



European Strategy and  
Policy Analysis System

*GLOBAL TRENDS TO 2030*  
**CHALLENGES AND  
CHOICES FOR  
EUROPE**

April 2019



AN INTER-INSTITUTIONAL  
EU PROJECT





### **Florence Gaub**

Florence Gaub is the Deputy Director of the European Union Institute for Security Studies (EUISS) and is the lead author of this ESPAS report *Global Trends to 2030: Challenges and Choices for Europe*. In addition to overseeing the EUISS' research activities, Florence works on strategic foresight, geopolitics as well as the Middle East and North Africa. Florence is widely published, and her two latest publications include *The Cauldron: NATO's Libya campaign* and *Guardians of the Arab State: Why militaries intervene in politics*.

Previously employed at NATO Defence College, she was educated at Munich University, SciencesPo, the Sorbonne, and holds a PhD from Humboldt University Berlin.



## TABLE OF CONTENTS

Foreword: the future is now	2
<b>Introduction: between prediction and foresight</b>	<b>4</b>
<b>Welcome to 2030: the mega-trends</b>	<b>7</b>
We are hotter	8
We are more, but where?	9
We live in cities	12
We continue to grow economically	13
We need more energy	17
We are highly connected	18
We are poly-nodal	19
<b>On the road to the future: the catalysts</b>	<b>22</b>
Trade will increase	23
Food and water will have to be watched	24
Warfare will change	25
Terrorism will remain	27
Technology will sprint ahead	28
People will move	29
Populists will try	31
<b>Time to decide: the game-changers</b>	<b>33</b>
How do we save the planet?	34
How do we improve ageing?	35
How do we manage new technologies?	35
How do we position Europe in the world?	36
How do we manage conflict?	36
How do we protect democracy at home?	37
How do we reach equality?	37
<b>Action and inaction: two scenarios for 2030</b>	<b>39</b>
If we take action	40
If we do not take action	41
<b>Conclusion: foresight does not replace the future</b>	<b>42</b>

# FOREWORD THE FUTURE IS NOW

by *Ann Mettler, Chair, ESPAS*

**T**he next decade will be defining for the future of Europe and Europe's role in the world. Seismic global power shifts; pressure on liberal democracies; challenges to global governance; the transformation of economic models and the very fabric of societies; new uses and misuses of technology; contrasting demographic patterns; and humanity's growing ecological footprint – the world is well on its way towards a new geopolitical, geo-economic and geo-technological order. What role will Europe play in this fast-changing world? How can the European Union ensure that it does not end up a middle power, caught between the United States and China? What will it take for Europe to hold its destiny in its own hands in 2030?

**The future is now, and tomorrow's challenges (and opportunities) are determined by today's choices.** But the future is not what it used to be. The world is far more complex, contested and competitive than before – and is changing at unprecedented pace. The interconnected and interdependent nature of national, European and global affairs has put a new premium on agile policy- and decision-making, resilience, strategic foresight, and anticipatory governance – all of which are more important now than ever before. Despite being more necessary and urgent, developing a 'culture of preparedness' and proactively shaping the future has also become more difficult and testing.

## TOWARDS A CULTURE OF PREPAREDNESS AND ANTICIPATION

Against this backdrop, the ESPAS *Global Trends to 2030: Challenges and Choices for Europe* report is a contribution to support policy- and decision-makers as they navigate the world into 2030. We may not be able to provide a linear, pre-determined chart – from port of departure to port of arrival. But what we *can* do is extrapolate insights from current global trends; explore some of the key uncertainties that will shape Europe's future; and better anticipate some of the choices and decisions that might confront us in the coming decade.

Without purporting to be all-encompassing, **this report seeks to pull together available evidence for what one may well call a European reality-check.** Europe is a key global player in many areas, but the world is no longer Eurocentric – nor will it be so in the future. Europeans will be fewer, older, and relatively poorer while much of the rest of the world is rising. Even if European Union Member States pool more resources together, Europe will remain outspent on security and defence. And as global power is being redefined by rapid technological progress, Europeans lag behind China and the United States on emerging technologies and innovations – from Artificial Intelligence to quantum computing. These are facts and they matter.

And, if there is any doubt about how much the world will change over the next 10 years, here are just some of the facts that point to profound change on the horizon:

- » **The world is becoming less free:** If, until 2005, democracies and freedoms were expanding around the world, today they are in decline – a trend that has played out unabated in the last 13 years;
- » **Global power is shifting:** If, today, of the world's eight largest economies, four are European (including the United Kingdom), by 2030, that number will be down to three (including the United Kingdom) and by 2050, only Germany is set to remain.
- » **The world economy is turning East:** If, in 2005, the size of the European economy (at current market prices) was more than six times larger than China's, today, China has all but caught up, with an economy worth 11.4 trillion euro, against 15.9 trillion for the EU 28 or 13.5 trillion for the EU 27;

- » **Connectivity is the new geopolitics:** If, in 2005, there were around one billion Internet users worldwide, today that number stands at almost four billion and rising. At the same time, the number of connected devices is increasing exponentially, powered by the fast-growing Internet of Things and the Fourth Industrial Revolution. Indeed, 'connectivity' is becoming a forceful expression of political power and global ambition, far surpassing mere economics.

## STRONG EUROPE, BETTER WORLD

With these profound changes underway, it may seem easy to dismiss Europe, as too small and too insignificant to really make a difference, but that would be a grave mistake. **Not only does Europe need Europe, but the world needs Europe as well** – as an inspiration for a better future; a sound balance between economic, social and environmental objectives; a beacon of democracy, diversity and freedom; and a true champion of multilateral solutions and collaborative approaches in a world increasingly dominated by nationalism and zero-sum politics. Europe is still a normative superpower, the place that sets the global gold standard when it comes to human-centric technology and digital rights, to regulation and consumer welfare, to social protection and inclusive societies.

As Florence Gaub – the leading author of this report – puts it, **foresight is a call to action**, it is about human agency and the choices we make. Europeans have two alternatives: to be largely idle bystanders of a future that will be shaped by others, or to shape that future themselves. The answer seems to be clear, but it is far from certain that Europeans will act jointly and decisively to confront challenges and seize opportunities. If this report makes one point unabashedly clear, it is that even the largest EU Member States cannot hope to achieve much on their own in this complex, contested and competitive world. Global trends are shaped by global powers, and 2030 is right around the corner. The choice is ours, and ours alone.





The background of the page is a composite image. The top portion is a dark, starry space background. Below this is a bright blue gradient. The bottom portion is an aerial photograph of a rugged, mountainous landscape with a mix of brown, tan, and green terrain. A semi-transparent grid of small blue squares is overlaid on the left side of the image, fading out towards the right. Two thin white diagonal lines cross the page from the top corners towards the bottom.

*INTRODUCTION:*  
**BETWEEN PREDICTION  
AND FORESIGHT**

For something as unknown as the future, it appears to have become surprisingly predictable. A Google search of 'future 2030' yields more than 97 million results, all more or less claiming similar things: that 2030 will see a more connected, yet fragmented world, with hazardous shifts in demography and energy, and dangerous changes in technology, environment, and politics.

The future, while overall negative, appears to be a rather certain place.

This illusion of definitiveness is created by two dynamics: first, the pessimistic tone that runs through the vast majority of foresight reports. This is a common feature when it comes to future thinking, with one study showing that all studies undertaken on the future over the last 70 years have one thing in common: pessimism.<sup>1</sup> The reason for this is simple: although both optimism and pessimism are natural human dispositions, the latter is more prevalent by far. Humans are, genetically speaking, biased towards the negative – some studies even indicate that this is particularly the case for Europeans.<sup>2</sup> Second, pessimism in foresight is encouraged by the grave air that surrounds it: in general, negative statements are given more attention than positive ones. That said, more pessimism in foresight does not equal greater accuracy, as one study shows.<sup>3</sup> In addition, it is precisely the seriousness and inevitability that often accompanies pessimism that is dangerous in foresight: taken together, they can easily promote paralysis and fear rather than action – the exact opposite of what foresight seeks to achieve.

Why is this so? Paradoxically, the more catastrophic the news, the less likely humans are to act – a phenomenon known as the Cassandra Curse. For instance, showing images of patients dying of cancer has not stopped people from smoking or tanning. The reason for this is that the change required to address the challenge is so fundamental that humans are paralysed when confronted with the task.<sup>4</sup> The abstractness of forecast facilitates this further: a number or phenomenon often does not lay out graphically what this means in detail for the individual reader – but humans act mainly when they understand (indeed, can imagine) what a certain development means precisely for them.

In this sense, successful foresight is not one which terrifies: it is one which promotes action. After all, foresight is not, as is sometimes claimed, the art

of predicting the future (and being consistently wrong about it, some say). Prediction, like pessimism, is deterministic and static. Instead, foresight is an intellectual exercise where we imagine different alternatives of the future – and tracing how we end up there. This is because whenever humans ponder the question of the future, they do so not merely to predict it, but, more importantly, to shape it. Indeed, the future is not just an idea of an upcoming state of the world – it always includes a method through which this idea can come about.<sup>5</sup> Therefore, foresight is to the future what memory is to the past: an organising yet selective principle creating order in complexity. Just as memories, the future is therefore a discussion space where meaning is created, not an (un)predictable set of events.<sup>6</sup> Consequently, foresight is never about one future, but about different possible futures.

*Foresight is much more about shaping the future than predicting it.*

The European Strategy and Policy Analysis System (ESPAS) was created precisely for this purpose: it provides a uniquely (but not exclusively) European space to identify and analyse the key trends and challenges, and the resulting policy choices, which are likely to confront Europe and the world in the years ahead. Similarly to its predecessors, this report is the outcome of a year-long consultation and review process identifying and discussing trends and options, involving representatives from the European Parliament's Research Service, the European Commission, the General Secretariat of the Council of the European Union, the European External Action Service, the European Economic and Social Committee, the European Committee of the Regions, the European Investment Bank, as well as the European Union Institute for Security Studies, think tankers, academics and experts.<sup>7</sup> It builds upon a vast array of reports and studies produced by the European institutions and third parties such as international organisations and research institutes.<sup>8</sup> It is, in that sense, a European discussion space where not only 2030 is imagined, but also the different roads which can lead us there – and what can be done to influence their trajectory.

In addition to providing a concise overview of what we already know, this report also seeks to inject new elements into the discussion. What



---

are the dynamics we are missing? Are there ways to think differently about the forecasts we are 'certain' about? Are there interlinkages and knock-on effects that we could explore further? What different futures can we imagine within the framework of what we know – and do not know? And most importantly, what does it all mean for Europe?<sup>9</sup> With this in mind, this report seeks to be as tangible and concrete as possible for European decision-makers, so that they do not lose sight of policy priorities during their day-to-day work.

***Rather than predictability, we seek surprise to challenge our thinking; rather than ending in paralysis, we look for actionable possibilities; rather than pessimism, we write this in the spirit of constructive optimism about what we can and want to change – in Europe and the world.***

It is important to note that this report does not aim to be globally comprehensive: not every trend the world will see by 2030 will be captured here. Instead, we focus on those global trends that matter most to Europe. This means that this is not a report on global trends generally, and it is not a report on European trends: it is an analysis of what global developments affect us, to what extent, and what we can do to shape them.

To do this, we need to create order in the seeming infinity that is the future by essentially using two tools: the present-day, and creative logic. After all, tomorrow will be a consequence of today, so clues as to what it will be like can already be identified in the now. We reduce the unknown with the many measurable trends we observe, and root our analysis very much in the factual. These are the elements of certainty we have. But simple extrapolation would not be foresight: the unknown dimension of the future is hidden in the new, be it developments we are unable to see today, or interactions between trends we did not expect. These unknowns can be reduced by thinking creatively about what possibilities for development there are. Armed with these categories, we can then zero in on the most important aspect: what can be done to shape these futures.

» [Mega-trends](#) are those developments already underway and nearly impossible to change over the coming decade. Inevitably, all the subsequent possible futures will be framed by these trends. These are irreversible certainties that we have.

» [Catalysts](#) are trends that, while identifiable, have higher degrees of uncertainty because they move faster than mega-trends. Like their namesake from chemistry, these trends are agents of change which can accelerate or decelerate other trends. They are uncertain certainties.

» Taken together, mega-trends and catalysts drive the future in a certain direction. But ultimately 2030 will depend on the decisions humans take *in the present*. These are the [game-changers](#) that will determine the future, and yet they have the lowest degree of certainty.

All three categories are interlinked – not just in real life, but also in this report. It therefore does not have to be read from cover to cover, but also through using the links amongst the different sections. This allows for an individualised reading experience depending on interest and time available. Those who are short on time, can jump straight to the [game-changers](#) – or, those who are even busier, straight to the [two scenarios](#) resulting from action or inaction.





*WELCOME TO 2030:*  
**THE MEGA-TRENDS**

Whenever we think about the future, mega-trends are our first helpers. This is because mega-trends have several characteristics in common that help us narrow down the futures from infinite possibilities to a restricted possibility space. As their name suggests, mega-trends are trends that occur on a large scale; they therefore affect large groups of humans, states, regions, and in many cases, the entire world. Mega-trends also unfold over an extended period of time: their lifespan is normally at least a decade, and often longer. Most importantly, mega-trends are linked to our present and are therefore phenomena we can already observe today. Because mega-trends are measurable, and affect many, and for a long period of time, they lend a previously foggy future an increased degree of visibility.

In this sense, mega-trends are the strategic forces that shape our future in a manner akin to a slow-moving glacier: they cannot easily be turned around by humans. In contrast to many other factors concerning the future, this type of trend can be backed up by verifiable data stretching into the past. The longer the data trail, the more reliable the trend.

Therefore, mega-trends serve as the backdrop against which any of Europe's futures will be set in 2030.

However, while mega-trends present a high degree of measurability, they are still open to interpretation. This is where forecast is different from foresight: whereas the former establishes a future fact (e.g. the number of people who will have internet access), foresight interprets this fact (e.g. that this increased connectivity means international trade will become faster).

Climate change, demography, urbanisation, economic growth, energy consumption, connectivity and geopolitics are among the most prevailing mega-trends that are explored in this report.

## WE ARE HOTTER

Climate change has two aspects to it: the dire consequences of past mistakes, which are already tangible today and will increase towards 2030, and the far worse consequences of mistakes we must avoid now. This means two things for the coming decade: first, that we will finally begin to feel the disruptive impact of rising temperatures and related weather events (the world is already

1 degree warmer than in the 1950s<sup>10</sup>), and second, that we may reach a tipping-point where changes to the climate become uncontrollable (discussed in the [game-changers](#)).

Concerning the first dimension, even in the unthinkable scenario of all emissions from human activities ceasing today, carbon dioxide already in the atmosphere will remain there for about 40 years. So irrespective of our next decisions, we will be hit by the fallout of past inaction and will have to manage the impact accordingly.

It is estimated that

***By 2030, the world will be 1.5 degrees warmer than during pre-industrial times.<sup>11</sup>***

This means that hotter summers will be the norm throughout Europe – but also in the United States, the southern neighbourhood and Asia. This will lead to increased occurrences of droughts and wildfires, as seen in the summer of 2018, the hottest on record and one in which 30-50% of certain key crops were lost in Europe. Studies show that healthcare costs increase significantly per heat wave, and that in the United States the cost of fighting wildfires reached \$2 billion in 2017. In total, weather-climate disasters cost 290 billion euro in 2017.<sup>12</sup>

### ***What does this mean?***

- » The increase in global temperature is the most pressing policy issue in the present day – and has been for the last decade, without generating the necessary responses.<sup>13</sup> Today, the effects of global warming are beginning to be felt by the public and policymakers alike, triggering deep societal concerns. As a result, previously unpopular decisions which will curb emissions may become easier to take and implement. At the time of writing, our political systems are, however, not undergoing the necessary radical changes, increasing the risk of 'runaway' (i.e. uncontrollable) climate change up to 2030.
- » An increase of 1.5 degrees is the maximum the planet can tolerate; should temperatures increase further beyond 2030, we will face even more droughts, floods, extreme heat and poverty for hundreds of millions of people;

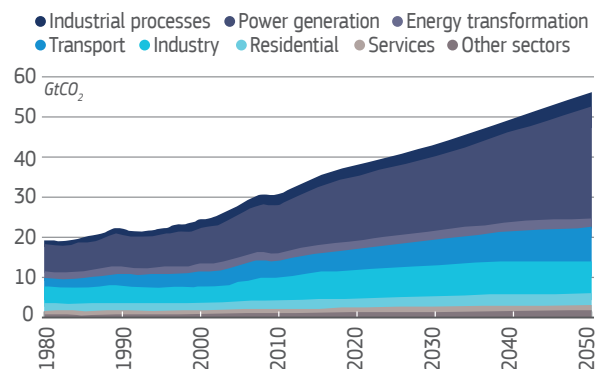


the likely demise of the most vulnerable populations – and at worst, the extinction of humankind altogether. [Learn more about how we manage climate change p.34.](#)

- » The main culprit for greenhouse gas emissions is energy production. By 2030, Europe is set to draw 32% of its energy from renewable energy sources – while we are a leader in this domain, it is not enough to curb temperatures.<sup>14</sup> [Learn more about energy p.17.](#)
- » There are three actors in particular that are most responsible for the increase in emissions due to their sheer size, as well as for its future reduction: Europe, the United States and China. Only jointly can this challenge be met. [Learn more about the future of multilateralism p.19.](#)
- » Increased temperatures will be felt particularly in cities, making urban planning even more important. The larger the city, the larger the increase will be. [Learn more about urbanisation p.12.](#)
- » Extreme weather conditions, especially heat, hit older populations harder – which Europe will have more of. [Learn more about demographics p.9.](#)
- » Hotter temperatures will mean a drop in productivity – and even more emissions in a downward spiral thanks to air conditioning. By 2030, the loss in productivity due to the hotter climate will mean the loss of more than 1.7 trillion euros globally.<sup>15</sup> [Learn more about economics p.13.](#)
- » Since high-level decision-making has not made the necessary progress, local and regional actors (such as the C40 initiative of 94 cities) have stepped in with their own measures in place to curb emissions. [Learn more about urbanisation p.12.](#)
- » Climate change is felt more in some places than in others: the Middle East and North Africa, for instance, will be afflicted by a temperature rise 1.5 times higher than the rest of the world. Aridification and extreme weather will push people from the countryside into cities and put pressure on existing conflict fault lines, as happened in Syria prior to the civil war.<sup>16</sup> [Learn more about urbanisation p.12.](#) [Learn more about conflicts to come p.25.](#)
- » Rising emissions are linked to energy consumption and energy generation, which are projected to keep increasing in parallel with the growing global population and middle class. [Learn more about demographics p.9.](#) [Learn more about economics p.13.](#)

- » Transport is another culprit for emissions – and one that will grow as mobility across the globe grows. Globally, green energy will clean up this sector only gradually and unevenly over the next decade. [Learn more about connectivity p.18.](#)
- » Cutting fuel subsidies and shifting to a greener economy is a painful step that can be exploited by populists worldwide. [Learn more about populism p.31.](#)
- » In part, climate change is driven by what we eat: 14.5% of greenhouse gas emissions result from livestock, especially cattle raised for both meat and milk.<sup>17</sup> If cattle were a country, it would rank third in emissions behind the United States and China. What we eat is intrinsically connected not only to climate change, but also to how we age: the two issues must be addressed together. But at the moment, only a few states, such as Germany and Sweden, have developed dietary guidelines promoting environmentally sustainable diets. [Learn more about how we age better p.35.](#)

### Global CO<sub>2</sub> emissions by source: Baseline, 1980-2050



Note: 'energy transformation' includes emissions from oil refineries, coal and gas liquefaction

Source: OECD Environmental Outlook baseline, 2011

## WE ARE MORE, BUT WHERE?

One of the best examples of a mega-trend is demographics. Because there are several decades between birth and death, the number of people living in a certain territory can normally be predicted with a higher degree of certainty.<sup>18</sup> Therefore, while errors in mega-trend calculation can occur, they are normally not entirely off the mark. It is for this reason that we can say with plausible certainty that by 2030 the population of the world will be greater than today.



**We will no longer be 7.6 billion, but 8.6 billion, in 2030.**

**Europe's southern neighbourhood will have reached 282 million in 2030 from 235 million today.**

To add some perspective to this impressive number, global population growth overall is slowing down – but it will not have stopped by 2030.<sup>19</sup> As with projections generally, this number can change in a variety of ways, especially in the longer run due to uncertainties regarding the impact of climate change: for instance, because fertility rates do not develop as envisaged (in the past Asian rates dropped faster but African ones were slower than anticipated). But even pandemics, or drastic changes in fertility rates, are unlikely to change the 2030 figures significantly.

**Population of the world and regions, 2017, 2030, 2050 and 2100, according to the medium-variant projection**

Region	Population (millions)			
	2 017	2 030	2 050	2 100
World	7 550	8 551	9 772	11 184
Africa	1 256	1 704	2 528	4 468
Asia	4 504	4 947	5 257	4 780
Europe	742	739	716	653
Latin America and the Caribbean	646	718	780	712
Northern America	361	395	435	499
Oceania	41	48	57	72

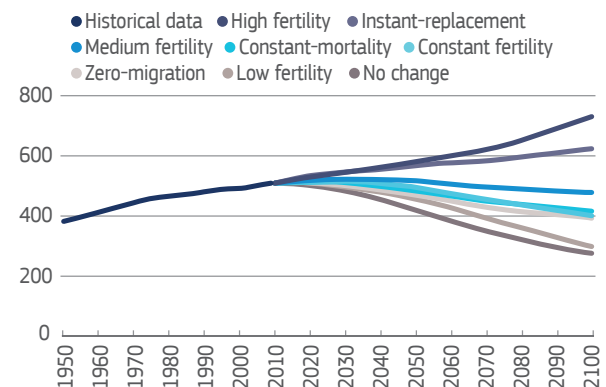
Source: United Nations, Department of Economic and Social Affairs, Population Division (2017). World Population Prospects: The 2017 Revision, New York: United Nations

What is more interesting than the figure as such is, first, where this growth will occur, and second, and more importantly, the consequences.

Future demographics divide the world into two camps: one which is growing, and another which is shrinking. The first is, as is now common knowledge, the case in Sub-Saharan Africa and South Asia (Nigeria, Tanzania, Ethiopia, India, and Pakistan, for instance). Another region where growth will be substantial, of particular interest to the EU, will be the southern neighbourhood – Egypt alone will add 21 million inhabitants. Even though its growth is already slowing down and will continue to do so, regionally the trend will not yet be reversed by 2030 (only Tunisian and Lebanese fertility rates will then have reached European levels).

At the other end of the spectrum are those parts of the world where population size is stalling or decreasing – in the lead here is the European Union, whose population with 27 member states is projected to be anywhere between 498 and 529 million in 2030 (in 2018, it was 513.8 million, including the United Kingdom, and the possible increase will only materialise in a high-fertility scenario highly contingent on policies in this regard).<sup>20</sup> But the EU is not alone: the eastern neighbourhood is following the same trend, and is likely to decrease from 74 million inhabitants today to 71 million in 2030.<sup>21</sup> Russia, too, is projected to decline from 143.9 million to 140.5 million. Crucially, China has 'peaked' as well and will remain stable at about 1.4 billion. Overall, the populations of more than 50 countries will decline in the coming years.<sup>22</sup>

**Historical and projected EU-28 population**



Note: The figure shows past (1950–2010) and projected (2010–2100) total EU-28 population.

Source: European Environment Agency, 2015

This trend is complemented by a second one: longevity. We are not only more numerous; globally, and in both 'camps', we also live longer. This is the result of a host of positive factors related to healthcare and wealth. By 2030, women in South Korea will have a life expectancy of 90, and in Africa life expectancy will be 64.<sup>23</sup> In terms of longevity, European populations are already faring well and will continue to do so in 2030, when French women will reach the highest longevity in the EU with a life expectancy of 88.<sup>24</sup>

As a whole, the world will therefore be older than today: in 2030, 12% of the world population will be over 65, up from about 8% today.



## Humanity is entering adulthood.

Europe leads this trend: in 2030, 25.5% of its population will be over 65 (up from 19% in 2017).<sup>25</sup> Russia and China follow the same pattern, with one-quarter of their populations set to be over 60 in 2030 (although Russian life expectancy will continue to stay well below European averages).<sup>26</sup> North America and Asia, especially India, will also see their populations live longer. But while humanity is growing older, some areas of the world will still feel the effects of youth bulges – whereby a population has a very high share of young adults and children. Even though numbers are dropping, they will remain high in Africa, but also in Europe’s southern neighbourhood where more than 45% are under the age of 30, down from 65% in 2010.<sup>27</sup>

### What does this mean?

A look to the past shows us that demographics have been a source of anxiety ever since the 1970s, when the so-called ‘population explosion’ gave rise to the idea of an inevitable famine (some predictions even foresaw the end of humankind because of a lack of food).<sup>28</sup> Global population increased, and the famine never materialised. Demographics today continue to be linked to other major concerns: from resources, climate and conflicts to migration, pensions, and health. As one report puts it: ‘demography is a political combat sport in which data and forecasts are weapons.’<sup>29</sup> For Europeans, psychology plays a role, too: ‘decline’ sounds like a loss, and ‘growth’ elsewhere sounds a like fear-generating word. But what do these numbers actually imply for geopolitics, economics, and social issues?

- » Europe’s work force will have shrunk by 2% in 2030 – despite the assumption that employment rates will slightly increase.<sup>30</sup> Nevertheless, its GDP will continue to grow moderately. [Learn more about economics p.13.](#)
- » At the same time, European spending on age-related issues will increase by 2%.<sup>31</sup> Most of this will not be spent on pensions, but on health- and long-term care. This means that if we manage to improve how we age, we will be able to reduce these costs, work longer, and be happier. [Learn more about how to improve ageing p.35.](#)
- » A smaller Europe seems to imply less economic growth, but future economies will be less manpower-intensive. A smaller, and more

educated population will be a competitive advantage – but at the moment, Europeans do not foresee an increase in educational spending. [Learn more about how new technologies will shape future economies p.28.](#)

- » Europe is not alone in facing the demographic challenge: China, Japan and Russia, too, have to find solutions for ageing populations and shrinking labour forces. [Learn more about economics p.13.](#)
- » Geopolitical influence is often seen as determined by population size – but this is a simplistic calculation. Influence is the result of economic performance, education, connectivity, relations and soft power – meaning that even given its comparatively smaller size, Europe can be an influential player. [Learn more about multilateralism p.19.](#)
- » Europe’s declining birth rate is, in part, a side effect of incomplete gender equality. Policies which would make it easier for mothers to work will have a positive impact on European demographics, economics, and equality. Although Europe is a leader in this regard, we are still far from the set goal: European women do more than twice the amount of domestic work, earn 16.2% less than their male colleagues, and display 10% lower employment rates than men.<sup>32</sup> Several of Europe’s future demographic challenges will be much easier to handle when women and men are equal. [Learn more about how to improve ageing p.35.](#)
- » Population growth in Africa has led some to the assumption that these populations will ‘run out of space’ and move to Europe. Not only is Africa’s population density much lower than that of Europe or Asia, migration will be determined by several other factors rather than space. [Learn more about migration p.29.](#)
- » The solution to decline in birth rates seems to be migration, but past experiences with supplementing European economies with migrants shed some doubts on this assumption. As one expert concludes, ‘Despite the polemical assertions on both sides of the immigration debate, the evidence suggests that the net effects are usually likely to be small. (...) In the long term any economic effects are trivial.’<sup>33</sup> [Learn more about migration p.29.](#)
- » Even though the southern neighbourhood’s youth bulge will have shrunk by 2030, it could still have destabilising effects in the region and Europe. [Learn more about conflicts to come p.25.](#)



- » Rising temperatures will affect economic performance, and it will hit older people in the work force more. [Learn more about climate change p.8.](#) [Learn more about economics p.13.](#)
- » There are concerns that older European populations will become more conservative and risk-averse politically speaking, but there is no evidence to prove this: rather than age alone, it is political events during the formative years of an individual that shape his or her voting behaviour.<sup>34</sup> There is some hope that the longer humans live, the more educated they become as they accumulate knowledge – making them perhaps more critical when it comes to populist slogans. [Learn more about populism p.31.](#)

## WE LIVE IN CITIES

While urbanisation is one of the older trends discussed here (it emerged in the early 20<sup>th</sup> century in Europe and North America), it is now developing new characteristics. It is by now common knowledge that by 2030 two-thirds of the world will live in cities<sup>35</sup>, but it is often overlooked that

***Far more will live in cities of under 1 million, followed by those between 1 and 5 million.***

These small- to medium-sized cities are currently growing at twice the rate of megacities which dominate the discussion. But the number of megacities is not projected to increase significantly by 2030. Then, we will see 43 such agglomerations of more than 10 million people in the world (only one of which, Paris, will be located in the EU).<sup>36</sup> Today, depending on how it is counted, there are already between 33 and 47 megacities on the planet.<sup>37</sup> And even though they are and will be an important feature of 2030, they will be home to only 8% of the global urban population, whereas the rest will live in medium-sized cities – the future, while very much urban, will therefore be more Munich than Cairo in size and shape. While this sounds more manageable, it is also this type of medium-sized city, especially in Asia and Africa, which struggles to find the necessary capital to prepare for the challenges related to the coming growth.<sup>38</sup>

Europe's levels and types of urbanisation are therefore very much in line with the rest of the world in 2030: most Europeans already live in

cities between 100,000 and one million – and only 7% of the European population lives in cities larger than five million (compared to 25% in the United States), a trend that will remain the same in 2030.<sup>39</sup> This means that

***Cities, rather than megacities, are at the centre of all other trends discussed here.***

Cities will consume 60-80% of energy resources, will be responsible for 70% of global emissions, account for 70% of the world gross domestic product and 35% of GDP growth. Cities are also where inequality and social exclusion are particularly pronounced, and where citizens interact chiefly with governance: while only 21% of Europeans declared to have faith in national governments, 45% declared to have faith in regional and city governments.<sup>40</sup> Cities are the centre of innovation, of economic activity, but also the recipients of migration movements and the theatre for political discontent, conflict, terrorism and crime.<sup>41</sup> Cities that offer attractive employment draw in an educated workforce from other parts of the country, contributing to salary segregation within a given country.<sup>42</sup> When we say 2030 will be urban, this is not merely an expression of residency, it will be the way of life of society as a whole.

### ***What does this mean?***

Where urban growth occurs in an uncontrolled fashion, it leads to urban sprawl, low productivity, segregation, congestion and crime. That said, there are a number of reasons why a city is an attractive destination: on average, relocating to a city has improved the lives even of those living in dire circumstances – for example, by allowing for better access to water and electricity.<sup>43</sup> This means that the city should be understood not merely as a hotbed of problems, but as a potential accelerator of human progress – if managed properly.

- » In 2030, local politics will be the conveyor belt for other policy issues: already, European regional and local elections match national elections in voter turnout. This means that cities are much closer to the daily lives and grievances of citizens, and therefore powerful antidotes to populist movements thriving on the perceived distance between the electorate and the national governments. This could also help address the



democratic deficit often raised with regard to the EU.<sup>44</sup> [Learn more about populism p.31.](#)

- » This is the case elsewhere, too: in Libya and Ukraine, conflict resolution has been most successful at the local level. European cities assisted in conflict settlement, opening avenues for a new model of the 'diplomacy', a new actor in diplomacy. [Learn more about conflicts to come p.25.](#)
- » Terrorism is an urban phenomenon, but cities are rarely involved in the decision-making which addresses it.<sup>45</sup> [Learn more about terrorism p.27.](#)
- » Urbanisation correlates with declining fertility rates, suggesting potentially lower birth rates in the future, as states in Africa urbanise, too. [Learn more about demographics p.9.](#)
- » Cities are considered responsible for increased pollution and climate change – but it is not human agglomeration itself that is the main culprit, but several other factors such as how well the city is connected, how large households are, what the population's median age is, how many industries are located within the city and how densely the city is populated. In fact, higher population density can lead to less energy consumption and emissions when transport and buildings are suitably adapted.<sup>46</sup> [Learn more about how we tackle climate change p.34.](#) [Learn more about the effects of climate change p.8.](#)
- » Modern technology has the potential to change urban areas into cleaner, safer and more efficient places, so-called 'smart cities' – provided there is connectivity and a minimum of infrastructure development. [Learn more about connectivity p.18.](#) [Learn more about new technologies p.28.](#) [Learn more about how we could manage technological progress p.35.](#)
- » Cities are associated with crime, but urbanisation is not the only relevant variable. Instead, urban crime heavily correlates with unemployment, inequality and inflation. [Learn more about economics p.13.](#)
- » Cities are also considered responsible for rising inequality – but it is there that inequality is decreasing faster than elsewhere.<sup>47</sup> [Learn more about economics p.13.](#)
- » Only one European city, Frankfurt, appeared in the top 20 of unequal cities.<sup>48</sup> [Learn more about economics p.13.](#)

- » Rapid urbanisation is correlated with the outbreak of civil war: as grievances over inadequate housing and jobs accumulate, networks of discontent and crime do, too. That said, few states concerned by emerging megacities (especially in Africa and Asia) have plans to manage the speed of their development – or struggle to find the necessary funds.<sup>49</sup> [Learn more about conflicts to come p.25.](#) [Learn more about how we manage those conflicts p.36.](#)
- » Even though crime is more frequent in cities than in rural areas, violent crime as a whole has been on the decline globally since the 1990s.<sup>50</sup> The new type of crime now is organised – and digital. [Learn more about connectivity p.18.](#)
- » Military action will see more urban warfare than before as a result of more people living in cities. But not all armed forces are prepared for this type of combat which requires a different type of skill from currently common warfare – with potentially large scale destruction of infrastructure and many victims as a result, as happened in Syria. [Learn more about conflicts to come p.25.](#)

## WE CONTINUE TO GROW ECONOMICALLY

At first glance, prospects for the global economy look rather positive: projections show that average global economic growth will be around 3% a year in the coming decade, making the world a richer place than today.<sup>51</sup> Most of this growth will happen in the developing economies, whose growth will accelerate from 3.1% currently to 3.6%. Developed economies, too, will grow, albeit at a much slower rate: Europe, for instance, is projected to grow at 1.4% a year – probably not enough to significantly improve employment rates, investment levels and the integration of young people into the labour market.<sup>52</sup>

Taken together, these two developments mean that by 2030, China is expected to become the world's largest economy, surpassing the United States. As a result,

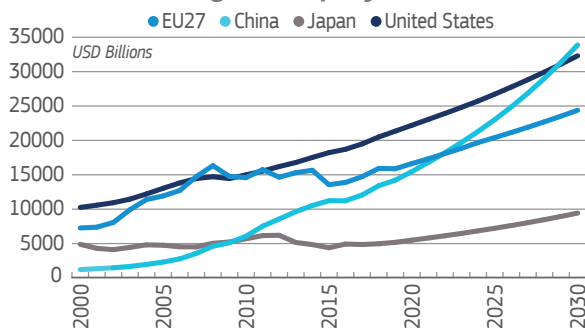
***Europe will be the third global economy.***



It is worth noting that things look quite different when measured as GDP per capita: while China's will grow from currently \$10,000 to \$14,000 in 2030, Europe's GDP per capita is expected to grow from \$37,800 to around \$50,950.<sup>53</sup>

These projections are, however, not fail-safe: while measures have been taken to prevent another financial crisis, there are still some elements policymakers should be concerned about. For instance, public debt remains high, financial regulatory reform is not yet complete, and global tensions over trade could destabilise the global economy.<sup>54</sup> And economic growth could slow down in China and the United States, affecting Europe as well.

### Nominal GDP growth projection



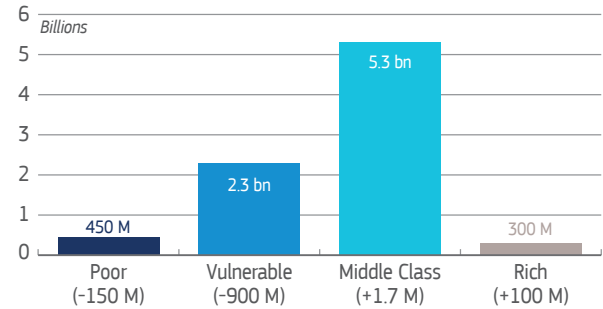
Source: ESPAS, based on IMF Economic Outlook

Note: IMF estimates begin in 2017. Figures after 2025 represent an extrapolation of IMF estimates using 2019-2024 average yearly GDP growth

Two rather positive dynamics are the result of these global developments: first, by 2030 the majority of the world will be middle class – defined as individuals falling anywhere between 67-200% of the median income in a country. Current estimates show that there will be 5.3 billion people classified as such in 2030, up from 3.2 billion now.<sup>55</sup> A large chunk of these people will be situated in emerging economies, especially in China. In addition, extreme poverty – defined as living on less than \$1.90 a day – now stands at 10.9%, down from 35% in 1990 – as the goal of cutting the 1990 poverty rate in half was reached five years ahead of schedule, in 2010. This means that the goal of reducing the rate to 3% in 2030 is a realistic one.<sup>56</sup>

Second, while almost everybody will be doing better in 2030, so will those that are already doing best – 1% of the world's population is projected to own two-thirds of its wealth in 2030, up from half of what it owns today.<sup>57</sup> This is hardly a new trend: the phenomenon of wealth accumulation has been three decades in the making. That said,

### Middle class dominance in 2030



Note: Figures in parenthesis indicate the increase/decrease in the number of people in each category by 2030.

Source: projections by World Data Lab

there are critical differences from country to country – for instance, Europe is home to the most equal societies, but inequality is very pronounced in the United States or the southern part of Africa. In general, inequality *within* countries is more pronounced than between countries.

How inequality emerges, and indeed increases, is still a puzzle. While it is related to differences in salaries, this is not all there is – other factors are the uneven accumulation of wealth over time, a general shift from low- to high-skill work, a decline in labour market protection, and tax policies.<sup>58</sup> Somewhat ironically, it is even the result of improved gender equality: as educated men increasingly marry educated women (a phenomenon called 'assortative mating'), female social mobility is reduced.<sup>59</sup> Globalisation has also been accused of promoting inequality, but not all evidence supports this claim. Simply put: inequality of household income is the result of several interlinked dynamics which are not easily untangled.

In addition, there is a somewhat paradoxical dimension to it, at least in Europe: the *feeling* of inequality may well intensify in societies that are approaching a high level of economic well-being. This is because in highly unequal societies, every new generation in the bottom income share will see its status improve over time. In equal societies, however, this improvement is obviously no longer as visible. And in Europe a 50-year trend towards poverty reduction is paying off – we are already very equal, meaning a perception of stagnation is setting in.

**Future generations will not feel better off than their parents, but they will still be well off.**



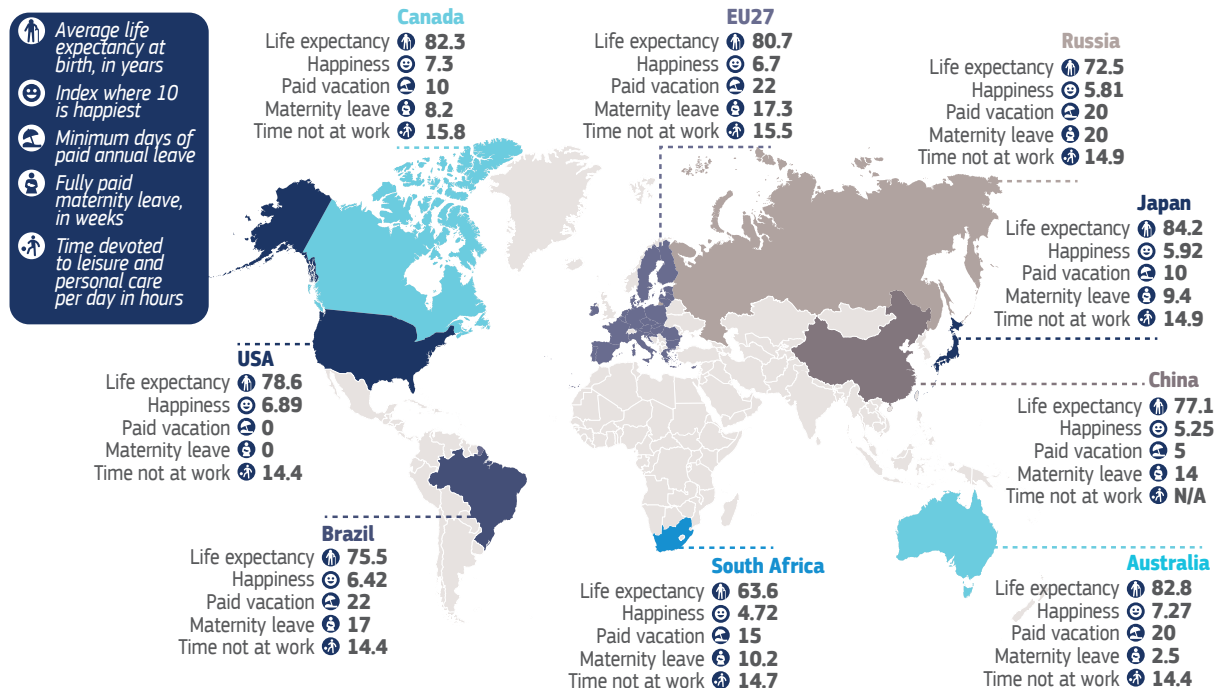
In fact, never has the world, and especially Europe, had as much as today. The poor still have less than the rich, of course, but it does not necessarily mean that they have next to nothing. But the problem with this is essentially philosophical one: a sense of progress is almost more important to humans than an absolute sense of well-being. This means that inequality is not merely an economic problem: it is part of a larger complex issue which also includes poverty, slow economic growth, social exclusion, access to essential services, and mental health. It is worth noting that while European poverty differs from poverty elsewhere in that we are wealthier than most of the rest of the world, 23.4% of our population is still at risk of poverty, living of 60% or less of the national median income. This number has remained more or less the same over the last 15 years.<sup>60</sup>

In that sense, slowing economic growth and increasing inequality lead to a larger question which goes beyond income: what can be done to improve European happiness in the absence of economic miracles seemingly out of reach in a service-based economy? This is not a naïve question, quite the contrary. After all, “the care of human life and happiness ... is the only legitimate object of good government”<sup>61</sup>, as Thomas Jefferson put it. Human happiness revolves around essentially six ingredients, according to the United

Nations: GDP per capita, healthy years of life expectancy, social support (as measured by having someone to count on in times of trouble), trust (as measured by a perceived absence of corruption in government and business), perceived freedom to make life decisions, and generosity (as measured by recent donations).<sup>62</sup> This attempt to gauge happiness acknowledges that economic prosperity and good health and social services play a central role. It is no coincidence that the UN Happiness Report finds that Europe is already one of the happiest places on Earth – but this does not mean that there is no discontent. In fact, the report finds that mental illness impacts European happiness as much as (if not more than) income, employment or physical illness.

But while economic factors are not the only – or indeed the most important – factors in determining human satisfaction with life, neither mental well-being, nor social connectivity have a prominent place on policymakers’ agendas.<sup>63</sup> Therefore, in addition to addressing legitimate economic concerns, policymakers could take a step back and address the broader question of human well-being beyond economic terms – and thereby achieve the necessary shift which is key to Europe developing any alternative to high-growth, high-consumption economic models, which may be quashed by climate change consequences.<sup>64</sup>

### Europe is a world leader in quality of life



Source: OECD, UN, European Commission. Visual reproduced from the European Commission’s Reflection Paper on The Social Dimension of Europe, 2017

---

## What does this mean?

Economics is at the centre of human activity: areas such as the environment, security, education, political stability and even health are all connected to economic development. But it is precisely because of their interconnected nature that it is so hard to anticipate certain economic developments, such as the 2008 financial crisis. That said, because economics is largely in the hands of humans, it is here that decisions normally have rather quick effects – both negative and positive.

- » Switching to a low-carbon, climate-neutral, resource-efficient and biodiverse economy will not only be beneficial for our employment rates and growth – it will also help us tackle climate change and other environmental challenges. [Learn more about how we manage climate change p.34.](#)
- » Some studies say that the advances made in poverty reduction might be overturned by climate change, pushing more than 100 million people into extreme poverty by 2030.<sup>65</sup> [Learn more about how we will manage climate change p.34.](#)
- » A growing middle class will have the means available to consume more energy – in Asia and Africa, this will mean fossil fuel. [Learn more about energy p.17.](#)
- » Contrary to the common idea that poverty pushes people to cross international borders, it is in fact a rise in income that does this; job creation for the rising African middle class is therefore a priority. [Learn more about migration p.29.](#)
- » Inequality correlates more with the outbreak of civil unrest than poverty.<sup>66</sup> [Learn more about conflicts to come p.25.](#)
- » Reducing inequality by increasing wages will have several positive effects, including on our pension and healthcare system. [Learn more about how we improve ageing p.35.](#)
- » Emerging markets will only realise their full economic potential if they implement reforms and improve their institutions – more so than Europe, they are at risk of a financial crisis. This means substantive investment in education, infrastructure and technology. [Learn more about new technologies p.28.](#) [Learn more about connectivity p.18.](#)
- » A growing middle class is also likely to have political expectations that will need to be met, but it will not by itself be the ‘grand democratiser’ of non-democratic societies. [Learn more about how to protect democracy p.37.](#) [Learn more about populism p.31.](#)
- » Economic growth also depends on a stable global trade regime, something which is currently under stress. [Learn more about the future of trade p.23.](#)
- » Economic growth and job creation are not an end in themselves: hyper-connectivity in the workplace will make people (including decision-makers) increasingly unhappy, which, in turn, lowers productivity and damages health.<sup>67</sup> [Learn more about connectivity p.18.](#)
- » Western labour markets are heading towards disruption thanks to technological innovation, but it is not clear how many jobs are threatened – or will be created. [Learn more about new technologies p.28.](#)
- » Innovation and ideas will be the key feature of the next leading economies – and education will be key to this. [Learn more about new technologies p.28.](#)
- » For Europe, most of its growth potential lies in services and the digital realm – but the extent of this depends on how fast it manages to catch up with other states. If the EU wants to stay competitive, it will have to increase its investment in research and development (R&D) from 2.03% of GDP currently to 3%.<sup>68</sup> (The current figure is lower than in Japan (3.29%), the United States (2.79%), and China (2.07%)). [Learn more about new technologies p.28.](#) [Learn more about trade p.23.](#)
- » Even though Europe is home to the most equal societies, inequality is an issue policymakers have to address, or populists will. Social measures such as a minimum wage, or a basic income, are one way to address the issue – and will, according to an Organisation for Economic Co-operation and Development (OECD) study, have a neutral or even positive effect on growth.<sup>69</sup> [Learn more about populism p.31.](#)



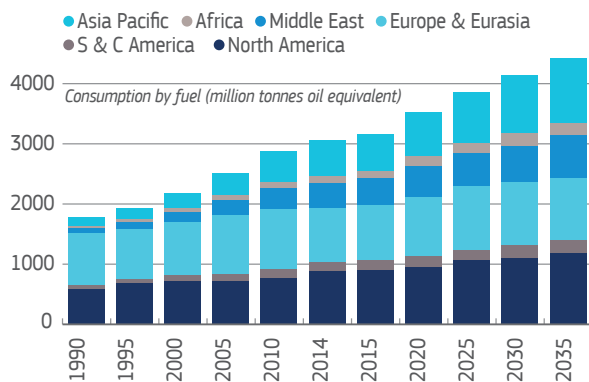
## WE NEED MORE ENERGY

Energy is a good example of two mega-trends joining up: because we will be more in number, and because we have more income available to spend,

**Energy consumption will rise globally by 1.7% per year**

– approximately the same speed as it rose between 1970 and 1990. This is not a European phenomenon: although demand will also increase in Europe and other Western states, it will mainly grow in non-OECD states – particularly India and China. As a result, oil, gas and coal prices will increase continuously, but not dramatically in the years up to 2030, returning to the high levels of 2010.<sup>70</sup>

### Natural gas consumption outlook by region



Source: BP Energy Outlook, Helgi Analytics, 2016

Due to global shifts away from industrial to service-oriented economies, global oil demand is expected to decelerate sometime after 2040, but oil, coal and gas will continue to meet most of the world's energy demands – mainly because renewable energy sources will not yet be able to meet the global demand. While Europe is in the lead in the energy transition, it will not have completed it by 2030. Its own goal is to then draw 32% of its energy from renewable sources. This means that its energy import dependency, especially with regards to gas, will slightly increase by 2030.<sup>71</sup> The United States will approach energy independence by then.

### What does this mean?

The fact that other world regions will consume more energy is often labelled as 'energy competition'; the term suggests resource scarcity, and that Europe may not be able to meet its needs on the global market – but this is a finite understanding of energy. Already, about half of Europe's energy is renewable, and oil and gas reserves mean that by 2030 energy will be available at reasonable prices. That said, increased energy consumption may have several other knock-on effects that are worrying – or encouraging.

- » Energy production is already the largest source of global greenhouse-gas emissions – the main driver behind climate change. With increasing needs for energy, the pressure on curbing the effects of climate change increases even further. [Learn more about climate change p.8.](#)
- » 'Green' energies have promising prospects for job creation, making them a future asset of our economies. [Learn more about economic growth p.13.](#)
- » At a time of increased international antagonism, aggressive competition for resources could become a source of rivalry among states regardless of the fact that there is no critical scarcity. [Learn more about geopolitics p.19.](#)
- » The development of new energy sources opens up the possibility of international partnerships on renewable energy development, potentially decreasing the importance of fossil fuel dependency.<sup>72</sup> [Learn more about how we manage climate change p.8.](#)
- » Energy efficiency is improving and diversification continues, which could change projections for 2030. For instance, energy storage is projected to increase six fold in the coming decade, enabling renewable energy and electric cars.<sup>73</sup> [Learn more about new technologies p.28.](#)
- » Rising energy needs in non-OECD countries are a side effect of rapid motorisation: the global passenger car stock is set to nearly double between 2012 and 2030 (whereas it will decrease in Europe). This has effects on economic, political and social connectivity. [Learn more about connectivity p.18.](#)



## WE ARE HIGHLY CONNECTED

The planet will continue to feel ever smaller in 2030: not only are more people able to communicate over the internet (90% of the world population will be able to read; 75% will have mobile connectivity; 60% should have broadband access), they will also move more.<sup>74</sup> Connectivity is therefore not only virtual and digital, but also physical.

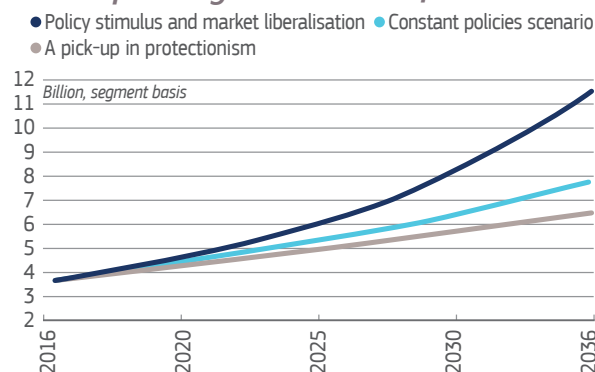
The internet will be in our cars, homeware, and even on our bodies.

**By 2030, the number of devices connected to the internet will have reached 125 billion, up from 27 billion in 2017.**

Almost all European cars will be connected to the internet in 2030, making our roads even safer.<sup>75</sup> Air travel will be safer, too – 2017 was the safest year in aviation history, although our skies have never been so busy.

Because humans are connected not only online but also through improved infrastructure, they and the goods they trade will move more than today: by 2030, air passenger numbers will have nearly doubled to more than 7 billion – most of which will be from the Asian middle class.<sup>76</sup> Air freight will triple and port handling of maritime containers worldwide could quadruple by 2030.<sup>77</sup>

### Global passengers scenarios forecast



Source: International Air Transport Association (IATA), 2017

Land transport, too, will be affected: while private car ownership is projected to decrease in Europe and the United States, alternative options for transport – such as shared cars – will be on the rise.<sup>78</sup> Elsewhere, car sales will continue to increase. For instance, by 2030, China will have 50% more cars than today. Some studies expect about half of new cars to be electric in 2030. Trains will also be an area of innovation: super high-speed trains (such as Hyperloop) can reduce travel time by nearly 90% and lower environmental damage. And as humans travel, so do the diseases they carry, increasing the risk of pandemics. While there has been progress on prevention and reporting, especially vulnerable states are lagging behind when it comes to important reforms in this regard.<sup>79</sup> (But it is worth noting that no pandemic ever managed to wipe out more than 6% of the world population, despite the fact that they occur regularly.)

### What does this mean?

Connectivity, like other mega-trends, is in itself neither positive nor negative, but in fact both. It acts as a multiplier of human behaviour more than anything else. In this sense, any human pattern, whether detrimental or beneficial, will be strengthened by connectivity. This also means that we have a certain degree of predictability, as we have some certainties about human behaviour. For instance, because human beings like communication, we can ascertain that any device facilitating it will be embraced enthusiastically. Social media, for instance, must be understood not as a static set of providers, such as Facebook or Twitter, but as evolving networks reflecting the state of mind of humanity at this point in time.

- » In some ways, connectivity has a negative impact on the environment, air travel and shipping, for instance. Improved aircrafts, operational efficiency, and alternative fuels can reduce this impact.<sup>80</sup> [Learn more about how to prevent climate change p.34](#). [Learn more about new technologies p.28](#).
- » Connectivity is one of the drivers of a more pluralistic world. [Learn more about geopolitics p.19](#).
- » Modern technology, especially artificial intelligence (AI), can make airport experiences smoother and faster, increasing the travel volume even further – assuming trade and/or visa liberalisation continue. [Learn more about new technologies p.28](#). [Learn more about trade p.23](#).



- » Modern technology can help address the employment needs of modern connectivity: for instance, by 2030 the commercial aviation industry will require three times as many pilots as today. Technology can help fill this need. [Learn more about new technologies p.28.](#)
- » Human life in cities can be improved through connectivity: traffic, waste management, transport and even crime can be addressed better through connection to the internet.<sup>81</sup> [Learn more about urbanisation p.12.](#)
- » Information, especially news, will be drawn mainly from the internet, with fake news, slander and potential for polarisation and election meddling increasing. Emotions in communication will become more and more important as the distance between citizens and decision-makers shrinks. [Learn more about how we protect democracy in Europe p.37.](#)
- » Connectivity means that individuals can identify with global policy issues beyond their borders, creating clusters of online citizenship. This could, or could not, be vulnerable to manipulation.<sup>82</sup> [Learn more about how we protect democracy in Europe p.37.](#)
- » As information travels much faster, reactions to certain policy issues will be more intense and concentrated. This puts decision-makers under pressure to act without the necessary time for reflection and consideration. Institutionalising longer-term strategic thinking units will be key to avoid short-termism under stress. [Learn more about populism p.31.](#) [Learn more about how we protect democracy in Europe p.37.](#)
- » Connectivity can also mean vulnerability: cyberspace will be one of the battlegrounds where states and non-state actors confront each other. [Learn more about conflicts to come p.25.](#) [Learn more about how we deal with conflict p.36.](#)
- » To achieve the maximum benefit from connectivity, most artificial intelligence systems will require access to big data – something many European citizens are uncomfortable with. [Learn more about how we deal with the challenges of new technology p.35.](#)
- » Connectivity means that irregular migrants learn quickly about European policies and adjust to them. [Learn more about migration p.29.](#)

## WE ARE POLY-NODAL

Many analysts have already proclaimed the advent of multipolarity. They are overhasty: in fact, we are only just beginning to transit out of the post 1990 unipolar system. The uncertainty of the geopolitical future is a frightening thought, causing worst-case scenario thinking in which NATO no longer exists, nationalistic states form unstable alliances, China dominates the rest of the world, and war becomes a distinct possibility. Indeed, some of the phenomena we see today, be it populism or protectionism, are direct consequences of this uncertainty.

And yet, it is helpful to add to the uncertainty and ask one more important question: are we actually heading for a multipolar order in the neorealist sense of the word? After all, it is doubtful that the world will be structured around 'poles' (that is: cohesive centres of power). 2030 will not just be different in terms of power distribution, but also in terms of the nature of power itself. Power will not be determined solely by classic measures such as population size, GDP and military spending, and it will be held not just by states, but also by cities, regions, companies and transnational movements. The connectivity, interdependence and pluralistic nature of the system will mean that

***The power of states will be determined by their relational influence.***

In that sense, it is not 'poles' that will be the building blocks of the system but 'nodes': points where pathways relate to each other. This is because in the future, no single state will be able to tackle major global challenges alone. As a result, a state's importance will depend on its capacity to deploy a variety of mechanisms to influence the policy decisions of other states, rather than just on the raw capabilities it has at its disposal. The key determinants for this will be the *number* and *quality* of bi- and multilateral relationships. Influence will be determined by trade and aid flows rather than economic power, and by arms and technology transfers rather than military spending. In a similar vein, membership of international organisations and alliances will constitute capital, as will connectivity – especially in the form of new technologies. Soft power and the ability to inspire others will also increase in



---

importance.<sup>83</sup> This means that values will not go out of style, and states with shared ones will continue to gravitate towards each other.

Contrary to popular belief, pluralistic systems are not less stable than bipolar ones: the father of classical realism, Hans Morgenthau, was convinced that plural systems would generate greater stability because the defection of a single state from an alliance would not upset the whole system. Yet much akin to the bipolar system, because states would have to rely on allies to maintain stability, they would act cautiously in order to not upset the balance. Moreover, large-scale wars could be avoided as gains can be made through alliances.<sup>84</sup>

That said, should this structure emerge, it will be shaped by the future trajectory of a number of geopolitical relationships. Of paramount importance will be the evolution of relations between the United States and China – but also between Beijing and the rest of the world. Despite its great power ambitions for 2050, China will also have to contend with the pluralistic nature of global affairs – if it continues on its current neorealist path to power, China will struggle to build positive relationships with its immediate neighbours, Europe, and, of course, the United States.

But Europe will have to adapt to this new pluralistic system, too. This means redefining the transatlantic relationship, both with its organisational embodiment, NATO, and the United States itself. In this context, it is important to note that although certain voices in the United States have openly questioned the usefulness of the alliance, American *actions* have been consistently supportive of it – quadrupling the financial support to eastern European member states, for instance, as well as increasing its presence on what NATO refers to as the ‘Eastern front’. As one observer put it, ‘Despite concerns about the future course of the Trump administration, NATO is significantly stronger today than five years ago, when it was looking for a new *raison d’être*.’<sup>85</sup> That said, American engagement in NATO will remain strong only as long as Russia is perceived as a threat – a perception which is dwindling as Moscow is seen as being in decline and Beijing on the rise. Precisely because Europe does not collectively share this assessment, this means that

***Strategic autonomy is no longer a mere option for Europe.***

This is the case for two main reasons. First, if Europe wishes to remain a close ally of the United States it will have to be able to support Washington’s power projection in Asia (and elsewhere). Second, and even if it chooses not to support the United States there, it will have to fill the security vacuum the American pivot to Asia will leave behind by fully providing for its own security – within and outside of NATO.<sup>86</sup>

Lastly, the plural nature of the system does not mean that its natural form of governance will be ‘multilateral’ as the term is understood today. That said, once current multilateral institutions have reformed and adapted to the new pluralistic power distribution, they will remain the most important frameworks for interaction: the more players, the more important they will be.<sup>87</sup>

### ***What does this mean?***

In international relations, interdependence has been interpreted since the 1970s as a motivation for cooperation rather than antagonism (captured in the expression ‘where goods don’t cross borders, soldiers will’).<sup>88</sup> Alas, interdependence and the relational nature of power have not meant, and will not mean in 2030, that conflict and competition will be a thing of the past. Instead, a connected system will mean mainly a new understanding of global politics and power.

A few things to consider are:

- » The multilateral nature of the EU means it is well equipped for the shift in power perception described above – but it is crucial that it future-proofs itself, and the multilateral institutions it cares about. [Learn more about how we navigate this system p.36.](#)
- » Because of the uncertainty generated by the transition of power, conflict remains not only a possibility, but a likely feature of the decade unfolding ahead of us. [Learn more about conflicts to come p.25.](#)
- » How Europe is equipped for these conflicts depends very much on how it prepares for them. [Learn more about how we manage conflict p.36.](#)
- » The main feature of the world of 2030 will be its connected nature – defining everything, including geopolitics. [Learn more about connectivity p.18.](#)

- » Power will also be determined by the extent to which states are leaders in new technologies – an area where the United States and China are in the lead, and Europe is lagging behind. [Learn more about how we manage new technologies p.35.](#)
- » How citizens feel about their state's role in the world feeds into their identity – indeed, there is a link between populism and perceived loss of global importance.<sup>89</sup> [Learn more about populism p.31.](#)
- » Somewhat ironically, as the world globalises, politics becomes more local and regional. This means that cities as well as regions will play a role in sectors previously reserved for states, such as diplomacy, conflict resolution – and crucially climate change. [Learn more about urbanisation p.12.](#) [Learn more about conflicts to come p.25.](#)
- » Alliances might form on an *ad hoc* basis across very different countries to achieve single-issue objectives such as space exploration or countering climate change. [Learn more about how we prevent climate change p.34.](#)
- » The interdependent nature of economics might enhance, or reduce, the importance of sanctions as a power tool, because even though states can hurt others by imposing sanctions, they also hurt themselves. [Learn more about trade p.23.](#)







*ON THE ROAD  
TO THE FUTURE:  
THE CATALYSTS*



In some ways, thinking about the future is far-sighted: we are good at seeing things further away, but the closer things are, the blurrier they get. A trend that is shorter in lifespan is therefore more difficult to identify than one that will unfold over several decades – simply because it is more dynamic and rapid. We call these trends ‘catalysts’ because as in chemistry, they accelerate (or decelerate) both mega-trends and other catalysts. In contrast to mega-trends, humans can change them more easily – but they produce change themselves, too. Catalysts unfold anywhere between six months and five years, which is why they are felt acutely by people in their daily lives. In this report, they are therefore set in a timeframe up to 2025.

One example of a catalyst is violent conflict: a development for which the solution is likely to call for a quick reaction, and trigger other, fast-developing trends such as migration or populism, but caused itself by mega-trends such as demographics or urbanisation.

Because catalysts appear faster than mega-trends, they push humans to take action quicker than on slow-moving mega-trends. Therefore,

***A significant part of a decision-maker's time will be spent on catalysts rather than mega-trends.***

The trends outlined below all fall into this category: we have a high degree of probability when it comes to them, but we also have to manage a certain degree of uncertainty linked to human unpredictability.

## TRADE WILL INCREASE

Until recently, the development of global trade would have been found in the mega-trend section rather than with the catalysts. But rising protectionism, not only in the United States, and the uncertain impact of Brexit on both British and European markets, seem to jeopardise the progressive integration of the global trade system to the extent that its future seems less certain now.

That said, international trade is still going strong: regional and preferential trade arrangements have been on the rise for the last two decades and continue to do so. The EU is negotiating or finalising agreements with several states (having

recently concluded one with Japan) and similar agreements are under way elsewhere, among African states, for instance. In the absence of a wide-ranging reform of the World Trade Organisation (WTO) and global trade governance, open plurilateral agreements may become a popular option in the future.<sup>90</sup>

There is a simple reason for this: open trading systems are beneficial for economies of a similar structure. This, and the fact that the United States alone cannot undo two decades of a trend, is a good reason to assume that despite its questioning by a major player, the system will continue to expand.<sup>91</sup> In 2016, total trade between WTO members (covering 98% of world trade) was \$16 trillion in merchandise and \$4.7 trillion in services – a testimony to globalisation.<sup>92</sup>

Even the United States will find that its current approach, aimed at protecting workers and domestic production from globalisation, may no longer be very effective. For instance, value and production chains are more global than ever, and tariffs would do little to encourage domestic manufacturing, and hence, preserve jobs. True, this is slightly different when it comes to final products; here, tariffs may still lead to certain rearrangements. But in any circumstance, imposing tariffs would mean increasing the cost of goods, which ultimately means consumers pay a higher price. Hence, American protectionism will not have the desired results. In addition to these current tensions, global trade volume will be impacted by China's gradual switch towards domestic activities, which reduces trading volumes in absolute terms. It is expected that this trend will continue in the long run, coupled with the expansion of trade in the Global South. Trade volumes between emerging economies are expected to increase faster than those between the developed ones.<sup>93</sup> This will add more weight to calls for a rebalancing of global trade governance.

Trade in services and data flows will be crucial in the years to come. Furthermore, over the medium to long term, intensification of trade either in terms of goods or services will benefit the world economy by spurring global efficiency, knowledge transfers, and innovation. For all of these reasons,

***We are cautiously optimistic that in the mid- to long-term, trade will continue to grow, especially trade in services.***



---

As the European market for goods is already fully developed and highly integrated, what will hamper European trade volume growth is the handicap stemming from a fragmented market in services. Data flows and access to service markets are predicted to grow substantially in the coming years, but the slow and inefficient integration of the European digital market and market for services in general may constrain this.<sup>94</sup>

### ***What does this mean?***

There is a certain degree of uncertainty when it comes to the future of trade, but there is also a high degree of probability: even though some governments currently favour protectionism, there are signs that the global trade system is not about to collapse. In fact, populist moves towards isolationism are not about trade, but about unemployment and poverty rates as its perceived consequences.

Protecting the international trade order therefore requires policy measures at the national level first, including a renewed focus on redistributive policies. And there are other aspects to consider:

- » Many associate poverty and unemployment with globalisation, but changes in tax and transfer systems have played a greater role in the decline of income redistribution than trade openness.<sup>95</sup> [Learn more about populism p.31.](#)
- » How global trade and its governing institutions will evolve will depend in large part on China. [Learn more about geopolitics p.19.](#)
- » Digitalisation will lead to an increase in new sectors which will affect not just economies generally but also trade as services – and jobs – could move abroad. [Learn more about new technologies p.28.](#)
- » Modern technology could also mean that production can move closer to the consumer, reducing the carbon footprint of goods transport. [Learn more about how we prevent climate change p.34.](#)
- » Global connectivity in terms of trade might enhance, or reduce, the impact of sanctions. [Learn more about conflicts to come p.25.](#)
- » Trade is not just about exporting goods: it is also about exporting standards, be it in the domain of labour, environment, or data protection. Trade agreements increasingly include such provisions – with

potentially positive effects on climate change, demographics, and global poverty rates.<sup>96</sup> [Learn more about how we prevent climate change p.34.](#) [Learn more about demographics p.9.](#) [Learn more about economics p.13.](#)

## **FOOD AND WATER WILL HAVE TO BE WATCHED**

---

The earth is a finite place when it comes to resources – or so it seems. Warnings of food and water insecurity have become a regular feature of international politics – and indeed, even in the EU, water scarcity and droughts affect one-third of its territory. (It is worth noting that 44% of European freshwater is used to cool thermal power, and only 24% for irrigation.)<sup>97</sup> Both food and water insecurity are therefore seen as mega-trends but are in fact – in their nature and impact – catalysts as they emerge over a short period of time and human action can have an immediate impact.

To understand this, we need to look at what food and water insecurity actually are. There are three dimensions to this: first, sheer availability – are food and water obtainable or not? Second, affordability: at what price are they available? And third, are they of sufficient quality?

When we apply these dimensions, we can see that we have different degrees of insecurity. For instance, the first dimension, availability, is in fact a dying category: famines have decreased to historically low levels all over the world. This is because our understanding of famines has evolved: while for many years experts believed that famines were caused by a shortfall in food availability, the insight emerged in the 1980s that famines actually occurred when food was available – but not accessible. This means that human complicity plays a crucial role in the onset of famines, and that

***Production and transport costs and governance are more important to our thinking about food insecurity than the idea of a planet running out of resources.***

The current understanding of food security is also influenced by food quality – food that not only feeds, but provides nutrients and helps individuals live the longest and healthiest life possible. When



we speak about food insecurity in Europe, for instance, we mainly mean food that leads to health issues such as obesity rather than a lack of access to food. Elsewhere, however, both water and food insecurity are real issues that need to be addressed in the coming years to assist the 700 million people who currently do not have basic access to water, and the 815 million people living in food insecurity – but neither issue is due to a lack of resources, rather to (mis)management and quality standards.<sup>98</sup>

Indeed, the ideas of ‘water wars’ and ‘food wars’ have captured the imagination of many, but a direct link between a lack of affordable water and food on the one hand, and violence on the other has not been established yet. Obviously, food prices correlate with a number of indicators associated to conflict (such as low GDP, levels of development, etc.), but there is no evidence proving that hunger or thirst themselves directly caused a war. Similarly, water insecurity is mostly the result of poor infrastructure and water management, rather than the planet drying up. Instead, both water and food are more accurately described as conflict *accelerators* rather than conflict *triggers*.<sup>99</sup>

### What does this mean?

Access to food and water is highly dependent on other aspects unrelated to their actual availability – which means they can intensify existing conflicts rather than create new ones. That said, both food prices and signs of water stress serve as important indicators that there is a larger policy problem – which could indeed lead to conflict and mass displacement. In the coming years, we will therefore witness moments of water and food stress outside Europe – and we should interpret them as signs that things are amiss more generally in a certain state or region.

- » Climate change will exacerbate both water and food insecurity in areas that are already prone to conflict, such as Africa and the Middle East. The IPCC says that climate change will expose 1 billion people to water scarcity in the coming years.<sup>100</sup> [Learn more about how we prevent climate change p.34.](#) [Learn more about conflicts to come p.25.](#)
- » Food and water indicators correlate with conflict; they can therefore be used as early warning signs. [Learn more about conflicts to come p.25.](#)

- » Europe suffers from over- rather than under-nutrition, with detrimental health effects. [Learn more about how we improve ageing p.35.](#)

## WARFARE WILL CHANGE

It is fair to say that the entire discipline of foresight was born out of the desire to know where, when, and how future wars would unfold.<sup>101</sup> But despite this burning interest, it is not the area where predictions have been most accurate – in large part, because we tend to overestimate the impact of technological progress, overlook the complexity of conflict drivers, and underestimate the lethality of comparatively unsophisticated weapons’ systems.<sup>102</sup> That said, reflecting on the future of war is still crucial because violent conflict will continue to be a feature of the coming years despite our best efforts to avoid it.

There are a few things we can say with certainty about future conflicts: for instance, extrapolating from past trends, we can assert that while interstate wars have become less prevalent, we will still witness one per decade at the global level.<sup>103</sup> This can take place in many different forms: at sea, in the air, on land, in space – and in the cyber domain. But it can also take on hybrid forms and come without a formal declaration or open acts of war: propaganda and political agitation, too, will be part of the offensive portfolio of others. In addition, the current unravelling of the non-proliferation regime re-opens the possibility of stand-offs between nuclear powers.<sup>104</sup>

The number of intrastate (or civil) wars will either remain the same, or increase in the coming years – that is, to over 40 ongoing conflicts per year. We can assume this because all the indicators for the drivers of conflict are projected to grow: climate change, inequality, youth bulges, repression, the unchecked spread of small arms and the connectivity of non-state actors all mean that states that are already facing numerous internal challenges will probably face even more difficulties in the coming years. We can therefore assume that

***The majority of conflicts that break out in the coming years will take place within a state, rather than between states.***



Unfortunately, a fair number of these conflicts will be situated in areas of strategic concern to Europe, especially in the Middle East and North Africa.<sup>105</sup> Iraq, Syria, Yemen and Libya continue to be at high conflict risk, regardless of the current status of combat operations.

But it is not just the Arab world which is at risk, so are several areas in Sub-Saharan Africa, such as the Lake Chad Basin, the Sahel, the Horn of Africa, and Central Africa. Although as a Union we are committed to the ideal of conflict prevention, neither we nor others have been able to decode the precise origins of war – despite the fact that conflict prevention could save anywhere between \$5 and \$70 billion a year.<sup>106</sup>

### EU areas of strategic interest 2019-2030



Source: EUISS, 2019

Different types of warfare will require very different skillsets from our armed forces: whereas conflict stabilisation is normally less sophisticated and more manpower intensive, it also lasts longer and requires long-term political commitment. Conflicts that we are the victim of can happen at any time, in any place, in any way: a 360° type of conflict for which we are currently not ready – but others are. It might include modern technology in the shape of unmanned aircraft and 'killer robots' – but there are other more pressing threats. The real danger emanates from all those types of attack which we do not immediately recognise as such, be it infiltration, media and political manipulation or cyber-attacks.

### What does this mean?

Although Europe has mostly lived in peace since its inception as a Union, this does not mean that it will remain unconcerned by future conflicts. On the contrary, to navigate the coming decade peacefully, Europe needs to ready itself for all the aspects of war likely to unfold – while also engaging in conflict prevention and resolution.

- » At the moment, our defence sector is not ready to face complex conflicts – among other things because we are fragmented. [Learn more about how we manage conflict p.36.](#)
- » Connectivity means that cyberspace will be a key front in any conflict, but areas that are less linked to the online realms will be affected less by this trend. [Learn more about connectivity p.18.](#)
- » Every conflict fought with violent means over the last 200 years produced surprising new technological developments or doctrines. Technological progress could make wars quicker, more (or less) lethal, and more multidimensional. [Learn more about new technologies p.28.](#) [Learn more about how we deal with new technology p.35.](#)<sup>107</sup>
- » Europe can no longer fully rely on the United States' security umbrella as Washington's strategic attention is already shifting to Asia. Improving not only its defence capabilities, but also rethinking how it manages conflict will be key to protecting itself in the future.<sup>108</sup> [Learn more about geopolitics p.19.](#) [Learn more about how we manage conflict p.36.](#)
- » The unravelling of agreements designed to prevent an arms race means that the likelihood of conflict will increase. [Learn more about geopolitics p.19.](#)
- » Big data can make conflict prediction more accurate than it is today – but not to a dramatic extent.<sup>109</sup> [Learn more about new technologies p.28.](#)
- » Instability in the Arab world will have an impact on European migration levels and politics. [Learn more about migration p.29.](#) [Learn more about demographics p.9.](#) [Learn more about populism p.31.](#)
- » A large youth population plays a role in conflict onset. [Learn more about demographics p.9.](#)

- » Conflict onset correlates, amongst other things, with political, social and economic inequality.<sup>110</sup> [Learn more about economics p.13.](#)
- » International law still addresses mainly interstate rather than intrastate conflict, making internal conflict the battleground where most pain is inflicted in humanitarian, economic and political terms. [Learn more about conflicts to come p.25.](#)
- » Peacekeeping is an expensive and manpower-intensive tool to settle civil wars – both aspects are at odds with Europe’s current strategic posture. [Learn more about demographics p.9.](#) [Learn more about economics p.13.](#)
- » Because the world will be more connected, human suffering will be visible to a much larger audience – this can be, of course, manipulated to increase pressure on decision-makers to end civil wars elsewhere. [Learn more about connectivity p.18.](#) [Learn more about populism p.31.](#) [Learn more about how we deal with conflict p.36.](#)
- » Abroad, intrastate wars will unfold increasingly within cities, leading to a new type of urban warfare. [Learn more about urbanisation p.12.](#)

## TERRORISM WILL REMAIN

Like violent conflict, terrorism is difficult to predict – indeed, the element of surprise is in its very nature. However, we can expect with a sad degree of certainty that terrorism will not disappear as a phenomenon in Europe (or indeed elsewhere) in the coming years. This is connected to several dynamics.

First, the pool for Islamic State (IS) recruits is not shrinking: there is potential for returnees from Syria and Iraq, but also for released convicts to conduct terrorist attacks. More than 1,500 terrorists will be released around 2022 in the European Union as they received sentences of five years on average.<sup>111</sup> In addition, home-grown radicalisation continues to be the driver for terrorist attacks in the Union – at the moment, between 50,000 and 100,000 individuals are being monitored for radical potential, a pool that could expand.<sup>112</sup>

And despite its current setbacks in the Middle East, IS continues to express the intent to conduct terrorist operations in Europe; the

strategic vacuums in Somalia, Libya and Egypt’s Sinai continue to provide a safe haven for its fighters to prepare such attacks and conduct strategic outreach to recruits.<sup>113</sup> The threat is also growing in the Balkans, where Salafi-jihadism was more successful in recruiting than often assumed: more than 1,000 citizens from these countries joined IS in Syria and Iraq between 2014 and 2016.<sup>114</sup> In addition, al-Qaeda’s strategic approach (weakening the ‘far enemy’, i.e. Western states, first before establishing a state) has been validated by IS’ defeat, meaning that its resurgence is a likely possibility. In addition, a new jihadist entity can emerge with similar objectives, building on the IS experience in Syria and Iraq.

It is worth noting that while jihadist terrorist attacks dominate the news, they constitute only 16% of terrorist attacks; 67% of attacks were of a separatist nature, 12% left-wing and 6% right-wing. This last category has been increasing significantly.

### *What does this mean?*

Terrorism will continue to be a feature of Europe’s security landscape in the coming years, well beyond the threat of IS: anarchic, right- or left-wing terrorism continues to pose a serious problem to the EU but receives much less attention. While most European terrorist networks operate across national borders, governmental cooperation on the issue is still not as developed as it could be.

- » All terrorist networks use the internet to recruit, exchange information, funds and knowledge. [Learn more about connectivity p.18.](#)
- » Terrorism is often linked to conflicts occurring outside Europe. [Learn more about conflicts to come p.25.](#)
- » Right-wing terrorism is linked to populism. [Learn more about populism p.31.](#)
- » Jihadist terrorism is used by populist parties to generate a xenophobic environment and win votes. [Learn more about populism p.31.](#) [Learn more about migration p.29.](#)
- » Home-grown terrorism is linked to poor integration and inequality. [Learn more about economics p.13.](#)





---

## TECHNOLOGY WILL SPRINT AHEAD

---

Technological innovation is a meta-trend in the sense that it permeates virtually all other aspects of human life. It appears here in the catalyst section because it develops much faster than mega-trends. And while technological progress has been an ongoing development, there is a new element to it as of now:

### *Machine intelligence is beginning to rival human intelligence.*

This will happen in the coming years already because innovation is expected particularly with regard to the Internet of Things (IoT), AI, advanced robotics, wearables and 3D printing. Other developments such as blockchain, new energy storage methods and 5G will also have an impact.<sup>115</sup> In total, the market for key digital technologies will reach €2.2 trillion by 2025.<sup>116</sup> In fact, an important share of Europe's future growth potential resides in this area.

In many ways, these innovations will make human life easier, not only in our day-to-day lives, but because they represent economic and employment potential. In other ways, they are a source of concern: for instance, we know that they will disrupt the labour market by destroying certain jobs – but also by creating new ones.<sup>117</sup> Machines are likely to replace humans in areas that are repetitive and mechanical, rather than take over entire labour markets. One study showed that those professions to be hit the hardest will include drivers, mail sorters and telephone operators.<sup>118</sup> In return, new jobs will emerge: according to some studies, the vast majority of jobs of the future do not exist yet.<sup>119</sup> However, this change is unlikely to be sudden or brutal, but incremental.<sup>120</sup>

And technology will not just affect day-to-day business: it will also be a determining factor in how Europe positions itself in the world as both a powerful technological innovator and a setter of ethical standards when it comes to prevent the use of machines for warfare, totalitarian control, and disinformation. At the moment, Europe is at risk of being left behind by China and the United States, leaving others to define a crucial area of the future.<sup>121</sup>

That said, Europe is well-equipped to take on the new technological challenge: it has high levels of education, connectivity and disposable income available.

### *What does this mean?*

In the coming years, the way we work, fight, age, communicate, solve problems, travel, trade, exchange information, live in cities, solve crimes, do business, vote, and connect to our loved ones will all be changed. These are not developments Europe can stop, but it can shape them. Indeed, if we choose not to, others will do it for us.

Although robotics will replace jobs, this does not mean we are heading towards a world where robots dominate humans. [Learn more about how we deal with new technology p.35.](#)

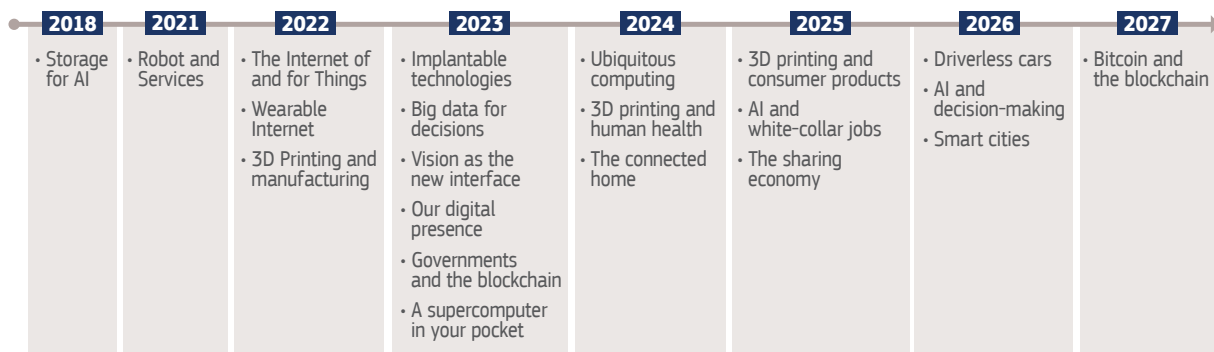
- » Modern technology also makes us more vulnerable in the cyber domain with regard to both crime and cyberattacks.<sup>122</sup> [Learn more about how we manage conflict p.36.](#)
- » Leadership in technological innovation is now, even more than in the past, a key ingredient in global power projection – if Europe wants to be part of this, it will have to invest more in R&D, education and skill development.<sup>123</sup> [Learn more about geopolitics p.19.](#)
- » Although the concept of life-long learning has been discussed for some time, it is becoming increasingly important now, as humans need to rely on those skills machines do not have – this has implications for education systems, as well as for older workforces already employed.<sup>124</sup> [Learn more about how we improve ageing p.35.](#)
- » Some technologies will allow for tighter controls within totalitarian societies, undermining Europe's democratic ideal. [Learn more about how we protect democracy p.37.](#)
- » New technologies will change how human conflict unfolds – whether for better or worse is our decision. [Learn more about conflicts to come p.25.](#)
- » New technologies can help meet some of the challenges of European longevity. AI can improve social connectivity and emotional health, and cognitive and physical ability.<sup>125</sup> [Learn more about how we improve ageing p.35.](#)
- » New technologies might be able to help mitigate the effects of climate change. CO2 capture technology can directly facilitate 30% of the emissions cuts needed by 2030, and

Everything you wanted to know about who predicts what on the impact of automation<sup>127</sup>

	Perspective 1	Perspective 2	Perspective 3	Perspective 4
	<b>Bid your job farewell</b>	<b>Keep calm and carry on (but do keep an eye on inequality)</b>	<b>Few occupations will be entirely automated, but all jobs will be affected</b>	<b>The rise of the industrial robots</b>
<b>Scope &amp; background</b>	In their ground-breaking study, Frey and Osborne (2013) were among the first to gauge the <b>probability of computerisation for 702 occupations in the US labour market</b> arguing that the potential scope of automation is vast.	The OECD (2018) shifted <b>attention to the variation between jobs of the same name and assessed which tasks are difficult for computers to carry out</b> , even in jobs that are most susceptible to automation.	Focusing on the years 2016-2030, McKinsey Global Institute (2017) <b>used data from 46 countries to break down 800 occupations into more than 2,000 activities</b> . Based on this breakdown, they determined the capabilities that would be needed by workers or machines for each activity.	Acemoglu and Restrepo (2017) and Bruegel (2018) respectively evaluate the <b>specific impact of industrial robots on the US economy and on 6 EU countries</b> that make up 85.5% of the EU industrial robots market.
<b>Their assessment on the impact of automation</b>	<b>47% of total US employment is at risk.</b> In the first wave, most workers in transportation and logistics occupations, together with the bulk of office and administrative support workers and production occupations are likely to be substituted.	<b>14% of jobs in OECD countries are highly automatable</b> – equating to around 66 million job losses. Occupations with the highest risk typically require basic or low levels of education, potentially furthering labour market polarisation and inequality.	<b>While less than 5% of occupations consist of activities that can be fully automated, up to 30% of hours worked globally could be automated by 2030.</b> Physical activities are most susceptible.	<b>One additional robot per thousand workers reduces the employment rate by 0.16-0.20 percentage points in Europe.</b> This notable displacement would most impact young cohorts, middle-education workers, and men.

Source: European Political Strategy Centre, 2018

Technology tipping points



Note: Average year in which each tipping point is expected to occur according to a survey conducted to more than 800 ICT executives and experts

Source: World Economic Forum, 2015



indirectly affect the rest through influencing consumer habits, scaling up a sharing economy and supporting business transformation to a circular economy.<sup>126</sup> [Learn more about how we can prevent climate change p.34.](#)

- » Low-skilled migration has slowed new technology development down in sectors such as food and agriculture as there is not yet enough incentive to develop alternatives. [Learn more about migration p.29.](#)
- » Should industry disruptions occur and large-scale unemployment set in, populist parties could thrive. [Learn more about populism p.31.](#)

## PEOPLE WILL MOVE

Superficially, migration looks very much like a mega-trend over which we have little influence. But in fact, migration is just a *symptom* of mega-trends – of demography, economy, connectivity, and environmental change. But precisely because it sits at the intersection of other trends, it is difficult to predict.<sup>128</sup> Statistically,

**Only 60% of predictions concerning migration were accurate.**

Regarding Europe, what we do know is that numbers of irregular border arrivals tend to be cyclical, rising and falling roughly on a five-year basis, and with a big influx every 20 or so years, which reflects a significant shift in the international order. And, of course, there is a marked difference between a refugee crisis resulting from an acute conflict, and migrants moving for economic reasons.

In addition, we know that most irregular migrants in Europe – traditionally at least – have been visa ‘overstayers’ who entered by regular means, rather than the – traditionally – small numbers who arrive by irregular means. According to current projections, 1.8 billion individual travellers will cross international borders each year by 2030 – but how many of those will overstay is impossible to say.<sup>129</sup> When it comes to foresight, the lesson from the 2015-2016 migration crisis is clear: action matters. The EU regained control only when it started trying to define the future on its own terms rather than second-guess where the next flow of people would come from. As soon as the EU-28 started using their combined weight and exercising influence abroad, pushing Morocco or Turkey

for reforms, job creation or border controls, the migration flows became more predictable.

That means the EU has some scope to influence migration. It could usefully view migration as a way to identify underlying mega-trends, and then find smarter ways to channel human reactions to them – to joblessness or to drought or to war. By contrast, if the EU views the threat of mass migration as some kind of inevitability, this fear could very well be self-fulfilling – bad European policies could help turn migration into an uncontrolled driver of demographic shifts, say, or a factor that turns environmental change into a source of civil unrest.<sup>130</sup>

### *What does this mean?*

Considering the cyclical nature of migration, another wave is to be expected in the coming years – but it is not clear what its extent will be, and whether Europe will be its target or not. That said, migration will continue to feature on decision-makers’ agendas. One of the major points for action in the medium term is to create a reasonably robust global framework on migration. For Europe, the scope to take a lead role in this has grown as the US has dropped out of the Global Compact for Migration (GCM) process. The 2018 UN GCM could, despite its shortcomings, serve as a basis for this framework because it takes place at a time when the organisation is not preoccupied with traditional points of contention between the Global North and South.

- » The main driver for migration is the global economy: the rise in income has meant that people in developing economies gain enough income and international sensibility to cross borders. It is now established that emigration rates tail off only when a country breaches the upper-middle income threshold.<sup>131</sup> [Learn more about economics p.13.](#)
- » Poverty, the classic push factor, tends to lead to local migrations, such as from countryside to town or to nearby countries. [Learn more about economics p.13.](#)
- » Connectivity strongly influences migration flows, because measures by authorities and information by diaspora networks are communicated to and within migrant communities. [Learn more about connectivity p.18.](#)
- » Climate change will influence migration into cities, rather than to Europe. [Learn more about urbanisation p.12.](#) [Learn more about how we prevent climate change p.34.](#)



- » Migration is increasingly used as a diplomatic bargaining chip. China uses large-scale exchange programmes to secure resource concessions in Central Asia and Africa, for instance, while Russia leverages the dependence of nearby states on labour remittances to extend its influence. The EU itself uses visa liberalisation and 'mobility partnerships' to build relationships with developing economies. [Learn more about multilateralism p.19.](#)
- » Although theories exist that an increase in population elsewhere will lead to increased numbers moving to Europe, because we are fewer, migration is not a spatial zero-sum game – and studies disprove this fear.<sup>132</sup> Africa, for instance, remains one of the least populated areas on earth, and migration there remains largely within the continent. [Learn more about demographics p.9.](#)
- » Migration is only a limited panacea to Europe's declining population rates.<sup>133</sup> [Learn more about how we improve ageing p.35.](#)
- » Migrants are at much higher risk of poverty and inequality in Europe than non-migrants. [Learn more about the economy p.13.](#)
- » Populists use migration influx to leverage xenophobic attitudes to their advantage. [Learn more about populism p.31.](#)

## POPULISTS WILL TRY

A populist appeal to the will of 'the people' and a rejection of (liberal) elites has been a steadily growing phenomenon in Europe over the last two decades, giving cause for concerns and fears over the stability of our societies. However, whilst populism seems to appear out of the democratic blue, it has surfaced repeatedly in Western systems since the late 18<sup>th</sup> century. And while some anti-system movements used populist methods to topple democracies in Germany or Italy, most populist waves did not seek, or succeed, in changing a political system. Instead, the vast majority of waves in the 19<sup>th</sup> and 20<sup>th</sup> century in the United States and Europe dissipated once their concerns were addressed through economic and political reforms.

So what is populism exactly and what does it seek? We use here the definition of populism as 'parties and politicians that claim to represent the true will of a unified people against domestic elites'.<sup>134</sup> In this sense, populism is not an

ideology (it can be found to the left and right of the political centre), but rather an exclusionary approach to politics, dividing the landscape into friends or enemies. In that sense, it is more political entrepreneurship than ideology.

Populist concerns revolve, to diverging extents, around three conflated issues: economic crisis, threatened identity, and an unresponsive political system.<sup>135</sup> However, the weight of these individual elements can vary significantly: the recent American populist wave, for instance, did not occur in a period of acute economic crisis, but it still displayed the other ingredients for a populist surge. Growth had slowed down, inequality had risen, the financial crisis had eroded trust in decision-makers, and the rise of China and automation fuelled fears of an imminent wave of unemployment; insecurity also existed in identity terms – at the international level, the perception that the United States was losing influence, and at the national level, that traditional identity was under threat by increasing levels of cultural and gender diversity. The fact that decision-makers ('elites') seemed to accept or even embrace all of the above only fuelled resentment further.

*The American case shows that populism is less about past performance and more about future expectation.*

But although populists are very much future-oriented when it comes to their concerns, economically speaking, they will take a short-term and redistributive approach to policy issues – in budgetary terms, they prefer spending (e.g. the establishment of a minimum wage or increased pensions); in environmental terms, they might curb restrictions on business to protect jobs; in social terms, they will identify 'others' as the cause of the problem, be it in gender, cultural or financial terms.

But at the heart of populism are genuinely felt concerns: it was populist waves which led to the creation of social insurance policies in Germany in 1880, to the 'New Deal' in the United States in 1933, and the provision of paid leave in France and Belgium in 1936. The key is to identify and address such measures designed to tackle root causes – but they will take time to take effect.



---



## What does this mean?

While it is clear that populism is triggered by crises (and indeed, triggers crises itself), it is less clear why it appears in some settings and not in others. It is for this reason that it is difficult to foresee the future of European populism in the coming years. That said, we understand what populist parties thrive on:

- » Populism is not just about domestic concerns: when citizens feel that their state has lost global importance, they are more susceptible to populist messaging.<sup>136</sup> [Learn more about how we position Europe in the world p.36.](#)
- » Populism is not just a movement, it is also a political style, relying on emotional, and even overtly offensive language to stress the urgency of its demands, and their proximity to the people. Institutions like the EU do not easily master this style. [Learn more about how we protect our democracies p.37.](#)
- » Populists seek to protect their electorate from international competition, which is why they favour tariffs. [Learn more about trade p.23.](#)
- » Populism thrives on perceived social immobility; one of the ways to stimulate growth is to improve education, especially life-long learning for older generations. [Learn more about demographics p.9.](#) [Learn more about economics p.13.](#)<sup>137</sup>
- » Measures to counter a populist narrative on inequality can include the strengthening of an inheritance tax to mitigate the accumulation of wealth, tax incentives for workers to invest in stocks, increasing measures against tax avoidance and evasion, and putting caps on top salaries – but ultimately, populism is more than an economic phenomenon, and instead expresses a larger sense of malaise.<sup>138</sup> [Learn more about how we protect democracy p.37.](#)
- » Populists prefer direct democracy over representative democracy, and proportional systems to non-proportional ones. [Learn more about how we protect democracy p.37.](#)
- » Populists generally prefer to use new forms of communication to bypass established media; social networks are favoured tools because fake news, rumours and conspiracy theories are not easily dispelled and because social media promotes ‘echo chambers’ where users are exposed only to news items and topics they already care about.<sup>139</sup> [Learn more about connectivity p.18.](#)
- » Populism takes advantage of the complexity of an international environment which is hard to understand. Higher levels of education, a side effect of Europe’s longer-living population, might be a useful antidote as people feel more comfortable with complexity. [Learn more about how we improve ageing p.35.](#)
- » Populism is not defeated by adopting its style, but by addressing the underlying fears of insecurity – and challenging negative narratives with positive ones. [Learn more about economics p.13.](#)

*TIME TO DECIDE:*  
**THE GAME-CHANGERS**

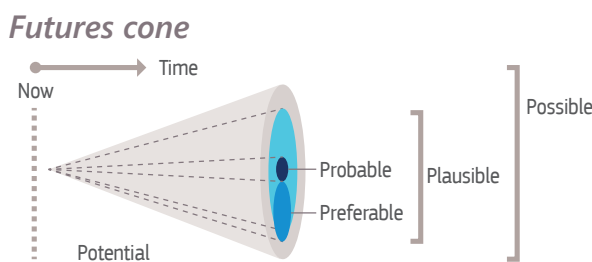




In foresight, a game-changer is, as its name indicates, a decision-making point. This is where human decisions will make the difference and determine the future(s) to come – it is for this reason that they are formulated as questions, rather than statements.

Game-changers are not free-floating: they are always set in a future determined by the mega-trends and catalysts evolving. In that sense, the future can be thought of as a cone whose outline is shaped by larger trends – but whose exact shape will be determined to a significant extent by decisions we take. This is why

*The focus of decision-makers should be those elements of the future they can shape.*



Source: Voros J 2003, 'A generic foresight process framework', Foresight, vol. 5, no. 3, pp. 10-21

The game-changers presented here are extrapolated from the trends (identified in the year-long ESPAS consultation process) outlined above. In effect, they constitute a European look at global priorities for action.

## HOW DO WE SAVE THE PLANET?

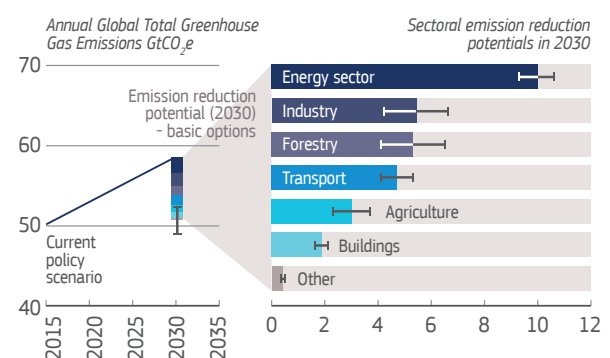
Climate change is the most important policy issue to address: climate-related decisions will determine not only the future of our economies and societies, but indeed of humankind as a species. For the EU, this challenge is divided in two components: one concerns European progress on achieving its goals; the other concerns the rest of the world – Europe will not be able to curb emissions alone, but it will be one of the three key players in the field.

The European Commission's climate strategy addresses the first dimension, laying out clear goals for 2030 – but further action is required given that the United States has left the Paris Agreement. This includes investing more in R&D to open up new avenues in technology which could assist in achieving these objectives, and a thorough discussion about the EU's energy transition: for instance, while the move away from coal is no longer as controversial as it used to be, there is still a reluctance to accept nuclear energy. And there are other areas that have the potential to turn 'green': agriculture, for instance, could help to achieve these goals (e.g. by reducing deforestation).<sup>140</sup> In addition, Europe has started to gear up towards creating an economic system as a whole that is sustainable and circular.<sup>141</sup> However, its member states are not at equal levels when it comes to curbing emissions – some will need more help than others.<sup>142</sup> Globally, of the 'big three', both as leaders and polluters, the US has turned away from its responsibility, and China still lacks the stance to shape a global response. This means that

*The responsibility to, quite literally, save the planet rests with Europe.*

But Europe will not be able to lead this response alone, which leads us to the second concern: partners, including at the state, regional and local level, will be imperative to achieve the goals. This includes, of course, China, but also middle income countries with fast-growing economies such as India, Brazil and Indonesia, as well as regional and even municipal levels in states that are reticent to act against climate change at the national level. For many actors, the necessary measures might be difficult to implement, so Europe will have to deploy environmental diplomacy in a hitherto unseen way.

### Total emission reduction potential in 2030



Source: UNEP

## HOW DO WE IMPROVE AGEING?

An ageing population can be a good thing – but only if age occurs in good health. Unfortunately, at the moment more years alive does not mean more healthy years. On average, older adults today experience almost the same levels of health decline as their parents – despite technological progress and longer lives, we have not yet achieved ‘morbidity compression’ – the reduction of ill health to the last few years of life.

*The real issue with ageing is not the length of life, but the health of life.*

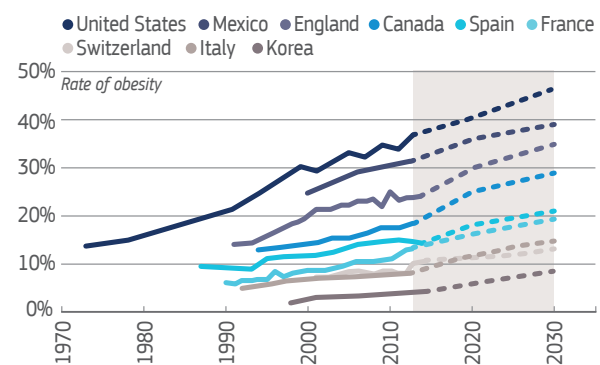
At the moment, Europeans spend nearly two decades with one or more illnesses. It is worth noting that while women live longer than men, they fall ill slightly earlier. This means that the majority of deaths, not just in Europe but also in the world, will be because of non-communicable diseases such as cancer and cardiovascular diseases. The most important cost of age is therefore not pension, but health- and long-term care.

To reduce the projected 2% increase in European spending on age-related issues by 2030, we need to not only reform our pension system, but perhaps more importantly, achieve *healthy ageing*.

After all, unhealthy aging is not inevitable. A recent study shows that lifestyle has a dramatic impact on health: not smoking, being of normal weight and/or having low blood pressure meant not just six years of longer life – but nine years of healthy life compared to those who smoked, were obese and had high blood pressure.<sup>143</sup> But currently, 46% of Europeans never exercise, and only 7% do so five days a week – the amount which significantly reduces morbidity and maintains cognitive capacities.<sup>144</sup> The same goes for diet: at the moment, one in two Europeans is overweight or obese – a number that is projected to increase in the coming years along with related diseases such as diabetes, coronary heart disease, stroke and cancer. 18.4% of Europeans still smoke daily, creating avoidable consequences for their health, such as cancer and cardio-vascular diseases. According to the European Commission, smoking remains the largest avoidable health risk in the EU.<sup>145</sup>

At the moment, ageing in Europe is seen mainly from a pension and healthcare angle, and migration as a potential solution. However, *healthier* older adults will be able to work longer, require less medical care, and be happier all around. Radical policy choices in the healthcare sector will therefore have not just financial, but also political ramifications.<sup>146</sup> To achieve this, Europeans have to lose 5% of their weight on average, increase their physical activity and stop smoking.<sup>147</sup> In addition, continuous improvement of gender equality will ensure that the currently timid upswing in European fertility is not turned around but evolves positively.<sup>148</sup>

### Projected rates of obesity



Note: Obesity defined as Body Mass Index (BMI)  $\geq 30\text{kg/m}^2$ . OECD projections assume that BMI will continue to rise as a linear function of time.

Source: OECD

## HOW DO WE MANAGE NEW TECHNOLOGIES?


The acceleration of technological progress seems to pose for some a primarily philosophical question about what it means to be human in the age of AI.<sup>149</sup> That said, there are other geopolitical and economic issues to consider because

*Europe is still playing catch up to the fourth industrial revolution.*

When it comes to research and patents for new technologies, China and the United States are in the process of defining the future of not just the digital market – but of the future market altogether, and indeed geopolitics and warfare, too.<sup>150</sup> This is because even though digital technology will not be everything, it will impact almost everything.



---



For Europe, a set of policy questions arises from this development: do we want to become the shapers of digital ethics, and contribute a distinctly European, carefully calibrated and agile regulatory digital eco-system to the ongoing race for digital leadership? Are we willing to invest, de-regulate, anticipate, and legislate? Do we develop a digital strategy to address all the socio-economic issues resulting from digital innovation? Do we try and pre-empt the disruption of the labour market by re-training those whose jobs are at risk of automation? Do we counter the development of technologies that undermine democracy and human rights both in Europe and abroad? Do we teach ourselves how to handle the overflow of information and life assistance these new technologies can provide? Are we equipped to deal with hyper-progress at both the individual, as well as collective level? If we fail to respond, others will, in different ways.

Precisely because new technologies have all the potential, negative and positive, it is a domain that particularly requires political leadership and vision – and decisive action.

## HOW DO WE POSITION EUROPE IN THE WORLD?

---

Many aspects of the poly-nodal system we are entering are familiar to Europeans: we have built our foundations on relations and communication between powers of different sizes, and the plural nature of the world will mirror the plural nature of Europe. That said, this does not mean that finding our distinct place (and ability to influence) in this context will be an easy task.

But we do not have to wait for a place to be assigned to us. Indeed, the EU Global Strategy already contains the vision that we have for ourselves as a global player – now is the time to implement it with even more determination.<sup>151</sup> We can do this proactively by continuing to be a strong leader in the fight against climate change, a stout defender of democracy and human rights, a continuous supporter of the global trade system, a reliable contributor to multilateral organisations, and an agenda-setter for the development of human-centric technology and ethical uses of AI.<sup>152</sup>

But to be defined as distinctly European in future geopolitics will require more than this: it will also require a change in mindset (and perhaps also institutions and procedures) as it will mean

being more active in areas we did not sufficiently address before (for instance, in defence and conflict abroad). We will have to acknowledge the fact that the peaceful world we dreamt of is not yet within reach, adjust the way we communicate with the world and present ourselves, and act with conviction.

If we do so, and continue to build on the EU's achievements of the past decades, we have the potential to be one of the shapers and innovators of this century – and continue to serve as an inspiration for others despite its flaws.<sup>153</sup> In this case, a united

*Europe can be bold about its vision for humanity.*

Unity in foreign policy will also help us forge a closer bond with our citizens again: overwhelmingly and regularly, two-thirds to three quarters of Europeans are in favour of common action in defence and foreign policy. We have a mandate to achieve this goal.<sup>154</sup>

## HOW DO WE MANAGE CONFLICT?

---

Although Europe has managed to create a safe haven for itself, war is not a dying breed. With climate change acting as a conflict accelerator, and the international system's current instability, we will have to accept that conflicts will be part of our future.

*As Europeans we reject violence, but we will have to be ready for those who do not.*

This means that we will have to be able to confront those attempting to infringe on our rights and achievements, but also to address conflicts elsewhere. This is not just out of altruism: conflicts in our neighbourhood have already impacted us in several ways and ignoring these issues will not make them disappear.

This means two things for us: first, how do we ready ourselves for both potential physical and online attacks? Do we have the necessary procedures, equipment, and imagination to pre-empt and deter all forms of attack, ranging from 'classical' kinetic wars to political agitation,



disinformation and infiltration? Do we reap the benefits of our political community also in the defence sector? Only when we can say confidently 'yes' to these questions have we done our duty.

Second, conflicts elsewhere need to be prevented, solved and their aftermath stabilised more efficiently. This is not Europe's sole responsibility, but it is still one of our concerns – in areas of strategic interest, it is even an imperative. So far, we have been only moderately successful in preventing conflict, but not necessarily because conflicts cannot be prevented. For instance, we have not engaged forcefully enough in conflict mediation, and we have virtually abstained from post-conflict military stabilisation – conflict relapse is proven to significantly decrease if there are United Nations troops present.<sup>155</sup>

Our Integrated Approach serves as an important roadmap for this as it thoroughly addresses all levels of conflict. But unless it is implemented, we will not see the necessary results. This will mean deploying all available tools (diplomatic, economic, military) to conflicts, and engaging a range of actors (e.g. international organisations, governments, civil society) in the process.<sup>156</sup> And we must stay committed to these efforts, as they normally take several years, and explain their purpose to our citizens. In addition, Europe might want to reconsider its support to United Nations peacekeeping missions, which play an important role in post-conflict stabilisation. At the moment, Europe contributes just 7.4% of United Nations peacekeeping troops (in contrast to China, which is now the largest troop contributor).<sup>157</sup>

***In both types of conflict, at home or abroad, defence will not be the only tool, but it will be the main tool.***

This is perhaps the most difficult reality to accept for Europeans and will inevitably require a change in strategic culture. Most importantly, working together on these challenges will make them more manageable than facing them alone.

## HOW DO WE PROTECT DEMOCRACY AT HOME?

European democracy currently faces a series of challenges: election meddling, populist parties, challenges to the rule of law, unrest over reforms, inequality and migration all appear to threaten our political way of life in different ways. But the

current situation must not be misread merely as an attack on democracy: it is also an opportunity to adapt our systems to the new political environment we now live in. The new environment is as much about new connectivity and information flows as it is about populism. In fact, political participation has increased over the last years, indicating that<sup>158</sup>

***Democracy is not in question – but the way we practice it is.***

Indeed, one of the many drivers of populism is perceived government unresponsiveness rather than the desire to install authoritarian regimes. It is this frustration that outsiders can tap into and feed in disinformation to destabilise our systems – but it is not a frustration that cannot be remedied. How political leaders connect to citizens, how policy options are formulated, communicated and implemented will determine how well 'democracy 4.0' will be suited for the coming years.


Protecting our own way of life therefore includes closing the gap between citizens and their governments by making it more visible and approachable (at local and regional levels, for instance), developing a relatable (rather than technocratic) narrative, and reinvigorating the European vision as something more than just economics – but a desirable way of life well-suited to manage the future. In addition, 'populist-proofing' democratic critical infrastructure, especially oversight and accountability mechanisms, will be key to protect democracies in the case of a populist government interlude. Once in government, populists are often tempted to hollow out the rule of law and certain basic freedoms (e.g. press), gradually eroding democracy. Strengthening the rule of law will therefore protect us from such populist erosion.

## HOW DO WE REACH EQUALITY?

In some ways, the current emphasis on inequality brings us back to a point that was always a cornerstone of European democracy: equality. Although the discussion currently focuses on its economic dimension, there is a broader case to be made for equality as a long-term vision for European well-being as a whole. In this sense, equality is about more than labour markets and income: it is about social inclusion, political participation and equal access to opportunities. In other words



---



***The more equal our societies are,  
the better prepared we are to face  
the challenges of the future.***

Achieving equality of participation and opportunities is not an altruistic endeavour, it will benefit all: studies show that improvements to gender equality for instance would create up to 10.5 million additional jobs by 2050, pushing the Union's employment rate to almost 80%. If so, Europe's GDP per capita could increase by up to nearly 10% by that date.<sup>159</sup> Regarding excessive economic inequality, measures such as a minimum wage, or a basic income are considered as having a neutral or even positive effect on growth.<sup>160</sup> Improved education systems, including mechanisms to promote life-long learning, will better equip our societies are well-equipped for the challenges of the future, allow them to adapt and innovate, and manage modern connectivity and false information. This essentially requires two things: an understanding of inequality that goes beyond economics – and committed political leadership.



*ACTION AND INACTION:  
TWO SCENARIOS  
FOR 2030*



2030 will be, of course, more than just two scenarios: it will be the result of our actions, and action is what foresight tries to generate. To illustrate the difference between action and inaction further, to bring it to life and make us understand the consequences of our (in)action more vividly, we outline the two extremes below. In reality, the future will in all likelihood not resemble one of these two, but lie somewhere in between.

## IF WE TAKE ACTION

**Climate change** effects are diminished because states have taken more and faster action: temperatures rise but not more than 1.5 degrees. The EU, China and Japan join forces to mitigate the effects of American withdrawal from the Paris agreement. While in the short-term Europe has to accept a total GDP loss of \$9–32 billion in this scenario, it is compensated by an increase in global importance, relational power and a leadership role beyond 2030 in transiting to a new, green economy.<sup>161</sup> Policy decisions prevent 100 million people from falling into extreme poverty: preventive measures are taken against wildfires, reducing the impact of heat on less healthy persons and diminishing the anticipated costs.

A direct political gain is that an increasing share of clean **energy** in total energy consumption reduces European dependency on oil and gas imports from Russia and the Middle East, and contributes further to curbing greenhouse emissions alongside new technologies.

Europe prepares its labour force for the **disruption caused by technological progress** through training

and education, easing not only the transition but generating new jobs in the process.<sup>162</sup> Europeans finally take health-improving measures (such as 150 minutes of exercise per week, especially for those 60 years and older, and improve nutrition in older adults) and adapt work environments to the **needs of older adults**. Ageism is addressed, and older citizens continue to play a productive role in society.<sup>163</sup> Policies are developed reducing the morbidity rate substantially: Europeans now spend 80% of their lives in good health (rather than 63% in 2018) thanks to moderate exercise and consistent nutrition. Due to a change in diet, Europeans not only lose weight, which boosts their health further – they also reduce greenhouse gas emissions.

**Artificial intelligence** and big data are used to improve human lives. AI takes over repetitive human jobs, but humans remain in charge of the main jobs. Humans now steer artificial intelligence in support of their well-being. A common agreement on the use of autonomous machines in warfare, such as the one proposed by the United Nations Secretary General, ensures humans remain in charge of lethal decisions.<sup>164</sup>

Europe **invests more in R&D** and at last reaches its 3.0% target in 2020; this means it keeps pushing the technological frontier. Moreover, better cooperation between member states in the research field creates an environment that incentivises innovation.

**Democracy** recovers from its recent setbacks both in Europe and internationally: the stabilisation of Tunisia’s system, thanks to European support, proves to citizens in the broader region that democracy is beginning to make inroads in the

### Climate change threatens to worsen poverty, but good development can help

Policy choices	Climate change scenario			
	No climate change	Low-impact scenario		High-impact scenario
	Number of people in extreme poverty by 2030	Additional number of people in extreme poverty due to climate change by 2030		
Prosperity scenario	142 million	+ 3 million		+ 16 million
		Minimum +3 million	Maximum +6 million	Minimum +16 million Maximum +25 million
Poverty scenario	90 million	+ 35 million		+ 122 million
		Minimum -25 million	Maximum +97 million	Minimum +33 million Maximum +165 million

Source: Rozenberg and Hallegatte, forthcoming.

Note: The main results use the two representative scenarios for prosperity and poverty. The ranges are based on 60 alternative poverty scenarios and 60 alternative prosperity scenarios.

Middle East and North Africa. In Europe, reduced rates of inequality, relatable political styles and positive economic developments mean that populist parties lose support. Regulated migration, assisted by integration programmes, reduces xenophobia and increases equality.

**Violent conflict** is mostly managed by a robust prevention programme developed by the United Nations; Europe is capable of defending itself in the real world and the cyber domain, making cyber-attacks much less effective. Thanks to increased cooperation within the Union, the EU develops a strong strategic degree of autonomy because it continues to invest in closer defence cooperation and capability development.

Europe reduces economic **inequality** by making it a policy priority. The measures taken include a stop to illicit outflows, labour abuses, and the creation of a minimum wage on the continent; abroad, the promotion of labour unions and increased inclusion of women in the labour force reduced inequalities and increased standards.

By installing an **institutionalised foresight capacity**, European leaders manage to anticipate and prepare for policy challenges – such as the loss of jobs due to automation.

At the **global level**, Europeans remain strong and cohesive, and build alliances with like-minded states across the globe. The EU cooperates with China and India (and other states) to maintain a globally connected economy and to mitigate climate change.

## IF WE DO NOT TAKE ACTION

On **climate change**, states do not honour their commitments, meaning that the temperature rises by over two degrees. Record-breaking warm nights increase five-fold in Europe and costs multiply in several areas: healthcare costs increase as no provisions have been taken to mitigate the impact of heat on older adults; wildfires continue to spread; migration rates increase, and production is significantly reduced by droughts, floods and other extreme events. In addition, climate change pushes more than 100 million people into extreme poverty by 2030 – overturning the important progress made since the 1980s.<sup>165</sup> A growing sense of impending doom and panic undermines and divides societies,

putting at risk our cooperative structures at all levels and stretching the EU's political stability to breaking point.

On **longevity**, Europeans continue to exercise little – costing EU countries €46.5 billion per year in healthcare. Malnutrition, social exclusion and inflexible work environments mean that older adults are not only excluded from the workplace, they increasingly fall ill, and place a significant burden on European healthcare and welfare systems.<sup>166</sup>

Unregulated **advances in modern technology** have unintended consequences. For instance, the use of robotics in warfare leads to indiscriminate killing; the unchecked evolution of superintelligence replaces human intelligence; big data is abused to undermine democracies and even free will. Jobs are lost without being replaced by new ones. Europe continues investing little in R&D and falls behind China in terms of innovation.

Continued support to 'stabilocracies' in the Western Balkans and the Middle East delays the emergence of **stable democratic systems** in these regions.

In Europe, unchecked inequality, flanked by large-scale loss of jobs as a result of technological progress, provides populist parties with ample pretexts to garner support. Lack of integration of migrants and continued terrorist attacks fuel xenophobia and empower populist parties further.

The absence of a functioning **conflict resolution** mechanism means that violence to Europe's east and south continues to affect its security. Instead of steering conflicts positively, the Union is a passive bystander. In the military field, the EU remains fragmented and defensive, as well as vulnerable to asymmetric methods such as cyber-attacks.

The income gap widens further, making the **unequal distribution of income** even more visible. Populist parties use this to their advantage in Europe; in the Middle East, it contributes to civil unrest.

At the **international level**, Europeans drift apart in a race for national sovereignty. The strength derived from their Union dissipates, diluting the European voice on the international stage. As a result, values such as democracy, human rights and peaceful resolution of conflict are eroded globally.



A man in a dark jacket and shorts is sitting on a large, grey rock on a cliffside. He is looking out over a vast, dense sea of white and grey clouds that stretch to the horizon. The sky above is a mix of blue and orange, suggesting a sunset or sunrise. The overall mood is contemplative and serene. The text is overlaid on the upper right portion of the image.

CONCLUSION  
FORESIGHT DOES NOT  
REPLACE THE FUTURE



This report has set out with two objectives: to *moderately* reduce our uncertainty when it comes to the future, and to propel us into action shaping it. One cannot be achieved without the other: high degrees of either certainty or uncertainty can lead to inaction, but inaction would mean our certainties are worthless. This also means that the success or failure of this report is not determined by whether 2030 will actually appear roughly as described here – but by the extent of the action it generated. After all, foresight does not replace the future – it informs the future. In that sense,

***Foresight is to decision-making  
what reconnaissance is to warfare.***

Without it, we risk stumbling ahead rather than following a strategic vision. When it is well done, it will guide our efforts, help us avoid mistakes and focus our aim. When it is even better done, it stimulates ideas, opens new avenues of thinking, and infuses us with the élan and drive to be proactive about what is to come. To achieve this, foresight does not necessarily have to be accurate. Rather, it must be creative, counterintuitive, and even slightly controversial. If this report is read in 2030 with amusement, then it is hopefully because we spurred ourselves and others into action. When foresight fails to force decision-makers to take action, it has failed altogether.

Although it may sound like a truism, this exercise is particularly important now: even though humanity continually faces challenges and has to take decisions, the decade of the 2020s will be one of decision-compression. In other words, decisions taken in this period will set the course well beyond 2030 and have ripple effects which are not easily undone. In other words, they will create the mega-trends for the coming generations – for good or ill.

Action will be complicated by the crowded agenda: from climate change to economic transformation to a changing world order, the list of disruptions is long. In addition, the instability which often accompanies moments of transition will mean that resources will often be diverted to priorities in the present rather than those linked to the future. To avoid this, regular foresight exercises or even dedicated units can remind us to stay the course.

No matter how tumultuous the coming years will be,

***Not losing sight of our goals  
for the future will be the most  
important task.***



1. Bernard Cazes, *Histoire des futurs : les figures de l'avenir*, de saint Augustin au XXI<sup>e</sup> siècle (Paris: Seghers, 1986) ; David Hecht, 'The Neural Basis of Optimism and Pessimism', *Experimental Neurobiology*, 2013 September; 22(3): 173–199. Bruno Tertrais, *L'apocalypse n'est pas pour demain : pour en finir avec le catastrophisme* (Paris : Denoël, 2011)
2. Daniel Kahneman, *Thinking, fast and slow* (New York: Farrer, Straus & Geroux, 2011); World Economic Forum, 'Most people around the world are overly pessimistic', December 2017, available at <https://www.weforum.org/agenda/2017/12/you%27re-probably-too-pessimistic/>; Hans Rosling, *Factfulness : Ten Reasons We're wrong about the world – and why things are better than you think* (Sceptre: London, 2018).
3. Florence Gaub, 'The benefit of hindsight: What we got wrong – and why', Brief 1, 2019, European Union Institute for Security Studies, available at <https://www.iss.europa.eu/content/benefit-hindsight>
4. Christoph O. Meyer & Florian Otto, 'How to Warn: 'Outside-in Warnings' of Western Governments about Violent Conflict and Mass Atrocities', *Media, War and Conflict*, Vol 9, Issue 2, 2016; Time, 'Why We Keep Ignoring Even the Most Dire Climate Change Warnings', 8 October 2018, available at <http://time.com/5418690/why-ignore-climate-change-warnings-un-report/>
5. Ariel Colonomos, *Selling the Future: The Perils of Predicting Global Politics* (Hurst: London, 2016), p.6
6. Yuval Noah Hariri, *Homo Deus: A Brief History of Tomorrow* (Harvill Secker: London, 2016), pp. 155 - 177
7. The author would like to thank Rosa Balfour, Mat Burrows, Marko Čeperković, Giovanni Faleg, Daniel Fiott, Roderick Parkes, Eva Pejsova, Bruno Tertrais, Stanislas Secrieru and John-Joseph Wilkins for their input – and Eamonn Noonan in particular.
8. Álvaro de Vasconcelos, 'ESPAS Report 'Global Trends 2030 - Citizens in an Interconnected and Polycentric World'', April 2012, available at <https://www.iss.europa.eu/content/espas-report-%E2%80%98global-trends-2030-citizens-interconnected-and-polycentric-world-%E2%80%99>; ESPAS, 'Global Trends to 2030: Can the EU meet the challenges ahead?', 2015, available at <http://ec.europa.eu/epsc/sites/epsc/files/espas-report-2015.pdf>; ESPAS, 'Global Trends to 2035: Geo-politics and international power', September 2017, available at <https://espas.secure.europarl.europa.eu/orbis/document/global-trends-2035-geo-politics-and-international-power>; ESPAS, 'Shaping the Future of Geopolitics: Foresight and Strategic Game Changers', November 2017, available at [https://ec.europa.eu/epsc/sites/epsc/files/espas17\\_-\\_thinkpieces\\_-\\_web\\_quality.pdf](https://ec.europa.eu/epsc/sites/epsc/files/espas17_-_thinkpieces_-_web_quality.pdf); European Parliament, 'Global Trends to 2035: Economy and Society', November 2018, available at [http://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS\\_STU\(2018\)627126](http://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_STU(2018)627126); European Defence Agency, 'Exploring Europe's capability requirements for 2035 and beyond', June 2018, available at <https://www.eda.europa.eu/docs/default-source/brochures/cdp-brochure---exploring-europe-s-capability-requirements-for-2035-and-beyond.pdf>; National Intelligence Council, 'Global Trends: Paradox of Progress', January 2017, available at <https://www.dni.gov/index.php/global-trends/letter-nic-chairman>; European Parliament, 'Global Trendometer: Essays on medium- and long-term global trends', July 2018, [http://www.europarl.europa.eu/RegData/etudes/STUD/2018/612835/EPRS\\_STU\(2018\)612835\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2018/612835/EPRS_STU(2018)612835_EN.pdf)
9. This report uses the term 'Europe' in the political sense interchangeably with the 'European Union' (rather than the European continent).
10. World Meteorological Organization, 'July sees extreme weather with high impacts', 1 July 2018, available at <https://public.wmo.int/en/media/news/july-sees-extreme-weather-high-impacts>
11. International Panel on Climate Change, 'Special Report: Global Warming of 1.5 °C', October 2018, <https://www.ipcc.ch/sr15/chapter/summary-for-policy-makers/>;
12. Michael T. Schmeltz et al., 'Economic Burden of Hospitalizations for Heat-Related Illnesses in the United States, 2001–2010', *International Journal of Environmental Research and Public Health*, September 2016, Vol.13 No.9
13. World Economic Forum, 'The Global Risks Report 2018', January 2018, <https://www.weforum.org/reports/the-global-risks-report-2018>; For additional reading on climate change please read: Mary Robinson, *Climate Justice: Hope, Resilience, and the Fight for a Sustainable Future* (Bloomsbury Publishing 2018); Will Steffen et al., 'Trajectories of the Earth System in the Anthropocene', (PNAS 2018) <https://doi.org/10.1073/pnas.1810141115>
14. European Commission, '10 Trends Reshaping Climate and Energy', 3 December 2018, available at [https://ec.europa.eu/epsc/sites/epsc/files/epsc\\_-\\_10\\_trends\\_transforming\\_climate\\_and\\_energy.pdf](https://ec.europa.eu/epsc/sites/epsc/files/epsc_-_10_trends_transforming_climate_and_energy.pdf)
15. Independent, 'Global warming set to cost the world economy £1.5 trillion by 2030 as it becomes too hot to work', 19 July 2016, available at <https://www.independent.co.uk/environment/global-warming-climate-change-economic-effects-jobs-too-hot-to-work-india-china-a7143406.html>
16. Peter H. Gleick, 'Water, Drought, Climate Change, and Conflict in Syria', *Weather, Climate and Society*, July 2014, available at <https://journals.ametsoc.org/doi/10.1175/WCAS-D-13-00059.1>
17. Boyd A. Swinburn et al., 'The Global Syndemic of Obesity, Undernutrition, and Climate Change: The Lancet Commission report', *The Lancet*, January 2019, available at <https://www.thelancet.com/commissions/global-syndemic>
18. Demographic projections over the last 40 years have been accurate within a 4% margin. National Research Council, *Beyond Six Billion: Forecasting the World's Population* (Washington, DC: The National Academies Press, 2000), p.37
19. United Nations, 'World Population Prospects: Key Findings and Advance Tables, 2017 Revision', (New York: United Nations, 2017), [https://esa.un.org/unpd/wpp/Publications/Files/WPP2017\\_KeyFindings.pdf](https://esa.un.org/unpd/wpp/Publications/Files/WPP2017_KeyFindings.pdf)
20. European Environment Agency, 'Population trends 1950 – 2100: globally and within Europe', 17 October 2016, available at <https://www.eea.europa.eu/data-and-maps/indicators/total-population-outlook-from-unstat-3/assessment-1>; Eurostat News release, 'EU population up to almost 512 million at 1 January 2017', 10 July 2017, available at <http://ec.europa.eu/eurostat/documents/2995521/8102195/3-10072017-AP-EN.pdf/a61ce1ca-1efd-41df-86a2-bb495daabdab>
21. United Nations, 'World Population Prospects: Key Findings and Advance Tables, 2017 Revision', (New York: United Nations, 2017), [https://esa.un.org/unpd/wpp/Publications/Files/WPP2017\\_KeyFindings.pdf](https://esa.un.org/unpd/wpp/Publications/Files/WPP2017_KeyFindings.pdf)
22. United Nations, 'World Population Prospects: Key Findings and Advance Tables, 2017 Revision', (New York: United Nations, 2017), [https://esa.un.org/unpd/wpp/Publications/Files/WPP2017\\_KeyFindings.pdf](https://esa.un.org/unpd/wpp/Publications/Files/WPP2017_KeyFindings.pdf)
23. African Development Bank Group, 'Briefing Note 4: Africa's Demographic Trends', March 2012, available at <https://www.afdb.org/fileadmin/uploads/afdb/Documents/Policy-Documents/FINAL%20Briefing%20Note%204%20Africas%20Demographic%20Trends.pdf>; The Lancet, 'Future life expectancy in 35 industrialised countries: projections with a Bayesian model ensemble', February 2017, available at <https://www.thelancet.com/action/showFullTextImages?pii=S0140-6736%2816%2932381-9>
24. Imperial College London, 'Average life expectancy set to increase by 2030', February 2017, available at <https://www.imperial.ac.uk/news/177745/average-life-expectancy-increase-2030/>
25. United Nations, 'World Population Prospects: Key Findings and Advance Tables, 2017 Revision', (New York: United Nations, 2017), [https://esa.un.org/unpd/wpp/Publications/Files/WPP2017\\_KeyFindings.pdf](https://esa.un.org/unpd/wpp/Publications/Files/WPP2017_KeyFindings.pdf)
26. Mikhail Denisenko, 'Will Russia withstand demographic blow.' From the series of lectures Forecasting threats', Argumenty i Fakty (AIF.ru), December 12, 2013, available at <http://www.aif.ru/onlineconf/1392868>
27. Population Reference Bureau, 'Youth Population & Employment in the Middle East & North Africa', July 2011, available at <http://www.un.org/esa/population/meetings/egm-adolescents/roudi.pdf>
28. Paul R. Ehrlich, *The Population Bomb: Population Control or Race to Oblivion?* (New York: Ballantine Books, 1968)
29. Bruno Tertrais, 'The Demographic Challenge: Myths and Realities', Institut Montaigne, July 2018, p.5 available at their willingness to participate in large-scale and long-term stabilization operations could weaken <http://www.institutmontaigne.org/en/publications/demographic-challenge-myths-and-realities>
30. European Commission, 'The Ageing Report: Economic and Budgetary Projections for the 28 EU member states (2016 – 2070)', 25 May 2018, available at [https://ec.europa.eu/info/publications/economy-finance/2018-ageing-report-economic-and-budgetary-projections-eu-member-states-2016-2070\\_en](https://ec.europa.eu/info/publications/economy-finance/2018-ageing-report-economic-and-budgetary-projections-eu-member-states-2016-2070_en)
31. European Commission, *ibid*'.
32. Eurostat, 'Gender pay gap statistics', available at [https://ec.europa.eu/eurostat/statistics-explained/index.php/Gender\\_pay\\_gap\\_statistics](https://ec.europa.eu/eurostat/statistics-explained/index.php/Gender_pay_gap_statistics)
33. Paul Collier, *Exodus. How Migration is Changing Our World*, (Oxford, Oxford University Press, 2013) p. 61, p. 123
34. Yair Ghitza and Andrew Gelman, 'The Great Society, Reagan's Revolution and Generations of Presidential Voting', Columbia University Working Paper, 14 June 2014, available at [http://www.stat.columbia.edu/~gelman/research/unpublished/cohort\\_voting\\_20140605.pdf](http://www.stat.columbia.edu/~gelman/research/unpublished/cohort_voting_20140605.pdf); The New York Times, 'How Birth Year Influences Political Views', July 2014, available at <https://www.nytimes.com/interactive/2014/07/08/upshot/how-the-year-you-were-born-influences-your-politics.html>
35. While the United Nations calculate 55% of people to live in cities in 2018, this study assesses that 85% already live in urban areas: United Nations Department of Social and Economic Affairs, '2018 Revision of World Urbanization Prospects', available at <https://esa.un.org/unpd/wup/>; [http://ec.europa.eu/regional\\_policy/sources/policy/themes/cities-report/state\\_eu\\_cities2016\\_en.pdf](http://ec.europa.eu/regional_policy/sources/policy/themes/cities-report/state_eu_cities2016_en.pdf)

36. European Commission Directorate-General for Regional and Urban Policy & United Nations Human Settlements Programme, 'The State of European Cities', available at [http://ec.europa.eu/regional\\_policy/sources/policy/themes/cities-report/state\\_eu\\_cities2016\\_en.pdf](http://ec.europa.eu/regional_policy/sources/policy/themes/cities-report/state_eu_cities2016_en.pdf)
37. United Nations Department of Social and Economic Affairs, '2018 Revision of World Urbanization Prospects', available at <https://esa.un.org/unpd/wup/>
38. Jeremy Gorelick, 'Raising capital for intermediary cities', OECD Development Matters, September 2018, available at <https://oecd-development-matters.org/2018/09/10/raising-capital-for-intermediary-cities/>
39. European Commission Directorate-General for Regional and Urban Policy & United Nations Human Settlements Programme, 'The State of European Cities', available at [http://ec.europa.eu/regional\\_policy/sources/policy/themes/cities-report/state\\_eu\\_cities2016\\_en.pdf](http://ec.europa.eu/regional_policy/sources/policy/themes/cities-report/state_eu_cities2016_en.pdf)
40. European Committee of the Regions, 'Reflecting on Europe: How Europe is perceived by people in regions and cities', April 2018, p.11, available at [https://cor.europa.eu/Documents/Migrated/news/COR-17-070\\_report\\_EN-web.pdf](https://cor.europa.eu/Documents/Migrated/news/COR-17-070_report_EN-web.pdf)
41. ESPAS Ideas Paper Series, 'Global Trends to 2030: The future of urbanization and megacities', October 2018; Bart Somers, Zusammen Leben: Meine Rezepte gegen Kriminalität und Terror (C.H. Beck: München, 2018)
42. Wolfgang Dauth, 'Assortative matching in cities', Vox, available at <https://voxeu.org/article/assortative-matching-cities>
43. Alex Ezeh et al. 'The history, geography, and sociology of slums and the health problems of people who live in slums', The Lancet, February 2017, Volume 389, No. 10068, pp. 547–558
44. European Economic and Social Committee, 'The future evolution of civil society in the European Union by 2030', 2018, available at <https://www.eesc.europa.eu/en/our-work/publications-other-work/publications/future-evolution-civil-society-european-union-2030>
45. European Forum for Urban Security, 'The Nice Declaration: Cities action for preventing violent extremism and securing urban spaces in Europe and the Mediterranean', October 2017, <https://www.nice.fr/uploads/media/default/0001/15/TERRORISME%20EUROPE%20de%CC%81claration%20-%20der%20version.pdf>
46. Brantley Liddle, 'Impact of populations, age structure, and urbanization on carbon emissions/energy consumption: evidence from macro-level, cross-country analyses', Population and Environment, Vol. 35, No. 3 (March 2014): pp. 286–304.
47. Alan Berube, 'City and metropolitan income inequality data reveal ups and downs through 2016', Brookings, 5 February 2018, available at <https://www.brookings.edu/research/city-and-metropolitan-income-inequality-data-reveal-ups-and-downs-through-2016/>; Ajaz Ahmad Malik, 'Urbanization and Crime: A Relational Analysis', Journal Of Humanities And Social Science, Volume 21, Issue 1, Ver. IV (Jan. 2016) pp.68–74
48. Euromonitor International, 'Income Inequality Ranking of the World's Major Cities', 31 October 2017, available at <https://blog.euromonitor.com/2017/10/income-inequality-ranking-worlds-major-cities.html>
49. Ronak B. Patel & Frederick M. Burkle, 'Rapid urbanization and the growing threat of violence and conflict: a 21st century crisis', Prehospital and Disaster Medicine, Volume 27, Issue 2, April 2012, pp. 194–197
50. The Economist, 'Where have all the burglars gone?', July 2013, available at <https://www.economist.com/briefing/2013/07/20/where-have-all-the-burglars-gone>
51. PriceWaterhouseCoopers (PwC), 'The World in 2050; The Long View: How Will the Global Economic Order Change by 2050?', February 2017, available at <https://www.pwc.com/gx/en/world-2050/assets/pwc-the-world-in-2050-full-report-feb-2017.pdf>
52. International Monetary Fund, 'World Economic Outlook – April 2018', April 2018, available at <https://www.imf.org/~media/Files/Publications/WEO/2018/April/text.aspx>; European Commission, 'Economic & Budgetary Projections for the 28 EU Member States (2016-2070)', May 2018, available at [https://ec.europa.eu/info/sites/info/files/economy-finance/ip079\\_en.pdf](https://ec.europa.eu/info/sites/info/files/economy-finance/ip079_en.pdf)
53. World Economic Forum, 'What will global GDP look like in 2030?', February 2016, available at <https://www.weforum.org/agenda/2016/02/what-will-global-gdp-look-like-in-2030/>; PriceWaterhouseCoopers (PwC), 'The World in 2050; The Long View: How Will the Global Economic Order Change by 2050?', February 2017, available at <https://www.pwc.com/gx/en/world-2050/assets/pwc-the-world-in-2050-full-report-feb-2017.pdf>; Wayne M. Morrison, 'China's Economic Rise: History, Trends, Challenges, and Implications for the United States', Congressional Research Service, February 2018, available at <https://fas.org/sgp/crs/row/RL33534.pdf>
54. Christine Lagarde, 'Is the world prepared for the next financial crisis', Foreign Policy, 22 January 2019, available at <https://foreignpolicy.com/gt-essay/is-the-world-prepared-for-the-next-financial-crisis-christine-lagarde-economy-recession/>
55. Homi Kharas, 'The Unprecedented Expansion of the Global Middle Class', Brookings, 28 February 2017, available at <https://www.brookings.edu/research/the-unprecedented-expansion-of-the-global-middle-class-2/>
56. World Bank, 'Poverty and Shared Prosperity 2016: Taking on Inequality', Washington: 2016, available at <https://openknowledge.worldbank.org/bitstream/handle/10986/25078/9781464809583.pdf>
57. Branko Milanovic, Global Inequality: A New Approach for the Age of Globalization (Cambridge: Belknap Press of Harvard University Press, 2016)
58. The New Yorker, 'The Psychology of Inequality', 15 January 2018, <https://www.newyorker.com/magazine/2018/01/15/the-psychology-of-inequality>; OECD, 'An Overview of Growing Income Inequalities in OECD Countries: Main Findings', 2011, available at <https://www.oecd.org/els/soc/49499779.pdf>
59. Jeremy Greenwood, 'Marry Your Like: Assortative Mating and Income Inequality', National Bureau of Economic Research, Working Paper No.19829, January 2014, available at <https://www.nber.org/papers/w19829>
60. European Parliament, 'Global Trends to 2035: Economy and Society', November 2018, p.87, available at [http://www.europarl.europa.eu/RegData/etudes/STUD/2018/627126/EPRS\\_STU\(2018\)627126\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2018/627126/EPRS_STU(2018)627126_EN.pdf)
61. Quoted in World Happiness Report 2017, available at <https://s3.amazonaws.com/happiness-report/2017/HR17.pdf>
62. World Happiness Report 2017, available at <https://s3.amazonaws.com/happiness-report/2017/HR17.pdf>
63. Steven Pinker, Enlightenment Now: The case for reason, science, humanism, and progress (New York: Viking, 2018), pp.97–120; EuroStat, 'At risk of poverty or social exclusion in the EU-28, 2016', available at <http://ec.europa.eu/eurostat/news/themes-in-the-spotlight/poverty-day-2017>
64. ESPAS Ideas Paper Series, 'Global Trends to 2030: New ways out of poverty and exclusion', January 2019, available at <https://espas.secure.europarl.europa.eu/orbis/document/global-trends-2030-new-ways-out-poverty-and-exclusion>
65. World Bank, 'Climate Change Complicates Efforts to End Poverty', 6 February 2015, <http://www.worldbank.org/en/news/feature/2015/02/06/climate-change-complicates-efforts-end-poverty>
66. Lars-Erik Cederman, Inequality, Grievances, and Civil War (Cambridge University Press: Cambridge, 2013)
67. ESPAS Ideas paper, 'The Future of Work and Workplaces', May 2018, available at <https://espas.secure.europarl.europa.eu/orbis/document/global-trends-2030-future-work-and-workplaces>
68. Eurostat, 'Europe 2020 Indicators – R&D and Innovation', June 2018, available at [http://ec.europa.eu/eurostat/statistics-explained/index.php/Europe\\_2020\\_indicators\\_-\\_R%26D\\_and\\_innovation](http://ec.europa.eu/eurostat/statistics-explained/index.php/Europe_2020_indicators_-_R%26D_and_innovation); Eurostat, 'R&D Expenditure', March 2018, available at [http://ec.europa.eu/eurostat/statistics-explained/index.php/R\\_%26\\_D\\_expenditure](http://ec.europa.eu/eurostat/statistics-explained/index.php/R_%26_D_expenditure)
69. OECD, 'In It Together: Why Less Inequality Benefits All', 2015, p.69, [https://read.oecd-ilibrary.org/employment/in-it-together-why-less-inequality-benefits-all\\_9789264235120-en#page70](https://read.oecd-ilibrary.org/employment/in-it-together-why-less-inequality-benefits-all_9789264235120-en#page70)
70. Organization of the Petroleum Exporting Countries, 'World Oil Outlook 2040', Vienna 2017, p.13, available at [https://www.opec.org/opec\\_web/flipbook/WOO2017/WOO2017/assets/common/downloads/WOO%202017.pdf](https://www.opec.org/opec_web/flipbook/WOO2017/WOO2017/assets/common/downloads/WOO%202017.pdf)
71. European Commission, 'EU Reference Scenario 2016: Energy, transport and GHG emissions Trends to 2050', July 2016, p.38, available at [https://ec.europa.eu/energy/sites/ener/files/documents/20160713%20draft\\_publication\\_REF2016\\_v13.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/20160713%20draft_publication_REF2016_v13.pdf); European Commission, '2030 Energy Strategy', available at <https://ec.europa.eu/energy/en/topics/energy-strategy-and-energy-union/2030-energy-strategy>
72. International Renewable Energy Agency, 'The Age of Renewable Energy Diplomacy', 29 November 2017, available at <https://www.irena.org/newsroom/articles/2017/Nov/The-Age-of-Renewable-Energy-Diplomacy>
73. Bloomberg NEF, 'Global Storage Market to Double Six Times by 2030', 20 November 2017, <https://about.bnef.com/blog/global-storage-market-double-six-times-2030/>
74. United Nations Educational, Scientific and Cultural Organisation, 'Literacy Rates Continue to Rise from One Generation to the Next', Fact Sheet No. 45 September 2017
75. IHS Markit, 'Number of Connected IoT Devices Will Surge to 125 Billion by 2030, IHS Markit Says', 24 October 2017, available at <https://technology.ihsmarkit.com/596542/number-of-connected-iot-devices-will-surge-to-125-billion-by-2030-ihsmarkit-says>
76. IATA, '2036 Forecast Reveals Air Passengers Will Nearly Double to 7.8 Billion', 24 October 2017, available at <https://www.iata.org/pressroom/pr/Pages/2017-10-24-01.aspx>
77. OECD, 'Strategic Transport Infrastructure Needs to 2030', available at <https://www.oecd.org/futures/infrastructureto2030/49094448.pdf>



78. PWC, 'By 2030, the transport sector will require 138 million fewer cars in Europe and the US', January 2018, available at <https://press.pwc.com/News-releases/by-2030--the-transport-sector-will-require-138-million-fewer-cars-in-europe-and-the-us/s/a624f0b2-453d-45a0-9615-f4995aaa6cb>
79. Nita Madhav et al, 'Pandemics: Risks, Impacts, and Mitigation', in Disease Control Priorities: Improving Health and Reducing Poverty, (Washington DC: World Bank, 2017) 3rd edition.
80. Cognizant, 'The Future of Air Travel: Eight Disruptive Waves of Change', June 2017, available at <https://www.cognizant.com/whitepapers/the-future-of-air-travel-eight-disruptive-waves-of-change-codex2566.pdf>
81. Parag Khanna, 'Urbanisation, technology, and the growth of smart cities', Singapore Management University, November 2015, available at <https://ink.library.smu.edu.sg/cgi/viewcontent.cgi?article=1030&context=ami>
82. ESPAS Ideas Paper Series, 'Global Trends to 2030: Identities and Biases in the Digital Age', October 2018, available at [https://espas.secure.europa.eu/orbis/sites/default/files/generated/document/en/Ideas%20Paper%20Digital%20Identities%20ESPAS-EPSC\\_V08.pdf](https://espas.secure.europa.eu/orbis/sites/default/files/generated/document/en/Ideas%20Paper%20Digital%20Identities%20ESPAS-EPSC_V08.pdf)
83. Jonathan D. Moyer, Tim Sweijs, Mathew J. Burrows, Hugo van Manen, 'Power and influence in a globalized world', The Hague Centre for Strategic Studies, February 2018, available at <https://hcss.nl/report/power-and-influence-globalized-world>; Yaqing Qin, A Relational Theory of World Politics (Cambridge: Cambridge University Press, 2018)
84. Karl Deutsch and J. David Singer, 'Multipolar Power Systems and International Stability', World Politics, N.16, 1964, p.390. Hans Morgenthau, Politics Among Nations: The Struggle for Power and Peace, (Alfred A. Knopf, New York, 1973), p.341-342.
85. Karl-Heinz Kamp, 'NATO's Short-Term vs. Long-Term Challenge', NATO Defence College Policy Brief, March 2019
86. NATO, 'Framework for Future Alliance Operations', 2018, available at [https://www.act.nato.int/images/stories/media/doclibrary/180514\\_ffao18-txt.pdf](https://www.act.nato.int/images/stories/media/doclibrary/180514_ffao18-txt.pdf); Barbara Lippert et al., 'Strategische Autonomie Europas : Akteure, Handlungsfelder, Zielkonflikte', SWP-Studie 2, February 2019, available at <https://www.swp-berlin.org/10.18449/2019S02/>
87. François Godement & Manuel Lafont Rapnouil, 'La Chine à l'ONU : de l'influence au leadership par défaut ?', unpublished paper
88. Robert Keohane & Joseph Nye, Power and interdependence: world politics in transition (Boston: Little, Brown, 1977)
89. More in Common, 'Attitudes Towards Refugees, Immigrants, and Identity in France', July 2017, available at <https://moreincommon.squarespace.com/france-report>; More in Common, 'Attitudes Towards National Identity, Immigration, and Refugees in Germany', July 2017, available at <https://moreincommon.squarespace.com/germany-report>
90. Bertelsmann Foundation, 'Interim Report: Bolstering Global Trade Governance', 2017, available at <https://www.bertelsmann-stiftung.de/en/publications/publication/did/interim-report-bolstering-global-trade-governance/>
91. World Economic Forum, 'Brexit, the US, China and the future of global trade', 12 February 2018, <https://www.weforum.org/agenda/2018/02/brexit-china-global-trade/>
92. World Trade Organization, 'World Trade Statistical Review 2017', available at [https://www.wto.org/english/res\\_e/statis\\_e/wts2017\\_e/wts17\\_toc\\_e.htm](https://www.wto.org/english/res_e/statis_e/wts2017_e/wts17_toc_e.htm)
93. World Trade Organization, 'Strong Trade Growth in 2018 Rests on Policy Choices – Press Release', 12 April 2018, available at [https://www.wto.org/english/news\\_e/pres18\\_e/pr820\\_e.htm](https://www.wto.org/english/news_e/pres18_e/pr820_e.htm)
94. ESPAS Ideas Paper, 'The Future of International Trade and Investment', 20 September 2018, available at <https://espas.secure.europa.eu/orbis/document/future-international-trade-and-investment-espas-ideas-paper>
95. Orsetta Causa, Anna Vindics and Oguzhan Akgun, An empirical investigation on the drivers of income redistribution across OECD countries, OECD 2018 [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ECO/WKP\(2018\)36&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ECO/WKP(2018)36&docLanguage=En)
96. European Commission, 'Reflection paper on harnessing globalisation', 10 May 2017, available at [https://ec.europa.eu/commission/publications/reflection-paper-harnessing-globalisation\\_en](https://ec.europa.eu/commission/publications/reflection-paper-harnessing-globalisation_en)
97. European Commission, 'EU Science Hub: Water', available at <https://ec.europa.eu/jrc/en/research-topic/water>
98. World Economic Forum, 'Why we need to address global water security now', December 2015, available at <https://www.weforum.org/agenda/2015/12/why-we-need-to-address-global-water-security-now/>
99. Slate, 'The "Water Wars" Trap: Climate change may threaten security, but countries won't be going to war over water any time soon', 9 December 2015, available at <https://slate.com/technology/2015/12/water-wars-caused-by-climate-change-arent-something-we-need-to-worry-about.html>
100. International Panel on Climate Change, 'Working Group II Impacts, Adaptation and Vulnerability', <https://www.ipcc.ch/working-group/wg2/?idp=180>
101. Lawrence Freedman, The Future of War: a history (Hurst: London, 2017)
102. Florence Gaub, 'The benefit of hindsight: What we got wrong – and why', Brief 1, 2019, European Union Institute for Security Studies, available at <https://www.iss.europa.eu/content/benefit-hindsight>
103. Thomas S. Szayna et al., 'What are the trends in armed conflicts, and what do they mean for US defence policy?', RAND Corporation, available at [https://www.rand.org/content/dam/rand/pubs/research\\_reports/RR1900/RR1904/RAND\\_RR1904.pdf](https://www.rand.org/content/dam/rand/pubs/research_reports/RR1900/RR1904/RAND_RR1904.pdf); Human Security Report Project, Human Security Report 2009/2010: the causes for peace and the shrinking costs of war (New York: Oxford University Press, 2011)
104. European Defence Agency, 'Exploring Europe's capability requirements for 2035 and beyond', June 2018, available at [www.eda.europa.eu/Fdocs%2Fdefault-source%2Fbrochures%2Fcdp-brochure---exploring-europe-s-capability-requirements-for-2035-and-beyond.pdf&usq=A0vVaw3Y8wHQpEnF2jin5CZvpVD0](http://www.eda.europa.eu/Fdocs%2Fdefault-source%2Fbrochures%2Fcdp-brochure---exploring-europe-s-capability-requirements-for-2035-and-beyond.pdf&usq=A0vVaw3Y8wHQpEnF2jin5CZvpVD0); World Economic Forum, '10 trends for the future of warfare', November 2016, available at <https://www.weforum.org/agenda/2016/11/the-4th-industrial-revolution-and-international-security/>
105. Institute for Economics and Peace, 'Global Peace Index 2018', available at <http://visionofhumanity.org/app/uploads/2018/06/Global-Peace-Index-2018-2.pdf>
106. World Bank, 'The Economic Cost of Conflict', April 2018, available at <https://www.worldbank.org/en/news/infographic/2018/03/01/the-economic-cost-of-conflict>
107. ESPAS Ideas Paper Series, 'The Future of Warfare', September 2018, available at <https://espas.secure.europa.eu/orbis/sites/default/files/generated/document/en/ESPAS%20Ideas%20Paper%20The%20Future%20of%20Warfare%20FINAL.pdf>; Foreign Policy, 'The Future of War', Fall 2018
108. Antonio Missiroli (ed.), Enabling the future: European military capabilities 2013 – 2035: challenges and avenues, Report No.16 (European Union Institute for Security Studies: Paris, 2013), <https://www.iss.europa.eu/content/enabling-future-%E2%80%93-european-military-capabilities-2013-2025-challenges-and-avenues>
109. Chris Perry, 'Machine Learning and Conflict Prediction: A Use Case', International Journal of Security and Development, 2013, Vol.2 No.3; Havard Hegre et al., 'Predicting Armed Conflict, 2010 – 2050', International Studies Quarterly, June 2013, Volume 57, Issue 2; Lars-Erik Cederman & Nils B. Weidmann, Predicting armed conflict: Time to adjust our expectations?, Science, 03 Feb 2017, Vol. 355, Issue 6324, pp. 474-476; Thomas Chadefaux, 'Conflict forecasting and its limits', Data Science, No.,1, 2017
110. Gudrun Østby, 'Horizontal Inequalities and Political Violence', University of Oslo, 2010, available at <https://www.duo.uio.no/bitstream/handle/10852/13093/dravh-Ostby.pdf?sequence=3>
111. Marc Hecker, '137 nuances de terrorisme. Les djihadistes de France face à la justice', Focus stratégique, n°79, April 2018, p.52, available at [https://www.ifri.org/sites/default/files/atoms/files/hecker\\_137\\_nuances\\_de\\_terrorisme\\_2018.pdf](https://www.ifri.org/sites/default/files/atoms/files/hecker_137_nuances_de_terrorisme_2018.pdf); Europol, 'European Union Terrorism Situation and Trend Report 2018', available at <https://www.europol.europa.eu/activities-services/main-reports/european-union-terrorism-situation-and-trend-report-2018-tesat-2018>
112. Europol, 'European Union Terrorism Situation and Trend Report 2018', available at <https://www.europol.europa.eu/activities-services/main-reports/european-union-terrorism-situation-and-trend-report-2018-tesat-2018>
113. European Parliament, 'The return of foreign fighters to EU soil: Ex-post evaluation', May 2018, available at [http://www.europarl.europa.eu/RegData/etudes/STUD/2018/621811/EPRS\\_STU\(2018\)621811\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2018/621811/EPRS_STU(2018)621811_EN.pdf)
114. Peter Neumann, 'Defeating extremism in the Balkans', EURactiv, 3 May 2018, available at <https://www.euractiv.com/section/enlargement/opinion/defeating-extremism-in-the-balkans>
115. Eurasia Group, 'Eurasia Group White Paper: The Geopolitics of 5G', November 2018, available at <https://www.eurasiagroup.net/live-post/the-geopolitics-of-5g>
116. The Guardian, 'Digital economy to hit \$23 trillion by 2025', 25 April 2018, available at <https://guardian.ng/technology/digital-economy-to-hit-23-trillion-by-2025/>
117. ESPAS Ideas paper, 'The Future of Work and Workplaces', May 2018, available at <https://espas.secure.europa.eu/orbis/document/global-trends-2030-future-work-and-workplaces>; World Intellectual Property Organisation, 'WIPO Technology Trends 2019: Artificial Intelligence'
118. World Economic Forum, 'These are the jobs that are disappearing fastest in the US', 12 May 2017, available at <https://www.weforum.org/agenda/2017/05/these-are-the-jobs-that-are-disappearing-fastest-in-the-us/>; Max Tegmark, Life 3.0: Being Human in the Age of Artificial Intelligence (New York: Alfred A. Knopf, 2017) p.122

119. Huffington Post, '85% Of Jobs That Will Exist In 2030 Haven't Been Invented Yet: Dell', 14 July 2017, available at [https://www.huffingtonpost.ca/2017/07/14/85-of-jobs-that-will-exist-in-2030-haven-t-been-invented-yet-d\\_a\\_23030098/?guccounter=1&guce\\_referrer\\_us=aHR0cHM6Y93d3cuZ29vZ2xlLmNvbS8&guce\\_referrer\\_cs=W641Dlw1CwBKX9EmsjvAw](https://www.huffingtonpost.ca/2017/07/14/85-of-jobs-that-will-exist-in-2030-haven-t-been-invented-yet-d_a_23030098/?guccounter=1&guce_referrer_us=aHR0cHM6Y93d3cuZ29vZ2xlLmNvbS8&guce_referrer_cs=W641Dlw1CwBKX9EmsjvAw)
120. World Economic Forum, 'Deep Shift: Technology Tipping Points and Societal Impact', September 2015, available at [http://www3.weforum.org/docs/WEF\\_GAC15\\_Technological\\_Tipping\\_Points\\_report\\_2015.pdf](http://www3.weforum.org/docs/WEF_GAC15_Technological_Tipping_Points_report_2015.pdf)
121. Kristin Shi-Kupfer and Mareike Ohlberg, 'China's digital rise. Challenges for Europe', Mercator Institute for China Studies, April 2019
122. Lawrence Freedman, The Future of War: a history (Hurst: London, 2017); ESPAS Ideas Paper Series, 'The Future of Warfare', September 2018, available at <https://espas.secure.europarl.europa.eu/orbis/sites/default/files/generated/document/en/ESPAS%20Ideas%20Paper%20The%20Future%20of%20Warfare%20FINAL.pdf>; Foreign Policy, 'The Future of War', Fall 2018
123. European Commission, 'The Age of Artificial Intelligence: Towards a European Strategy for Human-Centric Machine', 27 March 2018, available at [https://ec.europa.eu/epsc/sites/epsc/files/epsc\\_strategicnote\\_ai.pdf](https://ec.europa.eu/epsc/sites/epsc/files/epsc_strategicnote_ai.pdf)
124. ESPAS Ideas paper, 'The Future of Work and Workplaces', May 2018, available at <https://espas.secure.europarl.europa.eu/orbis/document/global-trends-2030-future-work-and-workplaces>
125. World Economic Forum, '5 key trends for the future of healthcare', 19 January 2018, available at <https://www.weforum.org/agenda/2018/01/this-is-what-the-future-of-healthcare-looks-like/>; The Telegraph, 'Seven visions of the future of healthcare', available at <https://www.telegraph.co.uk/wellbeing/future-health/healthcare-predictions/>; World Economic Forum, 'Technological Innovations for Health and Wealth for an Ageing Global Population', 2016, available at [http://www3.weforum.org/docs/WEF\\_Global\\_Population\\_Ageing\\_Technological\\_Innovations\\_Health\\_Wealth\\_070916.pdf](http://www3.weforum.org/docs/WEF_Global_Population_Ageing_Technological_Innovations_Health_Wealth_070916.pdf)
126. World Economic Forum, 'How technology is leading us to new climate change solutions', 29 August 2018, available at <https://www.weforum.org/agenda/2018/08/how-technology-is-driving-new-environmental-solutions/>
127. Carl Benedikt Frey and Michael A. Osborne, 'The Future of Employment: How Susceptible are Jobs to Computerisation?', (Oxford University, 2013), [https://www.oxfordmartin.ox.ac.uk/downloads/academic/The\\_Future\\_of\\_Employment.pdf](https://www.oxfordmartin.ox.ac.uk/downloads/academic/The_Future_of_Employment.pdf); OECD (2018), 'Automation, skills use and training', [https://www.oecd-ilibrary.org/employment/automation-skills-use-and-training\\_2e2f4ee4-en](https://www.oecd-ilibrary.org/employment/automation-skills-use-and-training_2e2f4ee4-en); McKinsey Global Institute (2017), 'What the future of work will mean for jobs, skills, and wages', <https://www.mckinsey.com/featured-insights/future-of-organizations-and-work/what-the-future-of-work-will-mean-for-jobs-skills-and-wages#part>; Daron Acemoglu and Pascual Restrepo, 'Robots and Jobs: Evidence from US Labour Markets', (NBER, 2017), <http://www.nber.org/papers/w23285>; Bruegel (2018), 'The impact of industrial robots on EU employment and wages: A local labour market approach', <http://bruegel.org/2018/04/the-impact-of-industrial-robots-on-eu-employment-and-wages-a-local-labour-market-approach/>
128. Roderick Parkes, 'People on the move – The new global (dis) order', European Union Institute for Security Studies, Chaillot Paper No.138, June 2016, available at <https://www.iss.europa.eu/content/people-move-%E2%80%93-new-global-disorder>; National Research Council, Beyond Six Billion: Forecasting the World's Population (Washington, DC: The National Academies Press, 2000), p.39
129. Roderick Parkes, 'Nobody move! Myths of the EU migration crisis', European Union Institute for Security Studies, Chaillot Paper No.143, December 2017, available at <https://www.iss.europa.eu/content/nobody-move-myths-eu-migration-crisis>
130. ESPAS Ideas Paper Series, 'Global Trends to 2030: The Future of Migration and Integration', October 2018, available at <https://espas.secure.europarl.europa.eu/orbis/document/global-trends-2030-future-migration-and-integration>
131. German Development Institute, 'More Development – More Migration? The "Migration Hump" and Its Significance for Development Policy Co-operation with Sub-Saharan Africa', Briefing Paper 20/2017, available at [https://www.die-gdi.de/uploads/media/BP\\_20.2017.pdf](https://www.die-gdi.de/uploads/media/BP_20.2017.pdf)
132. François Héran, 'Europe and the spectre of sub-Saharan migration', Population & Societies, Number 558, September 2018, available at [https://www.ined.fr/fichier/s\\_rubrique/28441/558\\_population\\_societies\\_migration.subsaharan.europe.en.pdf](https://www.ined.fr/fichier/s_rubrique/28441/558_population_societies_migration.subsaharan.europe.en.pdf)
133. Paul Collier, Exodus. How Migration is Changing Our World, (Oxford, Oxford University Press, 2013) p. 61, p. 123
134. Martin Eiermann et al., 'European Populism: Trends, Threats and Future Prospects', Tony Blair Institute for Global Change, December 2017, available at <https://institute.global/insight/renewing-centre/european-populism-trends-threats-and-future-prospects>
135. Barry Eichengreen, The Populist Temptation: Economic Grievance and Political Reaction in the Modern Era (Oxford: Oxford University Press, 2018), pp. 1-13
136. More in Common, 'Attitudes Towards Refugees, Immigrants, and Identity in France', July 2017, available at <https://moreincommon.squarespace.com/france-report>; More in Common, 'Attitudes Towards National Identity, Immigration, and Refugees in Germany', July 2017, available at <https://moreincommon.squarespace.com/germany-report>
137. European Parliament, 'Global Trends to 2035: Economy and Society', November 2018, p.87 available at [http://www.europarl.europa.eu/RegData/etudes/STUD/2018/627126/EPRS\\_STU\(2018\)627126\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2018/627126/EPRS_STU(2018)627126_EN.pdf)
138. ESPAS Ideas Paper Series, 'Global Trends to 2030: New ways out of poverty and exclusion', January 2019, available at <https://espas.secure.europarl.europa.eu/orbis/document/global-trends-2030-new-ways-out-poverty-and-exclusion>
139. ESPAS Foresight Reflection Paper Series, 'Is the Internet Eroding Europe's Middle Ground? Public Opinion, Polarisation and New Technologies', March 2018, available at [https://espas.secure.europarl.europa.eu/2Forbis%2Fsites%2Fdefault%2Ffiles%2Fgene rated%2Fdocument%2Fen%2FForesight%2520Reflection%2520P olarisation%2520paper\\_V04.pdf&usg=AOvVaw0Zq4SaQ9AMG7a oGGEd0qq](https://espas.secure.europarl.europa.eu/2Forbis%2Fsites%2Fdefault%2Ffiles%2Fgene rated%2Fdocument%2Fen%2FForesight%2520Reflection%2520P olarisation%2520paper_V04.pdf&usg=AOvVaw0Zq4SaQ9AMG7a oGGEd0qq)
140. European Commission, 'A Clean Planet for all: A European long-term strategic vision for a prosperous, modern, competitive and climate neutral economy', 28 November 2018, available at [https://ec.europa.eu/clima/sites/clima/files/docs/pages/com\\_2018\\_733\\_analysis\\_in\\_support\\_en\\_0.pdf](https://ec.europa.eu/clima/sites/clima/files/docs/pages/com_2018_733_analysis_in_support_en_0.pdf); European Environment Agency, 'Trends and projections in Europe 2018: Tracking progress towards Europe's climate and energy targets', [https://espas.secure.europarl.europa.eu/orbis/sites/default/files/generated/document/en/16\\_2018%20TrendsProjections%20TH-AL-18-018-EN-N.pdf](https://espas.secure.europarl.europa.eu/orbis/sites/default/files/generated/document/en/16_2018%20TrendsProjections%20TH-AL-18-018-EN-N.pdf)
141. European Commission, 'Reflection Paper: Towards a sustainable Europe by 2030', January 2019, available at [https://ec.europa.eu/commission/sites/beta-political/files/rp\\_sustainable\\_europe\\_30-01\\_en\\_web.pdf](https://ec.europa.eu/commission/sites/beta-political/files/rp_sustainable_europe_30-01_en_web.pdf)
142. European Commission, 'Global trends of methane emissions and their impacts on ozone concentrations', 2018, <https://espas.secure.europarl.europa.eu/orbis/sites/default/files/generated/document/en/KJNA29394ENN.en.pdf>
143. Silvan Licher et al., 'Lifetime risk and multimorbidity of non-communicable diseases and disease-free life expectancy in the general population: A population-based cohort study', PLOS Medicine, February 2019, available at <https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002741>
144. World Health Organisation, 'Physical activity factsheets for the 28 European Union Member States of the WHO European Region', 2018, available at [http://www.euro.who.int/\\_data/assets/pdf\\_file/0005/382334/28fs-physical-activity-euro-rep-eng.pdf?ua=1](http://www.euro.who.int/_data/assets/pdf_file/0005/382334/28fs-physical-activity-euro-rep-eng.pdf?ua=1)
145. Eurostat, 'Tobacco consumption statistics', available at [https://ec.europa.eu/eurostat/statistics-explained/index.php/Tobacco\\_consumption\\_statistics](https://ec.europa.eu/eurostat/statistics-explained/index.php/Tobacco_consumption_statistics)
146. World Health Organisation, 'World report on Ageing and Health', Geneva 2015, p.70, available at [http://apps.who.int/iris/bitstream/handle/10665/186463/9789240694811\\_eng.pdf;jsessionid=4D697B6C455F69CB1A17C03DD5E6357B?sequence=1](http://apps.who.int/iris/bitstream/handle/10665/186463/9789240694811_eng.pdf;jsessionid=4D697B6C455F69CB1A17C03DD5E6357B?sequence=1)
147. OECD, 'Policy insights: Obesity Update 2017', 2017, available at <https://www.oecd.org/els/health-systems/Obesity-Update-2017.pdf>; Laura Webber et al, 'The future burden of obesity-related diseases in the 53 WHO European-Region countries and the impact of effective interventions: a modelling study', BMJ Open, 2014, available at <https://bmjopen.bmj.com/content/4/7/e004787>; World Health Organisation, 'Progress report on implementation of the Physical Activity Strategy for the WHO European Region 2016–2025', 8 August 2018, available at [http://www.euro.who.int/\\_data/assets/pdf\\_file/0007/378394/68wd08e\\_B\\_PR\\_PhysicalActivity\\_180459.pdf?ua=1](http://www.euro.who.int/_data/assets/pdf_file/0007/378394/68wd08e_B_PR_PhysicalActivity_180459.pdf?ua=1)
148. RAND, 'Low fertility in Europe: Is there still reason to worry?', 2011, Santa Monica, California, available at <https://www.rand.org/pubs/monographs/MG1080.html>
149. Yuval Noah Hariri, 21 Lessons for the 21<sup>st</sup> Century (Jonathan Cape: London, 2018)
150. Foreign Policy, 'Whoever Predicts the Future Will Win the AI Arms Race', March 2019, available at [https://foreignpolicy.com/2019/03/05/whoever-predicts-the-future-correctly-will-win-the-ai-arms-race-russia-china-united-states-artificial-intelligence-defense/?utm\\_source=PostUp&utm\\_medium=email&utm\\_campaign=11682&utm\\_term=Flashpoints%20OC](https://foreignpolicy.com/2019/03/05/whoever-predicts-the-future-correctly-will-win-the-ai-arms-race-russia-china-united-states-artificial-intelligence-defense/?utm_source=PostUp&utm_medium=email&utm_campaign=11682&utm_term=Flashpoints%20OC)
151. European External Action Service, 'Shared Vision, Common Action: A Stronger Europe. A Global Strategy for the European Union's Foreign and Security Policy', June 2016, available at [https://eeas.europa.eu/delegations/united-states-america/36116/shared-vision-common-action-stronger-europe\\_en](https://eeas.europa.eu/delegations/united-states-america/36116/shared-vision-common-action-stronger-europe_en)

152. European Political Strategy Centre, 'Strong Europe, better world: Defending Global Cooperation, Multilateralism and Democracy in Turbulent Times', January 2019, available at [https://ec.europa.eu/epsc/publications/other-publications/strong-europe-better-world\\_en](https://ec.europa.eu/epsc/publications/other-publications/strong-europe-better-world_en)
153. Kishore Mahbubani, *Has the West Lost It? A Provocation* (London: Penguin Books, 2018)
154. European Commission, 'Special Eurobarometer 461: Designing Europe's future: Security and Defence', April 2017, available at <https://ec.europa.eu%2Fcommfrontoffice%2Fpublicopinion%2Ffindex.m%2FResultDoc%2Fdownload%2FDocumentKy%2F78778&usg=AOvVaw1lhKu4inLAK7xi7hTJpo8z>
155. Richard Gowan & Stephen John Stedman, 'The International Regime for Treating Civil War, 1988 – 2017', *Daedalus*, Volume 147, No. 3, Winter 2018. Sebastian von Einsiedel et al., 'Civil War Trends and the Changing Nature of Armed Conflict', United Nations University, Center for Policy Research, April 2017, available at <https://cpr.unu.edu/civil-war-trends-and-the-changing-nature-of-armed-conflict.html>
156. European External Action Service, 'Shared Vision, Common Action: A Stronger Europe. A Global Strategy for the European Union's Foreign and Security Policy', June 2016, available at [https://eeas.europa.eu/delegations/united-states-america/36116/shared-vision-common-action-stronger-europe\\_en](https://eeas.europa.eu/delegations/united-states-america/36116/shared-vision-common-action-stronger-europe_en)
157. United Nations Peacekeeping, 'Contributions by country', available at <https://peacekeeping.un.org/en/contributions-country-1>
158. The Economist Intelligence Unit, 'Democracy Index 2018: Me too? Political participation, protest and democracy', 2019. David van Reybrouck, *Contre les Elections* (Paris: Babel, 2016)
159. European Institute for Gender Equality, 'Gender equality boosts economic growth', March 2017, available at <https://eige.europa.eu/news-and-events/news/gender-equality-boosts-economic-growth>
160. OECD, 'In It Together: Why Less Inequality Benefits All', 2015, p.69, [https://read.oecd-ilibrary.org/employment/in-it-together-why-less-inequality-benefits-all\\_9789264235120-en#page70](https://read.oecd-ilibrary.org/employment/in-it-together-why-less-inequality-benefits-all_9789264235120-en#page70)
161. Han-Cheng et al, 'The impacts of U.S. withdrawal from the Paris Agreement on the carbon emission space and mitigation cost of China, EU, and Japan under the constraints of the global carbon emission space', *Advances in Climate Change Research*, Volume 8, Issue 4, December 2017, pp.226-234
162. ESPAS Ideas Paper Series, 'Global Trends to 2030: New ways out of poverty and exclusion', January 2019, available at <https://espas.secure.europarl.europa.eu/orbis/document/global-trends-2030-new-ways-out-poverty-and-exclusion>
163. World Health Organisation, 'World report on Ageing and Health', Geneva 2015, p.50 available at [http://apps.who.int/iris/bitstream/handle/10665/186463/9789240694811\\_eng.pdf;jsessionid=4D697B6C455F69CB1A17C03DD5E6357B?sequence=1](http://apps.who.int/iris/bitstream/handle/10665/186463/9789240694811_eng.pdf;jsessionid=4D697B6C455F69CB1A17C03DD5E6357B?sequence=1)
164. United Nations, 'Securing our common future: an agenda for disarmament', New York, 2018, p.55, available at [https://front.un-arm.org/documents/SG+disarmament+agenda\\_1.pdf](https://front.un-arm.org/documents/SG+disarmament+agenda_1.pdf)
165. World Bank, 'Shock Waves: Managing the Impacts of Climate Change on Poverty', Washington: 2016, available at <https://openknowledge.worldbank.org/bitstream/handle/10986/22787/9781464806735.pdf>
166. World Health Organisation, '10 key facts on physical activity in the WHO European Region', available at <http://www.euro.who.int/en/health-topics/disease-prevention/physical-activity/data-and-statistics/10-key-facts-on-physical-activity-in-the-who-european-region>



## Acknowledgements

The preparation of this report benefited from the contribution of many people. However, it is primarily the work of its leading author: Florence Gaub, Deputy Director of the European Union Institute for Security Studies (EUISS). She deserves all the credit for the extraordinary feat of putting all this knowledge and foresight into words, condensing and taking onboard not only the comments and suggestions from all ESPAS partners and colleagues, but also from all who provided constructive feedback throughout the writing process. The EUISS and its Director, Gustav Lindstrom, must also be warmly recognised for enabling Florence to take on this herculean task in the midst of so many other priorities for the Institute.

It would be impossible to thank each and every individual that provided intellectual input for the report: all deserve credit without exception. Yet, some cases warrant special mention. The members of the ESPAS Steering Group – Ricardo Borges de Castro, Pierluigi Brombo, Gianluca Brunetti, Jiří Buriánek, Jim Cloos, Julia De Clerck-Sachsse, Franck Debié, Hervé Delphin, Mikolaj Dowgielewicz, James Elles, Roubini Gropas, Christian Leffler, Ann Mettler, Danièle Réchard, Leo Schulte Nordholt, Andrej Stuchlik, Paweł Świeboda, Béatrice Taulègne, Anthony Teasdale and Klaus Welle – played a central role.

Eamonn Noonan of the European Parliamentary Research Service (EPRS) provided additional support and insights. John-Joseph Wilkins and Christian Dietrich from the EUISS read and edited the report. Annick Hilbert, the European Political Strategy Centre's (EPSC) graphic designer laid-out this publication.

A strong collaboration between the EPRS Global Trends Unit, the EPSC Foresight Team as well as all members of the ESPAS Project Team has been crucial throughout.

Finally, the ESPAS Young Talent Network has consistently brought innovative insights that have lent new dynamism to the ESPAS process.

## Disclaimer

The views expressed in this publication represent only the views of the authors. This publication does not bind, nor may be attributed to, any of the European Union institutions and bodies participating in ESPAS, namely the European Parliament, the General Secretariat of the Council of the EU, the European Commission and the European External Action Service, as well as the European Economic and Social Committee, the European Committee of the Regions, the European Investment Bank and the European Union Institute for Security Studies.

© Photo credit: NASA; Julie de Bellaing; European Commission; Daniel Ola, Doug Devine, Yousef Espanioly, Aaron Visuals, Mikael Kristenson @Unsplash.com

Print: ES-03-19-383-EN-C • ISBN: 978-92-76-04011-8 •

doi :10.2872/831696

PDF: ES-03-19-383-EN-N • ISBN: 978-92-76-04010-1 •

doi :10.2872/074526

## INSTITUTIONAL PARTNERS



## OBSERVERS







## About ESPAS

The European Strategy and Policy Analysis System (ESPAS) provides **a framework for cooperation and consultation** at administrative level, on a voluntary basis, between the European Parliament, the Council of the European Union, the European Commission and the European External Action Service, with the European Economic and Social Committee, the Committee of the Regions, the European Investment Bank and the European Union Institute for Security Studies as observers, to work together on medium and long-term trends facing or relating to the European Union.



AN INTER-INSTITUTIONAL  
EU PROJECT