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# Advanced Communications Contributing to Sustainability

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# Positioning with respect to sustainability in the Communications Industry

- Strong commitment to achieve SDG targets
  - Telefónica aims to net zero emissions by 2040
- Commitment reaches every level of the organization
  - From new low-carbon infrastructure acquisition up to energy efficient operation
- Different pathways being explored putting always sustainability in the focus of innovation
  - Observability <-> Decision <-> Action
- A key challenge is the industrialization of some of those propositions,
  - To be embraced can require standardization effort to facilitate adoption

# Services are complex by nature

- On the provider side, multiple stakeholders and even multiple technological domains per provider
  - Different (not uniformly defined) metrics, when available
  - No ways (yet) of exposing and sharing information
  - (Some) services conceived without sustainability in mind
- On the customer side
  - Multiplicity of different services being consumed
  - Lack of incentives
  - No way of signaling “sustainable”-mode

# What is the need?

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- Need to reliably assess energy consumption / carbon footprint equivalents (CO<sub>2</sub>e) of the use phase of an ICT service
  - During execution/provisioning over all involved domains, potentially of different tenants.
- Identification of incentives for energy consumption/ carbon footprint optimization mechanisms
  - Required for both service providers and service users

# Taking action

- Green ICT Digest as a collection of inputs related to different aspects of communications and sustainability, such as architecture, data collection, energy measurements, etc
- Sripriya Srikant Adhatarao, et al. “Standardization Roadmap towards Sustainable 6G”, IEEE Conference on Standards for Communications and Networking, Nov. 2024.
- Different contributions across standardization bodies, such as 3GPP SA2, ETSI PDL and IETF.

