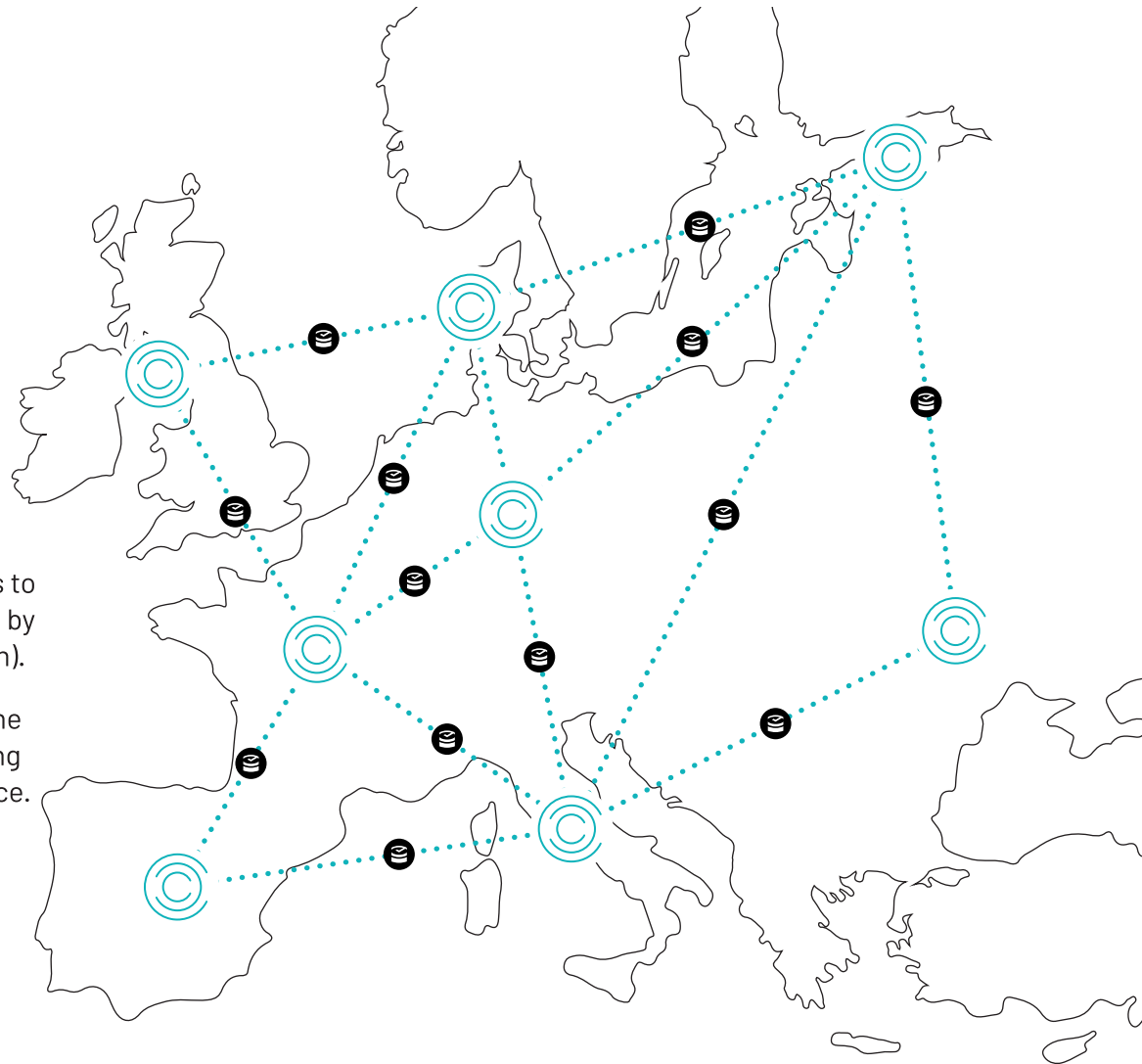# FREE ENERGY DATA

VISION

To enable seamless access to data with a few clicks done by the data owner (the citizen).

It is not important where the person lives or what existing energy networks are in place.

STORY

In the 21st century, much can be done to make our planet a more habitable place. SOFIE's "Free Energy data pilot" focuses on the liberation of energy data, envisioning and empowering a future of smart energy consumers. Every citizen's control over their energy consumption and circulation helps to grow their awareness, make economically wiser decisions and contribute to the planet's sustainable future.

CHALLENGE

Currently, the possibility to provide next generation energy services is limited by the lack of data access to energy consumption. People would be choosing a better deal from energy service providers, but the use of centralized data management, with complicated data exchange between IoT systems, is preventing this from happening worldwide.
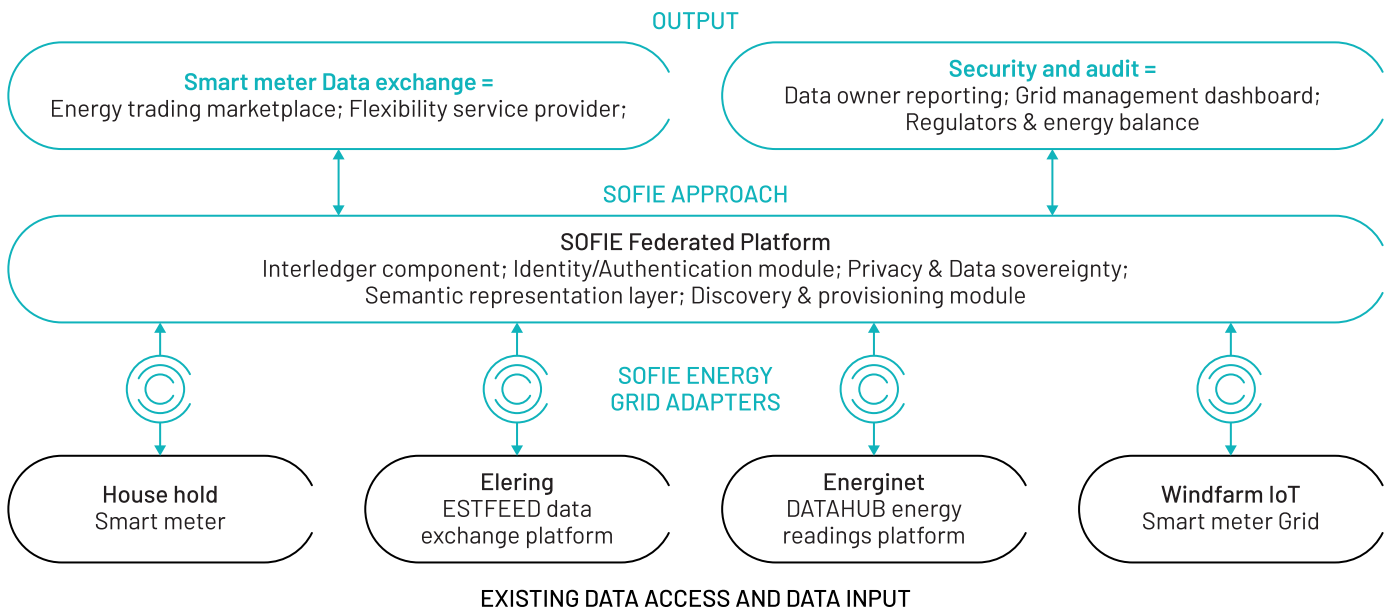
GOAL

The goal is to give the control of the data access to the data owners. This is made possible through SOFIE's energy grid adapters to link every smart meter in Europe to the interested service provider. This is done with cross border data exchange for future flexibility services and guaranteeing the third-party auditability and regulations compliance for the existing national data hubs, TSOs, DSOs and other stakeholders.

"FREE ENERGY DATA" WILL DELIVER:

- SOFIE adapters placement in data input and on each participant side.
- Secure authentication and control in mobile device for each data owner

- Dashboards for the data owner, national data hub manager and service providers' premises.
- GDPR compliant data access to pilot specific test sites.

THINGS THAT SOFIE DOES FOR ENERGY DATA PARTICIPANTS

OUTPUT

Smart meter Data exchange =
Energy trading marketplace; Flexibility service provider;

Security and audit =
Data owner reporting; Grid management dashboard;
Regulators & energy balance

SOFIE APPROACH

SOFIE Federated Platform
Interledger component; Identity/Authentication module; Privacy & Data sovereignty;
Semantic representation layer; Discovery & provisioning module

SOFIE ENERGY GRID ADAPTERS

House hold
Smart meter

Elering
ESTFEED data exchange platform

Energinet
DATAHUB energy readings platform

Windfarm IoT
Smart meter Grid

EXISTING DATA ACCESS AND DATA INPUT

FOR DATA MANAGEMENT

- Use real time and historical data to forecast the occurrence of reverse powerflow.
- Create flexibility requests on the marketplace to balance the local energy supply.

FOR SYSTEMS THAT MAKE USE OF DLT AND IOT TECHNOLOGY + IOT

- introduces a transparent data adaptation layer for IoT platforms;
- proposes easy to use and non-disruptive solution to federate heterogeneous IoT environments;
- proposes a solution which is agnostic to the existing DLT and IoT technology;
- enables anonymity and privacy protection of sensitive information.

FOR AUDITS, QUALITY CHECKS

- Provides GDPR compliance to all related parties from data owners to service providers and energy datahub managers;
- improves trace of access, authorization and security of customer data flow in order to provide the necessary tools in case of disputes and data security breaches;
- increases transparency and trust in auditing processes in cases of safety/quality issues and disputes among the companies of the energy sector data exchange participants.
- Protecting the entity who selling the energy from court cases.

- Providing energy consumption readings which are correct beyond dispute.
- Providing the provenance throughout the infrastructure that energy company is responsible for until delivery is made to 3rd party environment.
- Track energy consumption side, who has requested the personal data about an end user.

INTERESTED IN SOFIE'S "FREE ENERGY DATA" PILOT?

- Energy data exchange pilot executor: Guardtime and contributors: Athens University of Economics and Business, Engineering Ingegneria Informatica and Aalto University.

- Your primary "Free Energy data" contact is **Priit Anton** from Guardtime, e-mail **priit.anton@guardtime.com**

  Any questions or proposals you might have, he's happy to listen.

- You can also reach us via SOFIE's webpage to announce interest to be a test user in 2020 demonstration.
- You should follow SOFIE's social media channels to be up to date with latest developments.

HOMEPAGE www.sofie-iot.eu
TWITTER twitter.com/EU_Sofie
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