



Security for smart Electricity GRIDs

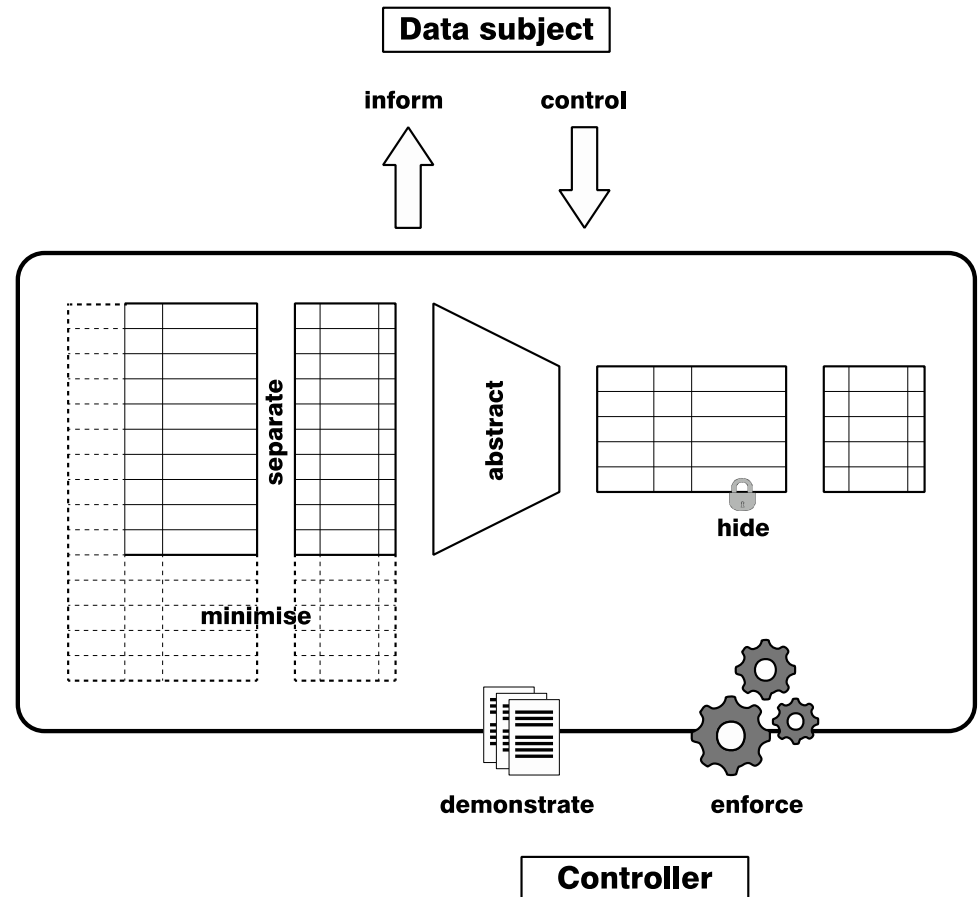
Privacy by Design

Jaap-Henk Hoepman

Privacy Design Strategies

To turn vague legal norms into concrete engineering goals

- Data oriented
 - Minimise
 - Separate
 - Abstract
 - Hide
- Process oriented
 - Inform
 - Control
 - Enforce
 - Demonstrate



Applying some strategies to a smart grid

- Abstract
 - Aggregate and report over large time frames
- Separate
 - Billing information only to Energy supplier; access to detailed usage information only to Network Operator
- Hide
 - Use encryption and access control
- Inform
 - Privacy dashboard
 - (Ambient) notice when smart meter accessed
- Enforce
 - Privacy policy