

Featured

OpenUK CEO Amanda Brock: Sustainability by design is becoming ever-more critical



OpenUK shared its first Open Technology Blueprint at the Open Technology for Sustainability Day, a Fringe event at COP26 in Glasgow. The amalgamation of research and collaboration offered up a [model](#) for the Carbon Negative Open Technology Data Centre of the Future, *writes OpenUK CEO Amanda Brock*.

With more interest in edge computing from customers, the blueprint recommended locating new edge data centres closer to customers, running open source software on open hardware, using open data and repurposing derelict retail units into useful bleeding edge technology driven spaces.

The blueprint even considered repurposing the heat generated from these locations, pumping this into community projects or to support communities. This suggestion is more relevant today than we could have imagined less than 12 months ago, with millions of households now at risk and struggling to pay their heating bills. At the Linux Foundation's Open Source Summit Europe OpenUK took the opportunity to launch its Second Open Technology for Sustainability Day sponsored by Intel, alongside its plans for deliverables at that event.

Providing a real-world example of consolidation in action

Ross Mauri, General Manager, Linux One at IBM provided a keynote, which focused on the company's next generation LinuxONE server. This Linux and Kubernetes-based platform claims to deliver scalability and support for tens of thousands of workloads in the footprint of a single system.

Mauri was joined on stage by Citi Bank's Martin Kennedy, to delve into the bank's use case of LinuxOne.

Like any financial institution, Citi's goals include reducing emissions and improving its carbon footprint. As a financial sector organisation with a sharp regulatory focus on Environmental, Social, and Governance (ESG)

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consolidate Linux workloads. The project built on this aims to reduce energy consumption by 75%, data centre floor space by 50%, and the CO2 footprint by over 850 metric tons.

This would have a significant impact on those ESG goals with clearly defined and critically measurable metrics that can feed directly into any organisation's overall requirements.

At this point of the keynote session, I paused for thought on the inevitable consequence of our ever-increasing data gluttony and processing. It's hard not to see the risk that data is about to become the next single-use-plastic, created only to be used once and then not useful or re-usable. The pandemic has only served to fuel the fire further as more companies had to get online or carry out digital transformation projects.

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This increased digitalisation and the associated increase in data processing using data centres, gobbling up fossil fuels and pumping out heat, means that responsible organisations must look to sustainability by design in their hardware and processing practices.

Many are making that a priority, As Marcel Mitran, IBM Fellow and CTO of Cloud Platform, IBM LinuxONE commented at the event: "Reducing data centre energy consumption is a tangible way to decrease carbon footprint. In that context, migrating to IBM LinuxONE is designed to help clients meet their scale and security goals, in addition to meeting sustainability goals for today's digital business."

Looking further ahead

Discussing the impact and uptake of LinuxOne with Mauri, it soon became clear that whilst this is a product looking for adoption at scale across the financial sector, it's one that will support all businesses seeking to elevate Sustainability to the heart of their technology agenda. It's no surprise with the outputs of the OpenUK research on Open Technology and sustainability over the last couple of years that today, major vendors like IBM also see a deep value in open source software's impact on Sustainability.

In its recent [IBM IBV study](#), the company claims that 48% of CEOs across industries say increasing sustainability is one of the highest priorities for their organisation over the next two to three years. Considering the impact of failure to do so, it can only be right for organisations to elevate the sustainability agenda at the C Suite level. The same report however recognised that whilst this is a high priority it is also one of their greatest challenges – 51% of those interviewed cited sustainability as among their greatest challenges in that same timeframe. A lack of data insights, unclear Return On Investment, and technology barriers were referenced as hurdles. The place of Open Technology in the success of that agenda should not be underestimated.

IBM's love affair with sustainability began over 40 years ago. Big Blue has been slowly integrating Sustainability by design into its technology and this becomes clear talking to Mauri. Not only are the company's technologists focused on emissions in the Scope 1 (utilisation) and Scope 2 (generated) categories, but they have taken the major forward step to look at Scope 3 (supply chain) and understand its impact.

Of course, IBM's love affair with open source software has been less clandestine than the 40 year IBM sustainability story Mauri tells. The impact of IBM's ongoing support for open source software development over several decades has been very clear. With LinuxOne, Mauri explained, the development has been engineered as a scale-out-on-scale-up system. This novel approach enables clients to run workloads at sustained high density and increase capacity by turning on unused cores without increasing their energy consumption and associated greenhouse gas emission. IBM's support for the open source ecosystem around this runs deep, and includes support for the upstream community critical to ensure security in addition to sustainability.

Mauri also recognised Europe's energy crisis and the cost of energy. When asked if he believes that the use of

dynamically and non-disruptively, thereby reducing energy consumption and improving energy efficiency in data usage and data centres

Talking with Mauri, it strikes me that the OpenUK's focus in 2022 – skills; sustainability; and security – aligns very strongly to the direction IBM is taking with its open source software strategy. Not only are we seeing this launch based on sustainability by design, but the use of quantum-safe security algorithms and pervasive encryption has been designed to protect data at-rest and in-flight, a priority for clients in regulated industries such as financial services.ⁱ All of this is geared to protect data in use while providing end-to-end encryption for data at rest and in flight. This comprehensive data protection profile provides businesses with a data protection strategy that underpins current and anticipated future cyber security protocols.

If I was a betting woman I might be ready to place a few bets that this foresight will rapidly normalise. We're about to see an increased focus across technology providers on the benefits of open source software in our infrastructure. These projects have to be well curated to provide the sustainability and security by design that enterprises need for their technology projects. As more companies look at their ESG and sustainability goals, open source will be at the heart of these efforts. I think that I'm making a safe bet

OpenUK's second [Open Technology for Sustainability Day](#), sponsored by Intel will take place in Edinburgh on 16 November. OpenUK's Summer of Open Source Software Security can be found at openuk.uk/security.

See also: [Cybersecurity as a critical ESG framework category](#)