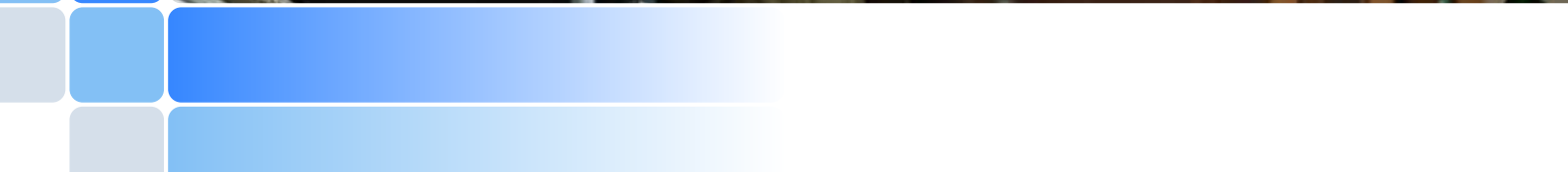


# Sustainability in 5G



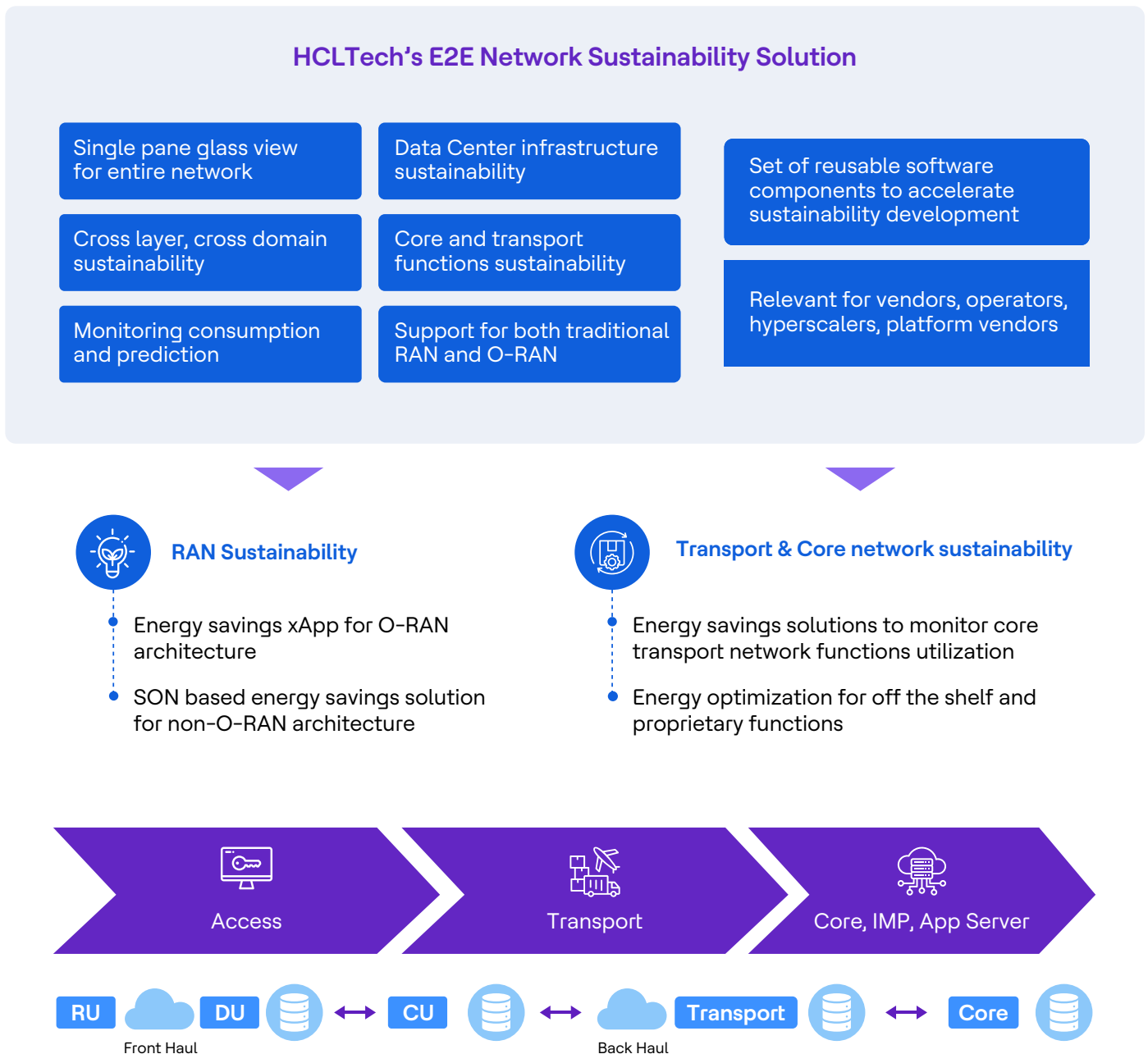
Sustainability is the need of the hour. Like nearly every other industry vertical, the Telecom sector is also focusing on improving energy efficiency and carbon footprint reduction. The Telecom industry, including mobile operators and their partner ecosystems, is currently pursuing an aggressive sustainability target with the focus of moving towards net zero emissions in the near future.

While Telcos are focusing on renewable energy sources to power their networks and data centre operations, there are challenges with renewable energy production. Typically, about 70 to 85% of the total energy consumption for wireless cellular operators is attributed to Radio Access Network (RAN) – and now, with network slicing support and virtualization, considerable energy consumption is attributed to cloud infrastructure as well.

## HCLTech's Sustainability in 5G Solution

HCLTech's Sustainability in 5G is an AI/ML-based solution that operates and manages RAN and 5G Core optimally based on network traffic, thereby reducing energy usage considerably.

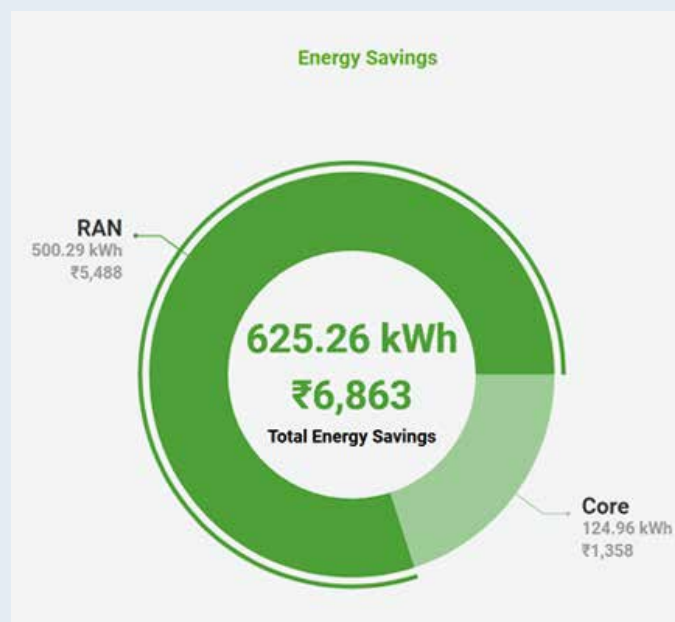
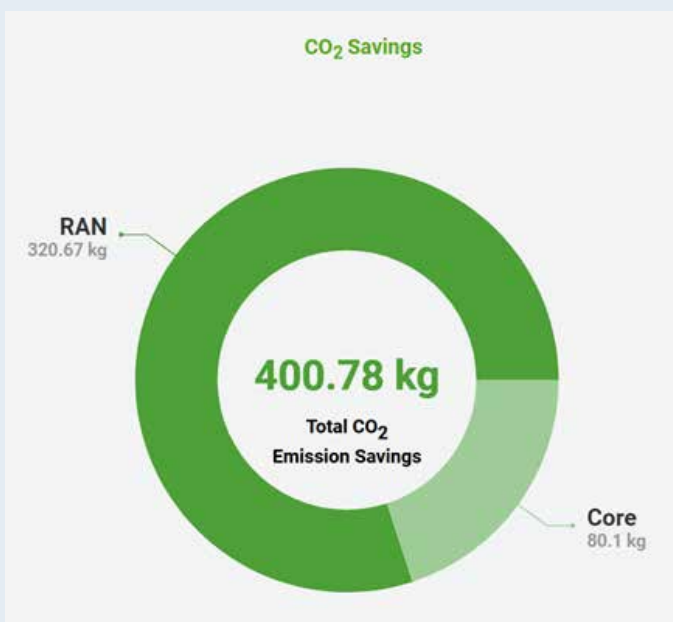
An overview of HCLTech's Sustainability in 5G solution is provided below:



HCLTech's Sustainability in 5G solution monitors the network parameters across all three domains: Access, Transport and Core. Leveraging AI/ML algorithms, the solution enables dynamic network optimization and energy management. AI/ML-driven predictions and energy saving functionalities are used to analyze in real-time and dynamically optimize network resources and improve energy efficiency. Given that RAN is a significant consumer of the network's energy, the dynamic RAN optimization features of our Sustainability in 5G solution offer significant optimization and energy efficiency improvement for telecom operators.

The 5G Core deployed in the telco cloud environment – and the network slices initiated – require sufficient compute and storage capacity. Based on the increase in the traffic and slice type, additional compute infrastructure will likely need to be initiated. Sustainability in 5G monitors the Core and network slice KPI parameters and optimizes resource allocation.

The analytical engine of the solution provides an integrated dashboard of energy savings and carbon footprint.



# HCLTech | Supercharging Progress™

HCLTech is a global technology company, home to 224,000+ people across 60 countries, delivering industry-leading capabilities centered around digital, engineering and cloud, powered by a broad portfolio of technology services and products. We work with clients across all major verticals, providing industry solutions for Financial Services, Manufacturing, Life Sciences and Healthcare, Technology and Services, Telecom and Media, Retail and CPG, and Public Services. Consolidated revenues as of 12 months ending December 2023 totaled \$13.1 billion. To learn how we can supercharge progress for you, visit [hcltech.com](https://hcltech.com)

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