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Tech's sustainability challenge: pioneering a green future

By Sean Ashcroft



We speak with sustainability leaders about the tech industry's role in achieving global ESG goals, reducing carbon emissions and mitigating climate change

Today's world is witness to generational advances in technology that are helping us reimagine how we live and work. Crucially, technology companies are also important in our bid to make Earth a net-zero planet by 2050.

But how, exactly, will the technology sector achieve this? What are the challenges and obstacles, and how can these be overcome?

To answer these and other sustainability questions, we turned to the experts: Dr James Robey (JR), who is Executive VP, Global Head of Environmental Sustainability at the France-based multinational IT company, Capgemini. Elena Morettini (EM), meanwhile, is Director of Sustainable Business at digital transformation specialist Globant.

How can the tech industry further global sustainability goals?

JR: The technology industry has a crucial role to play in achieving global sustainability goals – especially in reducing carbon emissions and mitigating climate change – but it can also have unintended consequences.

A key challenge facing organisations is a lack of understanding regarding the environmental impact of the digital world, which is seen by many as being less environmentally impactful than traditional industry. IT accounts for around 3% of global CO2 emissions – more than Spain, Italy, France, and Portugal combined. And this footprint is growing due to rising demand for computing power and data storage, as well as the production and disposal of electronic devices. So it's important for organisations to consider the impact of IT as they strive to balance growth objectives with sustainability goals.

On savings, for example, a technology can help reduce fuel consumption by optimising logistics planning.

EM: Technology can accelerate and scale the environmental impact of actions, policies, strategies already in place, which is vital because time is the one thing we do not have.

Technology companies need to develop applications, software, platforms, calculators, and automations that measure, compare, estimate, and forecast emissions. Emissions data is critical for understanding current emissions and for reaching global net-zero targets.

For example, at Globant, we're focusing resources on digital-twin technologies to help businesses calculate their carbon footprint.

How are tech firms incorporating sustainability into products, services, and operations?

JR: Increasingly, AI is being explored for its potential to offer innovative and scalable solutions to sustainability issues.

For instance, it's anticipated global demand for food will increase by 60% by 2050, which will disproportionately affect sub-Saharan Africa, where about 80% of the global population is at risk of crop failures and hunger from climate change.

Through our platform, Project Farm, we can leverage AI to optimise the agricultural value chain in East Africa, generating insights into farming patterns and increasing maize production among Western Kenyan farmers by up to 50%.

We're also using space-based technologies to address planetary issues. For example, in partnership with Sveaskog – the largest forest owner in Sweden – we have produced detailed maps to visualise the progression of spruce bark beetles, which is crucial in preventing the destruction of vast swathes of forest every year.

EM: Sustainable technology and green tech solutions are good for the planet and for business. While tech companies feel a social responsibility to incorporate sustainability and energy efficiency as a pillar of their product offerings, there's also a market demand for sustainable solutions. For example, there's increasing demand for energy-efficient coding through low/no code applications.

A lot of change can be driven by education. We train all our employees in green IT and best practices for sustainable software design and development to help them make climate smart solutions in their daily jobs.

How can tech companies make their supply chains sustainable?

JR: The intention shouldn't be to achieve compliance with environmental and social legislation but to create a positive force for societal good.

Technology companies need to adopt good sustainable procurement practices to ensure these align with their carbon reduction goals and sustainability objectives.

In doing so, they can address environmental risks, which can be challenging due to the complexity and reach of their supply chains.

Collaborating with suppliers is a key strategy for technology players here, such as waste generation and carbon emissions.

Technology can also play a role in supply chain management, particularly in tracking goods and services from manufacturing to the circular economy.

One of the main challenges technology companies face in sustainable supply chain management is the limited transparency and quality of data from other suppliers.

Despite this they must take a leadership role in promoting sustainable practices in their supply chains to create a positive force for societal good.

EM: For tech companies, a key challenge is energy consumption, and ensuring efficiency while maintaining clean operations. Some are trying to supply their operations with as much renewable energy as possible, while others are beginning to generate their own clean energy.

Sustainable procurement also needs to be a focus going forward, to ensure sustainability is considered in purchasing decisions.

What role do consumers play in driving sustainability in the tech industry?

JR: Delivering meaningful change requires collaboration with the stakeholder ecosystem – suppliers, governments and customers.

Consumers wield significant influence over the technology industry's sustainability efforts through their purchasing power. Companies can help customers make informed decisions by acting with transparency around their sustainability practices, including carbon emissions and waste reduction efforts.

Offering sustainable products and services that meet customer needs – such as energy-efficient devices and recyclable packaging – is also becoming increasingly important.

EM: Consumers are hyper-aware of sustainability, especially in technology, and are demanding more from their providers, forcing the industry to pay close attention to their emissions and impact.

This is where tech companies play a pivotal role, both in educating consumers on the efficient use of technology and also providing them with knowledge and tools to enable more efficient and responsible use.

An example of this is Apple's Clean Energy Charging feature. An optional add-on, it permits the iPhone's battery to charge up when the local electrical grid provides clean power, helping lower the carbon footprint and the electricity bill.

We see real opportunity in engaging consumers on sustainability issues through loyalty programmes. There is a strong argument for tech companies to look at how loyalty programmes could engage and encourage sustainable behaviours from their customers.

Video of The Week

Explore some related information to above article at following link.

https://www.youtube.com/watch?v=Rp_8rRoXr6U

https://www.youtube.com/watch?v=T6mK-Ukr_ts

<https://www.youtube.com/watch?v=IIPs0Pqa7RE>

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News of The Week

PERSONAL DATA PROTECTION BILL: ENTITIES MAY FACE PENALTY OF UP TO RS. 250 CRORE ON FAILING TO PROTECT DATA

Under the schedule, maximum of Rs. 250 crore and minimum Rs. 50 crore can be imposed on entity violating the norms.

Entities misusing or failing to protect digital data users may face penalty of up to Rs. 250 crore, according to the Digital Personal Data Protection Bill 2023 which lays down obligations of entities handling and processing data as well as rights of individuals.

The bill, which was introduced in Parliament on Thursday, moots creation of Data Protection Board of India and provides protection to the Centre, the board and its members, on "action taken in good faith".

The bill has relaxed penalty norms compared to the proposal made in the draft DPDP that was circulated for public consultation in November 2022.

"If the board determines on conclusion of an inquiry that breach of the provisions of this Act or the rules made thereunder by a person is significant, it may, after giving person an opportunity of being heard, impose such monetary penalty specified in the schedule," the bill said.

Under the schedule, maximum of Rs. 250 crore and minimum Rs. 50 crore can be imposed on entity violating the norms.

"No suit, prosecution or other legal proceedings shall lie against the central government, the board, its chairperson and any member, officer or employee thereof for anything which is done or intended to be done in good faith under the provisions of this Act or the rules made thereunder," the bill said.

Provisions under the bill enable the Centre to block access to content in the interest of general public on getting reference in writing from the board.

Minister of State for electronics and IT Rajeev Chandrasekhar said that the bill after it is passed by Parliament, will protect rights of all citizens, allow innovation economy to expand and permit the government's lawful and legitimate access in national security and emergencies like pandemics and earthquakes etc.

"It will take a lot of the concerns and lot of misuse and exploitation that is done by many of these (online) platforms. Puts a break on that once and for all. This is certainly a legislation that will create deep lasting behavioural change and create high punitive consequences for any or all platforms that misuse or exploit personal data of any Indian citizen," Chandrasekhar said.

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