

What if...
a glimpse into the future



HSBC UK | Opening up a world of opportunity

Technology: What if in 2030...

The world is moving at a startling pace and technology is leading the way, through innovation, disruption and creating the jobs of the future. In such a fast-paced industry, high-growth tech firms don't often get a chance to pause, look ahead and spend time with their peers considering what a changing world could mean for them. So, we created an event to do just that.

Our ambition was to look to the future, 2030 to be precise, with the aim of sparking 'What if' moments amongst business leaders. We aimed to equip our audience with ideas and inspiration for the future to help continue driving their businesses forward at pace.

We explored different views on the most significant technology trends and indicators likely to impact businesses, including the shift online, circularity and changing demographics. Interestingly, our audience believed AI and automation would be the biggest game-changers in our future.

We were joined by founders from high-growth tech firms Elvie and TPXimpact, to hear first-hand the opportunities and challenges they have faced, their learnings and how they plan for the future. Both shared inspiring insights and top tips with a room full of fellow founders – but surprisingly, the discussion focussed more on culture and skills rather than tech.

Finally, we opened up discussions with all the business leaders who joined us, to deliberate the opportunities and challenges of three key themes impacting the tech sector today and in the near future – ESG (Environmental Social and Governance), future-proofing and growing new markets (internationally and via new products).

The morning sparked exciting discussion, and we are keen to share the ideas and potential visions of the future with you.

It's time to build on the successes and unlock even greater growth potential.

It's time to create new opportunities and to think strategically about the forces of disruption that will shape our future.

Are you ready?

To ignite – build on the fire
To innovate – be the accelerant
To internationalise – into new markets



Roland Emmans

Head of Technology Sector and Growth Lending at HSBC UK

What if... a glimpse into the future

As the shape of the world changes, we asked James Pomeroy, Global Economist at HSBC, and Greg Williams, UK Editor and Deputy Global Editor of WIRED, to give their views on the key trends and influences most likely to shape the tech sector – and the world. Their responses were quite different, and spurred some interesting debate about what to expect in the rest of this decade.

Amid a startling pace of global change and a powerful rise in the capabilities of technology, it has become increasingly difficult to anticipate the issues that will impact businesses. In a world where black swan events start to seem like the norm, business leaders need to be able to see the expected changes coming. The ability to spot trends and opportunities ahead of their competitors can mean the difference between being a market leader or just another 'me too' firm.

Both Williams, who joined us as part of our wider partnership with WIRED, and HSBC's Pomeroy had the opportunity to share their top trends before coming together for a lively discussion. It's fair to say they didn't always agree. However, there were some interesting overlaps in how these leading thinkers view the road ahead.

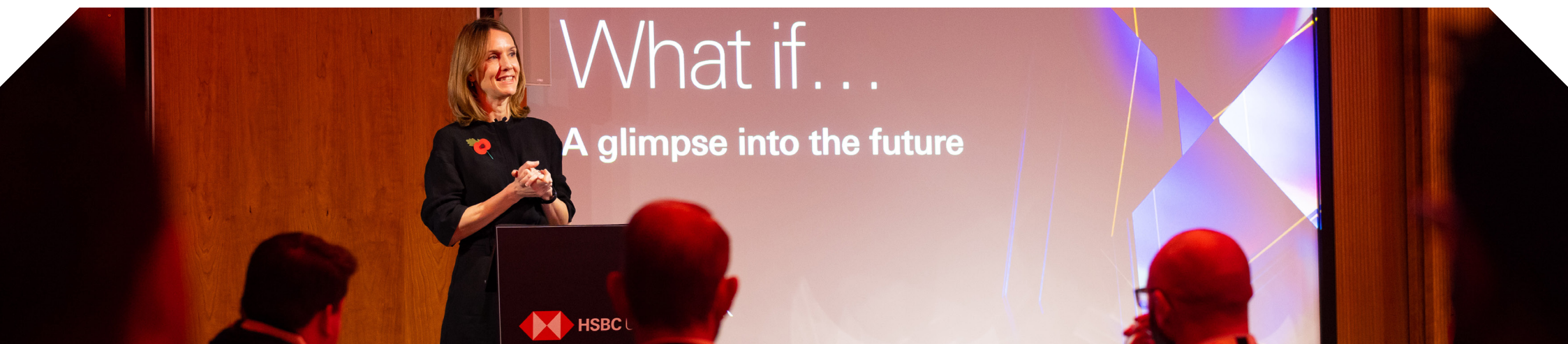
Seven key trends crucial to the development of the tech sector by 2030

HSBC's James Pomeroy

1. Changing demographics: Our evolving population and what it means for consumer habits
2. Circularity: The impact of environmental consciousness
3. The shift online: How a generation shift is set to move consumer activity online
4. Digital currencies: Stepping up in an increasingly online society

WIRED's Greg Williams

1. Geopolitics: Tech is the battleground for geopolitics
2. Future energy: An accelerated learning rate drives huge developments in tech-related areas
3. Automation and AI: Demanded by society, powered by tech

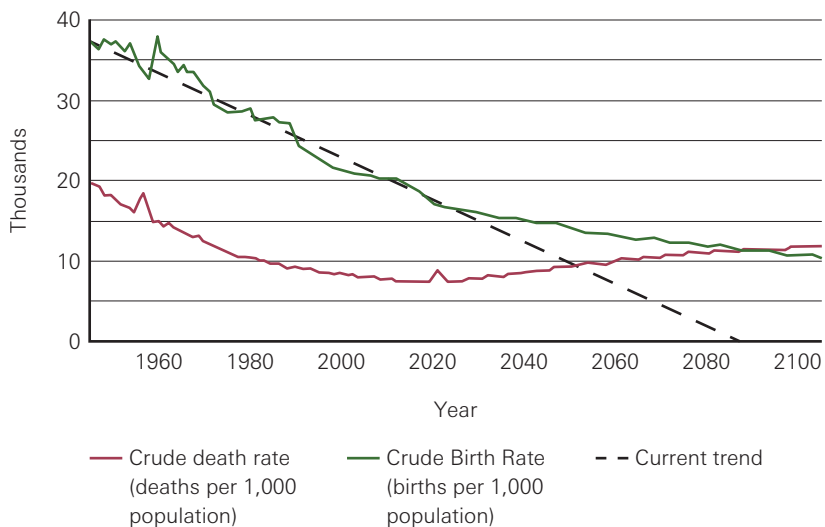


1. Changing demographics

"Demographics are the single most important trend affecting the world right now," says James Pomeroy, Global Economist, HSBC.

The global population will start shrinking but when?

World birth and death rate (UN base case)



Source: UN Population Division.

Note: The global death rate is expected to rise due to the higher average age of the global population

The world's population has just reached eight billion people and is expected to keep growing all the way through to the 2080s. But the pandemic and other socioeconomic issues, such as a rising cost of living, are contributing to people having fewer babies, particularly in developed economies.

These dual factors are set to rapidly change the shape of the world's population. In fact, the population of China will soon begin to fall and could halve by 2100. India's will peak around 2050. And the US population would fall from the 2030s if not for immigration.

Put simply, a number of the world's major economies are reaching sub-replacement fertility rate, a total fertility rate that, if sustained, leads to each new generation being less populous than the older. The economic repercussions of this is that pension commitments start to rise above the net value of earnings, as fewer people in the young working population support more people in the older, retired generations.

"There was a time when we thought the lowest the birth rate would go to was around 1.2 children per woman," Pomeroy says. "In Korea, we're now seeing that it's as low as 0.85. That means the Korean population will shrink by around 60% in the course of a generation.

"So we have to consider what that means for the world if that trend plays out more widely. It will mean there will be far fewer people earning money to support retired people, a demographic that is at its highest ever level, putting huge pressure on governments and businesses. It will also change the demographic of tech firms' target audiences, which in turn could impact business models."

Of course, as well as these challenges, this demographic change will also deliver socio-economic benefits and opportunities. A key societal benefit will be the potential reduction in environmental pressures, as an older population tends to consume less energy. A significant reduction in younger workers will also force an increase in economic opportunities for women and minority groups, and could cause an upward pressure on wages.

“Demographic trends don't only impact growth rates – they also drag other changes along with them. One of those is a cohort effect we are seeing. In the UK, the US, China and India, the most common age at the moment is in the late-20s. That means we will start to see far greater embracing of 'the circle' – the business models more reliant on reusing, recycling, sharing.”

James Pomeroy,
Global Economist, HSBC

2. Circularity

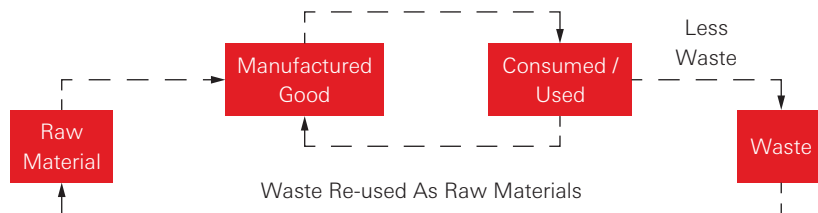
Pomeroy adds that demographic trends are intertwined with, and will further impact, other major trends – in particular circularity.

Is it time to embrace the circle?

The 'LINEAR' Economy



The 'CIRCULAR' Economy



The circular economy, or circularity, is an economic model that follows the **three Rs: Reduce, Reuse and Recycle**. A typical example would be mobile phone manufacturers accepting older models as trade-ins. The cycle starts with the new phone, then when that model reaches the end of its lifecycle and is traded back, the manufacturer strips it for essential materials that then go into new phones, and hopefully, responsibly recycles the rest. Not only can this be much cheaper than mining raw materials, it's also more sustainable.

Circular business models modify the pattern of product and material flows through the economy. By doing so, they can reduce the adverse environmental side-effects resulting from the extraction, use, and disposal of natural resources and materials.

Pomeroy says that, as younger people, with their environmental awareness and concerns, become an increasingly larger part of the global consumer economy and have greater spending power, they will drag the trend towards circularity with them and hugely increase its popularity.

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"That means we will start to see far greater embracing of 'the circle' – the business models more reliant on reusing, recycling, sharing.

"That, too, will deliver business benefits for tech firms and companies more broadly," he adds. "It will help us address some of the raw material challenges we are seeing, and the supply chain issues resulting from the current geopolitical landscape.

"If we don't need to go and mine lithium out of the ground in Russia, because we can recoup it from old Apple iPhones and put it into new Apple iPhones, for example, then that's going to help with a lot of those types of challenges."

3. The shift online

Another trend being accelerated by demographic patterns, and which will also have a major influence on tech firms' strategies going forward, is the shift to online.

Pomeroy explains that, currently, only 15% of shopping in the US is done online. However, that's about to change significantly. That's because among the younger demographic, the proportion of those who shop online rises to between 60-70%.

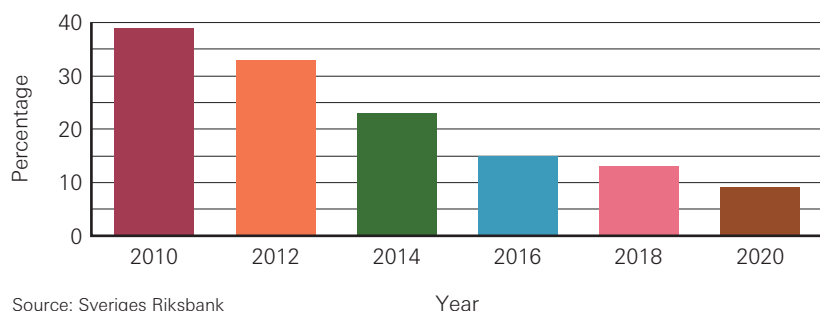
As this younger demographic grows and becomes increasingly wealthy, it will further drive ecommerce adoption and change the online versus offline picture for the retail industry.

"That demographic will drag along the digitising of the economy," he says. "The pandemic has also helped accelerate that – most people can name one thing they now do or buy online that they didn't before the pandemic – but it's the popularity of online take-up among this younger demographic that is set to make the real change."

4. Digital currencies

Increased online activity, along with new habits formed during the pandemic, have also helped spurred the rise of cashless transactions. Payments online are by nature cashless, but increasingly, even physical transactions are contactless or through smart wallets on mobiles.

Sweden: Percentage of people paying for their most recent purchase in cash



“All of these trends make it far more likely that we will see a rise in digital payments,” says Pomeroy. “In fact, this could be the world’s ‘Sweden moment’,” he adds, citing the example of the European country as one that is effectively ‘cashless’ today.

“Data is showing us that use of cash is declining. That means there is growing appetite among people to move away from cash and towards digital payments. When you look at Sweden as an example, hardly anyone uses cash.”

The move to digital payments has been a growing trend for the last few years, but it also sets the stage for the next evolution – digital currencies. While cashless payments thus far are still in fiat currencies, like the dollar or the pound, the embrace of digital payments means that people are more open to the idea of an entirely digital currency, such as the e-Yuan in China.

“The next obvious step is to fill the gap with a digital currency. And I think it will be Central Bank Digital Currencies (CBDCs), the digital form of a

country’s fiat currency, that will fill the gap because they will be more stable than other digital currencies and well regulated,” says Pomeroy.

5. Geopolitics

At a time of increased geopolitical volatility, set against a backdrop of the conflict in Ukraine and increasingly complex trade relations between the US and China, WIRED’s Greg Williams highlights the crucial role of technology in geopolitics going forward.

“Technology is now a battleground in geopolitics, particularly for nation states,” he says. “When you think about raw materials, whether it’s for toys, gadgets, or medical equipment and supplies, modern economies are completely dependent on this coordinated movement of consumer goods and commodities.

“It’s true that we now live in a world where making a purchase is just one click away, and it’s more likely to take place from the back of an Uber than in a retail store. However, the notion that this has completely broken down trade borders and has removed geopolitical barriers has passed,” he adds.

“The fact is there is increased competition for consumer spending among states, and technology is the key to that – with regional, fractured forms of the internet a great example of how that is playing out, and of the fact that geography matters.”

That may also further fuel the take-up of the circular economy set out as a key trend by Pomeroy – as firms look to overcome the supply chain and cost challenges created by geopolitical tensions.

“Over the course of the next decade we will see a lot of good things. And hopefully the global economy will look a lot healthier, too. The opportunities for tech are massive.”

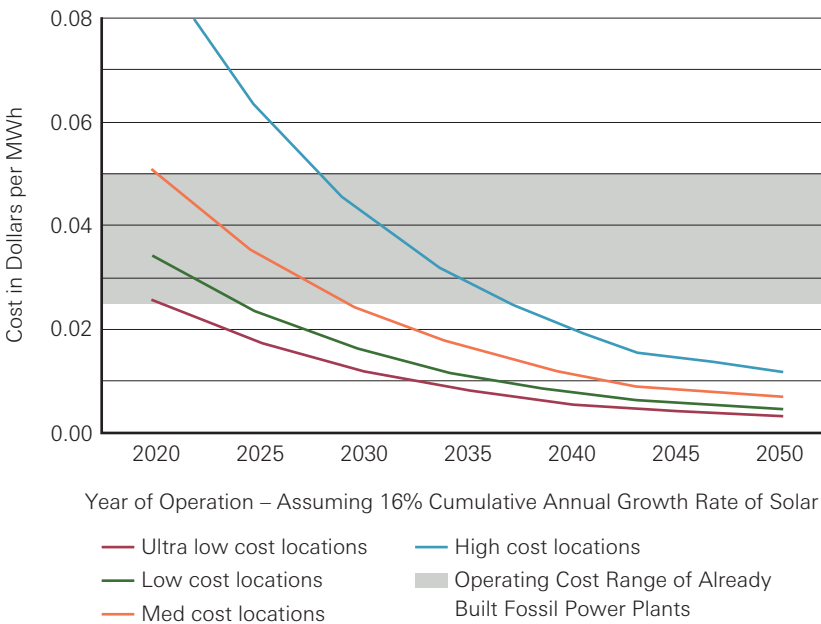
James Pomeroy,
Global Economist, HSBC

6. Future energy

Williams believes that huge capability advances and reductions in the production costs of important tech-related materials will also be a crucial trend between now and 2030 – and will have a major impact on the sector moving forward.

Future solar cost by year

Assumes 30% Learning Rate, 16% Compound Annual Growth of Solar Industry



Source: Ramez Naam – rameznaam.com

He says the increase in the ‘learning rate’ around areas such as lithium battery production and wind power technologies will have a major impact on production costs and the pace at which progress can be made.

The learning rate is the way in which companies are able to produce materials better, faster and cheaper due to the fact they are doing it

more – the more we produce, the better and more efficient we get, due to economies of scale, and because we are learning and improving all the time.

Williams says that the learning rate is speeding up around the production of crucial tech-related materials, which will hasten the speed of progress and growth.



7. Automation and AI

Both Williams and Pomeroy also highlight the importance of the advance of automation and AI over the remainder of this decade.

For Williams, while AI and automation are already having a significant impact on areas such as radiology and x-rays in recent years, the more recent advance of generative AI – whereby AI can, based on inputs, now produce ‘creative’ outputs – will advance progress even quicker.

“AI and automation has learnt what stuff means and it can produce creative work now,” he explains. “Whether it’s code writing, copywriting, media and advertising, 3D modelling or even making films, AI can now play a role in the creative process.”

Pomeroy adds that the advance of AI and automation will also be fuelled by the need for businesses to cut costs and reduce staff hours – citing the example of the role shelf-stacking AI tools could play in warehouses and supermarkets.

“Such developments are lower-cost, more efficient, and are almost with us,” he says. “There will be other impacts from AI’s growth – some jobs will be removed, so there will be a need for lifelong learning and upskilling. In fact, it’s predicted that 85 million jobs will be displaced in the next five years alone. But the benefits will be huge and so I don’t see there being a backlash. In addition, it might just mean that we as humans work a bit less – which in my view would be a sensible thing.”

“It is true that some jobs will be removed altogether,” he adds, “as machine is able to completely replace some roles. But it’s equally the case that they will create some new jobs and, of course, the perfect outcome is always machines and human combined – humans doing the ordinary and technology doing the extraordinary.”

Pomeroy says all of these trends should provide cause for optimism, adding that while many trends are often viewed as negative because they result in change, change can in fact offer great opportunities for growth.

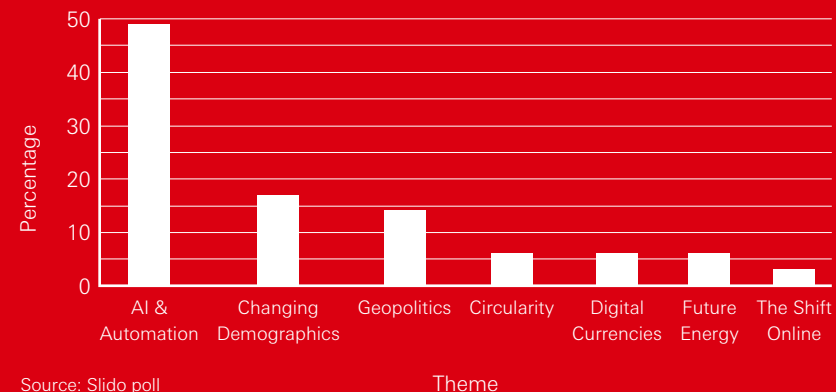
“Over the course of the next decade we will see a lot of good things,” he says. “And hopefully the global economy will look a lot healthier, too. The opportunities for tech are massive.”

What are businesses focused on?

After hearing from our speakers, we asked attendees to vote on which of the seven trends was the most important to their business in the years ahead. AI and automation was far and away the dominant theme, with just under half of delegates voting for this, followed by changing demographics (17%) and geopolitics (14%).

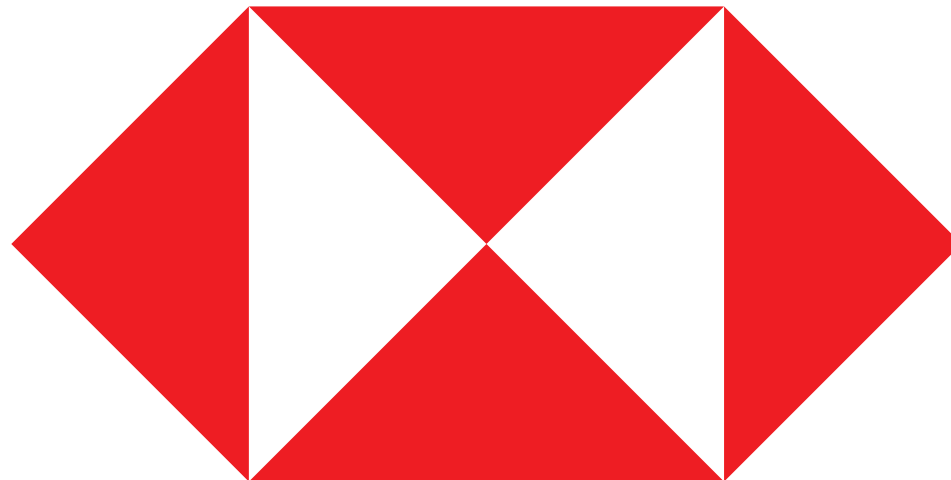
AI and automation’s dominance is likely the result of its ability to deliver not just huge efficiencies and cost savings for businesses, but also the result of the development of the younger demographic.

What do you think is the most important theme for your business, as we look ahead to 2030?



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Greg Williams,
UK Editor and Deputy Global Editor of WIRED



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