

Architectures for Open Access

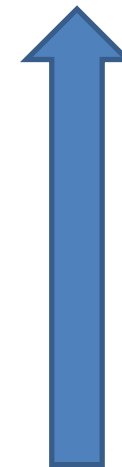
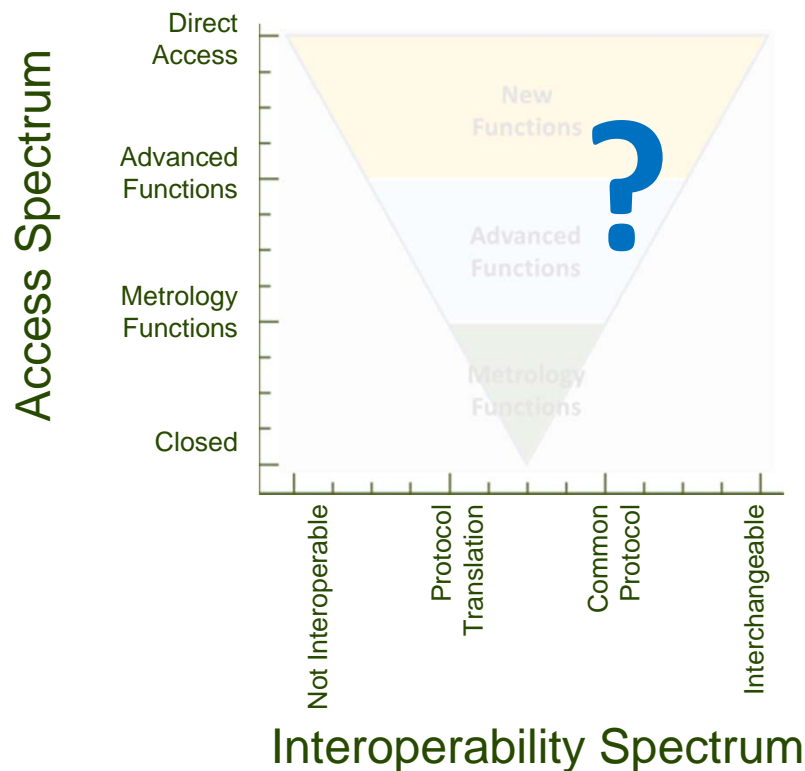
Peter Egger & Dr Martin Gill

31st October 2013

1. Architectures as Access moves through
 - Closed
 - Metrology Functions
 - Advanced Functions
 - Direct Access
2. Possible problems with smart meter communication details
3. Questions
4. Appendix – The Access Spectrum

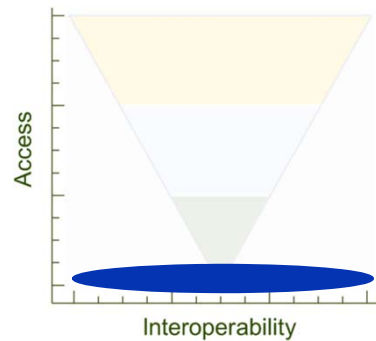
The Power of Choice

What level of Interoperability and Access is required to support the aims of the Power of Choice (PoC)?

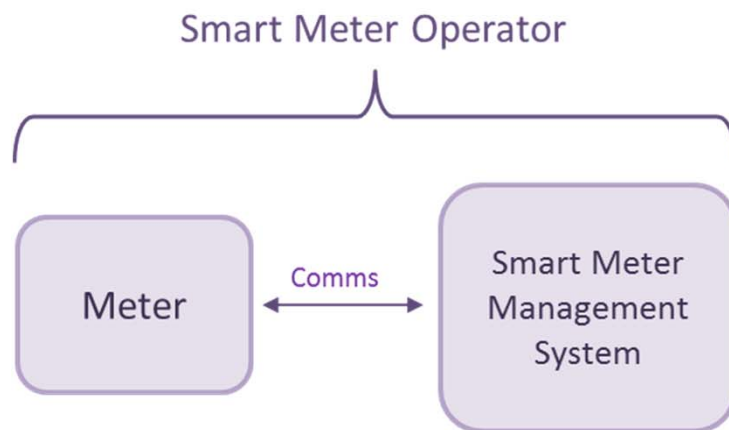


In the following slides the described functionality is additional to that described at the lower levels

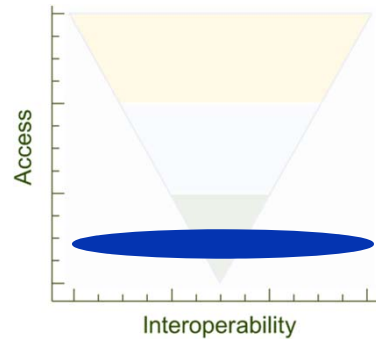
Closed



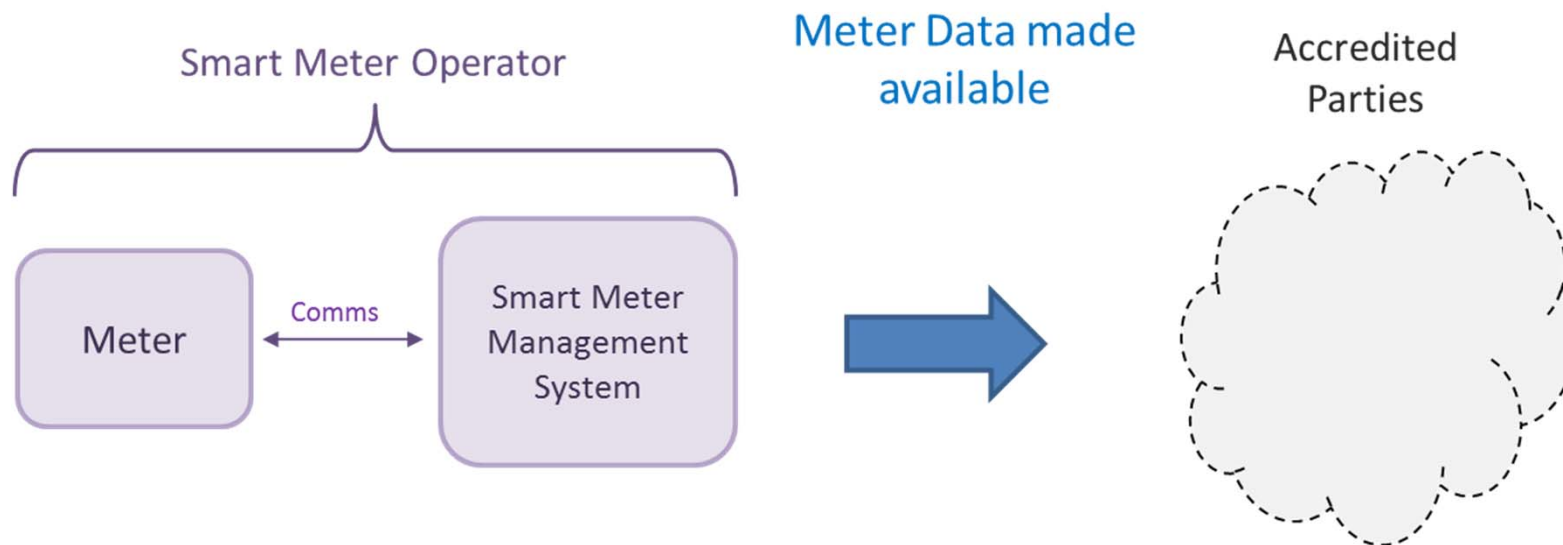
Accredited Parties not given access to the smart meters



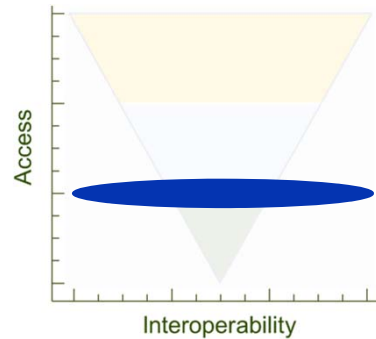
Metrology Functions



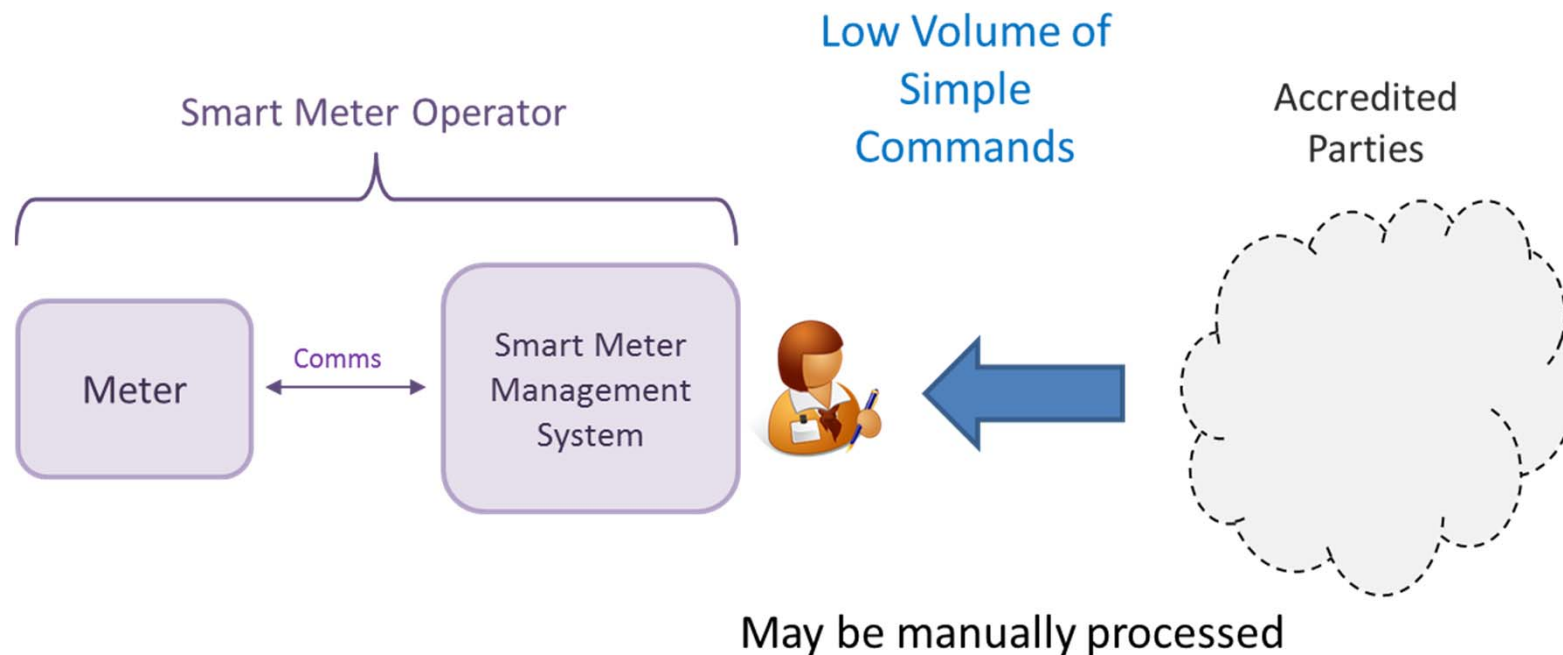
Meter Data made available to Accredited Parties (does not consider who is performing validation and substitution)



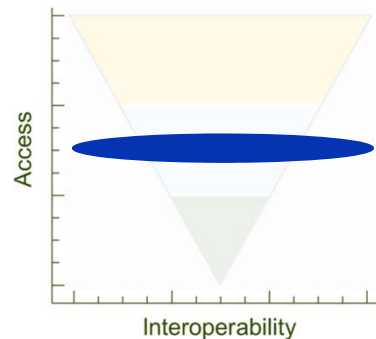
Metrology Functions



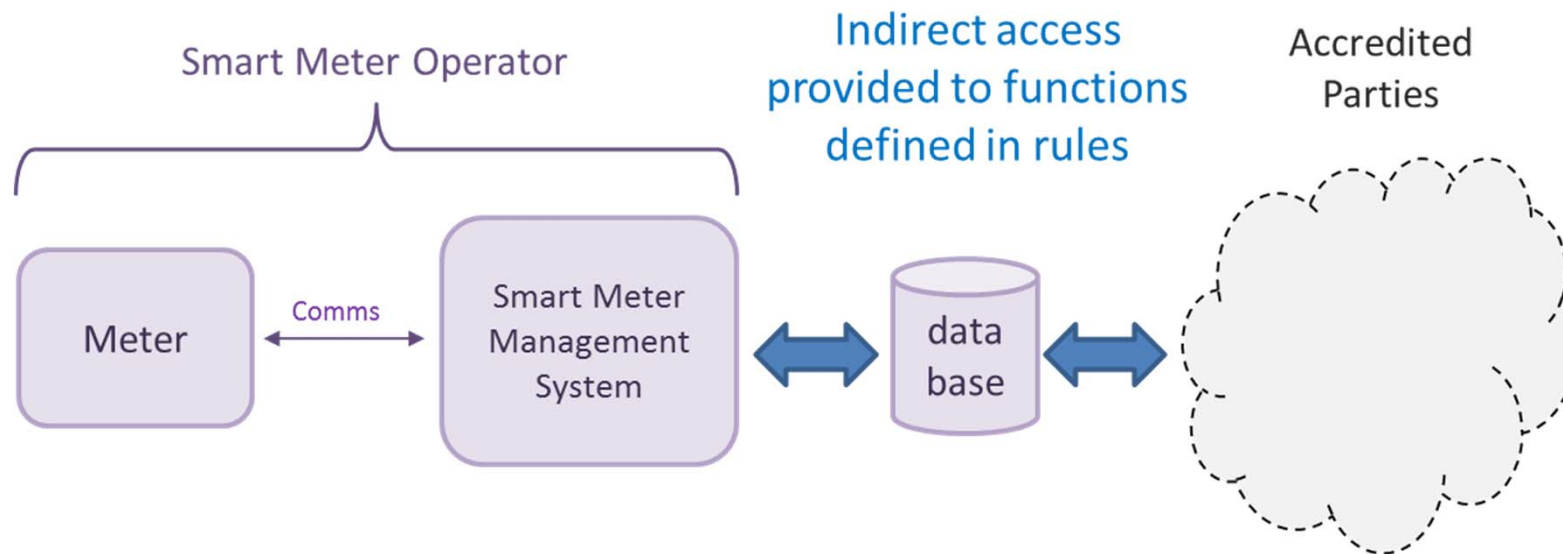
Supports low volume of simple commands
e.g. re/dis-connect
Commands may be processed manually



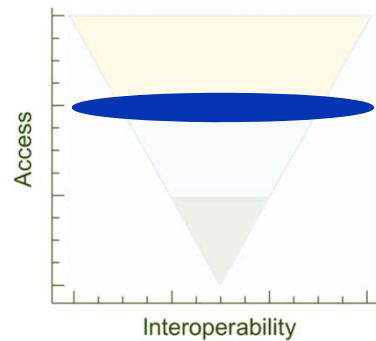
Advanced Functions



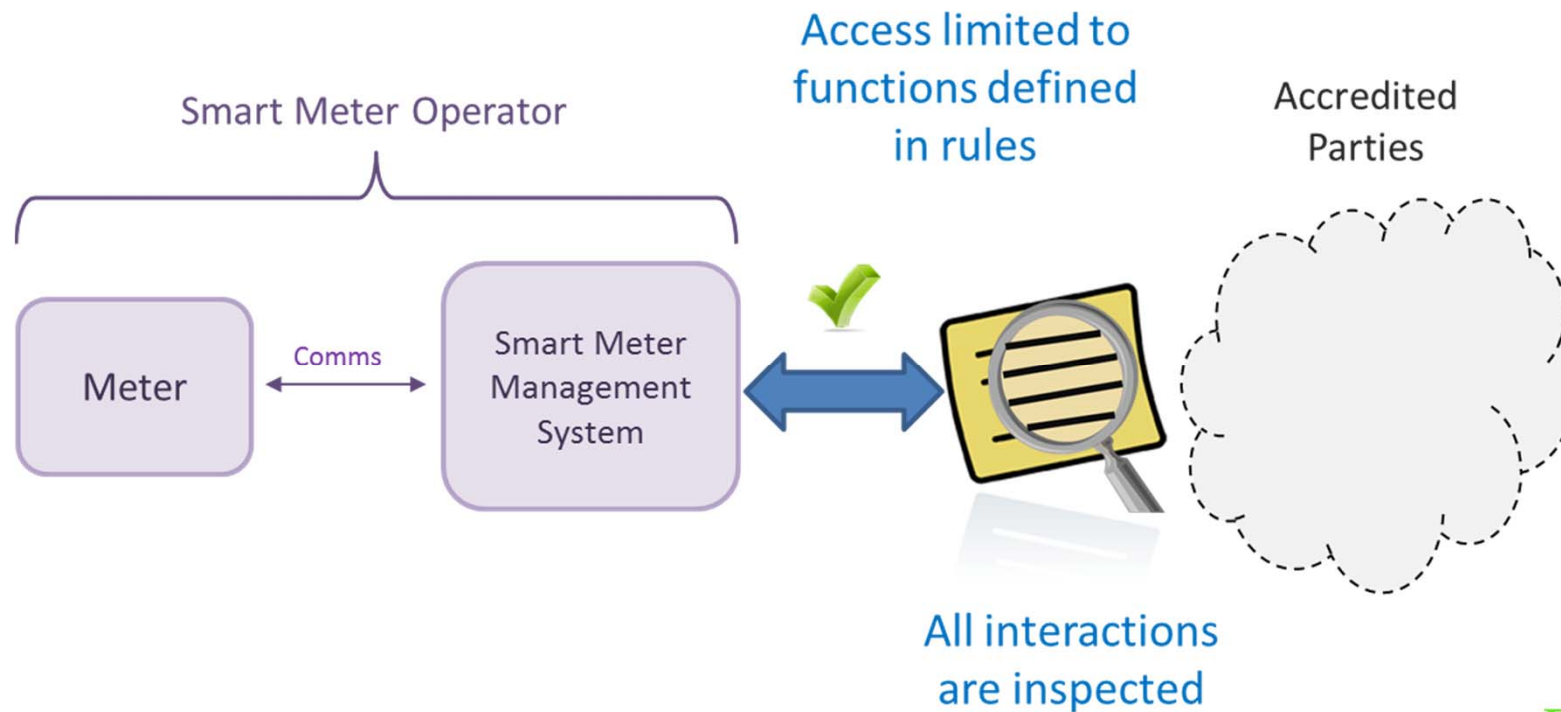
Accredited Parties provided with indirect access to functions defined in the rules.
e.g. status of the supply contactor is read from the database (not direct from the meter)



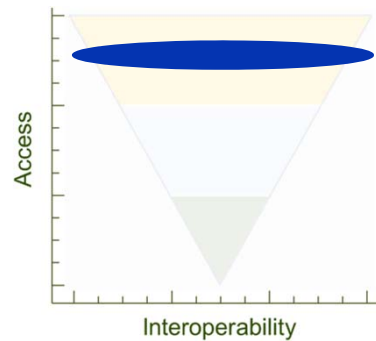
Advanced Functions



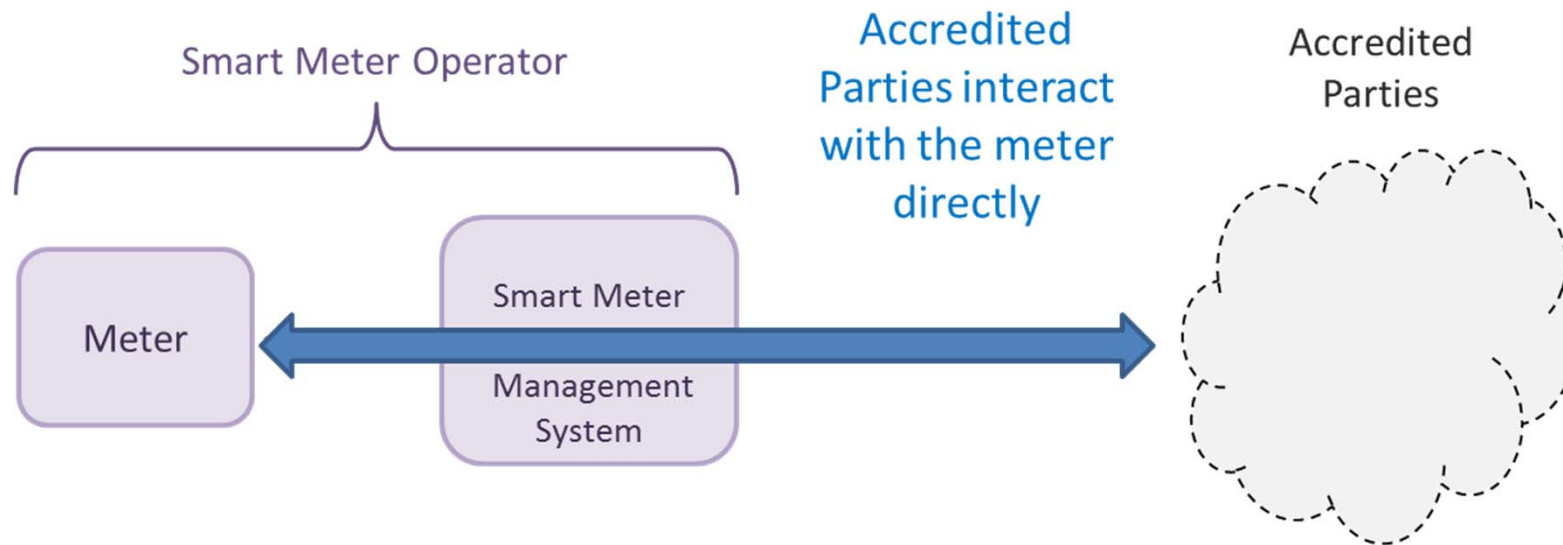
Access provided to all functionality defined
in the rules
Automated two way exchange



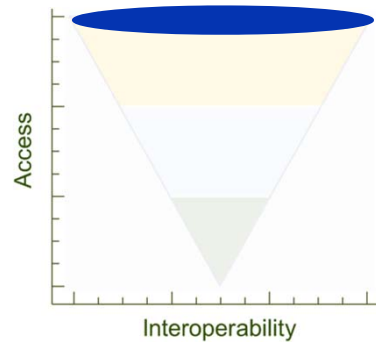
Direct Access



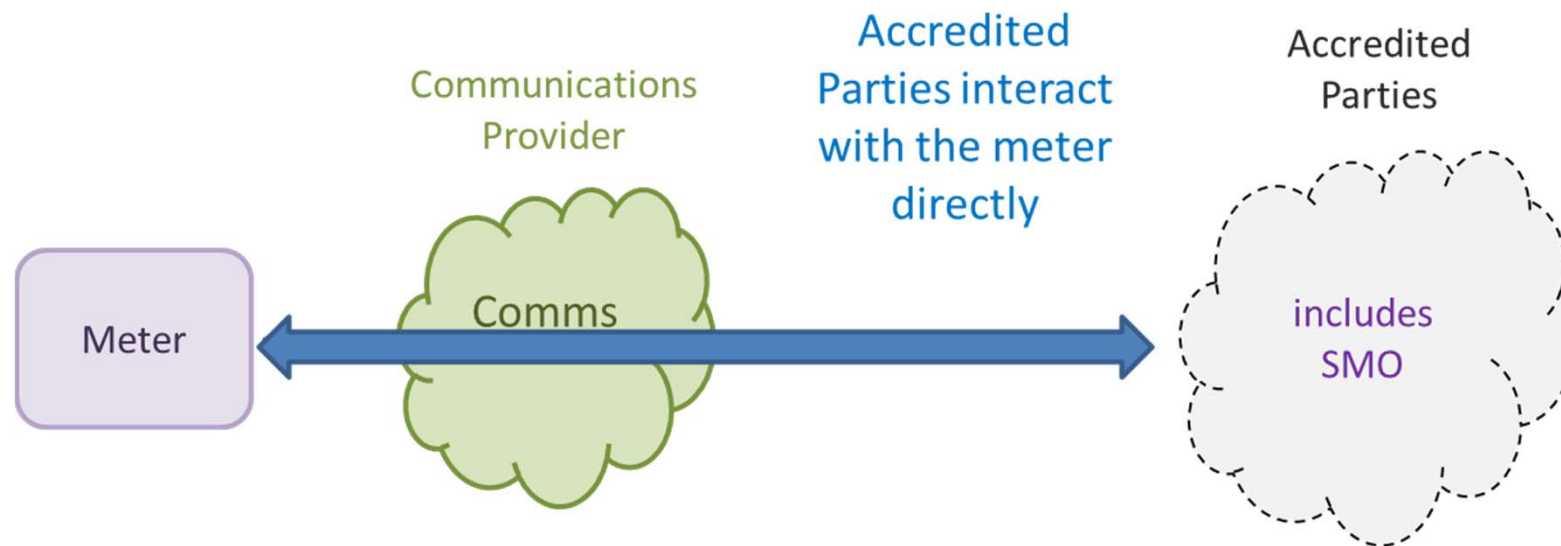
Smart meter operator checks security credentials of Accredited Party then provides direct access to all functionality supported by the meter



Direct Access



All Accredited Parties interact directly with the smart meter



Note that the Smart Meter Operator is considered to be another party accessing the meter remotely

Example

Example of communication details

National Electricity Rules Section 7.5.2 Metering register information



Responsible Person



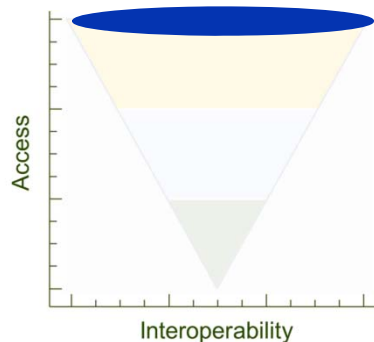
Details added to the
metering register



NMI,
Communications Details
including phone number, etc

Metering information to be contained in the metering register should include, but is not limited to the following

(c) Data communication details, including:



- (1) telephone number(s) for access to energy data;
- (2) communication equipment type and serial numbers;
- (3) communication protocol details or references;
- (4) data conversion details;
- (5) user identifications and access rights; and
- (6) 'write' password

Smart Meter communication details

Using the Metering Register to contact a meter



Accredited Parties can refer to the metering register to obtain the Number needed to contact the meter



NMI



Metering
Register



Number



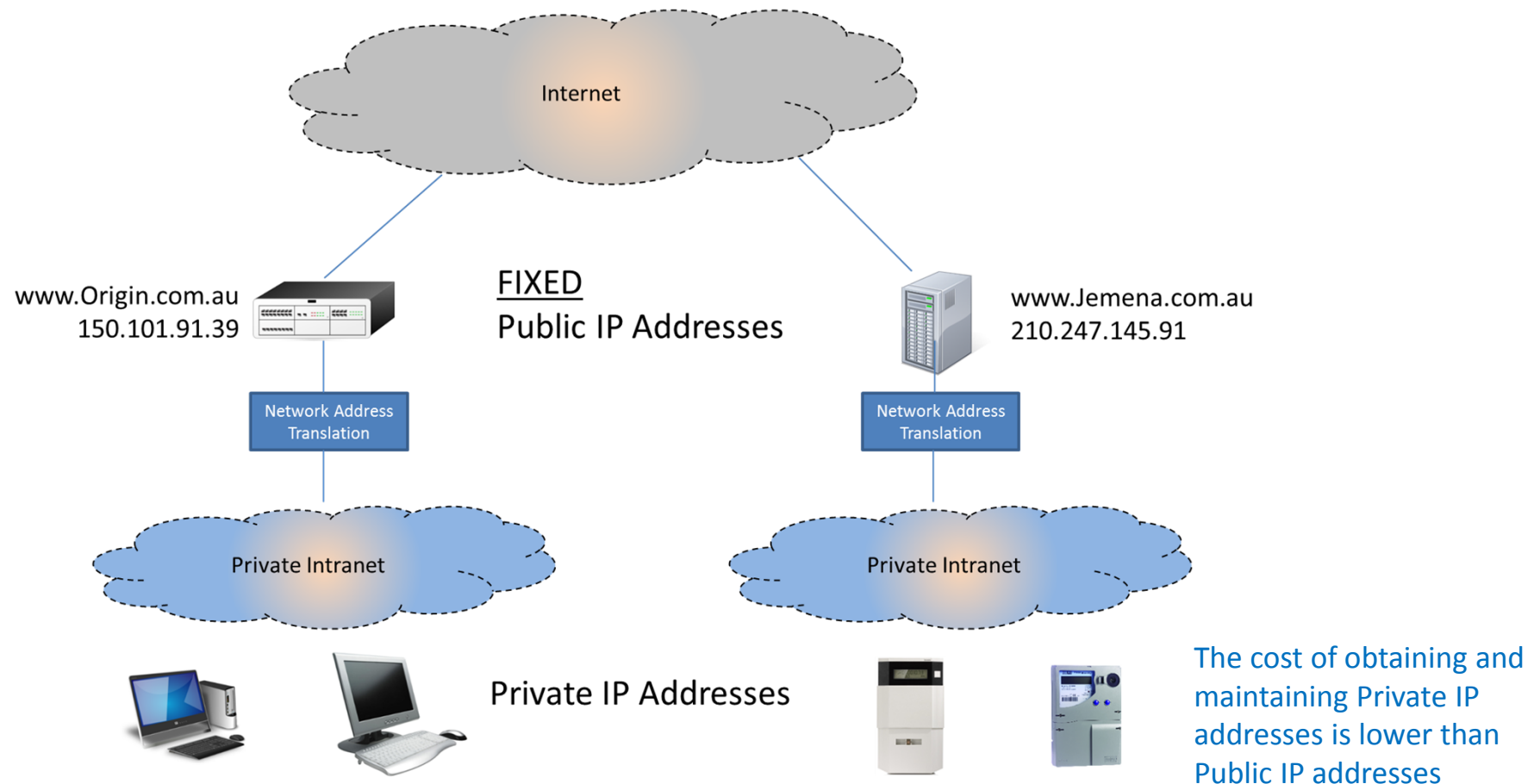
In modern communications the phone number is replaced by the meter's IP address



It may not be possible for Accredited Parties to use the meter's IP address to contact the meter

Smart Meter communication details (cont)

It is not possible to directly contact Private IP Addresses

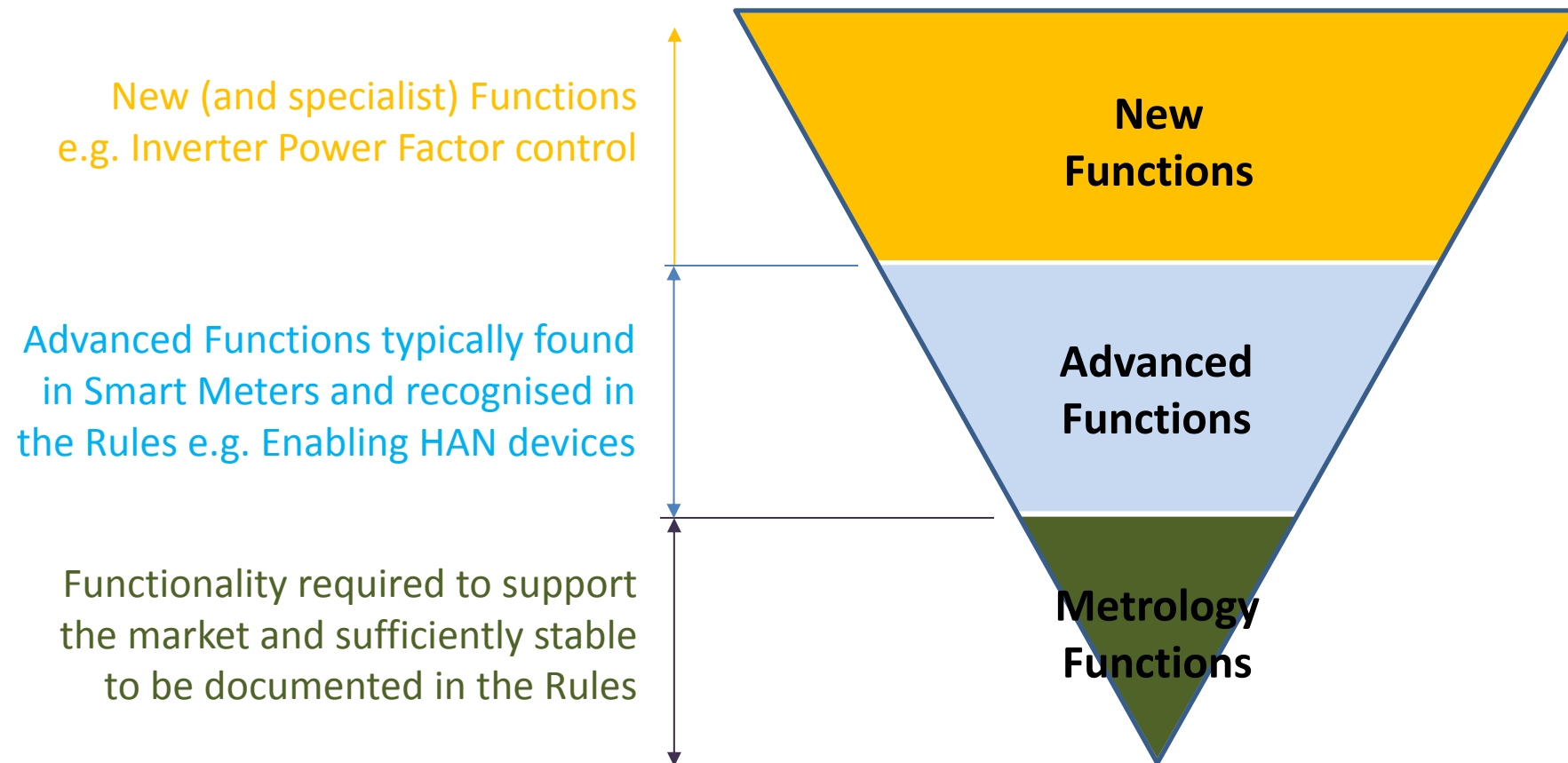


Questions



Appendix

Smart Meter Functionality



Access to Meter Functionality

