do not have a job in the 21st century. Societies, cities, companies are still more attuned to the present than to the future. The new paradigm requires more people to have a diversity of skills and problem-solving capacity, with the aid of AI. According to this interviewee, some jobs are bound to be replaced by AI. However, the new paradigm will have **'care and caring'** as the key words.

There is also a diversity of possible transactions in the new paradigm. We have been taught to see just buying and selling and investment of only one kind of resource. The perception of the resources that we have is also very limited. If we broaden the perspective on what resources are (from economic and natural resources into cultural, spatial and immaterial ones), this brings about a new economy. The logic goes that with new economy, new relationship with work will also emerge. Economy was stated to be much more complex and interesting than we have been used to know it.

Some interviewees also questioned whether there is any prevalent paradigm of work. “What is the paradigm of work now” is the question that should be asked first. Since work is no longer defined by specific hours and specific places, it is already borderless with respect to time and place. It was also expressed that the **paradigm should mean more than changes in time and space**. Still, work is mainly paid work – the core of work has not actually changed since Marx and Engels. You still get your pay for your labour, and hopefully the pay is due also in the future. One interviewee pondered whether there may be such a basic thing that does not change as long as work is paid work. We could imagine a society where we do things which we deem useful or necessary and which are not being paid for. This futures image would be radically different, since everybody would do

”

“Are we getting captured by old ways of doing things, or are we truly thinking in new paradigms?”

Wendy Schultz

”

things without being paid for, simply to serve society and oneself. That would reach beyond the present understanding of work. That is, however, utopia, not seen in timeline earlier than after the year 2060.⁸

Another important distinction for the new paradigm of work was seen to exist between paid work and forced work. One interviewee pointed out that fortunately, we have overcome much of the forced work such as the work in gulags and concentration camps. We are beyond that – at least in legislation if not in reality yet⁹. However, we are by no means beyond paid work.

Another interviewee raised the conception that the emerging new paradigm could be embedded in the idea that **work is a space of expression and freedom**. According to this line of thinking, the new paradigm could be much more humane, in terms of the feeling of personal value, the feeling of creativity. However, it would have to change the prevalent one, which is the present transactional kind of relationship with work. The interviewee pointed out that now you work because you have to work in order to have an income for your survival.¹⁰ In the present paradigm, your work does not have to be contributive and it does not have to make you feel like you are contributing. In other words, it does not have to make you feel anything good, actually. In fact, work is almost a negative association, but you have to do it.¹¹ The emerging new paradigm means not having to be linked, not having to physically be in one place, not having to work for just one person, not having to be told what to do etc. It covers all these forms of personal and individual expression and freedom. **Work actually is a space.**

Many experts voiced the shift from working just for money and survival to doing something that gives satisfaction, both in personal (working with people we like) and in general terms (doing something creative, meaningful, contributing to higher values). One interviewee reminded that this shift is already here – it is happening and will only be reinforced, because we can delegate tasks we do not need to do anymore to AIs. Of course, the need of remuneration for subsistence still remains for many. The question of recompensation will take a lion's share in the paradigm as long as our basic needs are not met. However, more and more people are discovering the importance of having higher purposes in life and to live meaningful and enjoyable times. According to the interviewee, **'giving a proper value to our limited time'** is an important lesson coming from the pandemics and is affecting the way we perceive working. In the Millennium Project report "Work/Tech 2050. Scenarios and Actions" (Glenn et al. 2020), a vivid positioning for the new paradigm was indicated to be expressed in the report's two key questions: "What kind of life are you creating? Are you boring or interesting?". This interviewee suggested that we add a further question in the same vein: "Are you contributing to improving our perspectives for the future, showing more awareness of what surrounds us and how we have an impact on our society and earth?" Such a new paradigm would mean that **the term "working" will lose meaning**.

Another interviewee claimed that the prevalent paradigm is that the most attractive jobs are provided by actors who have monopolistic ambitions. This was stated to be the case especially in the corporate sector. Furthermore, companies, which offer the most interesting positions for workers may be harmful in the large scheme things of things.

Some claims were also made for elaborating the new paradigm in the plural – as diversified for geographic communities and professional communities. The new paradigms for the future of work could be very positive on the surface, but may have very challenging impacts at personal levels or cultural levels or levels of community

⁸ Utopias and dystopias are one genre in futures-oriented literature, and science fiction is another which have presented descriptions of futures of work. Science fiction differs from futures studies in its thinking pattern in various ways: SF is thinking what can be imagined and how the actors play in that scene, while futures research is thinking what is possible and among those possible worlds what is desirable (Steinmüller 2016).

⁹ We should remember that there are forms of modern slavery like forced sex labour or forced drug trafficking still happening even today (Heys 2023).

¹⁰ Kuusi et al. (2024) take the reflections on the topic of survival beyond subsistence for a living to the next level. They study how artificial intelligence (AI) relates to the survival of the human species. Will it become a new species on par with living species? Naturally, this creates a new 'battle field' for work and new constellations in division of labour.

¹¹ However, a paradigm that Manfred Max-Neef framed out with his taxonomy of 9 basic human needs and human scale development, there is none that says you have to work (albeit that 'subsistence' implicitly could be interpreted to be based on work). Max-Neef was a Chilean economist and professor of economics in University of California, Berkeley. This reminds us of Jim Dator's thought about full unemployment not being an undesirable option (see FFRC eBook 5/2023).

integration. It was also suggested that the paradigm or paradigms of work should not come from outside, but within the profession or professionals to know what they think should be the next thing in their field.

2.2 Paradoxes of work at play

We asked our interviewees about the paradoxes of work that they find intriguing. By intriguing, we meant paradoxes that are considered interesting, important and somehow puzzling as well i.e. needing further reflections. This question is related to our efforts for developing a new foresight method called paradox probing (Heinonen et al. 2025; Heinonen et al. 2024).¹² It is based on the idea that paradoxes affect our thinking – consciously or unconsciously. Paradoxes are seemingly illogical statements, but they may carry interesting underlying currents and belief systems. Paradoxes represent the present (past included) but by deconstructing them we may find seeds for novel futures. Such seeds may grow to launch discontinuities or disruptions and contribute to catalysing societal transformation. If such seeds – similar to weak signals – can be identified, one can anticipate possible future developments and be better prepared for them or even try to affect trajectories towards more desirable futures. This section describes what the panelists highlighted or reflected upon the paradoxes.

”

“...we don't have focus anymore, we forget things, because we have technology helping us to remember things.”

Mara di Berardo

”

One interviewee defined the paradoxes as being understood as a kind of rebound effects you do not expect usually to see or as trade-offs. Sometimes paradoxes can be translated as challenges and sometimes challenges can be translated as paradoxes. This interviewee further perceived '**paradoxes as the philosophical expression or the philosophical side of challenges**'. One paradox is that the more we use digital devices and means of communication, the more we appreciate real physical contact (i.e. the analogue way).¹³ We notice that to do something physically has very specific benefits. Perhaps appreciation of physical contact even goes down to the chemical level, to pheromones and such things.

Another paradox this interviewee mentioned is about **trust**. Large platforms provide us with infrastructure, and the infrastructure has to be trustworthy. We use Zoom etc. and all the other apps, but the companies that provide these infrastructures are not seen as trustworthy. According to this interviewee, they are among the most distrusted ones as legal actors i.e. the providers of trustworthy infrastructure are distrusted.¹⁴

The third paradox was given concerning **language**. We speak English in the digital world as *lingua franca*, but this may reinvigorate smaller languages. An interviewee pointed out how all the digital infrastructure, all the algorithms, are impregnated not only by the (glocalised)¹⁵ English language but by the English culture – or broadly Western culture – as well. On the other hand, at the same time these infrastructures open up options for smaller cultures and languages. One example is that large language models, such as Chat GPT, are trained on English speaking data from the internet. However, you can train the LLMs in other languages, too. For example, the Icelandic language is spoken by less than one million native speakers, completely irrelevant globally. And yet, they trained large language models with the old Edda and their epic literature. Consequently, this Icelandic Chat GPT works on the basis of Icelandic culture.¹⁶ The globalized technology opens up opportunities for

¹² See pages 17–19 in FFRC eBook on 'Deconstructing Paradoxes of Work Through CLA' by Heinonen et al. 2024.

¹³ See the book by Sax (2022) on how we appreciate analogue things as digitalisation increases, and a book review of it in Finnish by Heinonen & Sivonen 2024.

¹⁴ This interviewee characterised companies such as Microsoft, Google or Meta as so-called “ugly” companies – they want to act nicely, but reality tells us otherwise, considering for example breaches of data privacy.

¹⁵ Taking into account for example the Indian call centres' accent.

¹⁶ It uses kennings (las kenningar) i.e. old Norse-Icelandic figures of speech and other things. The Finnish also has a good chance in this globalised world despite the software is originally developed and trained in English.

minorities in small cultures. Consequently, there is hope for six thousand languages, half of which we are currently in danger of losing in this century. It just needs work and dedicated people and time for doing the necessary things.

Fourth paradox identified is about time. The digital world is **time-agnostic** – it does not care nor necessarily even know in which time zone you are. Perhaps there is a paradox hidden here: the **timeless global digital world allows you to find your own time niches, your individual timings**. Biorhythms, biocycle times etc.¹⁷

A further paradox relates to digitalisation and work: **the more you invest into advanced digital infrastructure, the more you are tied to the past**. We are benefitting from a rapid evolution of digital infrastructure as well as appliances and applications. Every year you obtain new tools, partly based on new hardware. This interviewee reminded that if you invest too much in the hardware, you have vested investments, and after two or three years, your hardware is already old, perhaps even obsolete. Then you should invest already again. If you spend too much into your equipment today, tomorrow you will be tied to today's infrastructure – and lacking the funds to invest into the next generation of infrastructure. So, this is a rat race – you are always chasing behind the development. This opens up opportunities for people, countries and companies who do leap-frogging – for those who have missed one generation and jump directly to the next one.

Paradoxes bring to our mind associations with metaphors, too. One of the interviewees pointed out that in Sohail Inayatullah's CLA (Causal Layered Analysis), at the metaphor level, one of the metaphors often ideated is the idea that **'I am my work'**. In particular women were described to find themselves in a situation, where you cannot separate yourself and your value from the career you are pursuing. Therefore, it creates quite toxic cycles of believing that you are just this 'hamster on a wheel'. 'I am my work' or the 'hamster on the wheel' were given as paradoxes related to work. These terms we use, for example, being in the rat race, are actually quite negative expressions of ourselves in relation to the work. Still, we see our career as good and important. Here the value questions come in, because we are going to be much more circumspect about the value systems that allow us to feel that way, but yet to continue.

One interviewee remarked that some answers concerning paradoxes were indeed related closely to the paradigm shift, to the expectations of the transition to the new worklife. The pandemics accelerated this drive of people towards self-actualisation. They are taking their time, following their path, doing what they like, feeling such desire again. The system is not supporting the transition towards that. The young generation is showing us that, because they leave jobs, they do not need to work anymore. They do not see the reason, because the old concept of work does not apply anymore. Simultaneously, we have feelings of a new concept while the system is not defining (= supporting) it yet. This interviewee formulated a paradox being that **you still have the old concept of job where you work because you have to – you need wellbeing, you need to assure your old age. And yet, the retirement is not assured anymore, because of the system is to be changed**. You have to do three jobs to support your family. So, while your security is changing, you wish to pursue your passion and maybe make your passion your job. But as the interviewee deplored, you often cannot do that.

Economic aspects were also raised as paradoxical issues. According to an interviewee, **subsidies** are intended as supportive and positive push for industries. However, they **throw market and economic process out of balance**, especially in the fields of fossil fuel energy and agriculture. Another economic reflection was pondering whether people can have adequate income? Is it realistic to anticipate that all of these technologies actually free people up to the extent that we can all be doing what we truly want to be doing? The current economic model is partly the reason for the progress of these technologies. Would we be free of that economic model or would we find other tasks for people to do, i.e. not being free? The basic tension in this paradox is that even though people would be free from traditional labour, could they really enjoy their freedom and what would they do with their leisure time?

One interviewee phrased a key paradox as the question: "Is work to make a living or do we live to work?" Work has to take care of all my needs – this is an individual perspective. I have to be satisfied by my work. In order for

¹⁷ On the other hand, we of course have time conflicts between people from different time zones.

society to mature, maybe it is the opposite. How I work to take care of the needs in general? This would mean balancing. **The paradox is how to balance that I have to be served and I serve.** Another paradox according to this interviewee deals with **human rights**, and especially those of the children. The UN finally decided that children cannot work (forbidding child labour abuse). This was good on one hand and bad on the other hand, because then the children may lose roots, crafts, and ability. Of course, children may not work as labour, but this interviewee emphasised that at the same time they should be able to work (in order to develop their skills and in order to learn). We see that very much in developing countries. Whenever we achieve a success like in this case in human rights abolishing child labour, this may bring another problem.

2.3 Nature of future work

We also inquired about the nature, motivations and meanings of future work. Concerning the nature of work, interviewees were asked how the nature of work is going to change in the future. By this, we meant to inquire whether it would be more creative, for example. This led to a wide variety of answers and many of the interviewees focused especially on creativity. However, the impacts of automation were also assessed.

One interviewee mentioned as a starting point that the principles of work, for example getting paid, have not changed even in the face of industrial and technological revolutions. This interviewee also pointed out that it is easy to see, which jobs will disappear via automation. However, it is difficult to say what occupations will replace these. On creativity, an argument was made in a novel way that creativity is actually tied to social status. As an example, the work of a plumber is not considered creative even though a plumber must reflect on the materials, tools and ways to use these together. However, since a plumber's work is low-paid, we do not recognise this work as creative. Furthermore, the interviewee pointed out that what is deemed creative changes over time. For example, we can see that traditional scriptwriting has been overtaken at least to some degree by AI. This is the case even though not so long ago, this particular occupation was very much considered as creative. The interviewee claimed that "what was formerly considered creative has no longer the status of creativity, since it is automated".

Another interviewee also argued that traditional creative occupations are under pressure by AI and used script writers as an example of this development. Concerning wider changes in the nature of work, this interviewee argued that if we get a couple of things right, AI and automation will have the ability to change value creation in industry, production and services. However, this view raised pondering whether it will lead to a situation where people will find other jobs in other ways of value creation or will most of the jobs be wiped out. However, it was remarked that there has not been an industrial revolution which would had affected labour markets negatively. This interviewee further pointed out that this time the situation may be different since there were fewer "bullshit jobs" during the earlier revolutions. This could lead to **novel ways to create value**, which we do not even understand yet. The idea expressed is very similar as compared to another interviewee who noted that it is much more difficult to sketch out what are the new potential occupations. However, it is also possible that new occupations may not emerge and labour markets will collapse. This would entail new rules to keep people alive.

One interviewee mentioned that one constant in the nature of work is 'what is considered creation is also deemed as work'. An argument was given that there will be major revival on being creative. This idea is in a sense in line with already mentioned notions about the creativity, since what we deem as creative work, may change but nevertheless, creativity is central part of working. This interviewee further stated that you can see the need for this kind of know-how in many sectors in society and there is a **need for everything that "has to do with crafts"**. This may be seen as an answer to the issue of social status in creativity, since crafts would be more strongly deemed as creative. However, as a major change in 21st century, is that **care is the main word of work**

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“Not working may be seen as threat and associated with excessive and pervert lifestyle of old landowners and aristocrats and all this.”

Kacper Nosarzewski

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life. This is based on a notion that AI cannot do care work.¹⁸ There was also a notion of contributive work, which is not only valued based on productivity but **how it will contribute to society**.

One interviewee also pointed out that even though automation will change the nature of work, this is part of a longer development we can already see at play. This argument was based on a notion that “we are in a post-industrial sort of an agrarian revolution that required particular forms of participation in the economy”. This can be seen in options that people have. Instead of choosing between getting a job or starting a business people can, for example, have gig work where work is comprised of multiple shorter term work. On the other hand, temporal aspect has also changed. **People are working four-day week or just half the year**. As a last point about the nature of work, this interviewee mentioned that in the future, work is no longer tied to a certain place thanks to virtualisation.



Figure 4. *The nature of work will diversify in the future in many aspects (time, space, technology...).* Photos from Zaragoza ImpactHub and Barcelona OneCoWork by Sirkka Heinonen.

Human and AI relations were also a topic when thinking about the nature of work. One interviewee argued that AI will take care of a lot of mundane tasks but **humans' role is to double check AI** produced products and data due to possible biases. Furthermore, the human mind is needed when there is **need to interpretations or to understand nuances**.¹⁹ However, there is a potential downside of this relationship. People may burn out if they try to keep up with the machines, which need no sleep. On the topic of creativity, the same interviewee foresees that AI will not replace humans in this sector. Rather, AI can help people to test their visions or give a starting point for the creative process. On the side of wellbeing, the interviewee notes that maximum work effort cannot be given every day. On the contrary, workers should have possibilities to have mental resets, even during the day, to be productive. This kind of point of view is at odds with the traditional way we work. Based on this, the interviewee states that major changes in the nature of work are actually based on our understanding of neuroscience and the way the mind works so we can be most effective in our work.

¹⁸ In the most sensitive meaning of the word 'care', AI cannot do it as full replacement of human touch. However, AI can be widely used to support care work. Especially, in Japan there are several robots being used in hospitals and nursing homes to complement human care. Similarly, AI applications will become increasingly applied.

¹⁹ For the time being, AI is capable of knowing huge amounts of data, but the question remains how much it understands it.

2.4 Meanings of work

Interviewees were also asked: “How may the meaning of work change in the future?” This led to interesting notions from contradictory trends to collaboration-centric ideas. One interviewee stated that generally, discourse about work emphasises the meaning that people find from their work and a chance to develop oneself. However, a reference was given to a survey where young people’s attitudes toward work were studied. Based on this survey, this interviewee argued that **financial compensation is still a major incentive for employees**. This is not to say that other things, like work-life balance would not be important. However, the basic principle of work is that you trade your free time and therefore you should be compensated. And yet, this does not mean that all work is seen in these terms. The interviewee mentions that there are jobs which also include emotional pay for work. Still, this idea of two contradictory trends (meaningfulness and compensation) is an interesting outlier in work discourse, where meaningfulness is very much emphasised (see for example Millennium Project Work/technology report/Glenn et al. 2022). Another interviewee recognised that currently there is an emphasis on “individual, freelancing, gig and craftsman trend” when the meaning of work is talked about.

However, a question then arose whether these developments will lead to a change in the meaning of work in the long run. From a philosophical and sociological stand point, an argument was given that there is an understanding, coming from Calvinistic ethics and the myth of Sisyphus²⁰, that dignity comes from the work we do. From this point of view, not working is seen as something excessive and even perverse and is linked to an aristocratic way of life.²¹ However, this is not the whole picture. The interviewee points out that there are still many minorities that have hard time to get a job in the first place. Therefore, emphasising the workless lifestyle can be seen as gatekeeping from these groups’ point of view. As a final point, it was stated that there are both structural and philosophical barriers that make getting rid of work or limiting the time used for work very difficult. Furthermore, the consumerist propaganda makes such change even harder.

All the interviewees were not so bleak when it came to the meaning of work. One interviewee argued that the meaning of work in the future will be defined by words that start with **Co**. Thus, cooperation, collaboration, convergence, cooperatives and cocreation were mentioned. This idea is linked to the concept of **contributive work**. The digital world is exponential, whereas “planet, time and life” are not. It follows from this that “collaboration, convergence of time; and of resources” are the key. Therefore, people should give and contribute especially if they are unemployed due to AI but are provided by universal basic income (UBI). The main thesis of the interviewee is that if you receive without giving, societies are imbalanced. Ultimately human rights need partnering with human duties.

The idea of contributing came up in another interviewee’s thinking as well. Today’s trend is that people want their work to give meaning for them and to contribute value to the improvement in the world. However, there is

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“...we should change the concept of work. We should make it meaningful at individual and societal level. If technology frees us from work, maybe the purpose of work in the future could be planetary and human wellbeing rather than pecuniary remuneration. But until our basic needs are not met and we need to work to survive, motivation and wellbeing when working would not reach their potential even if this is what we want.”

Mara di Berardo

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²⁰ In the Greek mythology Sisyphus was condemned by the gods to roll a rock to the top of a mountain. However, the rock would fall down after each successful rolling and Sisyphus would have to start his endeavour all over again. Albert Camus argues that even though Sisyphus’ labour can be considered “futile and hopeless”, Sisyphus can find meaning in the act of rolling in of itself and becomes happy through this struggle. (Camus 1991.) In the context of our interview, this sentiment means that there is a general notion that work in itself is valuable and meaningful.

²¹ See also a roundtable discussion in futures of work (Heinonen & Haapasaari eds. 2024) where Jerome Glenn emphasised that the class of leisure did not mead idleness but having an opportunity to do all kind of meaningful activities.

a difference between this thinking compared to earlier generations. Earlier generations thought work as a major part of their identity. And yet, nowadays, people see their work as one part of their identity but not encompassing their whole life. This interviewee argues that there is going on a blurring of the lines between paid work and other things in our lives. Example of this is that people are **volunteering for their local community**. Here the major impact is that people “start pulling together the different communities” with their lives, which will probably lead to healthier life. Other issue as pointed out is the question of low skilled work or differently skilled work in the face of automation. Here two options were seen: either huge investments to education or universal basic income since societal change will lead to winners and losers and it should be made sure that the cost are not accumulated to one particular group of people.

One interviewee accentuated the sense of belonging as an integral part of the meaning of work. Human beings need to feel part of something to be motivated, be it a project or a goal or an organisation. This means that coordination in a group is very important when working, otherwise common visions lose their strengths to push the group forward together and fulfill common strategies at best, whether it is within a network or an organisation. We want to **add something good to the society, to contribute and create a better future**.

There was also one interviewee who focused on semantics – on the words surrounding the work when asked, how the meaning of work will change. It was noted that even though work as an activity has a long history, words like ‘employment’ are fairly new, at least in the grand scheme of things. Accordingly, definitions and words change across the time. For example, if we understand labour as something that demands sweat, we see that those kinds of occupation may be disappearing, at least partially due to automation. The same goes for the productivity. An argument was given that productivity measures will change, since the reasons for working are also changing. The same goes for compensation, success and education for work. It can be claimed that the main point of this idea is that even the words we use to define work, are changing in time and are not as constant as they may seem.

2.5 Values and work

Our interview template also included a question about values and their role. We inquired: What kind of role will values play in the future of work? One interviewee pointed out that the disparity between grand talk about values and how we forget to talk about value systems as a whole. An example was given on how our personal values may be at odds with the mainstream capitalist ethos and this disparity is not often confronted. However, an argument was also placed that we might have to come to terms with these contradictions since people have more time in their hands due to unemployment, for example. There is also a problem with general value discourse. Companies emphasise ESG (Environmental, Social & Governance) but act in a way that is not in line with these values and ideas. Here the interviewee sees a positive side of fragmented career paths where people do not work in same company for 30 years. This offers employees a freedom to criticise the company if it acts hypocritically even at the expense of their job, since they can always find a new employer.

This disparity between personal values and wider societal values was pointed out also by another interviewee. This interviewee argued that there is a strong movement to find balance between labour and values that we hold dear, such as **egalitarianism**

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“The first value that is important is how we envision the future – the future we want for ourselves and for the others...No one is fully satisfied when not thinking of what the legacy is. These new values are always systemic – cultural values, environmental, social and financial.”

Lala Deheinzelin

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and equity. However, there are also deeper myths and metaphors at play when we consider work.²² In other words, our understanding of development is strongly linked to the idea of productivity, which is seen as inherently valuable. The situation is difficult, since there is no clear replacement for this underlining value.

The role of values was seen as vital for modern work by other interviewees as well. One expert argued that a lot of problems concerning work are related to human and social aspects. Values also play a key role since incentives of work have changed in modern time. It was argued that we are at the first time in history in a situation where survival is not the key part of working. Instead, people have a chance to think about what they actually want to and not about how they are able to survive. Humans are not only thinking about their own interest, but think about what kind of a future they want for themselves and also for others. To understand this, we need **new metrics for values** which measure and tell what are the most important values at play. Last but not least, the interviewee argued that we are moving **from individualism to thinking about collectives and commons**. Instead of human rights, we start to talk about **human duties**.

Another interviewee also pondered the question of how values affect people's incentives in work life. The interviewee speculated that personal values become a vital part of new employees' decision-making considering their career choices. The upcoming generation wants to work with issues aligned with their personal values like environmentalism and social justice, as well as create solutions that make the world a better place.

All previous answers have dealt in one way or another with the change of values and how people may have deeper aspirations in their worklife than just getting paid. Based on these comments, it can be seen as a trend that values have a stronger meaning when workers decide where they want to work. However, the question is, do value systems follow this development or will there be a disparity between workers' personal values and the values that the system endorses.

One interviewee looked at the value question from the perspective of cooperation and how values affect workplaces. The interviewee argued that values are actually linked to interpersonal relations. People do not share all the values and points of view differ from person to person so individuals have to accept value differences and they must find common values within the work community. However, this does not mean that all values are acceptable. Basic human values set the limits of tolerance. This brings a new aspect to the discussion and underlines the importance **tolerance** in the workplace.

²² Thinking and re-thinking of metaphors for a topic represents one layer in Causal Layered Analysis (CLA) method. As regards metaphors for futures of work, an inspiring foresight exercise can be typically made within a futures workshop in order to launch a futures debate.

3. DEEP DIVES IN SPACES, SKILLS AND LEADERSHIP

This chapter focuses on specific questions around work spaces and the skills needed as well as the new leadership. We are now digging deeper into the operational level of work and its concrete manifestations. We take a special interest in the temporal and spatial dimensions of future work and various ways of organising work.

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“Time and space are interconnected.”

Karlheinz Steinmüller

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3.1 Spaces and places matter

In our interview template, there were two questions that dealt with spaces specifically. The first and a more general question was concerning workspaces and what are major trends related to them? What about countertrends? The other question was concerning co-working spaces: How do you see the potential and role of co-working spaces?²³ Or are there other new kind of working spaces that you can identify or imagine? In this chapter, we analyse and condense experts' answers to both of these questions. First, we deal with the more general question and then move on to the co-working spaces centric question.

The general spatial question led the interviewees to think about the ubiquitous nature of modern work. This point is well made by one interviewee who argued that thanks to laptops, **every space is a workspace** and even

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“The walls of your office no longer confine you.”

Wendy Schultz

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travelling time can be used for work. Therefore, it would be natural, at least in principle, to assume that there is need for less office space. However, now that pandemic has ended, we can see a trend, where offices are expanded once more. Nevertheless, **the quality of offices has changed**. The interviewee argues that modern office spaces are usually high-quality spaces. In practice, this means that in these spaces there are technological tools, air conditioning, plants and large spaces for meetings. Another noticeable trend is that spaces are also becoming cosier and they **mimic a home environment**. On the other hand, due to teleworking **homes start to resemble offices**. There is, however, a downside to this development: it blurs the boundaries of

work and leisure causing the worktime model to be undermined. **The new normal is the fluid time structure**. Based on this, the interviewee argued that “the trends, which refer to workspaces, are closely related to trends, which refer to working time. **Time and space are interconnected.**”

Another interviewee was more sceptical about the cosiness of office spaces – but recognised that there is indeed a trend toward more flexible and friendlier workspaces. However, this interviewee argued that there is a latent trend toward **efficiency of workspaces**. A claim was made that the wellbeing provided by office spaces is a weak trend that cannot be relied on. The expert's argument is the following: when there is an economic downturn, then cosy, wellbeing centric solutions are the first ones to go, and productivity will become the central value even in workspaces.

One of the interviewees approached this question from the point of view of how different spaces affect the way we work and cooperate. In this view, the starting point was that the future of workspaces is **hybrid**. Home is one of the major spaces for work but the problem with it is that people get lonelier. Therefore, the interviewee points to the fact that digital nomads are quite often working in cafeterias, since it gives them a **sense of belonging**. The interviewee also points to the fact that there is a lot of infrastructure that is underutilised like big office spaces. Interestingly, the expert argued that in the future, the **infrastructure is going to be designed in a way**

²³ Within the T-winning Spaces 2035 project at FFRC we also have studied cases of co-working spaces in different countries through visits and interviews (Heinonen 2024).

that it supports new ways of working, which are defined by behaviour that mimics the way ecosystems work. We can see this already. Big companies “constitute ecosystems” where one branch or one company has one particular responsibility. This way of working and creating an infrastructure that supports work that is done via ecosystems is also vital for a small company. The interviewee argues that rather than competing in one sector, small companies should work together and try to find solution for common challenge. Last, but not least the expert states that “**virtual infrastructure for work is a supertrend**”. Metaverse can be used as a tool to create spaces where people work together and also share what they are actually doing and see their flow of work.

Continuing on the topic of infrastructure, one expert pointed out that many industries actually plan their spaces for partial use, not full occupancy in mind. This interviewee sees that such development was accentuated by COVID²⁴. However, the expert actually conceives teleworking and work that is multilocalised, as part of a longer development that has been going on for 25 years. A recognition was also given to a countertrend where **employers want to get their employees back to work place** since there has also been negative consequences of teleworking for certain types of work.²⁵

Another interesting countertrend mentioned was **anti-urbanisation**. This is due to privileged people moving out from cities to “peri-urban or rural places”. This has wider societal effects since these privileged people also take their tax money with them to rural areas. Loneliness and solitude also formed a conspicuous theme that came up in the interview. There is even a sort of a paradoxical relation at play here. People feel loneliness since they are using virtual devices to work. On the other hand, these same devices make it possible to connect with other people, while they are disconnecting in traditional (physical) sense.

One interviewee emphasised the possibilities and challenges of technology. On one hand, a statement was made that through augmented reality (AR) technology workspace we can escape the confinements of the computer screen. Instead of a small screen, the **entire field of sight could be utilised as a workspace** and offer solutions for ergonomic challenges linked to traditional knowledge work. Downside of this kind of development could be that in practice **every place can be the office space**, which then would be detrimental to work/life balance. Furthermore, it may be hard to walk out of the virtual world that is ubiquitous. This led to a discussion about the physical contact, which can be reduced because of technology. The main argument underlining this discourse was that doctors, for example, lose tacit or embodied knowledge when they do not have contact with patients physically.

²⁴ COVID-19 was a wake-up call for many industrial sectors to start realising that crises do happen often unexpectedly and their impacts can be even dramatic (Heinonen et al. 2022) and that you can and should learn from crises (Karjalainen et al. 2021). The topic of the demand and use potential of offices, co-working spaces and hofices is relevant for construction companies and real estate developers. Toivonen et al. 2023 point out how the market environment is expected to be even more challenging in the future. Their paper deepened the understanding of how crisis impacts were perceived in the real estate market during the COVID-19 pandemic. See also Orel et al. 2024 how the co-working spaces are being re-shaped due to the pandemic. Resilience is a crucial element for the built environment. Through proactive approach and anticipation of possible crises, the vulnerability of the built environment can be decreased (Tähtinen & Toivonen 2024). Various spatio-temporal dimensions of remote work could be addressed through the lens of resilience in case of diverse crises.

²⁵ With COVID-19, workers drastically changed their traditional work from the office approach to pure working from home, as forced by the situation. There are both positive and negative outcomes of COVID working. Tagliaro & Migliore (2021) give recommendations on multi-location of work, new value for the headquarters and diversity empowerment, which open up avenues for future real estate strategies. Companies’ awareness of the positive and negative outcomes of the experience of COVID working should be strengthened. This could help in making their future workplace strategies.

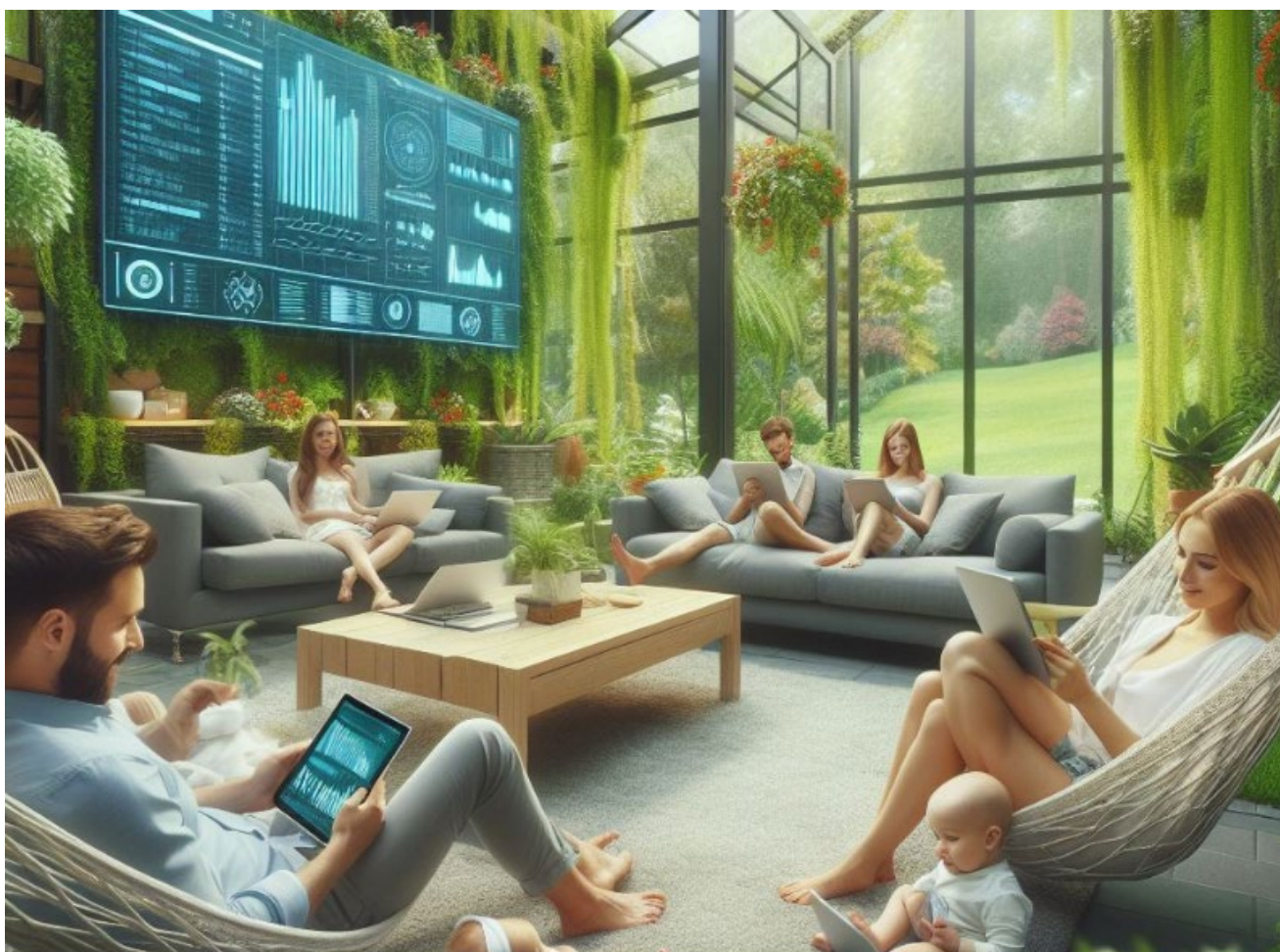


Figure 5. The future office space does not have to be conventional but could use hybrid elements of green, digital and virtual. Picture: Markus Heinonen/Dall E-3.

Digital spaces are changing the way we work and the way we socialise in relation to work but not only that – it was stated that they carry risks that need to be addressed. Some of those risks can be related to organisations, whereas others are related to single individuals and groups of individuals. In this connection, ‘organisation’ was indeed considered by one interviewee as another changing concept to monitored.

Security practices and policies need to be improved concerning cybersecurity, data, workflows, and even the relationships being managed and stored online. Also, privacy issues need balancing between tracking performances and maintaining privacy. This interviewee pointed out that there are, however, also risks connected to the lack of skills that are needed to adjust in an increasing digital world and to understand digital and hybrid spaces²⁶. There are risks related to how social connections are being reshaped, without face-to-face communication along the day especially when working remotely. These changes may affect team working and performances, but also personal lives when there is not a social net to support the individuals.

Considering co-working spaces²⁷, the answers and arguments varied greatly between the interviewees. An interviewee argued that co-working spaces can encompass many different work models into themselves. However, the interviewee also pointed out that in general **co-working spaces have reached a level, which**

²⁶ The topic of hybrid spaces is related to a wider phenomenon of the hybridisation of whole society. Understanding hybridisation, its manifestations and implications is a key to crisis awareness and futures resilience. See Karjalainen et al. 2022.

²⁷ Kyrö et al. (forthcoming) found out that basic service offering, such as an internet connection, printing services and soundproof pods are commonly available for users. However, virtuality is not well-developed in co-working spaces because they often lack prosocial virtual elements, such as virtual recreational events. See also Heinonen 2024.

cannot be surpassed by any large margin anymore. Furthermore, it was stated that **even co-working spaces need quiet areas** where person can retreat to shut off surrounding sounds.

Another interviewee proposed a vision of **co-working space that works as an ecosystem**. Furthermore, the discussion moved to spaces where living, working and leisure time are mixed together. The interviewee pointed out that these kind of experiments do exist, for example, in Italy and Brazil.

There was one interviewee who saw co-working spaces more as a problem than a solution. The interviewee recognised that they offer flexibility but a downside of them is that **co-working spaces do not consider people's individuality and diversity**. Rather, they are based on common norms and developing them for everyone would demand radical diversity. According to the interviewee, the main reason for this situation is that co-working spaces are mostly used by global workers and therefore the companies want to promote the global aspect of co-working spaces. This creates borders between local workers and co-working spaces.

However, another interviewee saw **co-working spaces as a hub to foster creativity**. According to this opinion, co-working spaces offer a chance to work alone or in specified teams, while making it easy to call employees of different expertise quickly together. This then enhances creativity, since **creativity is born out of synthesis of different expertise and perspectives**. Fostering creativity was seen as a vital objective of co-working spaces also by another interviewee.



Figure 6. Co-working spaces are successful if they combine social interaction with hybrid working. Photo from Barcelona OneCoWork by Sirkka Heinonen.

3.2 Skills and competencies needed

A lot of emphasis in discussions and anticipations for future work circle around the question what skills and competencies will be critical in tomorrow's working life. Many interviewees saw creativity as a major asset in the future of work life. One expert argued that both creativity and critical thinking play a vital role in the future of work. The argument for creativity was that it makes you see things differently and also helps to vision futures.

Another interviewee had a long list of skills to emphasise. It started from good communication skills and an argument for a wider concept of **human-to-human skills**. These skills are very practical in nature such as: can people listen to one another, be constructive and keep the information flowing within the team and organisation? Furthermore, critical thinking was stated to be an important skill. According to this view, critical thinking was again seen to be closely tied to creativity. This is because, when it is called for, critical thinking can help employees to be creative. However, its impacts do not stop there. There is also a question interpreting incoming data or the data that the organisation itself creates. Moreover, critical thinking makes actors aware of their own activities. This interviewee asks "are we getting captured by old ways of doing things, or are we truly thinking in new paradigms"? An argument was also given that better critical and systematic thinking is the only way to create systematic changes that are needed to tackle sustainability challenges. It is not only about innovations, but also about transforming the system that is at the play currently.

Another interviewee also gave a long array of different skills. First, the importance of **systemic perception** was mentioned, including self-perception, organisational perception and collective perception. AI and Metaverse can be used to build these different perceptions. The second important skill is the ability to select. By this the interviewee means a skill to "filter and elect what we want or not". In the current information environment this skill is of utmost importance. Thirdly, synthetical ability was highlighted. After that, it comes a turn for co-creative responsibility, which aims to free people of victim mentality and emphasises that people are co-creators of reality with the capacity of being proactive instead of reactive. One of the most important skills in the future is not embedded in specialisation but in **the ability to tell stories and to generate narratives** that are engaging. Concerning the future, one important skill is multi-temporal sense. This means "the ability of perceiving all times and the evolution, and above all, the evolution on time."

It was also mentioned that **time management skills** are crucial in order to avoid digital stress. Timesaving technology is destroying our schedules and shortening our attention span. At a societal level, we are rewarding short-termism – in other words we do not think twice and we keep forgetting things. We need imagination to anticipate consequences more and more, especially because of the increasing speed of change, but we are training ourselves to anticipate less. We are already experiencing forms of digital stress, with the need to be available 24 hours per day, 7 days per week, and with the continuous flows of information and communication intruding our life, especially when working worldwide. Not enough is done to balance the situation. Such a lack of time management skills will lead to 'stolen focus and time' (see di Berardo 2024). People seem to be more and more aware of how technology improves our daily lives but we should also be aware of how it causes changes that can be of concern. Our brain shrinks over time when we are outsourcing complexity. We have a lot of tools and technologies helping us, but we are diminishing our cognitive abilities, our critical thinking, our capability to analyse because of these very same technologies. The concept of time and how to manage it better is becoming of increasing importance in our desire of wellbeing because we understand that it is limited (at least for now). Our values are accordingly changing.

The importance of STEM (science, technology, engineering, and mathematics) was also discussed, especially considering the potential impacts of exponential technologies in the next few years. However, it seems that STEM is not enough to manage the future world of work. Some add an A for arts to emphasise STEAM. This also underlines the importance of other types of abilities, such as soft skills or "meta-skills". Others propose

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“The most important skill is to organize yourself.”

Karlheinz Steinmüller

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ESTEAM (with Entrepreneurship) and PALEM (Philosophy, Arts, Literature, Ecology, Music). In this context, the importance of creativity is noted. It is often underrated or not stimulated enough, and especially in relation to technology. This could be a strategic game-changer for many countries that could find the roots of creativity in their specialties and stimulate them to create something new, following a sort of synergetic approach.

The **ability to use information** was also mentioned by another interviewee. A point was made that thanks to advanced tools, work where the objective is to find data are being replaced by jobs where using the information and making sense of it is important. Another, a more reflective skill, is a skill to understand ourselves in the context of ontological and epistemological issues. Here the role of social sciences is paramount.

One expert based the answer to this question on the sectors that create the most value. Here, instead of social sciences, the emphasis is on technologies, which in practice would mean **engineering, management and development skills**. However, it was also pointed out that there is a vital problem in developed countries, when it comes to accumulation of skills. An argument was given that in order to survive in the market, people overinvest in their skills. This basically means that people end up in a vicious cycle, where they are always looking for the next diploma or degree, which is not economically a viable strategy. As a general skill needed, this interviewee mentions **literacy**, which is related to other important skills like learning. Furthermore, **entrepreneurial skills** are brought up but these should be understood widely. These are skills that make a person more adaptable in labour markets.

One interviewee also approached the question of skills through generalist lenses. An argument was made that the most important skill is to **organise yourself**. Moreover, **cooperation and communication skills** were emphasised. Interestingly, a point was made that this also means **understanding other person's feelings and cultural understanding in international work environment**.

There were many similarities between the interviewees when they considered important skills and competencies of work now and in the future. Several interviewees emphasised generic, human centric skills.

3.3 Leaps for new leadership

Alongside with the shifts and transitions in work and worklife, the leadership must accordingly change. How will leadership change in the future and what leadership skills are most needed in the future?²⁸

There is lot of literature about this field and many things have been said (see e.g. Mengel 2021; Schoemaker & Day 2020; Nathan et al. 2019; Karp & Helgø 2008). Work and leadership go hand in hand. If the paradigm shift happens in work, then this would obviously bring about a very different kind of leader, too. Good leadership already today is about setting good examples. A leader is *primus inter pares* – a prime specimen among others. A good leader has an excellent ability to **inspire others to do things, to promote the development of the team and to promote individuals**. A good leader helps them to reveal their own personal capabilities. Therefore, the “growth” of individuals and the team is one of the main jobs of good leader. Thus you have a better team, which works better together and has better results, so in a way it is quite simple. However, the challenge is how to translate it into reality? What to do with the people who do not comply to established rules? That is quite difficult. A leader should also be able to translate the tasks given from the top level

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“Many of the so-called leadership paradigms are at odds with the reality of those workplaces ... the reality is people get fired for saying something radically different, (and) the same old stuff or productivity is measured in the same old way.”

Geci Karuri-Sebina

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²⁸ The whole concept of leadership may change, not just its constituents. Future of work and that of leadership has been frequently addressed in the international online World Futures Day events. It has even been proposed that ‘the next leaders may be communities that answer to collective needs’ (di Berardo 2024).

to be given down to lower levels. The task is to translate the missions of the company or vision of the CEO into something that makes sense to your collaborators, your inferiors. Concerning leadership skills, you should also think not only about the relation between leaders and their inferiors, but also about the relation of the leaders with their superiors.

We use the words 'boss' and 'manager' – they are orchestrating bodies in an organisation. They tell you what to do and 'slap you if you are bad' and handle such very transactional things. A future leader is dealing with much more individual, much more creative and much more diverse constituents. Therefore he/she has to have such definitely different skills – **skills of inspiring, of corraling or of herding, as well as skills of actually enhancing visibility of individual work and collective gains**. We already see bits of different leadership paradigms²⁹ emerging here and there. Many of those so-called leadership paradigms in the present are at odds with the reality of those workplaces. In reality people can get fired for saying something radically different, and productivity is still measured in the same old way. One interviewee pointed out how you can sound all woke and creative, but there are not many organisations that actually apologise. People who are fairly evolved at a leadership level are apologetic for the fact that the organisation still treats people in the same punitive ways, while they behave like there is nothing they can do about it. There is a real **inconsistency between values expressed and real action**. In the future we will have situations where those values of leadership are much more aligned with the values of more bottom up i.e. more employee driven approach. In the future paradigm, you cannot act as though you cannot do anything about the institution.³⁰

Futures thinking and visioning are accentuated as leadership skills that are becoming more and more important. Futures thinking is fundamental to navigate in an increasing complexity and rate of change, to understand weak signals, trends, possibilities, desirability, and so forth. It helps grasp what is changing. Futures thinking is a multifaceted ability that requests to connect and integrate different perspectives and themes.³¹

An interviewee argued that leadership demands sort of balance and different roles. The main point was that not everyone can be a leader at the same time. Leaders need supporters to be successful and productive. To illustrate this point, the image of "yin and yang" and tower and square were evoked where tower is efficient and centralised, while the square is resilient. Both of these have to work together to be successful. A claim was also made that modern overtly horizontal decision-making structure is demagoguery rather than democracy and that distributed models are in a sense inefficient.

This dichotomy came up also in another interview session. The interviewee argued that people have different positions within the organisation which means that different skills are demanded from them. Those who are followers need to adapt and they cannot be demanded to be on the constant lookout for something new. The same cannot be said about leaders. It is essential for their work that they can constantly re-evaluate and reframe things. Therefore, leaders need futures literacy to be successful in their job.

This dichotomy was not shared in all interviews. One interviewee stated that there are skills that would make every worker a better leader. These are skills such as understanding communication and information flows and how it affects with the team. Furthermore, an interviewee argued that it is important to be experimental and adaptive. Here the interviewee made a reference to complexity theory and anthro-complexity.³²

²⁹ Mainly it was discussion of an emerging new paradigm of work, but with different angle one could also see paradigmatic niches and thus talk about it in the plural (paradigms).

³⁰ In addition, agility and ambidexterity (i.e. the skill to use many sides of your brain) are suggested as new necessary skills for leadership (e.g. Rosing et al. 2011)

³¹ As discussed during World Futures Day 2022, it needs a solid base, such as foresight (being it slow or hard) that requires a synthesis process. See di Berardo (2024).

³² On complexity theory see e.g. Byrne & Callaghan (2014). Traditionally the complexity theory focuses in efforts of sense-making of reality more on computational complexity and often relies on mathematical and agent-based modelling in such enquiry. Dave Snowden proposes instead 'anthro-complexity' as a new field of complexity, since complexity in human systems has added layers of complexity over and above that found in termite nests and the flocking behaviour of birds (Snowden 2020). He uses it as a tool for 'dealing with uncertainty' and as 'naturalising sense-making' i.e. as the application of natural science to the question of how we make sense of the world so that we can act in it.

Visioning, in the sense of building common visions together, is important too for leaders because it requires intuition, listening, searching, and understanding what may develop later. Vision-oriented futures thinkers understand that something can be changed, and move from abstractly looking into the future to actually building the future. Those who are able to change the future carry the seeds of change and nurture them, says Eleonora Masini (2009). But they cannot change the future alone, and they should support collective intelligence.

On leadership related issues, the interviewees' answers formed an interesting dichotomy. The most of interviewees saw difference between skills needed as a leader and skills needed as a follower. However, not all. One interviewee broke this dichotomy down and pointed out that there are some universal skills that all workers need and make them better leaders. These include communication skills, ability to understand how information flows and ability to be both adaptive and experimental.

A similar idea of different roles in work community came up in another interview. Here the main argument was that not everyone in the organisation can be a leader. In order to leaders to be successful, they need followers and an organisation cannot be too horizontal when it comes to decision-making. On a practical side of things, many different skills and abilities were named. A leader should be able to inspire other employees and help them to find their potential. Promoting teams and individuals is a vital part of being a leader. One interviewee emphasised that a major skill for a leader is futures thinking. This is due to ever growing complexity. Another interviewee pondered more on the change of leadership paradigm or rather a lack thereof. Here the argument was that even though there are many different new paradigms of leadership emerging, organisations still operate in line with the old model, where surveillance and punishment are emphasised.

4. DISCUSSION AND CONCLUDING REMARKS

This chapter summarises and concludes on what the interviewees articulated on the questions posed to them.³³ Based on the reflections, a mindmap is generated as illustrating the key thematic areas and issues as well as their relations within the wide scope of work, worklife and work spaces (see Figure 8).

The meta-question of the **new paradigm of work** instilled various opinions among our interviewees. One of the reflections was concentrated on the fact whether we even know what the present paradigm is. Work is no more dependent on space and time, therefore it is even now in the state of flux. The present paradigm was already deemed as highly diversified. Consequently, the new paradigm was expected to be even more diversified, seen both through geographical and professional lenses. Then, perhaps we should talk about it in the plural – **paradigms**. This is because, on the surface, the new paradigm might seem positive but underneath, it could have challenging impacts at personal or cultural levels, and from the point of view of community integration. Nevertheless, if we use the expression ‘paradigm of paradigms’, it manifests some specific features. The new paradigm is hybrid in every sense. Such hybridity also means balancing out, not only between the physical, digital, and virtual, but also between the specialised and the generic. It also combines the diversity of various skills. Accordingly, the new paradigm is also about everything ‘co’ – collaboration, co-creation etc. Contents-wise, the new paradigm is essentially about work related to care and caring. This would also mean a new economy where the concept of resources is widened. Paid work may still be at the core. In the new paradigm, the payment may just come out of more diverse sources, ultimately, for example, from the basic income system. At present, the most attractive jobs are, however, provided by corporate actors with monopolistic ambitions, which after all may prove counterproductive in the longer term.

In the new paradigm, work will become more humane and it will transform into a space of expression and freedom. However, a society where you do useful things just to serve society and yourself (without payment), is a utopia. In today’s paradigm, work is something you have to do – with almost a negative connotation. This present transactional relationship with work would have to change into a form where work makes you feel like you are actually contributing to society. Delegating tasks to AI may also free human capacity to have an impact on our society and planet, enabling humans to live meaningful lives³⁴. Then, the whole term ‘work’ would lose its meaning. Some very explicit claims can be made. For instance, we should be able to give proper value to our limited time in the new economy.

Some conclusions can also be made regarding how the interviewees identified **paradoxes of work** that they find intriguing. This question generated multiple reflections. It is interesting to note that the very concept of paradoxes can for the observer be understood as being similar to challenges and problems – or as rebound effects or trade-offs. Paradoxes can even be seen as philosophical expressions of challenges. This definition comes close to the concept of metaphors – figurative comparisons. Thus, paradoxes which lie more at an abstract level can be compared to the concrete challenges or tensions that they embrace.

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“The key for the future is every word that starts with co.

So it's cooperation, collaboration, convergency, cooperatives, cocreation...”

Lala Deheinzelin

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³³ The aim is to enable (for an impatient reader) an overview of all topics as discussed and argued upon.

³⁴ In one of our workshops, a preferred future was imagined where AI would free humans from work and administration and would give people a chance to find meaning in helping others and nurturing nature (Heinonen et al. 2024).

Many interviewees detected several paradoxes in connection to digitalisation. For example, the more we are immersed in the digital world, the more we value physical contacts³⁵. We also trust big digital companies even though we know they cannot be fully trusted – this undermines the data security and our privacy. Furthermore, the *lingua franca* of digitalisation is English, while the digital devices open up windows of opportunity for smaller languages and cultures. The digital infrastructure, however, can also be a hindrance. Technological advancements are so rapid that the digital infrastructure may become obsolete soon. In economic terms, this has implications for risks in investments. Temporal dimension is paradoxically global and local at the same time. Global digital time affords us individual time as well. A gender issue was also brought up. As work is associated with identity, especially with women this may generate a toxic cycle. Another idea was raised where paradoxically you would like to make your passion as your work, but dare not attempt that due to lack of security for retirement. Paradoxically, retirement is not assured any more anyway. A human rights angle was raised for children – while the children are legally saved from forced child labour, at the same time they miss the opportunities to learn by doing.

The economic dimension was highlighted in the paradox of subsidies throwing markets out of balance despite the original intention to support an industry. Furthermore, the future of the current economic model, based on the progress of new technologies, was questioned. Will the replacement of human jobs by the new technologies such as digitalisation and AI cause the economic model to change or will these technologies oblige humans with some other tasks? This is indeed a key question for labour unions and authorities in lookout for a fair, democratic and humane work environment in the digital age (Juego et al. 2024). All in all, the paradoxes addressed by the interviewees touch upon not only political, technological and economic issues, but also social, cultural and philosophical ones.

The question about the **nature of work** conjured up many different positions but there were also commonalities. Creativity was a vital point of reflection for many interviewees. First of all, some experts pointed out that we can already see how AI specifically affects occupations, which are considered at the moment as creative like script writing. An argument was given that what is deemed creative, will change alongside with technological development. Something that is deemed as creative in the past, may not be that in the future, since automation or AI can take care of this particular task. In short, creativity is not constant, it changes based on technology. To study futures of work, is to also study what is considered creative and how our understanding of these activities may change. This also came up in another interviewee where an expert argued that what is deemed creative, is also deemed as work. Other interviewees were not so drastic. Rather, they saw opportunities for creativity in AI like testing one's vision beforehand or giving some kind of starting point for a writer. Here the main message is that AI is a tool, which humans can use rather than it replacing human activity in some area or field. On the other hand, creativity may not even be the main focus of work in the future, at least not in the traditional sense. Rather, as one interviewee argued, it could be care and contribution as care is something that AI cannot do. Continuing on systemic changes, one interviewee pondered on labour markets as a whole: compared to earlier industrial revolutions, we may be facing a watershed moment due to automation and will see a development where many jobs are wiped out and not replaced since there are so many bullshit jobs on the market now. This would lead to a drastic societal change.

Other interviewees focused on more practical issues concerning the nature of work. Notions covered both temporal and spatial aspects of work. On temporal side it was stated by one interviewee that people are not following the traditional work time model: they work for four days a week or half a year rather than full time. From this point of view, work is not ubiquitous and full time. Another interviewee approached this subject from day to day perspective but argued in a similar fashion. Since our knowledge of neuroscience has developed so much, we know that people cannot be productive all the time. Rather, mind needs a mental reset and rest so it can be productive. As an example, this interviewee gave a notion of having small rests during the workday. The scale

³⁵ This paradox aligns well with the findings of the earlier research project RESCUE. In one of the Futures Cliniques conducted as a part of the project, participants were given a crisis to think about and to find solutions to this particular crisis. One crisis was mental health bomb due to excessive use of social media. Here the group argued that one solution could be stronger community building and social interaction via knowing your neighbours and even human library. (Heinonen et al. 2023.) For crises and crisis-related concepts, see also Heinonen et al. 2022.

is different from the former interviewee, but we can argue that the idea is the same. The modern work time model may not be the best for supporting productivity. In tandem with work hours, we need rest hours and this has clear implications for nature of work, and how work is organised. However, as one interviewee notes, we may see opposite development at least temporarily. Humans may think that since they work with AI, they need to also be as productive as AI, which could lead to early burnout. From the spatial point of view, one consensual argument was that work is not tied to one singular place anymore. This topic came up also during the workspace centric questions.

The question about the **meaning of work** conjured up several ideas which covered issues from finding the meaning through various means to the deconstruction of the whole work discourse. Two interviewees focused on the notion that meaning of work and changes we see in it is based on the idea that already now and even more so in the future people want that their work contributes to something. It is not only about doing your job, but about how it will change the world. This can lead to the blurring of boundaries of work and leisure since people can continue this act of contributing during their leisure time via volunteer work and live a more holistic life in general³⁶. A more radical idea was that the meaning of work will be in the future all about contributing to the society. This idea is not only applicable to people in labour market but also people who are on Universal Basic Income. The argument was that the system is out of balance if people get something but do nothing in return. In short, it can be concluded that these particular interviewees saw contribution as a vital part of meaning, not just doing a job for the sake of it or for salary. Not all the interviewees shared this position while one actually saw that there is a countertrend to such development. This argument was based on a survey studying young people's thoughts about work - that money is still a vital incentive to work and not the meaningfulness. This is an interesting countertrend comparing to the discussion surrounded by the values of future generations and self-actualisation economy. However, this countertrend should not be overemphasised. Generally, it is argued that Gen-Z will have different aspirations concerning work than earlier generations. Gen-Z is thought to value things like diversity, inclusion and mental health. (Kuosa et al. 2022.). We have a generation coming in that wants to have more impact on these wider issues – such as environmentalism, justice, equity and decolonization and a lot of other social issues. The young generation wants to know in their work that it is contributing to solutions, not making things worse.

The question was also approached from a more philosophical or deconstructive perspective. It was argued that there are underlining philosophical constructions for seeing work in itself as having an inherent value. Owing to this, there is on one hand societal aversion toward people who do not participate to work activities. So, there is a power structure establishing the work as an essential part of life. On the other hand, the power structure can work the other way around when we talk about marginalised groups. If it is argued to people who have never been able to get consistent occupation, that work is not essential, it can be seen as a sort of gatekeeping. Consequently, there are deeply rooted barriers and philosophical presumptions, which make systemic changes concerning work quite difficult. An interesting point was further raised that language related to work is changing according to time and society. For example, a word like 'employment' is rather a new invention. The way we understand the work will change as our vocabulary about it changes.

The question about the **role of values** led to a wide variety of differing ideas. Interviewees perceived values as things that drive employees but also as major presumptions that define work as a whole. From a practical standpoint, it was warned that we should be aware that to a certain extent values are related to interpersonal relations in workplace and thus we should tolerate differing values and try to find the common ground. Values were also considered as incentives. People do not have to work anymore to survive so they can look for a job that aligns with their values and their images of the futures. This came up in one way or another in several interviews. There was also a notion of generational shift. Especially younger generations were seen as workers

³⁶ There are differing perspectives concerning work time and leisure time and the balance between them. In a round table discussion Jerome Glenn argued that leisure and work time are tangled up and in the original sense, leisure did not mean that would not do nothing, rather it meant that they would do something they like to do. (Heinonen et al. 2024.) On the other hand, it has also been argued that there is a danger concerning the idea that people have to do something meaningful and productive both work and leisure time. For example, if leisure time is conceived as a time for skill development, it can in the end lead to situations such as burnout (Khallash & Kruse 2012).

who hold values dear. However, some interviewees noted that even though values are incentives, it can be difficult to actually combine these with the reality of worklife. Companies may argue that they respect such and such values but do they actually act in a manner, which aligns with these value statements, remains questionable. Consequently, there are certain contradictions and a need for balance in this sense. Furthermore, values relating to work can be seen as something else than personal values. We can also see values behind the whole system. It was also emphasised that productivity is still in many cases the inherent value of work and it is hard to see what will replace this bedrock value. Solutions were also suggested: we should build new metrics for values in work and to change the perspective from individualism to collectives and commons. All in all, the data points to the fact that values play a significant role in work life be it as incentives, underlining assumption or working as a part of larger community.

After the above addressed meta-questions concerning work, we moved towards more concrete themes as posed to our interviewees – starting with the question concerning **space and places**. There was a general consensus among the interviewees that work as an activity has escaped the confinement of space in a sense that people are able to telework and thanks to laptops, work can be done anywhere from home to car and anywhere between. Through virtual reality (VR) the whole horizon of human sight can be used as a sort of workspace. The internet and digitalisation – not to mention inventions like Metaverse – make communication and sharing ideas with one another easier than ever before. However, these developments come at a cost, which are multiple. Owing to the freedom to work where they want, people feel lonelier and lose the knowledge that can be achieved via physical contact. Moreover, this level of freedom may lead to other surprising consequences like losing work/life balance since you can work from anytime from anywhere³⁷. One interviewee claimed that the traditional worktime model has already eroded. Concerning the earlier notions about the need for resetting the brain or taking a break this kind of development can be detrimental for productivity not to talk about wellbeing. Office trends also interested the interviewees. It was pointed out that COVID made companies realise that offices do not need to be in full occupancy the whole. Furthermore, a trend was spotted where offices become cosier and home-like while homes become more office-like. On the other hand, it was anticipated that even though wellbeing centric offices are a trend now, this may actually be a weakening trend which will disappear during an economic downturn. Based on these arguments, it can be concluded that work is becoming separate from the space and can be done from anywhere. There is freedom in this arrangement, but also some possible downsides, which have already been realised. Spaces are not only walls, they affect how we think and work and have far reaching implications on wellbeing.

There was little consensus concerning co-working spaces and their utility. One interviewee saw that the trend surrounding them is at its peak now and cannot grow very much after this point. Another one stated that they should be on the other hand bolder in a sense, meaning that co-working spaces could mix living, working and leisure and not only be limited to work. From the perspective of creativity, co-working spaces were seen as hubs which can bring together people from different expertise. The most critical interviewee saw co-working spaces as problematic. This was based on a notion that they are usually planned to follow a certain norm, which is based on the views of global workers. Therefore, they do not promote local workers to go these spaces.

There were many similarities between the interviewees when they considered important **skills and competencies** of work now and in the future. Generic, human centric skills were especially emphasised. Furthermore, creative and critical thinking came up multiple times. Human centric skills encompassed communication skills and ability to control information flow within the organisation. Somewhat surprisingly, only one interviewee mentioned substantive skills like engineering and management. One interesting point of departure was also an emphasis on the ability to manage information, which emerged in different interviews. Since our environment is so full of varied information, the ability to manage all this data and to separate what is important and what is not is essential becomes vital. Reflective skills were also mentioned. By this it was meant that we must be able to understand ourselves in the context we are. All in all, it could be argued that the skills

³⁷ However, there is an aspect of personal preference at play here. For example, in our earlier interview report (Heinonen et al. 2023) one interviewee argued that she is happiest when she can work mobile and can combine work and leisure in a balanced way.

emphasised were not so much about one particular occupation or sector. Rather, importance was given to general skills, which make employees better communicators and give them the ability to make sense of the ever-growing information and their complex surroundings.



Figure 7. Human centric skills and spatio-temporal and cultural competencies will be needed in future work life. Photo by Sirkka Heinonen.

On **leadership** related issues, the interviewees' answers formed an interesting dichotomy. The majority of interviewees saw the difference between skills needed for a leader and skills needed for a follower. However, not all. One interviewee broke this dichotomy down, pointing out that there are some universal skills that all workers need and make them better leaders. These include communication skills, the ability to understand how information flows and the ability to be both adaptive and experimental. On the contrary to this point of view, another interviewee argued that the same things cannot be expected both from a leader and a follower. A leader has to be on a constant lookout for new things and have the ability to reframe and reevaluate. Similar idea of different roles in work community came up in another interview. Here the main argument was that not everyone in the organisation can be a leader. In order for leaders to be successful, they need followers and an organisation cannot be too horizontal when it comes to decision-making.

On a practical side of things, many different skills and abilities were distinguished. A leader should be able to inspire other employees and help them to find their potential. Promoting teams and individuals is a vital part of being a leader. A major skill for a leader was mentioned to be visioning and futures thinking. This is emphasised due to the ever-growing complexity. One interviewee pondered more on the change of leadership paradigm or rather a lack thereof. Here the argument was that even though there are many different new paradigms of leadership emerging, organisations still operate in line with the old model, where surveillance and punishment are emphasised. This position is prolific in literature, while new demands are also being made for the leadership paradigm. Contrasts for 'surveillance' and 'punishment' would be 'serving' and 'praising' as stances for futures leadership. Radically new directions for the concept of leadership would come from the mindshift where the

leader would adopt servant leadership (Nathan et al. 2019). This approach was combined with the inclusive and visionary leadership model as proposed by Pentti Malaska (Pouu et al. 2018) would positively affect the whole landscape of work within desirable futures horizon. Visionary leadership should be embedded in all executive training curricula. Mostert (2025) proposes an integration of futures thinking, systems thinking and executive education, based on his theory of systemic leadership learning for executive development.

When looking back at the insights highlighted within these interviews with foresight experts and reflecting upon them, we can draw some conclusions both on a systemic level as well as inside specific areas. Our interviews were made in the context of the twin transition of green and digital, as a stated strategic objective of the European Union. The deepest uncertainty concerning futures seems to be attached to the trajectories of digitalisation as related to work. Here, even though a huge potential for upgrading the worklife and ways of working exist through digitalisation, paramount concerns are expressed. The most problematic issue is seen in the potential of digitalisation, automation, and AI to replace human jobs. Another problem is seen in digital life generating collateral social damage to humans as isolation, loneliness, alienation, addictiveness and burnout. An issue that is perceived as generating a potential existential risk is the transition of AI from its narrow form (ANI) into the general form (AGI) and ultimately into the super form (ASI). This obviously goes beyond the issue of AI replacing jobs and focuses more on whether AI can develop its autonomy and become sentient, not just replacing jobs but the humans as species. This point is much discussed within the Millennium Project (see Glenn 2023; Glenn et al. 2024) and measures and solutions are called for pondering what global governance structures are needed to manage the rise of general AI. This issue did not prevail in the interviews perhaps simply because the time horizon is quite short in the T-winning spaces 2035, even though the idea did loom in some of the interviews.

However, as regards the green transition, the situation is different at least on the surface. The target of the green transition seems to be taken for granted and not problematised, since it aligns with the UN Sustainability Development Goals (SDGs). We might, however, pay more attention to how the ways we work, where we work and how our spaces for work are built has an impact on the environment. Perhaps a key point of concern will arise from the growing energy use as digitalisation and uses of AI require more and more data centres.³⁸ From the labour point of view, this is a more positive view (for obvious employment opportunities). It is the question of balance between the green and the digital – no re-bounds are welcome.

One sector in society that emerged in the interviews as of crucial importance to work but also particularly problematic was the **economy**. It seems that the current economic system as based on the old structures and dynamics cannot provide means of subsistence in a fair way for all those wanting to work³⁹. In our era of globalisation, competition, effectiveness, optimisation and profitability are driving forces. In both industrialised and developing economies, digitalisation is a transformative force, also used for surveillance and monitoring performance (Juego et al. 2024)⁴⁰. A permanent point for discussion in studies of environmental economy is also how we could have some other system than GDP for measuring wealth and productivity. The productive work (industry) is considered to be the key driver for societal wealth, while the regenerative work (care and education) enabling wellbeing is often underpaid.⁴¹

³⁸ For example, Microsoft has declared that it will spend \$80 billion on data centres for AI this year (Novet 2025).

³⁹ The issue of just labor markets is recognised globally. For example, decent work is mentioned as a part of Sustainable Development Goals. It is also noted that 2 billion workers have a job, which does not include social protection. Furthermore, due to urgent crises labour rights as a whole are also declining. (United Nations 2024)

⁴⁰ The process of algorithmic management (AM) has been introduced to coordinate labour inputs and outputs by monitoring, evaluating and controlling workers' behaviour and performance. Obviously, this has significant implications for work organisation, conditions of working, and on workers' rights and social dialogue (Juego et al. 2024). At the moment AM is used mainly for blue-collar work but it may become increasingly used in white-collar work as well.

⁴¹ Many reflections are made for renewing the current economic model, focusing on GDP measurements. Besides the Happiness Index, de-growth and neo-growth concepts and deliberations, there is a whole programme within the Club of Rome pondering this problematique. The Reframing Economics Impact Hub is a collaborative effort aimed at transforming our economic systems to achieve wellbeing for all while acknowledging the planetary boundaries and the finite nature of our planet. The objective is to challenge traditional economic models that prioritise unlimited growth and consumption, and instead explore and co-create policies that respect the natural limits of our environment. <https://www.clubofrome.org/impact-hubs/reframing-economics/>. Lala Deheinzelin proposes the model of Fluxonomy 4D

In the interviews, it became evident that the sphere of work is not only changing itself, but also its relation and interlinkages with other sectors in society are strengthened and in flux. Worklife needs skilled labour. Accordingly, the field of **education** and how it should change in order to cater for the future needs of working life is in the spotlights. The field of education is in turmoil as well, because foreseeing what skills and subjects need to be taught in the future is more than challenging. Do we need more mathematicians, doctors, nurses, teachers, therapists, priests, engineers or coders? In connection with the advancement in technologies – digitalisation, AI, quantum computing and all next technologies such as synthetic biology and space technologies – the occupations will also radically change. Many of the present occupations will need re-skilling or they may disappear altogether, while many new occupations will arise. In parallel with our interviewees’ insights, the Millennium Project Work/Technology Scenarios 2050 depict shifting the focus from mastering a profession to mastering combinations of skills (Glenn et al. 2020).⁴²

Besides education, another closely related sphere of life connected to work is **culture**. Often in society, key drivers and attractors of attention are technology and economy, while social and cultural aspects are left behind the scenes. However, it seems that when reflecting on futures of work, more and more themes are also culturally influenced. Interaction of work and culture always takes place within the context of geo-political and socio-cultural premises. Thus, the conditions for work, the societal role of work, the status of occupations and the day-to-day work practices and behavior in worklife may be strongly coloured by cultures. This is not a new idea. We can argue that the already mentioned seminal work of Max Weber points to this notion. In his thinking protestant ethics and especially Calvinism inspired capitalistic thinking where wealth is seen as a morally good thing as long as it is based on “sober, industrious career.” (Giddens 2001, xiii.) Even though this line of thinking is generally accepted at least in the western countries, it does not make it less culture centric. Actually, on the contrary, since it can be argued in the line of CLA that this kind of idea is an inherent metaphor of capitalistic system. Moreover, as the paid work opportunities get diminished, the search for meaningful activities is increasingly attached to culture. Culture may generate new work opportunities and help building wellbeing as emphasising co-creation instead of competition. Consequently, at systems level and holistically approached, futures of work have to be seen in the triangulation of work, education and culture (Figure 8).

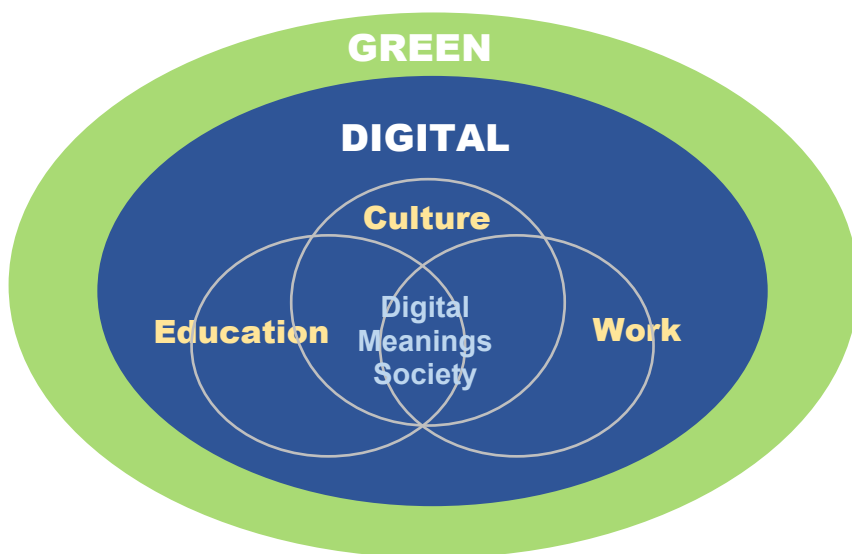


Figure 8. Mindmap of nexus of work, education and culture within the twin transition of green and digital.

for simplifying and optimising the processes in the economic system, identifying the resources and matching skills with companies, cities, stakeholders and people (Deheinzeln & Cardoso 2020).

⁴² The emphasis might accordingly move in the direction of self-managed learning portfolios instead of the standardised system driven degree certifications.

Furthermore, this mindmap of work, education and culture as emerged from the interviews is embedded within the twin transition of green and digital. Inside the nexus of work, education and culture, resides the heart of **digital meanings society**. The motivation for work will move from earning the income and subsistence towards self-actualisation aspirations and search for meanings and resulting wellbeing.

To conclude, people are no longer tied to places (except in place-dependent jobs or in jobs where telework is not allowed). On the other hand, places and spaces do matter. People would like to choose the places for work where they find themselves as most empowered and enjoyed. Naturally, this is not often possible and besides there is variation in preferences according to people’s own life situations and biorhythms. Time and space are interconnected. Temporal and spatial dimensions for work create a multiverse sphere where a preferred future can only be schematized based on experience, experimenting and aspirations. There is no one-size-fits-all model. The following mindmap (Figure 9) is an attempt to propose a preferred future for work attainable in the next ten years under favourable societal circumstances.

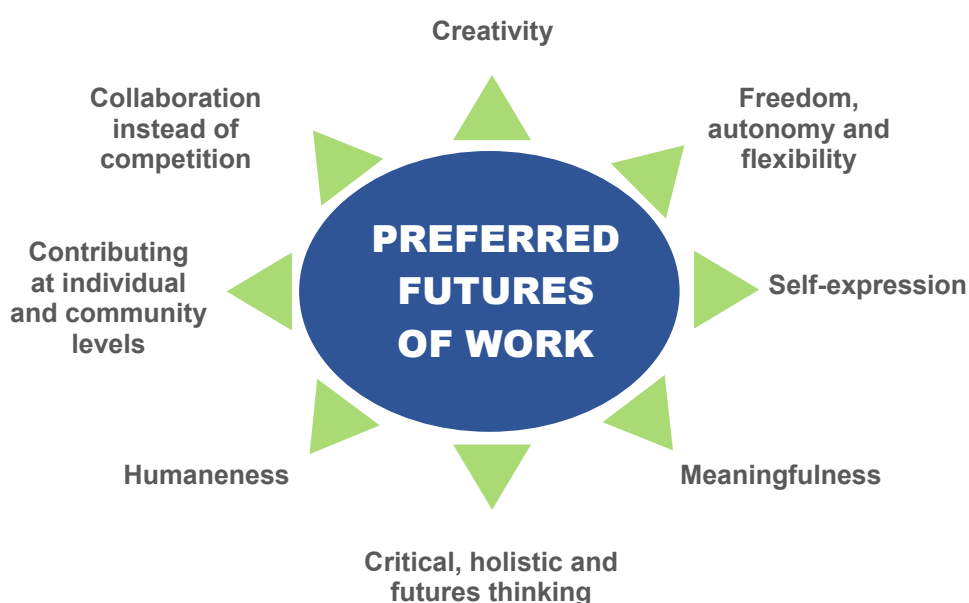


Figure 9. Mindmap of preferred futures sphere for hybrid work.

Work is fusing to become meaningful activity. Meaning matters – more than just income. Decent work or access to meaningful activity is, however, not yet attainable in a just way – polarisation prevails, globally and sector-wise. A preferred future for both individual and communitarian levels means transforming the essence of work from doing into contributing. Co-existence is the new meaning for work – covering human-human, human-nature and human-technology interfaces.⁴³

⁴³ The next steps of the T-winning Spaces 2035 Project will combine findings from all of our research modules: literature review, futures cliniques, Delphi study, and these two sets of interviews. Based on the material thus gathered, radical narratives will be written on alternative futures of work within the twin transition of green and digital to be subjected for discussions and futures dialogues with stakeholders.

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APPENDIX 1.

Foresight Experts as Interviewees



Mara di Berardo, PhD

Communications Director of the Millennium Project
Co-Chair of the Italian Node of the Millennium Project
Foresight Europe Network Communications Officer



Lala Deheinzelin

Founder and CEO Crie Futuros Movement.
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Kacper Nosarzewski

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Co-Chair of the Polish Node of the Millennium Project



Wendy Schultz, Dr

Director of Infinite Futures
Co-Founder and Director of Jigsaw Foresight
Affiliate to the UK Node of the Millennium Project



Karlheinz Steinmüller, Dr

Scientific Director, Z_punkt GmbH The Foresight Company
Affiliate to the German Node of the Millennium Project

APPENDIX 2.

Structured Interview Questionnaire to Foresight Experts for T-winning Spaces 2035 Project

Professor Emerita Sirkka Heinonen, Finland Futures Research Centre, University of Turku and the Team.

1. How will the nature of work change in the future? For example, will it be more creative when automation takes care of mundane tasks?
2. Considering workspaces, what are major trends? What about countertrends?
3. Digitalisation and converging new technologies/AI are a megatrend affecting whole society, and especially the working life. What kind of impacts will it have on our ways of working (place, modes, tools etc)?
4. What kind of skills are going to be most needed in the future when we consider work?
5. What kind of role will values play in the future of work?
6. How may the meaning of work change in the future?
7. Paradoxes are seemingly illogical statements but may carry interesting underlying currents, belief systems etc. What do you see as a major paradox of work?
8. How would you define the emerging new paradigm of work in the future? How will it have changed from the prevalent one.
9. How will leadership change in the future? What leadership skills are most needed in the future?
10. How do you see the potential and role of co-working spaces? Or are there other new kind of working spaces that you can identify or imagine?
11. What is your favourite place or space to work personally?
12. Open question: Something else you might want to add?

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Sirkka Heinonen
Riku Viitamäki

FFRC eBooks 1/2025

Finland Futures Research Centre
University of Turku

ISBN 978-952-249-623-2 (pdf) • 978-952-249-624-9 (print)
ISSN 1797-1322



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