



Alliance for
Internet of Things
Innovation

Open Marketplaces to spur Innovative Energy Services

DG Ener – DG Connect- AIOTI workshop • 22nd October 2018

Kees van der Klauw

Chair AIOTI Management Board

Open

- Pleased to **open** this workshop: end-to-end, multidisciplinary (AIOTI)
- **Open** your mind and become the driver of inevitable change
- **Open** (standardised) interfaces (in a distributed architecture)
 - Drive rapid adoption of a smart grid
 - Avoid cost of non-value added diversity for all
 - Supports innovation and differentiation where it matters
 - Create trust with stakeholders
 - Drive quality (by sheer volume)
 - ... do not imply that systems are open to just everyone

Market

- The prosumer energy **market** can lead other digitisations by example
- Requires involvement of all stakeholder from day-1 (today)
 - Producers, transporters, buffers, consumers, prosumers, brokers, regulators
- Requires a platform for **market** transactions
 - Demand and supply, omnidirectional, micropayment, secure transactions (DLT)
 - Forecasting, scheduling, avoiding speculative derailing
 - Cross border, EU wide
- A platform is actually a 'market' in the deeper meaning (αγορά)
a (virtual) place where people meet to offer and buy products (services)

Innovative

- There is a lot of **innovation** in sub-domains of the energy market
 - Wind turbines, hydrogen, solar, DC grids, storage, conversion
 - Smart metering, sensing, forecasting
 - Distributed ledger technologies, micropayment platforms
- ... and in higher level application domains depending on Smart Energy
 - Smart City, Smart Home, Smart Building...
- But it strongly depends on **innovation** on integration level
 - Justifying sub-domain efforts, enabling societally relevant applications
- An '**innovative**' workshop, applicable IoT **innovation** and AIOTI WG11

Energy

- Achieving the goal will require a lot of **energy** and true commitment
- There will be value re-distribution along the chain, but overall there will be more value to distribute
 - Dynamic pricing
 - Sustainability
 - Resilient networks and energy supply
 - Independency (distributed systems)
 - Innovation results for export
- Mind the **energy** consumed by IoT, big data, DLT... itself!
- ... and put **energy** in non-functional elements (security, privacy, trust)

Services

- No **lipservice** but commitment
- A smart grid infrastructure will enable and inspire more **services**
 - Lighting as a service, B2G and B2C
 - Mobility as a service
 - Derivatives in security and analytics ...
- Energy itself is commoditised already, but bringing it to the right place at the right time brings new business opportunities in **services**

Enjoy the workshop and beyond

This is only the beginning

AIOTI is committed to drive cross-domain, end-to-end, integrative

Credits to AIOTI WG11 leadership (Natalie)

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AIOTI's WG Smart Energy • Brussels, October 22, 2018

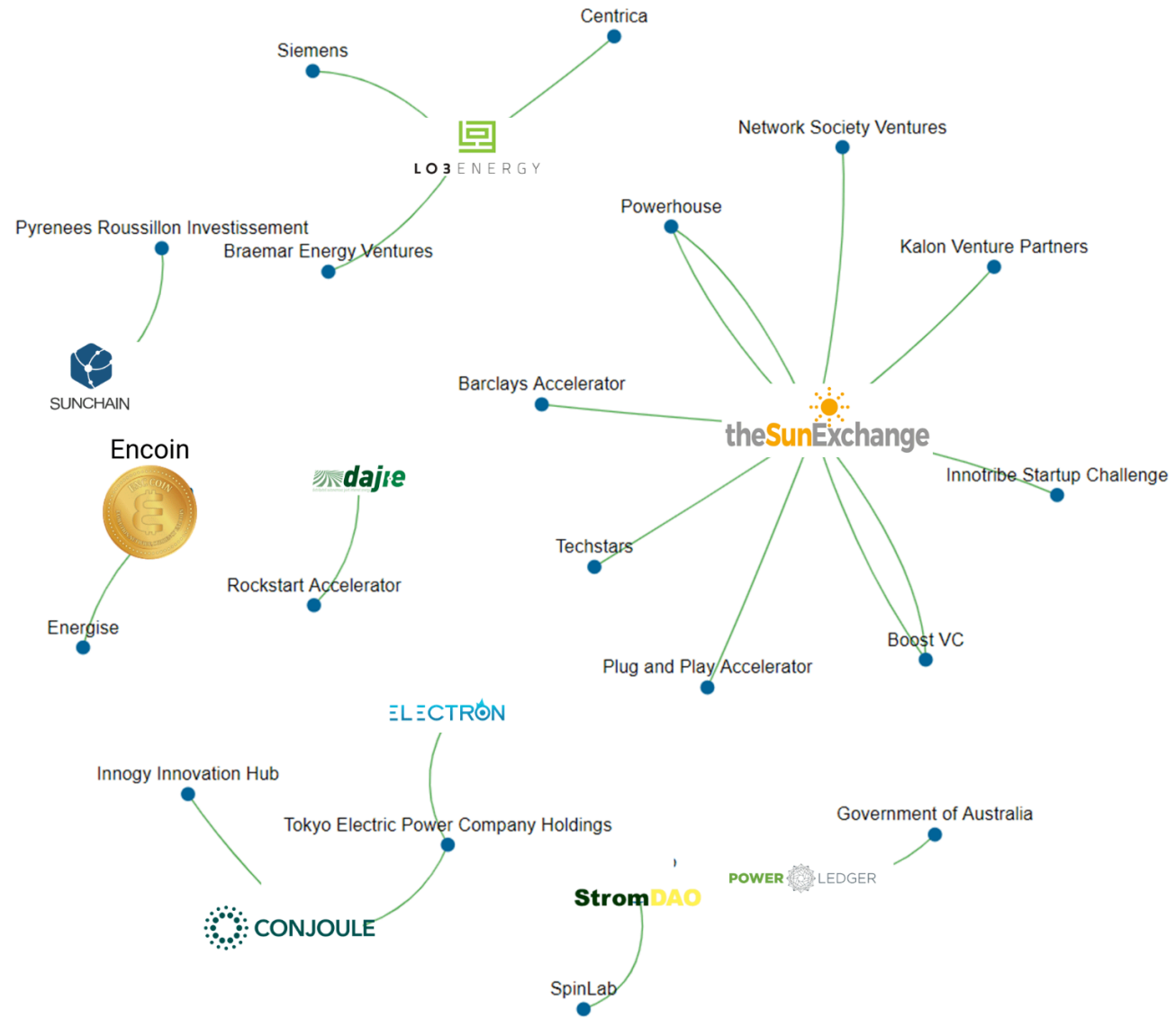
Natalie Samovich, Chair Working Group 12 SmartEnergy

Cross-sectoral significance of the IoT as a primary data source and beyond



Energy companies, governments, and VCs are investing in blockchain in energy

As of YTD 3/16/2018





**The perspective of AIOTI:
IoT as a significant cross-sector technology
enabling Smart Grids – core of evolving energy
marketplaces**

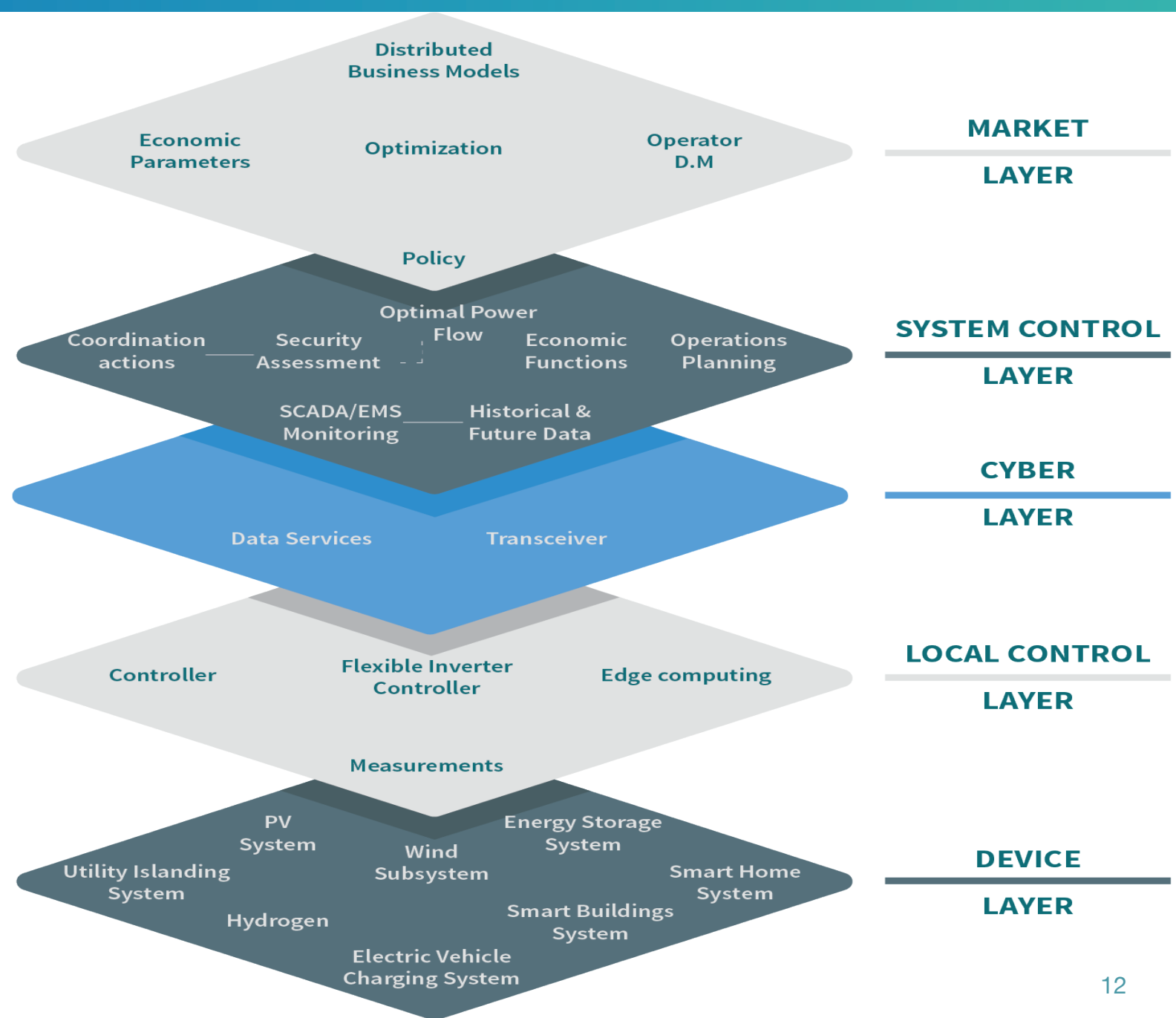
TRANSACTIONAL GRIDS 2030

will be enabled by

**INTEROPERABLE TECH
CROSS-DOMAIN DATA VALORISATION
DISTRIBUTED EDGE INTELLIGENCE
providing SYSTEM RESILIENCE
and wide participation of new ACTORS**

Smart Energy

TRANSACTIONAL GRID



ENERGY MARKETPLACES 2020

MULTI-SIDED markets for **SERVICES**
MULTIPLE REVENUE sources
EE, DER RES, Demand response
Aggregated Auxiliary Services
Bundled with Transport, Telecom and other
Long run efficiency, fairness, simplicity,
transparency



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