



IV ENCONTRO TÉCNICO ISA SÃO PAULO NA ENEL

Sede da Enel - Barueri / SP
6 de novembro de 2019, das 8h às 15h30



Sao Paulo
Section



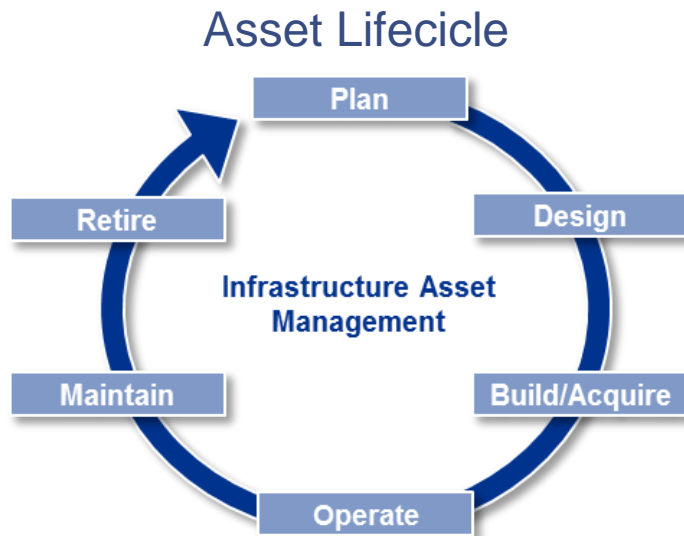
A Gestão de Ativos como Diferencial Estratégico para o Negócio de Energia

- ▶ Claudio Graeff - KPMG - Líder da área de Entrega e Gestão de Ativos de Infraestrutura para a América Latina, claudiograeff@kpmg.com.br

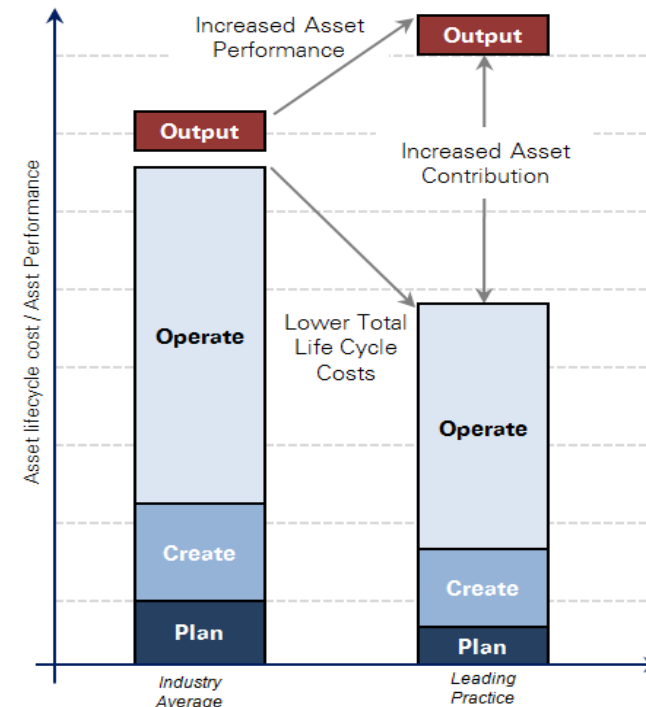
Asset Management

“Asset management is about extracting more value from the asset than what you put into it. It is about using assets to deliver value and achieve the organization’s business objectives”

The Institute of Asset Management

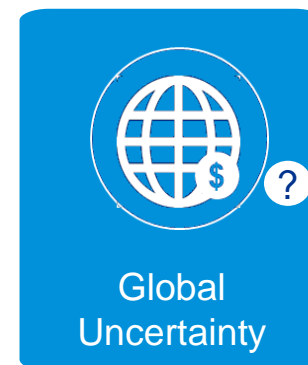
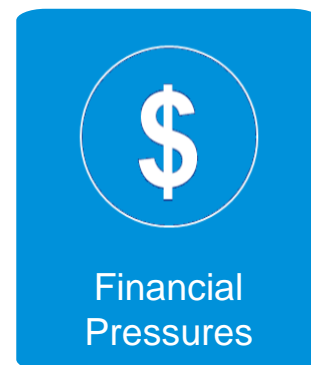
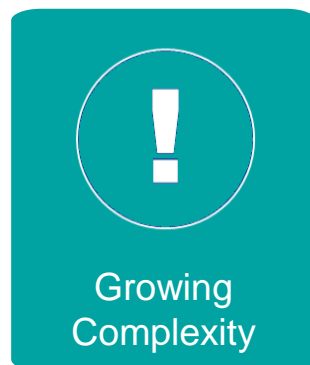
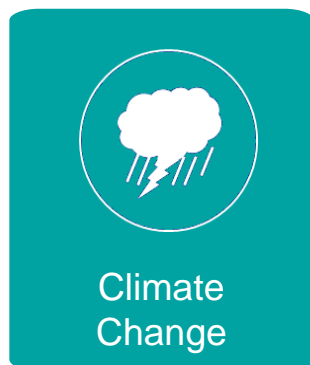
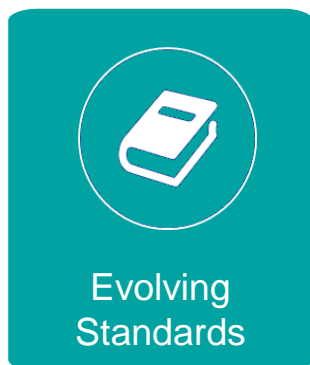
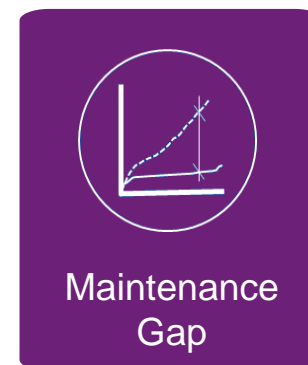
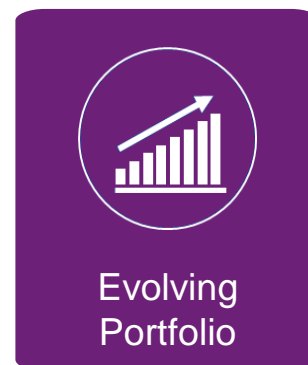
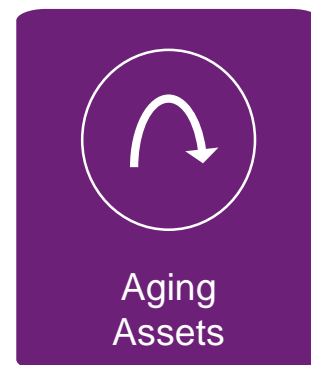


Improved financial performance
Informed asset investment decisions
Managed risks
Improved services and outputs
Improved efficiency and effectiveness



Goals and Objectives

Operators are facing a growing set of challenges impacting their ability to effectively and efficiently plan-for and deliver needed outputs to customers or stakeholders.



Goals and Objectives

Aligning organisational objectives, asset needs, and customer expectations to ensure optimum development and use of assets across their whole lifecycle will provide the opportunity for shifting from a short term pain point of regulatory compliance requirements to a more rewarding mid-to-longer term integrated and aligned financial and non-financial strategic asset management view and planning.



1

Plan, select, build (or buy) and operate assets with confidence

35% of the clients interviewed stated that they have no or limited ability to benchmark asset performance.



2

Prepare solid (asset management) foundation and build value upon it

45% of the clients interviewed stated that they have difficulty discerning baseline performance of assets.



3

Use relevant clean data to be disruptive

75% of the clients interviewed stated that they have data misalignment between the fixed and physical asset registers, and **55%** have difficulty in making asset strategy and planning decisions due to lack of good data.



4

Unleash the real value of your asset

60% of the clients interviewed stated that they face unexpected write offs, and **65%** have difficulty to accurately value assets and lifecycle costs.

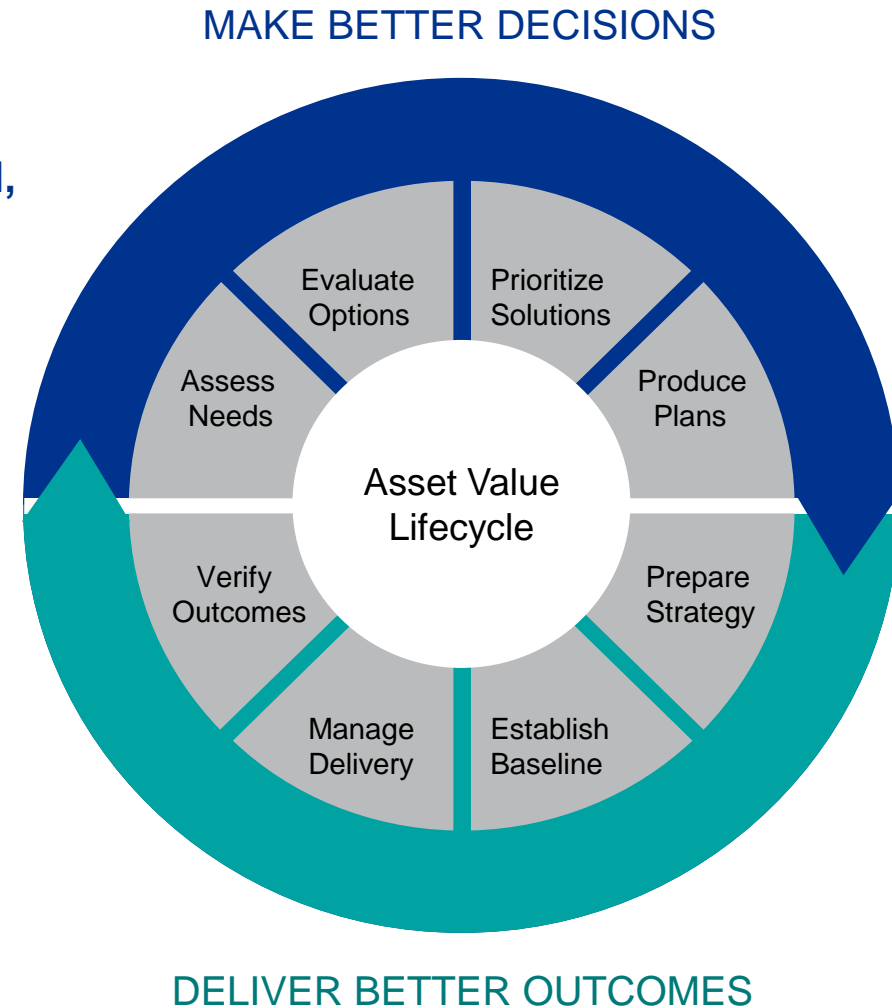
Asset Management Approach

To evaluate the options against strategic alignment, you need to have a vision of **“what good looks like”** and understand the value drivers to define the criteria and assess options. To help jumpstart the project, we have taken an initial view on this vision. We recommend that you **consider IT as both an enabler of the transformation and a functional area being transformed**



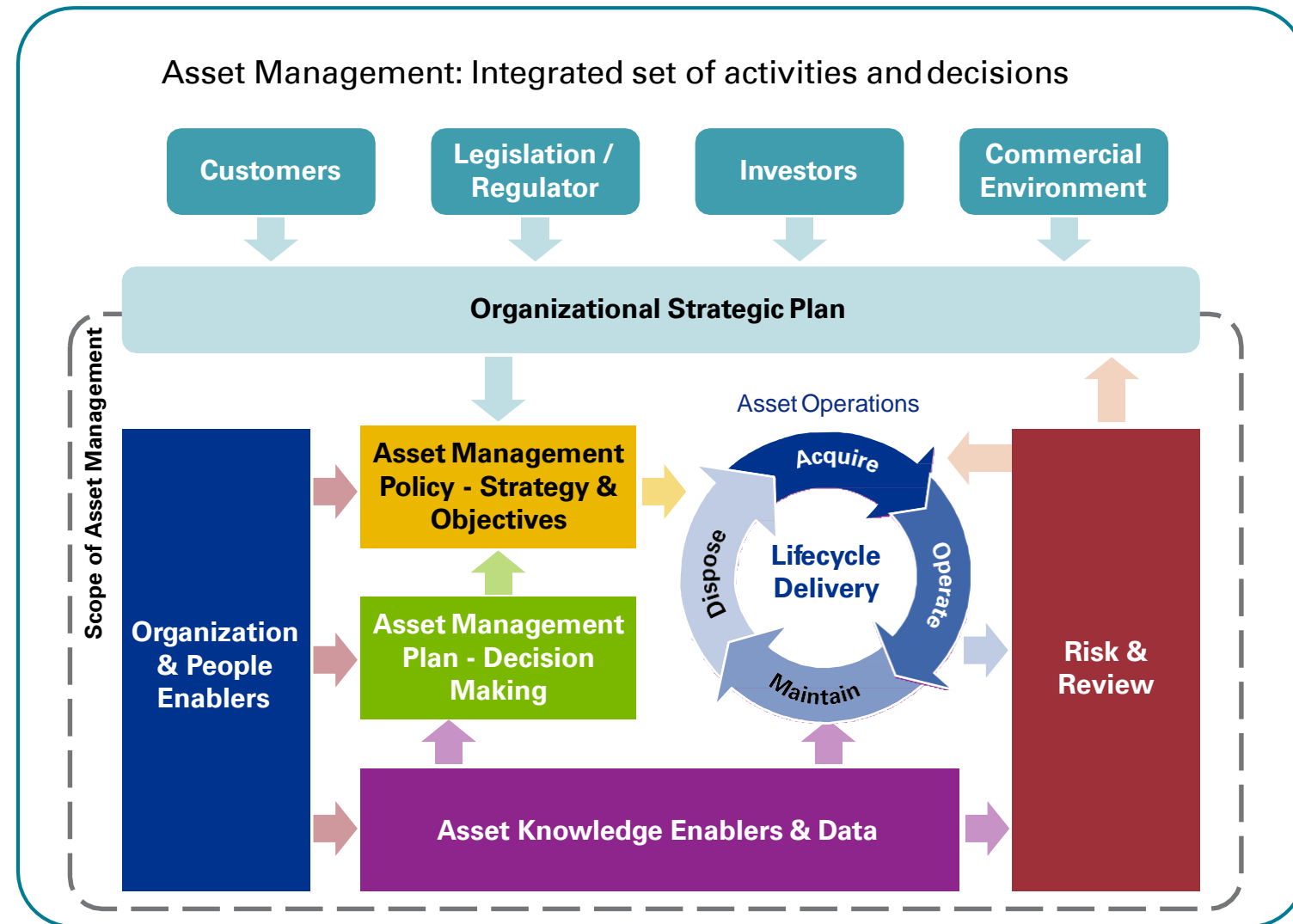
The Benefits of Asset Management

- **Accurate, timely and complete financial reporting**
- **Justify planned asset TOTEX to internal and external stakeholders**
- **Common taxonomy and understanding between operational, technical and financial areas**
- **Correct translation into financial accounts of asset changes on the field, including audit trail**
- **Transparent communication towards internal and external stakeholders**
- **Correct reporting towards regulator and authorities**
- **Link between financial and technical**
- **Improved asset decision making based upon real and consistent data**
- **Accurate Opex and Capex forecast for the next years**
- **Optimized maintenance and resource planning**
- **Gain insight and control over asset data, information and reporting**
- **Insight and control on asset related risks**



Overview of asset management system

Asset management best practices will help in identification of controls, governance, organizational structure, tools such as software systems, data integrations and others, or other elements need to be in place in order to achieve alignment of strategy, policies and procedures with ISO 55000 and achieve objectives of operational excellence



State of the Asset

Asset Management is founded on risk management principles. In an AM context, risks relate to the failure of asset to support service delivery requirements



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Risk Exposure

Likelihood of Failure

Consequences of Failure

Organizations can choose to accept a risk and whatever consequences that may occur as a result of failure, or manage the risk through the application of cost effective controls

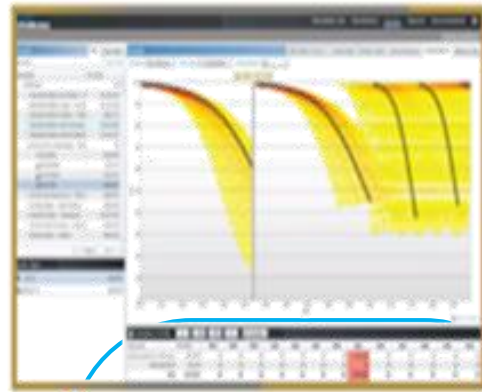
- The **likelihood of failure** is generally managed through asset replacement or renewal – in essence we are buying more ‘life’ – e.g. replacing a roof buys us another 30 – 40 years of service
- The **consequences of failure** is generally managed through the introduction of redundancies or operational controls – e.g. introducing a back-up generator can mitigate the risk of power outages

The Benefits of Asset Management

Organizations often use multiple technologies to support planning and decision making. While tools can help to streamline and facilitate the process, planning must be based on sound foundations and align with organizational needs.



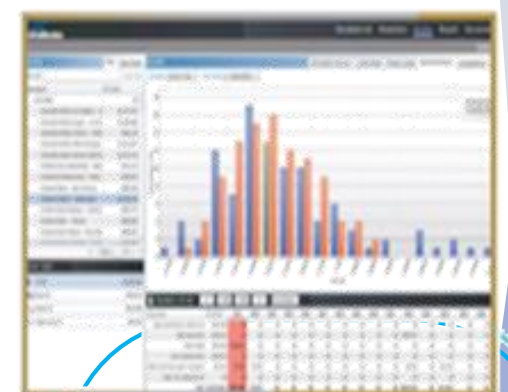
Organize and unify asset and lifecycle data



Assess lifecycle intervention requirements



Model strategies and scenarios



Generate financial and risk profiles

Harvey Nash/KPMG CIO Survey, KPMG Surveys & Thought Leadership

Infrastructure Assets globally undergoing rapid environmental change:

- Aging Infrastructure
- Socio-demographic stresses
- Enhanced regulation, accountability
- Safety compliances
- Disruption to business models
- Technology Disruptions

Impacts are Global, cross-industry & sector, and have the potential to alter the way businesses operate

Business Sector Demands

- **P&U** : Increased regulatory, safety compliances, cost pressures require higher performance standards to be adopted & implemented
- **Roads & Highways**: Prioritized maintenance spending for asset efficiency – congestion reduction, travel speed, Aged Infra management
- **Mobility**: Fleet management (Electric vehicles), MaaS, Avs
- **Cities** : Aging Infrastructure, Energy Efficiency, Space optimization, Socio- demographic expansion pressure

Business solutions being considered:

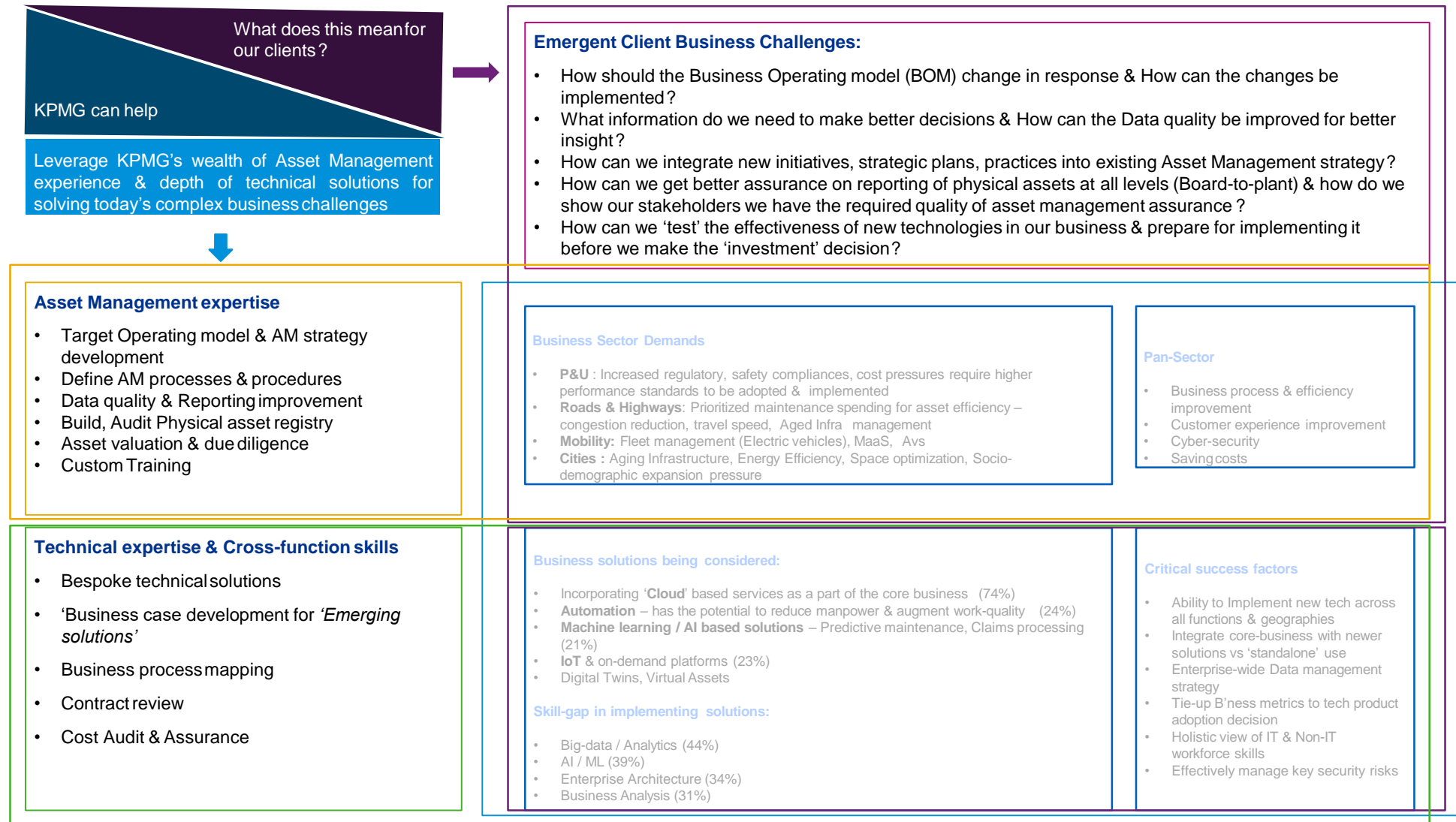
- Incorporating '**Cloud**' based services as a part of the core business (74%)
- **Automation** – has the potential to reduce manpower & augment work-quality (24%)
- **Machine learning / AI based solutions** – Predictive maintenance, Claims processing (21%)
- **IoT** & on-demand platforms (23%)
- Digital Twins, Virtual Assets

Skill-gap in implementing solutions:

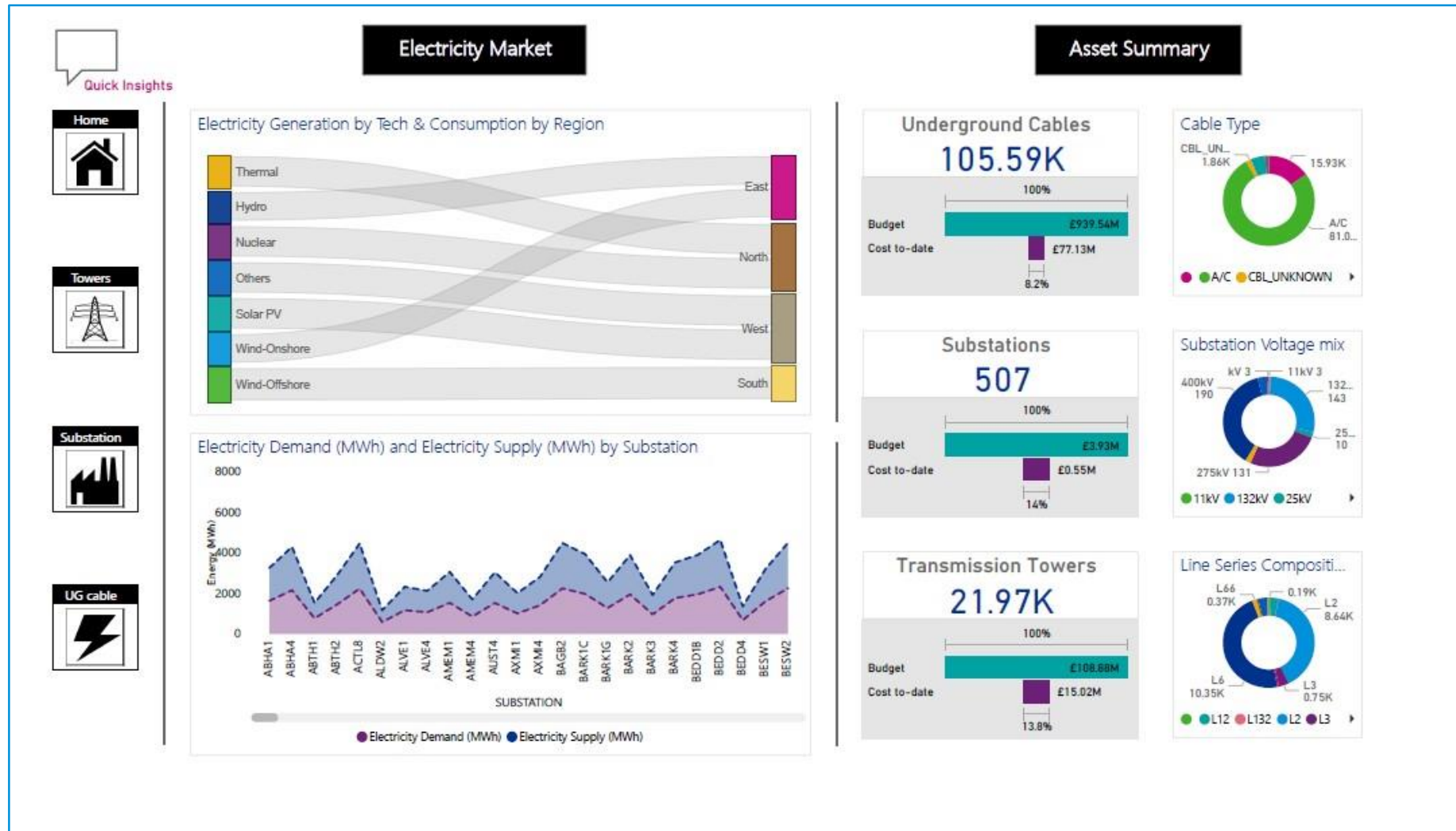
- Big-data / Analytics (44%)
- AI / ML (39%)
- Enterprise Architecture (34%)
- Business Analysis (31%)

* 2018, 2019 HN-KPMG CIO survey

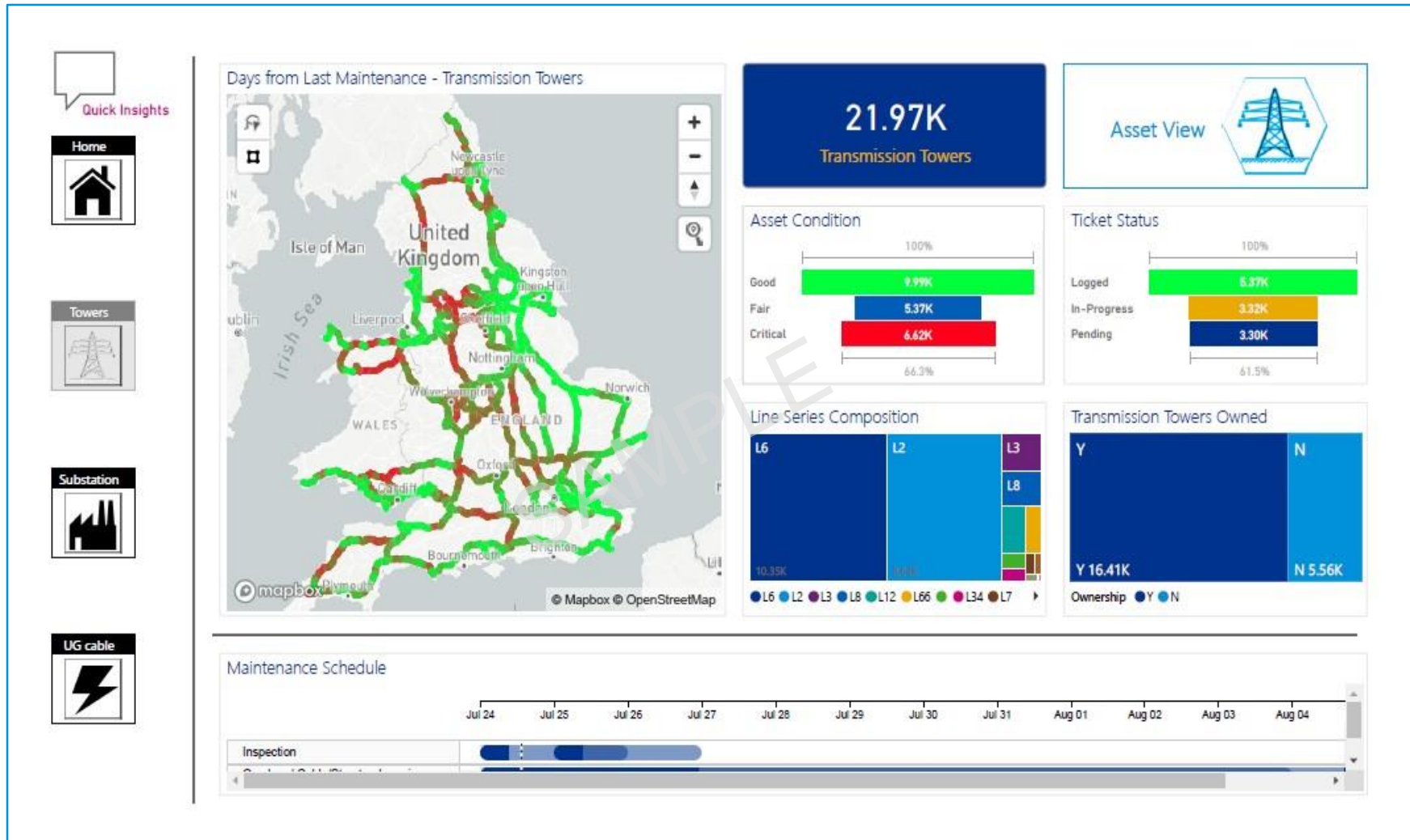
Traditional Asset Management Philosophy + New Age Solutions



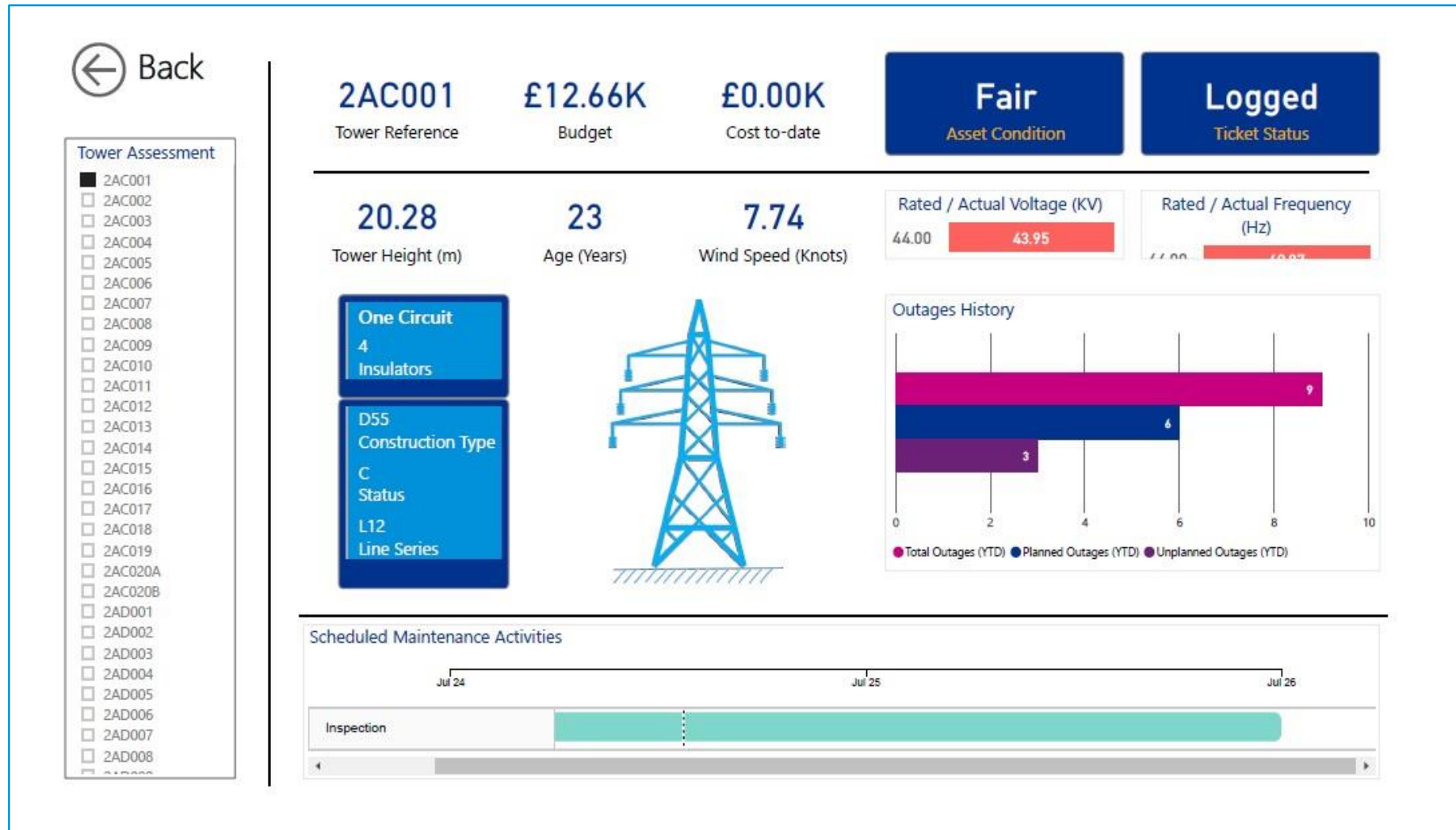
Benefits of the Technology in Asset Management



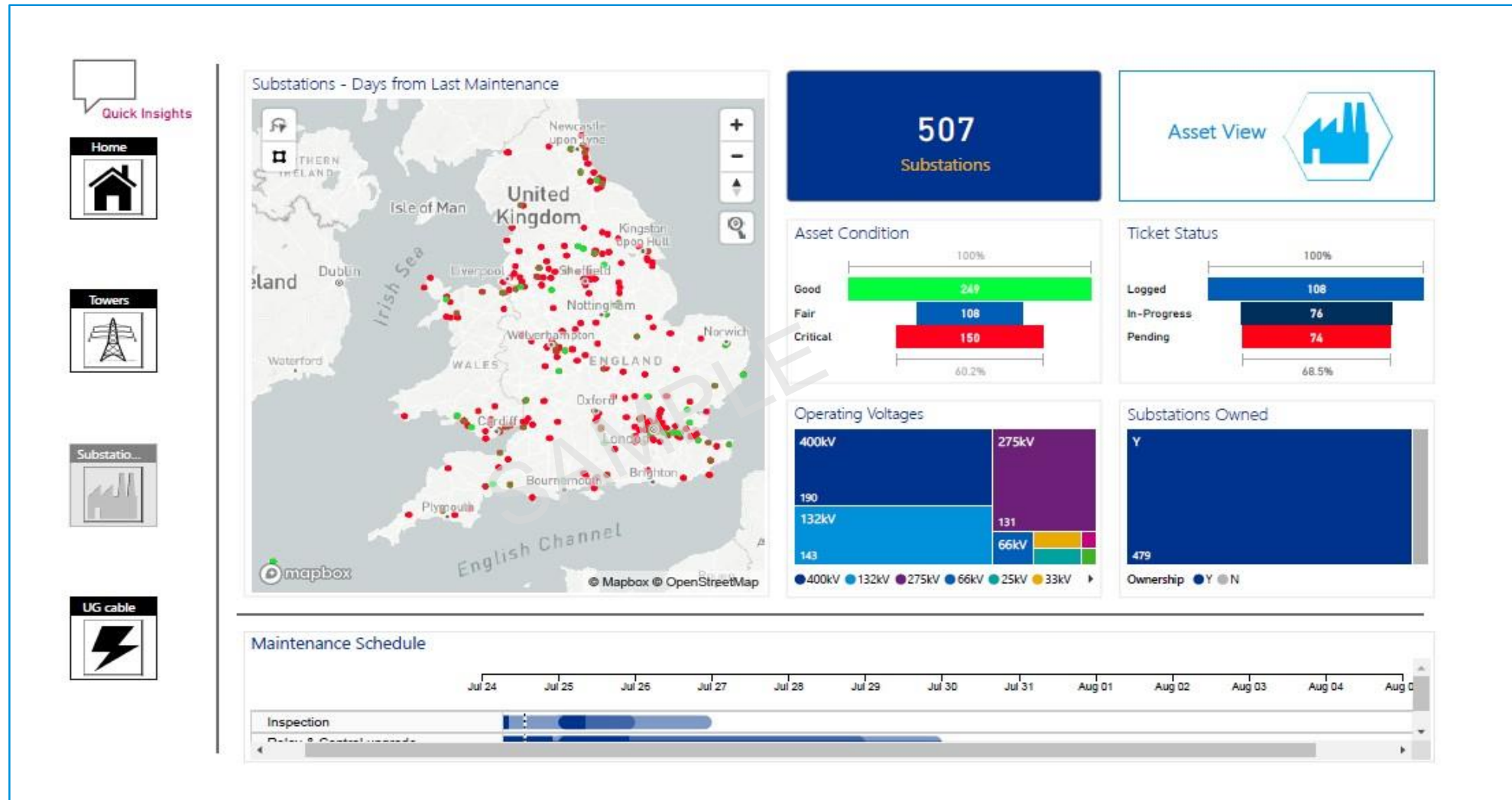
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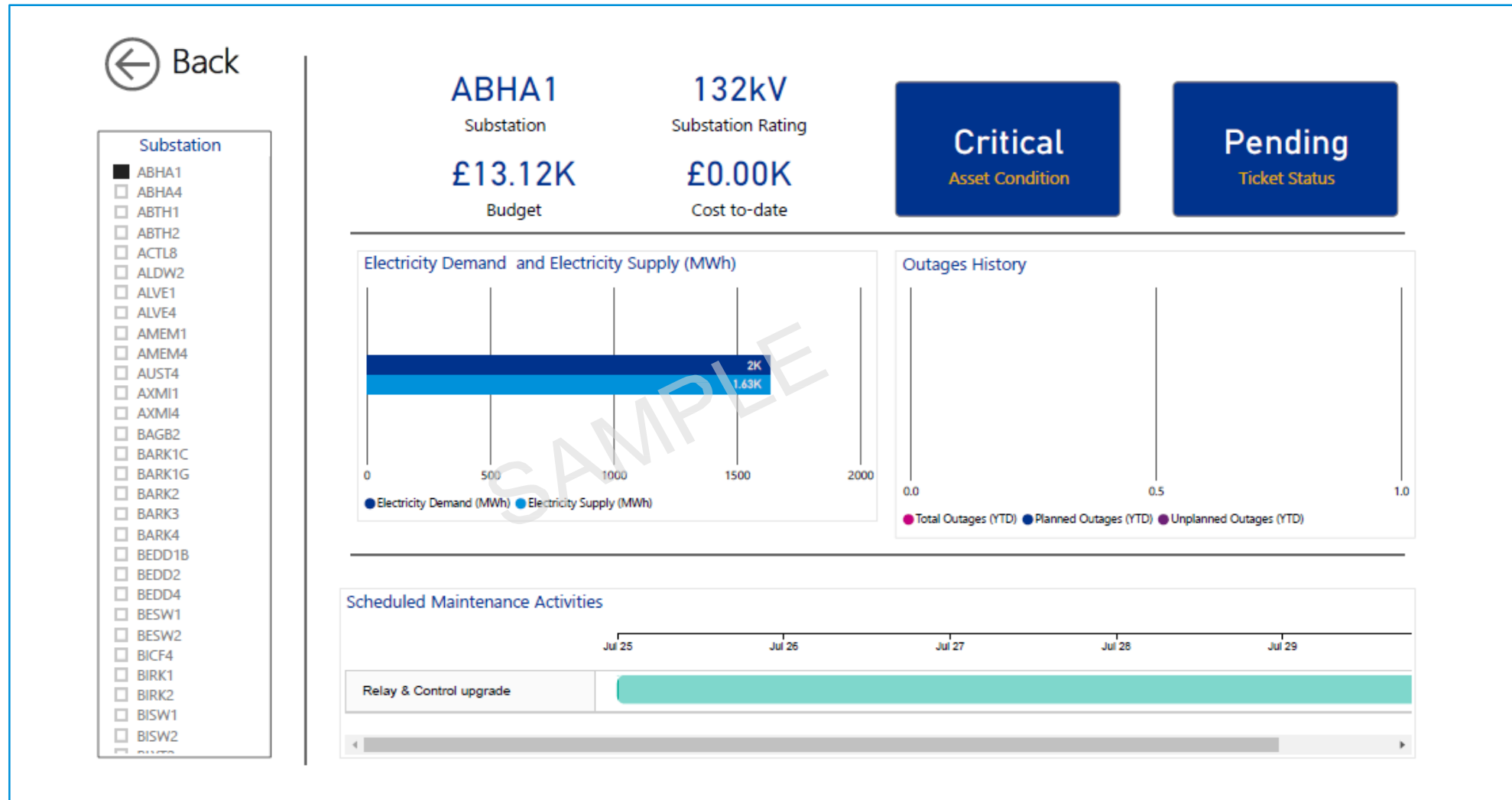
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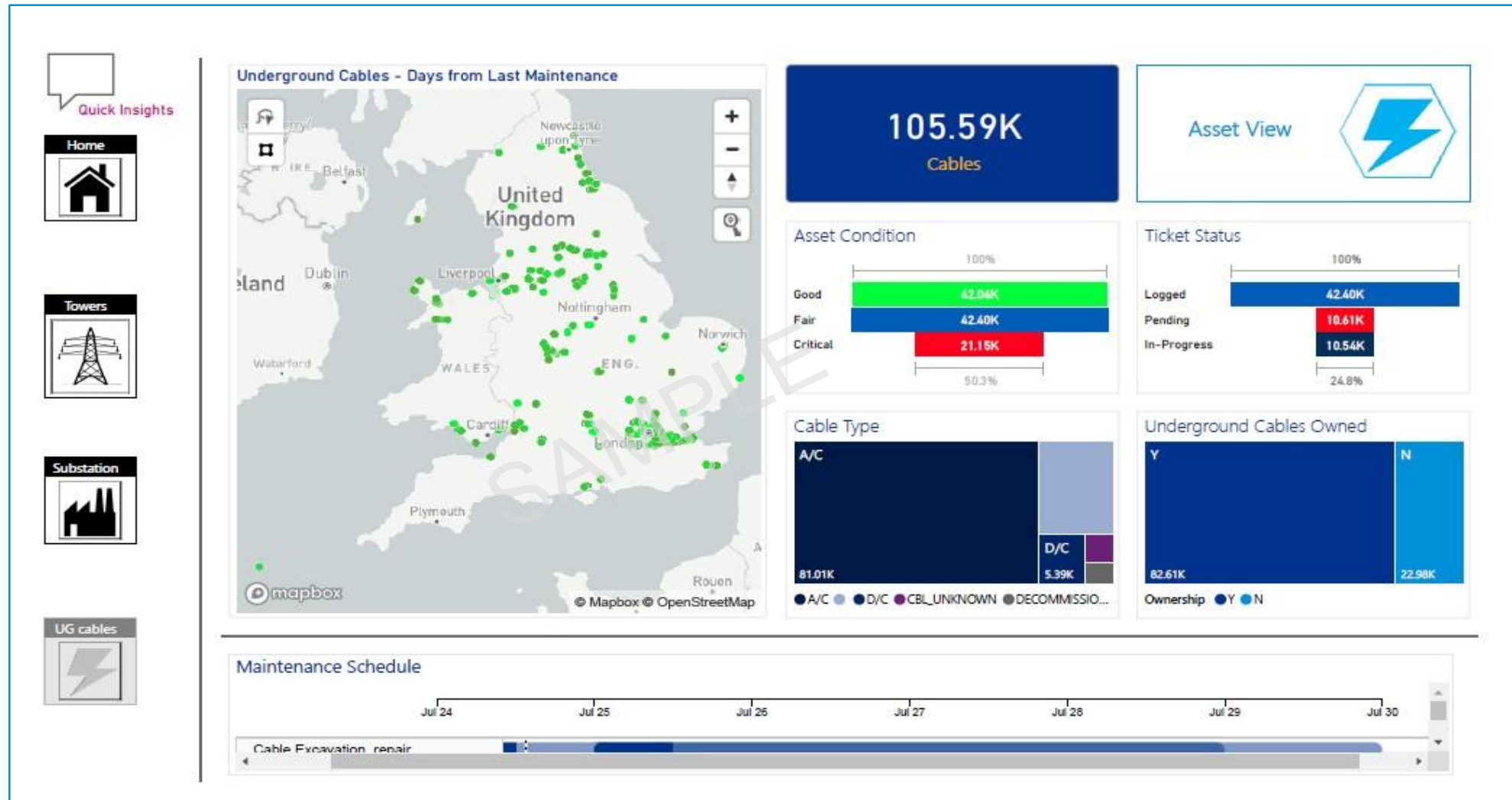
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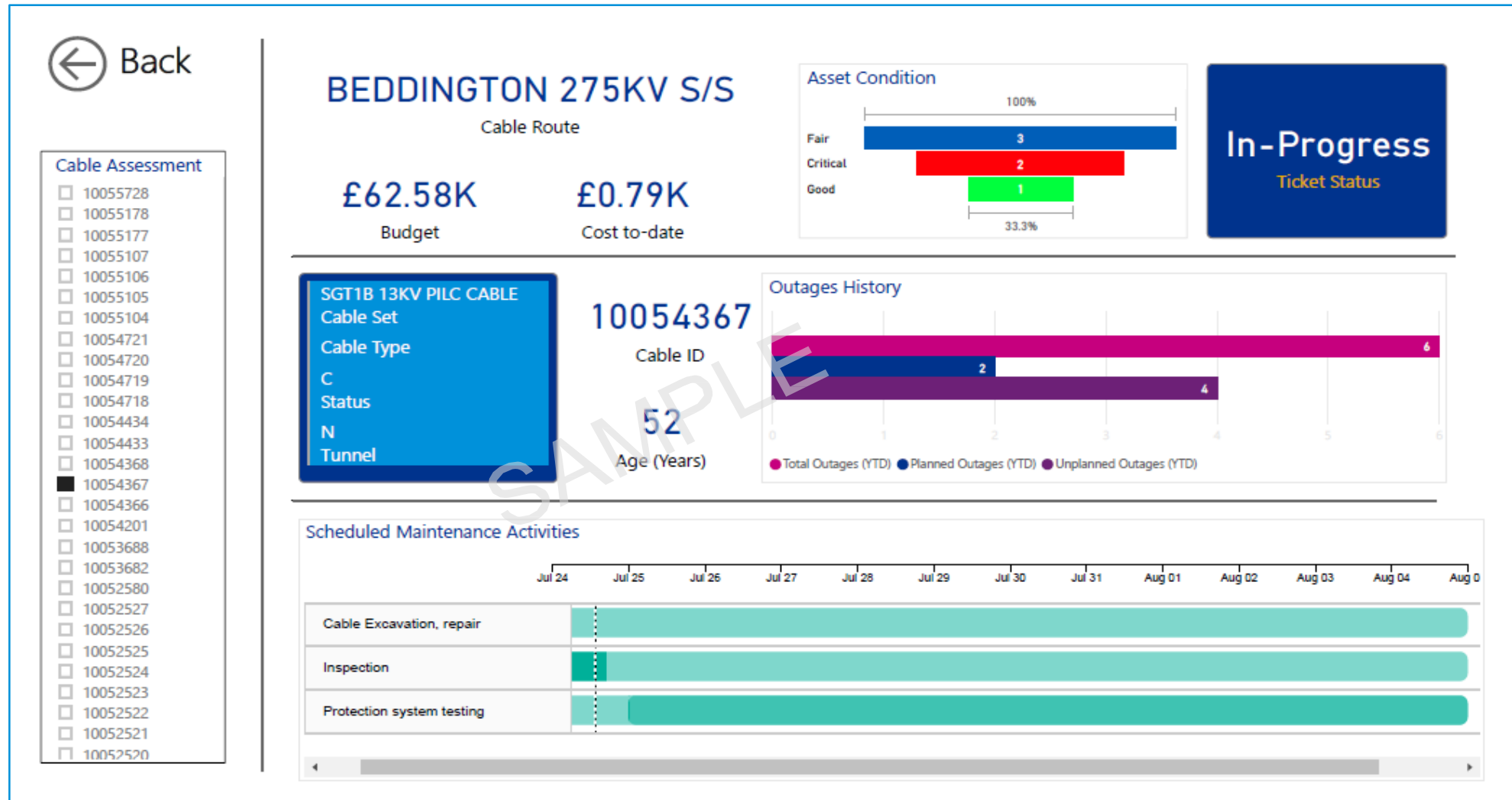
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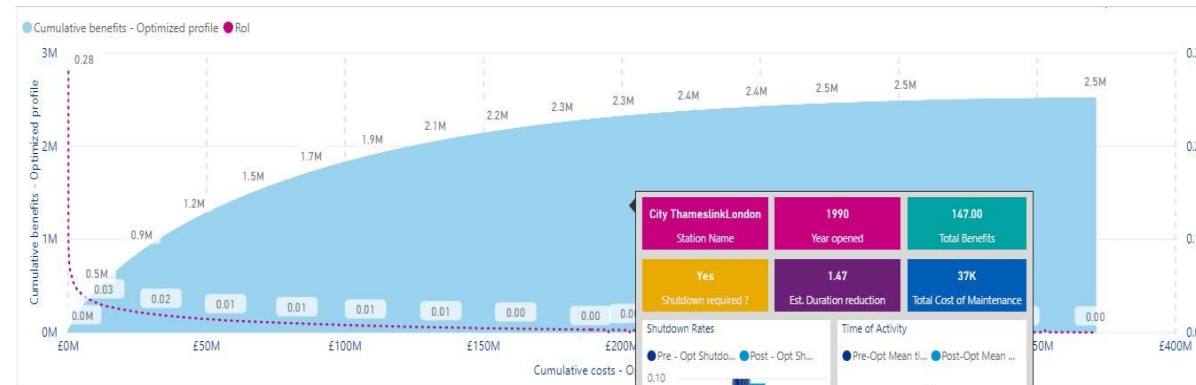
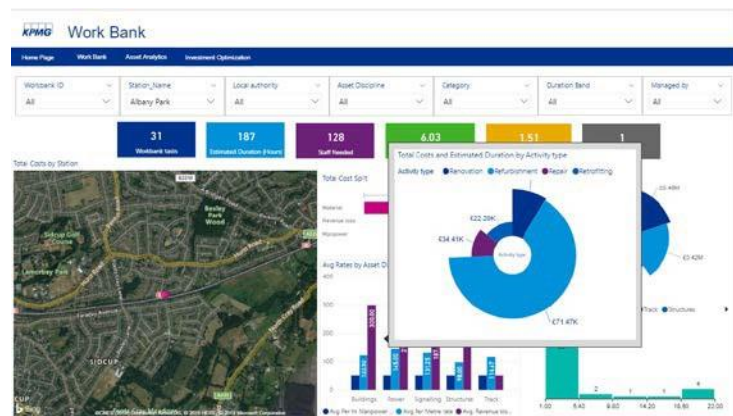
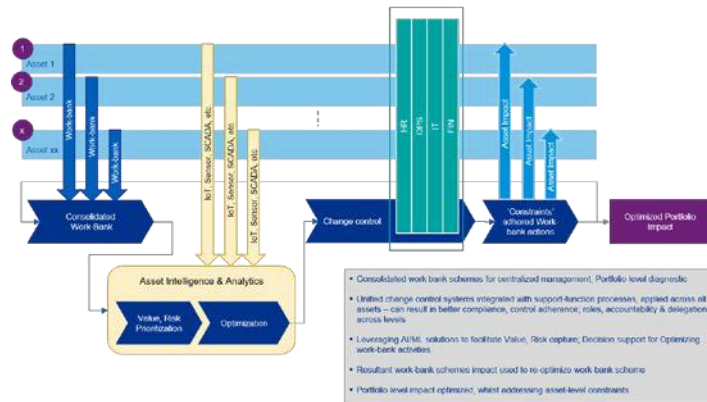


Benefits of the Technology - Portfolio Optimization

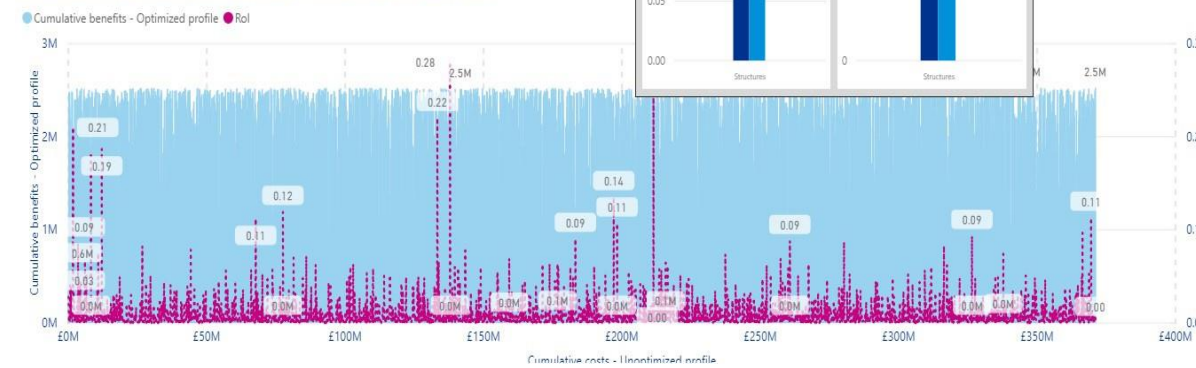
Business Context

The choice of undertaking which capex activity, O&M activity, and in what order determines the Investment prioritization plan in the Asset Management Strategy. This requires development of a 'value function' that captures Return on Investment, Upfront costs, Risks, Opportunity costs and benefits. To provide efficiency, status updates to the 'Board' can trigger business processes like Invoice payments, Contract checking, sending emails, updating records, etc. Using AI/ML, the value function & business processes can be enhanced

The Proposed approach



Cumulative benefits - Optimized profile and Rol by Cumulative costs - Unoptimized profile

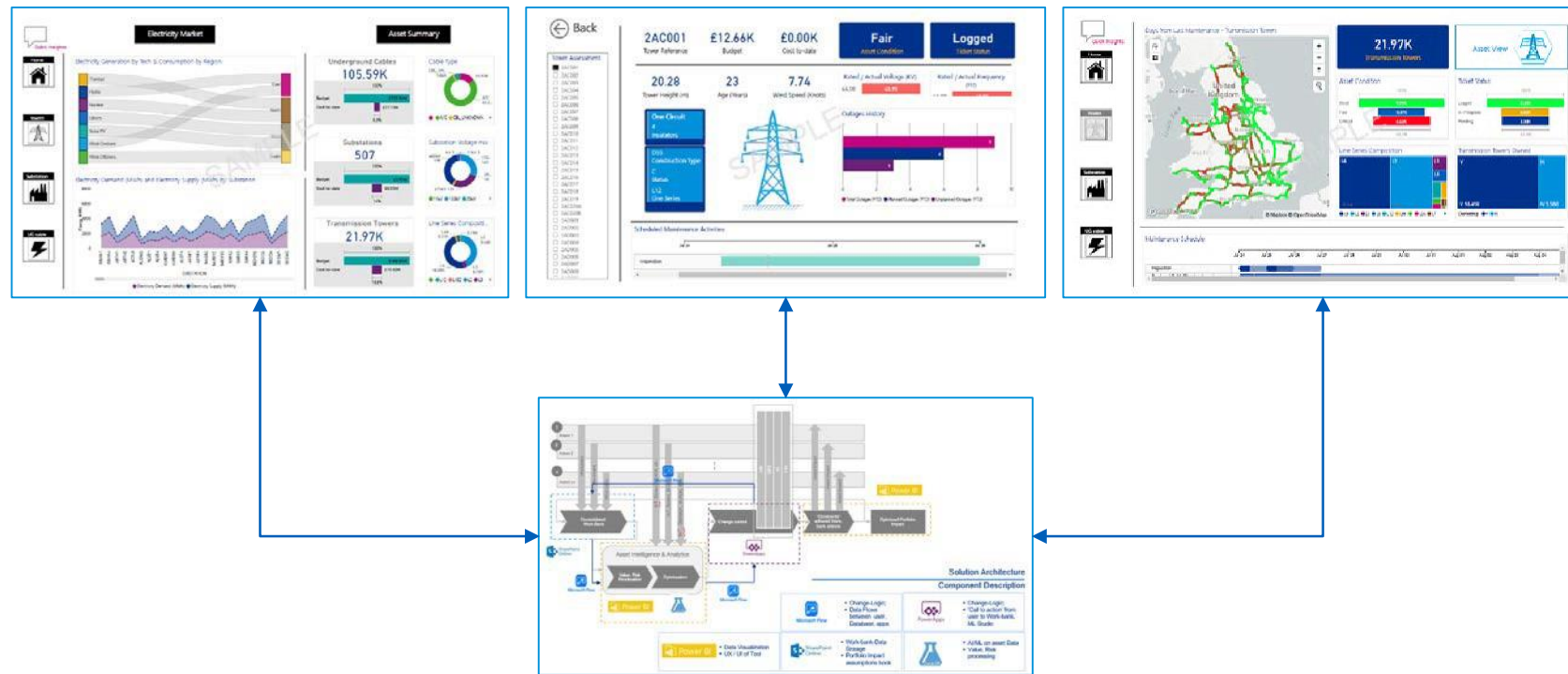


Benefits of the Technology in Asset Management

Business Context

Assets today have variety, volume & velocity in their Data. Different stakeholders monitor different aspects of the business. A single 'view-of-truth' around asset data, with multiple data-views, compatible with Desktop & Mobile environments, can help real-time monitoring and decision making. Integration with Data & Work-flow management technologies can allow decision makers to view and act on Data in real-time

Visualization

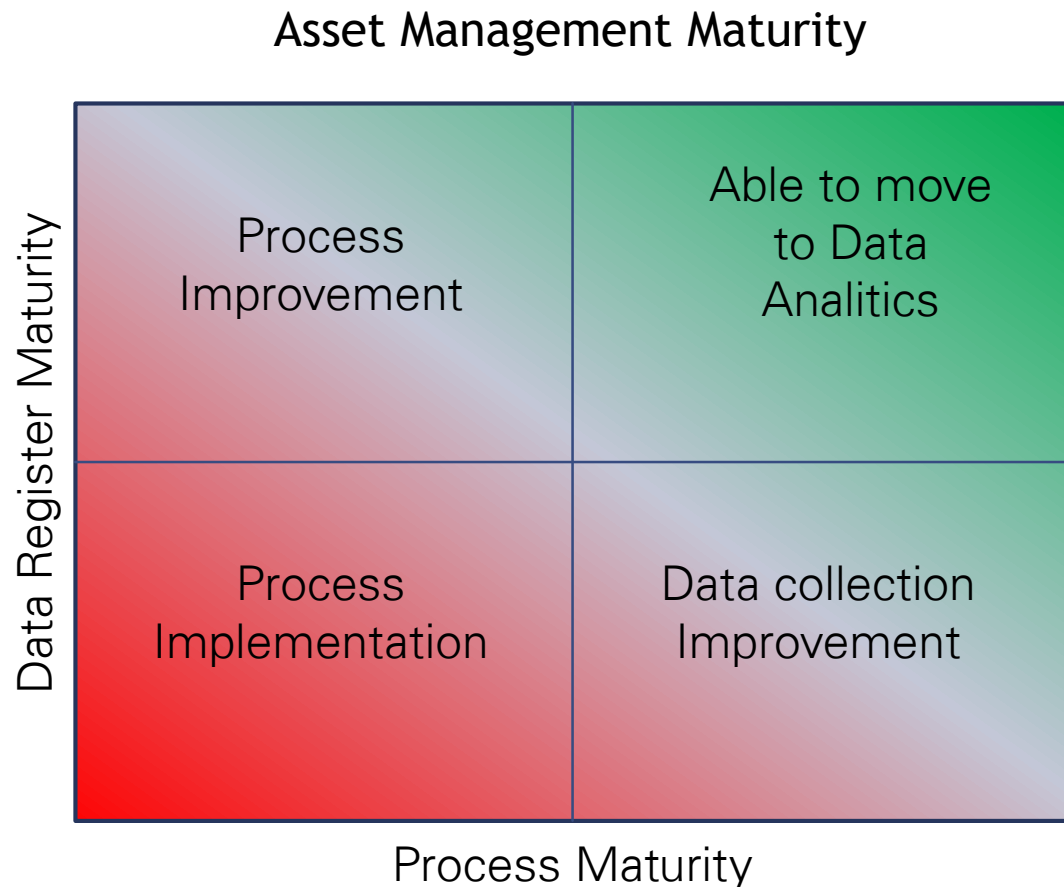


Change control

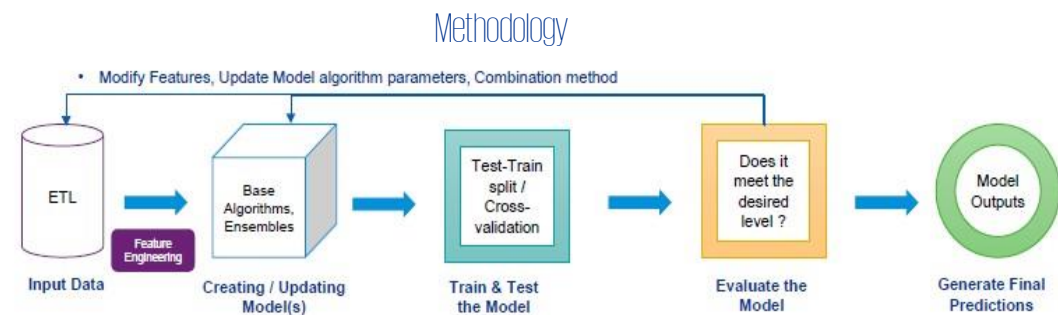
Visualization and Analysis



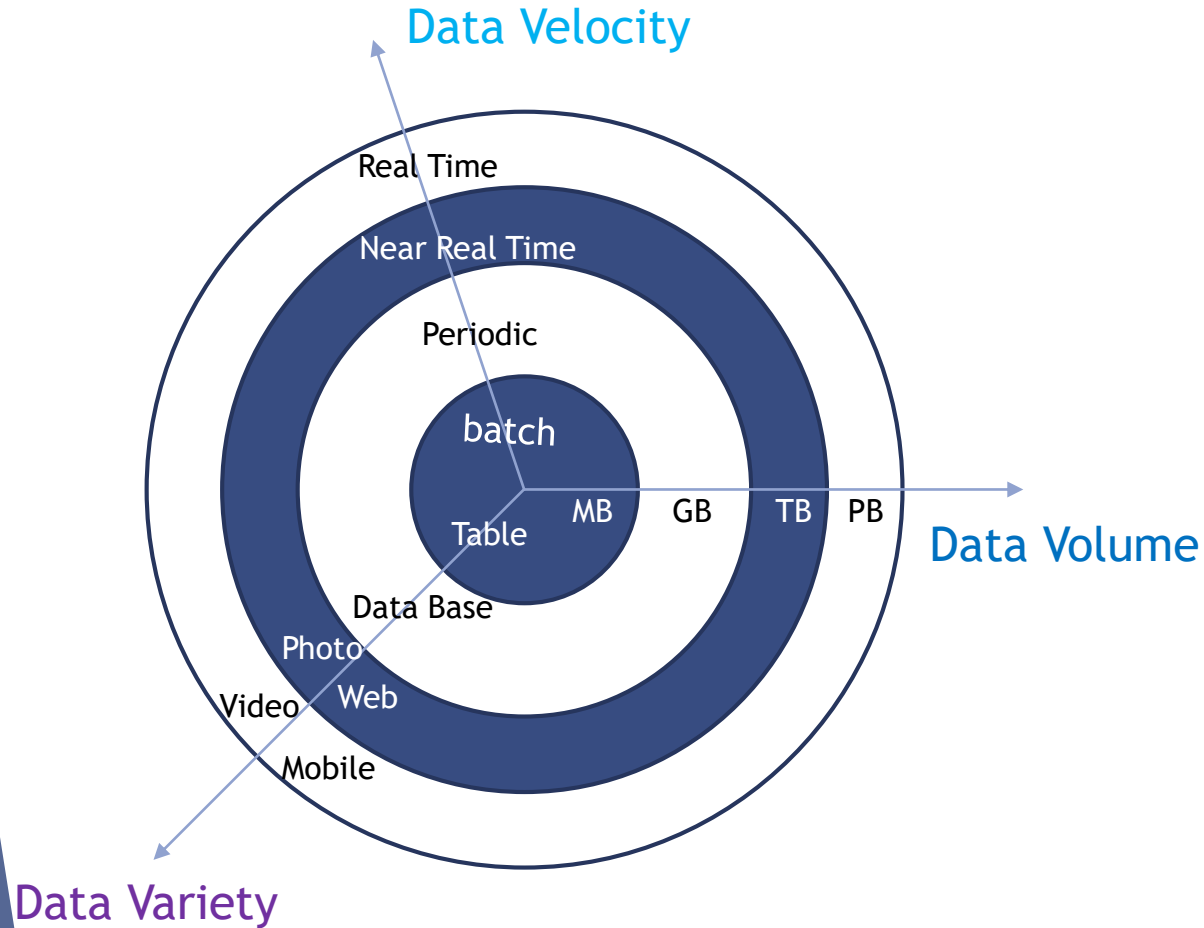
Considerations - Every Company can move on to technology at same time?



- The implementation of the use of technology has to be step-by-step
- The company have to have the Asset Management methodology implemented
- At least consider ISO 55000, methodology, procedures and practices
- The governance procedures are so important as a other disciplines
- People are the key
- Data security



Conclusions



- Asset Management is a decision making process
- The decisions are making with information not with data
- Half information means half decision
- Asset Management is not maintenance costs
- Be careful how are we treating the data that come from the field?
- Be careful to not get lost in the data volume
- Methodology is fundamental
- The profile of the professional are changing: less data treatment, more data analysis
- People are the key

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Perguntas

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