



Driving Sustainable Change in Telecoms Network Operations



Abstract

This whitepaper explores the growing importance of environmental sustainability in the telecommunications industry, magnified by pandemic-induced insights. It highlights the sector's vital role in a connected world and its escalating environmental impact. The paper spotlights key areas for improvement, emphasizing energy efficiency, responsible e-waste management, and sustainable supply chain practices.

Central strategies for driving sustainability are outlined, including setting measurable targets, investing in greener technologies, and fostering collaborations. Case studies of leading companies like Vodafone Group, Syniverse, Verizon, and T-Mobile US exemplify significant strides towards sustainability.

The paper underscores the industry's potential for positive change and calls for collective action to shape a greener future.

“Embracing sustainability is crucial for the telecommunications industry to **reduce its environmental impact, improve resource efficiency, enhance brand reputation, and meet the growing expectations of environmentally-conscious consumers.**”

Alex Duncan, CEO, Openmind Networks



Foreword

During the pandemic, travel declined sharply and smog cleared over big cities around the world. Then people saw that when emissions decline the benefits come remarkably fast. Fish swimming in clear waters in the canals of Venice and trees & wildlife thriving even in the most built-up areas show how resilient nature is when given space to breathe. This is a valuable lesson from the pandemic, and it's one reason that the issue of environmental sustainability has emerged even stronger on our agenda in recent years.

Our age is defined by technological advancements and an ever-increasing demand for connectivity where we in the telecommunications industry play a pivotal role. As the world becomes more interconnected, the environmental impact of this industry will become more pronounced if we are not proactive.

To ensure a sustainable future we are taking these proactive steps to minimize our ecological footprint and drive sustainability practices. Here our experts discuss key areas for improvement, and highlight strategies that can be implemented to promote a greener and more sustainable future for us all.



Network Operators Impact on the Environment

Telecommunications firms are not immune to the environmental challenges faced by other industries. With a rapidly expanding global network and the proliferation of devices, the sector's energy consumption and electronic waste generation have increased in recent years. The expanding ICT sector, powered by telecoms networks and data centers, is projected to contribute up to 14% of global carbon emissions by 2040, a significant increase from the current 3-4% level. The introduction of 5G technology is expected to further drive data consumption as it becomes more prevalent in industrial and consumer applications. Research indicates that the 5G ecosystem could lead to a substantial 160% surge in power demands by 2030. Embracing sustainability is crucial for the telecommunications industry to reduce its environmental impact, improve resource efficiency, enhance brand reputation, and meet the growing expectations of environmentally-conscious consumers.

How we can lessen that impact - Actions to Take

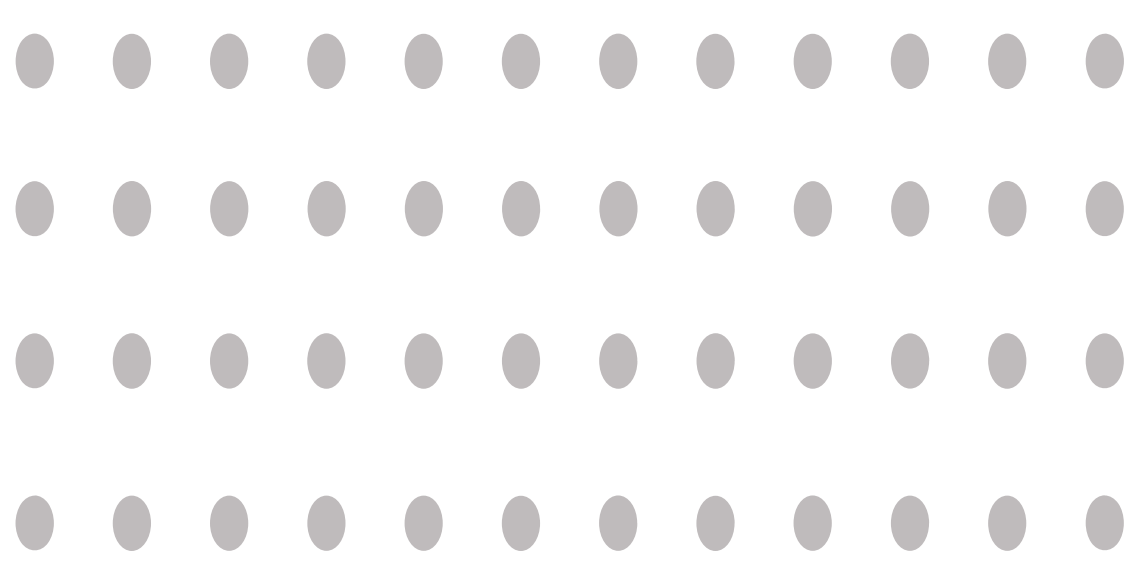
To drive sustainability practices, telecommunications firms have been focused on key areas of improvement.

Firstly, energy efficiency across network infrastructure and data centers is paramount. By **adopting energy-efficient technologies**, optimizing cooling systems, and implementing renewable energy solutions, firms can reduce their carbon footprint significantly.

Secondly, **responsible e-waste management** is on everyone's agenda. Promoting device recycling programs and establishing partnerships with recycling organizations is minimizing electronic waste and promoting the circular economy.

Finally, **sustainable supply chain management**, including responsible sourcing of raw materials and reducing packaging waste is particularly prevalent. On that point, let's take a closer look at a really good example of that from **Apple**.

The iPhone 14 Pro is the most environmentally friendly handset on the market according to recent research. It incorporates several green initiatives. The phone uses 100% recycled gold in the wire of its cameras and 100% recycled rare earth elements in its magnets. Additionally, it contains 35% or more recycled plastic in 15 components. Its carbon footprint is 65kg throughout its entire life cycle, which is nearly 6% less than the iPhone 13 Pro. The packaging of the iPhone 14 Pro is also sustainable, with 95% of it being fiber-based, sourced from recycled and responsible sources. Overall, the iPhone 14 Pro demonstrates Apple's commitment to environmental sustainability.



Strategies for Driving Sustainability

To achieve sustainability goals, telecommunications firms, in fact any organizations at all, can fall back on three key strategies. Let's take a look.

Firstly, setting **clear sustainability targets** and integrating them into the corporate strategy can be transformative. Firms can establish measurable objectives, such as reducing carbon emissions by a certain percentage or achieving zero waste to landfill. These number targets give you something to focus on and a way to clearly measure the actions you are taking. This isn't always easy to do of course, and is something that we in Openmind are currently working on so we have a pathway going forward.

Secondly, investing in research and development to **innovate greener technologies** can lead to significant improvements in energy efficiency and environmental performance. This could involve developing more energy-efficient network equipment, supporting the transition to Cloud infrastructure, 5G and other more sustainable systems. Exploring emerging technologies like artificial intelligence for optimized energy management is also something to consider.

Thirdly, **fostering partnerships and collaborations**. Telecommunications firms benefit from working with governments, NGOs, and accreditation bodies like Ecovadis to develop sustainable practices and policies. Sharing best practices and collaborating on initiatives like expanding renewable energy sources and promoting sustainable access to connectivity in underserved areas can lead to collective progress. Moreover, engaging customers through awareness campaigns and providing incentives for sustainable behavior can drive positive change. This could involve educating consumers about the environmental impact of their devices, offering trade-in programs for old devices, and encouraging the use of energy-saving features on smartphones and other devices.



Case Studies: Leaders in Telecommunications Sustainability

Several telecommunications firms have already made significant strides in driving sustainability. For instance, **Vodafone Group** has committed to reducing its carbon emissions by 50% by 2025 and sourcing 100% of its electricity from renewable sources.

In 2021, **Syniverse** moved forward with their commitment to assess their path to Net Zero, by starting their journey to set Science Based Targets. This work will continue throughout 2022 and 2023. Education around Net Zero will also be included in their mandatory ESG training to help employees understand how to reduce energy use both at home and at work.

Verizon has set a target of being carbon neutral in its operations by 2035 and is investing in renewable energy projects to achieve this goal.

T-Mobile US has committed to using 100% renewable energy and is actively promoting device recycling and responsible e-waste management. These examples showcase the industry's potential to drive sustainability practices and inspire others to follow suit.

Here at **Openmind Networks**, in the last 24 months, through significant Software R&D activity, we have reduced our CPU requirements on our flagship product offering Traffic Control 6000 resulting in a 25% reduction in CPUs for client companies. This results in a 25% reduction in power consumption requirement of our large systems.

We have also moved to a remote-first approach to working with shared office space available in our major centers of employment. This has had a positive impact on our carbon footprint in terms of transport commutes, light and heating of office space and so on.

Conclusion

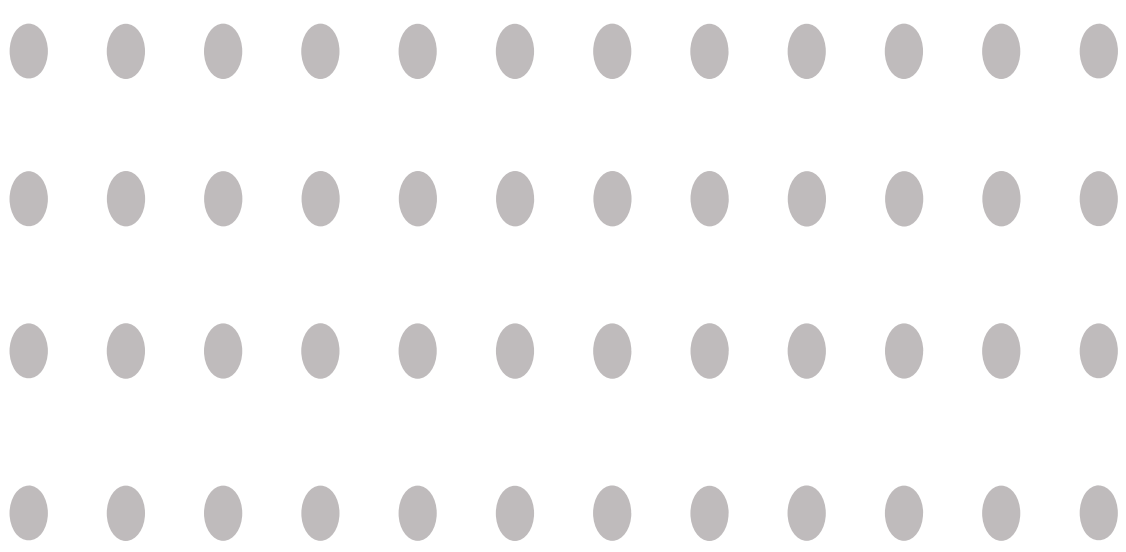
As the telecommunications industry continues to shape the modern world, sustainability has become a core value for firms operating within this sector. By focusing on energy efficiency, responsible operators will change the impact we, as an industry, have on our planet. Let's work together to do this.

At Openmind, we provide a total messaging solution for managing core networks, fraud prevention and CPaaS.



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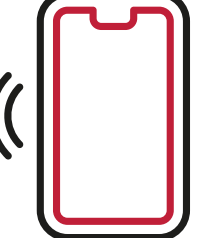
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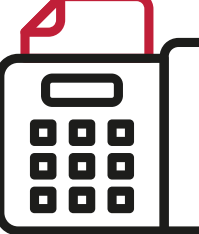


About Openmind Networks

Openmind are world leaders in mobile messaging. Our consolidated and flexible platform, delivered via a DevOps process, provides our Mobile Operator, Wholesale Operator and Messaging Aggregator customers with new revenue-driving opportunities at the lowest total cost of ownership.

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