

Gearing up to meet Africa's
rising power and water demand



12 – 14 May 2015
Cape Town, South Africa



**AFRICAN
UTILITY
WEEK**

**CLEAN POWER
AFRICA**



- Stephen J Callahan
- VP, Global, Strategy and Solutions, Energy and Utilities
- IBM
- United States

The Energy and Utilities industry landscape will change significantly by 2025.



New Customer



Ubiquitous smart appliances



Loads move in space and time (e.g. EVs)



There is an app for that



Automated Demand Response is predominate



Affordable consumer owned generation



Smart technology is pervasively deployed



Microgrids emerge where existing infrastructure is insufficient



Energy Storage technology is widely implemented

New Grid



Regulatory environment promotes new business models and grid essentiality



Consumers can easily sell surplus energy to the grid or contract with a third party

New Deal

The IBM Energy & Utility Point Of View | Electric



OUR POINT OF VIEW

1.

Viable Substitutes Rise

introducing the business and technical challenges of intermittency, dispatchability and disintermediation

OUR POINT OF VIEW

2.

Customer Engagement

Deepens through rich and instant interaction delivered via social and mobile apps

OUR POINT OF VIEW

3.

Core Expectations Persist

requiring the continued delivery of safe, reliable and low cost energy with sustainability embedded

WHAT WE SEE SHIFTING

Alternatives reach grid parity while renewables and storage mainstream and demand response increasingly balances supply.

WHAT WE SEE SHIFTING

Per capita demand is rising but energy intensity is sinking and prosumer supply is expanding driving a more sophisticated and economically challenging customer interaction.

WHAT WE SEE SHIFTING

Grid essentiality is challenged with OPEX agile new entrants emerging and growth stunted by #1 and #2.

STRATEGIC IMPERATIVE

Assume the role of energy integrator.

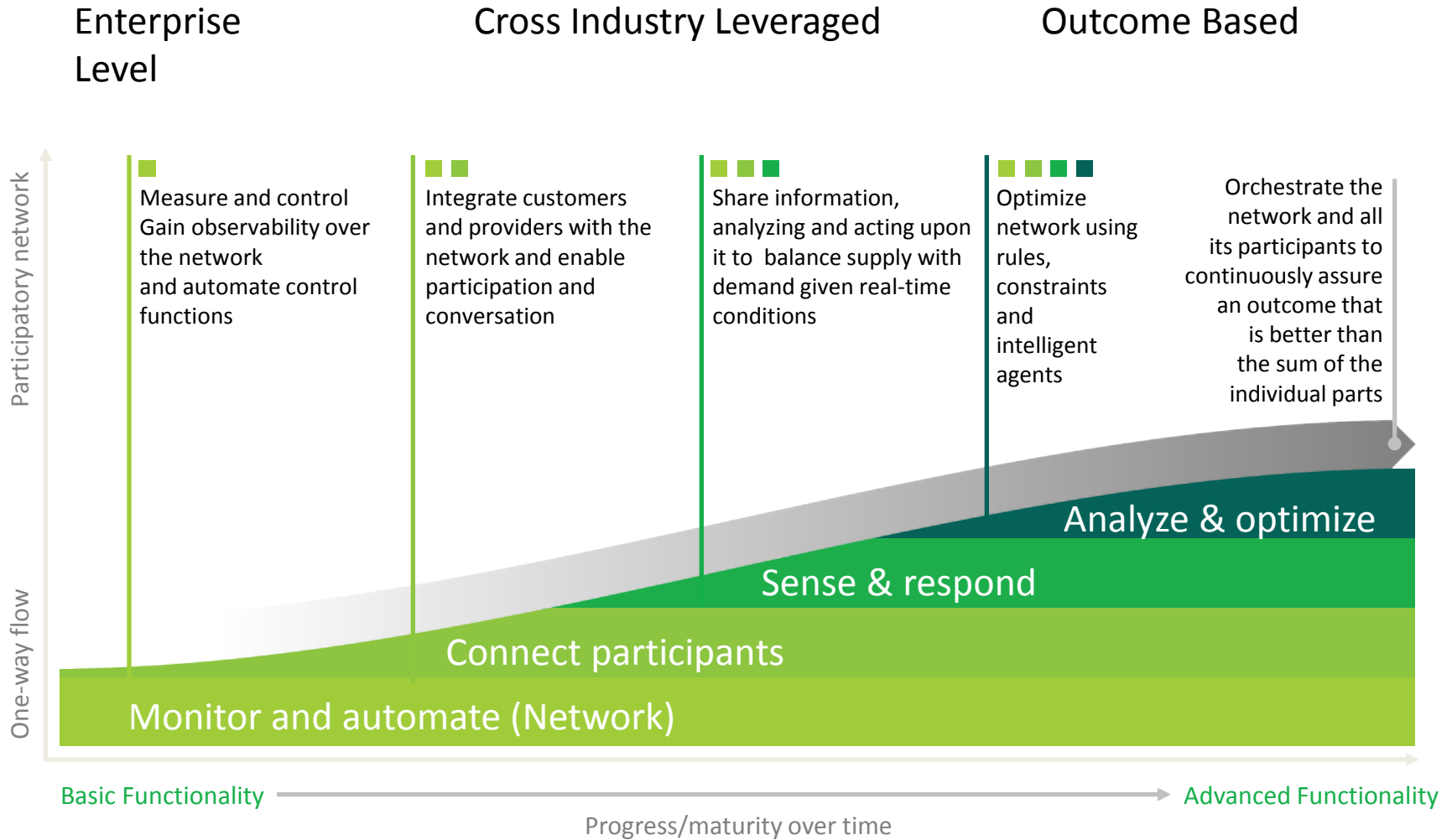
STRATEGIC IMPERATIVE

Deliver a 360 degree customer of one experience.

STRATEGIC IMPERATIVE

Disruptively innovate business processes through analytics driven operational excellence.

Analytics driven operational excellence is...



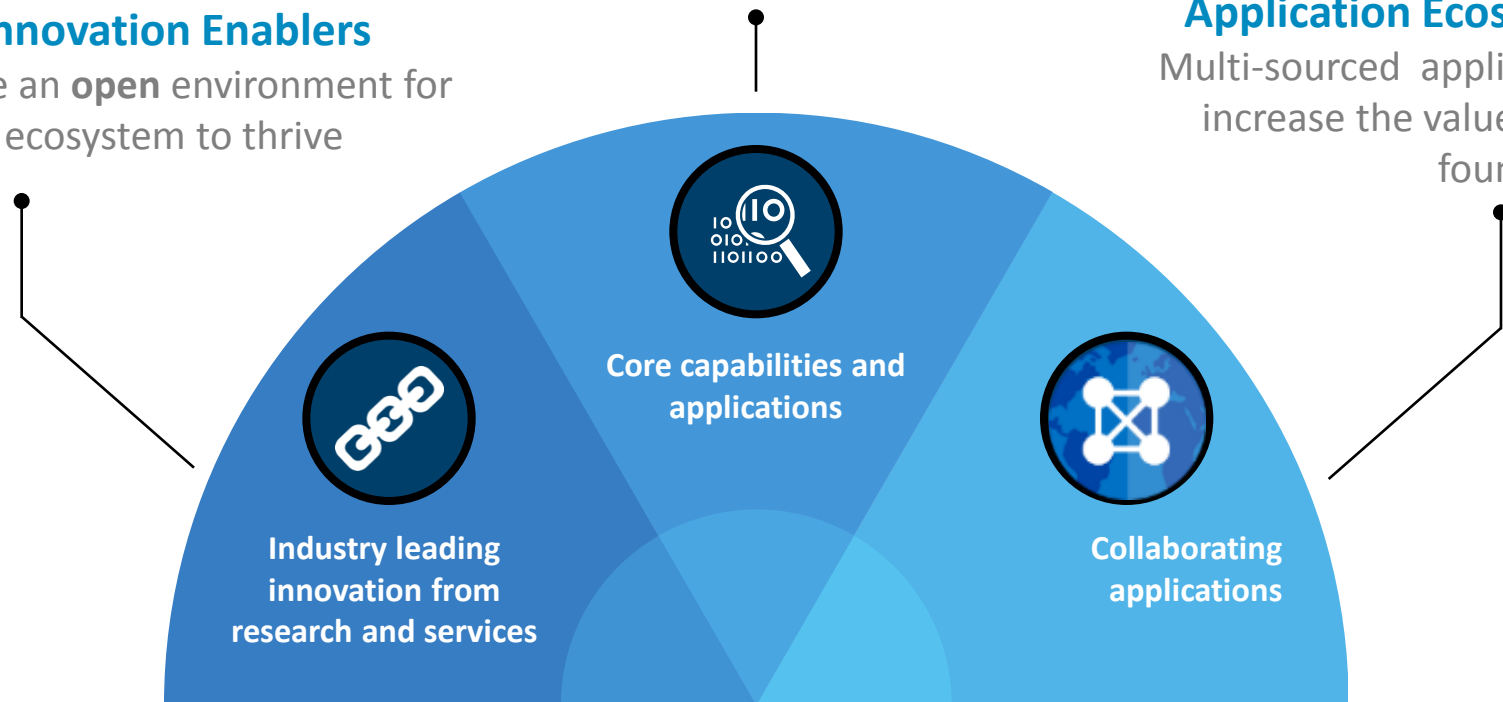
A strategic approach to drive operational excellence using analytics



Analytics Foundation
Is a single foundation for analytics across the energy enterprise

Innovation Enablers
Create an **open** environment for ecosystem to thrive

Application Ecosystem
Multi-sourced applications increase the value of the foundation



Industry leading innovation from research and services

Core capabilities and applications

Collaborating applications

An enterprise level analytics roadmap is the best starting point



Customer service

Customer Insight to prevent customer churn
Customer Information on Outage
Revenue prediction thru Theft analytics
PrePayment Scenarios

Asset Management

Outage Management, more efficient
Fieldforce information
Predict Failure and Advanced Asset
Analytics

Enterprise Analytics

Contribute to companies cost cutting
programms with all available and analysed
information

Distribution & Operations

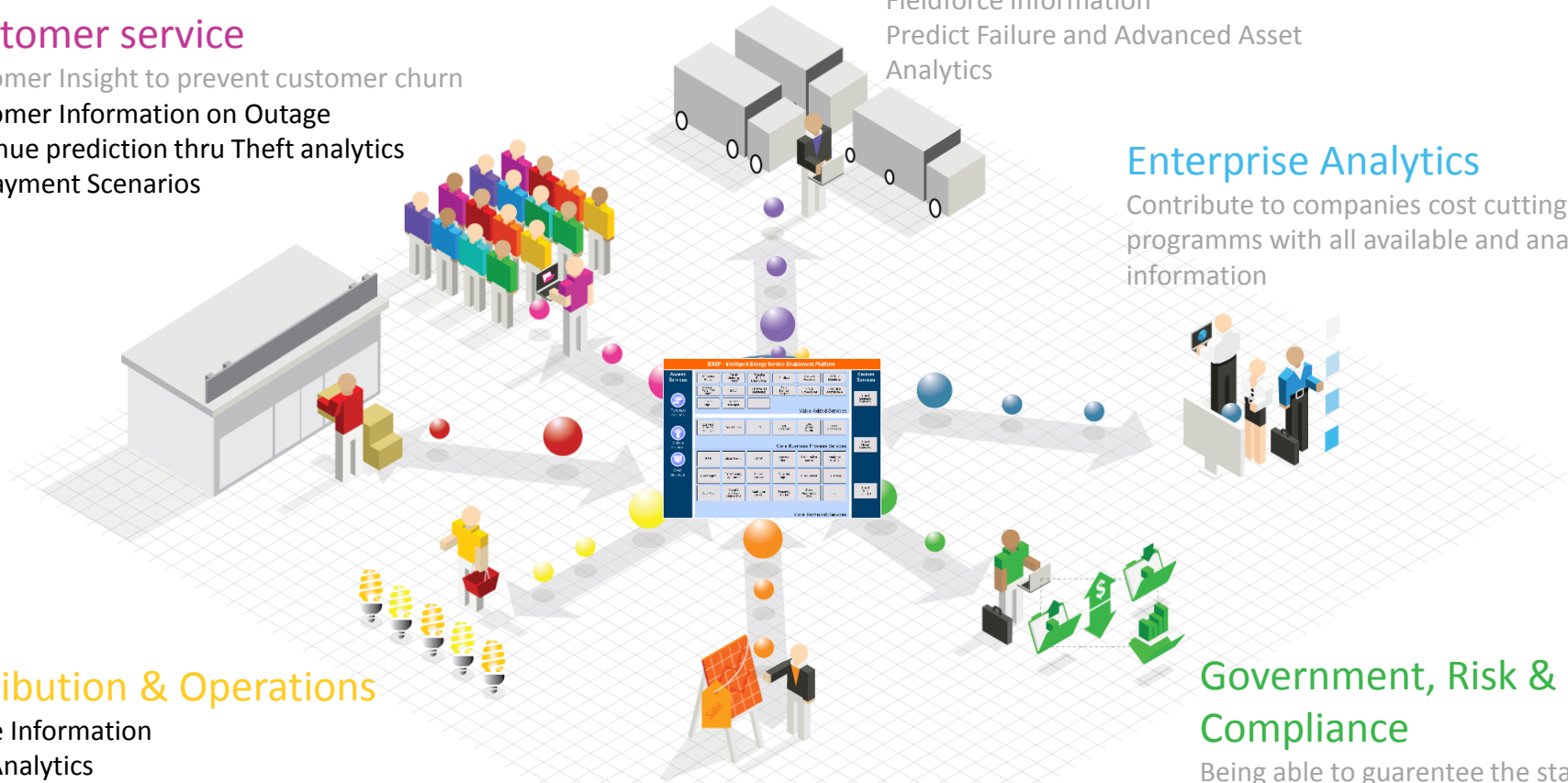
Outage Information
Theft Analytics
Identification of non-technical losses
Efficient Workforce Management

Network planning

Analysis for upcoming Grid extention by
using historical measurements, current
measurements, weather forecast

Government, Risk & Compliance

Being able to guarentee the status of
grid if reportable events occure
unexpected



The emerging narrative from the early steps of the journey



- Data is the hard part
- Platform matters
- Innovation is an outcome