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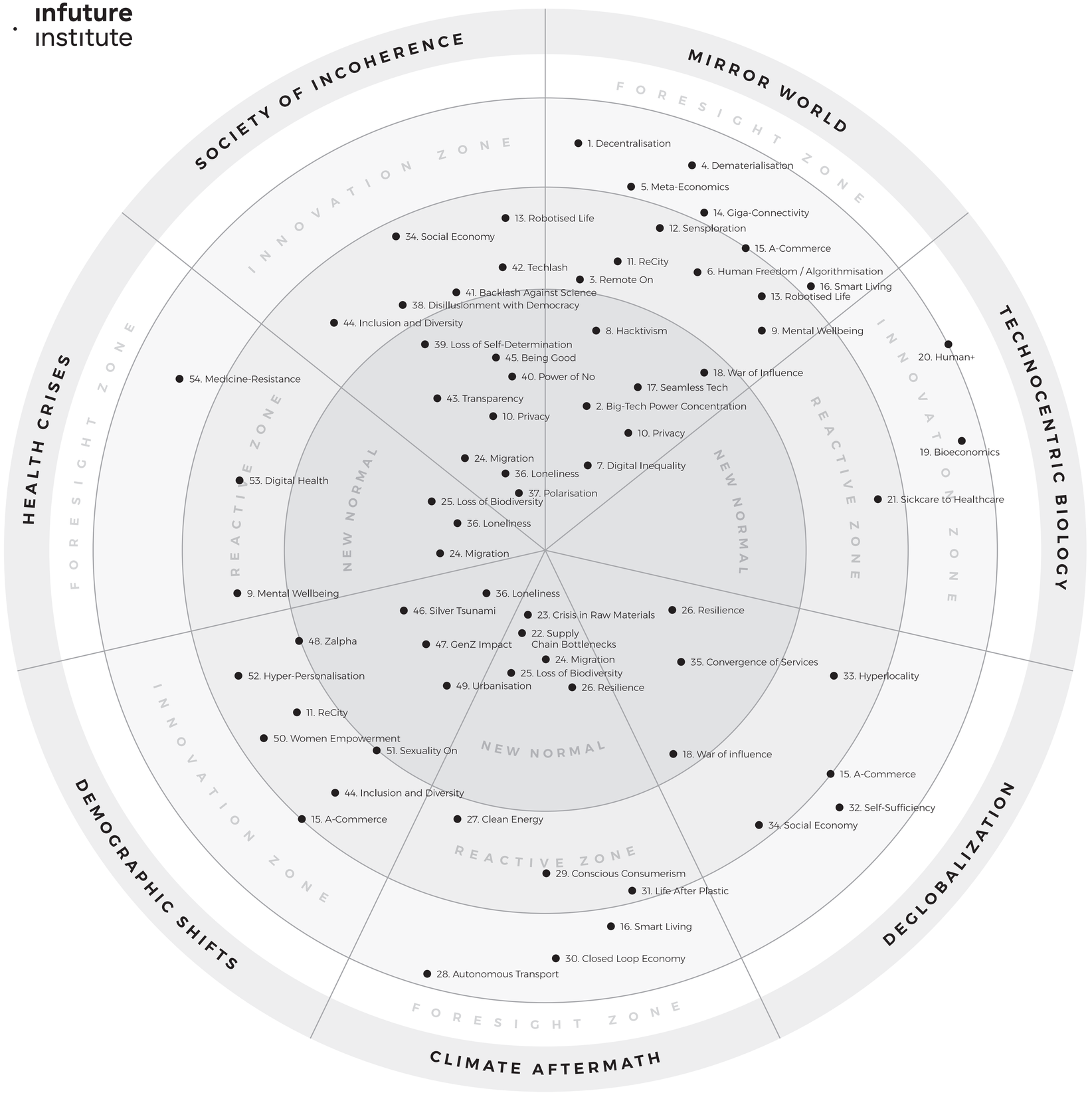
TRENDS MAP 2022



HOW TO APPROACH THE MAP OF TRENDS?

The Map of Trends is a proprietary tool by infuture.institute, published on a regular basis since 2018. This year, for the first time, the map comprises 7 megatrends (Mirror World, Technocentric Biology, Climate Transformation, Deglobalisation, Loss of Social Cohesion, Demographic Change, Health Crises, with 54 trends assigned to them. All trends are analysed using the STEEP method – they cover areas such as society, technology, economics, environment and legal regulations.

As the Map of Trends is a tool to be used in your daily work, it is designed to resemble a radar. This means that the trends present in the grey area – and at the same time closest to the centre of the wheel – are the most mature ones and require the fastest response, if such has not been already taken. The further away from the centre, the more time a trend needs to become a leading one. Different zones indicate how long a trend needs to mature (new normal – leading trend, reactive zone – 1-5 years, innovation zone – 5-25 years, foresight zone – 25 years and more).

MAP KEY – TREND MATURITY

NEW NORMAL	–	current, prevailing trends
REACTIVE ZONE	–	short-term perspective, a trend needs 1>5 years to enter the mainstream
INNOVATION ZONE	–	medium-term perspective, a trend needs 5>20 years to enter the mainstream
FORESIGHT ZONE	–	long-term perspective, a trend needs >20 years to enter the mainstream

MIRROR WORLD

The concept which assumes that the digital world is to be an accurate and complete replica of the physical world in all its dimensions – material, economic, human, spatial, etc. According to the concept, all the activities as known from the physical world (entertainment, sports, business, work, home, education, tourism, etc.), as well as people, their way of functioning in the world (including multisensory perception) will be transferred to the digital world. The COVID-19 pandemic has definitely intensified and accelerated the process of moving to the mirror world, but creating it in its complete rendition still requires a lot of resources – time and money. It is also necessary to create and disseminate many technologies – some of which already exist, and some of which are being created, as well as some which will still have to be devised. Creating a mirror world is a process, and it is impossible to set a specific date for its completion (just as it is impossible to set a specific date for the stage of dissemination of mobile internet, for example). The mirror world poses many social, legal, economic, health and environmental challenges. It will affect daily functioning of people and businesses.

Trends: Decentralisation, Big-tech Power Concentration, Remote On, Dematerialisation, Meta-economics, Human Freedom / Algorithmisation, Digital Inequality, Hacktivism, Mental Wellbeing, Privacy, ReCity, Sensploration, Robotised Living, Giga-Connectivity, A-Commerce, Smart Living, Seamless Tech, War of Influence

Factors of change: urbanisation, post-pandemic reality, internet penetration, technological maturity, social change, habits, greater propensity to use the internet by groups that have not done so before, physical distance, lockdown

Supporting technologies: 5G, 6G, FG, edge computing, portable data centres, quantum computers, AI, NFT (non-fungible tokens), internet of senses, BCI (brain computer interface), neurotechnologies, natural interfaces (BCI, voice, touch), digital therapeutics, blockchain, facial recognition control technologies, haptics technologies, AR, VR, MR, smart textiles, soft robotics, microfluidics, passthrough technologies, pancake optics, wearables, EMG input technologies, avatars/digital humans, emotion recognition technologies, internet of things (IoT)

TECHNOCENTRIC BIOLOGY

In his acclaimed book "The Nature of Technology" the renowned economist and technological thinker W. Brian Arthur wrote: „We are moving from an era in which devices enhanced the natural – speeding up our movements, saving our exertions, sewing our clothes ¬– to one in which technologies resemble or replace nature – genetic engineering, artificial intelligence, medical implants. As we learn to use those technologies, we are moving away from what's natural and towards direct interference with nature." And indeed, we are witnessing a watershed moment today. A moment where the biological is merging with the synthetic. The world of atoms with the world of bits. A world which is made of carbon with a world which is made of silicon. This requires far-reaching implantation, using bio- and nanotechnology, genetic engineering, tissue engineering, synthetic biology solutions and so-called Human Enhancement Technologies (HET). This new life form is sometimes referred to as robo sapiens or homAI sapiens. In philosophy, there is increasing talk of transhumanism, or the fusion of humans and machines. But this is really only the beginning of the road. At the end of it what might await us is the idea Nick Bostrom discussed in his theory of computer simulation of the world – ultra-intelligent, technologically advanced beings constituting the next stage of our evolution. Posthumans.

Trends: Bioeconomics, Human+, Sickcare to Healthcare

Factors of change: ageing society, depleting resources, climate crisis, health crises, genetic diseases, cancer epidemic, urbanisation, civilisation diseases, social change, redefinition of the family

Supporting technologies: mRNA, synthetic biology, CRISPR, ART (assisted reproductive technologies), digital drugs, HET (human enhancement technologies), bio-electronics, lab-grown food/ in vitro meat, genetic engineering, tissue engineering, IVG (in vitro gametogenesis)

DEGLOBALIZATION

The trend related to de-globalisation has been visible for a long time – especially at the economic level (significant slowdown of international trade since the 2008-2009 crisis) and at the technological level (so-called Balkanisation/splinternet). The COVID-19 pandemic has significantly accelerated this trend: broken supply chains, impeded movement of goods due to closed borders or economic insecurity in general, increased importance of short supply chains and promotion of domestic/local production, also with legal instruments. Taking into account other trends, including increasing polarisation, loss of social cohesion, disillusionment of developed societies with democracy, the attempt of states to regain sovereignty/technology neutrality, legal mechanisms introduced in connection with the climate transition (supporting at least local actors) and geopolitical tensions – this trend will further intensify in the upcoming years.

Trends: Self-sufficiency, Resilience, Hyperlocality, A-commerce, Social Economy, War of Influence, Convergence of Services

Factors of change: COVID-19 pandemic and the related border restrictions, closure of countries, ageing population, growing social inequality/ social stratification, cold war/wars of influence (China, Russia vs. US, Europe), changes in supply chains, economic sanctions, tensions between developed and developing countries, regulations, protectionist policies in individual countries, policies to protect national businesses, so-called strategic autonomy or economic/technological sovereignty

Supporting technologies: technologies that support internet disconnection/splinternet practices (hardware and software)

CLIMATE AFTERMATH

The fact that climate has been changing dramatically and that it has been caused by human activity has long been known. Nowadays, however, the narrative is taking a different course. Instead of climate crisis (a narrative that often blocks action and causes stagnation, because "since the crisis and the catastrophe, nothing more can be done"), there is more and more talk of climate transformation. It translates the challenge we face as humanity into real action – the transition to a closed-loop, low- or zero-carbon economy. The climate transition entails numerous challenges, both social and economic (so-called ‚just transition', where special support is needed for regions and sectors at risk of transition, including closure of entire industries), but also a completely new legal order.

Trends: Supply Chain Bottlenecks, Raw Material Crisis, Migration, Loss of Biodiversity, Resilience, Clean Energy, Autonomous Transport, Conscious Consumerism, Closed Loop Economy, Smart Living, Life After Plastic

Factors of change: urbanisation, growth-based economy, consumerism, growing global population, increasing demand for electricity, industrial agriculture, industrialization, deforestation

Supporting technologies: AI, internet of things (IoT), climate geoengineering, RES (renewable energy sources), fusion, quantum computers, autonomous vehicles, synthetic biology, microgrids, nuclear power, hydrogen technologies, blockchain, bioplastics, genetic engineering, nanotechnologies

DEMOGRAPHIC SHIFTS

A phenomenon that has lasted for years and has been constantly deepening, with its result being a change of social structure all over the world. Together with technological progress, widely defined development (both in social and economic terms), on the one hand, the length of human life is increasing, and on the other hand, the number of children born in the world is significantly decreasing (in developed countries below the generation replacement level, in developing countries just above that level, but following a constant downward trend). This presents huge, multidimensional consequences – both short-term ones (e.g. three or four generations or more work together in the same company, which gives rise to natural conflicts), and long-term ones (a need to establish how to build an economy based on sustainable growth in such society, since an ageing population consumes and invests differently, and is not necessarily willing or able to work until its death due to the state of health); preventive health issues, since an ageing population gets sick more often and for longer, social issues, such as building a hybrid society with people and social robots serving the elderly, as there are more seniors in society than those who can take care of them.

Trends: Silver tsunami, GenZ Influence, Zalpha, Urbanisation, Inclusivity and Diversity, Women Empowerment, Loneliness, ReCity, Sexuality On, A-commerce, Hyper-Personalisation

Factors of change: technological advances, increasing lifespan, lack of generation replacement, lower fertility rates

Supporting technologies: social media, web 3.0, development of the mirror world and all related technologies, big data

HEALTH CRISES

The 21st century is a time of health crises. The COVID-19 pandemic is not the first (before there were swine flu, bird flu, ZIKA), and certainly not the last in the line. Epidemics are set to increase due to climate change, loss of biodiversity and increasing human expansion into previously inaccessible areas. Another health crisis we are currently facing is drug resistance to bacteria (it is estimated that by 2050, bacterial infections will have become a more frequent cause of death than cancer), the epidemic of civilisation diseases (insomnia, diabetes, depression) and cancer. Each epidemic has a gigantic impact on the functioning of societies, economies and individual sectors.

Trends: Mental Wellbeing, Loneliness, Digital Health, Medicine-Resistance, Migration, Loss of Biodiversity

Factors of change: Biodiversity loss, Urbanisation, Industrialisation, Growing world population, Social inequality, Inequality between developed and developing countries, Poverty, Uneven development, Climate change, Deforestation, Technologisation of life

Supporting technologies: sleeptech, neurotech, wellness tech, remote work technologies, telemedicine, wearables, digital therapeutics, genetic engineering, CRISPR, AI, quantum computers

SOCIETY OF INCOHERENCE

As defined by the European Council, social cohesion is the capacity of a society to ensure long-term prosperity of all its members, based not only on equal access to resources, but also on respect for diversity and responsible social participation. The increasing technologicalisation of lives and the associated algorithmicisation confining people to information bubbles, the excessive use of social media resulting in feelings of loneliness and inability to build deep, close contacts, and – last, but not least – the COVID-19 pandemic mean that societies are losing social cohesion necessary for them to function properly. Polarisation is clearly visible in virtually every area of our lives, leading to so-called secondary tribalisation. As a consequence, it becomes impossible to establish a common vision towards the problems we have to face as a society and as a world.

Trends: Loneliness, Polarisation, Disillusionment with Democracy, Loss of Delf-Determination, Power of No, Backlash Against Science, Techlash, Transparency, Migration, Inclusiveness and Diversity, Being Good, Privacy, Robotised Life, Social Economy

Factors of change: legal regulations (splinternet, vaccination regulations, split of people into the vaccinated and the unvaccinated, privileges for the vaccinated, „sanitary segregation"), reduction of people's social and cognitive skills, disinformation, information bubbles, ageing society, algorithmisation, robotisation, polarisation, civilisation diseases, mental health, epidemic of loneliness, climate change, technologisation of life, COVID-19 pandemic, progressive decline in trust

Supporting technologies: social distancing technologies, algorithms, big data, neurotechnologies, bots/fake news

TRENDS OVERVIEW

1. Decentralisation
Decentralisation is mainly a technological trend, although it is also present in other areas. Its importance is growing with the development of such technologies as blockchain, the Internet of Things, the spread of the Metaverse concept and the development of a transitioning internet towards web 3.0, as well as the expectations of younger generations. According to the assumptions, the Internet as a concept is supposed to return to its roots with greater openness, freedom, and be placed in the hands of all users, and not managed by a few largest technology companies.

2. Big-Tech Power Concentration
Big-tech companies are referred to as the fifth power. They influence legislation, economics and innovation. With access to user data, they affect not only global processes, but also behaviour of societies and choices made by individuals.

3. Remote On
The pandemic has dramatically accelerated the transfer of people and their activities to the digital world – nowadays, it is becoming the norm that all of our activities can be and are conducted remote: remote medicine, remote work, remote meetings, remote shopping, remote entertainment, etc.

4. Dematerialisation
Intense transfer to the digital world in all aspects of life is making the physical world disappear (e.g., cash, brick-and-mortar stores, employees in offices, etc.) and change our approach to the value of product, possession, purchase or use.

5. Meta-Economics
Just as with bioeconomics, economic development is related to the introduction of the concept of Metaversum. Meta-economics concerns both the development of the economy within the digital world (owning, selling, ownership, costs, unlimited growth, new currencies, blockchain, NFT) and the economic changes in the physical world due to the introduction and spread of new technologies related to the construction of the Metaverse.

6. Human Freedom / Algorithmisation
The progressive algorithmisation makes the human being a product. The systems and tools humans use build individualised catalogues of knowledge, needs or motivations and behaviours. Choices made by an internet user are to a great extent based on recommendations of algorithms.

7. Digital Inequality
At its core, this concept assumes inequalities related to access to networks and digital exclusion. Across the world, as many as 40% of the population still lack access to the internet. The Metaverse, which is currently being developed by the biggest bigtechs, may become a factor that deepens digital inequalities.

8. Hacktivism
With moving to an online world, activism is also taking on a new dimension. Hacktivism refers to those hacking activities which involve breaking into networks or databases in order to reveal information about human rights violations, among others.

9. Mental Wellbeing
A trend aimed at achieving the so-called society's mental wellbeing. It includes all activities related to a broad category of mental health, conducted both online and offline. It also includes issues such as digital wellbeing and digital detox.

10. Privacy
In a world of increasing amounts of data and traces of our activities and behaviours online, the fight for privacy is becoming an important modern challenge, while cyber security – a key issue. We are not only threatened by the theft of sensitive personal data, but also by the loss of privacy in other forms (e.g., data from our homes, cars and even clothes).

11. ReCity
The COVID-19 pandemic has redefined the way cities are functioning. Urban services, transport, workplaces or shared spaces are undergoing transformations and the main challenge is to reorganise cities to maintain a high quality of life for citizens and – at the same time – ensure their safety.

12. Sensploration
The COVID-19 pandemic and lockdowns have led society to feel an even greater need for physical experiences. With the need to interact with each other in a digital world, the need to experience the world with all the senses is becoming more apparent.

13. Robotised Life
The trend refers to a growing use of automation and robots in various areas of social and economic life, from industry to elderly care assistance, education, etc.

14. Giga-Connectivity
At present, giga-connectivity is understood as the implementation of 5th generation of mobile technologies (and in the future also 6th), characterised by zero latency and much higher network bandwidth. New generations of mobile technology will become drivers of development in many areas of human life.

15. A-Commerce
The trend of A-Commerce (Anywhere Commerce) refers to the ubiquitous availability and ability to purchase a product or service at any time. Unlimited access to products and services is changing the habits of certain groups of consumers, while forcing companies to change their sales model.

16. Smart Living
The trend refers to the use of technology to build independence from larger systems. Efforts to manage resources more intelligently, such as water and energy, are becoming increasing evident.

17. Seamless Tech
The trend assumes that the technology becomes so embedded in people's everyday lives that it's hardly visible to them.

18. War of Influence
The mutual and increasingly complicated relationship between the two powers, the US and China, is affecting the rest of the world. Economic and ideological tensions and competition for influence and patents are becoming more and more severe.

19. Bioeconomics
As a technology, synthetic biology can be compared to the internet. Like the internet, synthetic biology will influence the intensive and wide development of a huge number of industries. Although currently synthetic biology is a relatively small area, its impact on the economy will be enormous. Hence the rise of the concept of bioeconomy which is already estimated to be worth almost 8% of GDP in the US alone.

20. Human+
The trend of Human+ refers to the development of areas and solutions related to improving human beings with the help of technology. Genetic engineering, tissue engineering or other constantly developing technologies are supposed to help overcome numerous human limitations and eliminate diseases.

21. Sickcare to Healthcare
A paradigm shift in health is being observed in the area of health. We are moving from a reactive approach (treating disease) to a preventive approach (maintaining health, preventing and counteracting disease, even at the genetic level).

22. Supply Chain Bottlenecks
The pandemic has had a huge impact on interrupted supply chains and thus negative consequences for production and trade. In the short term, such situation translates into supply shortages and rising prices; in the long term – a shift towards hyper-locality, a trend known as resilience, and a greater tendency towards the development of national economies.

23. Crisis in Raw Materials
The world is beginning to face a shortage of basic raw materials, especially fresh water, metals, minerals and other natural materials, including resins, wood or pigments. Certainly, the raw materials crisis is linked to climate change, growing population, economy based on constant growth, but also, among other things, to rising prices, transport difficulties and long waits due to factory closures. In 2020, the European Commission identified 30 critical raw materials (i.e., those of great importance to the EU economy, but in low supply). Since 2011 – when critical raw materials for the EU economy were first identified – this number has more than doubled. At the same time, it should be remembered that – with supplying 10 out of 30 raw materials identified – China is currently one of the main suppliers of critical raw materials for Europe.

24. Migration
Various factors (including climate change, economic and political crises) are forcing millions of people around the world to migrate. The number of potential climate refugees alone is estimated at 250 million by 2050. This situation needs to be addressed in a strategical and multifaceted way, at the level of local and international cooperation, rather than just in the form of ad hoc measures in the build-up of refugee crises.

25. Loss of Biodiversity
Scientists are warning that the world is at the stage of the sixth mass extinction of species. It is estimated that around 1 million species are facing extinction. The destruction of the planet's biodiversity as a result of human activity poses enormous risks, not only economically, but also socially, climatically, and in terms of health.

26. Resilience
Pandemics, climate or economic crises, challenges we face, nanosecond culture and frequent change are forcing societies to quickly adapt to a changing world. Resilience is becoming one of the most important competences of the future.

27. Clean Energy
Growing energy awareness and environmental lobbying mean that interest in green energy sources is on a steady rise. The long-term goal is to shift to a low- or zero-carbon economy, which entails legal changes at the administrative level and the need for individual countries, businesses and other players to adapt to a new legal reality.

28. Autonomous Transport
The implementation of autonomous transport (individual, passenger, freight) will affect the functioning of cities or the maintenance of security. With limited testing and investments, the COVID-19 pandemic has contributed to a halt in implementation of autonomous transport.

29. Conscious Consumerism
A trend which refers to a growing awareness of consumers and responsible product development by brands. It also includes activity aimed at counteracting progressive consumerism.

30. Closed Loop Economy
The trend assumes that the value of products, materials and resources is to be retained in the economy for as long as possible in order to reduce production of waste to a minimum.

31. Life After Plastic
An environmental trend that draws attention to excessive use of plastic (especially single-use plastic) and search for equally durable and cheap alternatives, such as living organisms (including fungi, bacteria and algae), waste from food production and completely new materials.

32. Self-Sufficiency
The pandemic and the ensuing disrupted supply chains, raw material crisis, climate change, and transition to a closed-loop economy, among others, have made the trend pushing towards self-sufficiency ever more visible. On numerous levels (food, energy, water production), it implies the autonomy of individual units (cities, organisations, factories, individual households, buildings, etc.).

33. Hyperlocality
Locality is synonymous with what is important, valuable and more authentic. Support for local entrepreneurs is growing in popularity. At the same time, companies are relying on local supply chains to mitigate risks.

34. Social Economy
An increasing number of conflicts and social stratification, as well as environmental changes, but also events such as pandemics, are generating a growing need for seeking and implementing solutions built on empathy and compassion and a rise of social economy. Consumers expect companies to be fair and to deliver a positive social impact.

35. Convergence of Services
The idea of convergence and the merging of products and services and the cooperation of multiple, sometimes surprising actors is not new, but is beginning to gain momentum. This trend points to an increasing multifunctionality as a way to respond to as many consumer needs as possible.

36. Loneliness
Social isolation and loneliness affect the health of societies (not only psychological, but also physical), generating serious consequences, including economic ones. The fight against the effects caused by lack of human contact is increasingly important, especially in times of pandemics.

37. Polarisation
The trend indicates the deepening of strong differences in attitudes among citizens towards important social and economic issues. Public discourse and mutual understanding are hampered by deepfakes, fake news or algorithms that selectively present us with information.

38. Disillusionment with Democracy
Research conducted by Cambridge University's Centre for the Future of Democracy demonstrates that dissatisfaction with democracy has been growing steadily since 2005, especially in developed countries. In 2020, this indicator reached its highest value with as many as 58% of respondents surveyed in 77 democratic countries around the world sharing their disillusionment with that particular form of system. Combined with such issues as increasing polarisation, fragmentation, growing lack of trust (in society, but also in governments, media, science), social unrest, growing role of technology companies, but also geopolitical changes, questions about the future of democracy in general come into play.

39. Loss of Self-Determination
As a result of increasing technologicalisation and algorithmisation of life, human beings are losing their sense of freedom and self-control. This is because the decisions and choices they make are to a large extent based on the operation of algorithms. Quite often a person is not even aware of how much technological companies control their behaviour. Social and geopolitical factors, as well as post-pandemic moods, also add to the feeling of losing control over one's own life.

40. Power of No
Tensions and social unrest are becoming more pronounced in connection with growing inequalities or the rise of extreme views, among others. Manifestations, protests and revolts are an expression of opposition to the existing order of things or a way of presenting one's views.

41. Backlash Against Science
Disinformation, fake news, spread and strengthening of conspiracy theories, and finally a sceptical approach to science and scientific methods – they all make the concept called anti-science gain momentum. Science ceases to be an objective field that builds universal foundations for functioning in a society.

42. Techlash
Techlash is an attitude of strong opposition to large technology companies and their negative impact on the functioning of individuals and societies. It is also associated with a more conscious use of technology or giving up on its excessive presence in everyday life.

43. Transparency
A trend pointing to a growing role of transparency, clarity and authenticity in many areas of our lives (both professional and private ones).

44. Inclusion and Diversity
The trend that indicates a growing need to be open to all society groups and to support them in their activities.

45. Being Good
A trend which assumes brands are taking action to take responsibility for the world in which they operate (including fighting for diversity, sustainable production or closing the gender pay gap).

46. Silver Tsunami
By 2050, one in three Europeans will have been over 60. The growing number of older people in society affects the functioning and design of cities, workplaces, products, etc.

47. GenZ Impact
Gen Z is a generation to first grow up in a completely digital world. This has shaped their needs and defined new expectations from products and services – an issue that brands are facing today.

48. Zalpha
The COVID-19 pandemic has been a defining event in the development of the two youngest generations: Alpha and Z. Due of this shared experience, the contact between these two generations is referred to as Zalpha.

49. Urbanisation
Urban population is on the rise, contributing not only to the expansion of megacities, but also to the construction of new urban centres. A growing population of inhabitants of towns and cities also influences the sprawl of existing agglomerations. One consequence of the phenomenon is suburbanisation, i.e., an assumption that more people live in suburban areas than in the city itself, while at the same time these individuals actively enjoy urban living.

50. Women Empowerment
Also referred to as #girlpower or #womenomics, the trend links to the growing role of women in social, economic or political life.

51. Sexuality On
A trend in which sex and sexuality are no longer taboo topics. Issues such as sex of the elderly or the disabled have become subjects of open discussions. Social opposition to abuses in this sphere of human life is also resounding in an ever louder and stronger way.

52. Hyper-Personalisation
The trend of hyper-personalisation points to the use of data about a single individual and directing the message to that particular person. In terms of the trend, the supporting technologies are mainly machine learning, AR or geopositioning.

53. Digital Health
A trend that takes into account the development of digital solutions in the area of the broadly defined health, based on such technologies as VR, AR, AI or IoT.

54. Medicine-Resistance
Bacterial resistance to antibiotic treatment is a trend that has been on the rise since the 1960s. In fact, numerous experts declare this to be the next global health crisis that awaits us in the future. As of now, nearly one million people worldwide are already dying each year because of drug resistance micro-organisms – and it does not just concern developing countries, but also Europe and the USA. Drug-resistant tuberculosis, syphilis, gonorrhoea and E. coli infections are on the increase. According to UN data, the number of people dying as a result of drug-resistant bacteria could elevate to as many as ten million by 2050.

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HOW TO USE THE MAP OF TRENDS?

1. Think of the impact of each trend on your organisation, processes, offerings, employees. Try to answer the following questions:

- → How does the trend affect the development of your organisation?
- → Are you adapting the trend in your organisation? How?
- → Is your organisation investing in activities which are in line with this trend? If so, which ones?
- → Are you implementing technologies that support the trend?
- → To what extent is this trend popularised in your industry?
- → How are your competitors responding to these trends?
- → How do you assess the level of awareness of the trend among your target audience?
- → Who do you consider the *early adopters* of a given trend in your market?

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2. Measure the level of adaptation and impact of each trend on your organisation. Plot the results on a matrix. The trends that have a high impact on your market and a low level of adoption in your organisation should be addressed first.

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3. If you would like to go through this process with infuture.institute, our proprietary Trend Radar tool will help you structure your knowledge and position your organisation, offering or strategy in relation to trends.

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For more information, contact us at:
marek.gawdzik@infuture.institute (the institute's COO)
who will be happy to talk to you and discuss the process in detail.