

What will the Internet
look like in 2050?



Chapter 3

Environment



New innovations will make carbon emissions transparent

Joanne Thurlow

Joanne Thurlow is keynote speaker and Executive Director of The ESG Institute. This organisation helps businesses adopt and integrate Environment, Social, and Governance (ESG) principles to create a more sustainable and equitable future. Thurlow hopes that in 2050 the world will work together to solve ESG-challenges. “I’m hopeful about the future and believe new technologies will bring much-needed transparency to carbon emissions.”



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Collective and connected

The biggest surprise about 2050 won't be just one single, new technology. I believe that in 2050 we'll be working and living in a collective and connected manner, in a way that would surprise us today. I'm talking about a seamlessly connected world on a full scale, incorporating technologies that are now being developed in response to climate change and the urgent need for sustainability. I believe we'll see a global world where all parties come together to find solutions to climate challenges. The combined efforts we saw during the COVID pandemic to create vaccines at a record pace have set a precedent for how the world can work together, beyond national borders, to implement a global response.

Hopeful

The fact that nations were able to work together during the pandemic has given me hope for the future. I believe we're moving towards an inherently global community, whilst also creating amazing technical solutions that are redefining every aspect of our world. It goes beyond the 4th Industrial Age, permeating the tech we use, the way we learn, how we live and interact with others. However, our world continues to decline at an alarming rate. We cannot understate how urgent it is to respond and turn the tide of climate change. As of 2023, we're still very far short of meeting our global Net Zero targets and we're still moving in the wrong direction. With this as the everyday reality in which we live, it's easy to become pessimistic. Yet it's encouraging to see how many people are now driven to make the changes we need. It's also inspiring to see how society is inherently shifting towards finding solutions on the global level. Incremental changes will build momentum. And momentum will drive speed. Necessity will drive innovation. When I look at how these trends are now converging, it makes me cautiously optimistic that we can achieve our ESG goals by 2050.

Technology creates transparency

The holy grail for achieving ESG targets is to ensure full transparency when it comes to carbon emissions in globally agreed standards. Those standards need to be understood by all parties, with consistency across all industries and geographical locations, and 100% certifiability, which isn't the case today. This would prevent greenwashing and fraudulent reporting, whilst making it impossible for the worst offenders to hide their real carbon performance through questionable offset schemes. It would allow us to know exactly where we stand collectively, on the global level. Data sensors, blockchain, artificial intelligence, machine learning, real-time analytics and green tech technologies all help facilitate this much-needed transparency. Innovation will contribute to a more sustainable world.



Safer internet

As we move forwards into an increasingly digitalised world, data is at the core of everything. IT infrastructure and connectivity are the keys to making data accessible. A faster, smarter, safer and more resilient internet will be crucial to making the full benefits of technological advancements available to everyone. From a governmental and societal perspective, we'll see a push to ensure the necessary interconnectivity of networks with common (and secure) protocols. Governments will play a bigger role in the control of networks. The war in Ukraine has reminded us of how essential cyber security is – and the vital importance of ensuring access to connectivity.

6G and sustainability

In 2050 we'll be using 6G, which is expected to be around a thousand times faster than 5G networks. This could provide higher capacity and lower latency, allowing for the exchange of data with excellent coverage at incredible speeds. The scientific community often refers to it as 'wireless cognition', as a 6G network could make it appear that humans are interacting with AI and robots through thought alone. 6G contributes to several SDGs, such as quality education, decent work and economic growth. However, from a sustainability perspective, any advantages offered by 6G could be offset by its high energy consumption rates. It's crucial to build such networks based on renewable energy sources.

The energy mix in 2050

We need to make a few changes in our energy mix. Fossil fuels must make way for renewables. We're making steps, but we're still in a transition process. I disagree with claims that wind and solar energy alone will be sufficient to meet our energy needs. Nuclear and hydrogen will also be part of the solution. We're still struggling with storing renewable energy and need better batteries. South Africa, for instance, has the perfect conditions for using solar energy but lacks the infrastructure to make use of this renewable energy. Investments should not only focus on developing new solar panels or windmills, but also on the (less sexy) infrastructure that renewable energies require. Besides that, as of today around 700 million people have no access to electricity daily. That's a problem that's hardly being addressed right now, but also needs to be considered. Just like we were able to get most cars to drive on unleaded fuel as a global shift, I hope that in 2050 around 90 percent of all energy will come from clean sources.



Looking back on 2023

When we look back on 2023 in 2050, we'll think of this as a time in which things started to change. We're taking the first steps in the energy transition, as the urgency is continuing to grow. When we reflect on this period of time, we'll think back on the extreme weather that had a huge impact on the quality of life and led to something of an awakening. Disasters like flooding and wildfires will only get worse. Parts of the world will become uninhabitable, causing more migration towards inhabitable parts of the planet. Extreme weather conditions will create more urgency to act on sustainability for humanity reasons primarily, and also because it will become financially unsustainable to not intervene. This will put more and more pressure on governments. 2023 will hopefully be a new beginning.





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