

DIGITAL EUROPE 2030

**The Public Sphere and Digital Sovereignty –
Three Scenarios for the Future**

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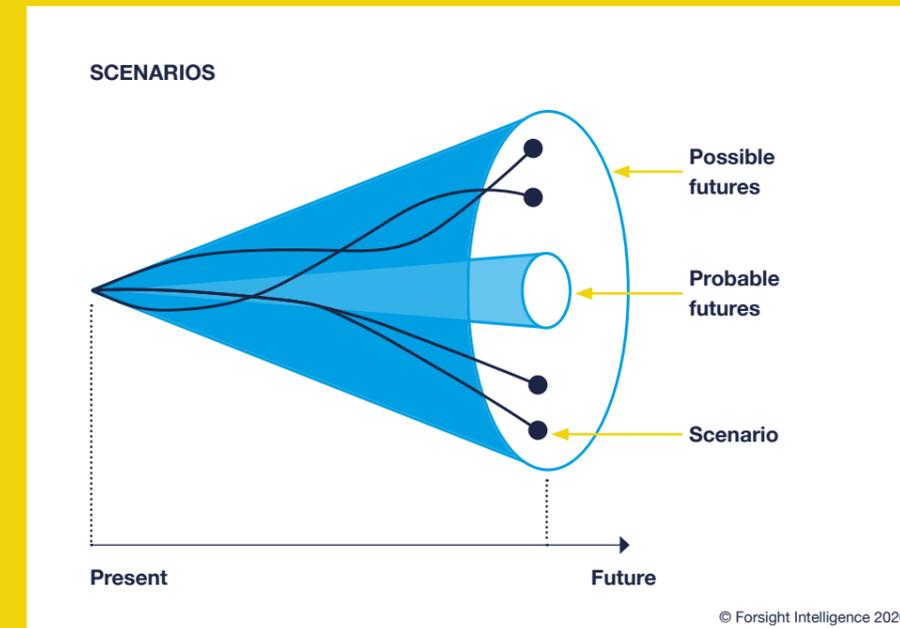
INTRODUCTION

In the run-up to Germany's Presidency of the Council of the European Union in 2020, Alfred Herrhausen Gesellschaft brought together an interdisciplinary group of experts to design possible futures for the digital transformation of Europe. How can Europe succeed in the digital era of the future? This is the central question asked by the "Digital Europe 2030" project. It focuses on the transformation of the public sphere, which is also considered from a technological perspective and in the context of Europe's digital sovereignty.

In a series of workshops, the group developed three exploratory scenarios for the digital Europe of 2030. Scenarios are plausible (but not necessarily probable) visions of the various directions the world *could* take in the long term. Exploratory scenarios make it possible to imagine an otherwise uncertain future. They help us to look beyond our limited horizons, make sense of complicated interdependencies and gain a better understanding of our own environment. By encouraging us to reflect on the future in a manner distinct from mere prediction (which is often heavily based on the status quo), scenarios extend

beyond our own desires and fears and help us to anticipate inconvenient surprises and discover new possibilities. Scenarios are a means of minimising risks and increasing opportunities, of remaining capable of acting despite uncertainty. They help us to make decisions today whose value we will only truly appreciate in the future.

After developing the scenarios, the project team reworked them and added further detail in cooperation with a sounding board. For obvious reasons, the following versions of the scenarios do not detail all of the group's discussions and ideas, nor do they constitute complete depictions of the future's possibilities. Instead, their aim is to portray several possible developments that are structurally distinct. This means that many details have to be left out, causing nuances and more complex distinctions to fade into the background and resulting in scenarios which may sometimes seem like stereotypical stories of the future. Nevertheless, there is plenty of room to read between the lines. And indeed, this is exactly what readers are encouraged to do, by filling in the gaps with their own views and ideas.



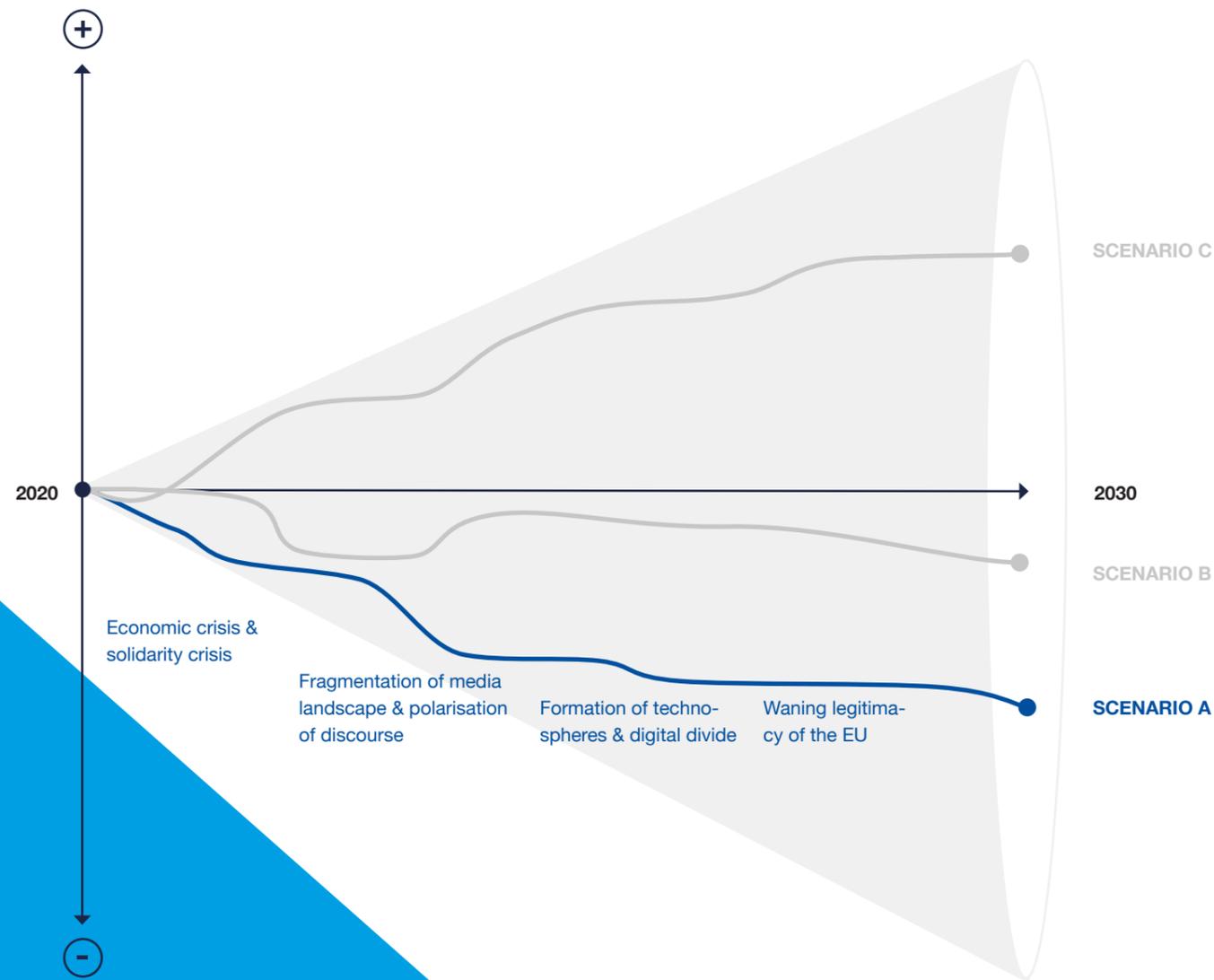
The scenarios are subject to a number of pragmatic premises which allow them to be used for their intended purpose. For example, the group deliberately refrained from developing a scenario in which the EU collapses because this would spark fundamental changes to the conditions under which all political decisions are made. For the same reason, radical alterations in the geopolitical or global economic environment – apart from those which were actually occurring in connection with the coronavirus pandemic – were also not considered.

As forecasting tools, scenarios are influenced by the context in which they are constructed. A different method or a slightly modified objective would have led to different scenarios and, likewise, other groups following the same method may have struck out in completely different directions.

Finally, scenarios are *strategic* foresight tools and should be used to discover how today's decisions could affect the distant future. Given massive uncertainty over what the future holds, they are meant to enable us to take initial concrete steps in the right long-term direction. What can we

do today for which we will be grateful in the digital Europe of the future – regardless of the path the world ends up heading down? The answer to this question depends on who asks it as well as on their underlying objectives and values, which is why readers will draw their own, possibly very distinct practical conclusions from the scenarios. Nonetheless, it is not our intention to leave this question completely unanswered. Our next step will be to release publications and hold events to highlight relevant areas of activity and courses of action.

Scenario A: LIMITED AGENCY AND INTERNAL DIVISION



2020/21: ECONOMIC CRISIS AND SOLIDARITY CRISIS

The economic consequences of the coronavirus crisis affect the EU member states in vastly different ways.¹ The EU is too slow to come to a decision on how to mitigate the impact of the ensuing recession. Each country looks at its own domestic needs first and places demands on the EU; constructive proposals for solutions fade into nothing as the member states each clamour to make their national interests heard. Old wounds inflicted during the 2008-2011 financial, economic and sovereign debt crisis reopen, causing divisions between the so-called donor and recipient countries to resurface.² Nationalism dominates the discourse, with the EU and its potential to resolve the situation scarcely getting a mention. Despite national aid being supplemented by European support programmes, experts emphatically deem this assistance to be “too little, too late and too bureaucratic”. The actual and perceived level of inequality in Europe is rising steeply. The economic crisis has developed into a solidarity crisis, which is stoked by nationalist rhetoric and one-sided media reports in the member states.

DISINFORMATION UNDERMINES INPUT LEGITIMACY

In a number of member states, political turbulence is whipped up by deliberate disinformation campaigns, which flourish in an environment already rife with scepticism about the EU and massive uncertainty about the future. Although the 2021 German parliamentary election leads to the formation of a narrowly elected (pro-European) government in Berlin, allegations of electoral fraud call the legitimacy of the result into question. Many agree that the days of democratic elections and representative democracy in the digital age are numbered. Several governments are losing their footing in the wake of a sweeping disinformation campaign orchestrated across several member states. Russia is the suspected source of this campaign, the purported aim of which

is to thwart the compromises being sought to overcome the crisis at a European level. What is certain is that networks of Facebook trolls have disseminated falsified, compromising videos and photos which have severely damaged the reputation of important government representatives.

2021–2023: CHINESE AND US SPHERES OF INFLUENCE IN EUROPE

In the USA, the coronavirus crisis has had terrible repercussions. When the second wave hit in 2021, the government in Washington was once again powerless in any attempt to counter it. The subsequent recession was even deeper and longer than initially feared and the gaps in the social security systems became wider. Silicon Valley suffered less than any other sector, having received political support to help it suppress Chinese competition on the US market.³

China emerged comparatively well from the coronavirus crisis, with strict bans on contact having contained the virus. The government in Beijing combatted the economic consequences by using foreign exchange reserves, pursuing a low interest rate policy and providing direct state aid to stimulate consumption and boost exports as well as direct investments abroad. The country also used the crisis as an opportunity to extend surveillance of its citizens.⁴

In addition to US companies, Chinese firms are now also further penetrating Europe’s digital space, increasing their market power by disseminating their technical standards, data infrastructure and services. Pressure is exerted on individual governments following the weakening of the EU’s digital single market by the solidarity crisis and in view of the fact that it is better to negotiate with member states separately as opposed to the still relatively powerful EU. China is offering cheap loans and special conditions for the installation of digital network infrastructure to Greece, Italy and some members of the Visegrád Group.

¹ Germany and France survive the recession of 2020 and 2021 relatively unscathed by investing heavily and using tried-and-tested instruments. In Portugal, Spain, Italy, Greece and Croatia, on the other hand, the economic and social systems almost collapse. Despite initially being severely hit by the crisis, the UK is surprisingly able to negotiate beneficial trade deals with both the USA and the EU by the end of 2020, prompting a number of commentators to declare that leaving the EU seems to have been worth it after all.

² The Greek and Italian media in particular come out in force against the German government, afraid that the austerity measures pursued in the past will rear their heads once more. Public discourse in Germany, in contrast, revolves around “not wanting to bail out others yet again”.

³ The US government’s key election campaign promise centres on the introduction of a digital tax which will directly fund a series of social welfare and military programmes. Measures such as the monthly recovery stimulus paid to American citizens and industry inspire intense loyalty and optimism across the country. The Economist leads with the headline: “Uncle Sam is Back, and He’s Riding on an Elephant”.

⁴ The existing social credit system has been extended to cover the entire population, with many aspects of it being taken from the technical system which had already been in use in Xinjiang. Work is also underway to integrate GPS tracking and automatic facial recognition into the social credit system.

Other countries, meanwhile, are clearly siding with the USA, citing security concerns, and are denying market access to Chinese companies.

FRAGMENTATION OF MEDIA LANDSCAPE AND POLARISATION OF EUROPEAN DISCOURSE

In addition to the solidarity crisis and scepticism about the EU, three other factors are intensifying the fragmentation and polarisation of the media landscape and of European discourse. Firstly, the media are becoming less diverse in Europe and critical infrastructure for public communication is dominated by China and the USA. On the one hand, ByteDance has bought Twitter and, on the other, more and more transregional newspapers and TV stations are under the influence of a US media mogul. Secondly, journalistic quality and the reach of public broadcasters are declining in the member states.⁵ And thirdly, a growing number of people are almost exclusively accessing personalised, algorithm-driven news channels, which – coupled with the use of virtual assistants becoming second nature when consuming media – is creating the perfect environment for filter bubbles. As a result, algorithms from Chinese and US platform operators are driving the supply of information and the discourse in Europe, serving as an additional catalyst for the centrifugal forces at work within the EU. The perception of reality has become completely splintered, predominantly along the borders of the US and Chinese spheres of influence.⁶

2023–2027: FORMATION OF TECHNOSPHERES AND DECLINE OF EUROPEAN DIGITAL COMPANIES

Two technospheres are developing in Europe in place of a digital single market. These clearly reflect the market shares of Chinese and US companies, with the likes of TikTok, WeChat, Alibaba and Alipay dominating the market in some countries, and platforms like Facebook, WhatsApp and eBay as well as the PayPal, Google Pay and Apple Pay

payment systems gaining a firmer footing in other countries. European digital companies are struggling. *€Pay*, for example, which was founded by a French bank and a German fintech company, is scraping by thanks to its niche status.

However, *€Pay* is unable to reliably process payments to Alibaba owing to its temporary exclusion from the Chinese Cross-Border Interbank Payment System (CIPS). Although the Chinese government has not commented on this decision, many people suspect that this discrimination of *€Pay* is a consequence of restrictions on Huawei's ability to invest in Germany and France. *2Pay*, *€Pay*'s Hungarian competitor, has been suffering a similar yet inverted fate, as ever since the Hungarian government awarded a major contract to Huawei, there have been ongoing problems with the processing of international payments through the Belgian financial services provider SWIFT.

Another example is a Danish robot manufacturer which was taken over by a Chinese conglomerate. It produces robots featuring innovative sensors which can only be operated centrally via the Chinese parent company's server. Exports of the robots to Asia are booming, yet there is very little demand for them in Germany and other countries falling within the US technosphere. While US and Chinese companies are able to demonstrate a high level of dynamism, the innovativeness of European digital companies is severely lacking.

2027–2029: DIGITAL DIVIDE

The disparate impact of the economic crisis, the huge differences in the status quo of digitalisation amongst the EU member states and the opposition between countries strategically aligning themselves with the USA and those gravitating towards China have led to a general political paralysis within the EU. On top of that, it has not been possible to implement Europe's flagship digital projects. The Digital Services Act (DSA) for regulating large online platforms has foundered⁷

and efforts to create European standards for the development and use of artificial intelligence (AI) and a European cloud have likewise petered out. Although the European Commission is not giving up on its attempt to launch digital policy initiatives, introducing Europe-wide regulations is virtually impossible. The fact of the matter is that the EU has gradually become divided into digital blocks which each have their own distinct digital infrastructure and generally use technology in different ways.

DIGITAL BLOCKS AND WANING LEGITIMACY OF THE EU

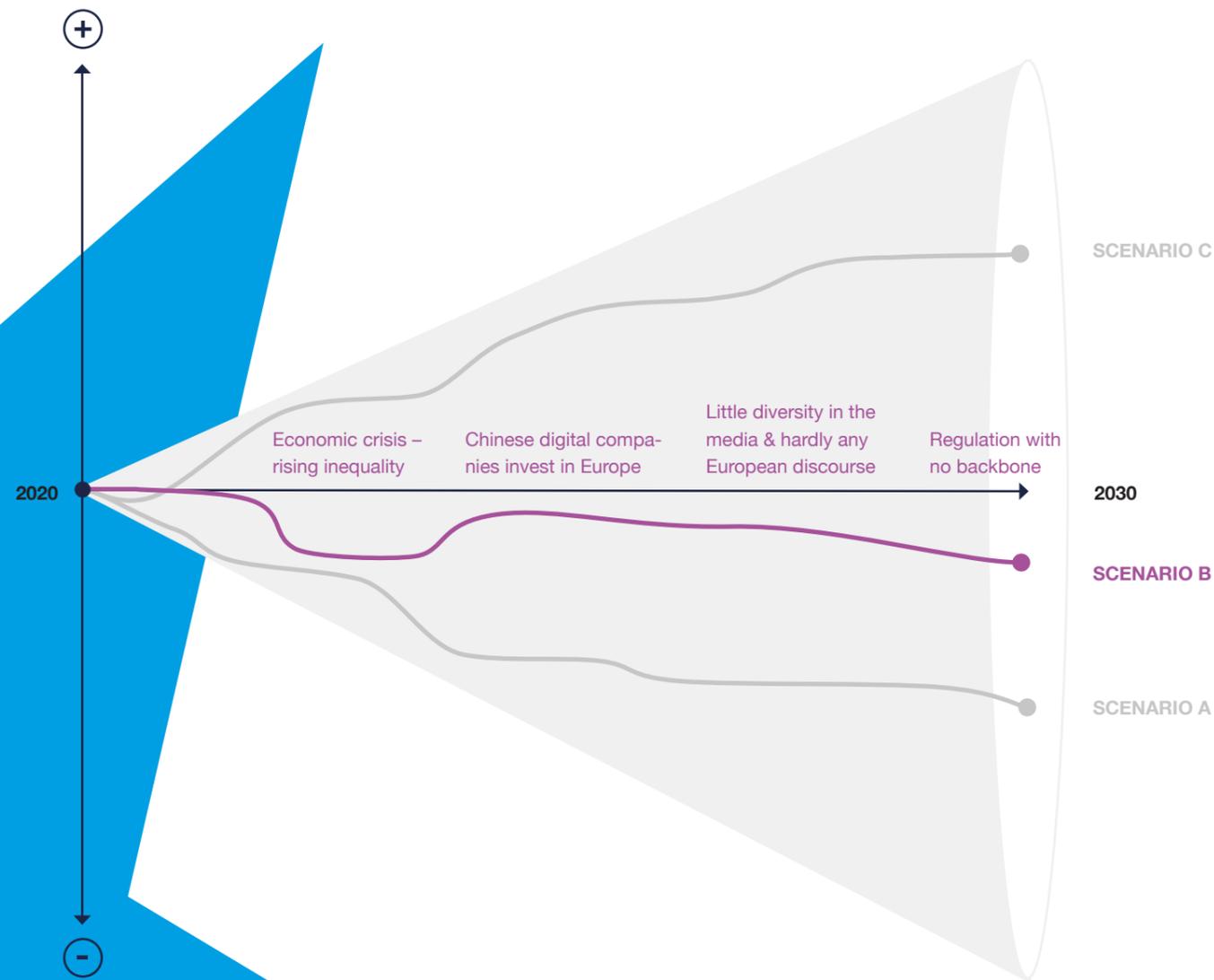
The European Parliament and other EU institutions have suffered a drastic decline in visibility and are now perceived as paper tigers. The political stalemate of recent years, including but not limited to the realm of digital policies, is ultimately leading to a significant loss of trust in the EU institutions and in politics in general. The quantity of disinformation has increased amidst a political climate shaped by competition for spheres of influence. Disinformation and divisive statements about climate change are particularly successful, as this issue is seen by some as an existential threat and by others as a conspiracy originating in Brussels. Anti-European parties have a strong position, while policies aspiring to shape change at a European level, especially in relation to the digital sphere, hardly stand a chance. At 20 percent, turnout at the 2028 EU election is dramatically lower than in previous years.

⁵ Public broadcasters have had to reduce their schedule to just a few channels after changes in viewing habits combined with a severe lack of innovation led to dwindling viewer numbers and the lack of public interest kept prompting discussions about how the broadcasters should be financed.

⁶ It isn't until 2026 – when three different videos appear of the same scene recorded at the 2026 Frankfurt Book Fair – that it becomes abundantly clear just how heated the mood and dysfunctional the discourse in Europe has become and how little importance is now given to facts and the truth. The videos all show the French President Emmanuel Macron praising a controversial novel depicting France as a happy colony of China. Each clip casts Macron's comments and the audience's reaction in a very different light. In the most widely shared video, Macron is pelted with soy sauce packets – “rightly so”, according to the proponents of this narrative, who claim he wants to sell off France to China. The “scandale soja” is a significant factor leading to the victory of the Rassemblement national in the 2027 election.

⁷ As the EU was in the process of putting together the Digital Services Act (DSA) for the regulation of large online platforms in 2024, a huge protest movement rose up against it and argued that the DSA was a means of censorship. The heated debate about the DSA was fuelled by disinformation campaigns from both within and outside of the EU. The protests were much larger and much more radical than the 2019 demonstrations against copyright reform in the digital single market. Arguments between governments also broke out about the specific form the DSA should take. Owing to the evolving technospheres, it was not possible to enforce Europe-wide regulation of Google, Facebook and Amazon on the one hand and Baidu, Alibaba and Tencent on the other. It was thus clear that the EU failed the litmus test on its ability to regulate and take action in matters concerning digitalisation.

Scenario B: FUNDAMENTAL VALUES ON THE SURFACE ONLY



2020–2022: ECONOMIC CRISIS – RISING INEQUALITY. ANTI-EU GOVERNMENTS

The economic effects of the coronavirus crisis are hitting all EU member states hard, and the socioeconomic disparities between them are growing significantly. The economic and social systems of Southern Europe in particular are on the verge of collapse. While there are European aid programmes in place, experts deem them insufficient. In 2021, the recession keeps threatening to turn into a depression, but luckily this does not materialise. Nationalistic, anti-European and far-right parties gain considerable support during the crisis years,⁸ with Europe becoming home to more and more EU-sceptic governments. Conservative and right-wing governments are elected, respectively, in Germany (2021) and France (2022). Both countries reduce their financial contributions to the EU as a result.

2022/23: CHINA HELPS EU STATES OUT OF THE CRISIS

Meanwhile, China – which is only partly weakened by the coronavirus crisis – takes strategic action. It steps in where no (more) support is provided by the EU, the USA or the International Monetary Fund (IMF). The Chinese government offers cheap loans for infrastructure projects in Southern Europe, and at a very high speed at that. Huawei is permitted to build the 5G network in Germany and other European countries. The criterion of cost plays a dominant role in the economic crisis, while strategic and security considerations – particularly those that are difficult to explain to the general public – fade into the background. China is seen as a helping hand, especially when it comes to developing and expanding digital infrastructure.

LITTLE DIVERSITY IN THE MEDIA. PUBLIC MONEY FOR HIGH-QUALITY JOURNALISM

In Germany, the number of local media outlets has been continuously falling since 2020, a trend that initially goes unnoticed by the general public. Media services also become less varied in many other EU states. As Chinese investments in European media companies increase despite restrictions on investment,⁹ some governments decide to take action and adopt additional measures to preserve the independence of journalism and the media within their borders. The German government, for example, becomes a silent partner in two media holdings, causing a temporary peak in transregional media consolidation in Germany. The few players remaining in the media landscape focus on entertainment and sports out of fear of angering their government stakeholders or, on the other hand, of being accused of acting on behalf of the state. This causes general interest in politics to decline further. European politics, which were already considered difficult to communicate, fade all the more into the background.

2024–2027: CHINESE DIGITAL COMPANIES DOMI- NATE THE EUROPEAN MARKET

Coronavirus and the economic impacts of the crisis have left deep chasms in the US health and welfare systems. The US government uses all possible means to relaunch the economy and reclaim the country's status as the number one global superpower. However, it is unable to get the USA back on its former political and economic footing. Although the digital sector is hit less severely by the recession, the big four US internet companies Google, Apple, Facebook and Amazon (known as GAFA) are not in the best of shape. They are afflicted on the one hand by a veritable Cold War that has broken out between Silicon Valley and Washington, and on the other by a series of data leak

⁸ On the one hand, many citizens feel like they are not being heard or represented in Brussels. If they have an interest in politics at all, this interest is focused on their own government, with their attention mostly captured by the personalities and parties who can offer them the simplest answers to the most complicated questions. On the other hand, this trend could have been boosted by the re-election of Donald Trump in 2020. His victory – against all expectations – is proof of the success of populist politics, even in times of coronavirus and economic crises.

⁹ Berlusconi sells his shares in Pro7 to a Chinese investor in 2022. A Chinese state-owned company indirectly becomes a shareholder in the German Rhein-Neckar-Zeitung newspaper after taking over an international investment company.

scandals which have severely damaged their reputation, even on US soil. Meanwhile, China overtakes the USA as the leading global economy and campaigns vigorously to replace the US dollar with another key currency.¹⁰ Chinese companies continue to significantly ramp up investment in the USA and the EU. In particular, Tencent's many subsidiaries purchase handfuls of highly specialised companies in the fields of AI, robotics, sensor technology and fintech. In cases where Tencent competes with a rival bid from Alphabet, the Chinese holding generally comes out on top over the Google parent company, its financial power tipping the scales in its favour. In Germany and Europe, Tencent makes sure that it purchases target companies in the early start-up phase, in anticipation of the possible security concerns authorities may have further down the line.

In addition to its involvement in EU research projects,¹¹ China is also the critical determinant of digital innovations in Europe, strong examples of which are seen in 2026 and 2027 in particular:

In January 2026, a car manufacturer located in Beijing strengthens its long-standing relations with Europe and acquires a majority stake in a German manufacturing company. While the manufacturer continues to develop engines at its site in Germany, the digital centerpiece of communication with other cars, charging stations and users (needed for car sharing) is provided by data processing centres in China. In March 2026, the new research and development department of a European robot manufacturer for smart factory robotics is set up in Foshan after a Chinese competitor purchases the company. In November of the same year, a Chinese insurance company based in Shenzhen acquires majority interests in several European insurance companies.

The head office in China takes care of lucrative day-to-day business, i.e. concluding contracts using an automated process, calculating risk premiums and processing standard claims, while the offices in Germany, France and Italy are responsible for processing claims that cannot be resolved by a computer. In all three cases, the investments from Chinese companies allowed workers at the European sites to keep their jobs and improved the growth prospects of the companies.

In the following year, the e-health industry takes off. European manufacturers are considered world leaders in this area. While some Chinese investors profit financially from this development, they have little involvement in the strategic management of the companies. European payment provider *€Pay* has also become a market player, and at least in Europe stands alongside Google Pay and Alipay as a serious competitor. *€Pay* does not have access to the Chinese market. In 2027, Tencent acquires the majority of shares in Facebook, thus also positioning Chinese platforms and services on the European market.

Alibaba and WeChat expand their market shares in online retail and short message services. Huawei and Tencent operate on the European market as mobile service providers. In 2027, Tencent opens a research centre in Aachen and launches its European cloud service with servers in Guizhou, connected via a hub in Luxembourg built solely for this purpose. Tencent announces its plans to further advance the automation of digital services from Germany, in particular through innovations in AI. Innovation dynamics in the European economy are closely related to how the Chinese economy is faring and to the interests of the government in Beijing. As a result, the EU and China forge closer political ties, made clear by the conclusion of a comprehensive trade and investment agreement.

2027/28: HARDLY ANY EUROPEAN DISCOURSE

In Europe, the political public sphere is constituted by the respective reporting of leading national media.¹² European political issues are debated less and less in the different member states, with Europeans predominantly concerned with national issues. This is partly because “the time for big political projects in Europe is over”, according to an Arte documentary, with European politics now only dealing with the single market (for goods and finance, not for digital or energy issues), agriculture and border control. It is also certainly linked to the fact that EU-sceptical parties have been in power in Italy and Poland since 2023 and the right-wing president of France was re-elected in 2027. Disinformation regularly creates political turmoil.

2029: REGULATION WITH NO BACKBONE

A European Commission initiative to regulate the use of AI is approved in 2029.¹³ By the time it is adopted, the new AI legislation has been drastically watered down, but is still seen as a tool for ensuring that Europe is financially competitive in the AI arena whilst retaining an explicit focus on its values. The hollowness of this promise soon becomes clear, however, as regulations covering the especially prominent issue of automated personality assessments are knowingly and publicly ignored. Two Chinese corporations explain that a refusal to use their analytical power, which is frequently drawn upon in other parts of the world, would diminish the quality of their products.

After threats to withdraw from the European market and a number of angry protests from European users, the EU Commission caves in, not only waiving the penalty foreseen for such a scenario, but also announcing its

intention to re-assess the legislation itself – ultimately resulting in it being suspended until further notice.

China's influence on the economy, politics and society in Europe has led to changes in political culture. Selective restrictions on the liberal and democratic rules of the digital sphere are pragmatically accepted. Users want to benefit from free, user-friendly data services – at least as long as they are not directly targeted by censorship. This pragmatic approach to selecting data services and platforms in the digital world also causes a subtle shift in European democracies – towards more centralisation and less diversity in the negotiation of political solutions to problems.

When it comes to Europe's regulation of the digital ecosystem, democratic values fail to penetrate the surface.

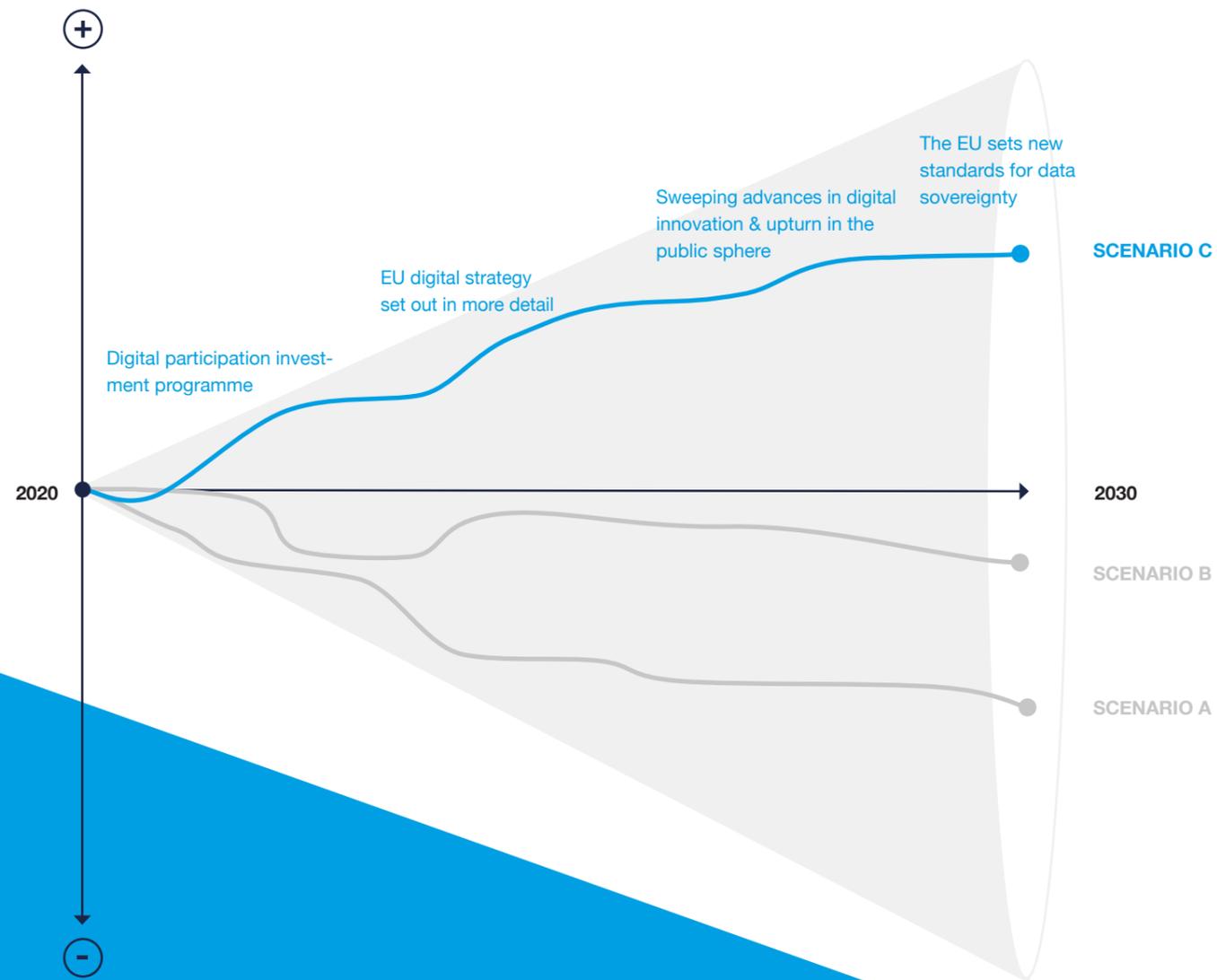
¹⁰ In March 2025, the Chinese government hosts a reserve currency conference (*Guānjiàn Huòbì*) in Beijing. At this event, it presents its plans to replace the US dollar as a key currency – not with the renminbi, however, but rather with an international currency. As suitable solutions, China puts forward the IMF's special drawing rights or another currency linked to the flow of goods under the management of the New Development Bank (BRICS Development Bank). In doing so, China portrays itself as a defender of multilateralism, although there is no doubt that China has more influence over the institutions involved than ever.

¹¹ After some delays, the implementation of the next Horizon Europe research and innovation framework programme moves forward. In addition to traditional forms of European cooperation, another significant pillar has been added to the programme: China contributes EUR 120 billion to a research partnership for cyber-physical systems.

¹² Reports from these leading media are semi-official in nature as they relay facts relating to government activity but do not spread false news or make polarising statements. This is in line with the current technocratic zeitgeist shaping the style of politics in Europe, especially in the aftermath of the crisis years and considering the general feeling of inability to solve major sociopolitical issues.

¹³ The Commission's proposal originally included provisions for ensuring that AI is used in compliance with the GDPR. For example, each application should provide those concerned with information on the personal data used and on the algorithm applied to anonymise said data.

Scenario C: SUCCESSFULLY SHAPING CHANGE



2020/21:
**PULLING THROUGH
THE CRISIS TOGETHER**

All over Europe, it's clear that the continent cannot afford a lack of solidarity in the context of the coronavirus pandemic; there is no room for rigid political stances. An effective crisis management approach based on these principles creates a widespread sense of being "in it together". People in Europe accept that they will have to get by with less: less work, less consumption and fewer recreational activities. It's also clear that all of these areas will move increasingly into the digital sphere in the future. As a result, all forms of economic, social and cultural participation will need to be rethought to make them fit for the digital future.

2021/22:
**DIGITAL PARTICIPATION
INVESTMENT PROGRAMME**

A comprehensive European investment programme intended to cushion the effects of the economic crisis is set up in a short space of time, with active support from almost all member states. In addition to direct aid for social systems and direct investments in traditional forms of infrastructure (energy and transport), the investment programme focuses in particular on measures for improving digital participation. The *Digital Erasmus* programme provides funding to students and teachers for purchasing hardware and software, and promotes virtual exchanges between pupils and students. *Digital Heart* provides additional funds with a view to accelerating the expansion of digital infrastructure and thus improving citizens' day-to-day lives.

EUROPEAN MEDIA PLATFORM

As part of the investment programme, *Medias Res*, the first publicly financed European media platform, is founded. Membership is open to all public broad-

casters who pay a contribution. They may then use the media platform to distribute their content. High-quality subtitles in all European languages are automatically added to all content, making it viewable in all EU countries. The platform also allows its users to upload content, on the condition that it is accompanied by a positive recommendation from a local and a transregional editorial department and that users register using their real names. *Medias Res* contains numerous reportages and documentaries as well as short films, educational material and political content on local and European issues.

2022/23:
**EU DIGITAL STRATEGY
SET OUT IN MORE DETAIL**

To tap into the digital possibilities at the EU's fingertips and ensure digital participation in the long term, plans are devised to enhance the European digital economy. With this in mind, the EU fleshes out its digital strategy and drives forward its implementation. The basis for this strategy is the "Digital Europe 2030" conference, organised by the civic tech community in the wake of the coronavirus crisis.

The main demands are:

- I. decentralising the internet, i.e. shifting data sovereignty from platforms to users by relying on political support to develop the relevant protocols;
- II. massively ramping up support for research into cyber-physical systems to accelerate innovations in industrial production (smart factories), electric vehicle mobility, energy generation (smart grids) and automated value chains;
- III. creating a purely European euro-based payment system to increase independence and maintain competition between payment service providers;
- IV. developing a strategy for promoting *free and open-source software* (FOSS) and relaunching the Gaia-X cloud solution at the European level.

FIRST MEASURES FOR DIGITAL EUROPE 2030

These ideas are discussed and developed further by politicians, economists and civil society. The EU adopts new rules on taxing digital corporations headquartered outside of the EU to cover the high costs of these strategic measures. In the same year, funding for e-health as part of Horizon Europe doubles, while funding for the subprogramme “Enabling and industrial technologies” quadruples.

The civic tech community creates a European chapter of the Internet Society, with the stated objective of formulating a new Internet protocol that facilitates data trusteeship and establishes a single interface between users, trustees and services/platforms. The EU invites tenders for research projects to develop this protocol (*user data management protocol, UDMP*). The proposal attracts global attention and gains prominent support in politics and business.

2023–2028: SWEEPING ADVANCES IN DIGITAL INNOVATION FOR ALL

Europe is gradually establishing itself as a serious player in the digital sector. A number of innovations in cyber-physical systems can be traced back to Horizon Europe projects and are boosting growth in the European economy. For instance, a German machine manufacturer develops a versatile all-round robot that quickly becomes a leading export. The parent company, a conglomerate from China, profits financially, but the underlying expertise acquired during research and development as well as production remains in Augsburg, as it cannot be replicated or replaced by software or AI. In a joint venture pursued by a German machine manufacturer and a Danish robot producer, entire factories

are exported. Thanks to the comprehensive sensor technology used and the networking of all components, the companies are able to react to requests for adjustments even shortly before delivery and thus massively reduce the risk of non-payment. European car manufacturers have agreed on a standard that allows their cars to communicate with one another on motorways, an important step towards autonomous driving.

€Pay has become a market player, and at least in Europe stands alongside Google Pay, WePay (China) and GoPay (Indonesia) as a serious competitor. Owned by Spanish and French banks and a German fintech company, €Pay allows users to pay at a payments terminal using near field communication as well as send money to registered email addresses.

The European FOSS strategy results in the *Open Source App Store* (OSAS), which contains operating systems, apps for chatting and emailing, simple social networks, video conferencing and other applications. Proprietary versions of apps and add-ons are also sold via the app store, enabling smaller software companies in particular to reach large numbers of users. OSAS is mostly used by universities, schools and authorities, but is also very popular among users who support the more stringent data protection rules in place in Europe. Research facilities involved in developing UDMP also play a role in testing the apps.

It is also worth mentioning *EUflix*, a streaming service offering content from the Medias Res library as well as high-quality European films and series. Despite barely making a mark on the global market, EUflix achieves a certain level of success in Europe.

BETTER TIMES FOR THE MEDIA, JOURNALISM AND EDUCATION

A software company based in the Rhineland and a Northern Italian hardware manufacturer join forces to bring in-ear real-time translation (known as *EU plug*) onto the market. This product effectively breaks down language barriers, thus helping to drive forward the development of a European public sphere. And innovations are seen not only in the world of technology: With teachers and lecturers at European universities and schools using the same applications from the European OSAS, new topics and teaching concepts can be shared easily. This boosts innovation in the education sector even though – or perhaps precisely because – the education systems in Europe are so varied; the module “Critical analysis of digital media” is especially popular.

As a result of increasingly noticeable global challenges, such as the rise in climate mobility, growing inequality worldwide and the worrying internal political developments in the USA and China, Europeans (especially youth) become more interested in the issues facing the continent. Transnational electoral lists, which have existed since the 2024 European election, also contribute to the emergence of a European political discourse.

Journalism in Europe is progressing well. Various surveys of journalists and students show that journalism is back on track to becoming an attractive, well-paid profession, with more variety in the job descriptions and sources of income available. The principle of public service media is experiencing a renaissance in many member states, thanks to Europe-wide cooperation and funding that is not dependent on the way broadcasting stations are organised. Disinformation is in abundant supply but fails to take hold.

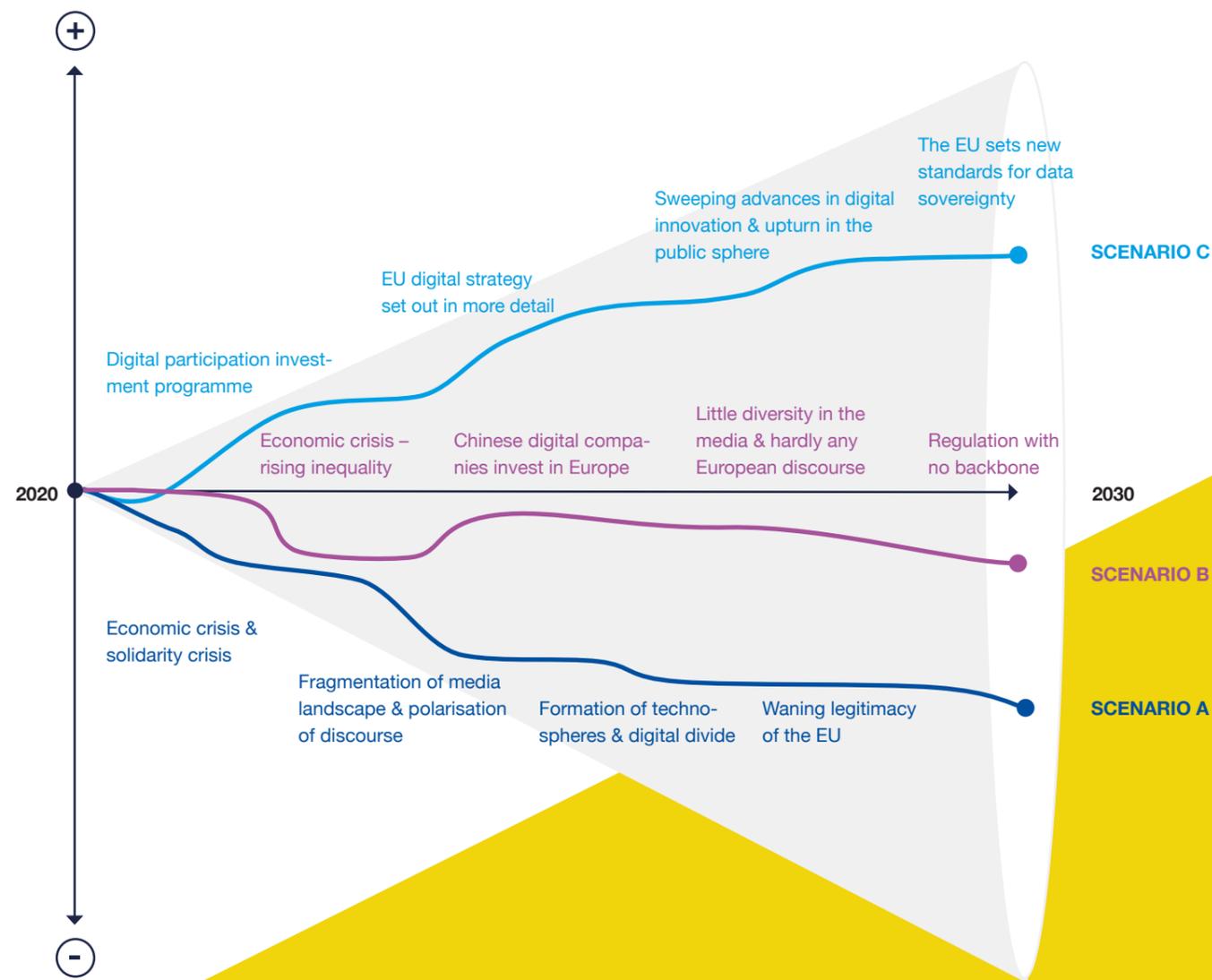
2028/29: THE EU SETS NEW STANDARDS FOR DATA SOVEREIGNTY

Thanks to money for research and a committed civic tech community, the EU is able to successfully implement the proposed Internet protocol aimed at introducing individual data sovereignty. The Internet Engineering Task Force publishes the new *User Data Access Protocol* (UDAP) in 2029, which provides decentralised data trusteeship solutions for internet users. A new paragraph is added to the GDPR on the certification of data trustees through the European Data Protection Board, stipulating the use of the UDAP as a standard protocol. This gives an enormous boost to a variety of innovations that were previously only available in prototype form but unable to drum up demand. As users no longer feel worried about the security and anonymity of their data, this enhances developments in the e-health sector, for instance. Support for research spin-offs also yields important results. With data protection issues no longer an obstacle, the smart grid and smart city management sectors see the emergence of an increasing number of companies with great potential for innovation.

POLITICAL INTEGRATION

The transnational EU election in 2028 achieves a voter turnout of 68 percent. Indirectly, this election is also an indicator of public support for plans to abolish the unanimity principle in European foreign and security policy by means of treaty change. Also under debate is the introduction of a European tax on greenhouse gases as well as a uniform social security system in Europe. For the first time, discussions surrounding these important issues no longer take place along national borders, but between political camps in Europe. Productive debate eventually leads to political compromises and viable solutions. Europe’s digital success story continues in the political arena.

At a glance: THREE SCENARIOS FOR THE FUTURE



Methodology: OUR WORK PROCESS

The “Digital Europe 2030” scenario process consisted of three virtual workshops.

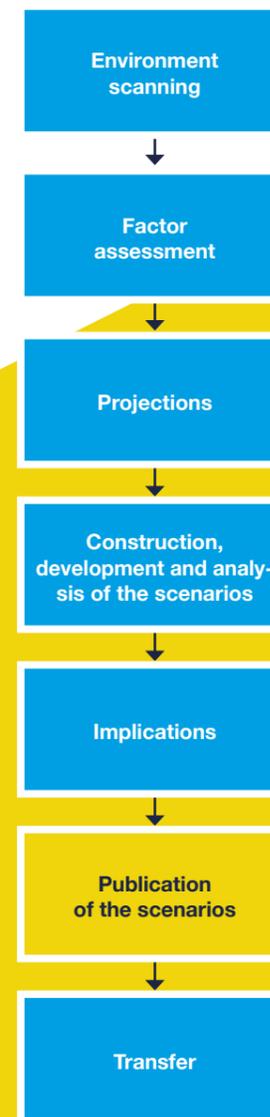
In the first workshop, the group identified factors that have a direct influence (today and up to 2030) on digital Europe (**environment scanning**). The results of this structured brainstorming were compiled into a list of 50 influencing factors from a wide range of areas (economy, politics, society, technology, media and journalism, etc.). In small groups, the participants then assessed these influencing factors with regard to their uncertainty and their impact on “Digital Europe 2030” (**factor assessment**). To construct the scenarios, the group then selected seven key factors that were associated with particularly high levels of both uncertainty and impact.¹⁴

For each key factor, a range of alternative possibilities (**projections**) for their long-term development up to 2030 was formulated. The resulting matrix of projections covering all the key factors provided the basis for the construction of the scenarios in the second workshop. In a moderated discussion, the group logically combined one projection of each key factor to arrive at the first ‘raw’ scenario. This process was then reiterated several times to arrive at a set of distinct combinations (**construction of the scenarios**).

In small groups, the participants subsequently expanded three of the raw scenarios to create more holistic stories of the future (**development of the scenarios**). They started by describing what the situation would look like in 2030, before creating a plausible series of events connecting the situation to the present day. After the workshop, the project team summarised the results of the group work in the form of scenario descriptions, which were then fleshed out in several rounds with both the Sounding Board and the expert group – resulting in the version published here.

In the third workshop, the opportunities and threats contained in each scenario were investigated (**analysis of the scenarios**). Based on these findings, the experts developed ideas for strategic plans of action in order to proactively shape the future of digital Europe whilst also keeping in mind possible alternative developments. Over the course of this process, the group examined which options would be suitable for preparing for not just one, but for all three scenarios (**implications**).

These **published scenarios** now open up the chance for further dialogue on the subject – just as Germany’s Presidency of the Council of the EU takes off. Upcoming publications and events will focus on using these scenarios to derive concrete courses of action tailored to specific fields of work (**transfer**).



¹⁴ The working titles of the seven key factors were: Quality of European integration/collaboration at EU level; Europe’s technological (in-)dependence (skills and market power); Disinformation and the integrity of politics; Quality of journalism and media diversity; Extent and effectiveness of European regulation (on digital technologies); Geopolitics and the global distribution of power; Structural formation of the public sphere.

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The scenarios are based on the participants’ joint discussions and do not reflect their personal views or the opinions of their respective organisations.

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The background consists of several overlapping geometric shapes. A large yellow shape is on the left side, and a large blue shape covers the right and bottom portions. The shapes are angular and create a dynamic, abstract composition.

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