

Reducing energy consumption and CO₂e of ICT services

The digitisation of society at large continuously transforms economic and technical realities in the telecommunications landscape resulting in increased power consumption and carbon dioxide (CO₂) production.

EXIGENCE takes on the massive task of considering the type of energy sources used by the individual tenants in each heterogeneous domain of the ICT value chain and the energy consumption and carbon footprint of the ICT ecosystem.

EXIGENCE Ambitions

Measuring



Enabling service-level sustainability measurements across different domains

Develop a system to assess energy consumption and carbon footprint equivalents (CO₂e) of the use phase of an ICT service execution/provisioning over all involved domains, potentially of different tenants.

Optimising



Enabling service provisioning and service invocation resource optimisations

Mechanisms for energy/carbon footprint optimisation of the service provisioning within and across domains allow more efficient service use phase instantiations, limiting running expenditures and infrastructural footprints.

Incentivising



Fair responsibility attribution

Positioning users as active elements in reducing the ICT services' energy and carbon footprint and creating economic models and incentives avoids the rebound effects.

Key Results



Energy-aware ICT metering solution



Energy-aware orchestration product



Incentive-compatible energy reduction mechanisms



6G-relevant 3GPP contribution

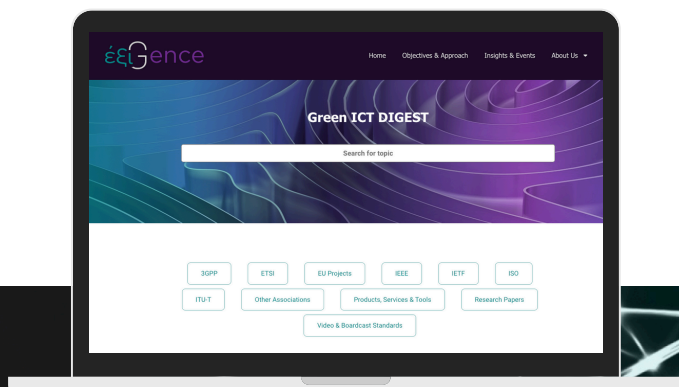


Dependable inter-domain energy metric exchange

Green ICT DIGEST

The climate crisis is real, and the time for action is now! As we navigate an increasingly connected world, the tech sector must lead by example in reducing energy consumption and carbon footprints.

The EXIGENCE Green ICT DIGEST page offers essential insights and tools to reduce energy consumption and carbon footprints. Explore the Green ICT DIGEST for comprehensive overviews of key metrics, in-depth analyses of standards from organisations like 3GPP, ETSI, and IEEE, and a collaborative hub to drive greener ICT practices. Discover interconnected sustainability initiatives and find the knowledge you need to make a difference.



Our Partners

EXIGENCE is a collaborative, interdisciplinary consortium uniting industrial leaders with experienced research institutions and technology partners. Comprised of 10 organisations spanning 7 EU countries, EXIGENCE leverages diverse expertise to achieve its goals



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