



Introduction to the SAFIRE process and report

We recently completed a project for EU R&I to develop a system for using foresight. This collection of blogs is an introduction to the project and the process used.

Using foresight to develop strategy and policy



Image by [Marlene Bitzer](#) from [Pixabay](#)

This is the first in a series of blogs based on a report to the European Commission by [SAMI](#) and a consortium of partners, [IFOK](#), [Cadmus](#), and [Teknologi Radet](#), to develop a system for using foresight to develop EU R&I [policy](#).

This first blog sets out four global scenarios for 2040. The next two blogs will:

- look in more detail at one global scenario – the one that most closely reflects the current state of the world; and
- describe how the scenarios can be kept up to date, factoring new information, reflecting new drivers of change, and wild card events.

After that, a series of ten blogs will look in turn at scenarios for each of the regions covered by the study. The ten regions are:

- China;
- Japan, South Korea & Taiwan;
- ASEAN;
- India & its Neighbours;
- Australia & New Zealand;
- Russia & Central Asia;
- The Middle East & North Africa;



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- Sub-Saharan Africa;
- Central & South America; and
- United States, Canada & Mexico.

The Report is available [to download here](#).

The Global Scenarios

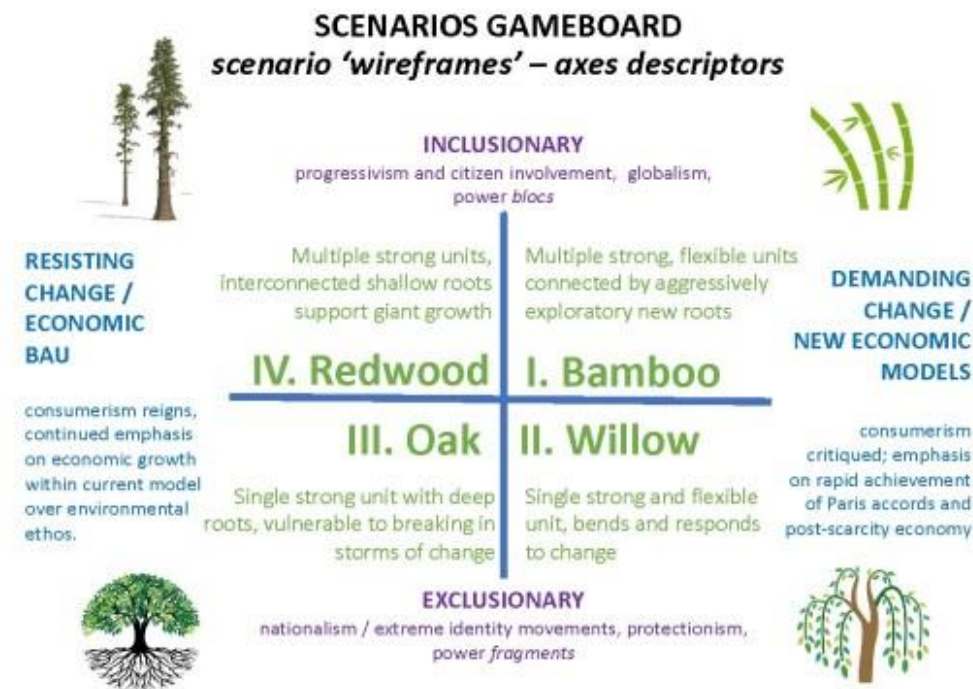
The bedrock of the scenario framework consists of two key concerns:

- whether the World will be more integrated, and collectivist ideologies will prevail, or whether it will be less integrated and dominated by individualist and/or localist ideologies; and
- whether the organizing principles of the global system in the future will continue to be dominated by the current economic paradigm or whether there will be a paradigmatic shift in the direction of sustainability and planetary health.

During the study, working with the EU client, and with other experts, gaming was used to explore the most powerful factors that could, in the future, push regions from one meta-scenario to another. We will look at this in the third blog in the series.

This is how the global scenarios look in diagram form. The “tree” identities match neatly the different characteristics of the four scenarios.

The 2020 Covid-19 pandemic encapsulates the importance of building flexibility into the scenarios, and the need to face potential surprises that history may have in wait for us. The pandemic teaches us is that foresight itself is not immune from the shocks of turbulent change.



Other major factors that will drive change in the regions include:

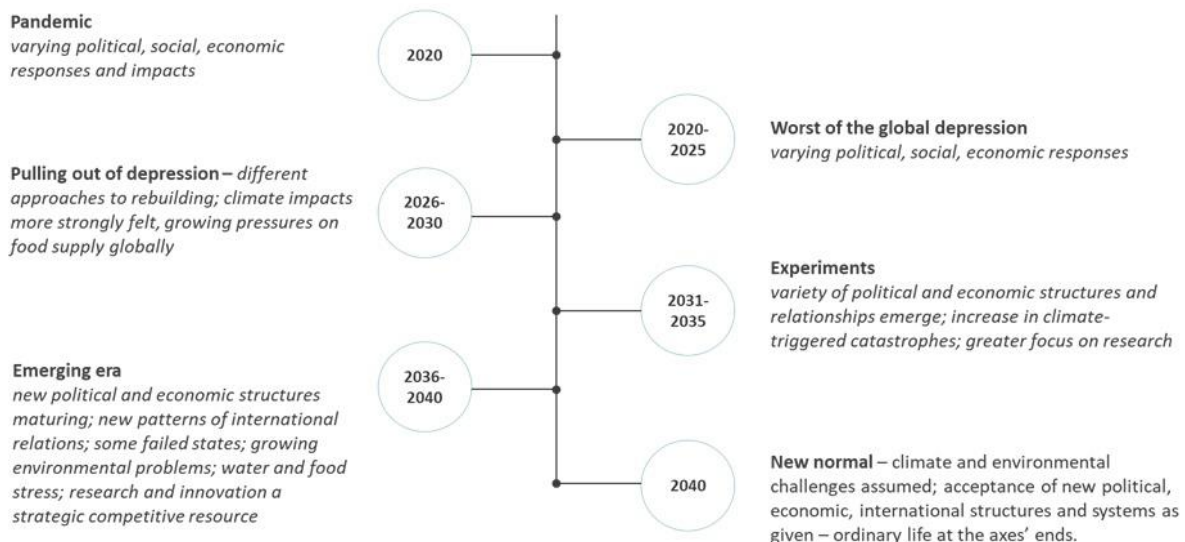


- The world is already becoming poly-nodal, as opposed to the post-war period when there were two major power blocs forming two poles. The rise of China and India, along with the consolidation of the economic power of other regions, signals a shift in power from the West and North, to the East and South.
- Climate change has moved decisively from a hypothetical future event to a major event in the present: climate impacts on different regions will vary in their nature and gravity, and the regional scenarios will say more about this, but no regions will escape climate change impacts;
- Demographic change will vary, but in most regions by 2040, populations will either be stationary or falling, and aging. The main exceptions are Sub-Saharan Africa, and the Indian sub-continent. A reducing and aging population will affect the culture and values of the regions affected as well as their economic prospects;
- The global economy looks increasingly unpredictable, as a result of the global recession and disruption to trade caused by the Covid-19 pandemic;
- Science, research and technology will continue to advance rapidly.

While the future is wide open, scenarios themselves are built to bound ranges of critical possibilities, and to enable in-depth exploration of potential futures for specific regions of the world, given the different situation of each region.

The road to the future needs to contain some elements that are common across all global scenarios and all regions. The first such element is the response to the Covid-19 pandemic. The second such element, following the pandemic, is the global economic depression that again will produce different results in different regions. The third such element, further forward into the future, described how the region recovered from the economic depression. The graphic below shows a notional timeline summarising the touchpoints from the narrative arc.

Timeline



SAFIRE timeline



Summaries of The Four Scenarios:

BAMBOO – TRANSFORMING TOGETHER

AXES: GLOBALISM AND INCLINATION TO TRANSFORM GEOPOLITICAL AND ECONOMIC SYSTEMS

The Covid-19 pandemic illuminated fundamental inequalities within countries and between countries. Across the world virus denialism crashed into epidemiological reality. The pandemic accelerated exploration of previously unthinkable policy options across civil society and in governments. With national governments stumbling, provincial, state, and city governments rose to the challenge – often organizing cooperative efforts with each other, or even with counterparts in other countries.

The pandemic lit up new possibilities of people working together in new ways. People raised the hope that the world emerging from the pandemic would take a new tack, and chart a new course into a more sustainable future. International policymakers and agencies called for nations to unite in addressing the pandemic, setting aside other hostilities.

Having weathered the 2020 pandemic, and the food crisis of the early 2030s, countries approached 2040 with stronger links across borders, and greater citizen participation at home. Digital governance platforms enabled new models of direct democracy and government accountability.

By 2040, the global economy was more distributed and decentralized. Social equity was higher both within countries and between countries. Many of the most innovative and flexible new product designs emerged from the global South.

WILLOW – FUTURE AS FORTRESS

AXES: PROTECTIONISM AND INCLINATION TO TRANSFORM GEOPOLITICAL AND ECONOMIC SYSTEMS

Covid-19 was a shock to the system. Despite calls for a unified response from global bodies, national leadership was often much less prepared for global collaboration. What did become clear were local strengths, local innovation, and local adaptation: in Brazil, drug cartels locked down favelas for public health when the government failed to do so; in South Africa, the health service adapted mobile TB testing units for on-the-spot Covid testing and localized their test reagent supply; and in Kiev, monks made hand sanitizer in Vydubychi monastery. With little effective global or national coordination, communities and businesses – even organized crime! – just went ahead and “got it done”.

In the first five years after the 2020 pandemic, most countries maintained a cordon sanitaire around their populations and resources. Or they tried to – the disruption to global food production and supply both from closed borders cutting off the migrant agricultural work force and from countries holding on to their supplies for security reasons put pressure on closed-border policies. The crisis highlighted a need to maximise national self-reliance in food and in medical supplies. This shifted research priorities and funding to bioscience – both in agriculture and in health and medicine.

By 2040, the global economy was more distributed and decentralized – localised value chains produced isolated mercantilism and weaponized markets. Trade agreements were a tangle of unilateral negotiations – one result was very complicated intellectual property rights



regimes. Governance around the world focused on the nation and national security. Politicians and voters were suspicious of the agendas of other governments, of multi-national corporations, and of NGOs.

OAK – PROTECTIONISM PREDOMINANT

AXES: PROTECTIONISM AND FOCUS ON BUSINESS AS USUAL

Covid-19 smashed around the globe like a tsunami. Social and political systems fractured along fault lines of power, privilege, wealth, and bias. Strong leaders tightened their grip on structures of governance. Vladimir Putin manoeuvred Russia's Constitutional Court into amending term limits, enabling him to run for a fifth and even a sixth term as president. In Hungary's 'coronavirus coup', the Hungarian parliament granted Viktor Orban the power to rule by decree for an indefinite time, and declared new penalties on speech and breaking quarantine. In Brazil, Joao Bolsonaro reinforced populist fervour by focusing on the economy over epidemiology.

In the first five years after the pandemic, most countries were simply struggling to address massive unemployment and the homelessness and food insecurity that followed. Lockdown surveillance persisted as an overall restriction on people's movement and rights of assembly. Fears that incomers might trigger additional infection fuelled anti-migration sentiments. An abrupt end to remittances from migrant workers to poor relatives in their home countries heightened poverty and desperation.

National digital IDs were widely deployed – many countries used them for identification, driver's licenses, virus and infection tracking, and ration cards. Social credit in turn opened or closed access to resources and rights.

In 2040 populist political movements had kept many authoritarian leaders firmly in power, backed by wealthy supporters. Inequity had increased both internationally and internally – big data-hoarding companies had concentrated wealth and digital power mechanisms in the hands of a few. Surveillance capitalism became the surveillance state. Social liberties were eroded, with citizens limited in movement, action, and expression.

REDWOOD – STOCKHOLDER SOCIETY

AXES: GLOBALISM AND FOCUS ON BUSINESS AS USUAL

Covid-19 threw a large spanner in the gears of the global economy. Energy demand collapsed and the critical shortage in oil markets became storage, not crude. Small and medium-sized businesses struggled, flailed, and despite government bailouts, many went under. But even as millions lost jobs, the rich became richer. Big firms and multinational corporations benefitted from closer ties to political power structures, capturing more direct assistance at a larger scale.

In the first five years of the pandemic, countries tried to claw their way back to economic stability. As a result, corporate goals over-rode social and political niceties: what was good for the multi-nationals was good for the world. Political and business leaders united to prop up oil markets, locking fossil fuel energy and plastics into global supply chains. Climate crisis impacts simply became another market for services and innovations.

In 2040, the global economy was more than ever a 'stockholder society,' with global corporations directing flows of resources – whether ideas, raw materials, automated systems and software, or people. Society had become even more unequal and more fragmented. National governments had become more hands-off. International institutions and NGOs had



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gradually strengthened but global governance was driven more by the private sector than by politicians.

Written by David Lye, SAMI Fellow

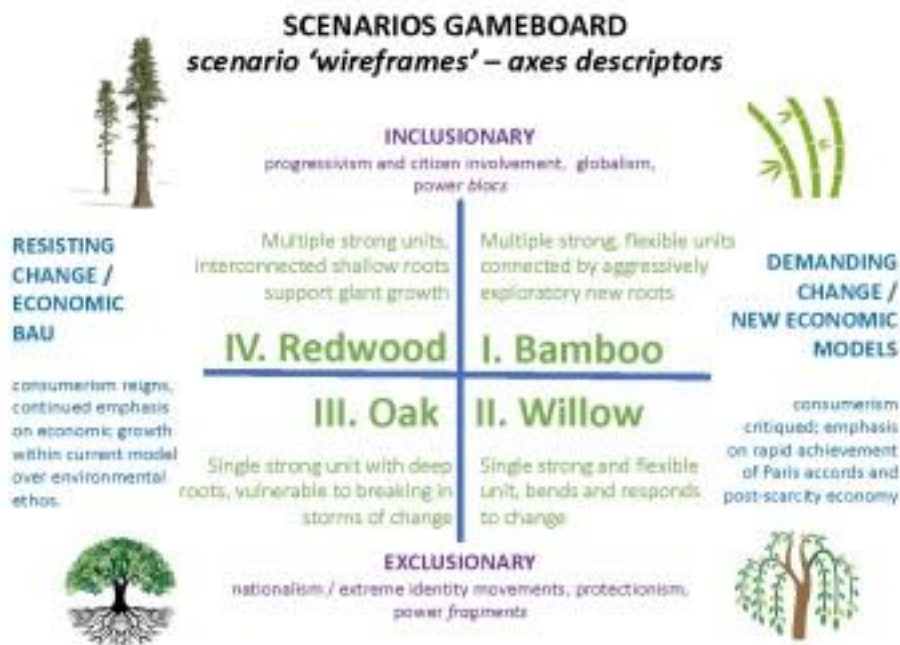
Published 10 November 2021



EC SAFIRE Scenarios Sample: Life in Oak



Image by RegalShave from www.pixabay.com



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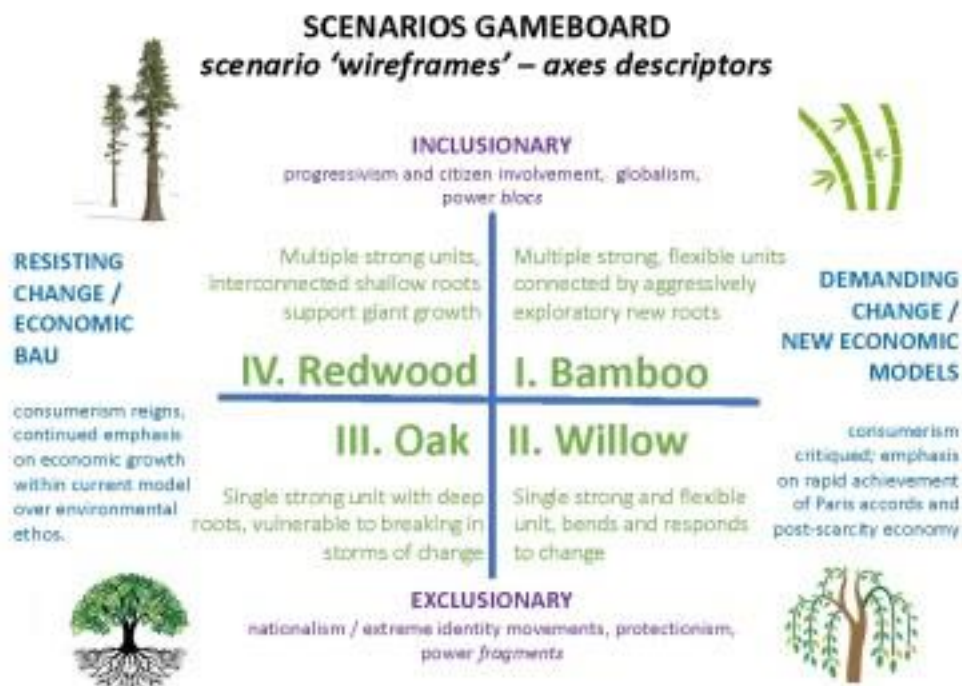
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The Global Scenarios

The previous blog (see link above) described the process by which we developed the four global scenarios. This is how the global scenarios look in diagram form. The “tree” identities match neatly the different characteristics of the four scenarios.



In late November 2019, the European Commission ran a workshop, at which experts in each of the 10 regions, along with officials from the Commission itself, looked at the global



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scenarios, and the impact of each scenario on their own region. Of the ten regions, nine suggested that the starting point was in the Oak scenario, either within the quadrant, or on its margins.

Two months after the workshop, it became clear that the Covid-19 pandemic was spreading around the world. In terms of the project, this necessitated an update of the scenarios to encompass the pandemic, and the emerging evidence of its consequences. The global response, which included travel restrictions, disruptions to trade and supply chains, and differing approaches to managing the pandemic, served mainly to reinforce the influence of the Oak Scenario.

What Does Oak Mean?

Axes: *protectionism and focus on business as usual*

In summary, our report to the European Commission described Oak as follows. Social and political systems fractured along fault lines of power, privilege, wealth, and bias.

The Covid-19 pandemic reinforces this. Autocratic leaders have tightened their grip on structures of governance. Vladimir Putin manoeuvres Russia's Constitutional Court into amending term limits, enabling him to run for a fifth and even a sixth term as president. In Hungary's 'coronavirus coup', the Hungarian parliament grants Viktor Orban the power to rule by decree for an indefinite time, and declared new penalties on speech and breaking quarantine. In Brazil, Joao Bolsonaro reinforces populist fervour by focusing on the economy over epidemiology.

In the first five years after the pandemic, most countries are simply struggling to address massive unemployment and the homelessness and food insecurity that followed. Lockdown surveillance grows as an overall restriction on people's movement and rights of assembly. Fears that incomers might trigger additional infection fuels anti-migration sentiments. An abrupt end to remittances from migrant workers to poor relatives in their home countries heightened poverty and desperation.

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Signals of Oak

- Increased protectionism, focus on economic interests, and moves to gain greater control of supply chains. We have seen trade used as a proxy weapon



by China in its dealings with Australia. In Europe, Brexit has opened up fissures over trade between the EU and the UK.

- Increased nationalism and suppression of minorities within nations. Ethnic, tribal and cultural conflicts are seen in the Middle East, in Africa, and in North Western China, and may become more intense due to economic and environmental pressures.
- Hostility to foreigners has seen conflict in some regions (for example migrant workers in parts of Africa), and repatriations in others, as controls on foreign workers become tighter. Some states have used migrants as a weapon of asymmetric warfare, eg Belarus and Turkey.
- There is an increasing use of technology for enhanced surveillance of citizens, and this technology is transferable from those states which lead in its development to allies and trading partners. “Good” citizens may be rewarded with social credits, and “bad” ones restricted in access to services and allowances.
- R&D may become focused more strongly on defence and security, for example the development of new generation missile systems in some states, and the adaptation of drones and other technologies in those with less R&D capacity.
- Conflict over natural resources, eg Ethiopia, Egypt and Sudan over the Nile, or SE Asian states over the waters of the Mekong, is likely to become more widespread, for example where water tables dry up, or river flows reduce.
- Under Oak, there is likely to be a diminished role for international institutions, such as the UN and its agencies, and informal ones, such as the WEF.

Drawbacks of Oak

- Greater risk of conflict – possibly accidental in origin, eg India and China frontier, or over water and other resources.
- Economic inefficiency as a result of protectionism is likely to lead to reduced (and/or unsustainable) growth, and reduced progress in developing new and greener technologies.
- Reduced cooperation in addressing the key strategic issues such as medical and other research, may inhibit the resolution of the current pandemic and hamstring responses to future ones.
- Protectionism and local conflicts are highly likely to obstruct action to prevent and mitigate global heating.
- Failure to combine expertise in research and development, amplifies the risk of ineffective science: such as vaccines are less effective, or failures in food production.
- Consolidation of ethnic and other grievances within nation states, will be a potential source of further conflict, and lead to further migration pressures.

As the bullet points above illustrate, Oak is not immutable. It will magnify problems and challenges that demand different ways of thinking, and greater collaboration even between bitter rivals. The statement of intent by China and the USA at the Cop26 in Glasgow was perhaps a “weak signal” of this: the world’s regions will have to find ways of working together to address global problems such as climate change, even if current economic pressures and the Covid-19 pandemic, are currently pushing the World towards Oak. Oak trees seem long-lived and immutable. But they can be destroyed by a storm almost in an instant.



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In the next blog, we will look at ways of using the scenarios, and how the world, or individual regions might move between scenario borders, by factoring in new information, reflecting new drivers of change, and wild card events.

Written by David Lye, SAMI Fellow

Published 19 November 2021



EC SAFIRE Scenarios: The Journey Game

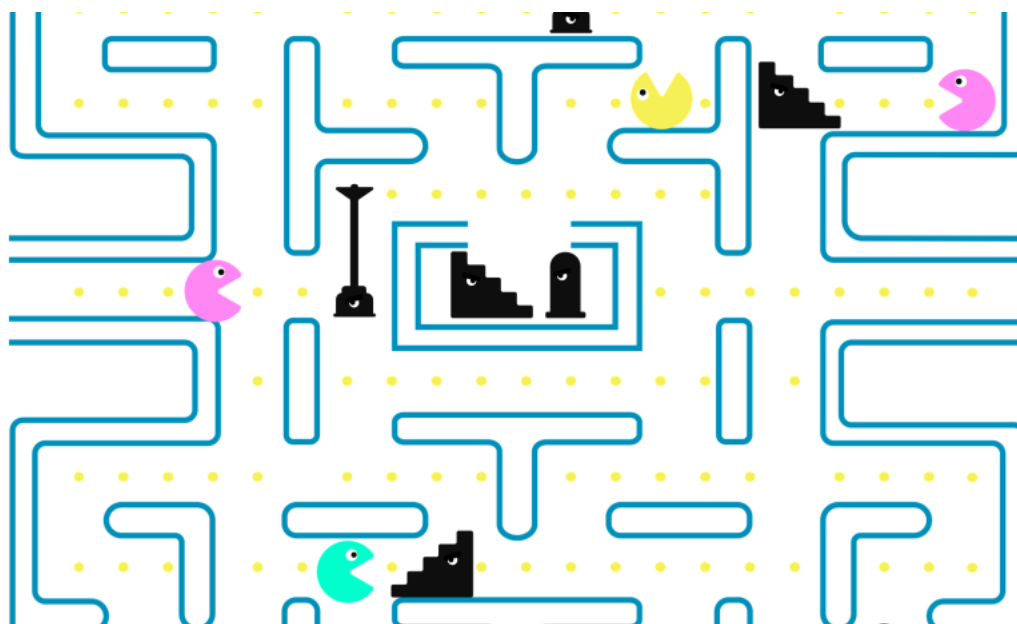


Image by María_Alberto from www.pixabay.com

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The first blog described [four global scenarios for 2040](#). The second looked in more detail at [one global scenario – OAK – the scenario that most closely reflects the current state of the world](#). This third blog describes an interactive use of the scenarios that explores the impacts of trends and changes on the trajectory towards the future and also assists in monitoring leading indicators that the possible futures might be emerging.

We will follow this post with a series of ten blogs that will look in turn at scenarios for each of the regions covered by the study. The Report is available via [this link](#).

The Global Scenarios

[The first blog](#) described the process by which we developed the four global scenarios.

The scenarios are based on:

- horizon scanning by the Task 2 Project team, drawn from SAMI Consulting, and supplemented by comments and input from European Commission officials; and
- a one-day workshop held on 20 November 2019 in Brussels, involving people with knowledge of the Regions under consideration, foresight experts, and European Commission officials.

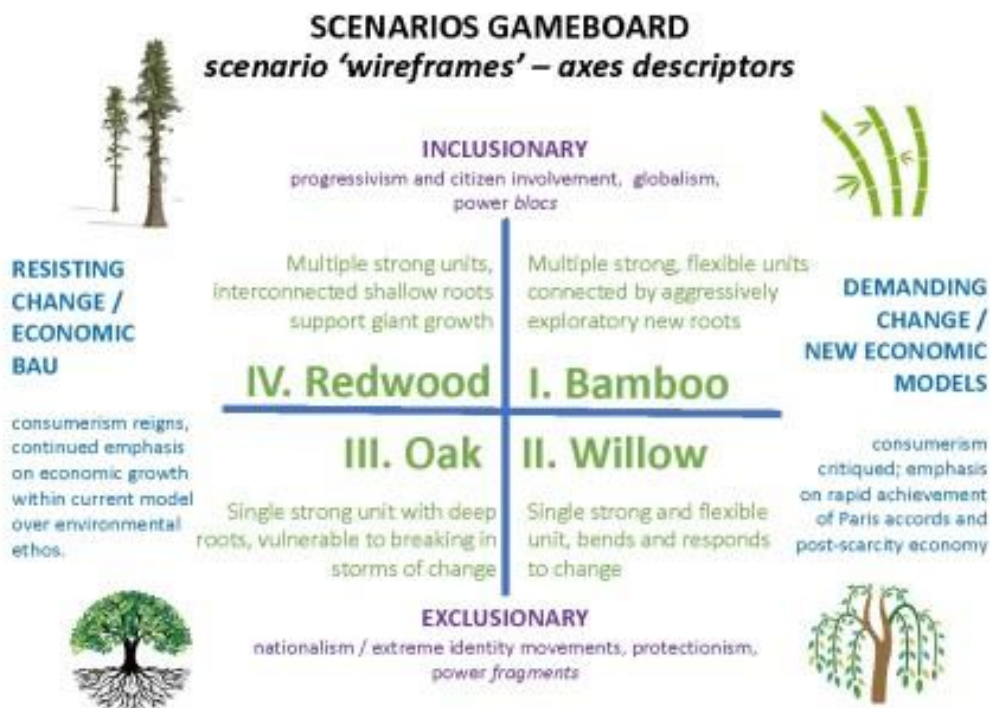


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The scenario axes allow scope to explore our volatile and polynodal world and the challenges it faces – challenges which have been amplified by the likely economic consequences of the Covid-19 pandemic. The axes are based on two uncertainties:

- Whether *protectionism or globalism* will characterise international relations; and
- Whether in the face of global crises, people and nations are inclined to *transform geopolitical and economic systems, or to carry on with business as usual*.

The resulting scenarios are depicted in the graphic below. The tree metaphors provided an apt summary of the core characteristics of each scenario.



From Snapshot to Movie: The Journey Game

The uncertainties summarised above frame four scenarios that depict possible futures for 2040 with an emphasis on geopolitics, economics, and values. The commonly used 'axes of uncertainty' method for scenario building generates snapshots illustrating four possible outcomes for a specific time horizon. This approach manages uncertainty by constraint, limiting the degrees of freedom to two uncertainties. Complexity and chaos theory suggest, in contrast, that whatever future we face will be the emergent outcome of cascades of change and impacts. Our challenge was designing a simple interactive format to reflect that by allowing more dynamic exploration of emergent possibilities. That become increasingly important as the pandemic crisis accelerated and disrupted previous patterns of geopolitical, economic, and social change. Fortunately, we designed the scenario 'Journey Game' process to allow for this, adding a sequence of adaptive responses to change over time to the 'snapshots of the future' that scenarios usually describe.



Scenarios as Adaptive Journey

To use the gameboard, participants first review a deck of cards identifying possible changes. Next they consider how fast those changes are emerging, and how significant the resulting impacts might be on their particular region. That is, would the changes and their impacts shift the region towards a particular scenario? In a two-round version of the game, this lets people consider fast-breaking changes whose impacts will be felt within a decade, as well as longer-range changes whose impacts may take 20 or 30 years to mature. With continuously updated change data, EU policymakers could use these scenario sets to explore potential global and regional adaptation to emerging changes by exploring responses of different regions to changes over time, assessing the implications for European policy and strategy.

Playing the Journey Game

The journey into the futures and across the gameboard begins by placing the region in the scenario it is most likely to resemble in the next five years. Players then pick two fast-breaking changes each from a deck of cards and discuss what impacts those two changes would combine to have on the region over the next ten years to 2030, how the region would respond, and where it would move across the scenarios gameboard as a result. Marking the new position, participants repeat the process with two slow-maturing changes and explore where those changes will take the region over the next twenty or so years, to 2040.

To illustrate with an example from the November 2019 workshop, we see how the workshop participants placed their region in 2025, and then how the region “moved” in 2030 and 2040 due to the impact of change drivers.

Journey Game Example: Japan & South Korea (+ Taiwan)^{1]}

Two journeys from Redwood and Willow towards a common goal in Bamboo^[2]

By 2030, more precarious employment and economic prospects, and greater difficulty accessing the raw materials on which these high-tech economies depend, sees an increased demand for change – more inclusive politics and new economic models in Japan and South Korea. In Taiwan there is a move towards less inclusion, but a similar demand for change.

By 2040, prompted by their own falling and aging populations and the impact of global warming, especially on food supplies, the three countries are all seeking change and new economic models and a more inclusionary world.

¹ TAIWAN WAS CONSIDERED AS A SEPARATE ENTITY WITH ITS OWN JOURNEY USING THE SAME DRIVERS AS FOR JAPAN & SOUTH KOREA ON THIS GAMEBOARD



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Starting position: 2025

Starting position: 2025



Japan & South Korea: in the centre of the “Willow” scenario
Taiwan: in the centre of the “Redwood” scenario

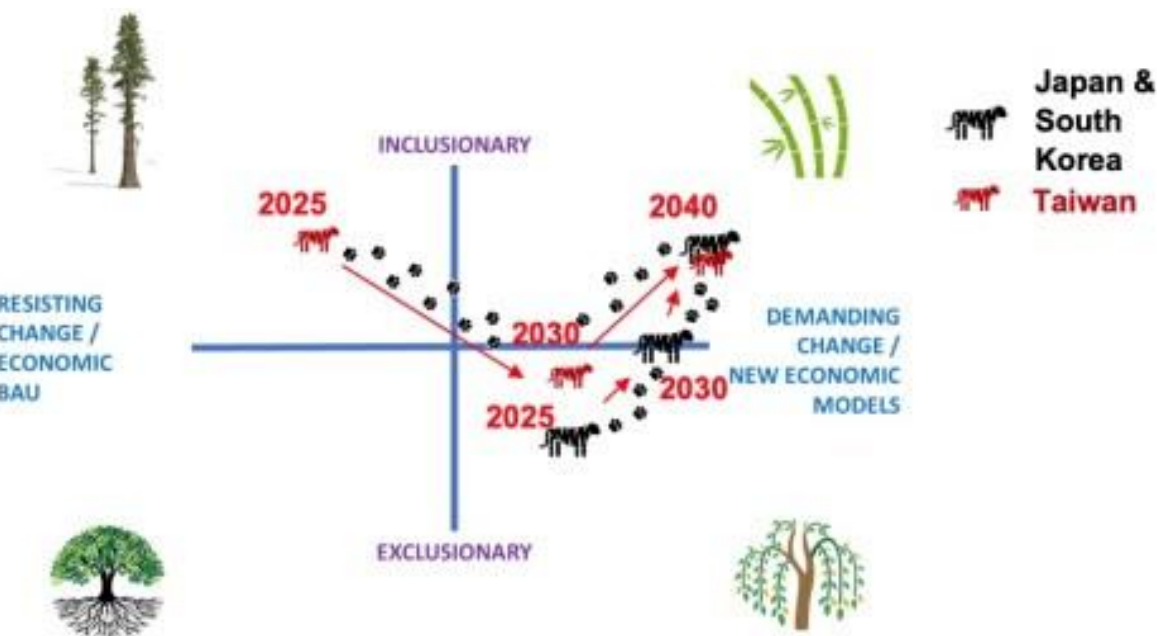


Journey 1: 2025 □ 2030



First selected driver of change: Rising social inequality and increasingly precarious employment options for youth as well as populism

Second selected driver of change: Decreasing raw materials availability (especially strategic minerals) as well as supply chain risks



Journey 2: 2030 □ 2040



First selected driver of change: Dramatic population decline

Second selected driver of change: Increasing climate change impacts as well as increasing vulnerability of global food chains

Learning from the Journey

Adding this process to traditional ‘axes of uncertainty’ scenario building enhances the method in two ways: it assists participants in creating credible storylines depicting how a region might move into the future; and it enables participants to explore how multiple changes might interact dynamically with the two key uncertainties initially identified. In an extended workshop, participants could play several rounds of alternative journeys, exploring how different drivers of change affect the same region. Or each participant in a working group could role-play a single region, allowing the working group to compare how specific



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drivers of change create different paths into the future for different regions on the same gameboard.

The Gameboard serves to emphasise the point that we are moving into a less predictable, poly-nodal world: a world where current assumptions may not hold. The gameboard allows policymakers greater latitude to flex the scenarios, bringing different factors into play in particular regions.

The Gameboard also allows policymakers the chance to consider one major global disruptor, or a set of regional disruptors, which might cause several regions to move from one quadrant of the scenario matrix to another or even cause a shift in the predominant global scenario axes.

Finally, the Gameboard resources (scenario and change driver sets) allow policymakers to gauge the effect of different drivers of change and/or wild card events across all regions, to look at the way in which different regions respond, and whether some, or all, regions cluster together in particular quadrants of the scenario board.

The Gameboard approach thus allows policy makers the chance to give full rein to the unpredictability of the world we are now entering – and to update that perspective on unpredictability by playing the game with new signals of change as they emerge.

*Written by Wendy Schultz, SAMI Principal
Published 25 November 2021*