



**sanedi**

South African National Energy  
Development Institute.



**What is the value proposition that Smart Grids present in the context of ageing infrastructure, high electricity cost and insufficient generation capacity to meet rapidly raising demand?**



**65<sup>TH</sup> CONVENTION**  
by

**Mr. Teslim M. Yusuf**  
**South African National Energy Development Institute**

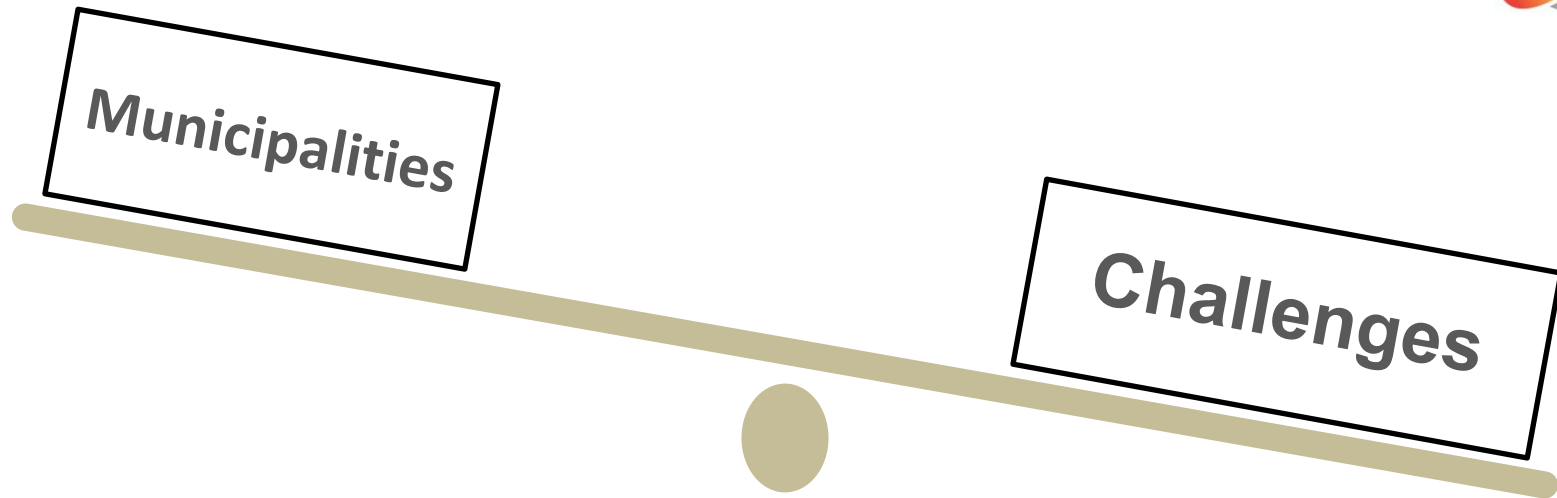
**ENERGY INNOVATION FOR LIFE**



*I am not here to tell you what you  
don't know already*

The electricity  
distribution business is  
under treat.

# The balancing act



*Challenges can be turned into opportunities*

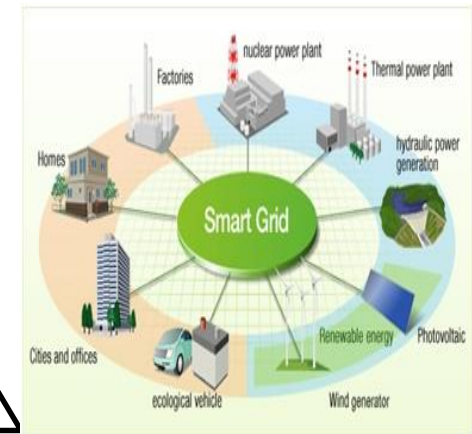
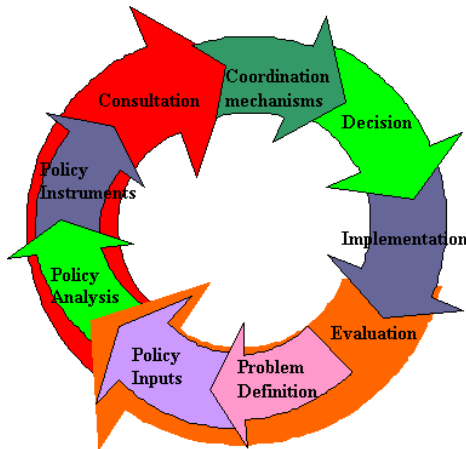
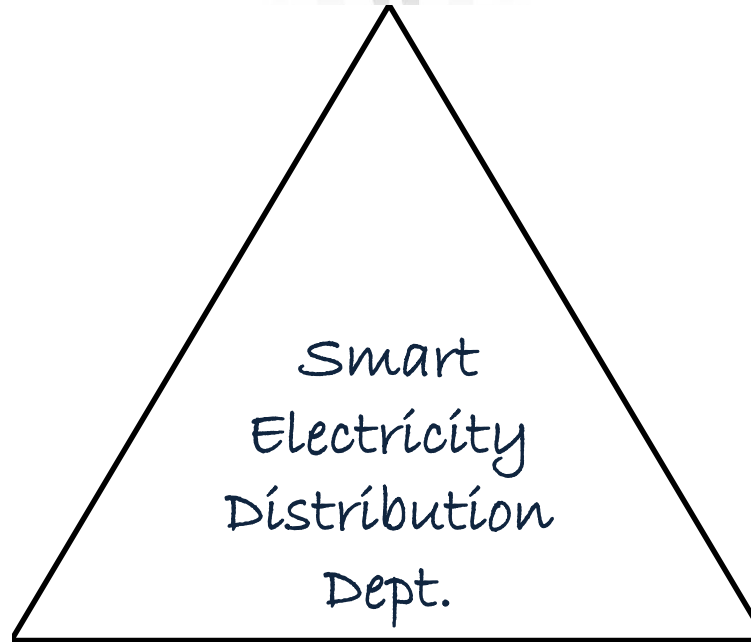
Inadequate Business Model  
Customer dissatisfaction  
Financial Distress  
Ageing assets and infrastructure  
High electricity tariffs  
Operational inefficiencies

# The enabler for change



A Smart Distribution Grid- Enables active participation of its customers, accommodate embedded generation, enables new products and services, optimises asset utilisation, ensures quality of supply and responses to system requirements.

# Smart Sustainable Utility



People + Processes + Smart Technologies = Smarter Electricity Department

# Building Blocks



An Advanced Metering Infrastructure- this is an integrated system of smart meters, communication networks and data management systems that enable two-way communication between utility and customers- USA DOE

Create better visibility and a higher level of control of your network.

# Value Proposition



Smart Asset Management

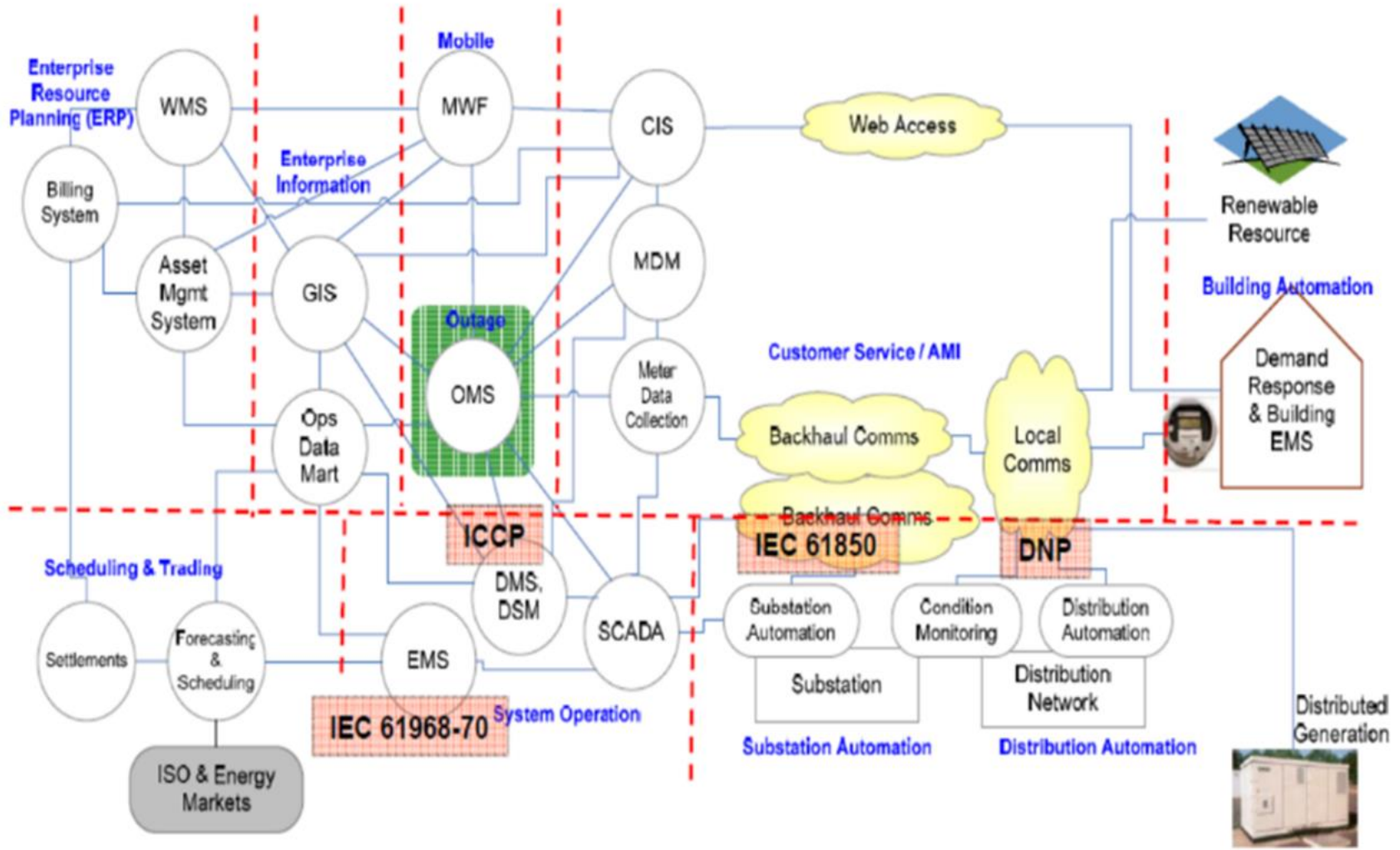
Customer Services

Advanced Metering Infrastructure

Engineering & Field Services

System Operations

# Convergence of systems





# It's not as simple as it sounds



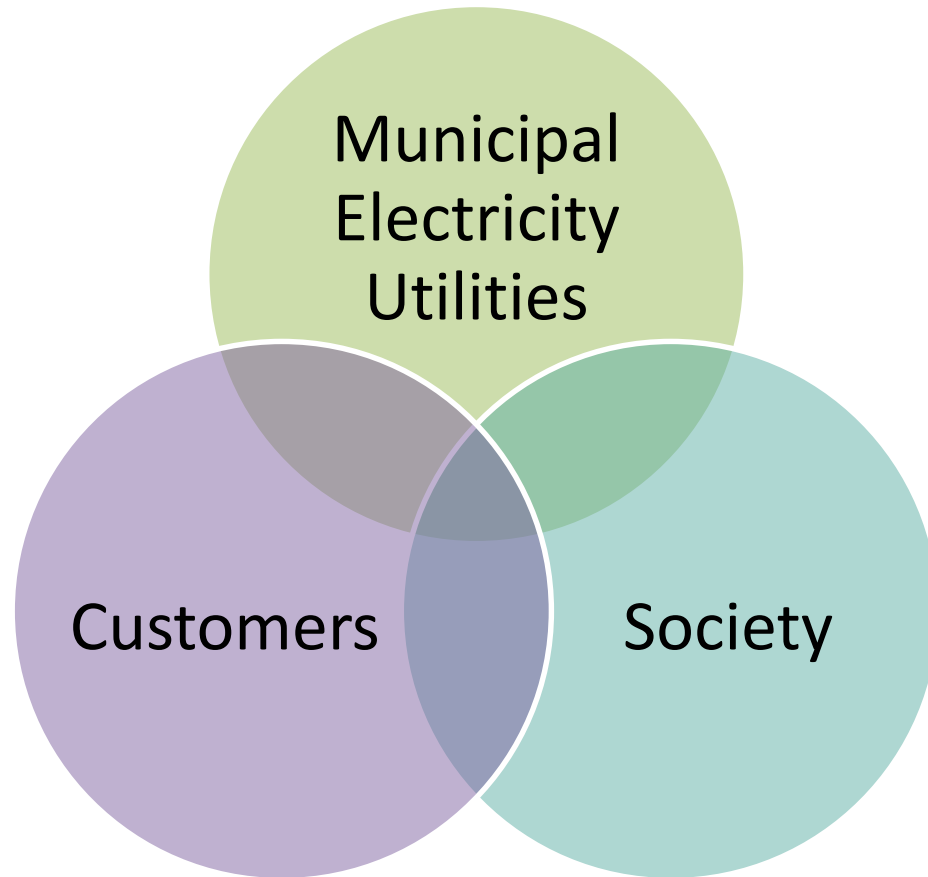
- Challenges exist in every layer of the society and the Electricity Supply Industry (ESI)
- Municipalities are politically charged environments
- Change is not interesting
- Smart Grids is not the silver bullet, only a part
- Smarter Grids cost money and require specialised skills

Show me a thing without two sides to it and I will tell you its other side.

# Benefits of Smarter Distribution Grids



- Reliability
- Economics
- Efficiency
- Environmental
- Security
- Safety



The society at large is the biggest winner.

# Conclusion



- Engage with SALGA on the proposed Municipal operating models, they are brilliant
- Understand your unique situation and challenges before you adopt a strategy on technology
- Smart Grids will change your Electricity Departments either for better or worse
- Learn from the experience of others, but act in time, planning horizons are reducing
- Develop new income streams

Change has come,  
nothing can stop it,  
embrace it.



**sanedi**

South African National Energy  
Development Institute.



Thank You

**ENERGY INNOVATION FOR LIFE**