OMNETRIC Group

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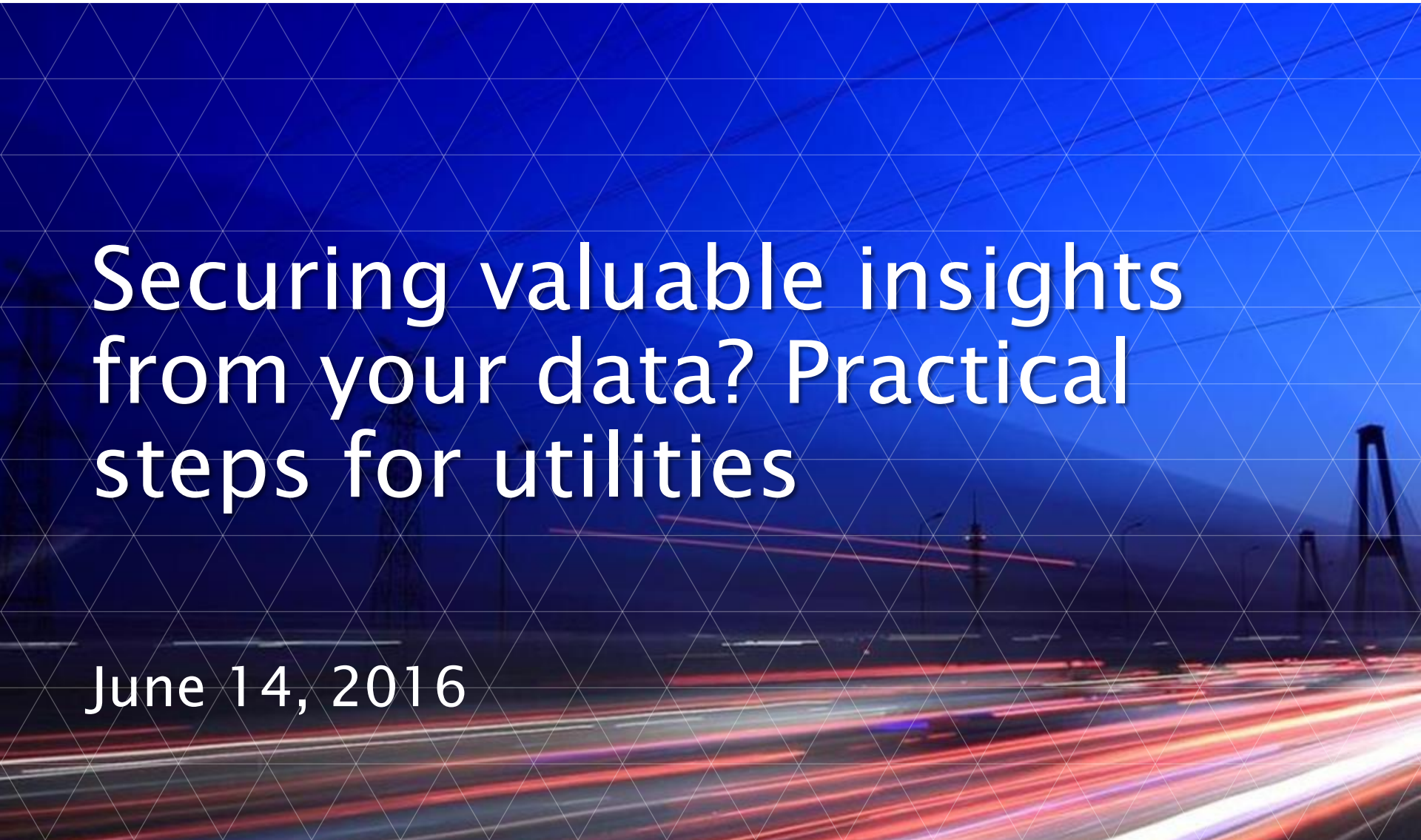
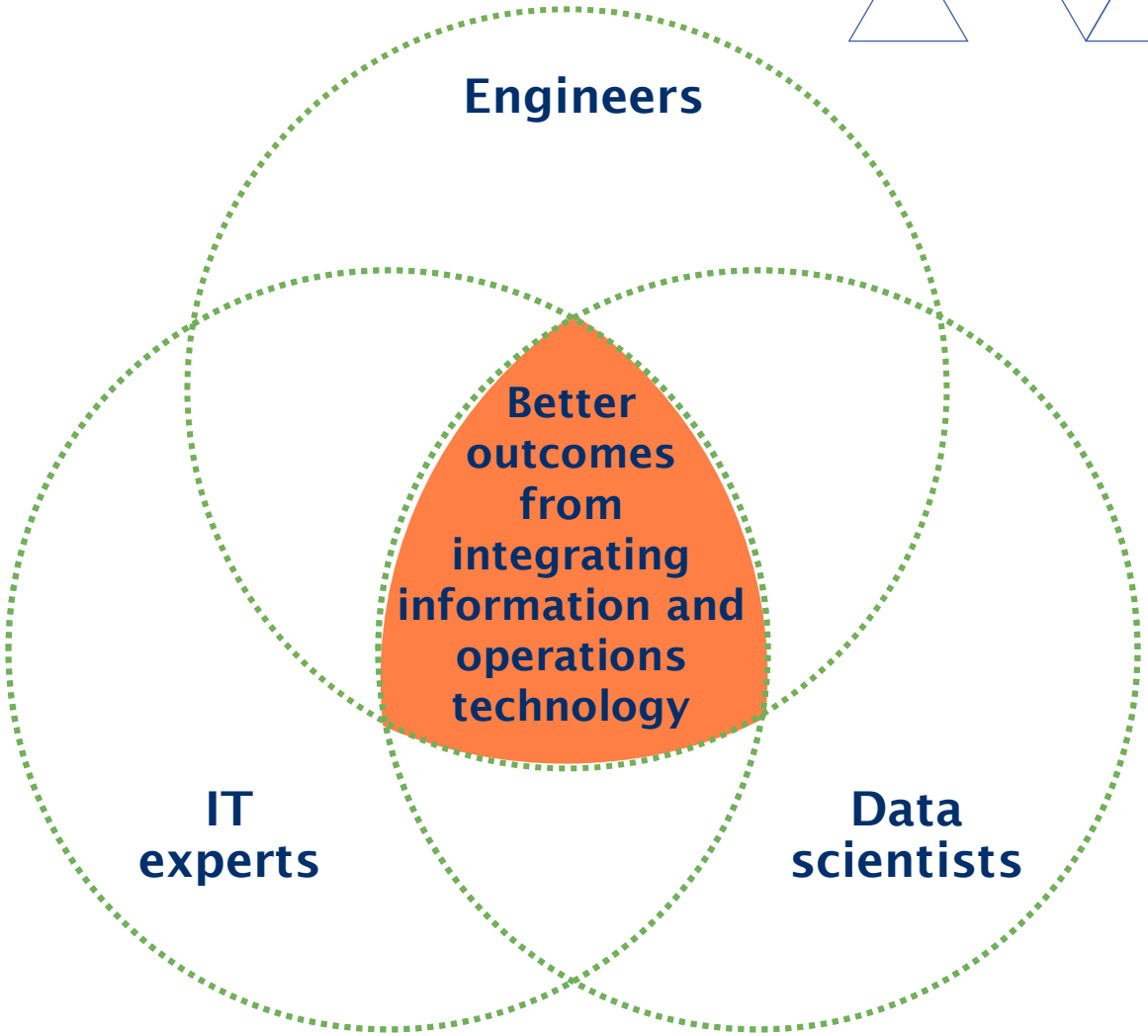


Securing valuable insights from your data? Practical steps for utilities

June 14, 2016

Who is OMNETRIC Group?

- We are committed to bringing the utilities sector to the forefront of the new energy economy
- We bring together engineering know-how, IT expertise and data science to push the boundaries of innovation



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Agenda

Developing the analytics business case

- Approach
- Value drivers
- Risk modeling

Preparing for data analytics

- The utility application landscape
- Analytics architectures
- Education & training

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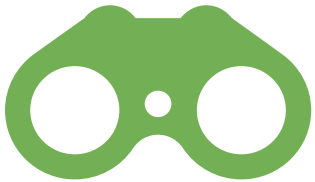
Achieving business value

The drive towards business value is focused on three areas:

1. Use case selection and prioritization



2. Value identification

3. Business case development

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Use case selection and prioritization

A master list of use cases was subjected to a series of tests including:

- **SME need**: was there a champion who felt strongly about the use case solving a problem?
- **Data availability**: was the data for the use case felt to be available?
- **Business value**: did the benefit of the use cases outweigh the cost?
- **Cross-cutting use case**: preference was given to use cases that touched more business groups or bigger processes within a business unit.

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Value identification

We have used two approaches to identifying the potential business value:

1

Top-Down

Scaling and normalizing the value from our Financial Model of over 100 Smart Grid implementations across categories such as AMI, Customer Operations, Network Operations, Revenue Protection, Asset Management, Power Quality and Demand Response.

2

Risk Approach

Understanding the impact of risks to the business and assessing the degree of risk reduction and capturing that portion of the risk impact as a benefit. This last measure is not well applied within the industry and was used only as an order of magnitude verification for the other two estimates.

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Developing the business case

- Bottom-up analysis consisted of canvassing the Business Stakeholders for impacted processes and assigning a value to improving these processes. Where possible, these estimates were validated against industry standards.

- Benefits focused on increased revenue, cost savings, cost avoidance and risk reduction. This included such specifics as avoided outage minutes, increased energy delivery and reduced business costs for truck trips and miles.

- The full business case for each use case of analytics was deferred due to a number of uncertainties in terms of scale of the platform, processing speed, data inventory etc.

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Preparing for an analytics project

Principles				
Own your data model	Develop an open architecture	Buddy up with Data Governance	Start with sample data	It's not dirty laundry; it's laundry that could be cleaner

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Preparing for an analytics project

First Steps

1. Document the architecture landscape – system connectivity

2. Document your data definition
   - Map system, to modules, to fields
   - Data types, values, ranges
   - Foreign/Primary key?
   - PII?
   - Formats
   - Cleansing requirements
   - Data resolution, accuracy, % null

3. Document an audit trail of your data collection efforts
   - Many systems and need view of the status to cast such a wide net effectively
   - System, description of the data, what group supplies the data
   - Status, roadblocks and what support is needed to remove?
   - Whether you've gotten sample or a full dataset
   - Map to your prioritized Use Cases

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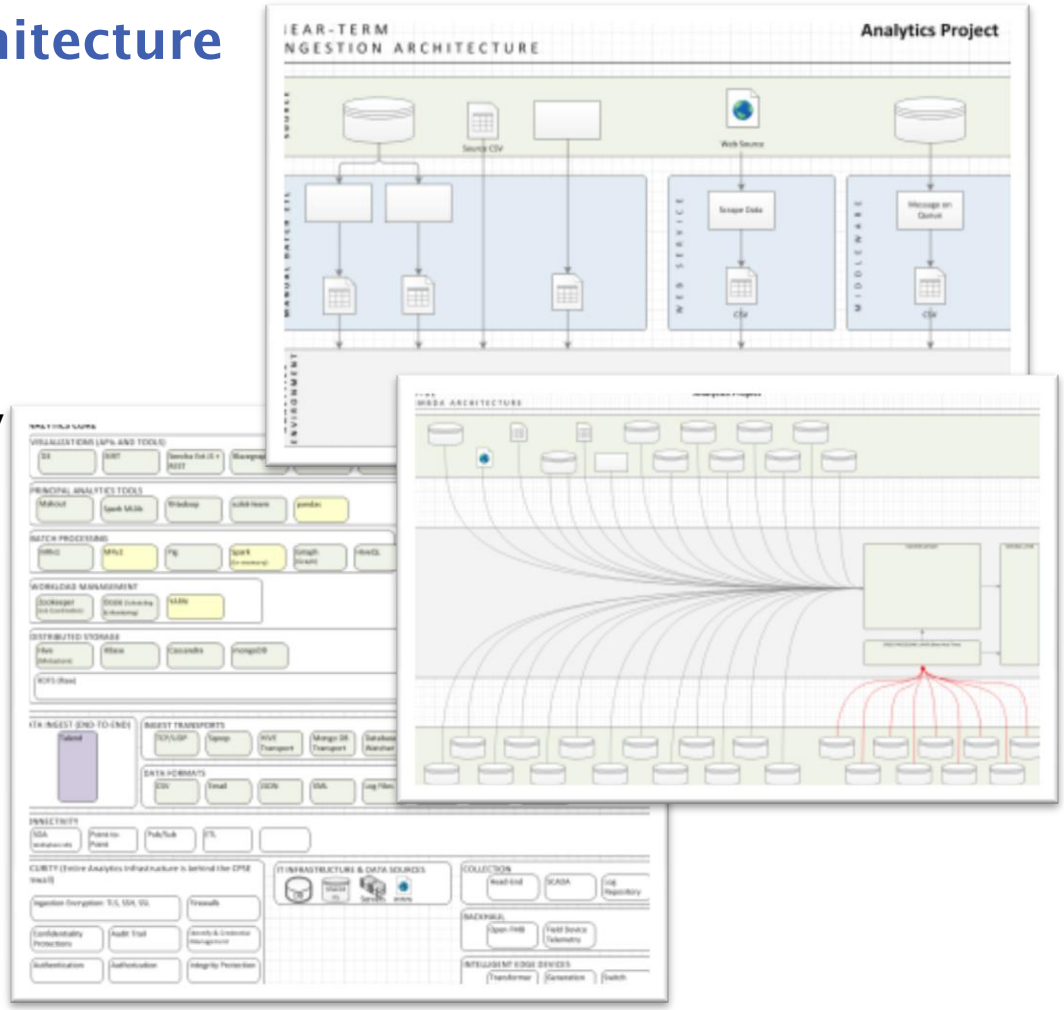
Preparing for an analytics project

Thinking about your architecture

Draw out multiple versions of your architecture to help illustrate plans

1. Compare what your initial architecture looks like versus your target, which would likely have automated-ingest etc.
2. Lambda architecture to differentiate between master-data or batch and your speed layer (Spark/Storm)
3. Draw your analytics environment and show compatibility



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Conclusion

Do

…Question things you think are right

…Think about a converged, comprehensive data model with detailed meta data

…Expect your analytics vendor to help you bridge gaps and assess business case value

…Know that it takes data scientists, IT experts and engineers all speaking the same language

…Limit the number of simultaneously pursued Use Cases to ensure availability of multidisciplinary teams

Don't

…Give up your data model

…Force analytics where it's not needed

…Underestimate the Change management required (skills, focuses)

…Do it (at home) on your own

…Think the "tool of the day" will solve all of your problems

…Forget about the importance of Data Governance with respect to analytics

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Thank you

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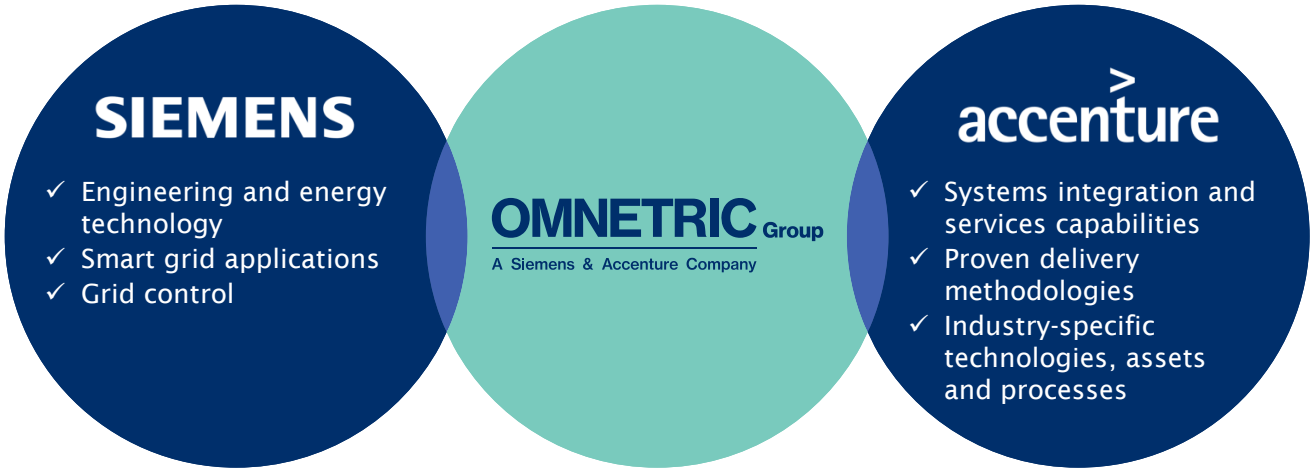

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