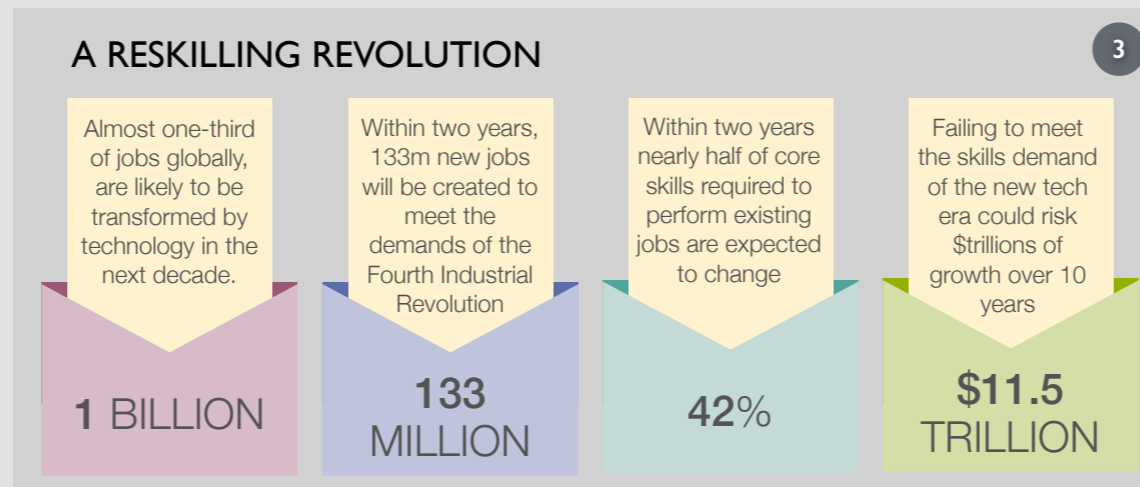
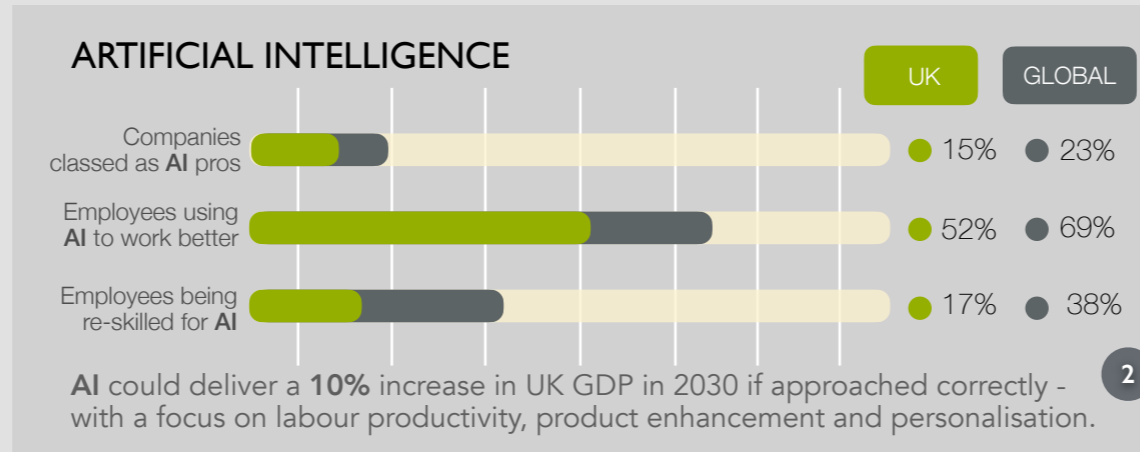


# FUTURE GROWTH

There are a number of meta trends that will drive systemic change across the economy and society: the climate and nature crises, population growth, faster technological change; global power shifts and increasing inequality.

With most future trends it is impossible to predict exactly what changes will happen or exactly how they will change the local economy. Nevertheless, it is important to understand these drivers of change and how they

might disrupt some industries and create opportunities for others. The trends will often give a good indication of what will be important over the next 10 years and how the local economy will need to change.



**KEY ISSUES**

In reading new strategies and plans, HotSW LEP will need to keep abreast of future trends - deciding when it needs to act quickly, plan for change or track developments.

**GLOBAL RISKS**

The identified top global risks could all have significant implications for HotSW. These all take place against the backdrop of a changing world order - with economic and political power moving east and south (BRICS+).

**TECHNOLOGY**

HotSW must ensure it has the skills, creativity and infrastructure to embrace new technologies. This will need public and private investment.

**NEW SKILLS**

Meeting future digital and green skills needs will mean fundamental changes across most jobs - harnessing data to drive value and productivity.

**PUBLIC FINANCES**

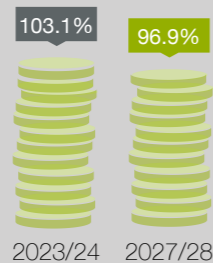
In the short to medium term, public spending is likely to be constrained. HotSW will need to lever in private investment' to maximise impact

**POPULATION**

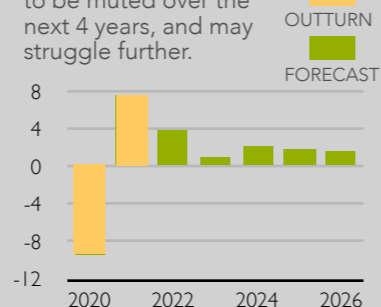
HotSW needs to find innovative, collaborative and cost-effective ways to manage care for the elderly - creating opportunities from that.

**DEBT AND GROWTH**

Public sector net debt is predicted to reach 103% of GDP by 2023. This is the highest level since the early '60s and has been driven by government spending as a response to the financial crash Covid, Brexit and social care.



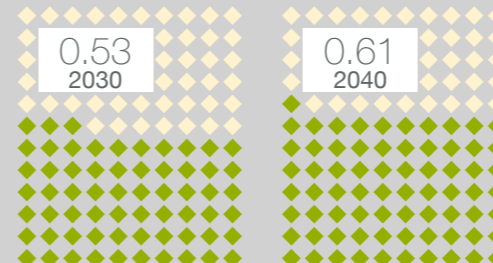
GDP growth is forecast to be muted over the next 4 years, and may struggle further.



**OLDER POPULATION**

The population of over 65s will continue to increase in HotSW - which is almost 90% of the projected 180,000 population increase to 2040.

Number of people aged 65+ for every working age person.



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# FUTURE GROWTH - contents

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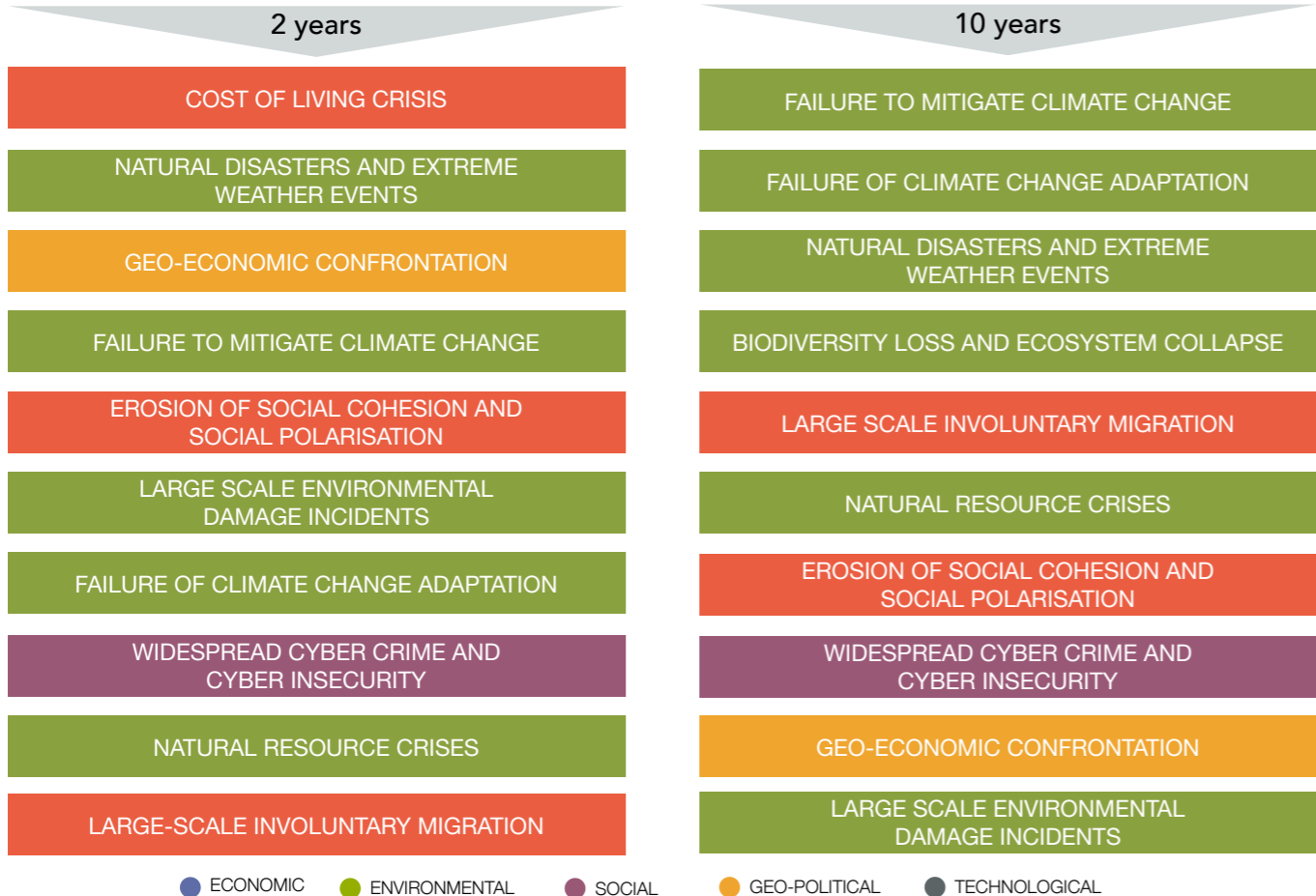
Global risks	Slide 3	
UK risk and reward	Slide 4	
Climate (1) - every little helps	Slide 5	<i>updated</i>
Climate (2) - tipping points	Slide 6	<i>updated</i>
Climate (3) - risks	Slide 7	<i>new page</i>
Global change	Slide 8	
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Economic indicators (1)	Slide 18	<i>updated</i>
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Population	Slide 20	
Inequality	Slide 21	
Data	Slide 22	

# FUTURE GROWTH - global risks

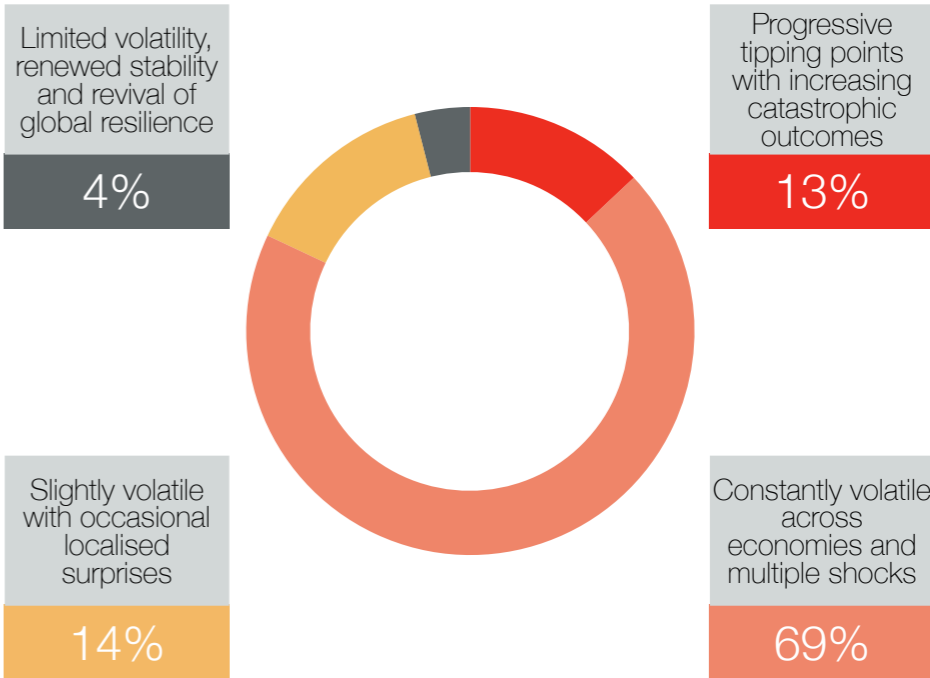
Every year, the World Economic Forum (WEF) produces a Global Risks report.

In it, they report on their annual survey of business, political, academic and NGO leaders from around the world. In the 2023 report, their Risk Perception survey is based on 959 responses. The top 10 most severe risks on a global scale over the next two years and next 10 years are shown below, along with views about the outlook for the world over the next two years.

## TOP 10 RISKS - short and long term



## 2 YEAR OUTLOOK



Global Risk Perception Survey results

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# FUTURE GROWTH - UK risk and reward

In their 26th annual survey of UK CEOs, from November 2022, PwC have highlighted a number of important trends and expectations that company leaders feel will be important over the next five years. Health and climate risks are seen as less important this year, while inflation is seen as more so.

*CEOs CONCERNED ABOUT THREATS TO THEIR BUSINESS*

PwC CEO survey

MACROECONOMIC VOLATILITY



29%

INFLATION



28%

GEOPOLITICAL CONFLICT



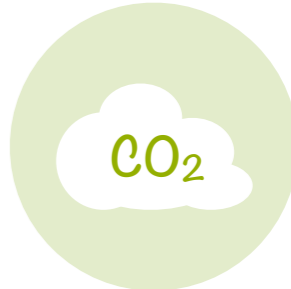
25%

CYBER RISKS



25%

CLIMATE CHANGE IMPACTS



22%

CHANGING CUSTOMER PREFERENCES



56%

REGULATORY CHANGES



53%

LABOUR AND SKILLS SHORTAGES



52%

TECHNOLOGY DISRUPTORS



49%

SUPPLY CHAIN DISRUPTION



43%

*CEOs SEE MANY CHALLENGES TO PROFITABILITY IN THEIR INDUSTRY*

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# FUTURE GROWTH - climate - every little helps

The need to rethink our society in the light of the climate and nature crises could not be more urgent. These are existential crises - literally. They demand huge changes of all of us - to avoid the worst consequences and to learn to live with the changes that are already baked in. Even given strenuous efforts to limit the cause of global warming, further climatic changes are inevitable in the future and the UK will need to manage the growing risks from climate change.

The recent UN Climate Conference, COP 27 in Egypt, announced an historic deal to provide 'loss and damage' funding to developing and vulnerable countries. However, no progress was made on the central issue of keeping global temperature increases to 1.5C. In fact the UN Secretary General, Antonio Guterres, stated just before the COP that there was no credible route to 1.5C and that the world was heading for 2.8C of global heating by the end of the century. **The world reached an average of 1.5C of warming in July and August 2023.**

Scientists agree that we need to keep emissions below 450 parts per million of CO2. Daily totals vary according to seasonal atmospheric conditions - but the trend is consistently upward. We reached 422ppm in April 2022 and are currently at 417ppm.

## HALF A DEGREE MATTERS - the difference between 1.5 and 2C rise



Global population exposed to severe heat at least once every five years.

Plants that lose at least half of their range

Amount of arctic permafrost that will thaw

Number of ice free summers in the Arctic Ocean

Latest IPCC report

World Resources Institute

# FUTURE GROWTH - climate - tipping points

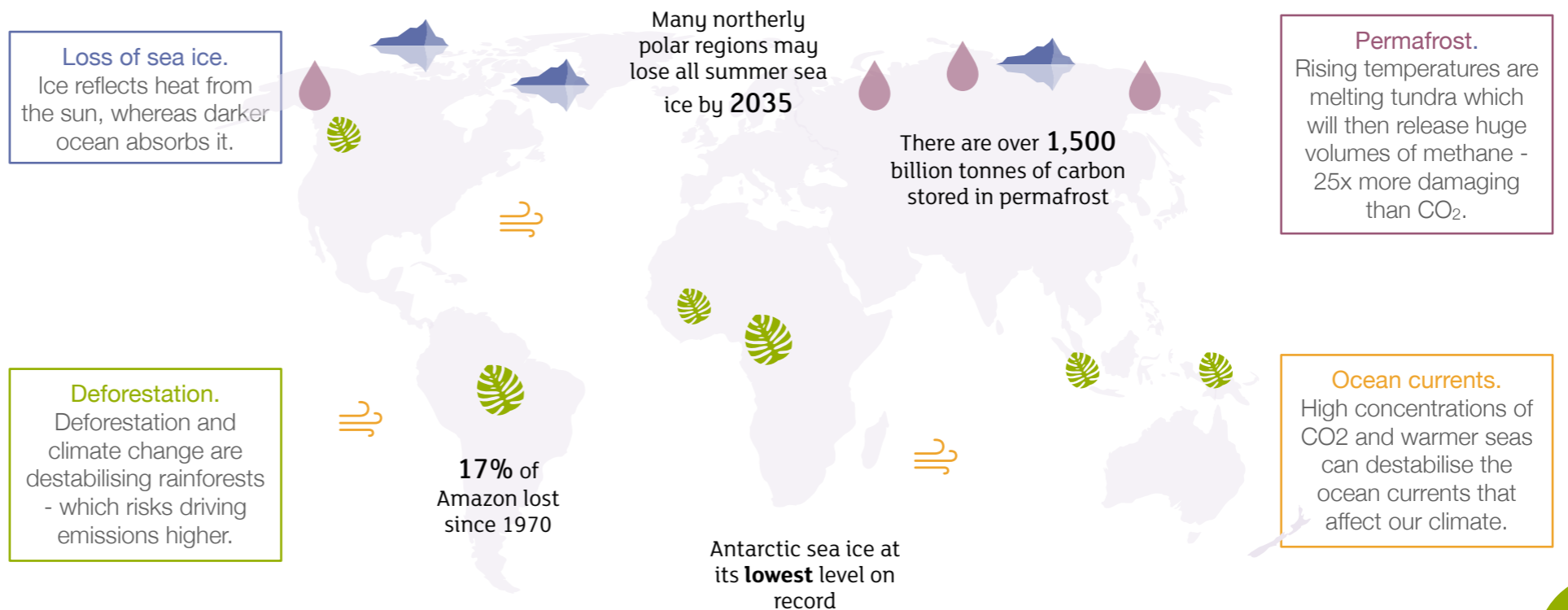
The IPCC have concluded that, in order to keep the average global temperatures rise to 2°C or less, the maximum level of CO<sub>2</sub> (equivalent) in the atmosphere should be 450 parts per million. This is not a target - it is a maximum beyond which would bring extreme risks to humans and other species. As of September 2023, we are at 417 ppm, and have already seen a 1.5°C rise in average temperatures across the world - this surpasses the agreement at the Paris Summit. The poles are warming up to four times faster than the rest of the planet, destabilising permafrost, ancient glaciers and sea ice.

Global heating is not a linear process because of the existence of feedback loops, or tipping points. As a result of rising temperatures, some tipping points may be triggered which would accelerate heating even further. The precise point at which these events might happen is unclear. Widespread and devastating wildfires, flooding, drought and storms have occurred across the world in 2023.

## TIPPING POINTS - increasing the risk

Climate change monitor

Information on tipping points





# FUTURE GROWTH - climate - risks

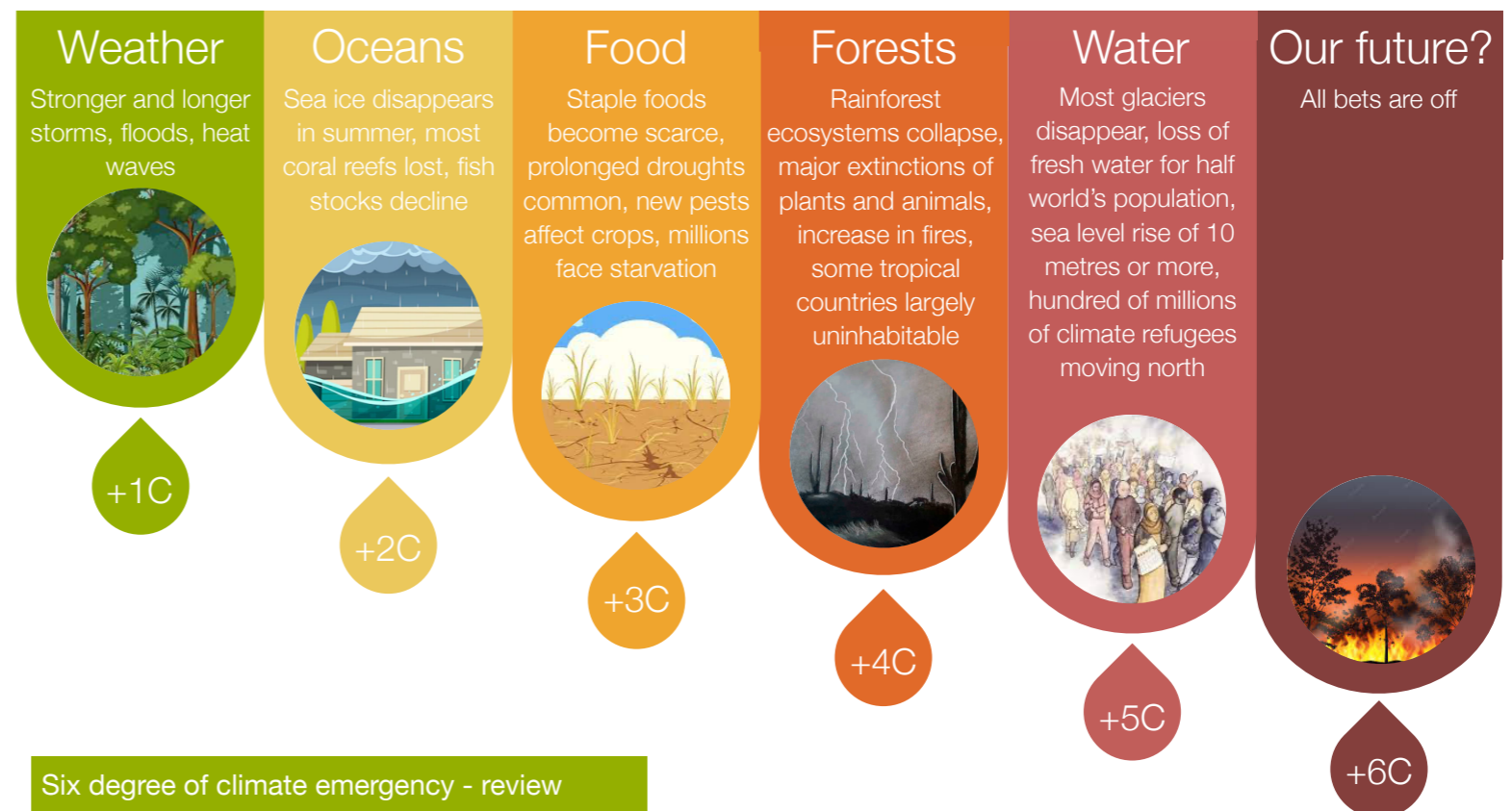
The latest Nationally Determined Contributions (NDCs) – the promises made by countries to combat climate change – take less than 1% off predicted 2030 emissions. 45% reduction is needed to keep to 1.5C.

Countries' climate change promises for 2030 put the world on track for a temperature rise this century of at least 2.8C. And recent announcements from the UK and other governments put even those inadequate promises at risk. 2023 is already the hottest year on record, globally and temperatures exceeded 1.5C above pre-industrial levels for the first time in both July and August.

Major global climatological records have fallen at a rapid rate across the Earth's atmosphere, hydrosphere and cryosphere, including:

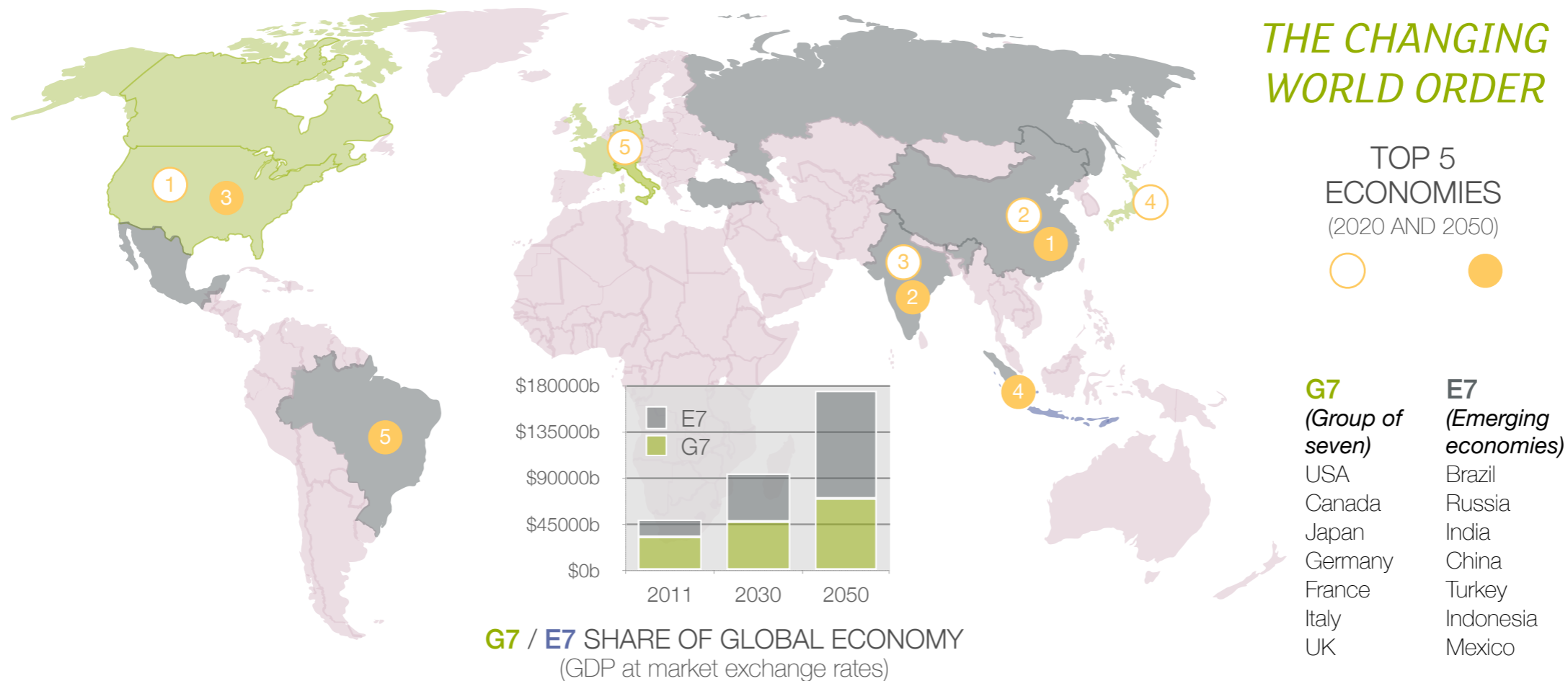
- Record-high monthly air temperatures in June, July and August
- All-time record daily average air temperature, passing 17C for the first time
- Record-low Antarctic sea ice in May, June, July and August
- Record-high monthly ocean temperatures in April, May, June, July and August
- All-time record daily average ocean temperature, passing 21C for the first time

## CLIMATE - an existential threat



# FUTURE GROWTH - global change

Global economic growth will be driven by emerging market economies, which will gradually increase their share of world GDP over time, leading to a doubling of the global economy by 2042. The E7 economies - Brazil, China, India, Indonesia, Mexico, Russia and Turkey - are forecast to grow at an annual average rate of 3.5% to 2050, compared to just 1.6% for the advanced G7 nations of Canada, France, Germany, Italy, Japan, the UK and the US. In the decades ahead, Asia's economies will go from participating in the flows of trade, capital, talent and innovation to determining their shape and direction.



PWC Report- the long view

PWC Report- the world in 2050

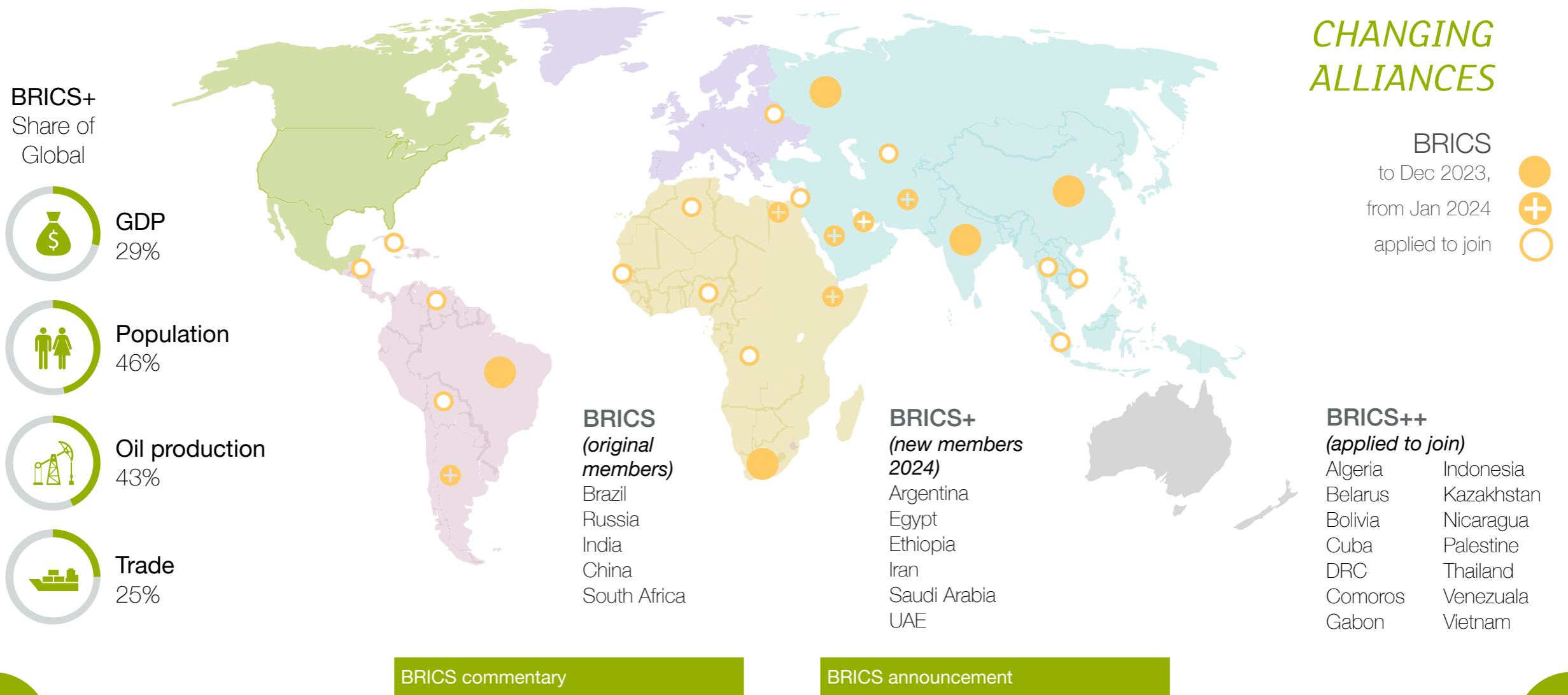
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# FUTURE GROWTH - fluid politics

The BRICS group of emerging economies (Brazil, Russia, India, China and South Africa) met in August 2023 and agreed to admit six new members at the beginning of 2024. Many other countries have applied to join this loose alliance - for a range of political and economic reasons. Although the BRICS+ block does not have a clear or unifying agenda, it signals a loosening of old ties and the start of a more fractured multi-polar world. It also signals greater involvement from the global south and a challenge, albeit limited at first, to dollar-based trading blocks of the global north and west.

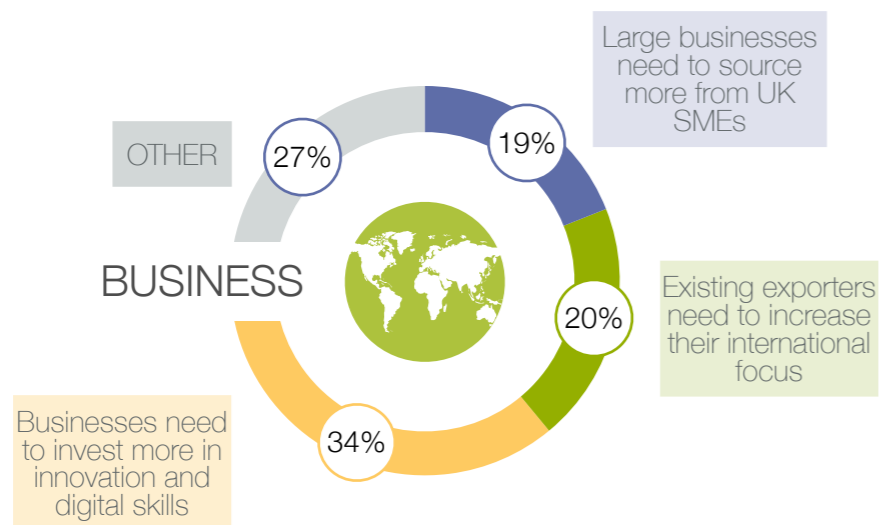


# FUTURE GROWTH – trade

BREXIT has triggered a huge change in how and where the UK trades with international markets. While there is a lot of focus on trying to broker a series of individual trade deals with countries to make up for the loss of the EU as the principle trading partner, there is less focus on the fundamental questions about the openness of the economy itself. As a result of the Leave vote and the gradual imposition of barriers to trade with the EU, sterling has depreciated by about 10% - leading to higher prices and falling wages. It also stifled domestic investment and affected flows of international investment into the UK.

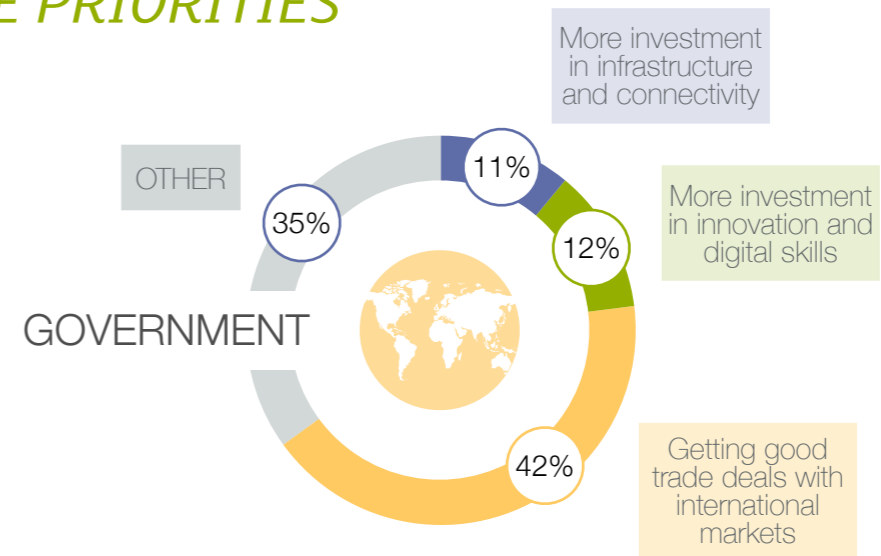
The next decade will shape future economic (and political) relations with the rest of the world and lay the ground for how the UK will position itself for trade with the USA, the EU and the emerging E7 economies. There will be trade and investment opportunities from the delivery of domestic policies - such as Levelling up and Net Zero - which should be seized; there is also a need to focus on the sectors where the UK has a genuine comparative advantage; and there is a need for more collaboration between industry, government and private investors.

## FUTURE TRADE PRIORITIES



UK trade: the new agenda (PWC)

From a PWC survey of 458 business leaders in UK and overseas. Oct 2020



Trading places (Resolution Foundation)

# FUTURE GROWTH - politics

During the last two years, polls across the devolved administrations have shown growing momentum for greater independence from Westminster. In 2014, polls in Northern Ireland said that 65% wanted to remain in the UK but, in a late 2022 poll, 27% backed a united Ireland and 50% wanted to remain as part of the UK. In Scotland, a December 2022 IPSOS poll indicates that those wanting independence are now ahead by 12%. Support for Welsh independence has risen to 25% in June 2022, but Wales remains much less likely to choose independence.

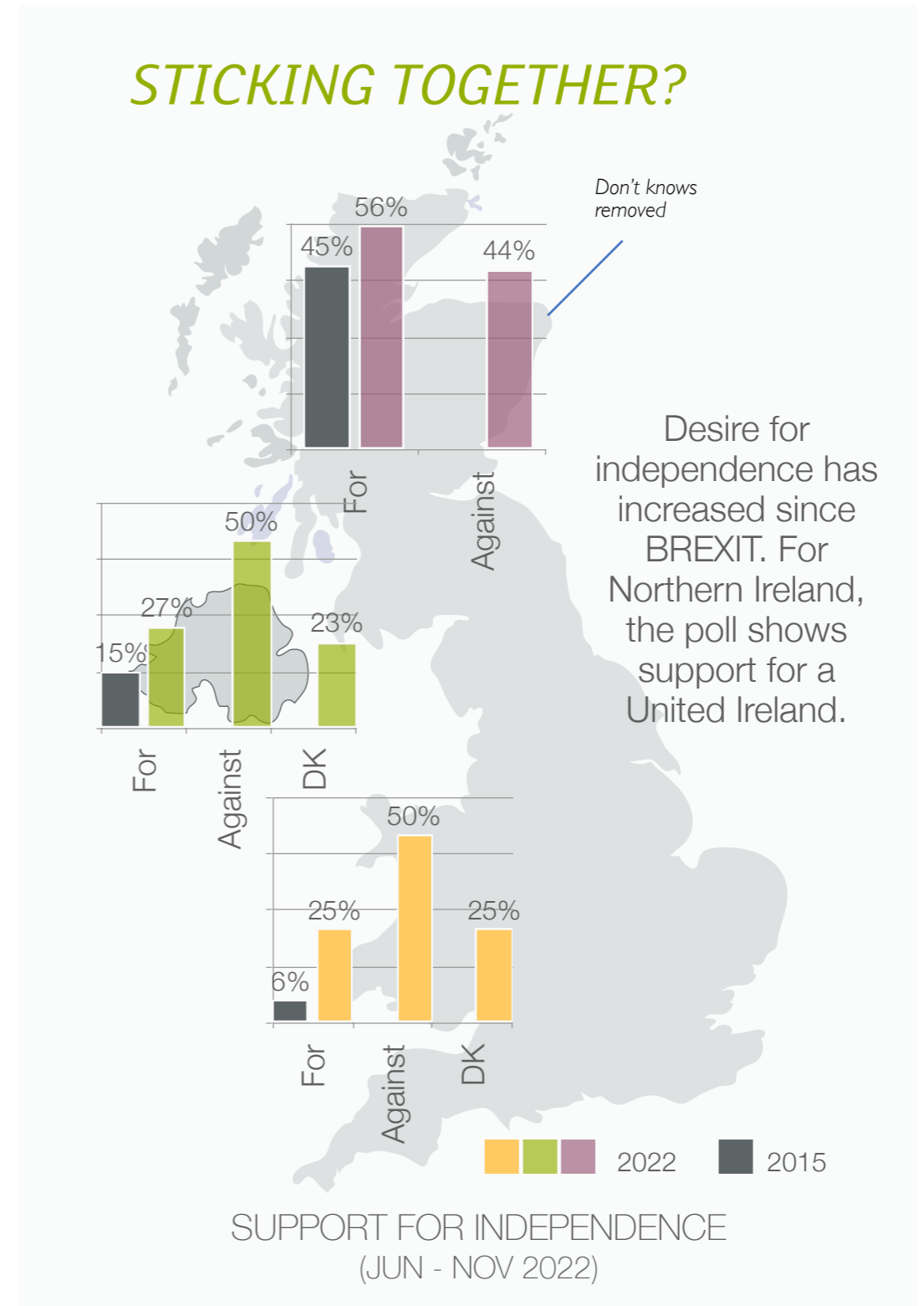
The potential implication for the South West is whether the cost of keeping the Union together - as well as maintaining the new political landscape across the north of England - means that greater Government funding will flow to those areas. This may mean, if the levelling up focus remains on those areas, that there will be less available funding for other areas.

IPSOS Scotland poll

It's time to break up Britain

NI polling - Arins project

Independence polling for Wales



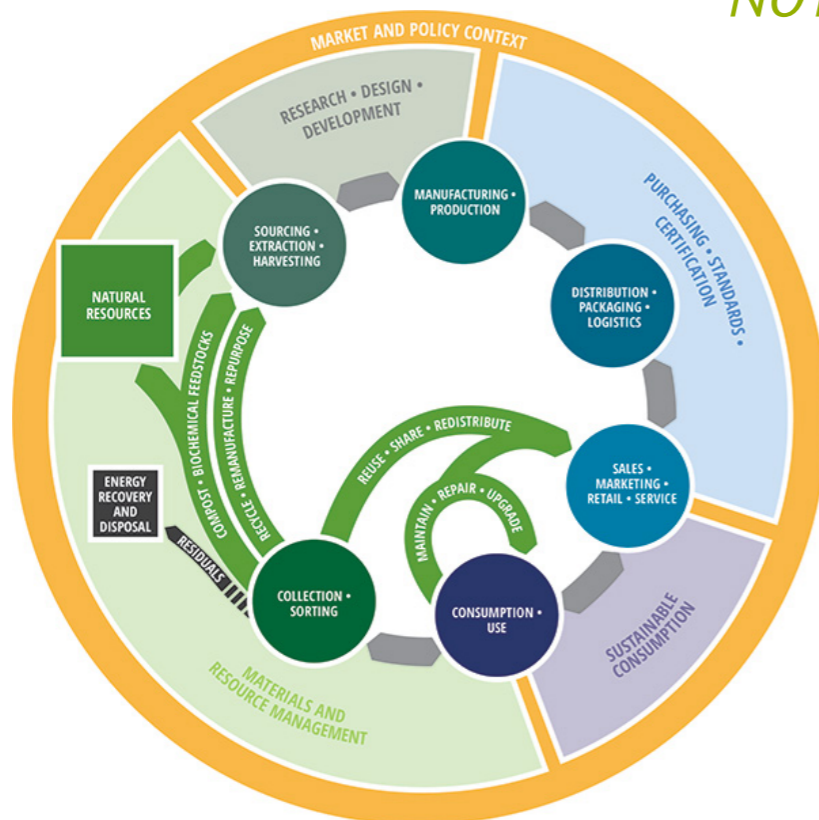
# FUTURE GROWTH - alternative models

With the global population set to reach almost 10 billion by 2050, we need to find ways to make our resources more productive. Looking beyond the current take-make-waste extractive industrial model, a circular economy aims to redefine growth, focusing on positive society-wide benefits. It entails gradually decoupling economic activity from the consumption of finite resources, and designing waste out of the system.

Underpinned by a transition to renewable energy sources, the circular model builds economic, natural, and social capital.

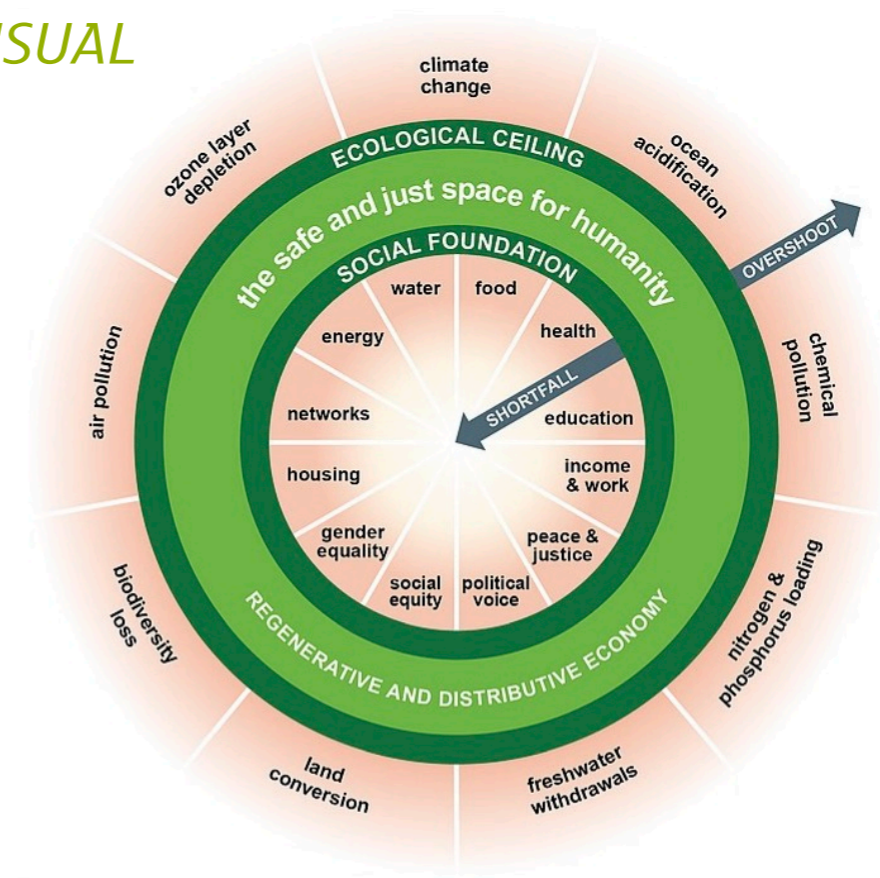
Based on a groundbreaking book by British economist Kate Raworth, 'doughnut economics' is a model for creating a balanced economy. It aims to avoid a range of environmental overshoots and addresses a series of social shortfalls - and so create a safe and just operating space for humanity. Effectively the doughnut replaces GDP growth as the aim of economic policy. Economic growth becomes a means to achieve social goals within environmental limits.

## NOT BUSINESS AS USUAL



Exeter Centre for Circular Economy

Ellen MacArthur Foundation



Doughnut Economics Action Lab



# FUTURE GROWTH - technologies

Digitisation is driving industries from product-based to service-based offerings. These services tend to be highly automated but also personalised through software. Integration of the physical and digital worlds using networked sensors, actuators and embedded software is changing industrial models.

Several technologies are converging and driving change in the nature of work, jobs and wealth creation. Artificial intelligence and robotics in particular will cause major changes in the jobs market and destabilise some sectors - yet they are likely to increase productivity and economic growth.



Forbes - technology trends for the next decade

Things to come - a timeline of future technology



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# FUTURE GROWTH - AI

Recent research by Microsoft reveals that the UK has lower AI maturity, adoption levels and workforce skills than its competitors. To close the AI skills gap, organisations need to invest in building the skillsets of their workforce, focussing on four key steps:

- ◆ Embrace AI - employers should demonstrate the benefits of AI to their employees.
- ◆ Create agile workers - as AI changes the way we work, businesses will require people and their skills to change with it.
- ◆ Re-skill employees - business leaders need to help their teams stay on the cutting edge.
- ◆ Dedication to lifelong learning - businesses must invest in digital talent platforms that foster workforce learning.

The impact of AI will be felt throughout the economy and not just within 'tech' firms. Some sectors are likely to be impacted strongly, such as: healthcare, automotive, e-commerce, security, logistics, financial services, manufacturing and public transport.

Within firms, AI can be used for a wide range of business functions which will change the nature of work, organisational structures, skills needs and customer interactions.

## AI DRIVEN BUSINESS FUNCTIONS



Microsoft report - AI skills in the UK

Range of AI futures articles from Forbes



# FUTURE GROWTH - work and skills

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In the mid-term, loss of jobs caused by the introduction of new technologies will most likely be offset by job growth in the 'jobs of tomorrow' - the surging demand for workers who can fill green economy jobs, roles at the forefront of the data and AI economy, as well as new roles in engineering, cloud computing and product development.

It is also important to understand that the constituent activities of many jobs will go or change. A significant proportion of the workforce are in jobs that are likely to need redesign and workforce retraining. The spread of disciplines and jobs across sectors will also stimulate the hybridisation of skills.

## FUTURE JOBS

- 
1. Data Analysts and Scientists
  2. AI and Machine Learning Specialists
  3. Big Data Specialists
  4. Internet of Things Specialists
  5. Digital Transformation Specialists
  6. Process Automation Specialists
  7. Information Security Analysts
  8. FinTech Engineers
  9. Database and Network Professionals
  10. Business Development Professionals

- 
1. Data Entry Clerks
  2. Accounting, Bookkeeping and Payroll Clerks
  3. Administrative and Executive Secretaries
  4. Accountants and Auditors
  5. General and Operations Managers
  6. Client Information and Customer Service
  7. Assembly and Factory Workers
  8. Business Services and Administration Managers
  9. Statistical, Finance and Insurance Clerks
  10. Bank Tellers and Related Clerks

McKinsey report on automation

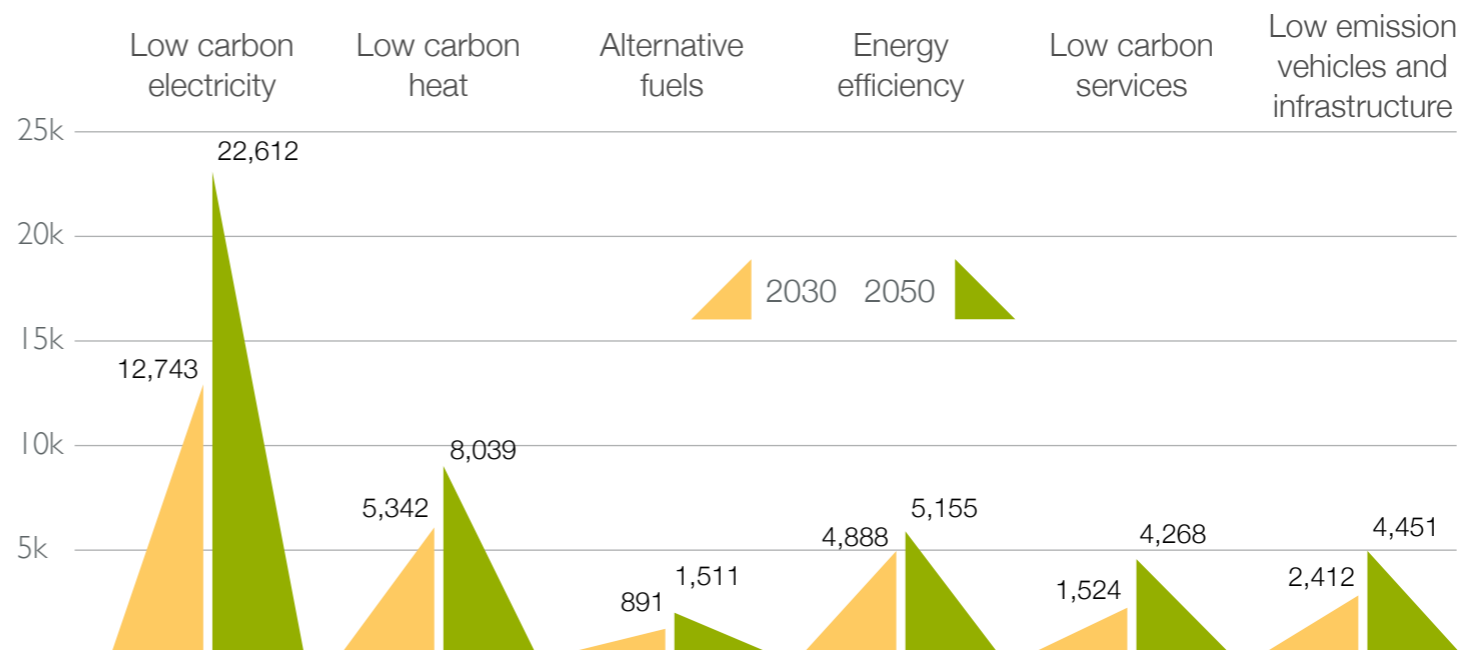
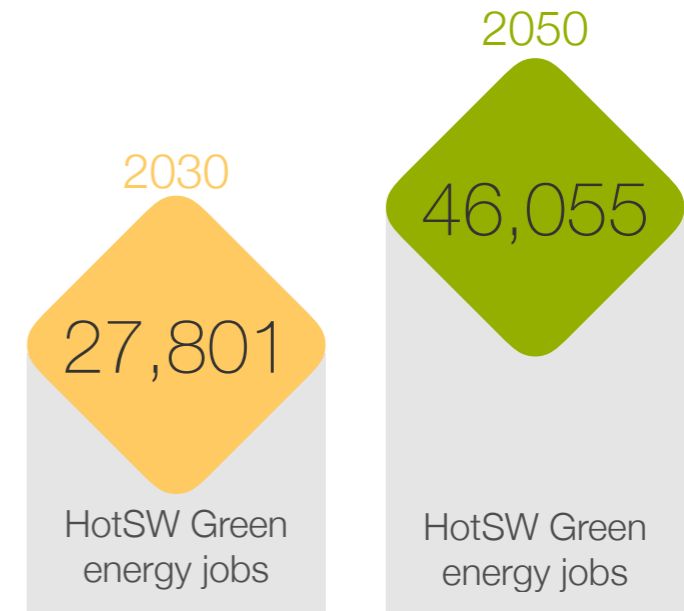
WEF - Future of Jobs report

WEF - Global Re-skilling revolution

# FUTURE GROWTH - green energy jobs

In 2018 there were 185,000 full-time workers in England's low-carbon and renewable energy economy. In 2030 across England there could be as many as 694,000 direct jobs employed in the low-carbon and renewable energy economy, rising to over 1.18 million by 2050. It's crucial that there is a workforce with the right skills in place to deliver the change needed by 2050. Local areas will need to understand the skills gaps that will emerge within each low-carbon sector and, as a result, the opportunities for re-skilling the workforce.

## ESTIMATED JOBS IN LOW CARBON ENERGY IN HotSW



LGA - local green jobs report

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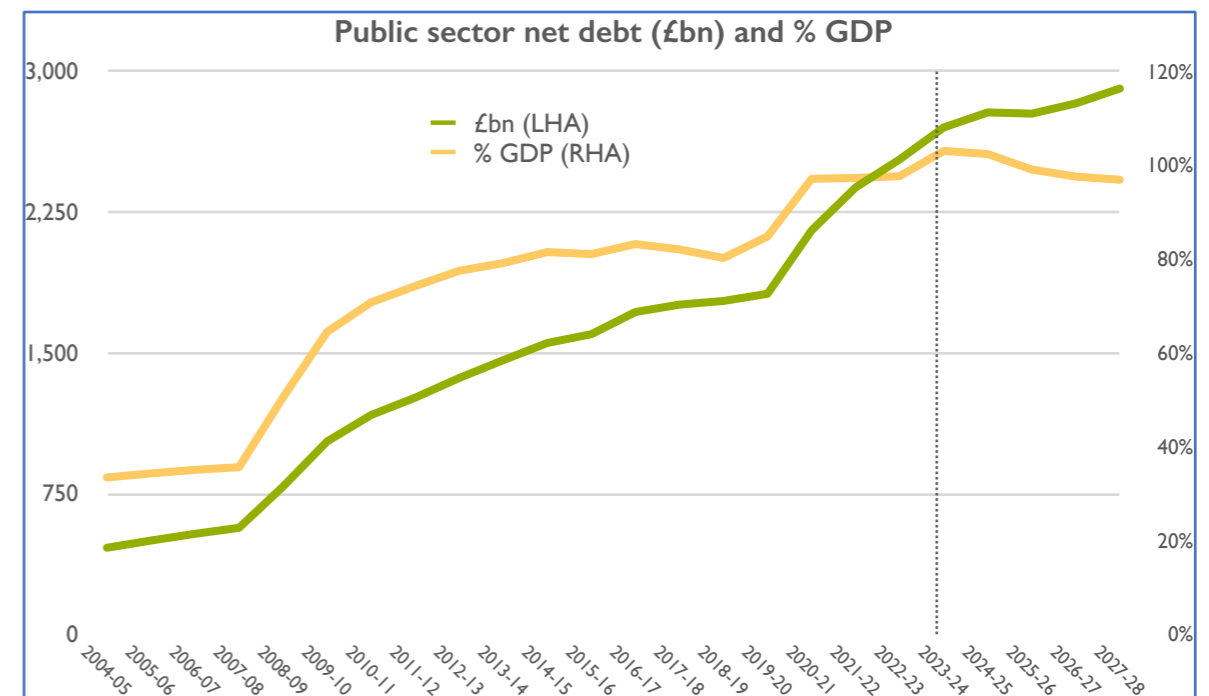
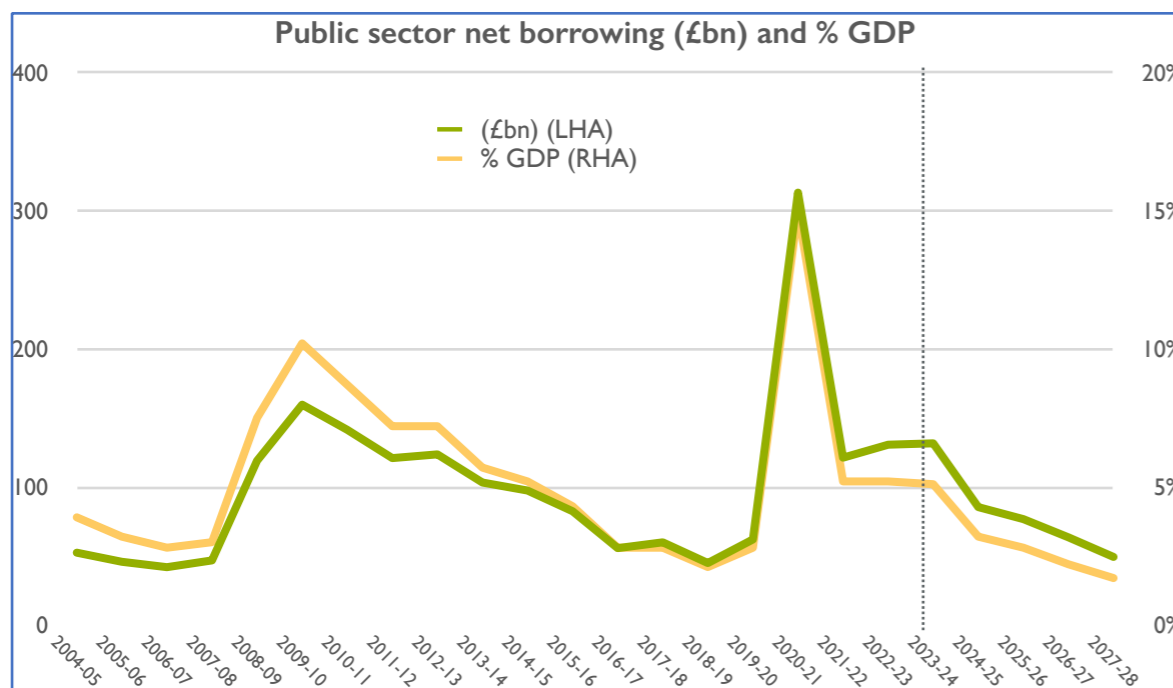
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# FUTURE GROWTH – public finances

Government expenditure and net borrowing outturns have tended to be lower than forecasts over the last few years. In general this has been supported by higher than forecast tax receipts.

Public sector net borrowing peaked at c£310m as the full extent of Covid hit society/economy – equivalent to c15% of GDP. It was expected to decline sharply over the coming years, returning back to medium-term trends. The Office of Budget Responsibility, in Summer 2023, forecast that public sector net debt (which is a cumulative figure) will continue to rise – reaching nearly £2.9 trillion by 2027/28. This represents about 100% of annual GDP and will have significant implications for public spending. Whilst these forecasts did take into account the prospect of a recession, the depth and duration of any economic downturn will ultimately determine whether these forecasts will be accurate.

## LONG TERM DEBT

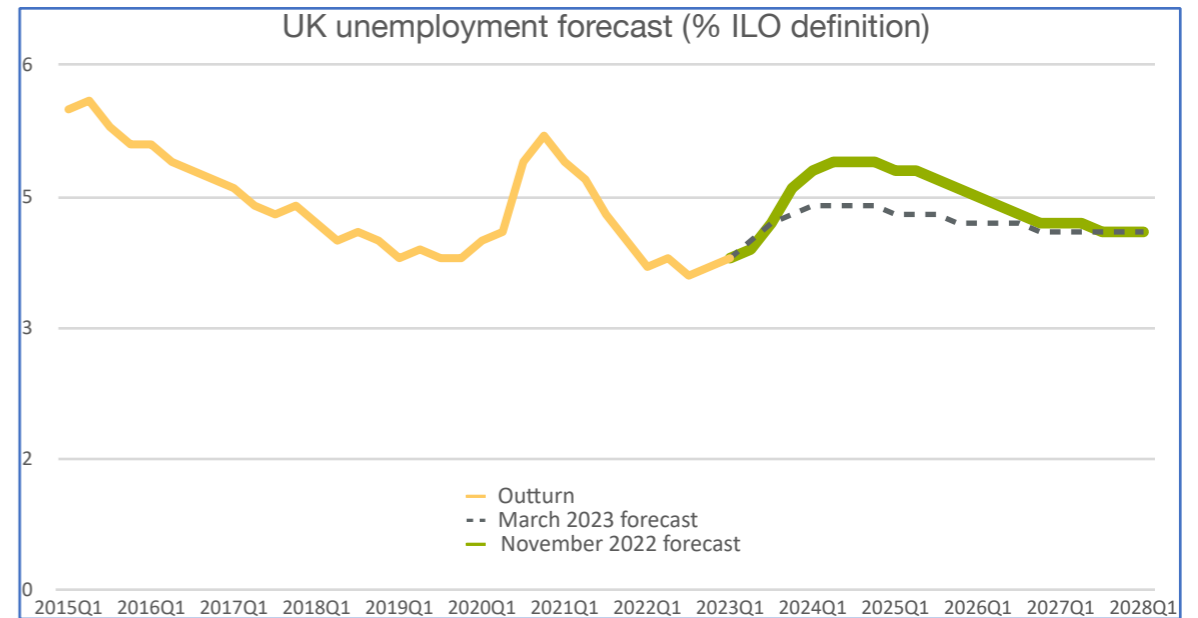
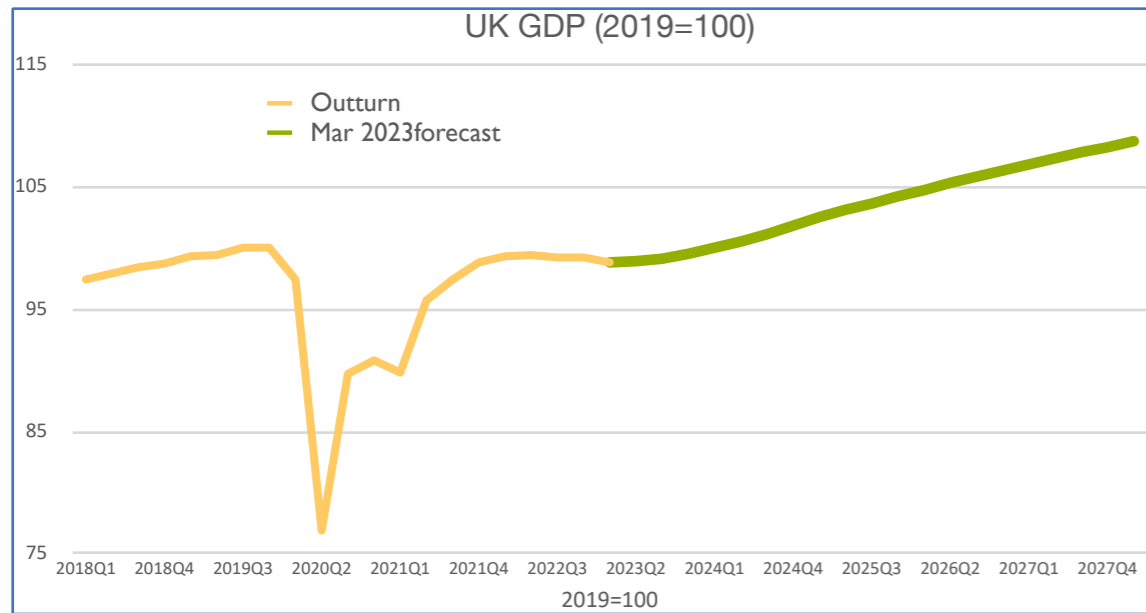


Public finances

# FUTURE GROWTH – economic indicators (1)

Economic output (GDP) is now back below pre-pandemic levels, due to the downturn. The confidence of sustained growth demonstrated in previous economic forecasts has reduced, with those forecasts now much more negative/muted. The latest data indicates that the UK economy continues to tread water. However, unemployment has still not reached the levels forecast in the depths of the pandemic – as shown in the chart below showing the differences in forecasts made by the OBR in Nov 22 and the latest forecasts in Spring 23 (with further updates expected to accompany the 2023 Autumn Statement). Latest OBR forecasts expect the short-term contraction in early 2023 will be followed by a period of 'flatline' in output and stronger growth to return in the middle of the decade (24/25). Over the longer-term forecasts expect the economy to return to long-term trend. As always, forecasts are uncertain but some of the primary factors underpinning these subdued forecasts are sustained high energy prices and wider inflationary pressures - in themselves resulting in a gradual tightening of monetary and fiscal policy - i.e. higher interest rates.

## AN ECONOMY STRUGGLING TO MAINTAIN MOMENTUM

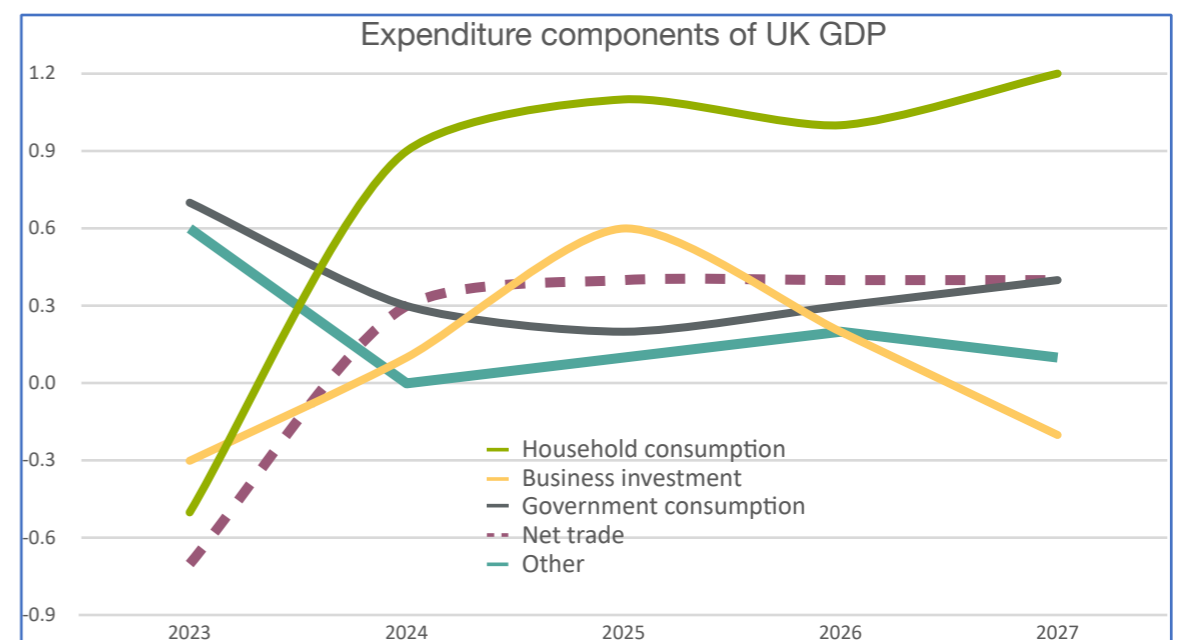
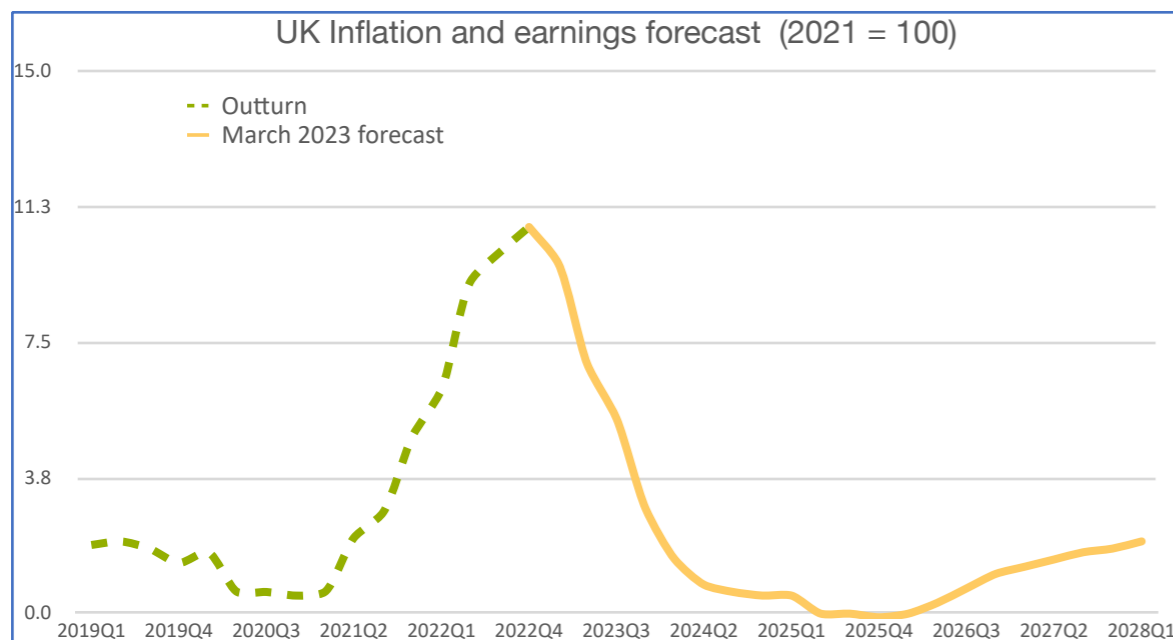


# FUTURE GROWTH – economic indicators (2)

The latest OBR forecasts now expect inflation to have peaked in 2023. Recently, for the first time in several years, wage growth exceeded the rate of inflation. Any economic growth was expected to be provided by a rebound in household consumption and business investment from the depths of pandemic-hit 2020. Government spending - which propped up the economy through 2020 via the various Covid support programmes - is expected to play a much less significant stimulus role.

There is an expectation from organisations such as the Bank of England and the Office of Budgetary Responsibility that UK inflation could drop quite quickly from its 2023 peak (as illustrated in the below chart). However, there is considerable uncertainty and it remains subject to wider macro trends. For example, the price of crude oil has recently increased again and given that it underpins the cost of other products - not least transportation and energy costs - then inflation may remain more stubborn than these forecasts predict. In addition, some commentators are worried about a wage-inflation spiral.

## A RISK FROM INFLATION



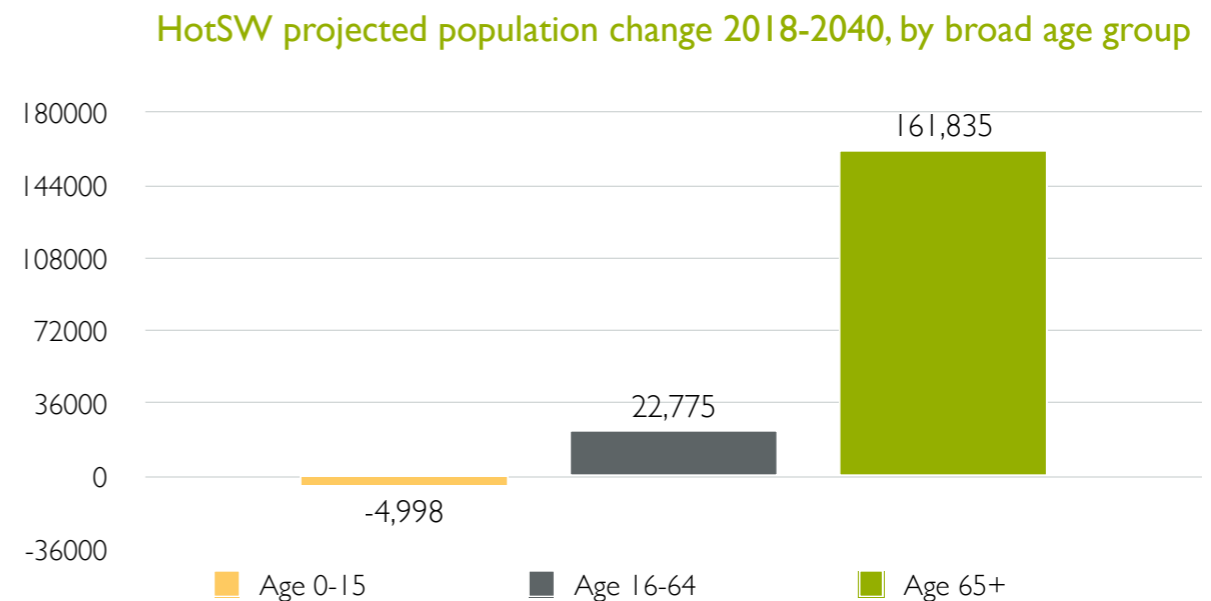
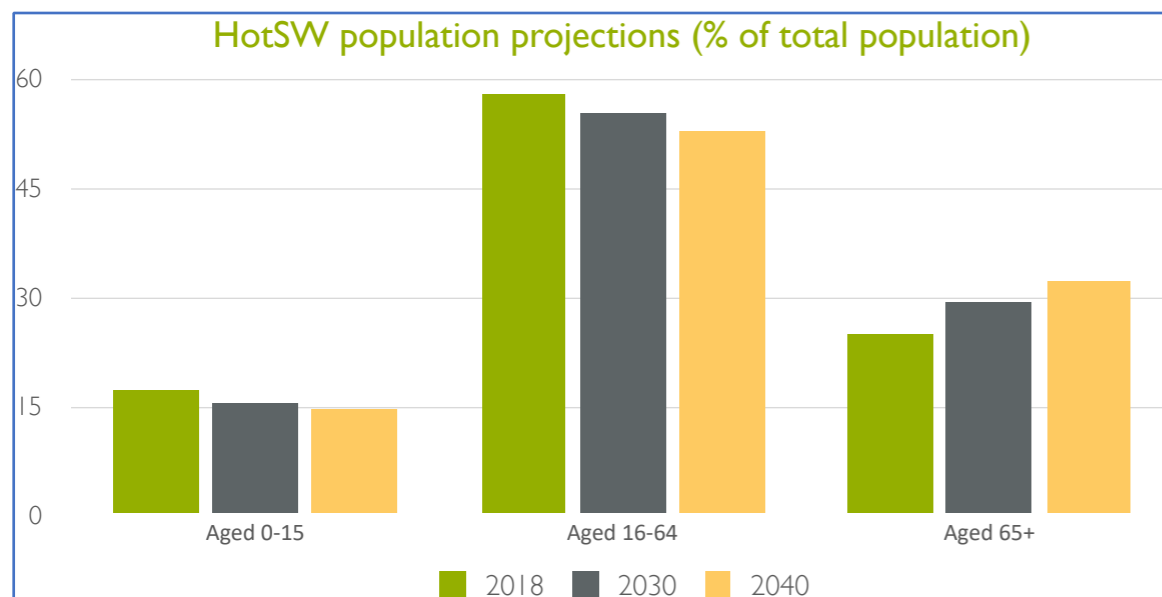
Economic projections

# FUTURE GROWTH – population

Office for National Statistics projections show that the balance of the UK population will be substantially different by 2040. There will be more people in all the older age groups - with the number of over 85s doubling to 3 million.

The demographic projections for the HotSW show that it will continue to age – extending the trend seen over recent years. Over the next 20 years (notwithstanding any major shift in inward migration), about 90% of the projected 180,000 net growth in population will be in those aged over 65. The proportion of the working age population will continue to shrink - falling to c52% of the total population. This will increase the 'old age dependency ratio'. In 2018, there were 0.43 people aged 65+ for every working age person. By 2040 this is projected to be 0.61 – with obvious implications for the economy and other issues such as the cost of social care.

In the much longer term, lower birth rates, as are being seen in Japan and Italy for example, may lead to some depopulation of rural areas - with implications for services like health, housing and transport. However, the projections for HotSW as a whole continue to show growth for the next few decades.



Population projections



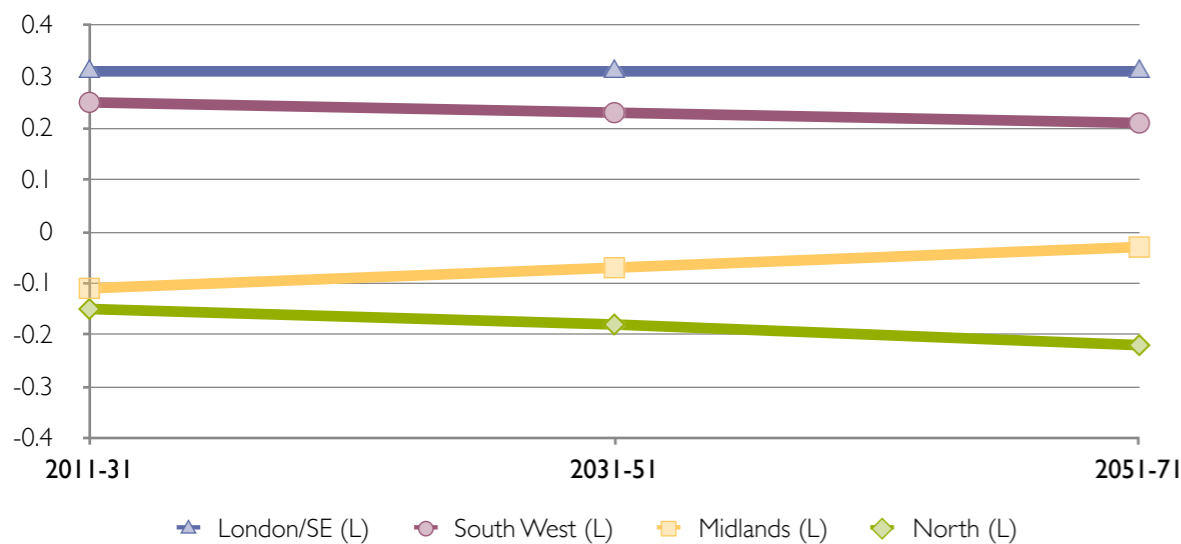
# FUTURE GROWTH - inequality

The slow recovery of unemployment and continuing benefit cuts mean child poverty will rise to its highest levels for nearly three decades. Child poverty (defined as those children in a household with less than 60 per cent of median income) is also expected to rise, pushed up by a number of adverse benefits changes. This could mean between 31 and 33% of children being in poverty by the end of the parliament, some 730,000 more than in 2020-21. By 2024-25, it is estimated that 23.0% of individuals will be living in relative poverty – up from 22.2% in 2019-20, and from 21.1% in 2020-21. An overall measure of inequality – the Gini coefficient – shows a similar picture, with income inequality set to rise further between 2019 to 2025 - to 34.97.

This chart on the left shows a prediction of broad regional employment change. Outside the challenges of closing gaps under current policy direction, arguments for restructuring and investment in the Midlands and North may prove an ongoing challenge to funding policy for decades - with possible implications for the wider SW.

## REGIONAL EMPLOYMENT CHANGE

Estimates of % change in regional job distribution under current policies (using a low growth scenario)



Future regional disparities

## POVERTY INCREASES BY 2024/25



Living Standards outlook

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# FUTURE GROWTH - notes

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Thinking about the future is not an exact science, There is little definitive data to draw on.

The reason for including a 'futures' dashboard is to:

- deepen understanding of the driving forces affecting future development of policy or strategy in the area
- identify gaps in knowledge and suggest areas of new research required to understand driving forces better
- start debate amongst stakeholders about the issues and how to tackle them
- identify some of the difficult policy choices in the future
- create strategies and plans that are more resilient and adaptable to changing external conditions

In this dashboard, we use a number of credible sources ranging from research reports and articles to polling data and forecasts. In many cases, we have chosen specific issues to highlight while the full reports offers further information and insight. Each slide gives a direct link to where the report or data we have sourced is found, however over time these links may be superseded or show later data than has been used in this report.

The approach taken in these dashboards is to use consistent sources of data to track changes over time. In some instances, different but more up-to-date data/forecasts may be available - although they will not necessarily be updated on a regular basis, or cover quite the same thing. Therefore, using a consistent data source is the approach chosen.

All data used is publicly available under the terms of the Open Government Licence and UK Government Licensing Framework.

Data reflected up to the 15th September 2023.

Unless otherwise stated data has been sourced, collated, analysed and visualised by Ash Futures Ltd.