

AT THE CUSP OF A NEW ERA

THEMIS
FORESIGHT

SCENARIOS FOR EUROPEAN BUSINESS
IN A NEW WORLD ORDER



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SÜDWESTMETALL

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PREFACE

This document is the sequel to our November 2022 Themis Foresight report “The European Economy in a New World Order”.¹ While our November report was merely an analysis of the drivers for change in the global economy and their repercussions on the European Union, this publication focuses on possible, probable, and desirable futures and design options.

Corporate executives of European businesses are faced with a dual task – navigating the detrimental impacts of the gigantic jump in energy prices, political uncertainties, supply chain disruptions, rising cost of capital, all while being challenged by new EU legal frameworks incurring additional compliance costs and charting a long-term course for their businesses. While the European economy has so far proven reassuringly resilient to navigating the Covid and energy crises, it will still have to stand the test of time of long-term transition to a technologically advanced and decarbonized future. The five scenarios proposed in this document aim to assist executives in this task.

In our November analysis we discussed a decoupling between political and business interests. This state carried over into the development of our scenarios. Of the five scenarios we developed over the course of the last few months, four are driven by political interests and their ideological outlooks. We felt strongly that this would be unsatisfactory and decided to develop a counterfactual scenario that would put the interests of business at the center.

Scenarios do not pretend to forecast “the future”.

But they do portray possible futures as a means to consider courses of action. The ability to anticipate a variety of different outcomes of developments – perceiving opportunities where others see none, being aware of risks where others are blindsided by the impact of pressing current-day impacts and preparing for a variety of measures – is a core competency of successful leadership, commonly described as “Futures Literacy”.

1 Jan Berger, James Hoefnagels, Siv Helen Hesjedal, [The European Economy in a New World Order](#), November 2022

It is in this spirit that we have developed our scenarios. They are not intended to be mutually exclusive. They rather highlight a divergence of interests between businesses who, e.g., maintain a keen interest to be active in all corners of the globe or would rather only focus their activities on a European or national market. Their intention is also to alert readers to needed changes in different policy areas, as well as direction of innovation and transforming business models.

We are currently engaged with several corporations to discuss and apply these scenarios to their core business activities and invite you to do the same.



Jan Berger

*Founder & CEO bei
Themis Foresight*



*Themis Foresight is a German **business think tank** researching and operating globally.*

*Many business leaders lack the time in their day-to-day operations to **dig deeper into possible futures** and build new business for their company in the long term. Yet it is thinking forward that makes it possible to **identify and exploit future options and avoid risks**. We identify **decisive developments of the next 15 - 20 years**. We investigate which social, economic and political drivers and new technologies will influence and change the business models of companies as well as entire industries and economies in the future.*

INTRODUCTION

It is one year since Russia invaded Ukraine and the end of the war is not in sight. The war has led to tens of thousands of fatalities and has had significant political and economic implications for Ukraine, Russia, Europe, and the rest of the world. The war has accelerated the end of the post-Cold-War era that has been in the making since the 2010s. In our report released in November 2022, we argued that we are entering a new world order.² A new world order does not emerge from a single event, but the Russian war on Ukraine is one event on the timeline towards the end of the Western-dominated world order. While we cannot know what the future world order will look like, we can see the signs of change.

In our report, we discussed what will be relevant for the positioning of European business in such a new era. In this report, we provide five possible futures, in the form of five scenarios for European business in 2045. A scenario is not a forecast or a prediction, but a way to generate stories about the future. Scenarios illustrate trends, landmark changes, events, decisions, and their consequences as they could evolve. They create images of the future that can help us act today. The five scenarios in this report explore what needs to be done in the field of business innovation, political reform, and foreign policy for the European economy to thrive in 2045.

The starting premise for these scenarios is that we are moving into a more complex world order, marked by differing interests of superpowers, and a relative growing strength of middle powers. In Europe, there is an increasing separation of political and economic interests. A second premise is that the futures of the European Union are intertwined with the level of unity within the union. The third starting premise is climate change and the goal of limiting global warming through decarbonization. In all the scenarios, Europe aimed to pursue policy pathways that lead to no or minimal overshoot of the 1.5°C target by mid-century.³ This has, however, not been achieved in most of the scenarios.

2 Jan Berger, James Hoefnagels, Siv Helen Hesjedal, [The European Economy in a New World Order](#), November 2022

3 Research by the [Washington Post and the Potsdam Institute for Climate Impact](#) shows that of 230 pathways modelled to limit the earth's warming to 1.5 degrees, there is not a single 'easy' pathway that will avoid overshooting the target. They find that there are 11 'challenging' pathways that can be taken, all requiring much speedier scale up of carbon capture and storage, and a total, or near-total shift to non-fossil fuels.

Deliberate political and economic action is required to achieve decarbonization. In the short to medium term, it is necessary to drastically increase the share of electricity in energy consumption. In the long term, a change in the technological and energy foundations of society will be necessary. The final premise of these scenarios is our thesis that it is the economies and businesses that are capable of successfully innovating in the replacement of the raw materials of the fossil fuels era and will be capable of securing their incomes and ability to act globally for decades to come.

It is our contention that the futures described by these scenarios are plausible, possible, and to varying degrees probable futures for European business. Readers may find some of these scenarios more desirable than others or may find that they desire none of these future worlds. They are not the only possibilities, but they are coherent scenarios that can help us ask critical questions about what we need to do today. There is something to learn from each of the five possible futures we provide here.

Scenarios, however, have limited value unless they are used.

The intention of these scenarios is that they are used as conversation starters among business leaders and policy makers.

The scenarios can be used to evaluate existing strategies, to develop new strategies or to help a business expand their repertoire of risk indicators. The scenarios will have different implications for business in different countries and different industries, but there is something for all businesses to learn from thinking about multiple future possibilities.



ABOUT THE AUTHORS



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*Senior Researcher at
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Siv Helen Hesjedal is a professional futurist and strategist with over 20 years of international experience in strategic management and futures research. Siv has worked as a strategic advisor to senior politicians and business leaders. After nearly two decades in South Africa, she now works from Norway. She supports clients and directs our project design and foresight methodologies.



Jan Berger
*Founder & CEO at
Themis Foresight*

Jan Berger is a historian and linguist. He is the founder of Themis Foresight GmbH, a sought-after sparring partner for CEOs and a keynote speaker. He has lived and worked on four continents. He started his career in publishing and then moved to the real estate industry, where he was responsible for building the Russian business for a Danish real estate group. After two years in a digital startup, Jan led the operations of 2b AHEAD ThinkTank for 7 years and founded Themis Foresight in 2021.



Dr. Ewald Böhlke
*Senior Associate GEPA
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Dr. Ewald Böhlke is a passionate futurist with more than 20 years of professional experience. He is a Senior Research Associate at GEPA Group and focuses on the interactions of technology dynamics and geopolitics in the energy sector. Previous professional positions include Senior Researcher at Daimler AG and Head of the Berthold Beitz Center for Russia, Ukraine, Belarus and Central Asia at the German Council on Foreign Relations (DGAP). Dr. Ewald Böhlke has also held teaching positions at various universities. He is a member of the advisory board of Themis Foresight.



James Hoefnagels

Senior Researcher & Strategist at Themis Foresight

James Hoefnagels is a political scientist and futures researcher from Canada. He has worked on a wide range of topics including energy, quantum technologies, and global politics. In his work, he analyzes and evaluates emerging trends and their potential impact on businesses. He advises business leaders on how to successfully prepare for potential future scenarios. Prior to joining Themis Foresight, he was a Senior Researcher & Strategist at futures research institute 2b AHEAD, and before that he worked as a Junior Associate at the Copenhagen Institute for Futures Studies.

METHODOLOGY

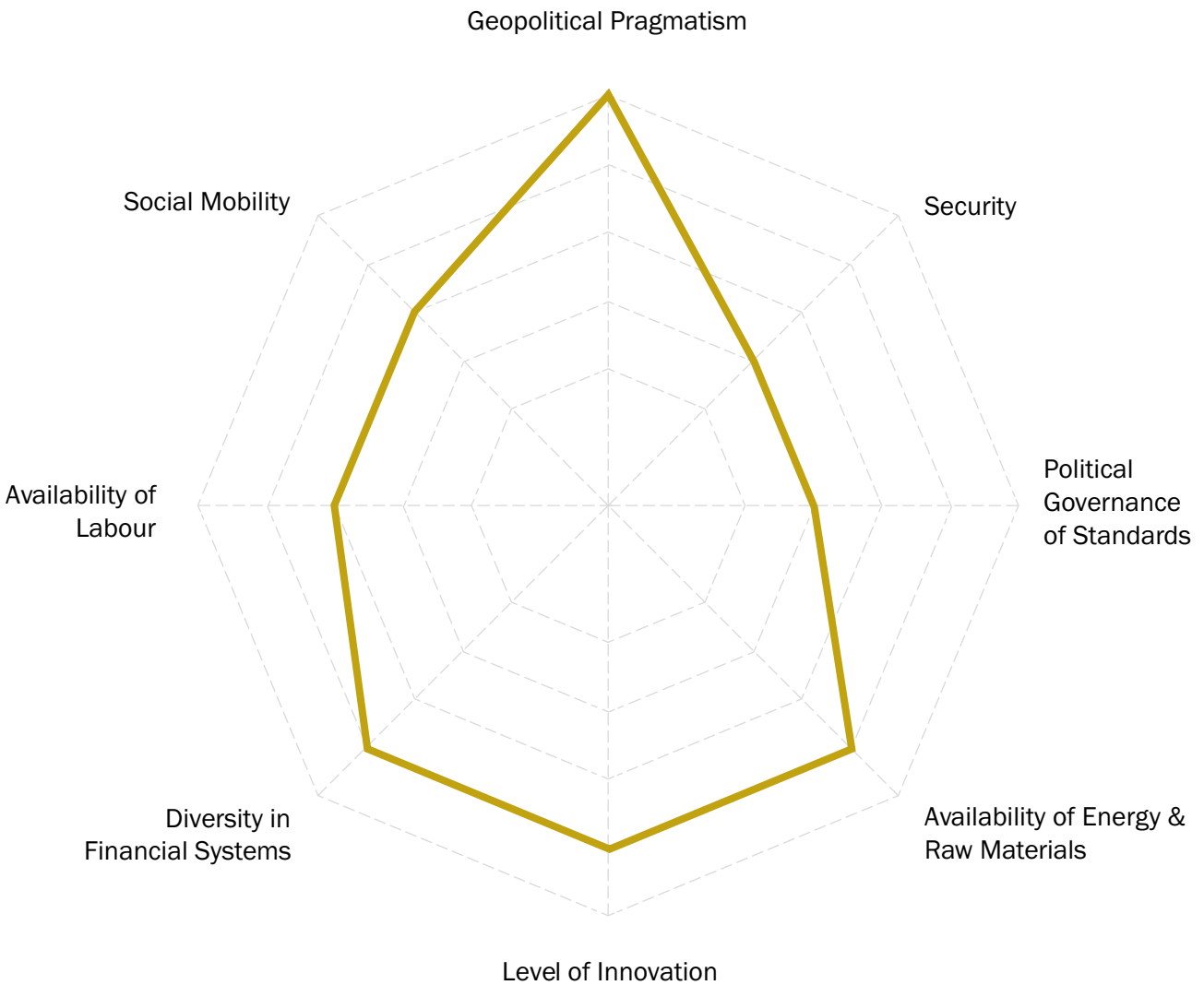
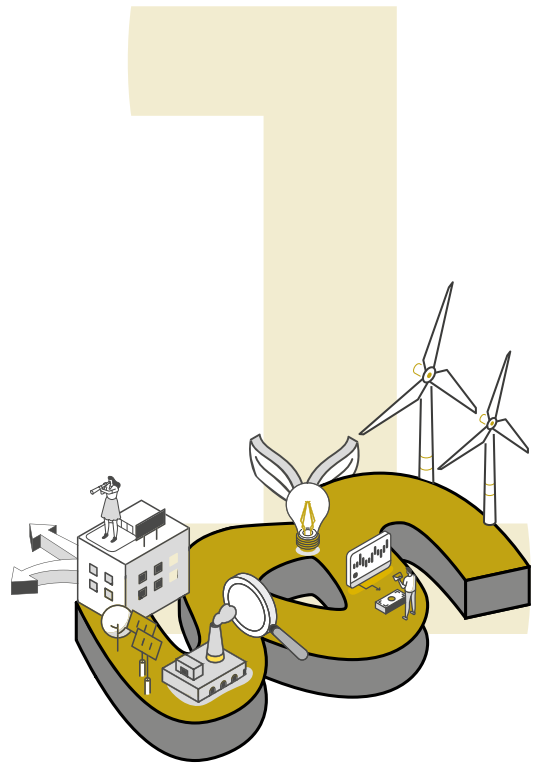
The research conducted for this project has been carried out in two phases. The first phase, conducted in the spring of 2022 comprised of a survey of business leaders, a Futures Lab, and ongoing environmental scanning. An interim analysis was published in November 2022, providing the starting premise for the scenarios.

The second phase of research comprised of **expert interviews** and a **Futures Lab**. Based on the interim analysis, we developed hypotheses that were tested in over 30 expert interviews with business leaders, entrepreneurs, and researchers in 19 countries across five continents. **Eight future drivers** were developed through the analysis of this data. A Futures Lab held with 15 business executives and futurists in November 2022 developed content for the scenarios.

Each scenario has been built by first setting the geopolitical parameters, the global balance of power, and the level of unity within the EU. Secondly, determining the directionality, strength, and combination of the eight drivers. The radial diagrams illustrate the eight drivers. Scenario 5 is a counterfactual scenario, where it is business that sets the parameters for society.

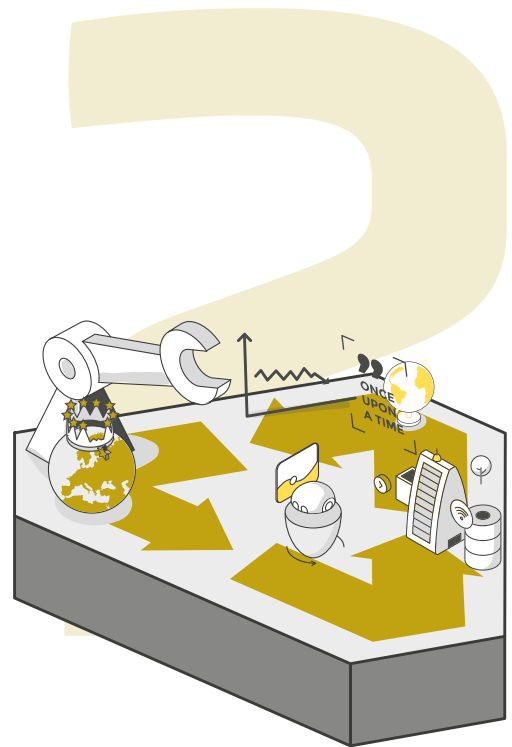
EUROPE: A FLOURISHING MIDDLE POWER

Europe lost the edge in the race for digital, climate, and energy innovation in the first two decades of the 21st century. With businesses moving their technology and operations to other parts of the world and the G7 having lost its global significance, Europe was forced to rethink its goals. Focused on meeting climate goals, Europe suspends trade conflicts and seeks collaboration with countries and regions that are in the technology lead. Accepting its role as 'just' a middle power, Europe flourishes in its focus on climate.

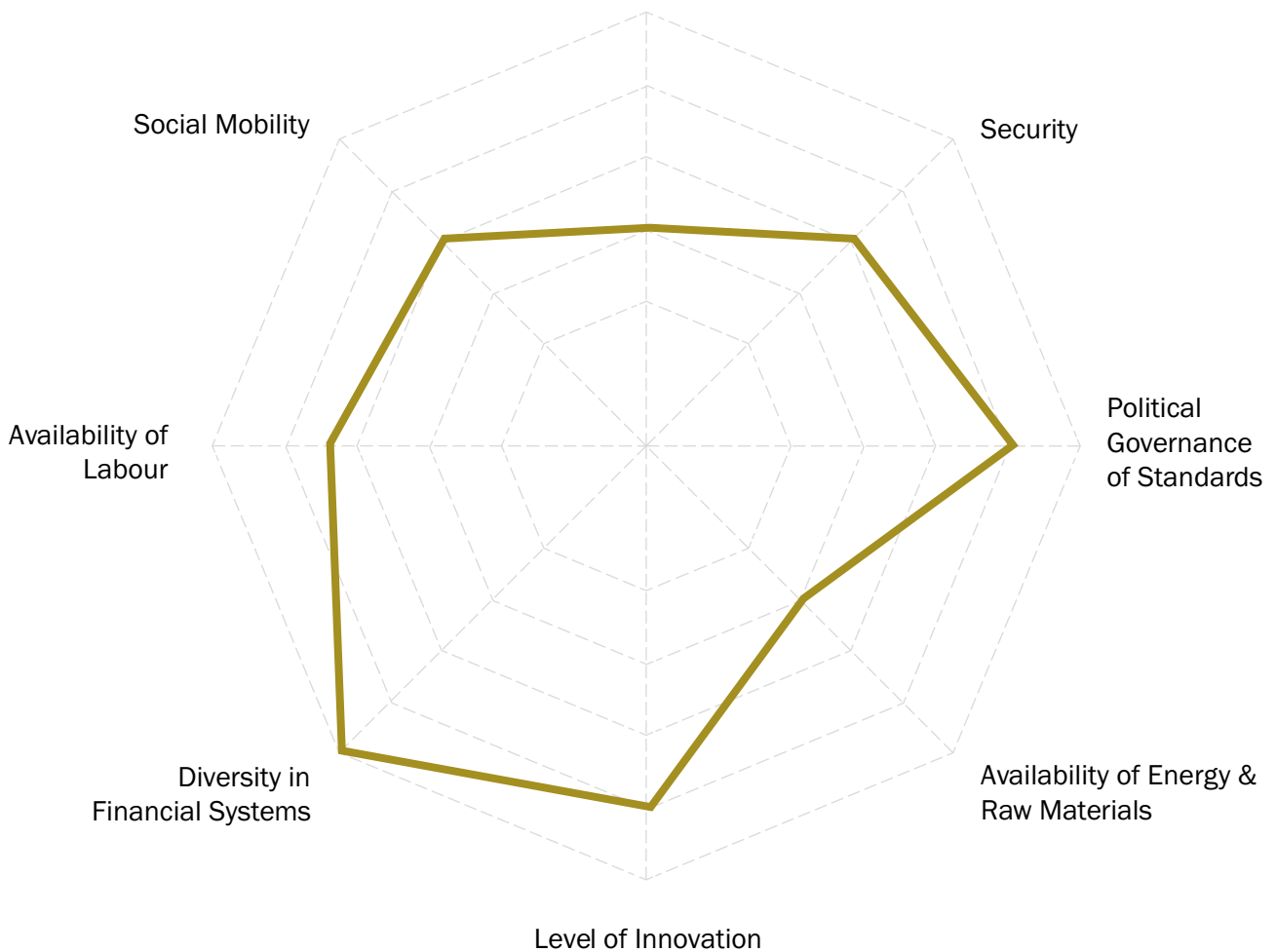


GLOBAL VILLAGE EUROPE

Global Village Europe is a largely self-contained geographic and economic entity. The unified economic and political union is pioneering circularity, modern living within planetary boundaries, and alternatives to raw material extraction. There is a more centralized and integrated market structure, with strong state companies. Innovation thrives, staving off economic decline. The productive sectors of the economy gain a larger share and are fully integrated with computing and digital technologies.



Geopolitical Pragmatism

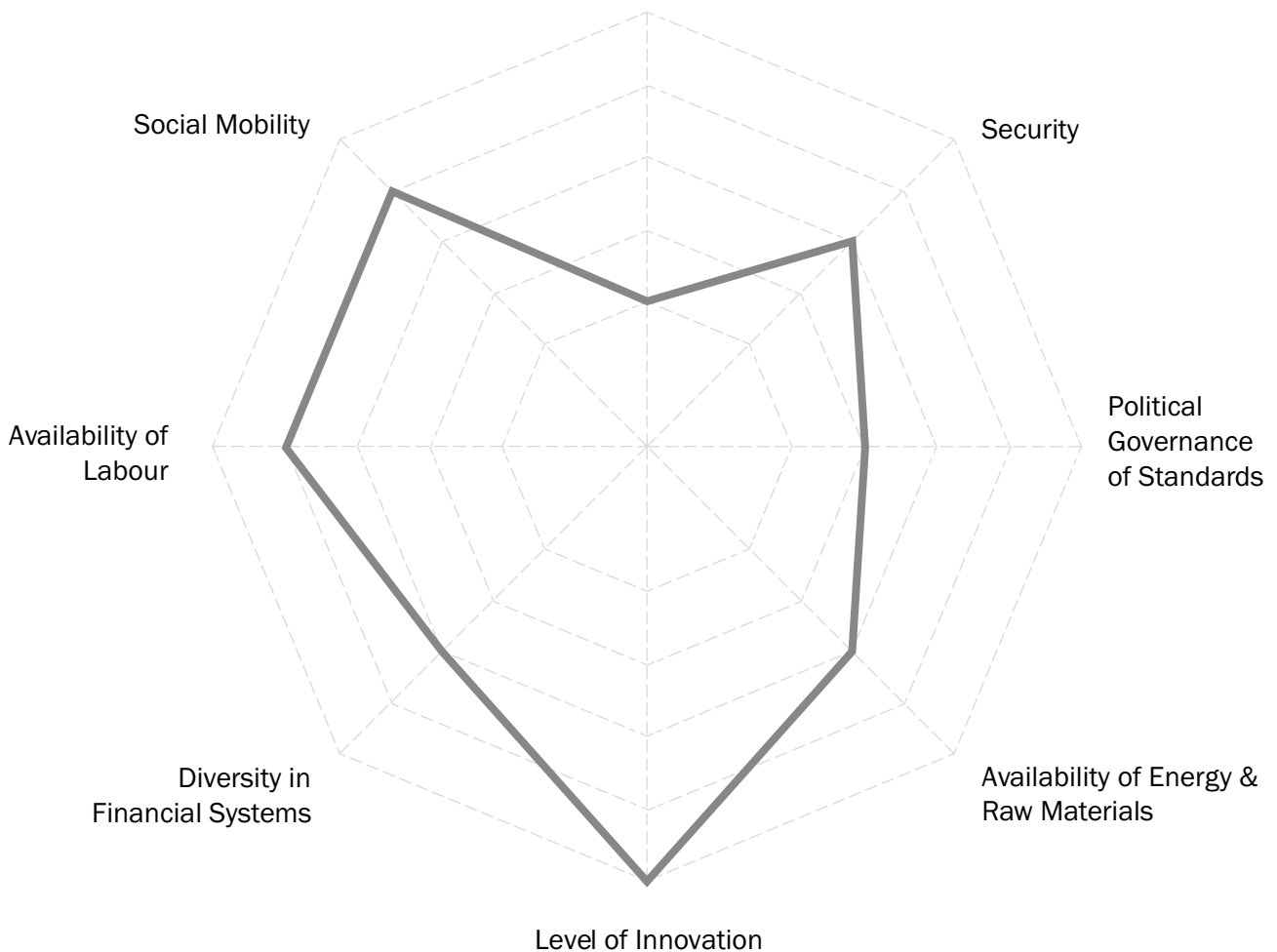


HISTORY ENDS, AGAIN

In this scenario, the “global West” maintains its leadership role in the world, with Europe being a junior partner to the U.S. Western dominance is secured through technology dominance, applied innovation, and reshaped relations with developing countries. Markets are competitive with strong growth in innovation and technology sectors. Internal social unity was important for the mobilization of populations. Europe thrives in the shadow of the U.S.

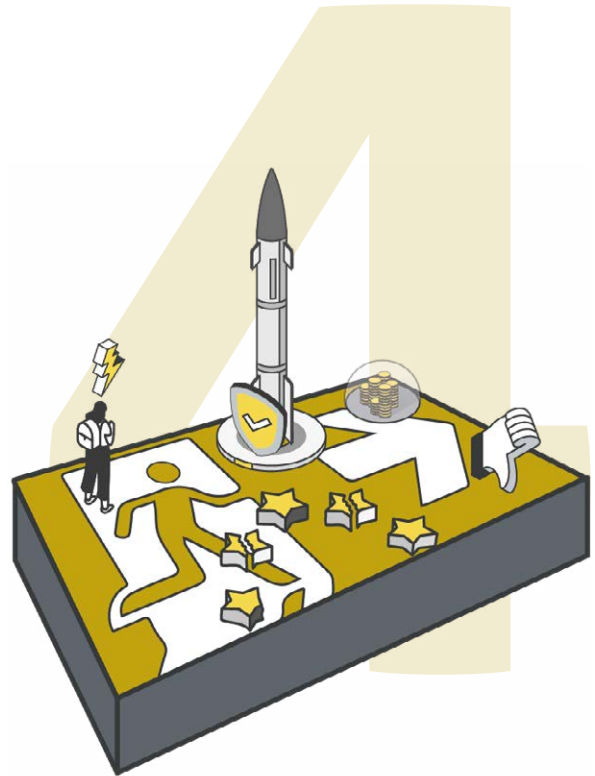


Geopolitical Pragmatism

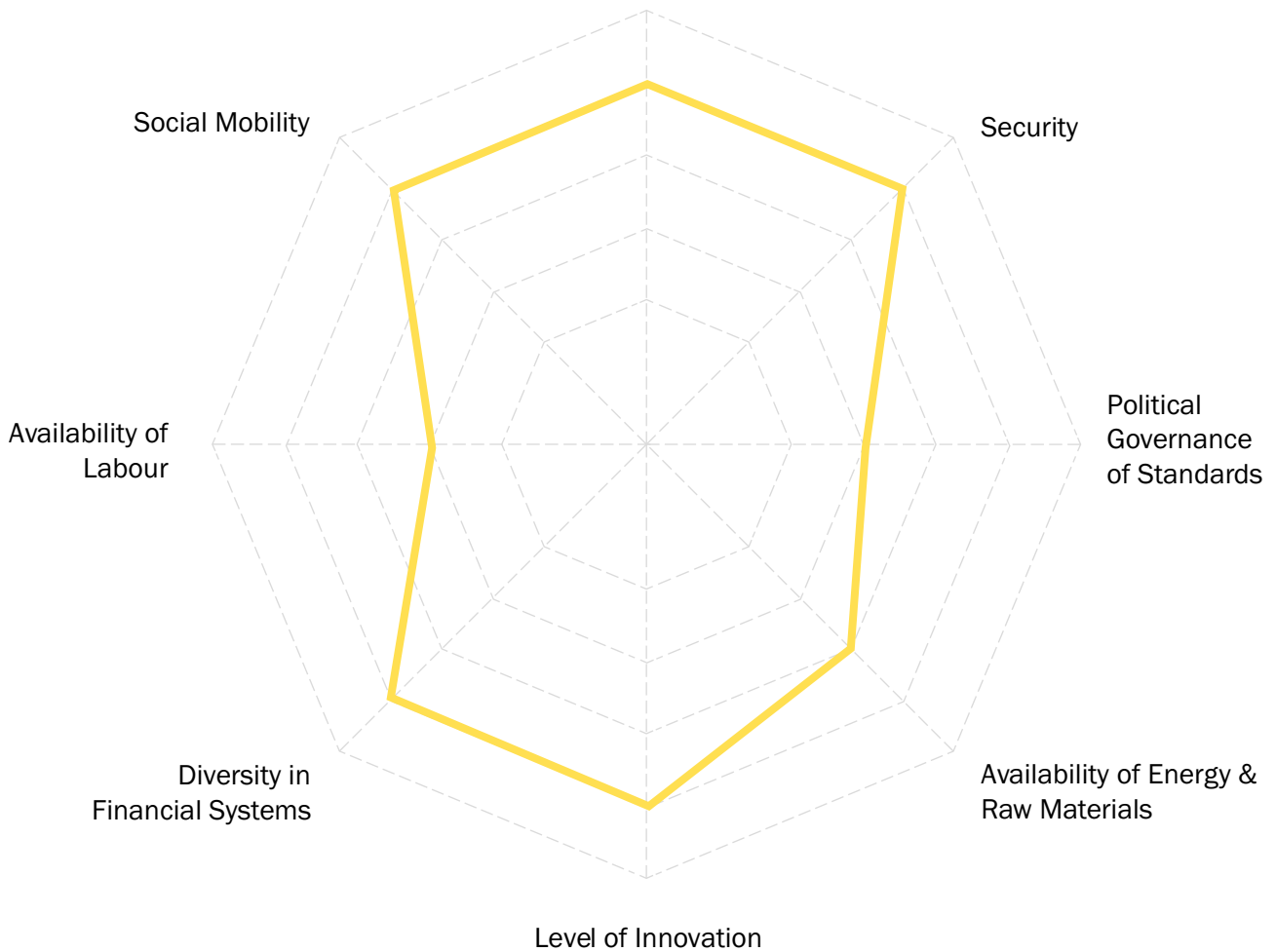


THE GREAT EXIT

In 2045, the EU has ceased to exist as a single economic and political union. Operating costs are high amidst uncertainty, financial risk, and renegotiation of trade and other relationships. The market structure is fragmented and decentralized, shifting away from regulated and centralized sectors. Europe is vulnerable. As the rules of trade and cooperation are rewritten, only large and stable businesses seem to weather the storm.

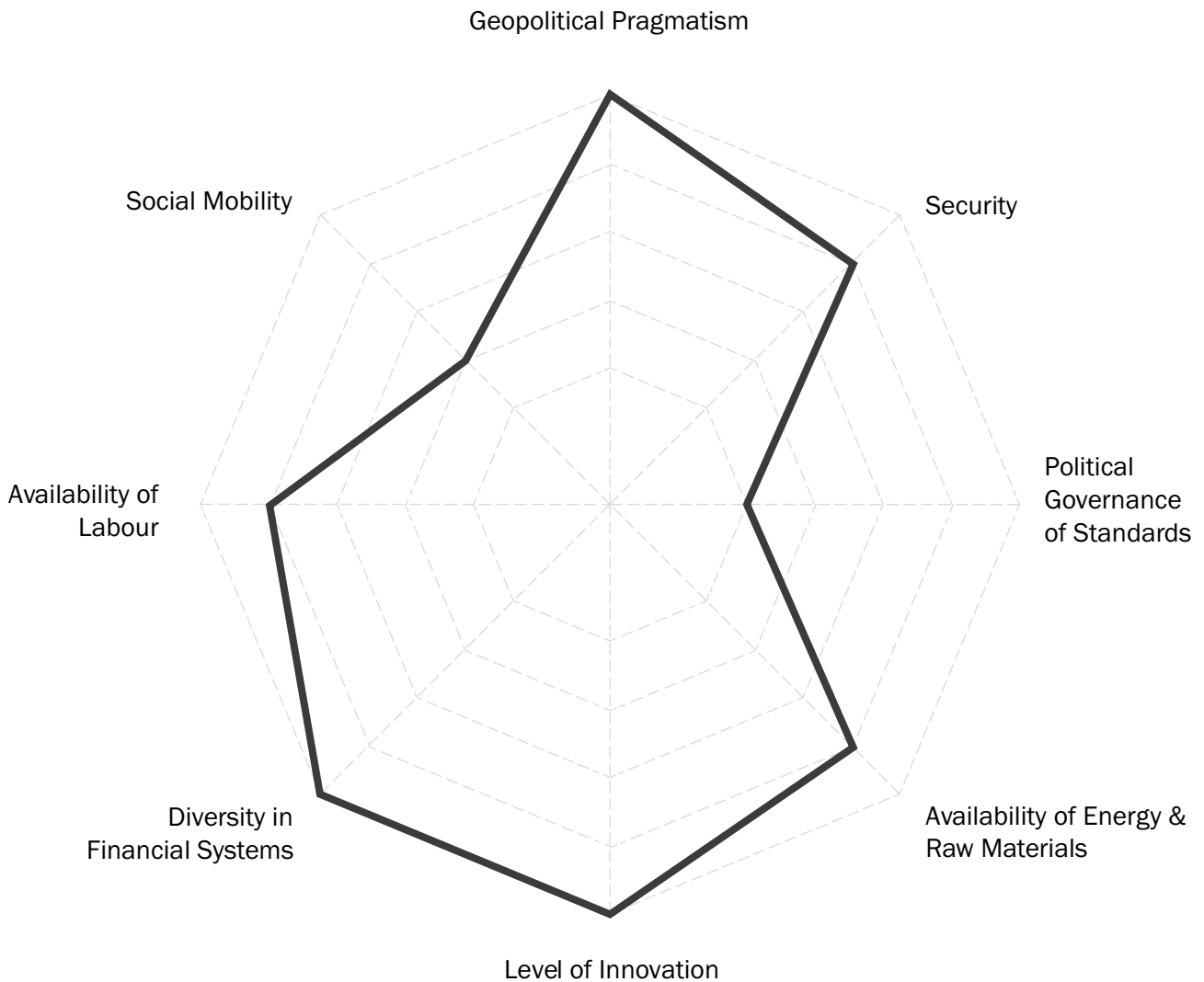
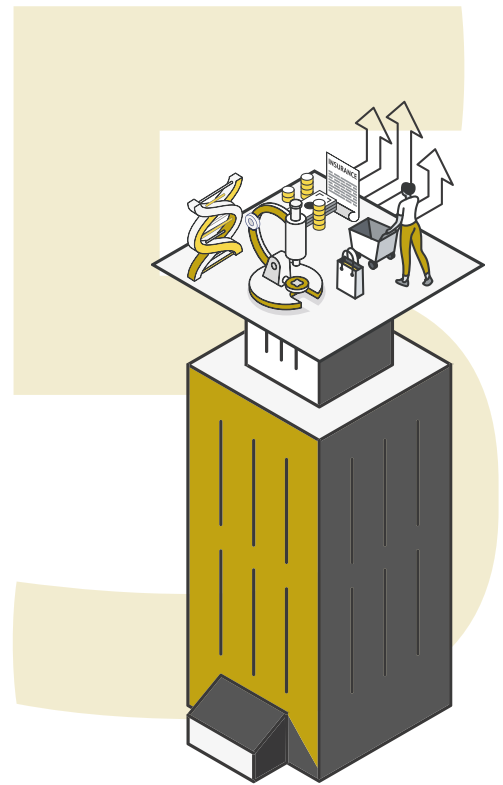





























Geopolitical Pragmatism



CORPORATE EUROPE

Business sets the parameters for society in this scenario. In the company state, the aim of society is to make and sell products and services. Government provides business with some guarantees and protections, and in return business finances and orchestrates regional development and social security. The market structure is centralized and hierarchical.



Scenario 1 A Flourishing Middle Power	Scenario 2 Global Village Europe	Scenario 3 History Ends, Again	Scenario 4 The Great EXIT	Scenario 5 Corporate Europe
<p> EU has a flexible and pragmatic foreign policy, works closely with China, and maintains relations with the US.</p>	<p> Europe has lost global political influence and its economic position.</p>	<p> The “global West” maintains a global leadership role, with Europe as the junior partner.</p>	<p> Europe has dissipated and European powers like Germany have lost their global standing.</p>	<p> Regions interact at a global level to negotiate the geopolitics of competing corporations.</p>
<p> Political and diplomatic ways of settling conflicts are preferred.</p>	<p> An independent European security policy is only possible in very small, selected areas.</p>	<p> Europe is busy containing internal conflicts to prevent disintegration.</p>	<p> Tough competition for government contracts determines the security dynamics of Europe.</p>	<p> Regular state forces are being replaced by private armies.</p>
<p> Governance by outcomes. Business negotiates industrial standards in the face of advanced technologies from China, India, the U.S. and other nations.</p>	<p> EU's governance regime is tight, with power and decision making concentrated in Brussels.</p>	<p> Standards are outcome-based, set by the U.S., and followed globally.</p>	<p> Governance is nationalistic and pragmatic as everything is being renegotiated.</p>	<p> Minimal level of negotiation between business and the state around political goals.</p>
<p> Raw materials and energy are secured through imports.</p>	<p> With no imports, the emphasis is on substitution and innovation to create new sources.</p>	<p> Securitization leads to supply volatility.</p>	<p> Supply at high prices, as suppliers exploit a fragmented Europe.</p>	<p> Europe is energy independent. Access to raw materials is uneven.</p>
<p> Innovation is aimed at decarbonization as well as local and global wealth distribution.</p>	<p> Innovation is focused on reducing the exploitation of planetary resources.</p>	<p> Innovation is targeted at finding solutions to problems of the developing world, to maintain their political support.</p>	<p> Innovation and technology infrastructure suffers as common mechanisms disappear.</p>	<p> Business innovates for short term profit. Innovation in provision of social services.</p>
<p> International financial systems have diversified beyond U.S. Dollar domination.</p>	<p> Highly diversified, as regions decouple and run their own systems and infrastructures.</p>	<p> The U.S. Dollar has regained dominance.</p>	<p> The European Central Bank has closed, and national currencies have been reintroduced.</p>	<p> Currencies have lost much of their relevance as payments and settlements take place in real time.</p>
<p> A high level of automation has eliminated labor shortages and stripped away jobs with no social or economic purpose.</p>	<p> Labor shortages are addressed through automation and targeted migration.</p>	<p> With labor supply secured, focus on managing the interplay between humans, robots, and algorithms.</p>	<p> High competition for labor between countries in Europe.</p>	<p> Labor is highly flexible. Guilds of skilled workers collaborate with industry associations to ensure training and upskilling.</p>
<p> Low mobility and high inequality.</p>	<p> Mobility is limited and a result of individual success.</p>	<p> Social peace is safeguarded by social mobility and full employment.</p>	<p> Large inequalities and high social fragmentation.</p>	<p> All social and “public” services are provided by the company state.</p>

WHAT WILL INFLUENCE EUROPEAN ECONOMY AND BUSINESS IN 2045?

From our research, we have identified eight drivers of change that will impact the future of the European economy. We cannot know with certainty how these drivers will develop, but we know that they will both influence and be influenced by the positioning of business in 2045.

Whose rules in a rules-based order?

A rules-based world order is a system of international relations where actors agree to abide by a set of rules that may be codified in some form of treaties or agreements. The current set of rules were written in the 20th century, and many of them were written by the victorious powers after the 2nd world war. The United Nations, the Bretton Woods institutions, and others such as the International Atomic Energy Agency were the institutions created to maintain this order. The post-war rules-based order reflected the liberal norms and ideals of its drafters, most notably the U.S. and its allies. But in today's multipolar world, the liberal rules-based order is challenged. It is also violated, including by its authors. The Russia-Ukraine war has emboldened the challenges to the current era. For China, and emerging powers like India, it is not a question about having no rules, but rather about having a different economic and geo-strategic role – and having a stake in writing the rules. India's foreign minister S. Jaishankar underscores this in an interview with the New York Times when he says that “I would still like to see a more rules-based world. But when people start pressing you in the name of a rules-based order to give up, to compromise on what are very deep interests, at that stage I'm afraid it's important to contest that and, if necessary, to call it out.”⁴

India will become the world's most populous country in 2023 and is projected to be the third largest economy in the world by 2030.^{5,6}

4 [India Emerges as Key Global Player Amid Russia's War in Ukraine - The New York Times \(nytimes.com\)](https://www.nytimes.com/2022/02/24/world/asia/india-ukraine-war.html)

5 [India will soon overtake China as the world's most populous country | The Economist](https://www.economist.com/asia/2022/07/28/india-will-soon-overtake-china-as-the-worlds-most-populous-country)

6 [India Emerges as Key Global Player Amid Russia's War in Ukraine - The New York Times \(nytimes.com\)](https://www.nytimes.com/2022/02/24/world/asia/india-ukraine-war.html)



“There has to be a recalibration of what we mean by a rules-based order.”

Prof. Alejandro Reyes, Asian Global Institute, University of Hong Kong

The question for the next two decades that we ask in these scenarios is who will write the rules of the next rules-based order? The answer will be a function of geopolitical power relations. In a multipolar world, it will not only be a question of relations between the U.S. and China. China’s rise has opened new viable cooperation options for many nations and regions in terms of trade as well as political bargaining. Regions, regional power structures, and the processes of regionalization are becoming more important in a complex and multipolar new world order. Regardless of the outcome of the war, Russia remains a power that countries in this Central Asia and the Caucasus region must negotiate political and economic relationships with. NATO member Turkey maneuvers around the great powers and has intensified economic and security collaboration within the Organization of Turkic States. For countries that have less economic power, the multipolar order calls for skillful negotiations and pragmatic relations. A foreign relations and policy expert speaking on condition of anonymity from Kazakhstan put it thus: “Hopefully the West will understand that and not push us to take side. That would be disastrous for us [in Kazakhstan & Central Asia].”

Regionalization does, and will, not necessarily only take the form of formal institutional structures. Regionalization includes greater political and economic integration, trade agreements, issue-based coalitions, and alliances. Regionalization goes beyond immediate geography and regions are shaped by history, culture, language, religion, infrastructure, and resources, as well as shared economic and security interests. Countries and groups of countries

engage in regional interaction in multiple ways. The concept of region here includes country groupings that emerge as political instruments such as the BRICS (Brazil, Russia, India, China, and South Africa). Egypt, Saudi Arabia, and Turkey are middle powers that are now seeking to strengthen their ties with BRICS. Another example is the Comprehensive Economic Partnership Agreement between United Arab Emirates, India, Israel, and Indonesia. The Quadrilateral Security Dialogue, known as the Quad, is another example. Here, the U.S., Japan, India, and Australia works for “a free and open Indo-Pacific”.⁷

We contend that future regional power structures will not always be politically and economically aligned. Thus, it may be incorrect to simply cast the current situation as a battle between liberalism and autocracy. There will be a new set of rules for the new era.



Setting political goals or regulating processes?

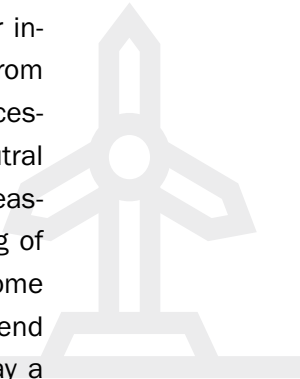
Deliberate political and economic action is required to achieve decarbonization. Standards are emerging as an important instrument in the EU’s approach to addressing climate change. Standards are voluntary guidelines that provide technical specifications for certain goods, services, and processes. The EU in 2022 published the EU strategy on standards, articulating its “objective is to shape international standards in line with its values and interests”, while recognizing that “it is in strong competition to do so.”⁸ Standards are increasingly being used as a geopolitical instrument by the EU, and the 2022 strategy indicates a shift from a regulatory to a strategic approach, where the EU aims to include standards in economic cooperation. How politics direct the process of decarbonization at the level of the EU and its member countries will have a strong impact on business in the coming decades.

⁷ See [The Quad in the Indo-Pacific: What to Know | Council on Foreign Relations \(cfr.org\)](#) and [A Free and Open Indo-Pacific - United States Department of State](#)

⁸ [DocsRoom - European Commission \(europa.eu\)](#)

Towards energy and raw material abundance

Europe's economic growth has been based on cheap energy, however, in the short term, the era of low energy prices is over. Immediate concerns for industries and governments are security and the cost of energy supply. From a climate change perspective, an urgent transition to clean energy is necessary. It is also under way. The main pillars of this transition are climate-neutral electricity production (green electricity, hydrogen, and its derivatives); increasing efficiency of energy conversion and use; storage and load balancing of variable renewable electricity; and transmission. Green electricity will become the central energy source in almost all sectors of the economy and for end consumers.⁹ Safe and abundant nuclear energy from thorium could play a role when it can be produced at a competitive cost. Breakthroughs in nuclear fusion hold significant potential. While commercial use is likely to only start after the time frame for our scenarios, 2045, it will nonetheless have an impact on energy policies during this time.



Energy transition is also part of the geopolitical realignments that are taking place. As renewables surge and markets for fossil fuels eventually decline, relations between states will change and structural transformation of economies will take place.¹⁰ New energy sources and processes will make it possible for countries to break away from previous energy monopolies, diversify energy imports, and significantly reduce the cost of energy. Security political interest of the large powers will change.

With higher demand for materials and minerals, the energy sector is becoming a major force in global and regional mineral markets. The types of raw materials needed for green energy transition vary depending on the technology used. Some examples include lithium, nickel, cobalt, manganese, and graphite for battery performance and rare earth elements for wind turbines and electric vehicle motors. Copper and aluminum are important for electricity networks. Production and processing are highly concentrated, vulnerable to climate risk, and needs to improve both in terms of environmental and social impact.¹¹ The mining sector is undergoing a transition as revenue from production selected energy transition minerals is expected to overtake coal before 2040, assum-

9 Abicht and Berger (2022) [Energie-Zukünfte 2050, Themis Foresight Energie-Report – Themis Foresight \(themis-foresight.com\)](#)

10 [The GeGaLo index: Geopolitical gains and losses after energy transition - ScienceDirect](#)

11 LKAB, a Swedish state-owned company recently announced that it has found Europe's largest known deposit of rare earth metals. It is however too early to know the full extent of the deposits, and if or when extraction can start. Opposition to mining in the Swedish Arctic can also be expected. See [Sweden Says It Has Uncovered a Rare Earth Bonanza - The New York Times \(nytimes.com\)](#)

ing the energy transition gains speed.¹² At the same time, a shortage of supply of critical materials and minerals can constrain the energy transition. Prices and security of supply are becoming a significant concern and will create new dependencies. How businesses in Europe will secure supplies or innovate to substitute is one of the factors that will shape the future of Europe's economy.

Societal purpose of innovation

The EU is growing dependent on technologies developed and produced in the U.S. and China and its share of global research and development (R&D) is shrinking.¹³ For the European economy to take advantage of its existing strengths and capabilities, it needs to focus R&D investments into the industrialization of renewable and climate technologies, the physical sciences, biotechnology, and quantum technologies. For Europe to remain a contender in the technology race, it will also have to speed up innovation and product cycles. Critical for this is innovation policy, public and private innovation finance as well as the infrastructure required for innovation systems. Technology infrastructure includes digital and AI infrastructure, quantum infrastructure as well as R&D ecosystems that foster collaboration between private and public actors. Finance and investment in green energy innovation and industrialization was a key concern raised by experts interviewed.

“For the green transition to happen fast, we need to scale. Otherwise, the tech will go away to other parts of the world.”

Anders Korsgaard, CEO Blue World Technologies



¹² [Executive summary – The Role of Critical Minerals in Clean Energy Transitions – Analysis – IEA](#)

¹³ [After the new normal: Scenarios for Europe in the post Covid-19 world \(europa.eu\)](#)

However, a precondition for leadership in innovation is the quest to solve a societal challenge. The social purpose of innovation can be related to economic growth, to eradicating poverty, ensuring social inclusion, longevity, and health. We are in the age where climate change and the need to create a new set of relations between human beings and our biosphere are the overarching global challenges. Limiting global temperature increases to 1.5 degrees Celsius is the main proxy for the tipping point beyond which earth systems are destabilizing and are no longer able to support human civilization.^{14,15} The process is already under way and the earth has warmed 1.1 degrees Celsius above preindustrial levels. The main measures are drastically reducing carbon greenhouse gas emissions, transitioning to clean energy, and removing carbon from the atmosphere.¹⁶

The two dominant political answers to the climate crisis are de-growth and green growth. De-growth politics argues for reducing consumption and green growth is a policy response that drives the economy towards low carbon development. Protectionism is a short-term response aiming to protect industry and jobs today. With advances in scientific development in areas such as bioengineering and synthetic biology, energy, artificial intelligence, and quantum computing, the preconditions already exist today for converting the global economy to climate-neutral production. However, the social purpose of innovation should go beyond this to keep our planet habitable for humanity in the long term and defend and expand the prosperity that humanity has fought for over millennia.¹⁷



14 [Exceeding 1.5°C global warming could trigger multiple climate tipping points – paper explainer – climatetippingpoints.info](#)

15 [Leading the Charge through Earth's New Normal > World Economic Forum Annual Meeting | World Economic Forum \(weforum.org\)](#)

16 [Climate Change 2022: Mitigation of Climate Change \(ipcc.ch\)](#)

17 Abicht and Berger (2022) [Energie-Zukünfte 2050, Themis Foresight Energie-Report – Themis Foresight \(themis-foresight.com\)](#)

End of the Petro-Dollar

Complex geopolitics and multipolarity have implications for financial markets. There is a parallel movement towards a diversity in financial infrastructure and systems, driven by geopolitics, digitization, and regulatory shifts. Climate change and associated structural shifts will also impact future financial markets. A more multipolar, multiple-currency international monetary and reserve system is emerging, with a modest diversification away from the U.S. Dollar to the Chinese Renminbi and smaller non-traditional currencies over the past two decades.¹⁸

The recent announcement by the Kingdom of Saudi Arabia, the world's largest oil exporter, about openness to settling trade for oil and natural gas in currencies other than the U.S. Dollar and Euro¹⁹ will speed up the diversification and potentially bring decades of the so-called Petro-Dollar system to an end. Saudi Arabia's pegging of its currency to the Dollar has been a pillar in the Petro-dollar system, where global trade of oil is largely conducted in U.S. Dollars. With its announcement, Saudi Arabia is seeking to build closer relations with China. China is working to put in place the Cross-Border Interbank Payment System (CIPS) as an alternative. However, both CIPS and existing alternatives for central bank digital currencies (CBDCs) are modeled on SWIFT and the new systems are built on liquidity.

New technologies enable new systems of real-time payments and real-time liquidity through a hub-based model, thus reducing the need for securities, collateral, and currency conversion. Such alternatives, some of which are already in place, may supersede both SWIFT and systems that pose as alternatives. With such solutions, financial frictions will be significantly reduced. Reducing frictions in retail and wholesale cross-border payment arrangements that contribute to the challenges of high cost, low speed, limited access, and insufficient transparency is already a focus for the Financial Stability Board.^{20,21}

Real-time payment and settlement will also be a significant disruption to dominant currencies.

¹⁸ [The Stealth Erosion of Dollar Dominance: Active Diversifiers and the Rise of Non-traditional Reserve Currencies in: IMF Working Papers Volume 2022 Issue 058 \(2022\)](#)

¹⁹ [Saudi Arabia Open to Talks on Trade in Currencies Besides Dollar - BNN Bloomberg](#)

²⁰ <https://www.fsb.org/2022/10/g20-roadmap-for-enhancing-cross-border-payments-consolidated-progress-report-for-2022/>

²¹ <https://www.fsb.org/2021/10/targets-for-addressing-the-four-challenges-of-cross-border-payments-final-report/>

“Of course, it will hurt the Dollar. But not as much as they think, because the U.S. is the largest when it comes to purchasing power, so they have the most to gain when it comes to taking away the friction and the cost. But the small elite where the money from these frictions end up will be hurt.”

Tord Coucheron, Gründer und CTO von Unite Global

The signals are indicating a future of a more diverse global financial system. With the end of the Petro-dollar and the establishment of alternatives to SWIFT, the weaponization of SWIFT which has served Western interests in the past may be disappearing. U.S. and EU economies may be forced to adapt to an eye-level negotiation of financial market standards with powerful G20 nations.

From bullshit jobs to abundant labor

Demographic development globally points to a reduction in birth rates and an aging population with the African continent being a notable exception. The European population is nearing its peak size and is expected to decline slightly by 2045. Labor shortage, and particularly skilled labor shortage, is reported across industries and is expected to continue. Migration is only partially addressing this and will only partially address this in the coming decades as Europe competes globally for skills.

Climate change and the decarbonization goals are leading to demand for skills relating to science, engineering, construction, design, and data analytics. There will also be demand for skilled workers in the fields of public policy, regulation, governance, and community engagement. Other factors driving the future of work and future of labor markets are automation and AI. Technological change drives the automation of rule-based work, labor is hypermobile and collaborates with machines to perform skilled work. The future labor force will be diverse and heterogeneous.



“The western economy grew on cheap labor, leveraged cheap salaries in the east. That is now over.

Do we have enough labor to keep the technology developing, to industrialize green tech here?

To manufacture the materials that go in?

Automation will help, but labor is still an issue. Germany is running out, in Scandinavia we already ran out of labor force.”

Anders Korsgaard, CEO Blue World Technologies

In 2017, David Graeber wrote the book ‘Bullshit Jobs’ where he argued that a significant number of jobs in capitalist societies are unnecessary, meaningless, and even harmful.²² He argued that unproductive jobs are created to keep the economy going, rather than being economically productive or meeting any real social or economic need. Productivity gains have not benefited workers, instead, new types of jobs have been created.²³

Will AI and automation free up labor to perform productive and meaningful tasks, distribute the gains of productivity and shorten the work week or will new sets of bullshit jobs emerge to tick climate compliance boxes. A central

²² <https://www.amazon.com/Bullshit-Jobs-Theory-David-Graeber/dp/150114331X>

²³ The five categories pointed out by Graeber were: flunkies, who serve to make their superiors feel important; goons, who harm or deceive on behalf of their employer; duct tapers, who create temporary solutions to problems that should be permanently fixed; box tickers; and task masters, who manage the work of others.

challenge going forward for companies is the orchestration of collaboration between algorithms, hardware, and people.

“In the long-term perspective, Europe is not attractive enough for migration flows of skilled labor.”

Prof. Dr. Kerstin Cuhls, Fraunhofer Institute for Systems and Innovation Research

Social Mobility

Inequality can be measured within countries or for the EU as a single unit. When analyzing inequality data for the EU as a whole, the level of inequality between citizens is significantly below that of the U.S., but above that of countries with established welfare models, such as Australia or Japan.²⁴ Inequality within countries is relatively low by global standards, particularly in North and central Europe. Nordic countries top global social mobility rankings²⁵ Inequality levels have been stable since the 2007-2008 recession, except in Southern Europe where inequality increased.²⁶ Social mobility is also lower in Southern Europe, as well as in the UK. The Covid-19 pandemic again highlighted barriers to social mobility, especially amongst migrants and their children, people belonging to racial and ethnic minorities, and people with disabilities. There is a shrinking, yet elusive gender gap.²⁷

Additionally, the rise of precarious work, such as temporary and part-time jobs, and the decline of traditional manufacturing industries makes it harder for people to find stable and well-paying jobs. Building on what Fiona Hill terms the ‘infrastructure of social mobility’²⁸ to enable social mobility for these classes will be a precondition for safeguarding social peace and maintaining a

24 [Income inequality in the EU: General trends and policy implications | CEPR](#)

25 [Infographic: Ranking the Social Mobility of 82 Countries \(visualcapitalist.com\)](#) und [Global Social Mobility Report.pdf \(weforum.org\)](#)

26 [JRC Publications Repository - Beyond averages - Fairness in an economy that works for people \(europa.eu\)](#)

27 [Current challenges to social mobility and equality of opportunity \(oecd-ilibrary.org\)](#)

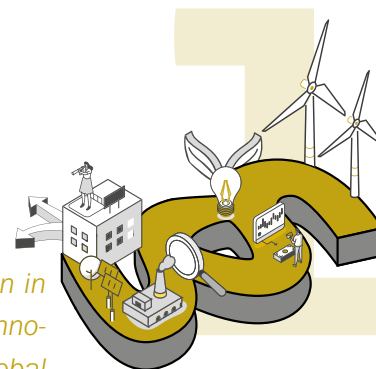
28 Fiona Hill (2021) There is nothing for you here. Finding opportunity in the 21st century. New York: Mariner Books.

democratic governance model. Free, or affordable, education remains a critical part of this infrastructure. Inequality of opportunity associated with class, race, gender, and location is a cause of discontent, alienation, and political populism on both sides of the Atlantic. Hill eloquently describes the political, economic, and social dynamics, in particular the fear and lack of social opportunity that have shaped democratic crises in the United States, United Kingdom, and Russia.²⁹

²⁹ Fiona Hill (2021) *There is nothing for you here. Finding opportunity in the 21st century.*

New York: Mariner Books.

SCENARIO 1: A FLOURISHING MIDDLE POWER



Europe lost the edge in the race for digital, climate, and energy innovation in the first two decades of the 21st century. With businesses moving their technology and operations to other parts of the world and the G7 having lost its global significance, Europe was forced to rethink its goals. Focused on meeting climate goals, Europe suspends trade conflicts and seeks collaboration with countries and regions that are in the technology lead. Accepting its role as 'just' a middle power, Europe flourishes in its focus on climate.

Business leaves for greener pastures

In 2021, the EU put into place a climate law, legislating the target of zero emissions by 2050 and a reduction of carbon dioxide emissions by 55% of 1990 levels by 2030. Regulations and standards became among the EU's most important instruments to achieve this. The Carbon Border Adjustment Mechanism took full effect in 2027 and was extended to plastics and chemicals in 2030. The regulatory regime that followed reshaped economic organization through a combination of incentives and restrictions. Unfortunately, despite enormous effort and cost, the 2030 targets were not fully met, and the 2050 target will also likely be missed.

The period between 2023 and 2028 saw large numbers of businesses move parts or all their operations out of Europe. High energy prices and an unstable energy outlook pushed energy-intensive businesses away. Energy and green technology firms are attracted to the U.S. by incentives for green innovation. The fear of a foreign policy that would prevent them from doing business in countries seen to be at odds with the values of the EU caused others to move their technology or operations. Tensions were palpable and agendas were separate.

Flexibility in foreign policy

By the end of the 2020s, it was clear that Europe had lost any edge they had in the race for clean energy and climate technologies. The strategy of 'technology sovereignty' did not yield the intended results. China was the undisputed global leader in energy technologies, AI, quantum, and biotech. Export bans on technologies contributed to keeping manufacturing on the mainland and cementing its position. There was no hiding from the fact of technology dependence on China. Countries that had once been dependent on European technologies had long shifted to buying elsewhere.

Faced with an internal economic crisis and a global crisis of relevance, the EU changed its policy outlook in the early 2030s. A foreign policy regime that had been strongly founded on the values espoused in the Treaty of Lisbon was increasingly replaced with a more flexible and pragmatic outlook without abandoning the Lisbon Treaty values in domestic politics. Geopolitical tension and conflict only served to weaken Europe's competitive position. After much debate and internal opposition, the EU changed course and sought collaboration with those in the technology lead. However, Europe did not waver from its climate agenda. Collaboration allowed Europe, with Germany in the lead, to utilize its engineering and machinery capability to industrialize and scale green energy and climate technology.

Europe settles in its new middle power role

While the EU remains one of the largest markets in the world, Europe has redefined its role in global geopolitics. Like other regions and middle powers, Europe refrains from taking sides in global power struggles. Relations are built with those that are willing to collaborate on the climate agenda and secure critical suppliers. Settling in its role as a regional power gives Europe the freedom to innovate in new areas.

After signing agreements to supply gas and hydrogen in the early 2020s, countries in Southern Africa pushed back against green energy imperialism. There was widespread discontent with being a 'global fuel station' and fears of being locked into stranded assets. After a period of facing critique for 'green protectionism', the EU's new approach sees countries and businesses finance technology transfer, infrastructure, and industrial capability in Africa, South America, and Central Asia.

Drivers

Scenario 1: Europe – a flourishing middle power | Europe 2045



Geopolitics

- The EU has a flexible and pragmatic foreign policy, works with China, and maintains relations with the U.S.
- Other world regions increase their negotiation power by strengthening internal cooperation.
- Cooperation in the Association of Southeast Asian Nations (ASEAN) has increased based on the model of the EU.
- Central Asia signed regional trade agreements in the 2030s.
- The African Free Trade Agreement bears fruit.



Security

- Political and diplomatic ways of settling conflicts are preferred over confrontation.
- Security policy is subordinated to climate policy requirements.
- Europe is working largely in the transatlantic area when it comes to the direct development of weapons systems but is clear about its non-confrontational posture.



Governance

- Governance of standards has shifted from input to outcomes.
- Politics set the outcomes, and business has increased agency in (re)creating industry standards where this is still possible.
- Global standards bodies have been democratized by giving appropriate weight to advancing high-tech nations.



Availability of energy and raw materials.

- Europe is dependent on China for solar and nuclear technology to meet renewable energy targets.
- There is sufficient energy for domestic and industrial uses, and energy is approaching pre-2020 prices through the scaling of green energy technology.
- Raw materials are available through strategic partnerships; however, prices are high. Substitution has taken place where possible, but Europe relies on imported technologies.



Social purpose and level of innovation

- Innovation is aimed at achieving climate neutrality as well as local and global wealth distribution.
- There is considerable innovation in distribution and redistribution.

**Innovation systems and infrastructure**

- Where Europe does not have the technological know-how, innovation is focused on implementation and how to apply and adapt existing technologies.
- Cross border innovation systems have enabled European companies to regain first mover advantage in new areas.

**Financial infrastructure and systems**

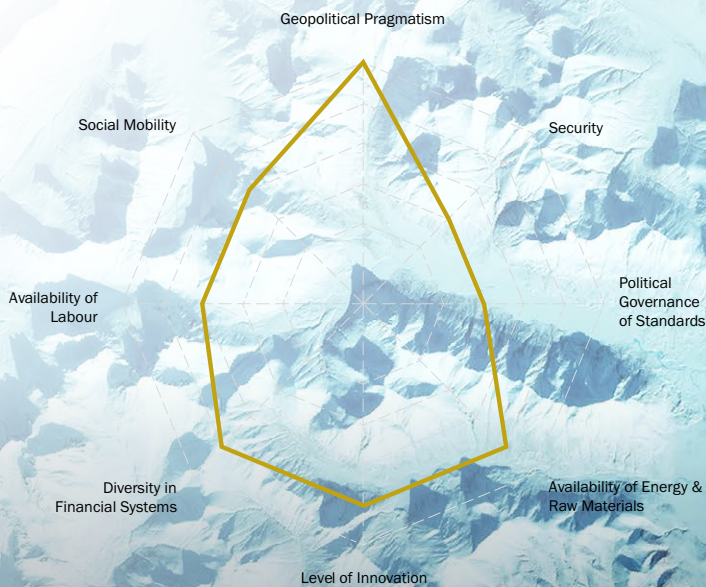
- International financial systems have diversified beyond U.S. Dollar denomination.
- Advanced digitization has reduced friction in financial systems.

**Labor**

- Europe is battling to compete with other leading countries to attract the best global talent in science and technology.
- A high level of automation has eliminated labor shortages and stripped away jobs with no social or economic purpose.
- People are turning their attention to the social and cultural sector and work for social purposes.

**Social mobility**

- Social mobility is limited, and inequality rates have increased steadily since the 2020s in all countries in the EU.



1

The political and economic ties with China remain high and are getting stronger with other technologically advancing nations. How will you ensure your competitiveness against technology from China, India, the U.S. and other nations?

2

Highly skilled expertise is in high demand. What can you offer scientists, engineers, technicians, designers, or developers that no other competitor can? How can you work with authorities to create better conditions for your employees' families?

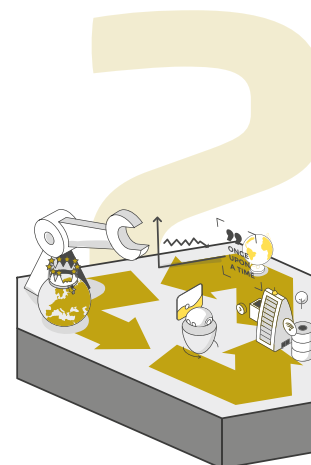
3

Climate targets were missed. How will you ensure that your company remain resilient in the face of weather-related disruptions to supply chains?

**EUROPE - A FLOURISHING
MIDDLE POWER**

IMPLICATIONS FOR BUSINESS

SCENARIO 2: GLOBAL VILLAGE EUROPE



Global Village Europe is a largely self-contained geographic and economic entity. The unified economic and political union is pioneering circularity, modern living within planetary boundaries, and alternatives to raw material extraction. There is a more centralized and integrated market structure, with strong state companies. Innovation thrives, staving off economic decline. The productive sectors of the economy gain a larger share and are fully integrated with computing and digital technologies.

Europe shuts off from global trade

Trade takes place almost exclusively within the borders of Europe. Germany's trade in 2021 was 55% internal in the EU and 45% external.¹ 2044 trade figures released by Eurostat show that 80% of trade for Germany is internal and 20% external. Countries such as Hungary, Slovakia, Czechia, and Luxembourg have moved from about 80% to close to 90% in the same period. Without exports, industries have changed what they produce to meet the needs of the European market. Export-oriented economies, like Germany, experienced a severe recession. Facing economic decline, incentives were put in place to reshape industries and stimulate demand.

The European Union has 40 member countries, including Serbia, Albania, Kosovo and Ukraine. Membership is two-tiered, with the first tier of members having greater decision-making power and a deeper level of cooperation in areas such as taxation, social standards, security, justice, and defense. The second-tier member countries do not fully enjoy the common social security systems and other benefits. Countries undergo significant political and economic reform to be admitted as first tier members. The EU has also developed strong relations with what are considered preferred partner countries or regions. Turkey is among these, serving as a bridge to the Turkic belt in the Caucasus and Central Asia.

With global trade diminishing, the EU's approach of 'change through trade' as a basis for international relations and security lost its currency, and political security had to be guaranteed in other ways. While not a fully-fledged army, the common military pact of EU countries is an important aspect of this new era.

¹ [Intra-EU trade in goods - main features - Statistics Explained \(europa.eu\)](https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&plugin=1)

Nonetheless, Europe is perceived as an appendage of NATO and an independent European security policy is only possible in very small, selected areas.

Paying the price

Imports of energy, minerals, chemicals, machinery, and equipment as well as consumer goods and agricultural products have been reduced to a minimum and are tightly controlled by the central administration. Anything that can be created from reused, recycled, or repurposed materials cannot be imported. The pricing of raw materials was important in this process of moving away from the extractive paradigm. Innovation is high to find substitutes and create new products with similar functionality. Industries and governments aim for net-negative carbon emissions by 2050, with a particular emphasis on carbon removal, energy transition, and lowering methane emissions.

However, Europe has lost global political influence and its economic position. Global companies have re-shored or sold the parts of their business that operated outside of Europe. They are no longer global. Tens of thousands of businesses that exported their goods and services have gone out of business.

Creating new capabilities

The circular economy has led to new areas of specialization, new businesses, and new relationships. There is significant support for technology and innovation to overcome energy and raw material dependencies of the past, however, these have only partially been overcome. With an emphasis on the quality and longevity of products, as opposed to fast consumer goods, the economy has been restructured. Secondary industries make up over 30% of total GDP, as new productive industries emerge from the circular economy. For example, previously relying on the import of chemicals for manufacturing, construction, agriculture pharmaceuticals, chemical processing, innovation has led to new bio-chemical industries and the production of chemicals from recycled materials. Biotech and bioengineering are other major sectors.

Europe was initially lagging in scientific and technology development in biotechnology but by building on and adapting technologies developed elsewhere, businesses have managed to further develop the European biotech industry. Engineering capabilities enabled the development of new manufacturing sectors focused on key substitutions and local production of components needed for renewable energy production, storage, and transmission.

Drivers

Scenario 2: Global Village Europe | Europe 2045



Geopolitics

- Europe is one of several largely closed global trading blocks.
- The U.S. lost much of its global standing with Europe's withdrawal from global trade.
- China has cemented its relationships with Africa, Central Asia, and increasingly South America, but has had to concede some power to allow for regional development.
- The EU centrally manages internal as well as external relations to govern the import and export of a narrow range of products and services.



Security

- Europe's resources for security policy have been weakened by the escalation of conflict from the early 2020s onwards.
- Europe is perceived as an appendage of NATO. Defense elements are purchased in the U.S. and from friendly Asian countries.
- An independent European security policy is only possible in very small, selected areas.



Governance

- Power and decision making is concentrated in Brussels.
- Tight governance is necessary to secure unity, implement common policies, and systems across member countries.
- Laws are backed by central incentives and funding measures.
- Deeper cooperation is aided by the creation of common governance and administrative systems.
- Human-machine cooperation aids highly efficient and targeted management of infrastructure.



Availability of energy and raw materials.

- The green energy transition was complete by 2035.
- Nuclear energy does play some role in Europe, with new technology and capacity being built to compensate for decommissioning of older capacity.
- Carbon capture at source is still used as a transition measure, however, support mechanisms favor nature-based and direct air capture.



Social purpose and level of innovation

- Innovation is focused on reducing the exploitation of planetary resources.
- Innovation is driven by the demand for regenerative, recycled, and durable materials at low costs. Raw materials are extracted from the air to produce replacement materials.
- Quantum computers solve optimization problems in chemical, materials, finance, supply chain, logistics, and other areas.
- There is a high rate of production of cellular and synthetic foods, as land areas need to be protected.

Drivers

Scenario 2: Global Village Europe | Europe 2045



Innovation systems and infrastructure

- The EU has worked hard to build up their technology infrastructure and capabilities needed to make the region self-sufficient in technology.
- Technological innovation was boosted by the common military pact, and the substantial funds made available to the defense innovation accelerator.
- One of the outcomes was the growth of European contenders in the race for space exploration.
- Politicians place pressure on scientists to protect discoveries and re-focus collaboration internally in the region.
- States and companies provided incentives to bring back scientific expertise working outside Europe.
- Longevity and healthy aging are prioritized to ensure productivity in an aging population.



Financial infrastructure and systems

- The global financial system is highly diversified, as world regions run their own systems and infrastructures.
- The restructuring of the economy is funded by savings.
- Regional monetary policies are decoupled.



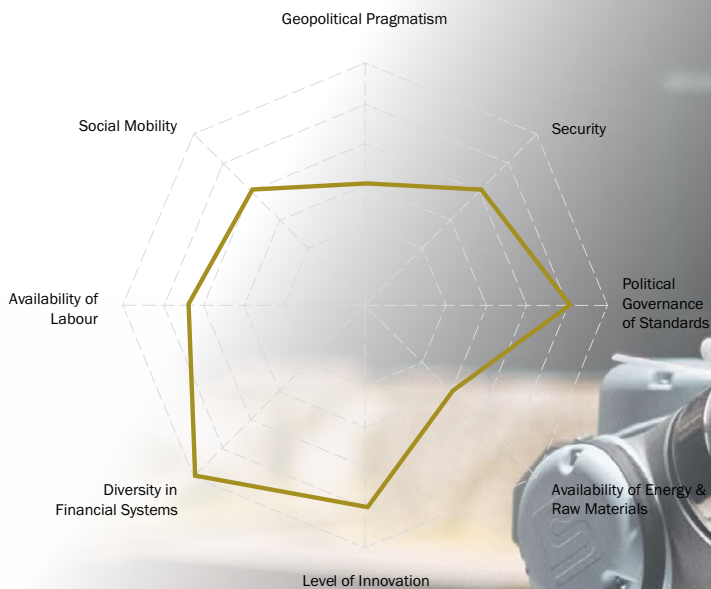
Labor

- The retirement age has increased in all EU countries.
- The circular economy has generated a need for new skills, both at the level of computation, design, manufacturing as well as servicing.
- Skills shortages are addressed by automation and targeted skilled immigration.
- The shift in immigration policies draws many critiques from regions that have been dependent on trade with Europe.



Social mobility

- Population and nations unite under the common vision of Global Village Europe, but tensions remain within and between countries.
- Europe is run in a highly centralized manner, with resource effectiveness and scientific innovation being the central political and social goals.
- Full employment is achieved by industrial revival, however, living standards are lower than in the 2020s.
- Innovation reaps the highest social and economic rewards, and there is cut-throat competition for incentives and rewards.



1

The state and state-owned corporations have a strong hand in most industries. How will your company recalibrate its strategy in a more centralised market?

2

Circularity is no longer a buzzword. How can your company best integrate digital capabilities to drive its R&D? How can you reduce complexity and dependencies in the supply chain?

3

Capital flows to Europe dry up. How will your business be financed?

2

GLOBAL VILLAGE EUROPE

IMPLICATIONS FOR BUSINESS

SCENARIO 3: HISTORY ENDS, AGAIN



In this scenario, the “global West” regains its leadership role in the world, with Europe as a junior partner. Western dominance is secured through technology, applied innovation, and reshaped relations with developing countries. Markets are competitive with strong growth in innovation and technology sectors. Internal social unity was important for the mobilization of populations. Europe thrives in the shadow of the U.S.

Challenges to U.S. hegemony

The 20th century belonged to the West, but the first two decades of the 21st century saw a more fragmented and increasingly multipolar world. Western democracy lost attractiveness as a model of government. China and new regional powers contested the western narrative and the inevitability of liberal democracy. By the middle of the 20th century Western dominance was questioned.

In the early-2020s, China had become a challenger to the West in the fields of climate tech, AI, ICT, quantum computing, space, and engineering. The Belt and Road Initiative secured China access to raw materials and a foothold in every region of the world. China announced the internationalization of the Renminbi in 2030. There were however still questions relating to authoritarianism and its difficulties in opening completely. In 2030, India became the most populous country and the 3rd largest economy in the world.

A new hope for western dominance

A reimagined BRICS+ attempted to launch a common digital currency in 2032. With conflict lingering between countries and insufficient liquidity, the attempt however failed. Tensions between India and China escalated, and China’s economy stagnated in the face of demographic decline and authoritarianism. The U.S. Dollar strengthened again. Populations in the developing world are increasingly impatient with elites reaping all the benefits of economic growth and demanded better distribution and better conditions. Failing to address the concerns of their populations, China, India, and the BRICS+ are unable to substitute the western rule-based order.

Emboldened by these developments, the U.S. rallies the West together with a renewed vision for liberal democracy and free market economics. The U.S. reaches out for closer ties with its historical ally, Europe. It also doubles its effort to cement relations in the Indo-Pacific. Democratic governance is the

rallying call, along with climate change and participation in economic development. Simultaneously, there is a process of corporate self-correction among global tech giants, in response to mounting pressure for ethics in digital development and more equal treatment of workers across the world.

The West puts digital capabilities to use in the real world

But to regain hegemony and win the global technology race, the U.S. needed a more globalized approach to innovation and industrial policy. The instruments that were used to develop green technology in the 2020s were extended to further develop and apply its innovation, engineering, and manufacturing capability to the problems faced by the still growing populations in Africa, Central Asia, and the Middle East. With this, digital innovation moved beyond the creation of digital networks to solve real-world physical and social problems. The trademark entrepreneurship and risk-taking culture of the U.S. was combined with a new social and political purpose. A new wave of growth ensued in the U.S. and Europe, with full employment, prosperity, and declining inequality. Extreme weather events and high temperatures worsen, climate-related migration affects both the U.S. and Europe.

Facing an escalating conflict with China, India strengthens its alliances with the West and U.S. hegemony in the Indo-Pacific is secured. Africa is an area of strategic competition over critical resources. While the Belt and Road Initiative strengthened China's position, the new wave of innovation in the U.S. and Europe leads to new Western influence. The U.S. won the technology race in AI and quantum by increasing public support. For example, enabling AI to develop without the constraints of advertising-based revenue models was a significant catalyst. Global labor migration increases, as the U.S. and Europe needs labor.

Europe follows where the U.S. leads

Europe profits from cultural closeness and economic ties with the U.S. but is also more reliant on the U.S. for technology and inputs. Trade with China declines. Increasingly U.S. firms operate in Europe and corporate cultures shift. The economic reward for greater innovation is high, however, European countries like Germany and France are becoming more market economies. Resistance is strong and Europe becomes less cohesive. The single market remains, but the EU's role is largely confined to the economic sphere. Europe's prosperity has come at the cost of its political independence. Where the U.S. sprints forward, Europe runs to catch up.

Drivers

Scenario 3: History Ends, Again | Europe 2045



Geopolitics

- The West is building a new set of alliances with governments in Asia, Africa, Central Asia, and parts of Eastern Europe.
- Global geopolitics has found a new equilibrium under U.S. dominance.
- China is retreating to a role as a regional power. India allies loosely with the U.S.



Security

- American strategic culture prevails, continuing the trajectory from the Cold War.
- Europe is containing internal conflicts to prevent disintegration.



Governance

- Standards are outcome based, and U.S. firms play a large role in standards definition.
- Standards for climate, data governance, finance, and technology set by the West are followed globally.
- European countries like Germany adjust their policy and legislation to this new reality.



Availability of energy and raw materials.

- Transition to renewable and zero carbon energy is slow but steady.
- Essential raw materials like lithium, rare earths, cobalt, titanium, or energy carriers like hydrogen are increasingly securitized, posing a concern for Western governments.
- Some concessions are made in regional economic cooperation agreements to secure access.
- Access is secured in exchange for technologies and investment in new and better extraction and production capabilities.



Social purpose and level of innovation

- Innovation is directed at applying digital capability to real-world problems.
- Providing digital technology and infrastructure, creating affordable solutions in agriculture, food, water management, ecosystem regeneration, energy, health care, and education puts the West back in the technology leadership position.

**Innovation systems and infrastructure**

- Speeding up of innovation cycles is achieved by knowledge sharing in innovation ecosystems.
- Innovation in technology infrastructure and computing capability provides tools and resources for faster commercialization.

**Financial infrastructure and systems**

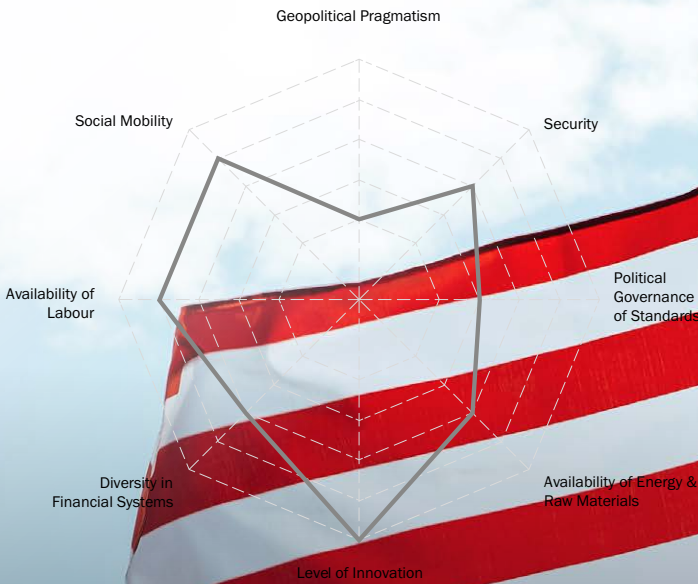
- The Renminbi is internationalized and there are multiple payment systems available at the regional level.
- U.S. and EU economies entered negotiations of financial market standards with powerful G20 nations.
- The U.S. Dollar regains dominance from the mid-2030s.
- Costs of capital may increase for banks, but not necessarily for corporations.

**Labor**

- Immigration addresses labor shortages in the U.S., and to a lesser extent Europe.
- With both production and coordination functions automated, HR functions are focused on managing the interplay between humans, robots, and algorithms.
- A more open Europe sees greater diversity in top positions. Of the DAX 40, ten have CEOs from India, the Middle East, and African countries.

**Social mobility**

- Social mobility is secured through full employment.



1

Exports and investment in high-growth markets are more important. What might a strategy and an organisational structure for a more international company look like?

2

Corporate and management cultures differ in the U.S. and Europe. How will you ensure that long established relations with workers remain?

3

Automation brings solutions, but also new challenges. How can your company build the competencies needed to orchestrate collaboration between software, machines, and people in its processes?

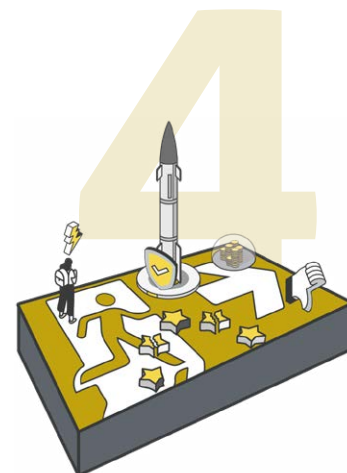
3

HISTORY ENDS, AGAIN

IMPLICATIONS FOR BUSINESS

SCENARIO 4: THE GREAT EXIT

In 2045, the EU has ceased to exist as a single economic and political union. Operating costs are high amidst uncertainty, financial risk, and renegotiation of trade and other relationships. The market structure is fragmented and decentralized, shifting away from regulated and centralized sectors. Europe is vulnerable. As the rules of trade and cooperation are rewritten, only large and stable businesses seem to weather the storm.



EU implodes

Despite taking on new members, the EU failed to create and mobilize populations around a new common vision. Imbalances and inequality between countries led to an implosion of the union. For new members, the reforms required and the expectations for integration were too fundamental, and the trade-offs were perceived to outweigh the gains. National identities remained stronger than the vision for a united Europe. Two decades after Brexit, the great EXIT is complete!

The first wave of departures were countries from Eastern Europe in the late 2020s, by 2033 all the members that joined after 2004 had left. Italy, Spain, and Portugal followed suit before the end of the decade, effectively ending the Union, and leaving only a Central and Western European core of Germany, Belgium, France, Luxembourg, the Netherlands, and the Nordic countries.

The European Central Bank has closed, and national currencies have been reintroduced. The immediate results of the end of the Euro have been inflation, exchange rate volatility, high financial risk, and associated high cost of capital. Resources and attention are redirected away from climate change. The EU's goal to reach net zero by 2050 is abandoned. Countries develop their own plans and mechanisms amidst extreme floods and heatwaves as the global temperature increase crosses the 2 degrees Celsius pre-industrial temperature threshold.

Rewriting the rules of cooperation

While Europe has dissipated politically, the economy does not dissipate. Everything is being renegotiated and is up for grabs after the end of the single market. Europe in 2045 is organized around three regional blocks based on geography, culture, language, and economic relationships. Central, southern, and eastern European trade and economic blocks have formed.

Economic cooperation is more issue-based, and smaller countries have little leverage over larger ones. A multiplicity of bilateral and multi- and plurilateral agreements are in place, creating chaos, uncertainty, and a vacuum that must be filled. National interests argue for tariffs to protect domestic firms, and anchor industries are given strong agency in determining tariff regimes.

Industrial standards are necessary for trade to continue and are adapted by countries. Where standards have driven up the cost of operating, these are re-negotiated. There is more competition than collaboration in this process, and realignments has a high cost, both for the public sector and for businesses.

Large businesses weather the storm

Large economies, accustomed to negotiating with the EU take time to enter new relationships with countries and the three blocks. Fragmented markets are less attractive to partners than large, common markets. This leaves European countries vulnerable to supply disruptions, tariff barriers, and attacks from unfriendly powers.

Large corporations are becoming more powerful with increased bargaining power as countries are in steep competition to retain economic activity and attract new investments. Business determines where to operate based on incentives offered and has a strong say in how they want to operate. Large and global corporations are however able to use the stability of their existing supply chains and are in a better position to use their inventory, relationships, and supplier ecosystems to continuously supply goods and services, albeit at a high cost.

**Geopolitics**

- China is the world's largest economy; however, its geopolitical influence is waning.
- With the end of the European Union and the single market, Europe has lost its global political and economic standing.

**Security**

- Germany, France, and Great Britain are strengthening national defense capabilities, with enormous burdens on national budgets.
- Tough competition for government contracts determines the dynamics of Europe.

**Governance**

- Realigning and rebuilding own economies is the most important objective for national governments.
- Social and environmental protections are rolled back.
- B2B relations set the template for new agreements and recrafted standards, giving businesses more agency.

**Availability of energy and raw materials.**

- Energy and raw materials are available, but costs are high.
- Suppliers exploit competition between countries and the three European blocks to push up prices.
- Countries aim to protect their own industry and put in place tariffs.

**Social purpose and level of innovation**

- Europe remains technologically reliant on the U.S. and China.
- Countries retreat to their historical areas of economic strength, and national innovation agendas are aimed at retaining market share in these areas.
- Resources are not invested in R&D and innovation.

**Innovation systems and infrastructure**

- Innovation and technology infrastructure suffers as the European common mechanisms disappear and countries are forced to re-build their own mechanisms.
- Science, technology, and innovation institutions that previously received funding from the EU have closed, downsized, or have been bought by corporations.
- Businesses take advantage of the hiatus in regulation and experiment in new technology areas.

**Financial infrastructure and systems**

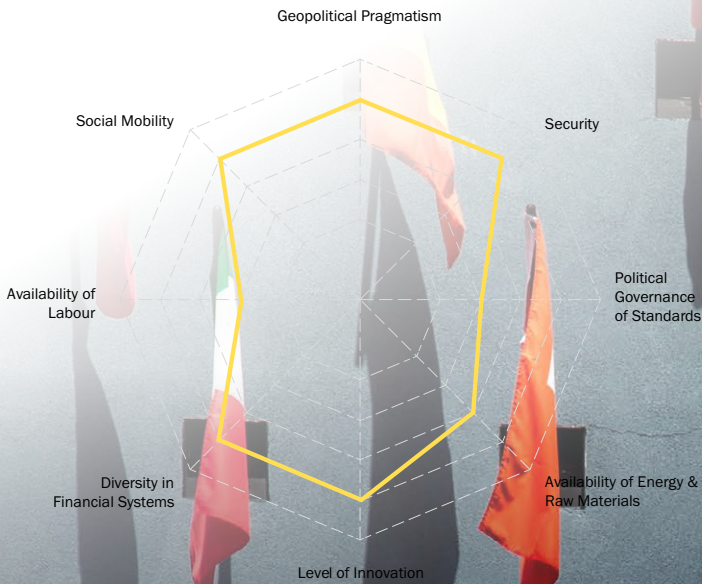
- National central banks have defaulted to orthodox monetary policy, and there is little policy innovation.
- Implications for transaction costs are kept minimal due to trade through digital real-time payment systems.

**Labor**

- High competition between European countries for labor.
- Due to the high demand for labor, bargaining power is increased.
- Countries set their own immigration policies, leading to high differentiation.
- Migration from outside of Europe increases in countries where local labor costs are too high, and automation is not cost effective.

**Social mobility**

- There are large inequalities between countries and a high degree of social fragmentation.
- Options for social mobility are largely constrained to your country of birth, and social systems are strained due to the overall high cost of the EXIT.
- Movement of people for education purposes has become expensive, severely impacting education institutions and regions where these are economic anchors.



1

Industries such as technology, innovation, and services may become more prominent in a volatile market. How can you recalibrate your strategy to adapt to the changing market conditions? Is there something at the core of your business that can create stability amidst uncertainty?

2

B2B relationships will be ever more important. How will you build strong relations with your suppliers, business partners and customers?

3

People are less mobile. How do you build up a strong home base of the skills your business needs? Can your operations be virtual?

4

THE GREAT EXIT

IMPLICATIONS FOR BUSINESS

SCENARIO 5: CORPORATE EUROPE

Business sets the parameters for society in this scenario. In the company state, the aim of society is to make and sell products and services. Government provides business with some guarantees and protections, and in return business finances and orchestrates regional development and social security. The market structure is centralized and hierarchical.

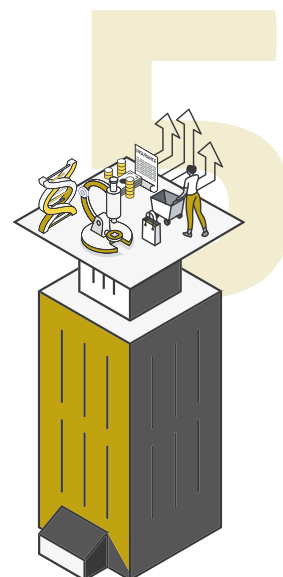
The company state

In Europe 2045, the company state is on the rise. Businesses operate without infringements or restrictions on where and how they operate. Overall nation states in Europe are weak, and most decision making has been devolved to the EU. The EU is led by a coalition of not-so-public representatives and powerful business leaders. National governments and Brussels provide defense, security, and some critical network infrastructure. But large companies and the company ecosystem is the organizing pillar of society. Companies provide functions that in the past were associated with the state, for example, law and order, policy, and welfare services. Foreign relations nominally remain the pursuit of governments, however, the plutocracies of Europe determine the content of trade relations.

Governments provide some guarantees to business and facilities relations with countries across the world to secure access to inputs and markets. Global decarbonization goals are acceded to by business, however, have limited real impact on operations. Firms play lip service where decarbonization does not have short-term benefits and there are no political consequences. There has been significant innovation around energy to achieve energy independence in Europe and the energy system is diverse and decentralized. Modular nuclear reactors provide energy at a regional level. Companies lead the process in their own interest; thus, supply is not secured beyond company ecosystems. Ecological costs are externalized to the regions where raw materials originate from.

Citizenship through company affiliation

Taxation is pretty much a thing of the past. In exchange, businesses pay for the development of the regions where they are headquartered and have major production sites. Businesses provide social services and infrastructures to their workers and members of their business ecosystems. The company state



is not limited to single locations, as few large companies can thrive if confined to one physical location.

Nonetheless, the company state and its management echelons have a strong regional affiliation. Company ecosystems and social systems coexist virtually and across multiple physical locations. Where your citizenship and location were once a strong proxy for your life trajectory, it is today your affiliation to a business ecosystem that determines your opportunities and options. Social services and privileges are also extended to the virtual workforce. Those that fall outside are doomed to be paupers.

Everything is a service in the company state

This level of freedom for business has become the main incentive for businesses to stay in Europe or move to Europe. Business thrives, and goods and services flow freely, with little regard for borders. Everything is a service, and the company state is a marketplace.

In a world where the company is king, the individual values of company chairs and CEOs set the moral compass for regions and millions of people. Along with economic and social security, company values influence workers choice of work, or ecosystem affiliation. Industry associations are important and powerful, as businesses must also cooperate with one another. Personal relations determine access to business and labor relationships.

There are few or no independent public interest organizations, apart from those sanctioned to perform environmental, cultural, or social work within 'company state' ecosystems.

**Geopolitics**

- Regions interact at a global level to negotiate the geopolitics of competing corporations.
- Plutocratic elements guiding foreign trade relations.

**Security**

- Hardware and software conglomerates are forming in Europe, developing distinctive ecosystems to achieve the most modern level of defense capability.
- Regular state forces are being replaced by private armies, which have gained extensive experience since the 2003 Iraq war and the 2022 Ukraine war.
- In Europe, the attitude that this type of conflict regulation is advantageous for their own societies is gaining ground among the population.

**Governance**

- Leaders of business and heads of 'company states' tolerate a minimal level of negotiation with the state around political goals.
- Business leads in the development of industry standards to enable free and open trade and the movement of goods across borders and economies.

**Availability of energy and raw materials.**

- Europe remains reliant on the import of raw materials such as rare earth minerals.
- Access to raw materials is uneven, and there is competition between businesses.
- Energy-intensive industries import the energy that they require from the best priced sources.
- After much lobbying from business leaders, there are high import tariffs on mass produced reactors while the capability is built in Europe.

**Social purpose and level of innovation**

- Industry needs and the quest for productivity and profitability of businesses determine innovation and research agendas.
- There are no restrictions on the use of and development of technologies, data, subjects, and objects of research. Biotechnology, medical research, and AI flourishes.
- Businesses, in collaboration with industry associations own, fund, and operate free innovation zones, and the paucity of safety concerns lead to shorter innovation cycles.

**Innovation systems and infrastructure**

- Basic research happens through small, independent, corporate funded institutions, with funding facilitated through industry associations.
- Elite institutions attract the best minds in the world.
- Funding of social sciences or humanities only happens as part of the marketing, propaganda, and social control agenda.

**Financial infrastructure and systems**

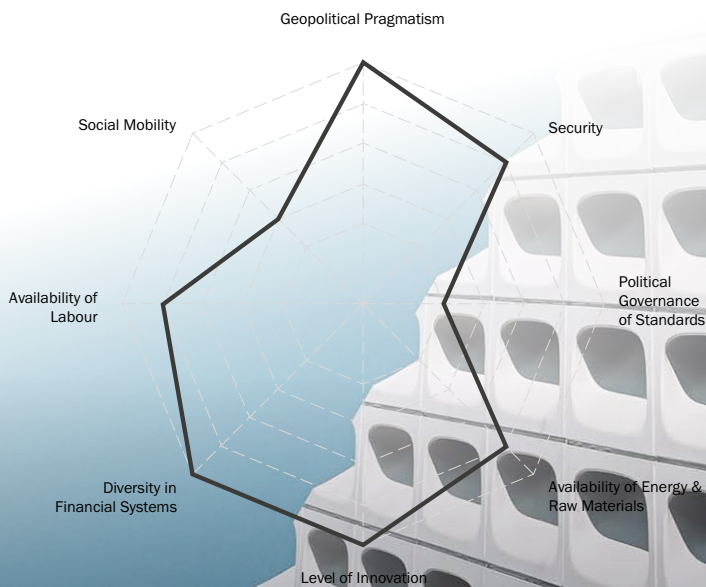
- Currencies have lost much of their relevance for global trade.
- Payments and settlements take place in real time at almost no cost, regardless of the currency.
- The WOCU currency (World Currency Unit) has been issued.
- While financial markets are liberalized, the financial sector operates according to a minimal set of (depoliticized) regulations from the European Central Bank and the Financial Stability Board.

**Labor**

- Labor legislation is highly flexible, with limited protection for workers and no co-determination.
- The orchestration of human-machine cooperation is vital for resource optimization and remains a predominantly human function.
- Business makes choices about upskilling and reskilling independent of national systems, but in collaboration with guilds of skilled workers.

**Social mobility**

- Health, education, and infrastructure services are provided within the company ecosystem, often through insurance schemes.
- Handling of social conflict is outsourced, and police functions provided by private security services.
- Social mobility is limited, with high differentiation between countries, regions, and individuals.



1

Whether you are at the centre or periphery of the company state, it is all about who you know. How will you build relations with the people you need to operate and grow? And who are they?

2

What matters is which network you are in. How will you adapt your organisational structure in a hierarchical market?

3

Employees are attracted by the security or conditions you can provide. Who are the new partners you need in your ecosystem?

5
CORPORATE EUROPE

IMPLICATIONS FOR BUSINESS

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Other Experts
speaking on condition of anonymity from China and Kazakhstan.



HOW WILL THESE SCENARIOS AFFECT YOUR BUSINESS MODEL?

How these possible futures will affect your company's business areas can already be anticipated. Themis Foresight works with companies from various industries as well as business associations to conduct impact analyses of the development trajectories which the five scenarios are based on.

We support you with our foresight expertise.

1

Evaluation of the long-term risks, opportunities, and the secondary effects of the possible transformation of the European economy.

2

Analysis: Where may business areas come under pressure? Where will new needs for products and services arise?

3

Development of a signal & uncertainty dashboard: Keep an eye on risks and uncertainties and react quickly to new developments.

More about the project

LIST OF ABBREVIATIONS

AI	Artificial Intelligence
ASEAN	Association of Southeast Asian Nations
BRICS	Brazil, Russia, India, China and South Africa
B2B	Business to Business
CBDCs	Central bank digital currencies
CIPS	Cross-Border Interbank Payment System
DAX	Deutscher Aktienindex
EU	European Union
NATO	North Atlantic Treaty Organization
R&D	Research and Development
SWIFT	Society for Worldwide Interbank Financial Telecommunication
WOCU	World Currency Unit

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