

# Reducing energy consumption and CO<sub>2</sub>e 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 (CO<sub>2</sub>) 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 PROJECT OBJECTIVES

### Measuring



Enabling service-level sustainability measurements across different domains.

Develop a system to assess energy consumption and carbon footprint equivalents (CO<sub>2</sub>e) of the use phase of an ICT service execution/provisioning over all involved domains, potentially of different tenants.

### Optimizing



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.

### Incentivizing



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.

## EXPECTED 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

**FOLLOW US TO STAY UP TO DATE ON OUR PROGRESS:**



[www.projectexigence.eu](http://www.projectexigence.eu)



Projectexigence