



Smart Grid Australia Inc

7 December 2011

Judy Anderson
Chair
Vision and Policy
Working Group



Agenda

- Smart Grid Australia
- Where are we today?
- Internet of things
- Optimise networks
- What this means for energy
- The future – learning systems
- What this means for our end users



Smart Grid Australia Vision Statement

Smart grids have the potential to improve the economy, lifestyle and environment for Australians.

Our mission

To educate, inform and lead the debate to ensure consumers, industry, government and policy makers understand the solutions, benefits and possibilities of smart grids.



Smart Grid Australia - Members

- Electricity utilities
- Telcos
- Vendors
- Energy investors
- Federal, state, and municipal agencies
- Research organisations
- Non-profit energy organisations

**Smart Grid
ecosystem
centric**



Where are we today?... Very inefficient

40% of energy assets are only used 5 days of the year

Poor transport costs us \$9.4 billion pa
(will cost \$20b by 2020)

Inefficiencies in systems globally cost \$15 trillion



'Internet of things'

Technology is changing – instrumented, interconnected, and intelligent – create an opportunity for governments to think and act in new ways.

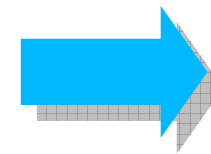


Individualised services

- sustainable outcomes
- reducing costs
- maximising value.

Business intelligence

- improve insight
- visibility and control
- transform performance.



Deploy high performance environmentally responsible operations

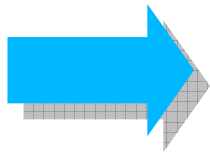


Optimise.....

**Massive
amounts of data
growing
X10 every 5
years**

**Unstructured
and noisy data
from different
sources**

**Massive
computing power**

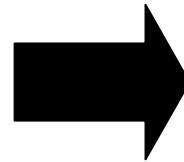


How extract business value?



Optimise.....

**Optimise the
'silo' (enterprise)**



**Optimise our
'systems' – cross
networks**

**Unlock innovation – drive
step-change efficiencies**

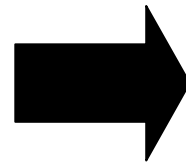


What does this mean for energy?.....

Bring together all energy network data

- demand
- distribution network
- transmission network
- generation – distributed, base load
- weather

Optimised silo



Water

Buildings

Smart Infrastructure /Smart City

Transport

Industry

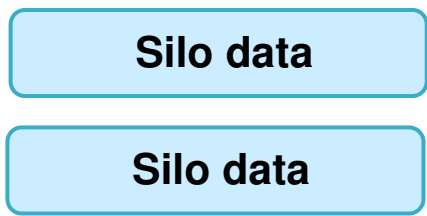
Emergency services

Optimised network

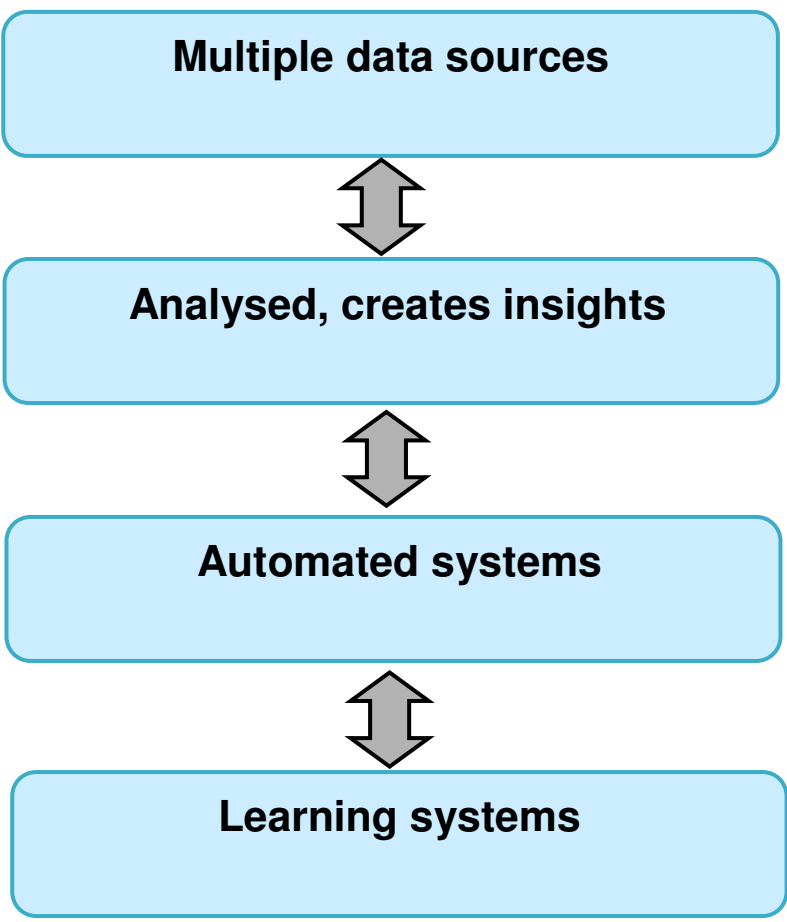


Learning Systems

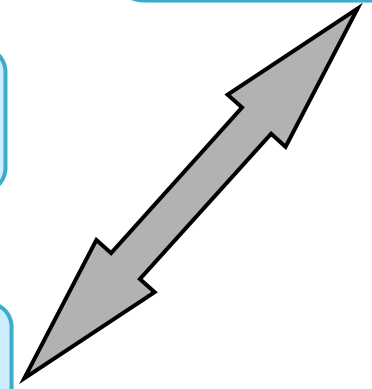
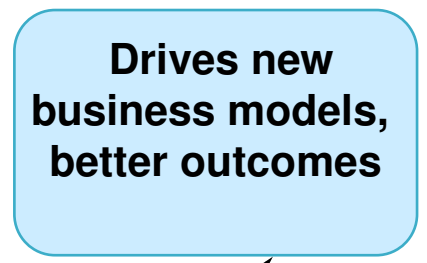
Optimised silos



Optimised network



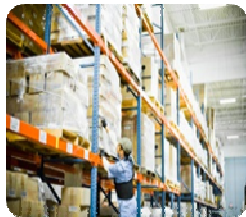
Business innovation



Learning Systems

...the future is becoming clear

Accounting Systems

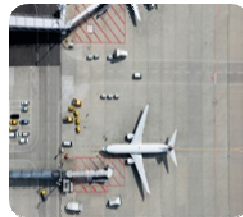


All industries begin to automate:

- payroll
- stock management
- back-end accounting

1960 →

Transactional Systems



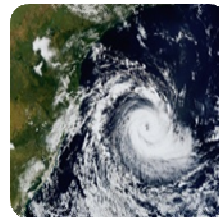
Airline reservation systems

Modern **banking**

Electronic POS with cash registers are networked to a **retailer's** mainframe

1970/80 →

Computational Systems



All industries

PCs transform individual productivity for millions

Barcode readers automate inventory management

1980/90 →

Social Systems



The internet enables e-commerce spawning **new online industries**

Self-checkout technology creates yet another shift in **retail** productivity

2000 →

Analytic Systems



All industries

Analytics begins to accelerate productivity in an increasingly instrumented, interconnected and intelligent world...

2010 →

Learning Systems



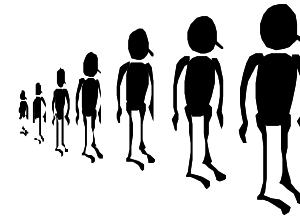
All industries

Learning systems technology offers the potential to double productivity

What does this mean for end users?

Traditional Campaign Management

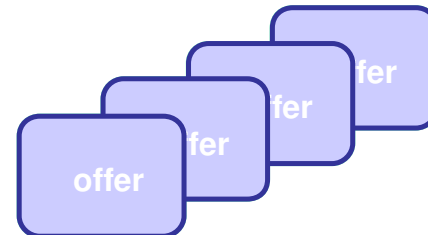
"I have an offer..."



"Let me find a group of people to tell about it."

Event Based Campaigns

"I have an individual with a change in behaviour that suggests a need..."



It's seeing and reacting to change in behaviour that provides an opportunity to meet end user's needs.



Thank You!

www.smartgridaustralia.com.au