



Project Presentation

BEYOND

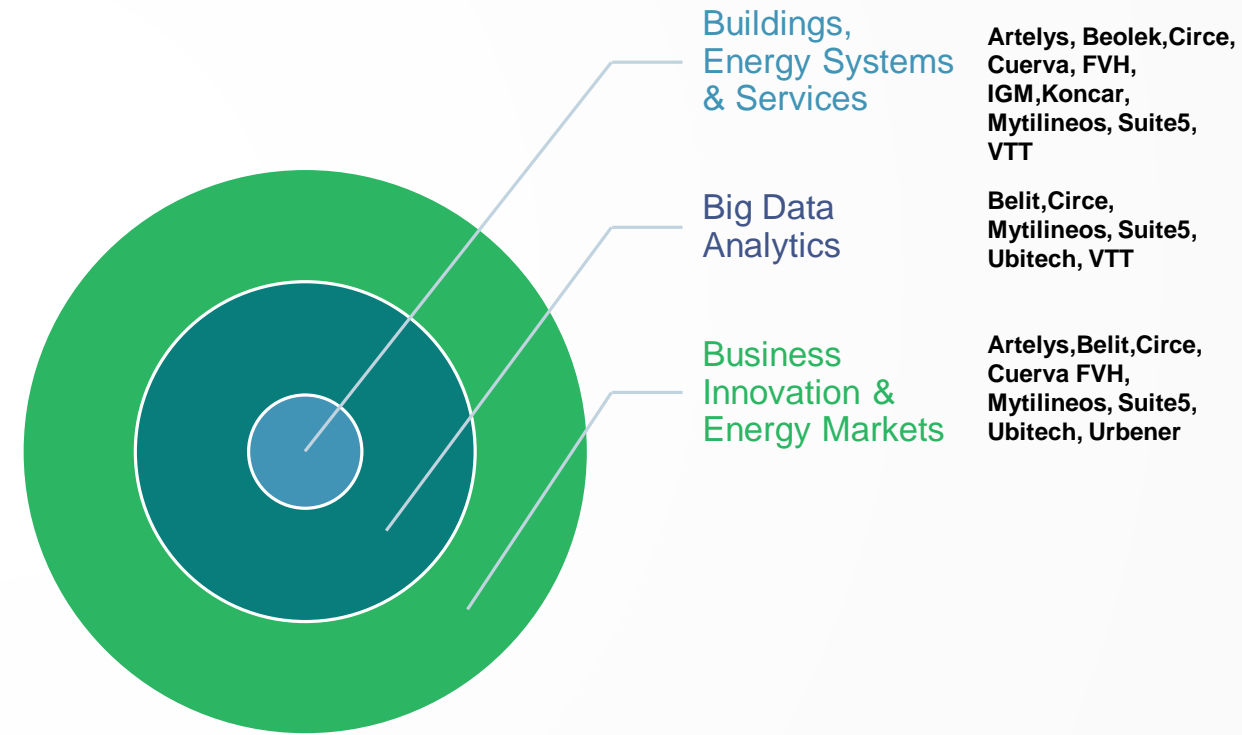
A reference big data platform implementation and AI analytics toolkit toward innovative data sharing-driven energy service ecosystems for the building sector and beyond





A reference **big data platform implementation and AI analytics toolkit** toward innovative **data sharing-driven energy service ecosystems** for the building sector and beyond

Start Date 01/12/2020	13 Partners
36 Months	8 Countries
Innovation Action	4 Demonstrators





Context

Big cities don't only
consume...



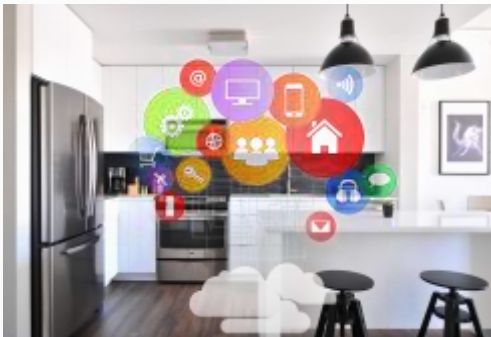
energy...



but also produce vast
amount of data...



since homes & offices
become smarter!

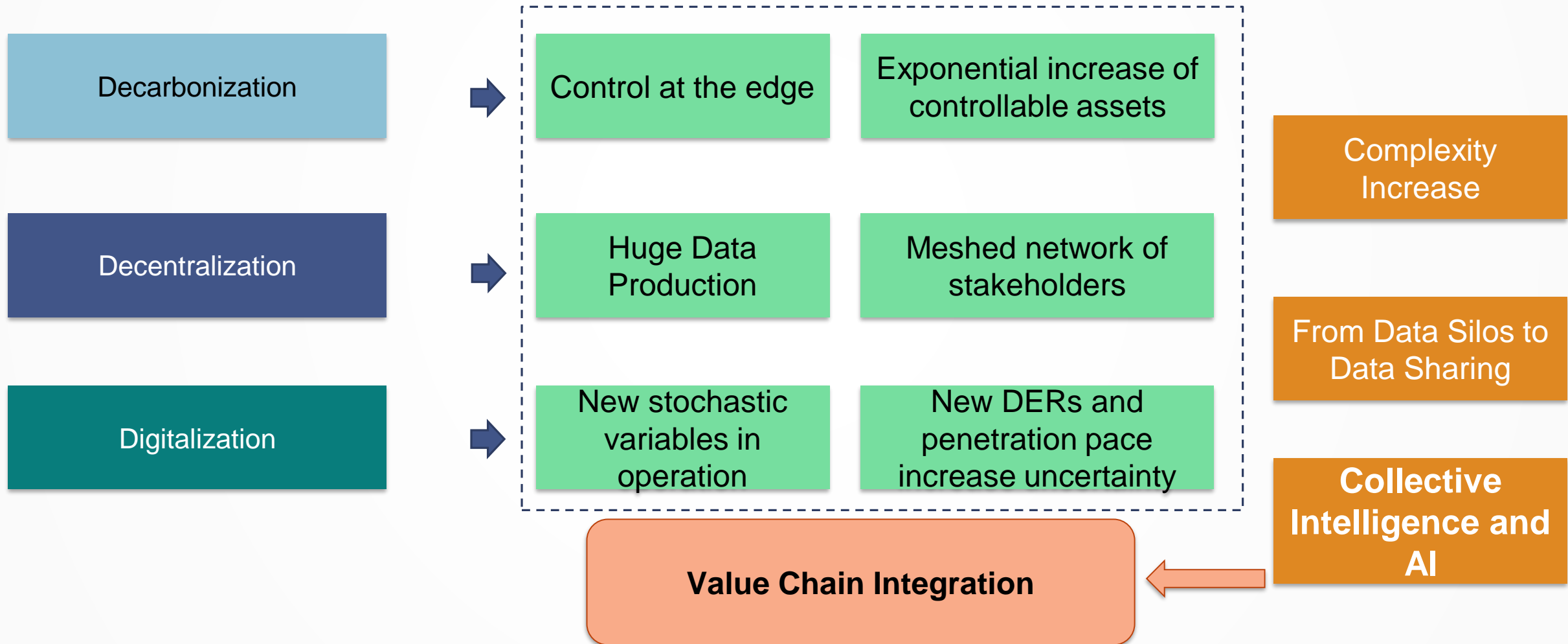


Does this data availability can lead
energy actors to exploit new
monetary flows by integrating
buildings as active nodes in their
business models?



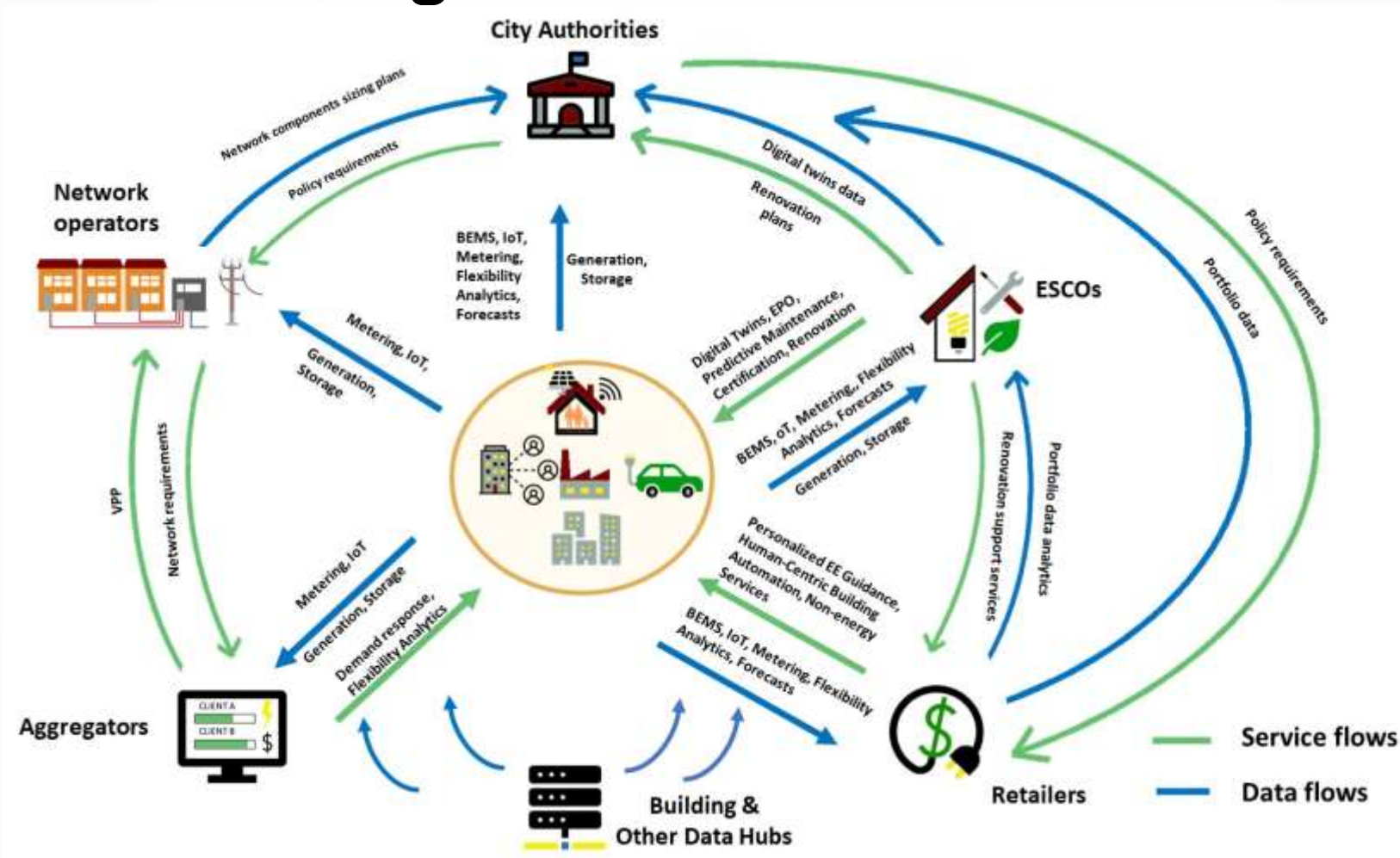


Why (Big Data for) Buildings?



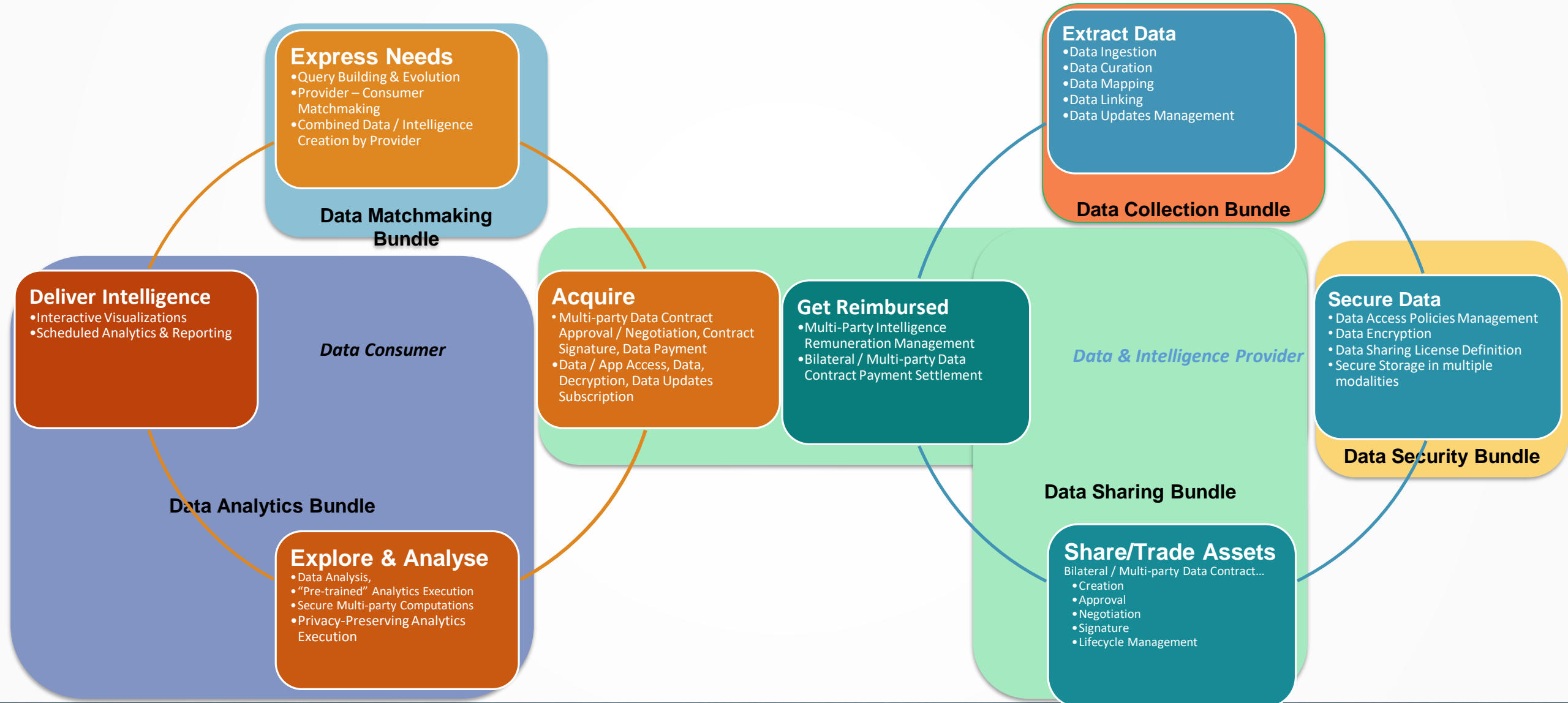


Collective Intelligence through Buildings-Data Value Chain Integration





Trustfulness and Sovereignty in Data Sharing- The BEYOND Approach





BEYOND in a nutshell – Technical novelties (1/2)



Effortless data management

Easing tasks for the curation, mapping and linking of private data assets with external data based on a Common Information Model



Intuitive data exploration

Support in searching, locating/"matchmaking", understanding, exploring and "preparing" energy-related data for analytics

Analytics as a Service

Enabling novel applications for the whole value chain

- Personal Analytics
- Industrial Analytics
- Edge baseline analytics



By-design Interoperability

Provision of standardized interfaces to collect and export intelligence





BEYOND in a nutshell – Technical novelties (2/2)



End-to-end data security

Encrypt and check-in data through an on-premise environment with multiple modalities



Real data privacy

Data remains private and on -premise while allowing for joint actions with other “trusted” stakeholders



Secure experimentation playground

Designing and executing analytics and “applications” in private sandbox environments, spawn on demand



Trusted data sharing

Creating, signing and validating smart multi-party data contracts in an immutable manner, while remunerating the involved stakeholders



Advanced access control

Regulate access to the private data assets through declarative authorization policies



A bundle of data sharing-driven energy services

- Data-driven Urban Planning → City Authorities
- Evidence-based energy infrastructure planning and sizing → Network Operators (District Heating/ Electricity)
- Advanced renovation support → ESCOs, Construction Companies
- Enhanced Digital Twin for holistic building energy and asset management → ESCOs, Facility Managers
- Bottom-up Portfolio Analytics and Management → Retailers
- Personalized energy analytics and automation → Prosumers
- Building Energy Performance and Smart Readiness Certification → ESCOs
- VPP Configuration and Residential Demand Response → Aggregators



BEYOND Demonstrators

- **Greece:** Mytilineos (Retailer)
- **Spain:** CUERVA (DSO, Retailer)
– URBENER (Aggregator)
- **Finland:** FVH (City Agency/
Building Management)
- **Serbia:** BEOELEK (District
Heating Network Operator/
Retailer)





BEYOND

Thank You!



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