

CEER WEBINAR ON DATA ACCESSIBILITY MARKET & CONSUMER DATA

 **WED. 10 FEBRUARY**
 **10:00 - 12:30 CET**

#CEERDataWebinars

Welcome address

Veli-Pekka Saajo, CEER Distribution Systems Working Group Chair

Webinar agenda

Introduction – with Jiří Pilař (DG Connect), CEER delegates to EG1 and EG3 Christelle Heng and Louise van Rensburg

Regulatory perspective – with Clara Poletti (ARERA, ACER BoR Chair)

Academic perspective – with Valerie Reif (FSR), Helena Gerard (VITO) and Silvia Vitiello (JRC)

Panel discussion – with Judith Ward (Sustainability First), Agustín Reyna (BEUC), Constantina Filiou (DG Energy) and Eleonora Bettenzoli (ARERA-CEER)

Closing remarks – with Louise van Rensburg



The EU Data Strategy, Data Spaces, Data Governance Act and Open Data

CEER Webinar on Data Accessibility - Market and Consumer Data
10 February 2021

Jiri PILAR, European Commission, CNECT.G1



“I want European businesses and our many SMEs to access high quality data and create value for Europeans – including by developing Artificial Intelligence applications.”

*Thierry Breton,
Commissioner for the Internal Market*

What are the problems?

Not enough data available for reuse

- More public sector data can be made available
- Low uptake of voluntary data sharing among companies
- No clarity on the use of private sector data for the common good

No real user empowerment

- imperfect data portability mechanisms

Lack of European data processing & storage solutions

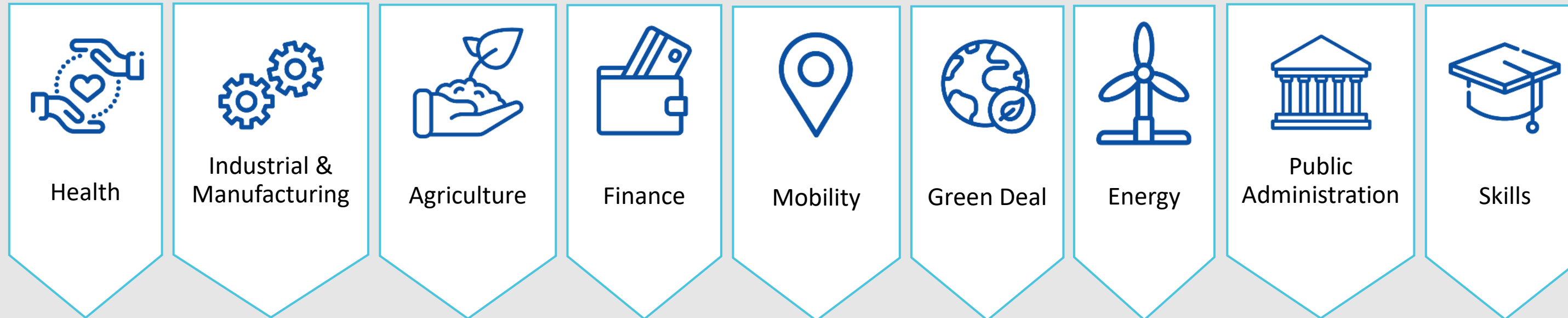
Absence of comprehensive data governance approaches

- To address legal and technical barriers within and across sectors (e.g. standardisation & interoperability)

Skills shortage and low data literacy

Fragmentation of the single market

Common European data spaces



- Driven by stakeholders
- Rich pool of data of varying degree of openness
- Technical tools for data pooling and sharing
- Sectoral data governance (contracts, licenses, access rights, usage rights)
- IT capacity, including cloud storage, processing and services

Personal data (spaces)

Public sector data (high value data, 'sensitive' data)

Horizontal framework for data spaces:

- Trust in novel data intermediaries that respect 'data sovereignty'
- Governance of standards for cross-sector interoperability

EU data strategy: 4 key instruments

Q4
2020

Enabling framework for the governance of common European data spaces

Data sharing intermediaries, data altruism, better use of sensitive public data

Q4
2020

Market power instrument under Digital Services Act package

Data: a key element of Big Tech's market power

Q2
2021

Implementing Act under Open Data Directive (HVDs)

Opening up high quality government data for SMEs & innovation in six thematic domains

2021

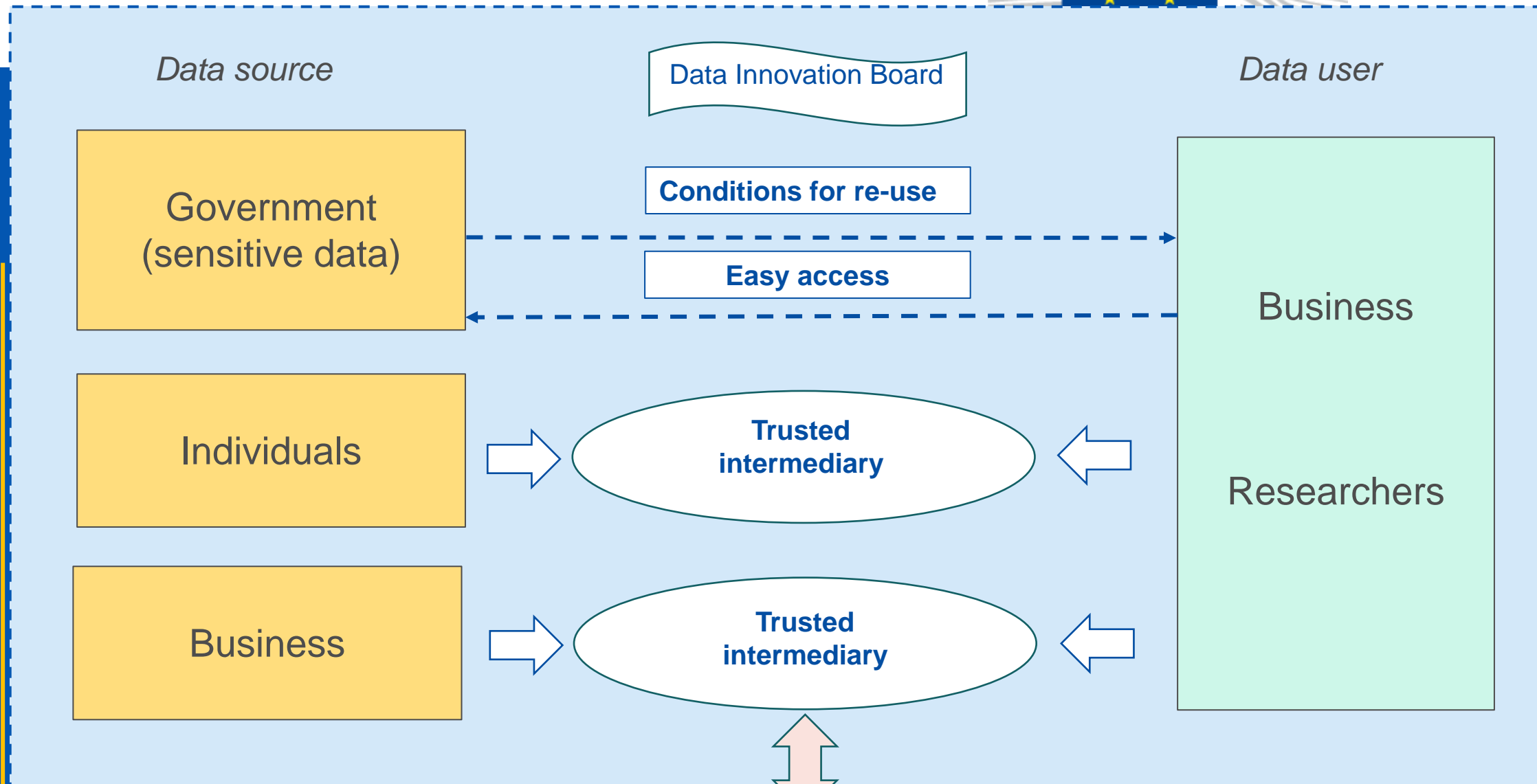
Data Act – maximizing value of data among all actors of the data economy

Better access to and control over co-generated data, B2G data sharing

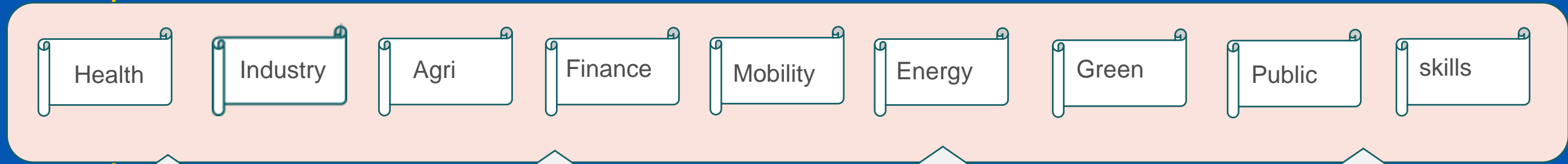
Data Governance Act



Other relevant legislation



- ← **Open Data Directive** (and forthcoming Implementing Act of High-Level Datasets) for non-sensitive public data sets
- ← General Data Protection Regulation (**GDPR**)
- ← Sector-specific, e.g. EU-type approval for motor vehicles (access to vehicle data)
- ← EU Regulation on the free flow of non-personal data
- ← **International obligations** (WTO/GATS, bilateral agreements)
- ← Forthcoming **Data Act** (with mandatory data access or use rights)



- ↑ **Sector-specific legislation** (e.g. on health data spaces)
- ↑ **Governance rules** defined and agreed by the participants to a space
- ↑ **EU financial support** for the creation of EU data spaces (DEP, CEF)
- ↑ **EU-level standardisation** for (cross-data space) interoperability

DSA package - Objectives & Ambition

Digital Services Act

Ensure a proper functioning of the single market for digital services

- ✓ Ensure the best conditions for **innovative cross-border digital services** to develop
- ✓ Maintain a **safe online environment**, with responsible and accountable behaviour from digital services
- ✓ Empower users and **protect fundamental rights**, and freedom of expression in particular
- ✓ Establish the appropriate **supervision of online intermediaries** and cooperation between authorities

Digital Markets Act

Ensure fair and open single market for digital services

- ✓ Ensure that gatekeepers by means of unfair behaviour do not undermine **functioning, fair and contestable platform markets**
- ✓ Enable business users **to bring innovative services to the market** and **empower customer to freely choose** their service providers
- ✓ Enhance **coherence** and **legal certainty** for all market operators by uniform set of substantive and procedural rules.

Implementing Act on High Value Datasets

Geospatial

*Earth observation
and environment*

Meteorological

Statistics

*Companies and
company
ownership*

Mobility

Datasets listed in the implementing act to be made available for free, in machine-readable formats, via APIs and (where relevant) as bulk downloads.

Examples in recital 66:

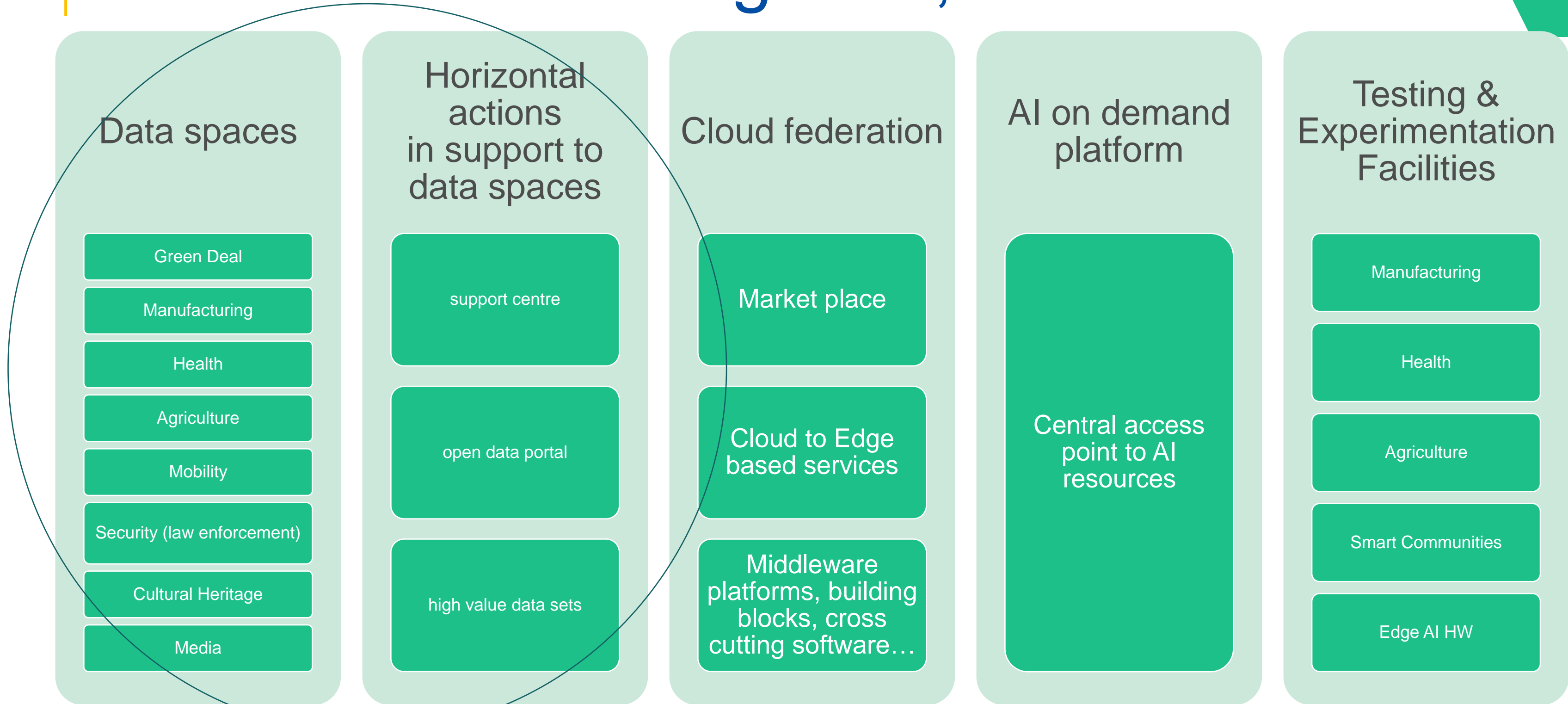
"the thematic categories listed in the Annex could inter alia cover postcodes, national and local maps (Geospatial), energy consumption and satellite images (Earth observation and environment), in situ data from instruments and weather forecasts (Meteorological), demographic and economic indicators (Statistics), business registers and registration identifiers (Companies and company ownership), road signs and inland waterways (Mobility)."

The thematic categories can be extended by Delegated Act

Data Act

- The process only recently launched: an IA-support study under way
- Need to examine actual data flows and contractual practices in a number of industrial ‘ecosystems’ to study obstacles to data sharing (Mobility, Renewable Energy, Aerospace & Defence, Health, Agri-food, etc.).
- Possibilities for enhancing B2G data sharing
- In line with the Data Strategy, the aim is to maximise the value of data across the economy while respecting the legitimate interests of companies investing in data generation (e.g. production of smart devices, sensors, etc.)
- Public consultation to be published soon

DEP: Artificial intelligence, data and cloud



Actions will be managed directly by CNECT

Support for a European data space for energy

- 1) The data space can involve actors from the public and private sectors and facilitate the exchange of all kinds of relevant data including Copernicus data, High Value Datasets, data under INSPIRE and private sector data (e.g. energy use, mobility).
- 2) Funding from the Digital Europe Programme will help build up the necessary data sharing tools, infrastructures and governance mechanisms, without losing sight of the potential of cross-sectoral data use.
- 3) Data Spaces will also benefit from Digital Twins, such as Destination Earth (DestinE) in DEP: a dynamic, interactive, computing and data intensive “Digital Twin of the Earth” or “Urban Digital Twins”



**Thank you very much for your
attention**

For further questions:

email: CNECT-G1@ec.europa.eu

Unit G1 of DG CONNECT

Websites with more information:

<https://eur-lex.europa.eu/legal-content/EN/LSU/?uri=celex:32019L1024>
https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-data-strategy_en
<https://ec.europa.eu/digital-single-market/en/open-data>

Introduction and policy perspectives on data accessibility and trends

Christelle Heng, CEER delegate to EG1

Expert group 1

- The Steering Committee of the Smart Grids Task Force (SGTF) decided beginning 2017, to establish a Working Group on Electricity and Gas Data Format and Procedures (EG1).
- EG1 has been asked to provide input (interoperability requirements as well as transparent and non-discriminatory procedures for access and exchange of electricity and gas data) to the EU Commission for the development of Implementing Acts that further defines data interoperability requirements and procedures as stated in article 23 and 24 in the Electricity Directive.
- The participants in the Expert Group are varied : DSOs (CEDEC, E.DSO, Eurelectric, GEODE), ENTSOE, ESMIG, consumer organisations (ANEC/BEUC), NRAs (CEER), standardization agency (CEN/CENELEC), ebiX, SmartEn etc...

'interoperability' means, in the context of smart metering, the ability of two or more energy or communication networks, systems, devices, applications or components to interwork to exchange and use information in order to perform required functions;

Article 24

Interoperability requirements and procedures for access to data

1. In order to promote competition in the retail market and to avoid excessive administrative costs for the eligible parties, Member States shall facilitate the full interoperability of energy services within the Union.
2. The Commission shall adopt, by means of implementing acts, interoperability requirements and non-discriminatory and transparent procedures for access to data referred to in Article 23(1). Those implementing acts shall be adopted in accordance with the advisory procedure referred to in Article 68(2).
3. Member States shall ensure that electricity undertakings apply the interoperability requirements and procedures for access to data referred to in paragraph 2. Those requirements and procedures shall be based on existing national practices.

Work plan

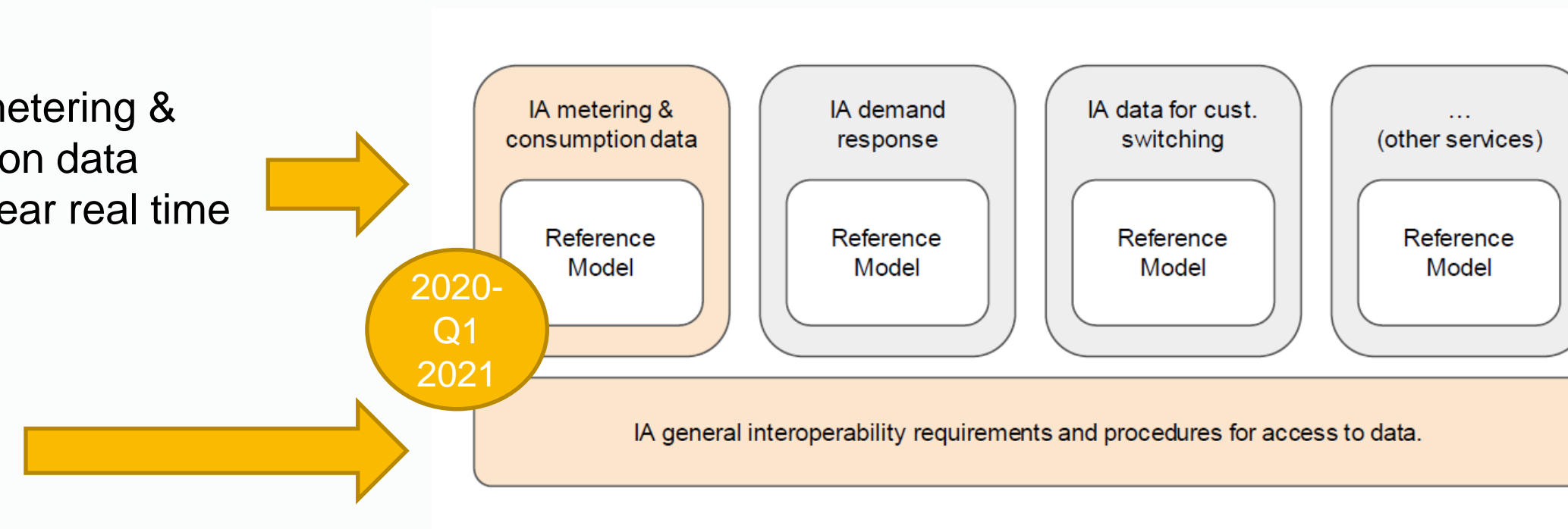
- The work is divided into four phases (originating from article 23(1) Electricity Directive (EU) 2019/944)

Part 2:

- Annex 1 metering & consumption data
- Annex 2 near real time data

Part 1:

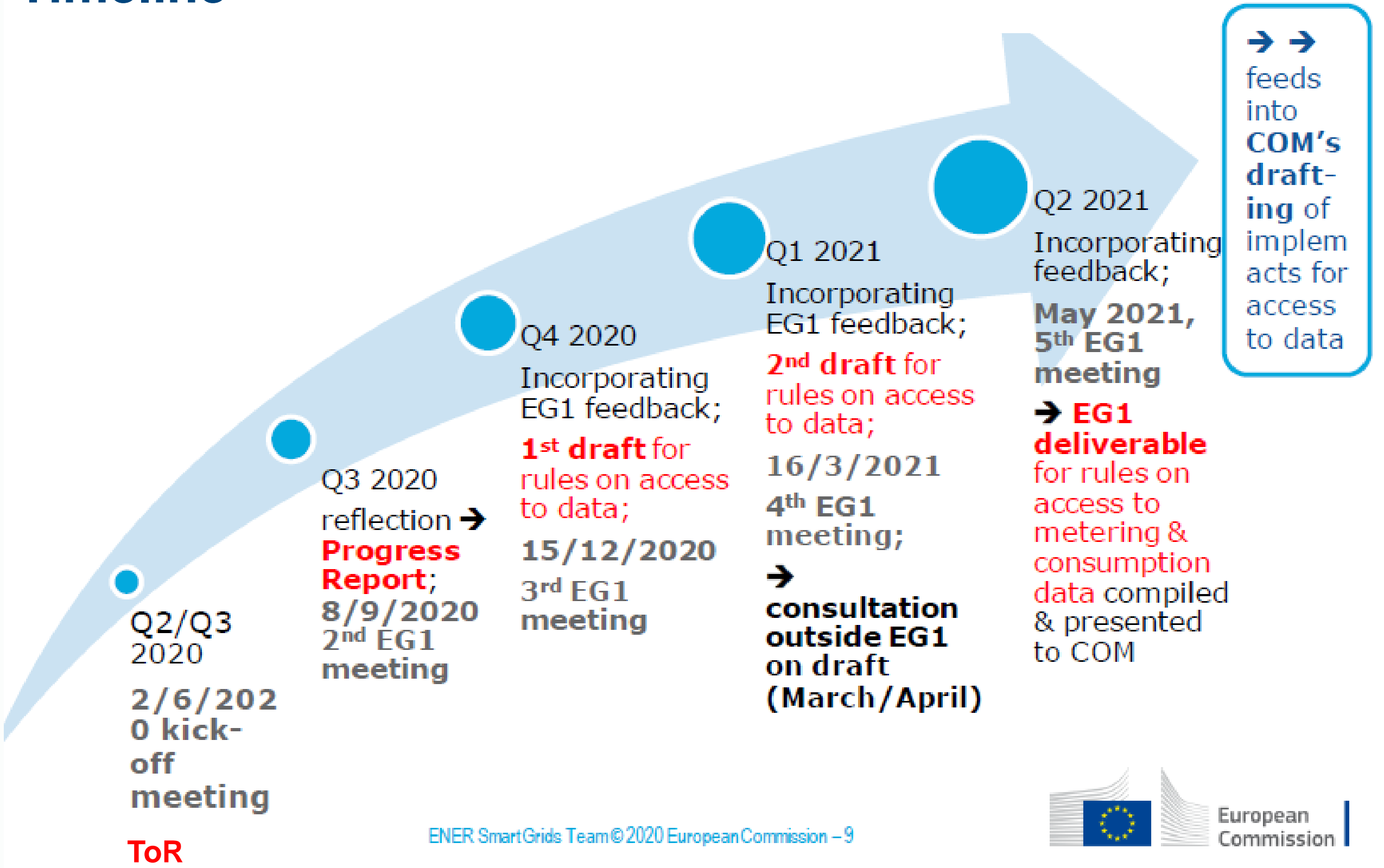
- General



- Multi-phase drafting process that will deliver I.A.s on the different types of data included in art. 23 of Electricity Dir. 944/2019.
- Current work on :
 - Part 1 contains general guidelines, defining the procedures for the mapping of national practices and the role of the EU competent authority (to be designated by the Commission),
 - Part 2 contains the interoperability requirements and procedures for access to metering and consumption data and for near real time (not validated) data.

CEER WEBINAR ON DATA ACCESSIBILITY: MARKET & CONSUMER DATA

Timeline



ToR approved

ENER SmartGrids Team ©2020 European Commission – 9



**Introduction and policy perspectives on data
accessibility and trends**

Louise van Rensburg, CEER delegate to EG3

Expert group 3

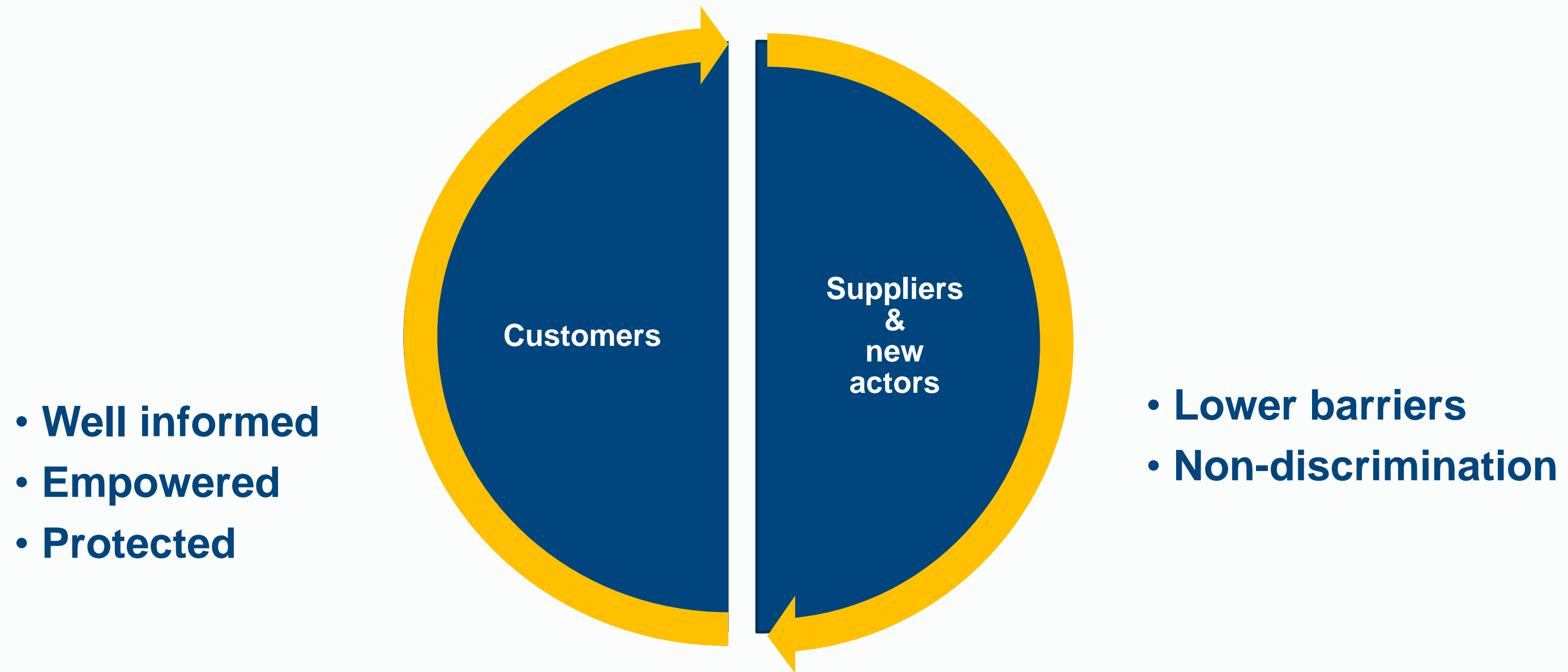
- The Steering Committee of the Smart Grids Task Force (SGTF) also established a Working Group on the Deployment of Demand Side Flexibility (EG3) in 2017.
- The purpose:
 - To identify the main barriers to the development of Demand Side Response and propose related recommendations, to enhance the development of Demand Side Response and address any potential regulatory gaps. .
- Similar wide range of participants to EG1 group.
- Evaluated use cases and identified main barriers, with 37 proposed recommendations to enhance the development of Demand Side Response and address any potential regulatory gaps. Data identified as one of the key elements; recommendations included the following:
 - Data access and data sharing framework
 - Data requirements that flexibility service providers must report
 - Data to be collected from assets delivering flexibility
 - Increase LV observability with smart meter data
 - Digitalisation
 - Improved forecasting at distribution level
 - What and how information should be made transparent in the energy sector
 - More detailed information on data needs and accessibility

CEER Webinar series on “Data Accessibility #2 System Data” to be held on 17 February
will focus more on the system use of data

Regulatory perspective

Clara Poletti, ARERA Commissioner/ACER BoR Chair

Access to customer and metering data



Need to guarantee this cycle is virtuous and well-functioning

Key challenges for NRAs

1

Interoperability



Support interoperability while also guaranteeing privacy and security, in cooperation with other Authorities

2

Consumer protection



Make sure that some customers are not disproportionately disadvantaged by the digital divide

3

Consumer engagement



Guarantee that the right data/information is made available to consumers and market operators at the right time and at least cost



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Accessibility and interoperability of energy consumer data: An illustrative approach

Valerie Reif
Florence School of Regulation

10 February 2021
CEER Webinar Data Accessibility #1 Market and Consumer Data

This presentation illustratively shows ...

1. why we cannot discuss data accessibility without interoperability
2. why we increasingly need to consider cross-sectoral legislation in this discussion

1. Why we cannot discuss data accessibility without interoperability

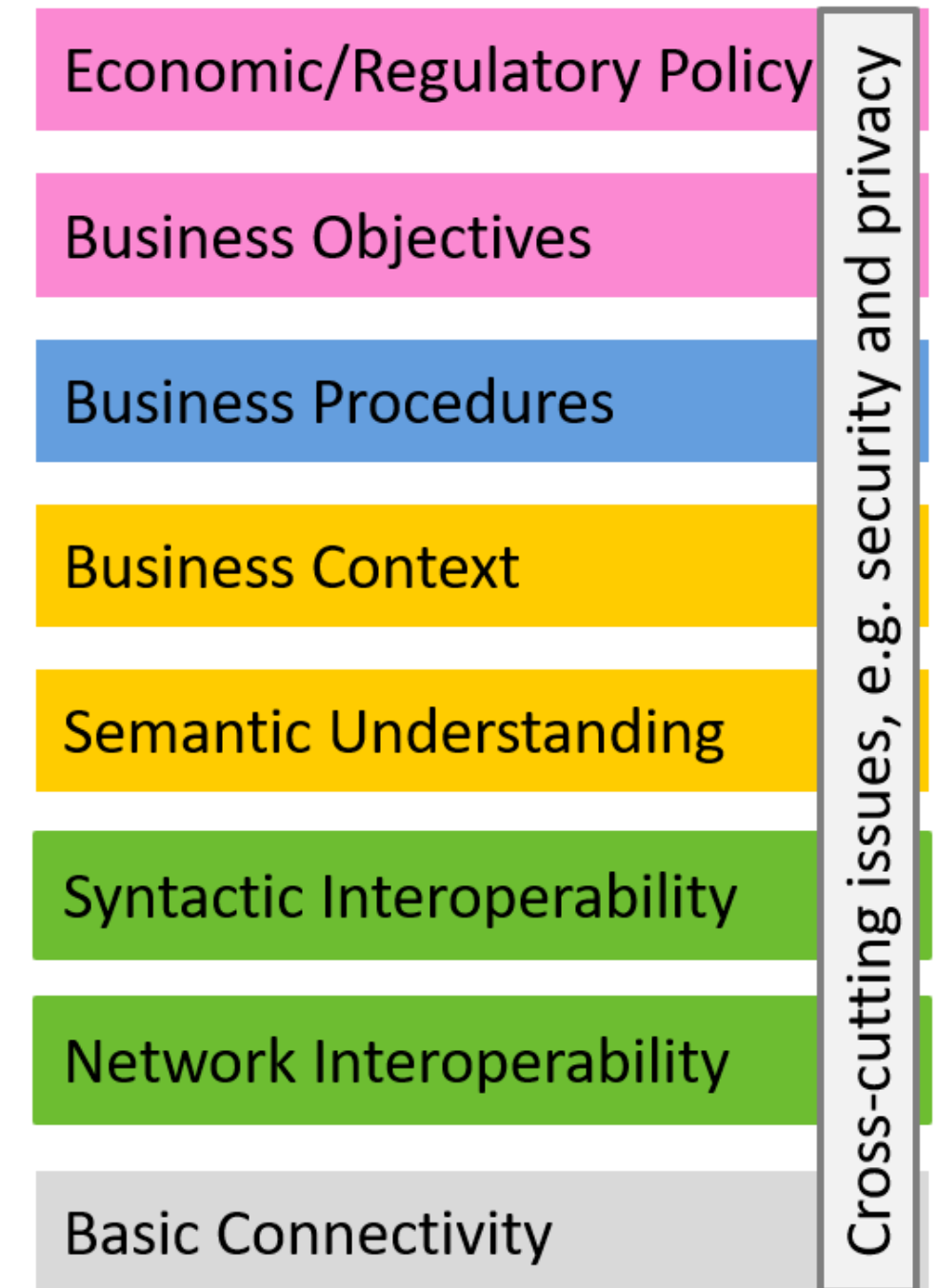
Literature example from the US

Meet Margaret Watts (alias Meg)



- 78-year-old
- Fixed income, health problems
- Lives in a newly built retirement home
- Advanced metering infrastructure, residential energy management system & programmable thermostat
 - Temperature preference: 22°C
- Registered in demand response program to reduce her bill
 - Medical exemption: no emergency curtailment

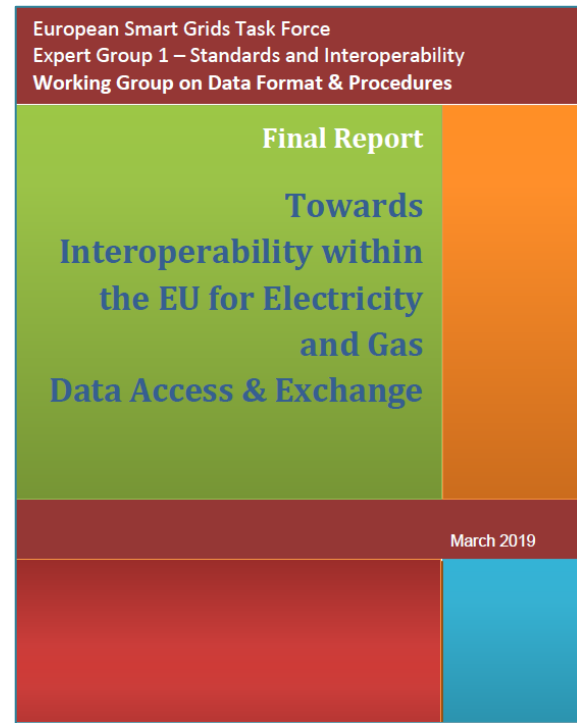
Source: GridWise Architecture Council (2008)



GridWise Architecture Council (2008) –
Interoperability categories of the GridWise
Interoperability Context-Setting Framework
for the electric power system

1. Why we cannot discuss data accessibility without interoperability

Where Meg fits into the European discussion



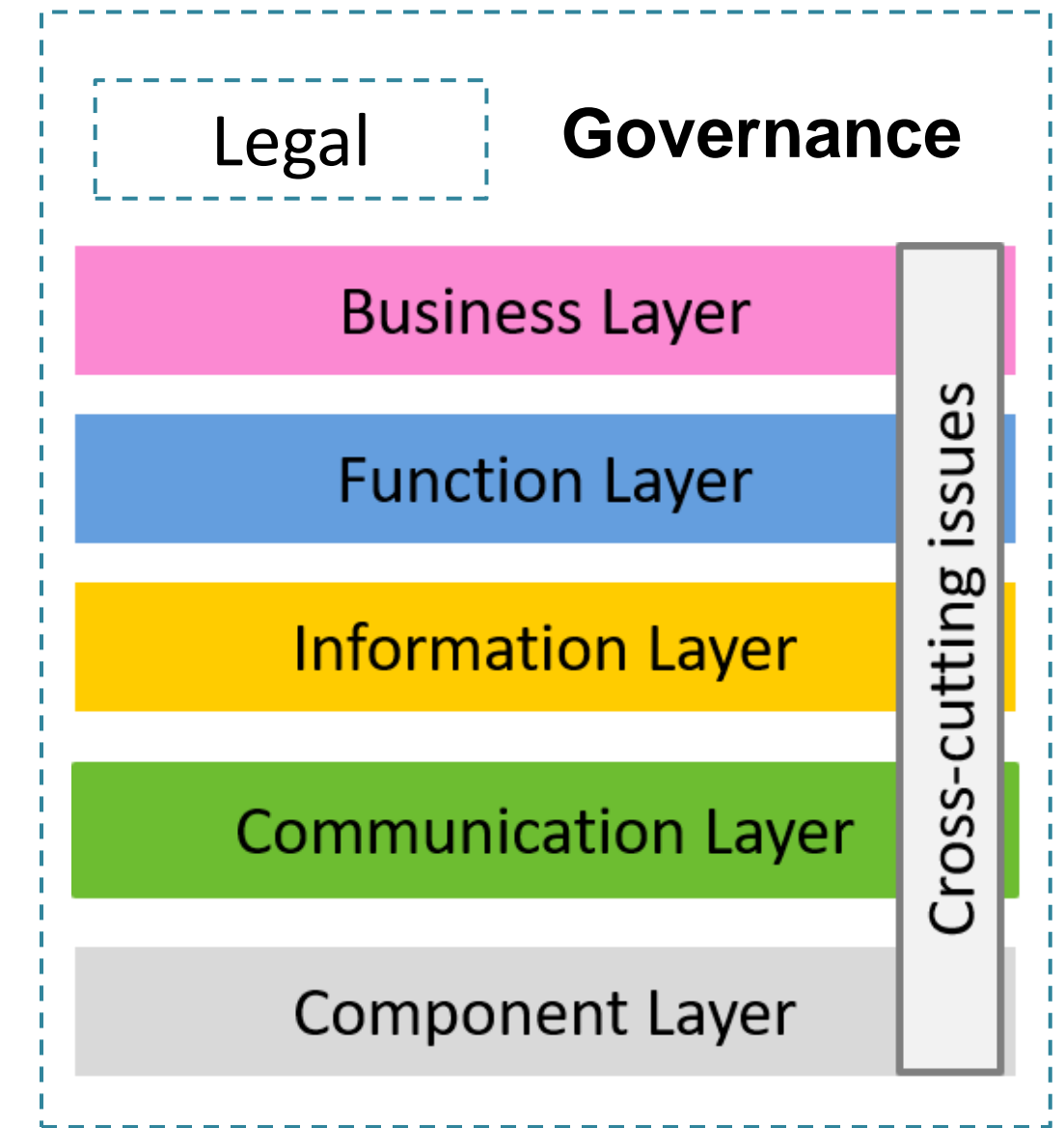
- Traditional retail processes
 - Billing
 - Supplier switching
 - ...
- New and emerging services
 - Download my data
 - Share my data
 - Revoke consent
 - Terminate service

Use case families:

Traditional processes

Data sharing

Demand response



Smart Grid Coordination Group (2012) – Interoperability layers of the Smart Grid Architecture Model (SGAM) Framework



2. Why we increasingly need to consider cross-sectoral legislation

“Data sharing” country examples: UK and NL

Next steps for Smart Data



Source: BEIS (2020)

- Smart Data = secure and consented sharing of customer data with authorised Third Party Providers
- Best practice Open Banking, now other sectors
 - **Cross-sectoral Smart Data working group**: initial focus on **energy**, finance and communication
 - **Coordinate and accelerate** existing Smart Data initiatives **across government and regulators**, draw on academic/industry expertise
 - **Focus on common challenges** (e.g. consent, authentication)



Source: Data Sharing Coalition (2020)

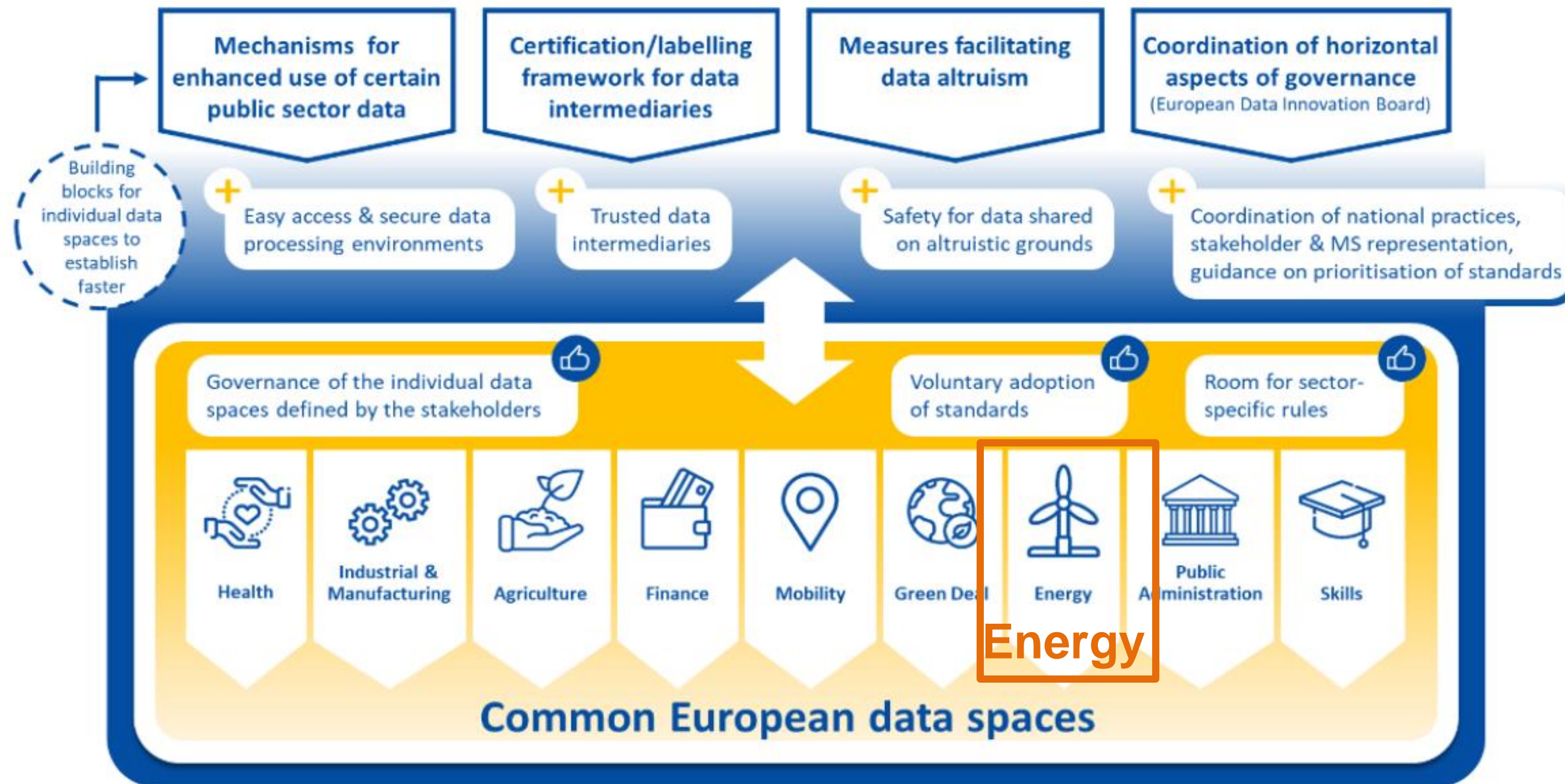
- Initiative for cross-sectoral data sharing
- Based on cross-sectoral use cases (e.g. energy & finance)



Green Loans: data sharing as a new source for the energy transition

2. Why we increasingly need to consider cross-sectoral legislation EU framework for data and data governance

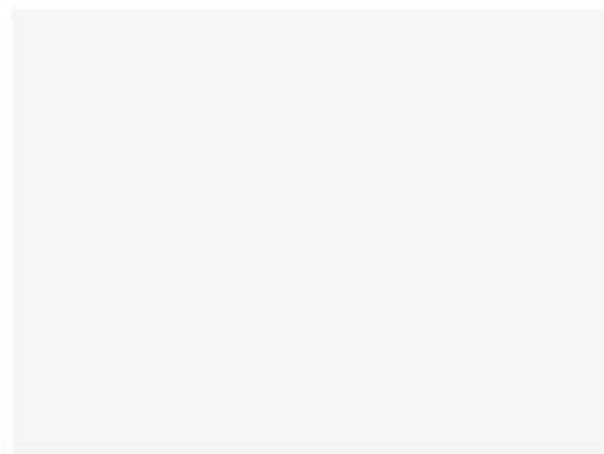
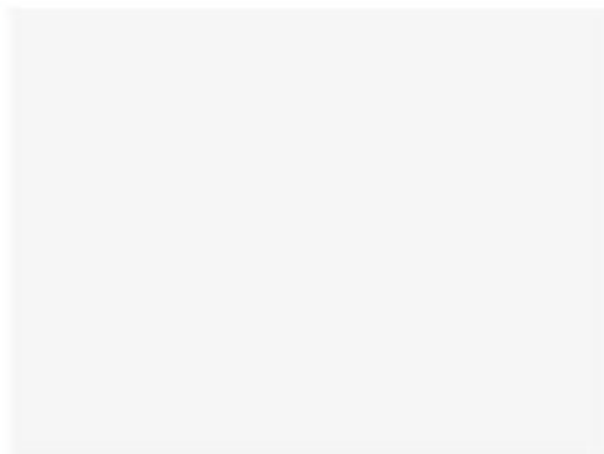
Interplay of the horizontal framework and the sectoral European data spaces



Source: European Commission (2020), Impact Assessment Report "Data Governance Act"

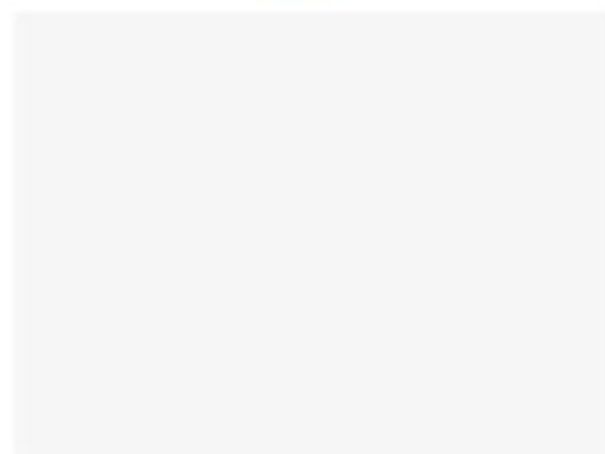
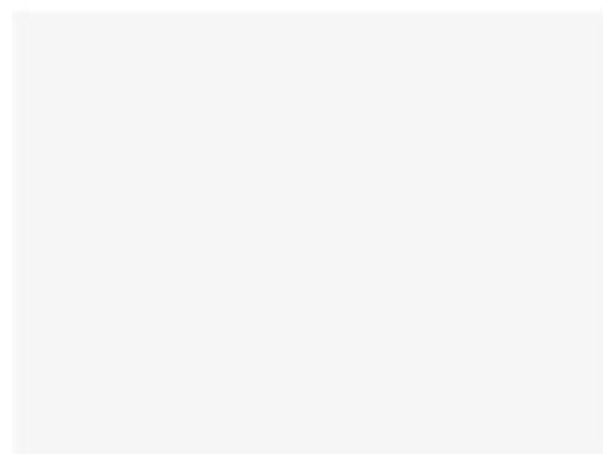
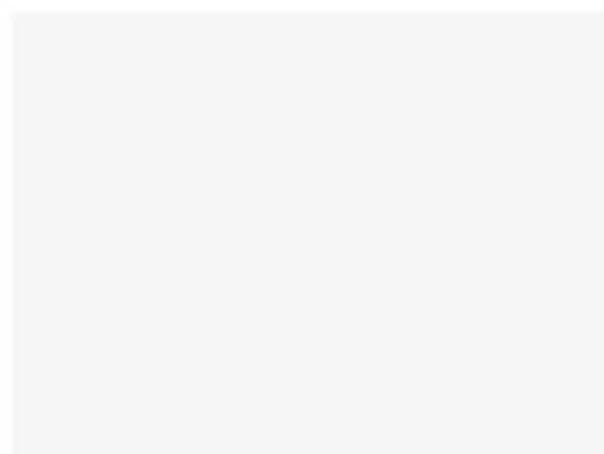
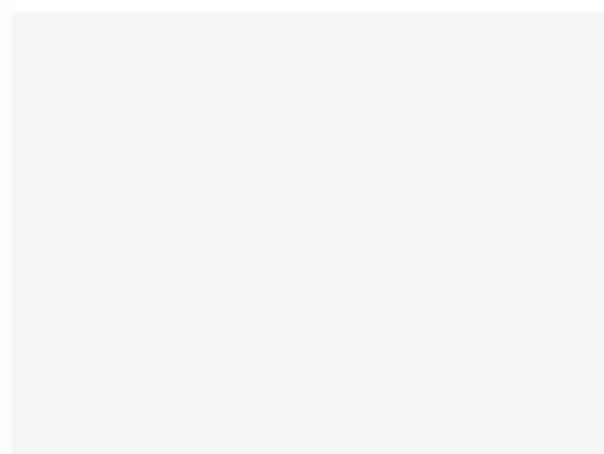
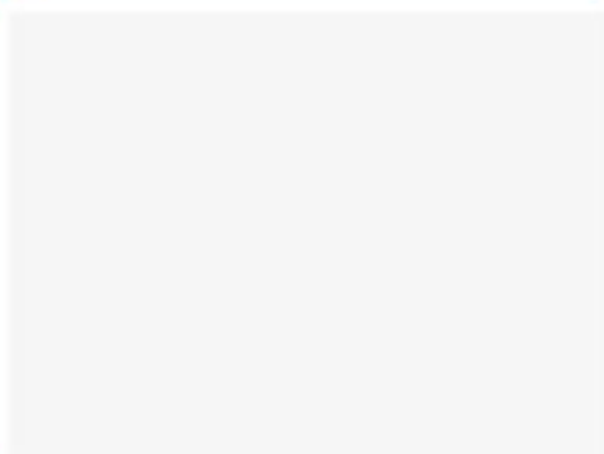


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Thank you!

Valerie Reif
valerie.reif@eui.eu

10 February 2021
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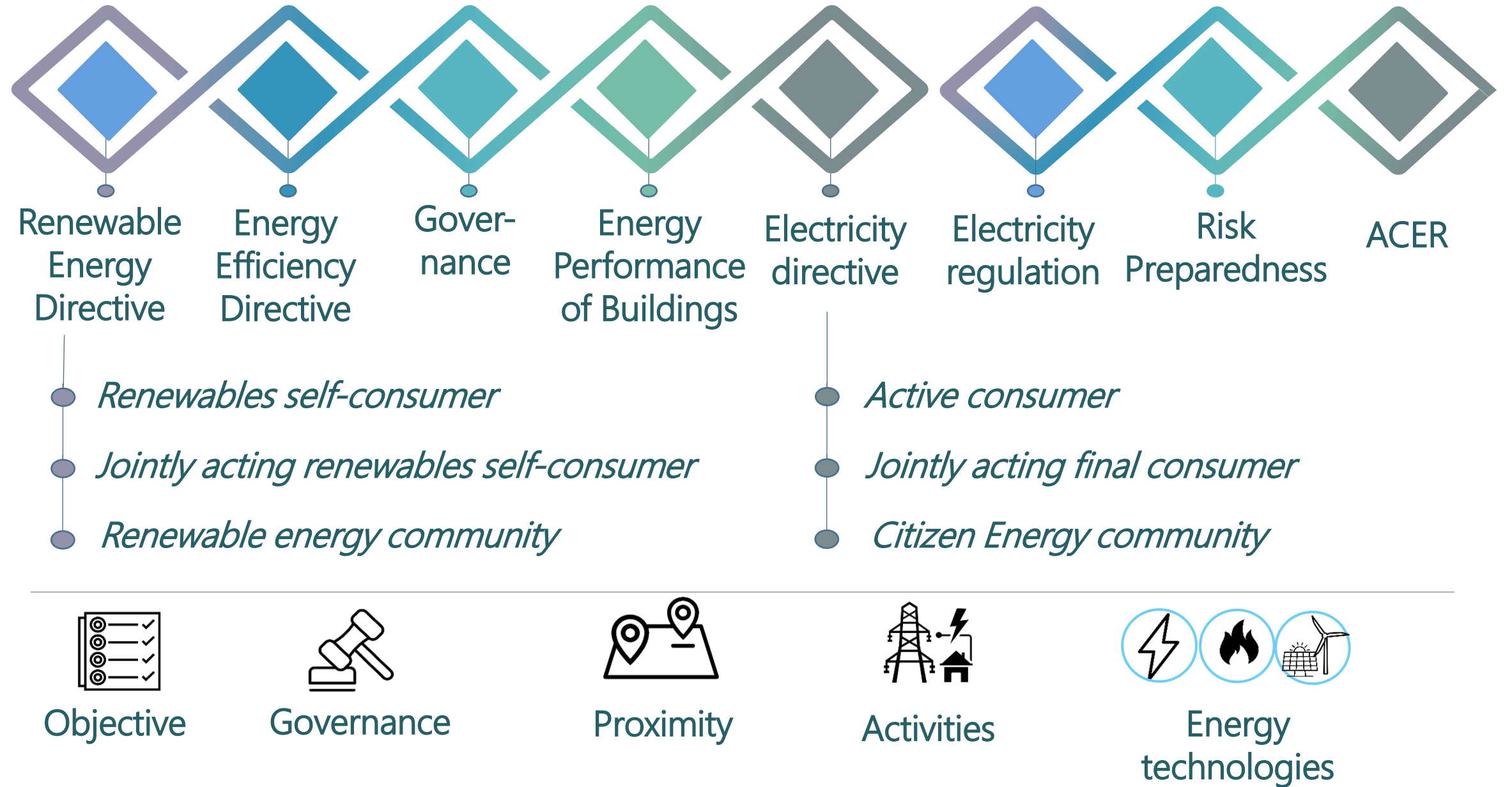
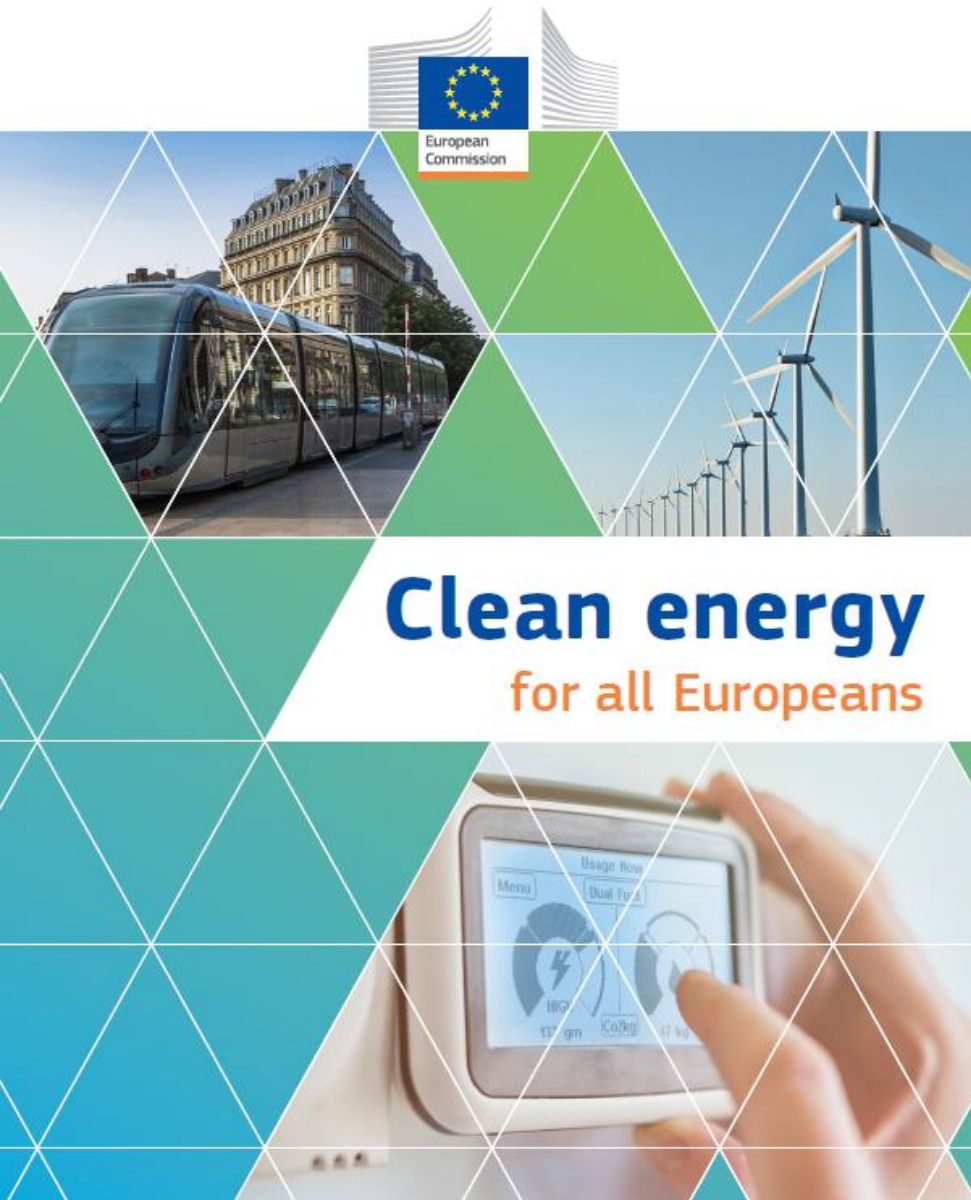
#1 Market and Consumer Data



Helena Gerard

10/02/2021

The consumer at the center of the energy transition

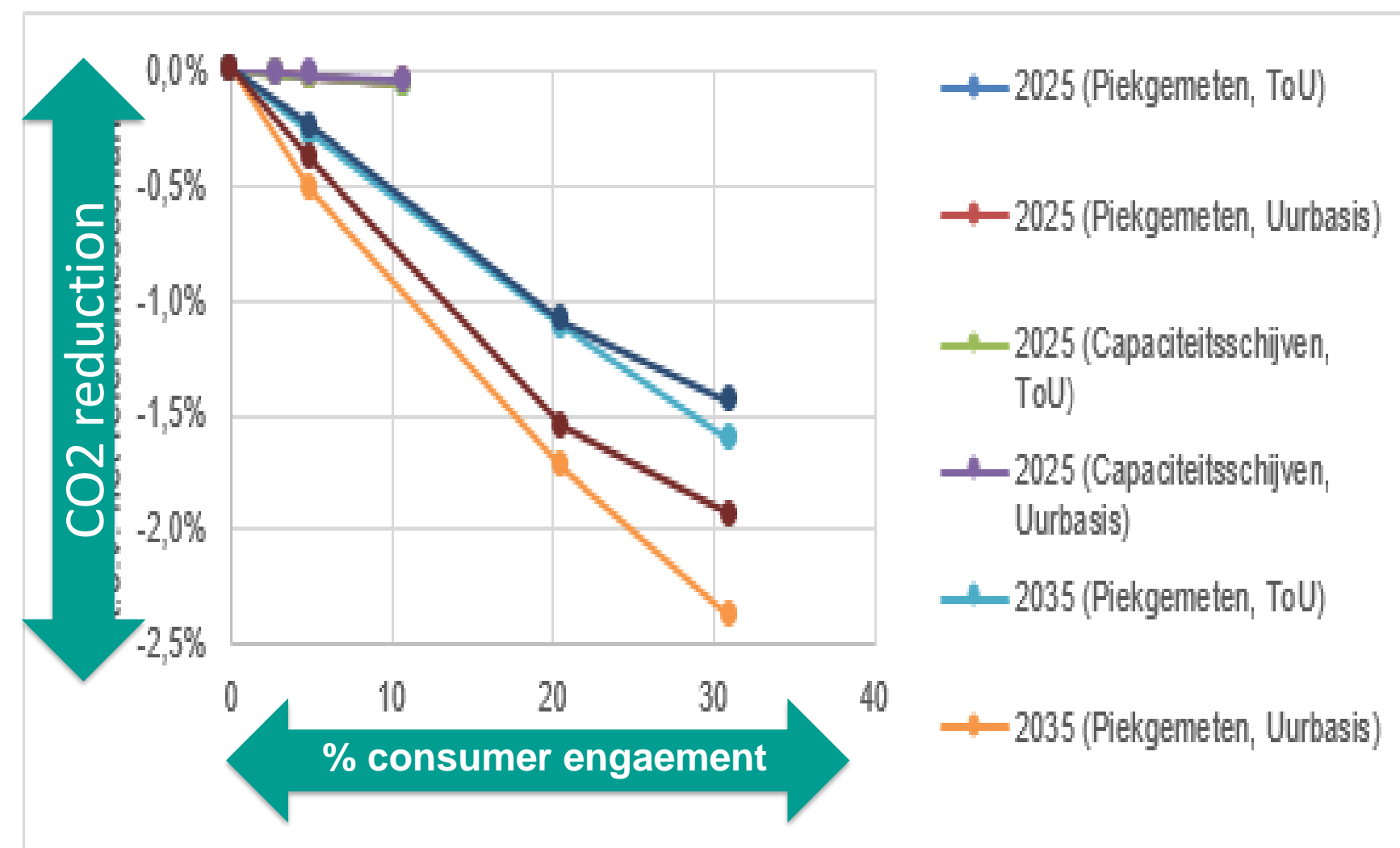
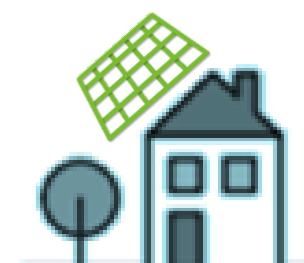


From Data to Real Value

From passive to active consumer

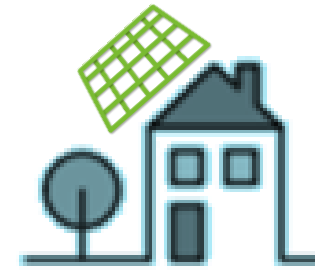
The Value of an Active Consumer

- Today, consumers are driving investments in clean energy
- The flexibility of 'engaged' consumers has significant value:
 - Increasing self-consumption
 - Provision of system services
 - ...
- Increased level of consumer engagement benefits the entire energy system
- Important technical barriers are addressed
 - Availability of a digital meter
 - Interoperability (connectivity of appliances)



Change in emissions compared to the reference scenario

Challenge 1: The Heterogeneous Nature of the Consumer



The Consumer Challenge: Consumers are very diverse (different demographics – different preferences – non rational behaviour)



Role of The Regulator/Policy Maker: Taking into account the heterogeneous nature as a reality - for defining + explaining new regulation

Challenge 2: The Knowledge Gap



The Consumer Challenge: Limited knowledge leads to lack of trust, fear and unclear view on value of flexibility



Role of The Regulator/Policy Maker:

- ✓ Simplification incentive/support schemes (importance of low complexity)
- ✓ Creation of trust (importance of privacy)
- ✓ Specific attention for vulnerable consumers
- ✓ Importance of feedback (making use of data) – social comparison



Challenge 3: The Question of Fairness



The Consumer Challenge : Consumers do not perceive a correct reward for their behaviour/provision of flexibility/making available specific data/...



Role of The Regulator/Policy Maker: Clear link between the value of the benefit and the value for the consumer (e.g. network tariffs, split of benefits within a collective entity)

Challenge 4: The Risk Averseness of the Consumer



The Consumer Challenge : Consumers do not naturally engage enthusiastically in all new data-driven opportunities



Role of The Regulator/Policy Maker:

- ✓ Stable regulatory framework – but keeping room for innovation
- ✓ Simplicity
- ✓ Contractual transparency
- ✓ The 'fun factor' – gamification as a booster



Conclusion

- ✓ The **Consumer** is at the heart of the 'data debate'
- ✓ Engaging the consumer, making use of **the intrinsic value of data** is key
- ✓ None of the presented measures is the **golden buzzer**
- ✓ **Regulation** can play a **key role**, but
- ✓ ...should be backed-up by **sound technology** and **educational campaigns**
- ✓ Moreover, a further deepening of the understanding of the **heterogeneous nature** of the consumer will bring us a big step into the good direction



Moving from data to information to real value



Helena Gerard

Senior Researcher

helena.gerard@vito.be | helena.gerard@energyville.be



DSO as neutral market facilitators – a (scientific) perspective

CEER Webinar on data accessibility

#1 Market and Consumer Data

Silvia Vitiello

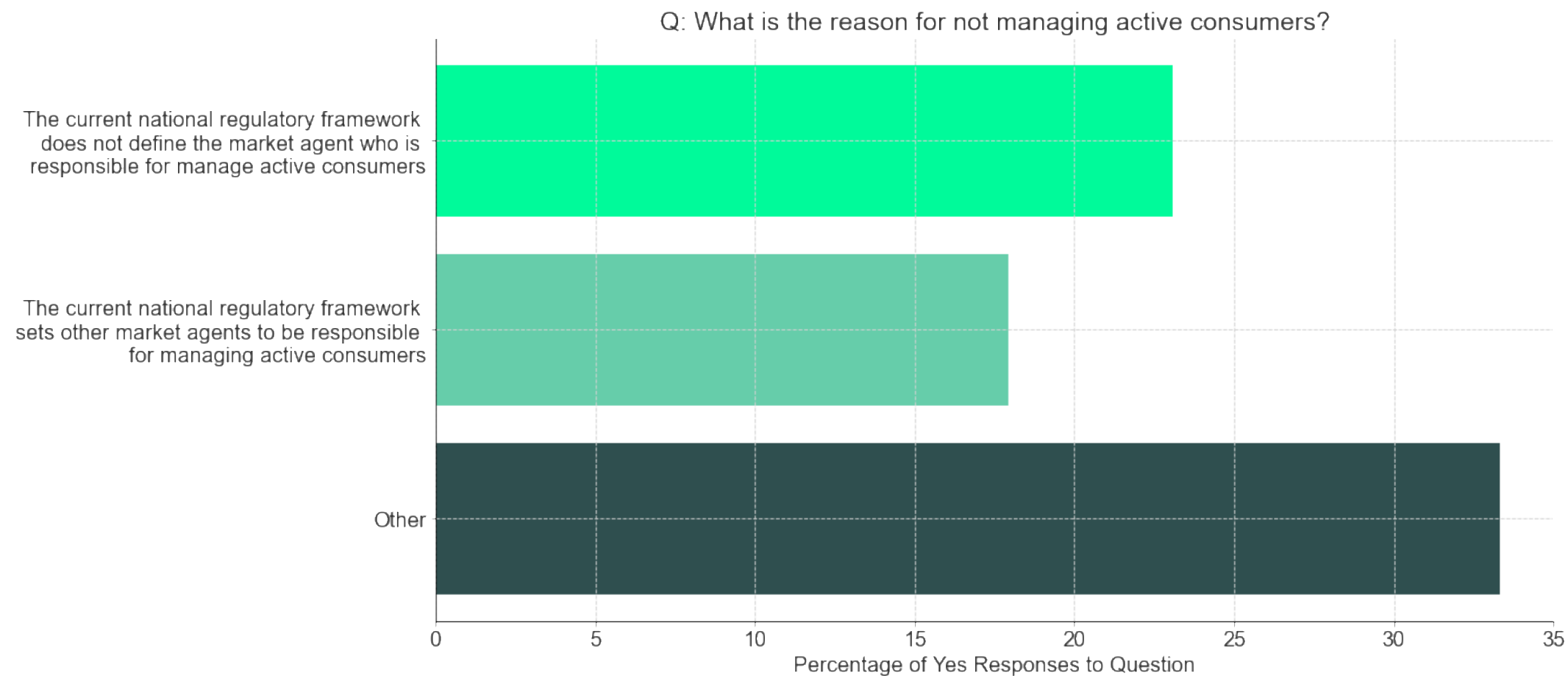
February 10th, 2021

Data Management in power distribution: why a data platform?

A new function in the electricity market: data management.

An example on Active Customers data from the JRC DSO Observatory 2020.

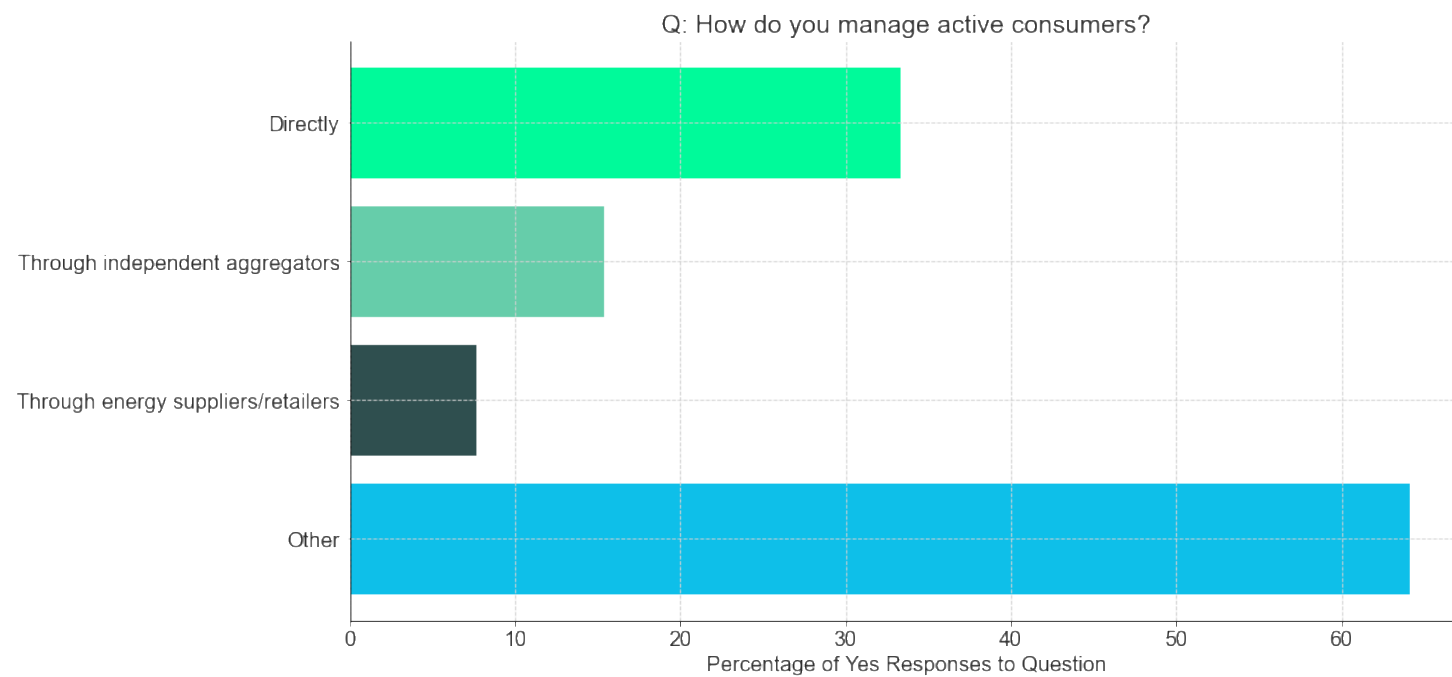
Figure 21: Main reasons for not managing active consumers



Source: JRC, 2020.

A possible regulators' task: What data should be shared?

Figure 19: Modalities to manage active consumers

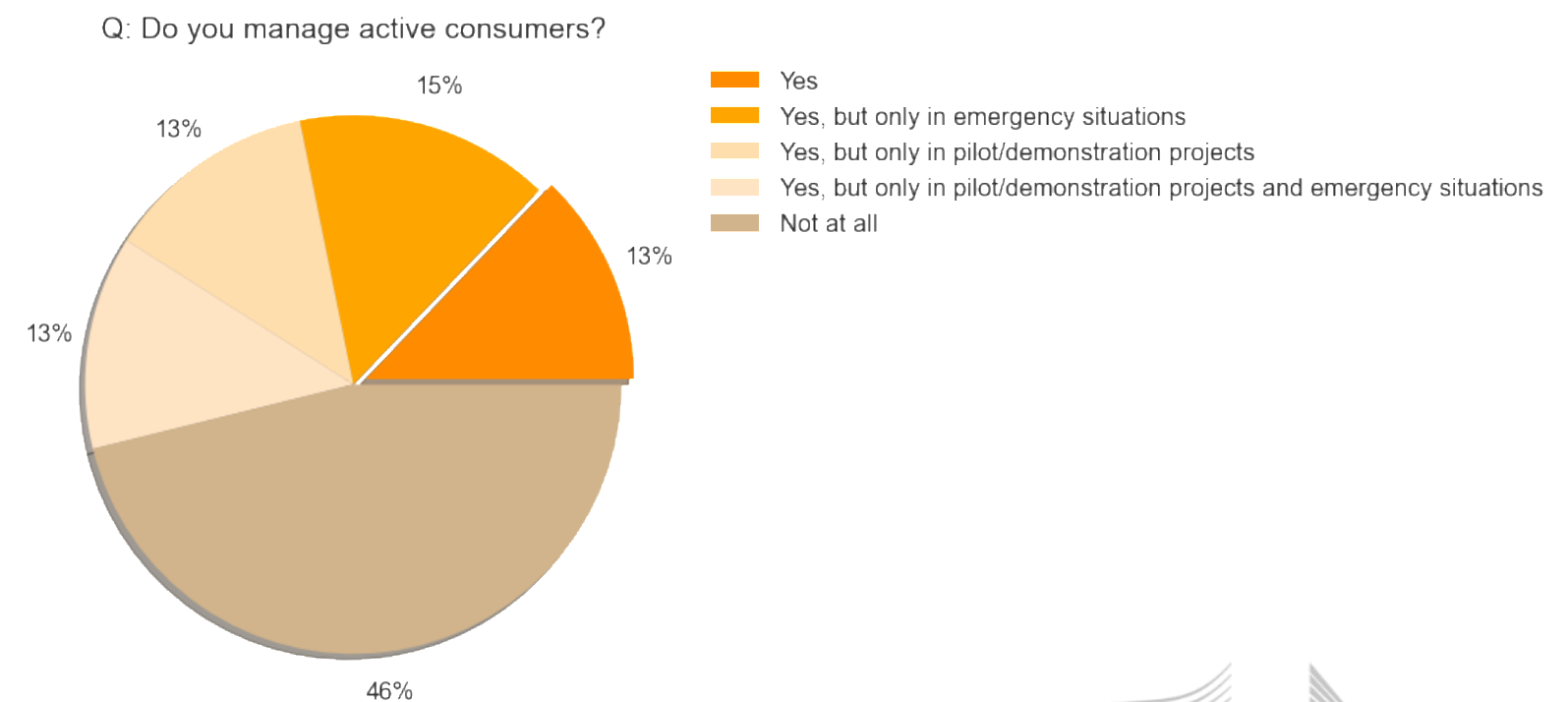


Source: JRC, 2020.

E.g., active consumers data from JRC DSO Observatory 2020
Data may come also from Citizen Energy Communities, aggregators, etc.

An example of data taxonomy from the scientific literature: Smart Metering Data Analytics, by Y. Wang, Q. Cheng, C. Kang, Springer, 2020

Figure 18: Management of active consumers



Source: JRC, 2020.

How: DSOs (or others?) as neutral market facilitators

Benefits of a data platform:

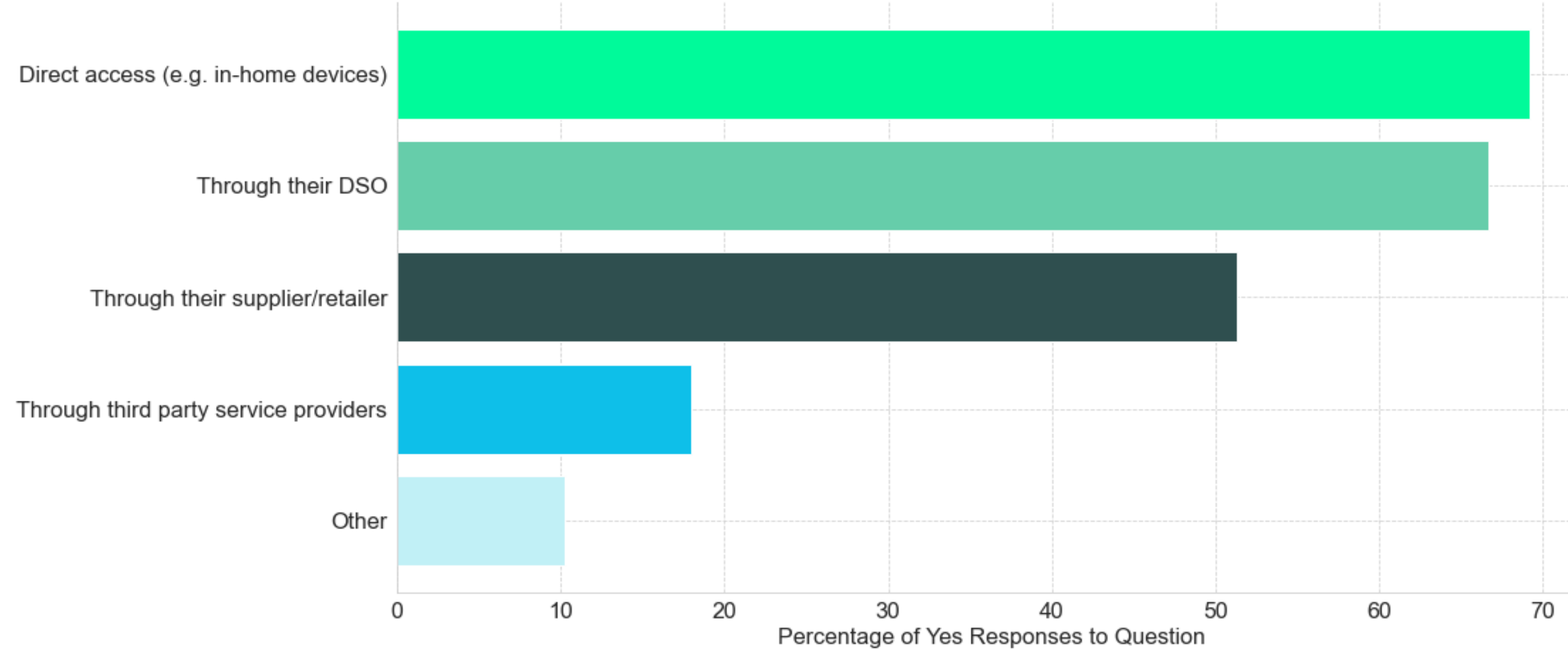
- standard communication protocol and data format
- Combining smart metering data at EU-level may unlock additional investments
- Pollitt*: *secure* and equal access to data, as long as the DSO is separated from retail activities.
- PNNL: Data quality checks**
- Guaranteeing safety: mixed evidence, it should be guaranteed anyway

- * The future of electricity network regulation: the policy perspective In: Finger, M. and Jaag, C., *The Routledge companion to network industries*. Oxford: Routledge, pp.169-182, 2016
- ** Simplified Processing methods for Meter data analysis, PNNL, 2015.

How: DSOs (or others?) as neutral market facilitators

Figure 39: Options to retrieve data for final consumers

Q: As a consumer or active consumer what is the procedure to access and control their meter data?



Source: JRC, 2020.

Examples

ATRIAS, Belgium

[DSO-Operated]

ELHub, Norway

EstFEED, Estonia

Re.Alto, Belgium
(commercial use of data)

Datahub, Finland

DataHub, Denmark

[TSO-Operated]

These companies are owned by TSOs and DSOs, but are separate: data platform can be managed also by companies not operating in distribution and transmission

- [Atrias - Belgium](#)
- [Implementation of data hub in Nordic Countries](#)
- [Datahub – Finland](#)
- [DataHub - Denmark](#)
- [Elhub - Norway](#)
- [estfeed – Estonia](#)

DSOs are very diverse across EU:
some may have the capacity to set up data management tools, some others won't.

estfeed Eng Technology For Developers Pilots News About Join

Our vision is to connect all European smart meter data by 2025 to a single data sharing platform

Problems we are solving:

- Smart meter data in Europe is in hundreds of different information systems
- Consumers have no control over who accesses their data
- Energy service providers do not have equal access to consumer metering data

- Smart meter data: Balancing consumer privacy concerns with legitimate applications, McKenna et al, 2012, *Energy Policy*
- Stochastic Counterfactual Risk Analysis for the Vulnerability Assessment of Cyber-Physical Attacks on Electricity Distribution Infrastructure Networks, Oughton et al. 2019, *Risk Analysis*

What's in for the regulators?

Suggest the “rules of the game” for data platforms:

- Why are data shared for: taxonomy?
- Certify that the actors (DSOs or others) managing data are fit for purpose and neutral:
 - Technical and legal ability for dealing with privacy and cybersecurity matters
 - Capacity to establish and manage data-based processes with third parties, etc.
 - Recommend practices to protect data platforms from high-impact/low probability events
 - ...

Keep in touch



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Thank you.



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Slide 2-3: [charts](#), source: [JRC DSO Observatory Report 2020](#); Slide 6: [picture](#), source: [estfeed](#)

Panel discussion: data-access, exchange & consent management

Current practice, challenges & lessons learned

Focus ? Access to final-customer data

From whose standpoint ? Individual customer, policy-makers, market actors, innovators

Panel

- **Constantina Filiou**, DG Energy
- **Eleonora Bettenzoli**, CEER-ARERA
- **Agustín Reyna**, BEUC

Moderator : Judith Ward,
Sustainability First

<https://www.smartenergydatapiag.org.uk>

Discussion themes

- 1.Society / ‘common-good’ benefits –**
do we understand these ?
- 2.Consent to access –** privacy vs
benefits
- 3.Customer trust –** how to build this
further?

Closing remarks

Louise van Rensburg, CEER Distribution Systems
Working Group Vice Chair

Thanks for your
attention!

The webinar on *SYSTEM DATA*
will take place on 17 February,
10:00-12:30 CET

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