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determined to make a difference

New trading platforms for DERs: A solution for a revolution

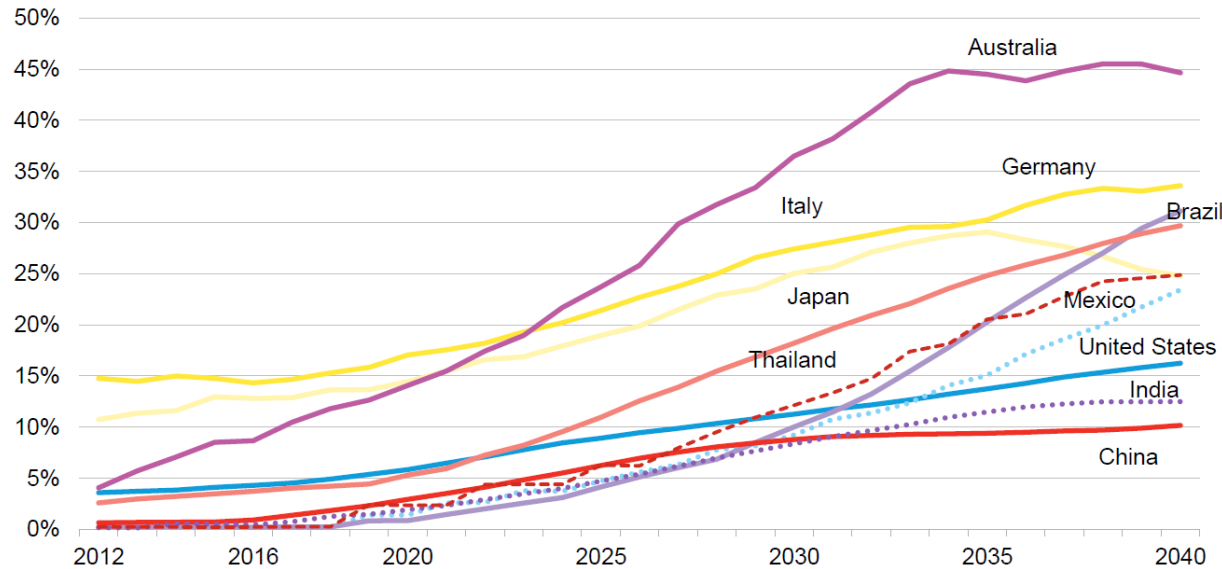
Asia-Pacific Energy Leaders' Summit 2018

Neil Gibbs - Marchment Hill Consulting

As Australia leads globally in the uptake of DERs, it is creating new risks

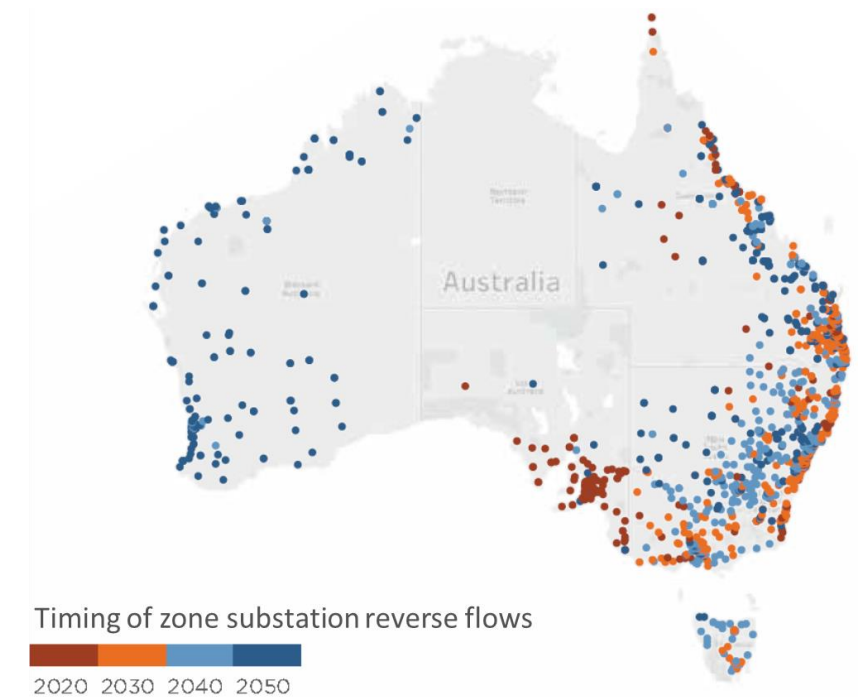
“A future where up to 45% of all electricity is generated by the customers in 2050 - at the opposite end of the system from its original design - presents a very significant range of technical, economic and regulatory challenges”

Decentralization ratio



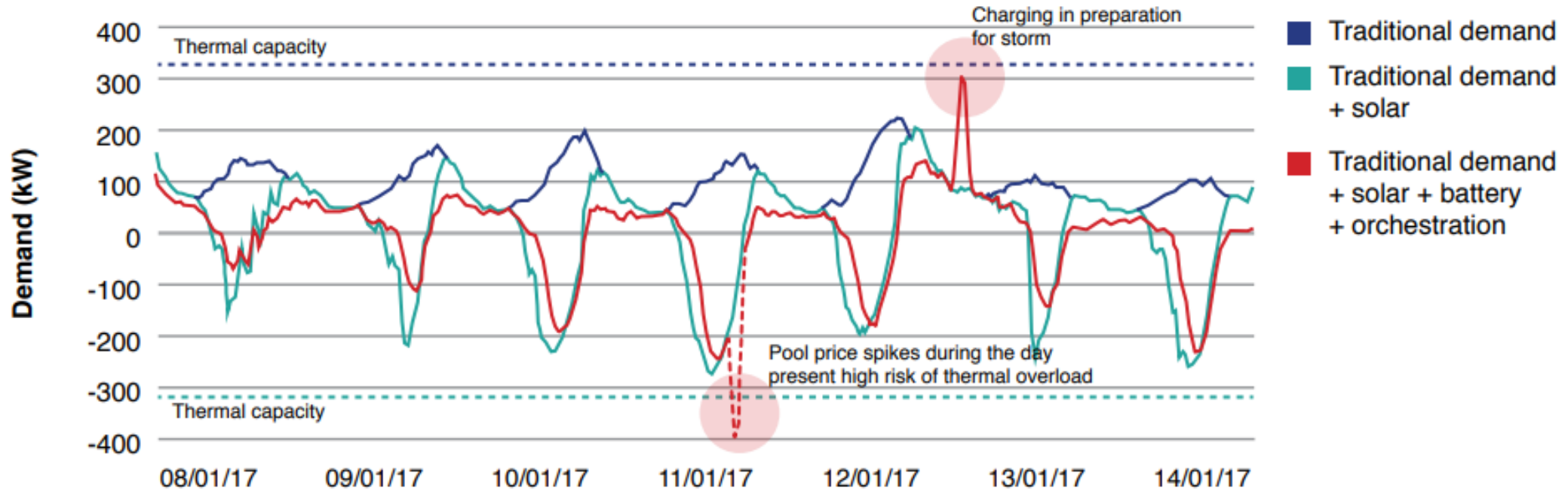
Source: Bloomberg New Energy Finance

Note: Decentralization ratio = ratio of non-grid-scale capacity to total installed capacity



Source: CSIRO & ENA 2017, Electricity Network Transformation Roadmap, Final Report

Which could compromise the security and reliability of our electricity supply



Source: Open Energy Networks, July 2018

The issues are significant and there are limited customer-focussed solutions

Technical issues

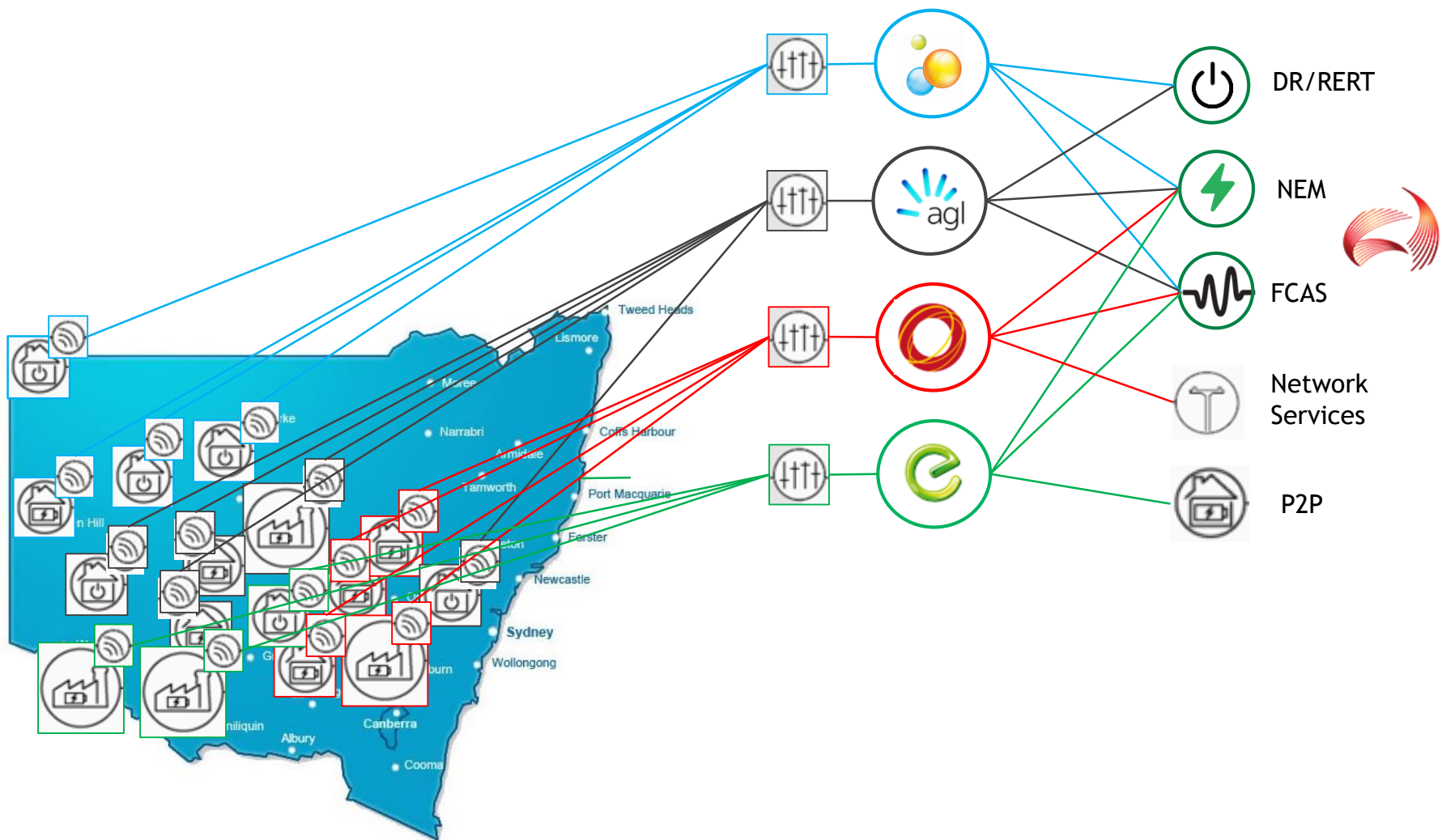
- High penetration of distributed generation creates **connection and export constraints** across major areas of the network
- Aggregated DERs could act in a way that creates issues for **network stability** - leading to broad based bans / limits

Market issues

- The characteristics of the **network may constrain the ability of DERs to respond to market signals**
- The ability to authenticate and settle transactions could be impacted by other activity on the network

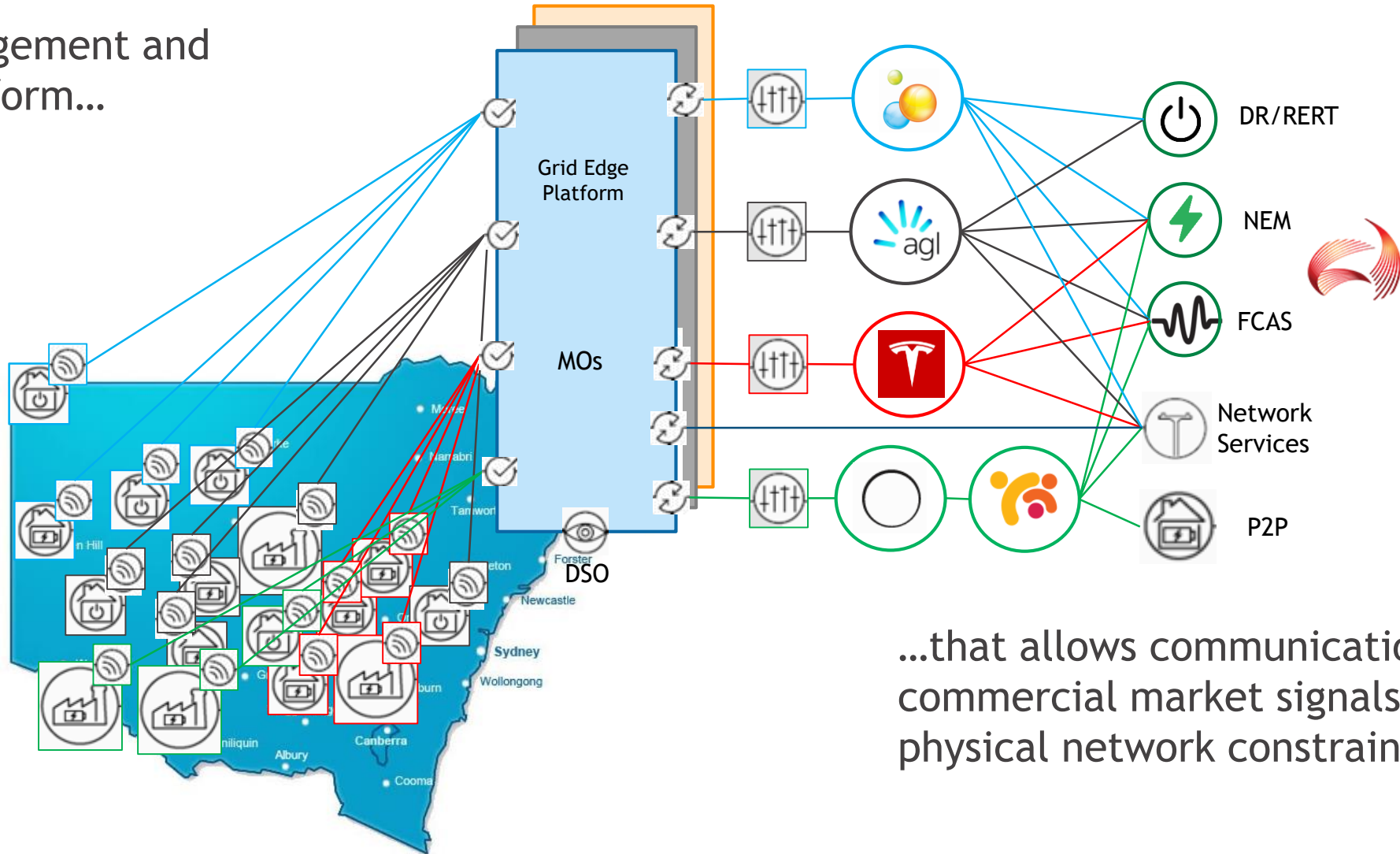
Networks are finding themselves needing to limit rather than enable customer choice - at a time when becoming more customer centric is the ambition

How can customers optimise the value from their DERs while ensuring security and reliability of the network is maintained?



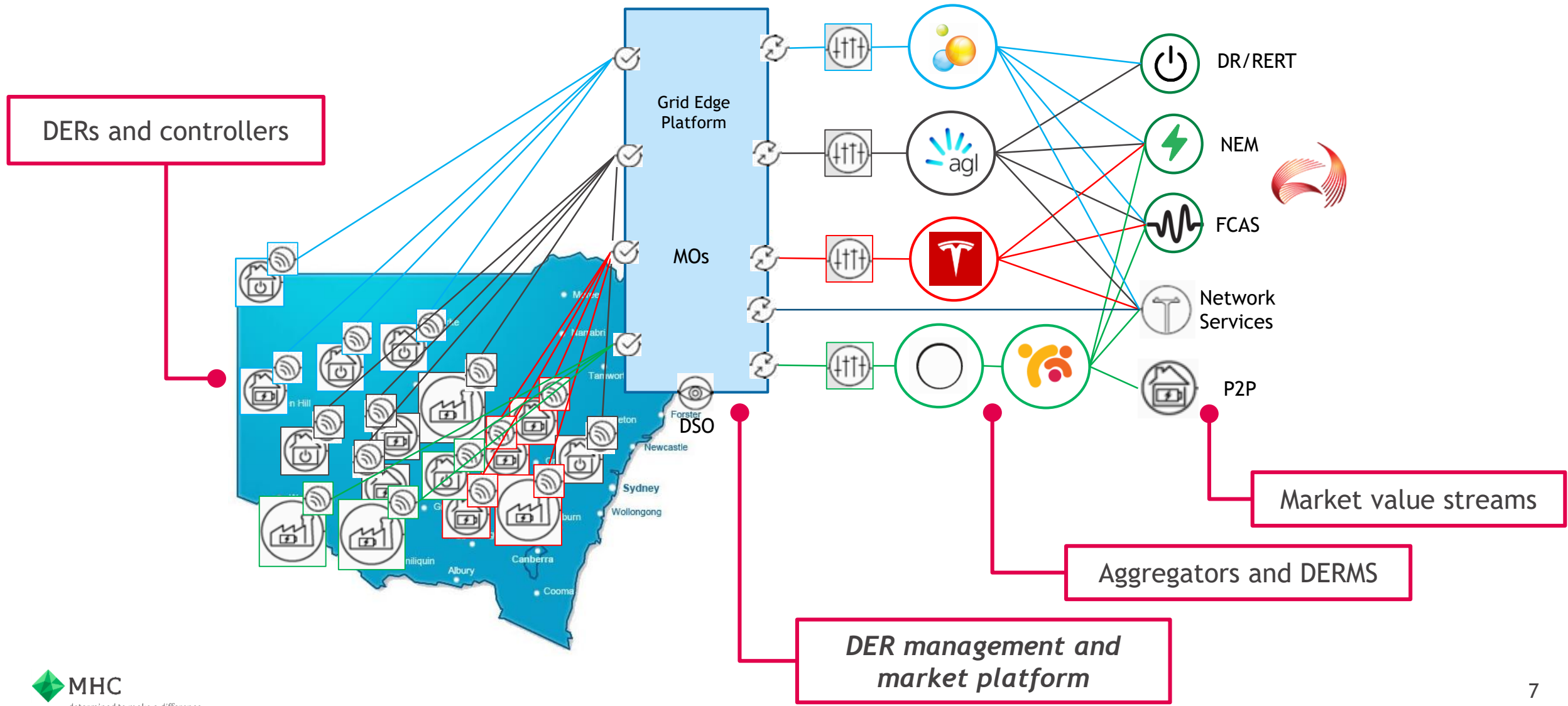
The platform solution

A DER management and market platform...



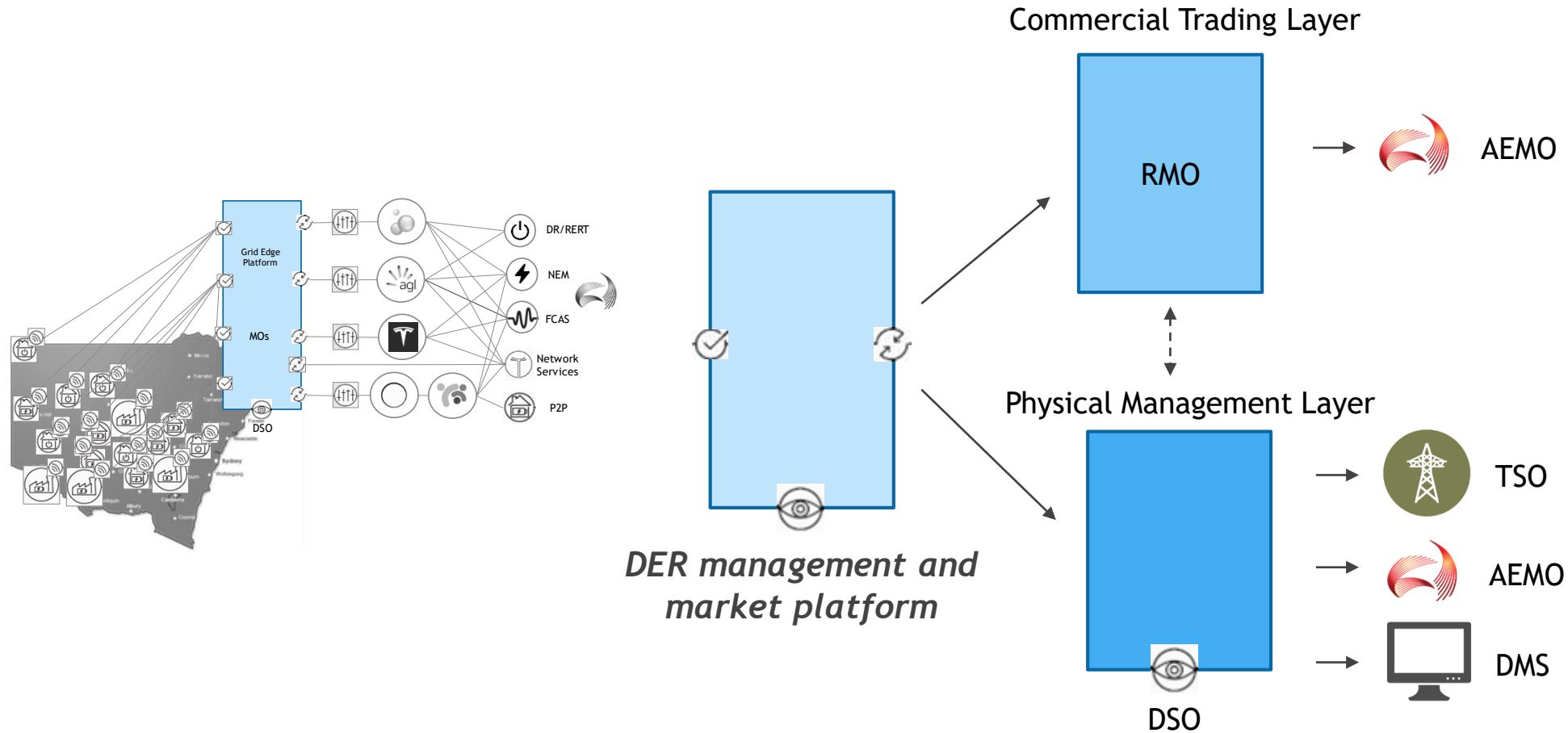
...that allows communication of commercial market signals within physical network constraints

...and a future marketplace



A Grid Edge Platform - delivering benefits for customers and networks

A digital platform providing a standardised link between multiple aggregators and their DERs and multiple value streams to optimise the performance of the system.

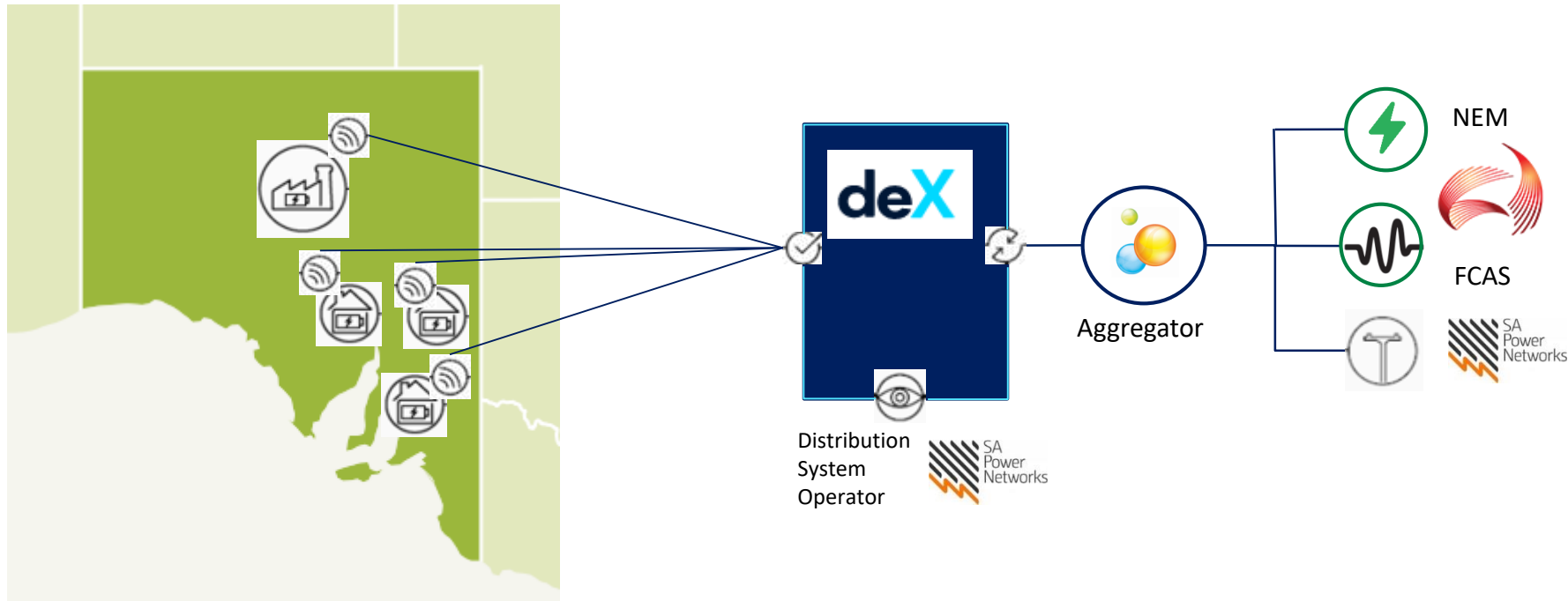


EXAMPLE: deX is currently being developed and trialled through Simply Energy's VPPx

Simply Energy chooses Tesla for 8MW Adelaide virtual power plant

By Giles Parkinson on 28 March 2018

- Simply Energy led project over 2 years
- 1,200 residential batteries
- 2MW of C&I Demand Response
- Integration of VPP into deX platform
- SAPN as DSO



Project Partners

ARENA



GreenSync



MHC

flex

