

Leveraging Big Data Analytics to Drive Customer Intelligence for Utilities

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Agenda

- Energy and Big Data
- Market Opportunity
- MCL Analytics
- Final Thoughts

Energy and Big Data

Size of Data Wave is Unprecedented

# of smart meters	15 minute interval	1 minute interval	1 second interval
10,000	32.61 GB	489.0 GB	114.6 TB
100,000	326.10 GB	4.8 TB	1.1 PB
1,000,000	3.18 TB	47.7 TB	11.2 PB

Increasing Granularity of Data

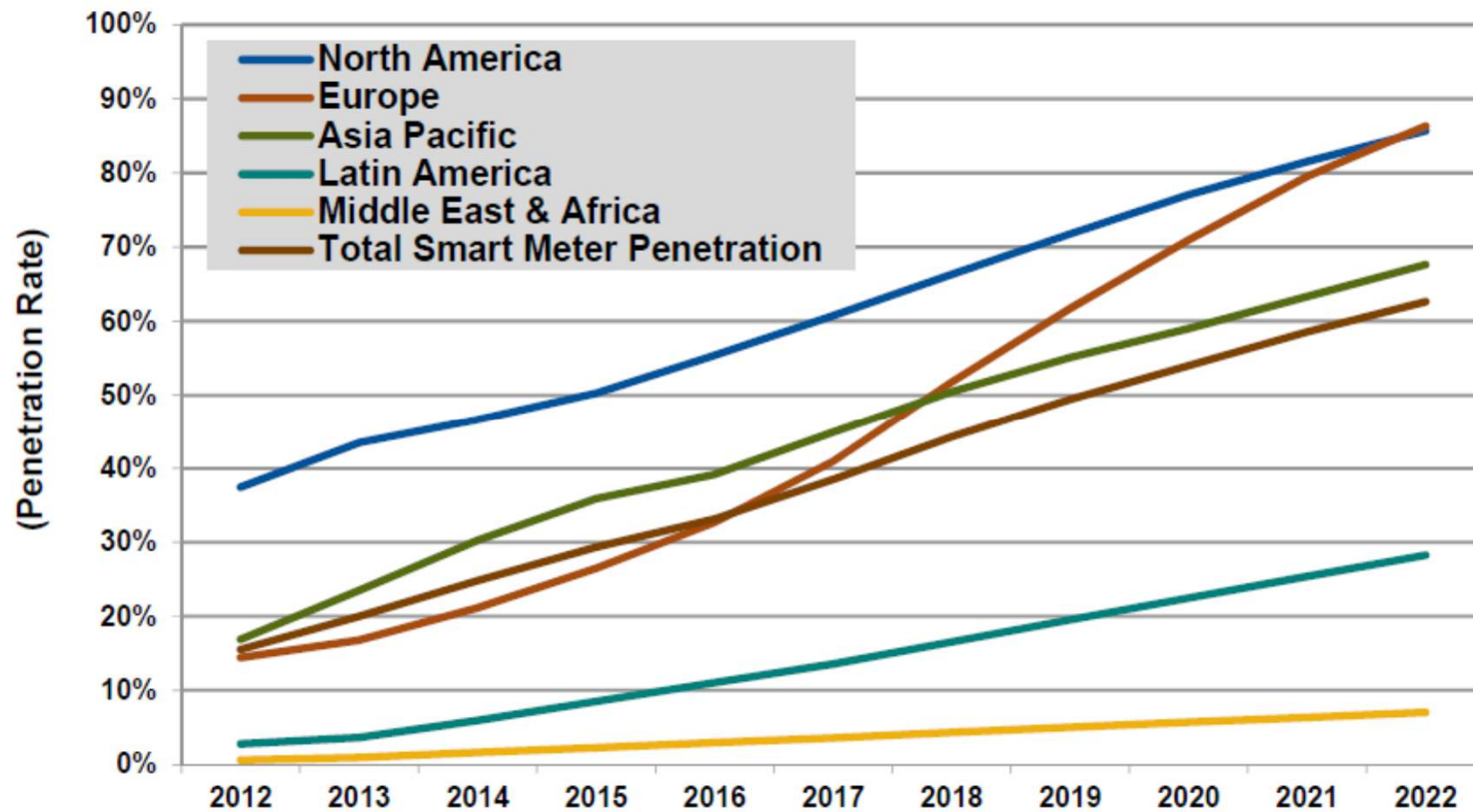


Unprecedented Levels of Data

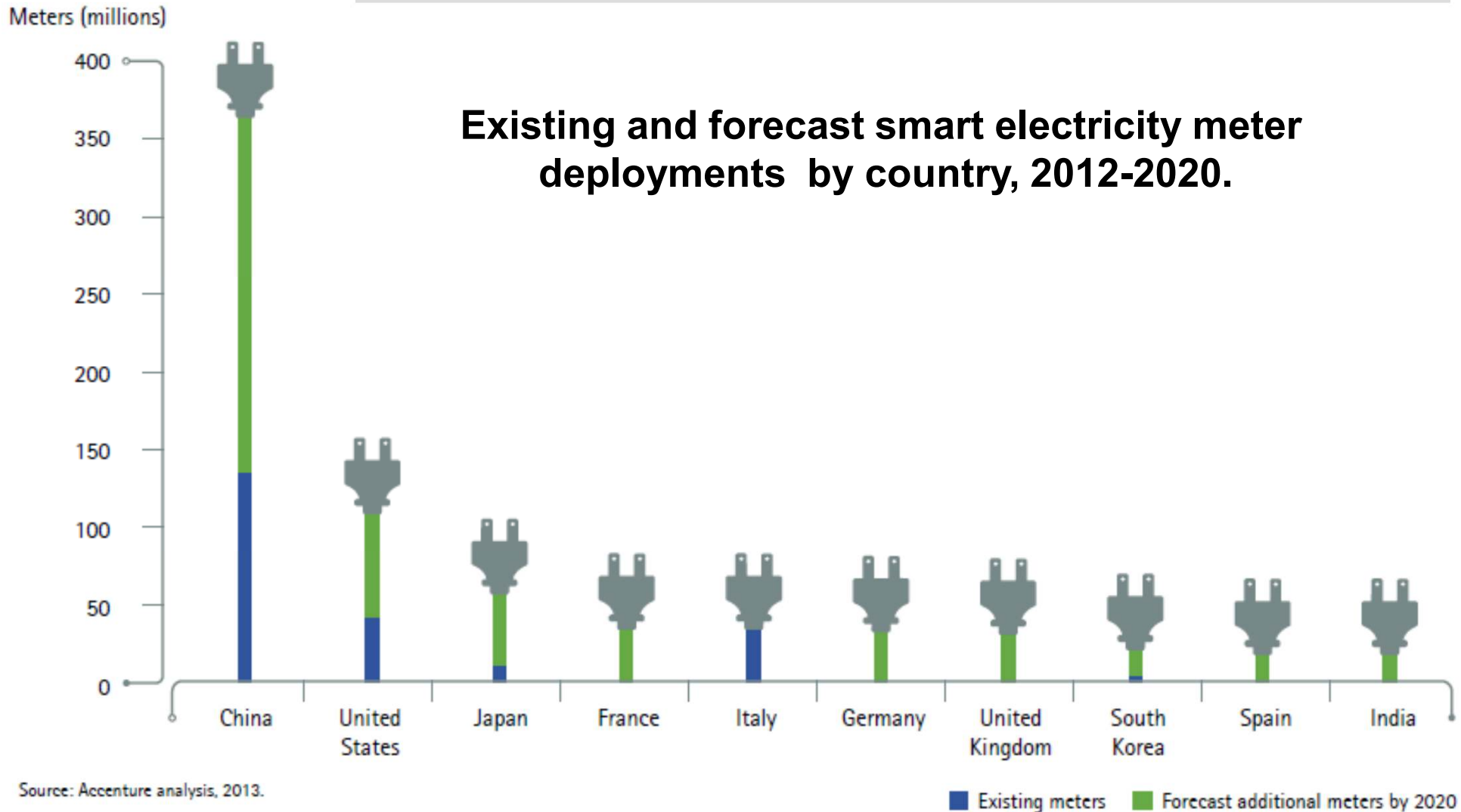
Source: AutoGrid

Energy and Big Data

Existing and forecast smart meter deployments by region, 2012-2022.



Energy and Big Data

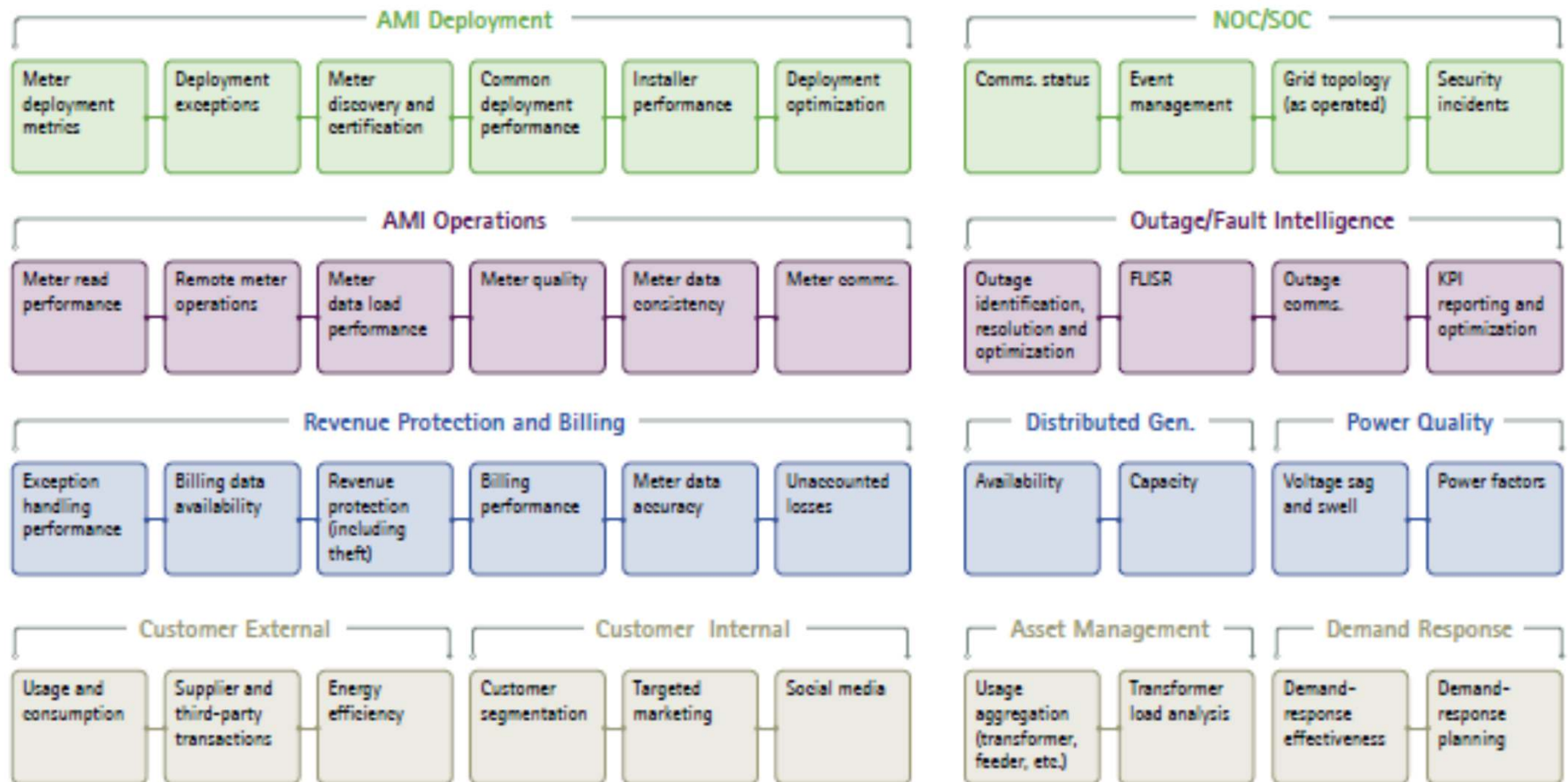


Source: Accenture analysis, 2013.

Energy and Big Data



Market Opportunity



Note: NOC: network operations center, SOC: smart operations center.
Source: Accenture.

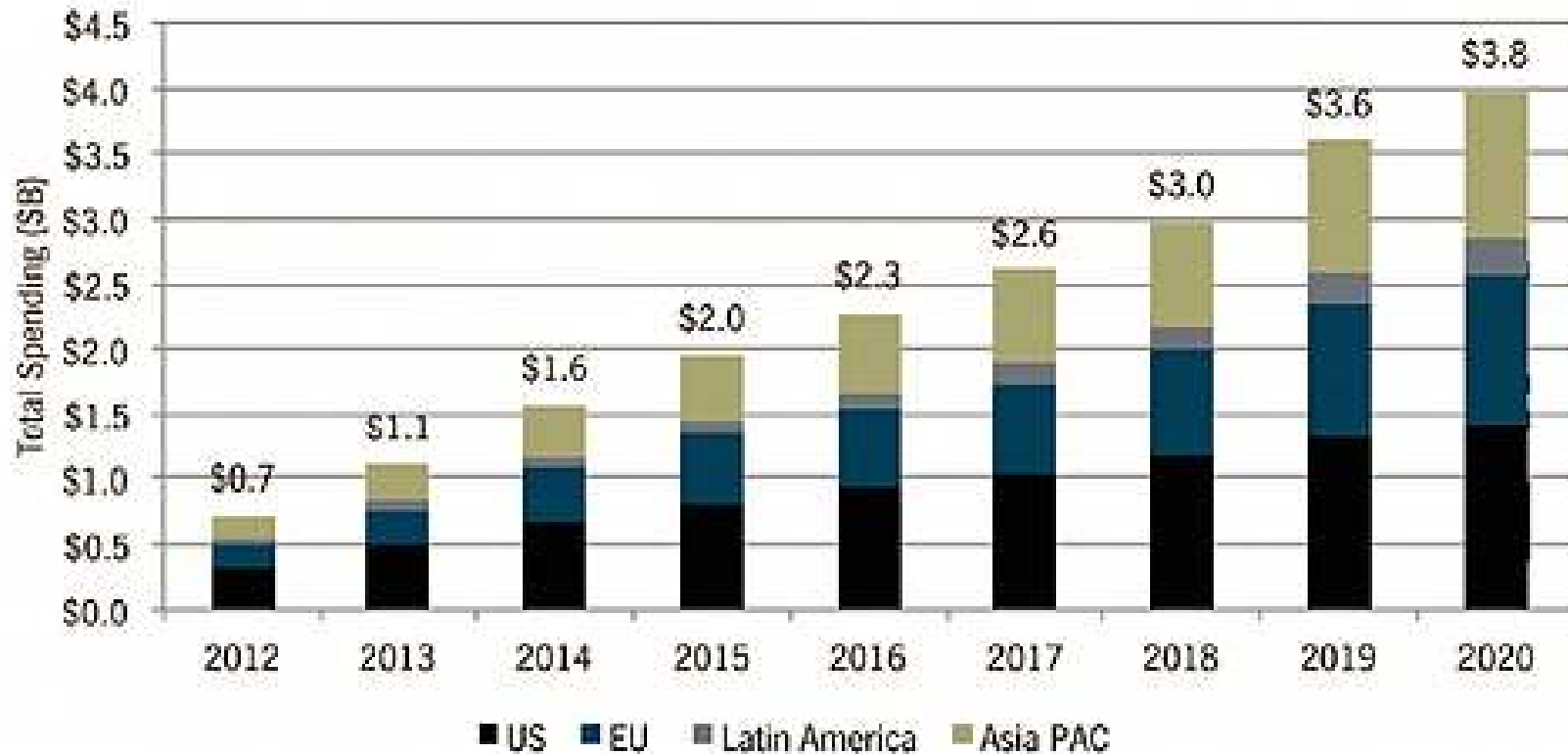
Market Opportunity

Opportunity Areas	Drivers
Revenue protection	Detecting unauthorised use and recovering lost revenue
Voltage optimisation	Using asset condition models to refine operational settings of assets to save on power costs
Demand-response effectiveness	Increasing participation in DR programmes and load savings
Load forecasting and planning	Improving investment planning based on bottom-up demand
Outage detection and response	Reducing outage costs from enhanced response to outages
Outage prevention	Reducing equipment outages by focusing on assets with highest risk of failure
Investment planning	Revising priorities of asset investments based on analysis of asset risk and consumer impact
Maintenance strategies	Revising strategies based on condition and risk analytics
Energy efficiency	Identifying and helping consumers improve their energy efficiency
Energy services	Targeting consumers for products and services most suited

Source: Accenture

Market Opportunity

FIGURE: Global Utility Analytics Spending, 2012-2020



Source: GTM Research

MCL Analytics

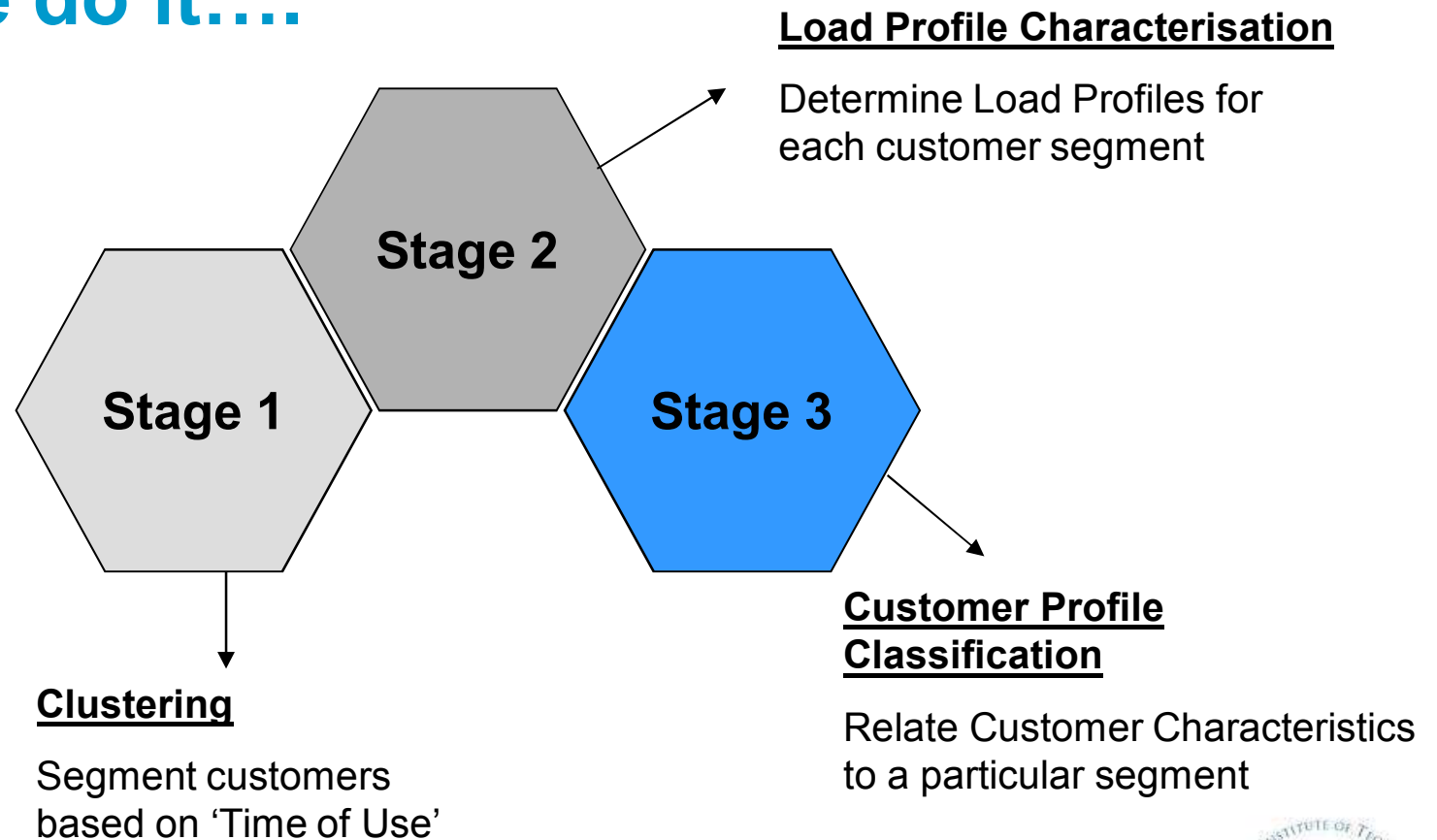
What we do....

MCL Analytics helps Utilities understand and engage their customers more effectively by providing actionable insights into consumer behaviour drawn from big data.



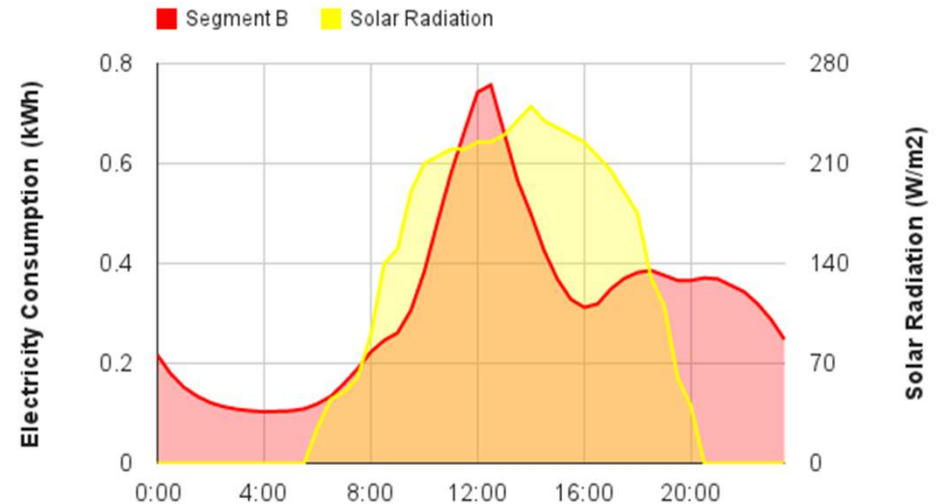
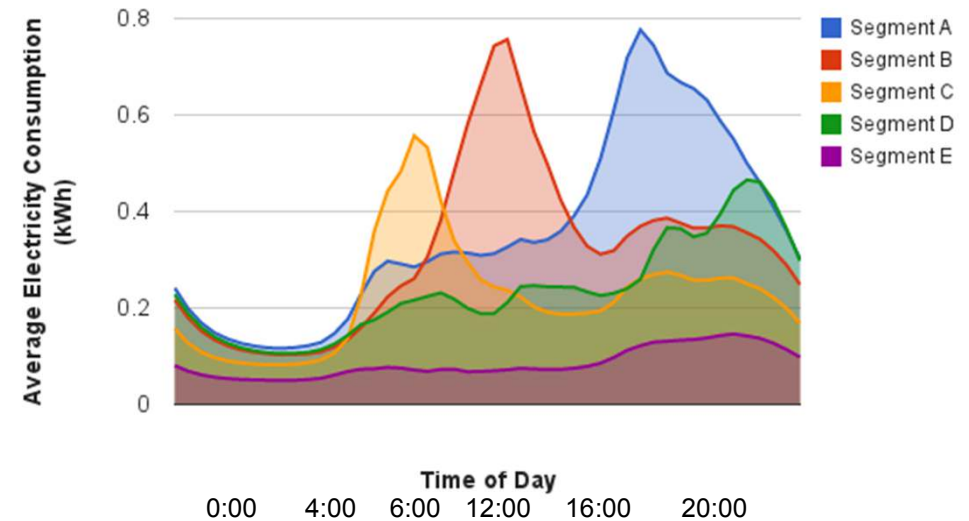
MCL Analytics

How we do it....



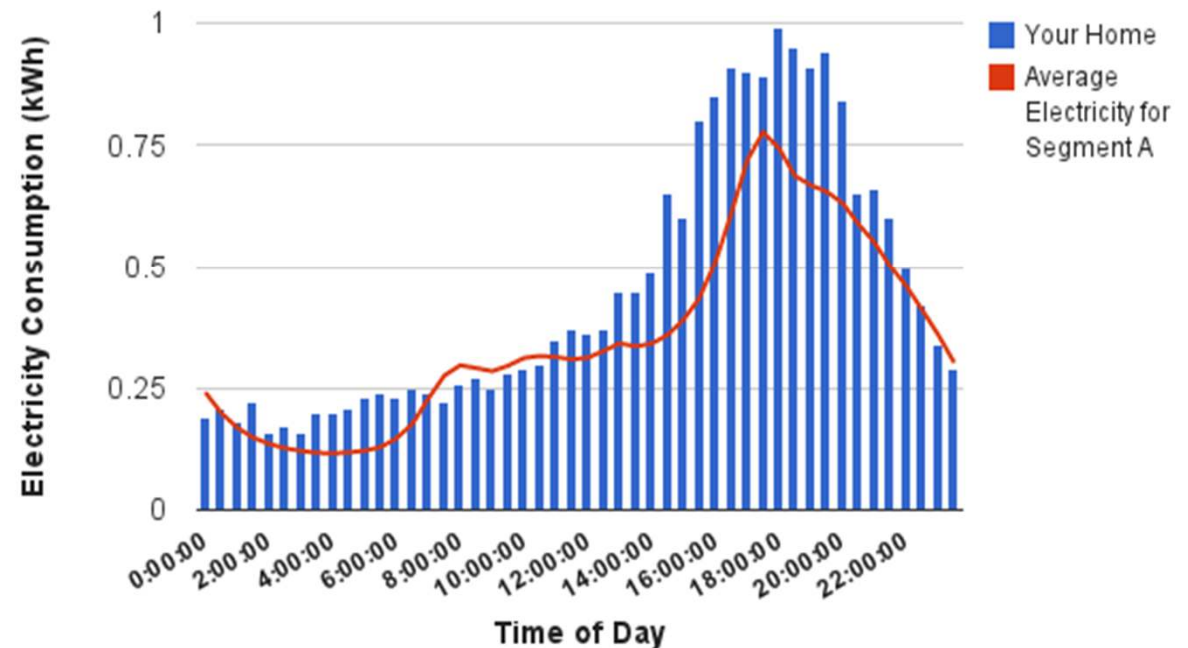
Targeted Marketing – Solar Example

- **Problem:** How to target the right products and services at the right customers?
- **Solution:** Using data analytics to determine the 'best fit' based on ToU consumption patterns and consumer profile characteristics.
- **Benefits:** Generate more profit per customer and greater revenue returns.



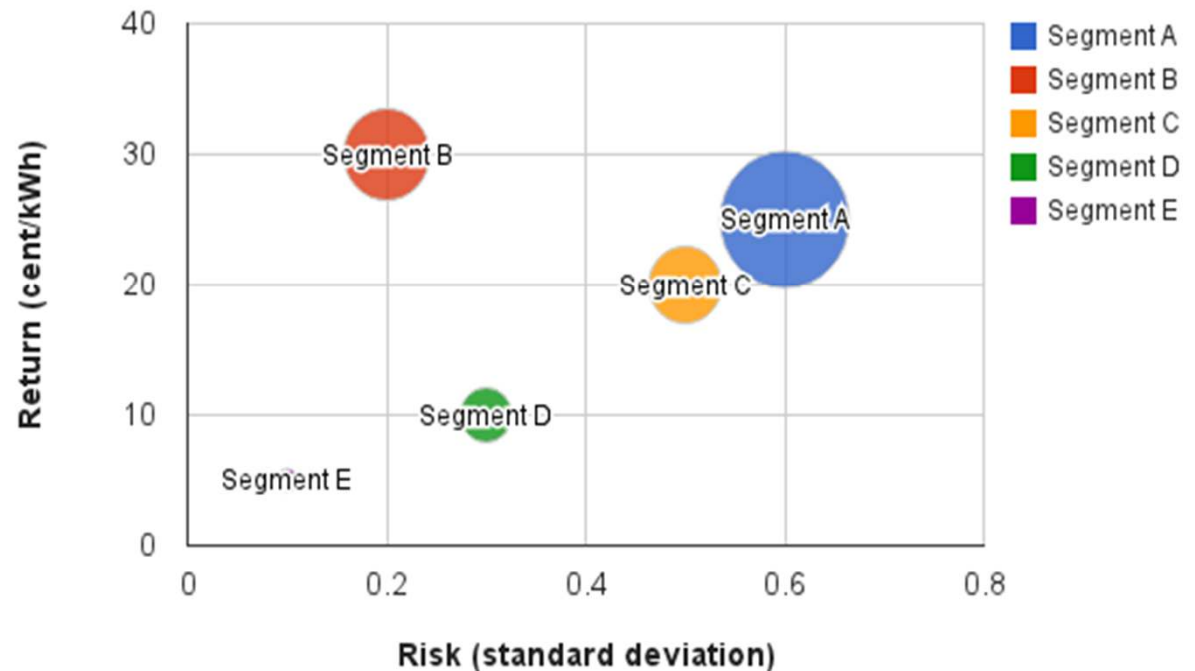
Customer Service – Energy Efficiency Example

- **Problem:** How to improve customer service and add real value?
- **Solution:** Using data analytics to provide accurate insights into consumer consumption behaviour which can be used to improve customer service levels.
- **Benefits:** Improve customer retention and develop brand recognition in the marketplace.



Operational Efficiencies – Portfolio Mix Example

- **Problem:** How to increase operational efficiencies?
- **Solution:** Using data analytics to determine the most optimal customer portfolio mixes based on different risk and return profiles.
- **Benefits:** Reduced exposure to wholesale energy costs and optimisation of asset base.



Final Thoughts

- Utilities under pressure to become more innovative due to a number of factors:
 - Growth of renewables
 - Emergence of distributed generation
 - Creation of the Smart Grid
 - Focus on energy efficiency
 - Increased competition
- Harnessing 'Big Data' provides the capabilities to address many of these challenges and in a number of cases turn them into valuable opportunities.

Acknowledgements

