

# e& and Ericsson: Collaborative journey towards Net Zero



# Introduction

The “Pledge to Net Zero” represents a collective global commitment by organizations to take credible, science-based action to reduce its greenhouse gas emissions to Net Zero. Education and awareness are vital in this journey by engaging employees, stakeholders, and the community in understanding the urgency of reducing emissions, we foster a shared sense of responsibility and inspire collective action toward a sustainable future.

The United Arab Emirates (UAE) proclaimed its “UAE by [Net Zero by 2050](#)” strategic initiative, in line with the 2016 Paris Agreement targeting Net Zero greenhouse gas (GHG) emissions, in the country by 2050. As part of the initiative, the telecommunications sector plays an important role by contributing a sustainable infrastructure build-out and enabling new smart services for consumers, enterprises and industries that will contribute to the reduction of GHG emissions.

Hence, e&, a leading global technology group that operates in thirty-eight countries across the Middle East, Asia, Africa, and Central and Eastern Europe, [has pledged to achieving Net Zero](#) within its group’s own operations in the UAE for [Scope 1 and 2 emissions](#) by 2030. Moreover, during COP28, the company [announced](#) near term targets (2030) of a Group wide reduction of 43 per cent from its own activities and the energy it purchases/uses (Scope 1 and 2 emissions) while being committed to achieving zero carbon emissions across its own operations (Scope 1 and 2) in all e& Group markets by 2040.

This commitment was a testimony of e&’s vision in advancing sustainable digital innovation through different initiatives that incorporate implementing energy-efficient solutions, sourcing renewable energy, and modernizing the existing network. To attain

this objective, e& has outlined an ambitious also pragmatic sustainability framework within their strategy. This framework supports the evolution of their network and is backed by a range of enhancement initiatives and key performance indicators (KPIs). Its purpose is to steer the business strategies and operations of their operating companies throughout the Middle East, Africa, Asia, and Central and Eastern Europe.

As part of this of this framework, Ericsson, being a long-standing partner for e& signed a joint MoU for sustainability collaboration where both entities join efforts to explore initiatives aimed at reducing energy consumption, breaking the energy curve, and constructing more efficient, sustainable networks ready for the future.



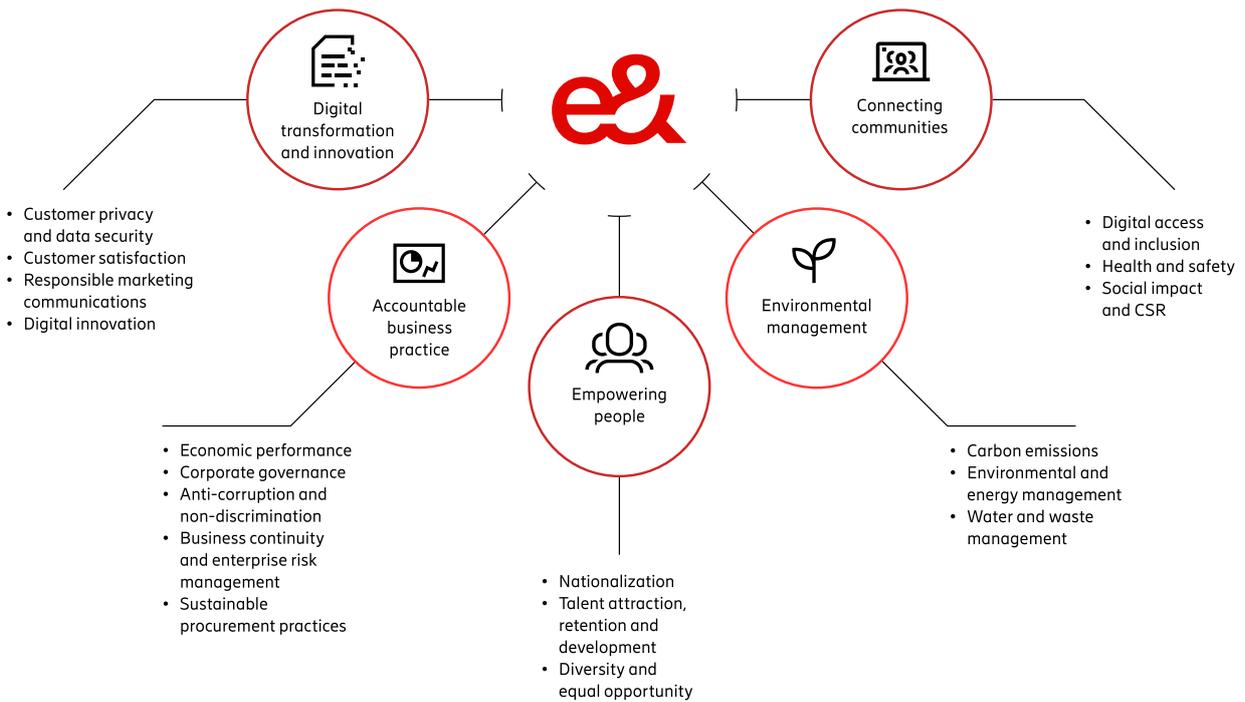
# e& pioneering sustainable digital innovation

e& is dedicated to expediting digital innovation within its markets, with a focus on advancing a more sustainable economy. This commitment involves delivering comprehensive digital solutions tailored to specific industries, thus fostering intelligent advancements in sectors like education, healthcare, and transportation.

e& has established a comprehensive sustainability framework, bolstered by a suite of improvement initiatives and key performance indicators (KPIs). The framework encompasses a wide spectrum of endeavours aimed at contributing to the UAE’s carbon reduction objectives and the United Nations’ Sustainable Development Goals (UN SDGs). e& is resolutely committed to expediting decarbonization

efforts while concurrently focusing on the modernization of mobile networks through the deployment of cutting-edge, energy-efficient radio equipment (both hardware and software). Additionally, it is emphasizing the increased utilization of renewable energy sources and crucial carbon-offsetting measures to meet its targets.

## e& Group sustainability framework



Embedded within e&’s sustainability framework is a strong emphasis on environmental management, aimed at crafting sustainable products and optimizing operations for reduced energy, water, and waste footprints. This approach underscores their commitment to minimizing environmental impact and fostering a more sustainable operational ecosystem. The modernization of mobile networks, achieved by deploying energy-efficient equipment and expanding the use of renewable energy sources, is instrumental in achieving these objectives.

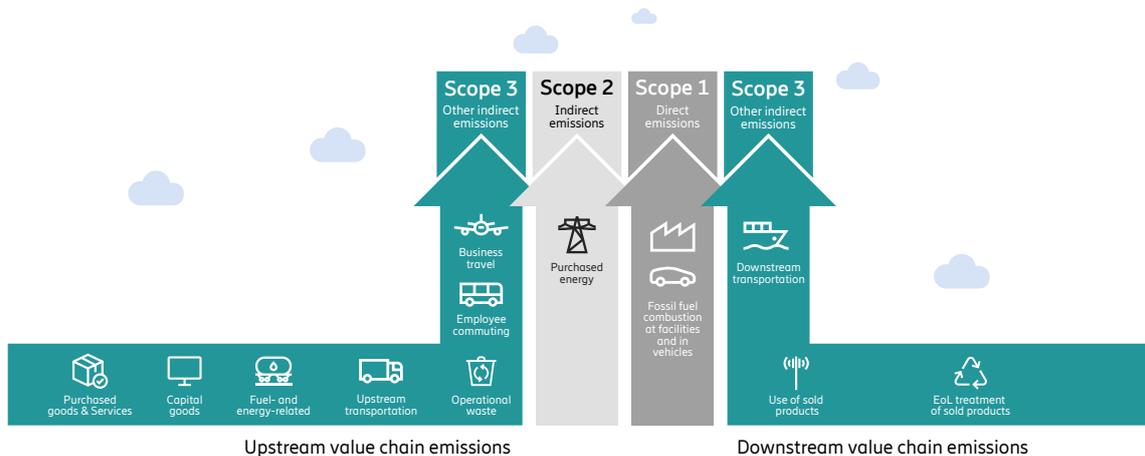
e& is actively implementing diverse strategies to address this objective within their sustainability framework:

- Implementing the latest generation of energy-efficient radio equipment, encompassing both hardware and software.
- Reducing reliance on diesel generators in favour of renewable energy sources for off-grid cell sites.
- Maximizing the deployment of hybrid technology for off-grid

sites where diesel is currently in use.

- Expanding the use of free cooling at sites to reduce overall energy consumption.
- Replacing older rectifiers with newer, highly efficient models.
- Utilizing site sleep mode during low-traffic periods to conserve energy.

# e& and Ericsson: Collaborative frontiers explored



Ericsson and e& are united in their commitment to a low-carbon future, focusing on reducing emissions across all three scopes through

targeted actions, innovative technologies, and collaboration. Both companies are driving measurable progress, and with this partnership,

Here are some highlights of how Ericsson contributed to e& GHG scopes.

<p><b>Scope 1</b> (Emissions from operator’s own operations)</p> <ul style="list-style-type: none"> <li>• Diesel generator for backup power supply</li> <li>• Operator fleet vehicles</li> </ul>	<ul style="list-style-type: none"> <li>• Refrigerant chemicals</li> </ul> <p><b>Transition to Hybrid energy systems for Ericsson Radio Access Networks</b></p> <ul style="list-style-type: none"> <li>• Introduction of Hybrid Power</li> </ul>	<p>systems (including Solar power) for Radio Access Network</p> <ul style="list-style-type: none"> <li>• Use of Smart control system to minimize diesel consumption within Radio Access Network</li> </ul>
<p><b>Scope 2</b> (Covers indirect emissions, e.g. Purchased electricity)</p> <ul style="list-style-type: none"> <li>• Emissions generated through the operations of Network Equipment (up to 70% from Radio sites)</li> <li>• Operator choices (Secure green power, Deploy energy efficient HW, Buy carbon offsets)</li> </ul> <p><b>Deployed Ericsson Solutions</b></p> <ul style="list-style-type: none"> <li>• Deploying Energy Efficient</li> </ul>	<p>Hardware (up to 52% reduction in energy consumption with introduction of 6626 Visby Radio in e&amp; UAE) Ref: <a href="#">e&amp; partners with Ericsson to build sustainable networks in the UAE, 2. Redefining the best network and making it smarter - Ericsson</a></p> <ul style="list-style-type: none"> <li>• Deploying Energy efficient site solution (up to 40% reduction in fuel cost in e&amp; Egypt (Ref: <a href="#">e&amp; Egypt reduces carbon emissions</a>)</li> </ul>	<p><a href="#">with Ericsson Smart Connected Site</a></p> <ul style="list-style-type: none"> <li>• Moving shelter sites to all outdoors</li> <li>• Deploying latest AI based SW features/Energy Mgmt. solutions</li> <li>• Traffic migration to 5G/ Technology sunsetting</li> <li>• Launch of <a href="#">zero-footprint RAN site</a> in the UAE</li> </ul>
<p><b>Scope 3</b> (Indirect emissions generated through rest of the value or supply chain)</p> <ul style="list-style-type: none"> <li>• Emissions generated through embodied carbon (product development cycle of network equipment and equipment transportation to sites)</li> <li>• Emissions from End-of-life treatment of Network equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Other indirect emissions (upstream &amp; downstream)</li> </ul> <p><b>Innovative Ericsson rollouts</b></p> <ul style="list-style-type: none"> <li>• Product design innovation to reduce embodied carbon (<a href="#">WEF names Ericsson US 5G factory an Industry 4.0 pioneer</a>)</li> <li>• +90% of Ericsson high emitting component suppliers already aligned to 1.5 C emission</li> </ul>	<p>reduction target (<a href="#">Sustainability- and Corporate Responsibility Report 2024 (ericsson.com)</a>)</p> <ul style="list-style-type: none"> <li>• Reduced emission during transportation methods and vehicles</li> <li>• Efficient rollout (First time right, Virtual drive tests)</li> <li>• Recycling of dismantled equipment</li> </ul>

# e& and Ericsson's holistic approach to driving Net Zero, energy efficiency and digital transformation

## Ericsson Breaking the energy curve: Insights on how to reduce energy and carbon emission through deployment of Ericsson solutions.

- Ericsson conducted an extensive analysis of its existing telecommunications equipment installations in e& Group Opcos network to assess and quantify the energy consumption and the CO2 emissions of that base.
- Targeted network modernization in high carbon emission sites utilizing energy efficient Baseband, ERS portfolio including multi sector multi band Radios.
- Select, test & validate AI Powered energy saving software features.
- Sites were migrated from shelter to outdoor enclosure, this initiative eliminates the AC cooling from the site and reduces the power consumption on the site cooling part by up to 80%.
- Ericsson has enhanced its remote management feature on e& Egypt's network by implementing the [Ericsson Smart Connected Site solution](#), enabling diesel generators that run in shorter bursts to save up to 40 percent in fuel costs and carbon dioxide emissions. This extends the diesel generator's lifetime and reduces the overhauling frequency by up to 50 percent.
- During COP28, e& and Ericsson demonstrated the Ericsson zero-footprint site which is a focused RAN site representing a compact, easily installed, and energy-efficient solution that eliminates

the need for ground space.

This innovative approach relies entirely on zero-footprint power solutions and fan-less convection cooling. This evolved radio site deployment demonstrates a substantial reduction in energy consumption, decreased carbon dioxide emissions, and lowered preventive maintenance needs. Moreover, it optimizes the use of materials like steel, copper, and concrete, contributing significantly to reducing the overall carbon footprint. The pilot implementation demonstrated a remarkable reduction 47 percent reduction in energy consumption at the site level, equivalent to curbing 15 tonnes of carbon emissions (CO2) annually.

## Circular Economy: Ericsson has committed to implement its product take back program for Waste Electrical and Electronic Equipment (WEEE) for e& Group opcos, now named Ericsson e-waste program.

- Ericsson takes responsibility of its products for their entire life span, i.e. to be responsible for collection and recycling when they become end-of-life. Through its product take-back program for WEEE, Ericsson has promoted a circular economy approach across e& networks, recycling 1022 metric tonnes of end-of-life electronic and electrical equipment in a responsible and sustainable way.

## Climate Action Knowledge sharing for greener networks of the future and accelerate journey to Net Zero.

- Ericsson and e& conducted joint Workshops and knowledge

sharing sessions involving global experts to raise awareness and exchange ideas around Climate Action on topics like Climate action and Ericsson Targets & Net Zero Journey, Carbon Disclosure project, Green Procurement and supply, E-waste, contributing to industries.

## Collaborative external initiatives aimed at contributing to society.

- In the November 2022 edition of the Ericsson Mobility Report, e& Group gained prominence with its featured article. This publication showcased a joint opinion piece titled "Holistic Approach to Energy Efficiency and Digital Transformation."
- e& UAE's methodology of modernization with sustainability in mind and its decisive steps have been featured in [Ericsson's Sustainable Networks RAN Modernization Guide](#).
- This collaborative piece highlighted the crucial intersections between energy efficiency and digital transformation within the telecommunications industry. Notably, e& Group and Ericsson co-organized a remarkable event, "Hack for Earth," during COP28.
- This hackathon aimed to leverage innovation and technology to address environmental challenges, emphasizing the collective commitment towards sustainable solutions in the tech landscape.

# Conclusion

The three years of collaboration between e& and Ericsson stands as a powerful example that demonstrates the possibilities within the telecommunications industry's to transition to a sustainable, Net Zero future. By combining cutting-edge energy-efficient technologies with a shared commitment to circular economy principles, this partnership

has not only delivered substantial reductions in carbon emissions and energy consumption but has also redefined what's possible in network modernization.

This sets a bold benchmark accelerating industry wide progress and inspiring change toward a greener, more resilient digital

world. The momentum generated here signals a future of expanding impact, where technology and sustainability moves forward hand-in-hand. This partnership's trajectory indicates significant expansion in the coming years, driven by the successful innovations cultivated through the collaboration between Ericsson and e&.

## References

- [The UAE's Net Zero 2050 Strategy | The Official Portal of the UAE Government/integrated-report-en-2022.pdf \(eand.com\)](#)
- <https://ghgprotocol.org/>
- <https://www.ericsson.com/en/press-releases/5/2022/e-partners-with-ericsson-to-build-sustainable-networks--in-the-uae>
- [e& Egypt reduces carbon emissions with Ericsson Smart Connected Site](#)
- [Redefining the best network and making it smarter - Ericsson](#)
- [Ericsson and Hack for Earth organized 'Hack for Earth at COP28' hackathon with 1200 participants from 112 countries worked together in teams to co-create solutions for a sustainable future.](#)
- [Ericsson and e& UAE launch zero-footprint RAN site](#)
- [e& UAE methodology to modernize the RAN with sustainability in mind](#)
- [e& and Ericsson partner to build more sustainable future networks](#)

## About Ericsson

Ericsson's high-performing networks provide connectivity for billions of people every day. For nearly 150 years, we've been pioneers in creating technology for communication. We offer mobile communication and connectivity solutions for service providers and enterprises. Together with our customers and partners, we make the digital world of tomorrow a reality.

[www.ericsson.com](http://www.ericsson.com)

## About e&

e& is a global technology group focused on innovation and collaboration to create a better future for all. Since 1976, we've been pioneering new technologies and expanding our reach to more people and places. Today, we provide services to over 163 million customers across 16 countries in the Middle East, Asia, and Africa through our telecom brands under e& international and etisalat by e&. We're committed to driving the digital future to empower societies and help businesses and governments create a smarter, safer, and more sustainable world through all our business verticals including e& enterprise, e& life, and e& capital. Our goal is to empower people, communities, and societies worldwide to achieve more.

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