



Data Spaces: Common data models for Energy, Home, Mobility

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DoEAP | Background & Context



Twin Energy and Digital Transition

European
Green Deal

Europe fit for
the Digital Age

a better-functioning, smart, integrated and interconnected energy system, where new business models can easily emerge in a fast-changing market.



July 2020 : Energy System Integration Strategy

key actions to drive the energy transition, including:

“a system-wide **Digitalisation of Energy Action Plan** that could accelerate the implementation of digital solutions and the integration of energy systems”.



July 2021 : Fit for 55 package

to **reduce emissions by at least 55% by 2030.**

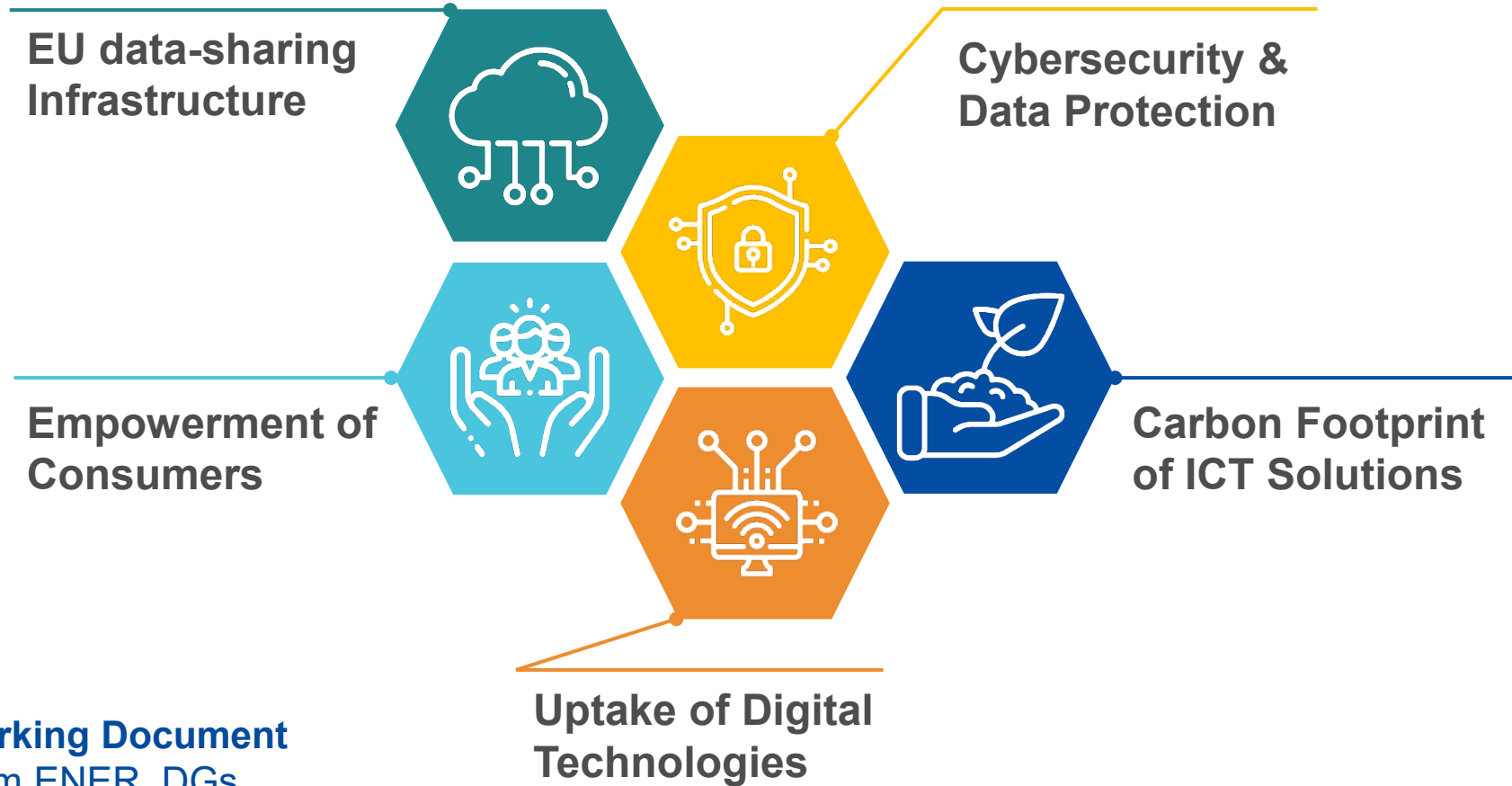
This will cover several policy areas – from renewables to energy efficiency first, energy performance of buildings, as well as land use, energy taxation, effort sharing and emissions trading.



May 2022 : Re-POWER

to **rapidly reduce dependence on Russian fossil fuels and fast forward the green transition.** It covers diversifying energy supply, investing in new sources like biomethan and hydrogen, reinforcing Fit for 55 targets and accelerating the roll-out of Renewables.

DoEAP | The 5 Areas



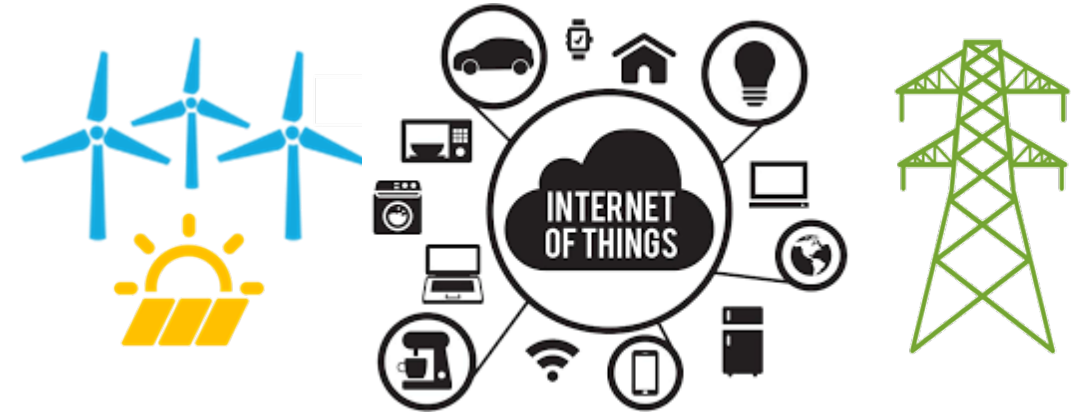
Staff Working Document
input from ENER, DGs,
CINEA, EISMEA among others

System Perspective

- **Grid operators want a stable grid:**
 - Higher shares of renewables
 - Quantum leap for EV charging deployment
 - Unexplored potential for Smart Buildings

- **Ways to accelerate :**

- Service bundling EV charging, solar, heating, appliances, living, mobility, work,...
- Opportunities for new market entrants,
- other sectors like charge point operators, retail (Ikea, Sonai, Amazon, ..), mobility (Uber, BlaBla), housing companies, CPOs, railway etc.



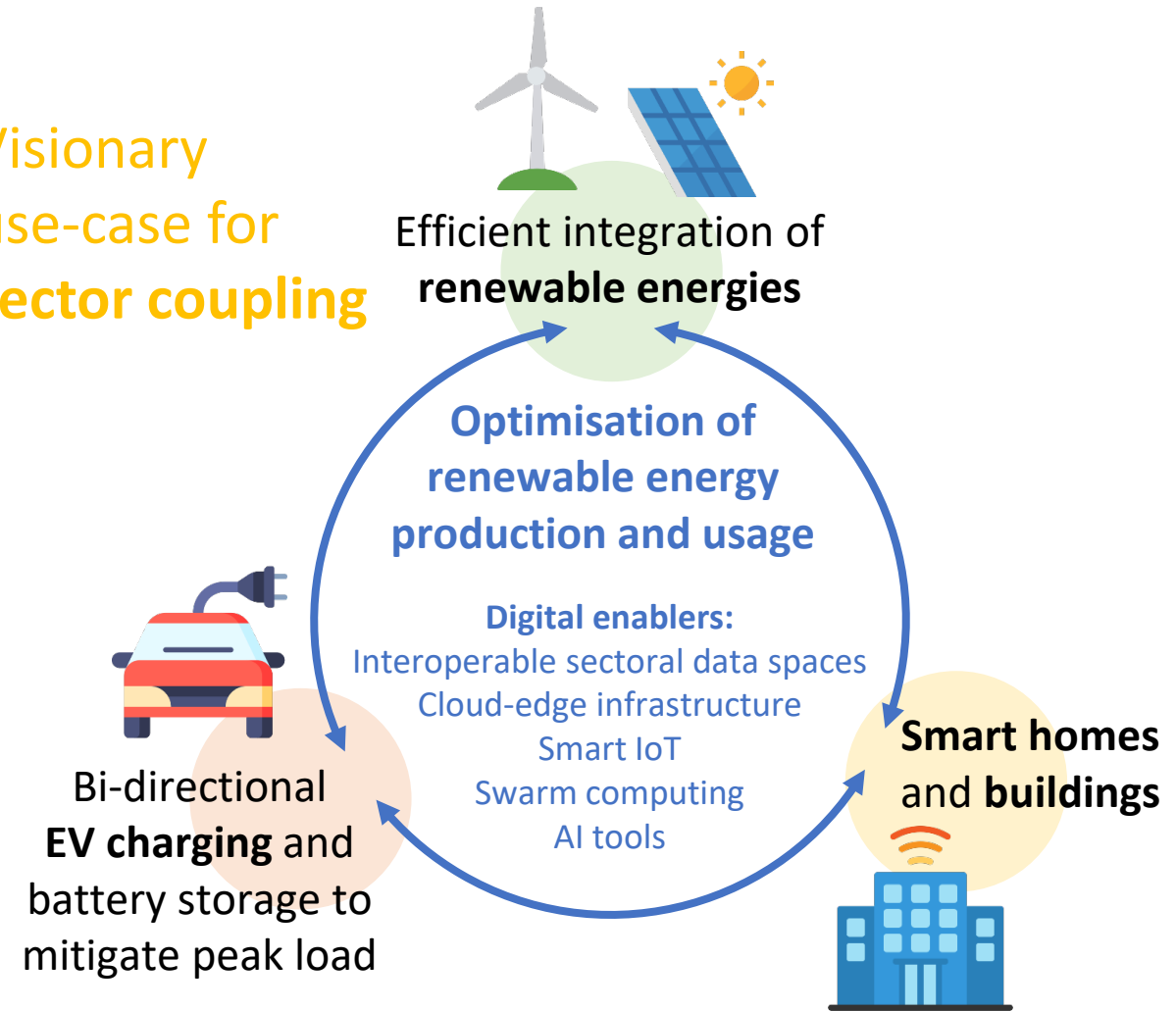
Towards interoperable data spaces

Leveraging the momentum

- **BRIDGE Data WG**
- **GAIA-X** - energy data space
- Converging guidelines: **Open DEI** design principles for data spaces



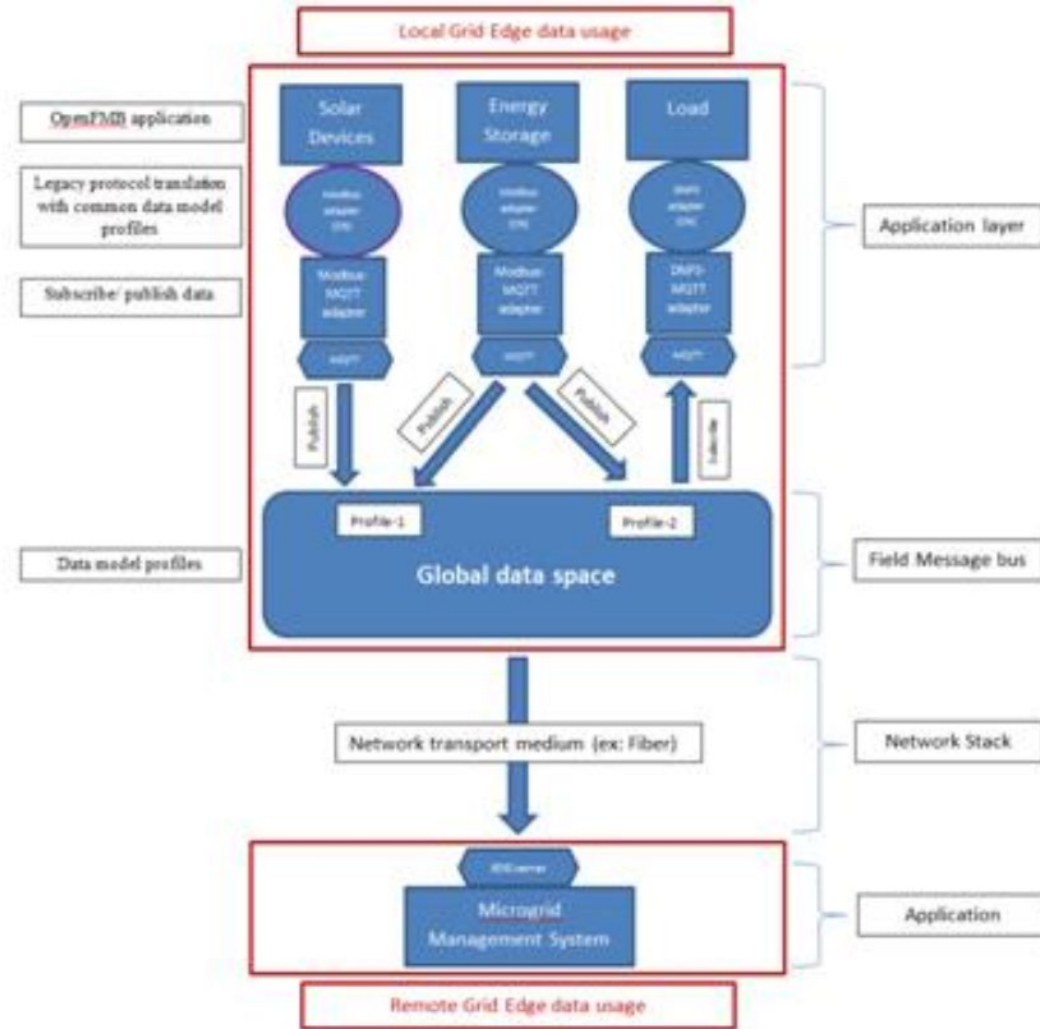
Visionary use-case for sector coupling



Framework for Open Data Models

- **Utility Industry Standardized Semantic Models to design a common data space**
 - IEC's Common Information Model (CIM) is used as the common grid data model
 - Abstracting from underlying fieldbus protocols like DNP3, M-Bus and MODBUS etc.
 - Further process of harmonizing data model with other models such as IEC 61850, like OpenADR, eeBus/SPINE, IEEE 2030 etc.
 - Translation across different ontologies like Schema.org, SAREF, etc.
 - → **Smart DATA initiative/templates** to use JSON-LD to translate underlying protocols to create a common ground so that devices can understand each other.

See <https://smartdatamodels.org/>



Courtesy: OpenFMB



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Thank you



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