

Smart Utility

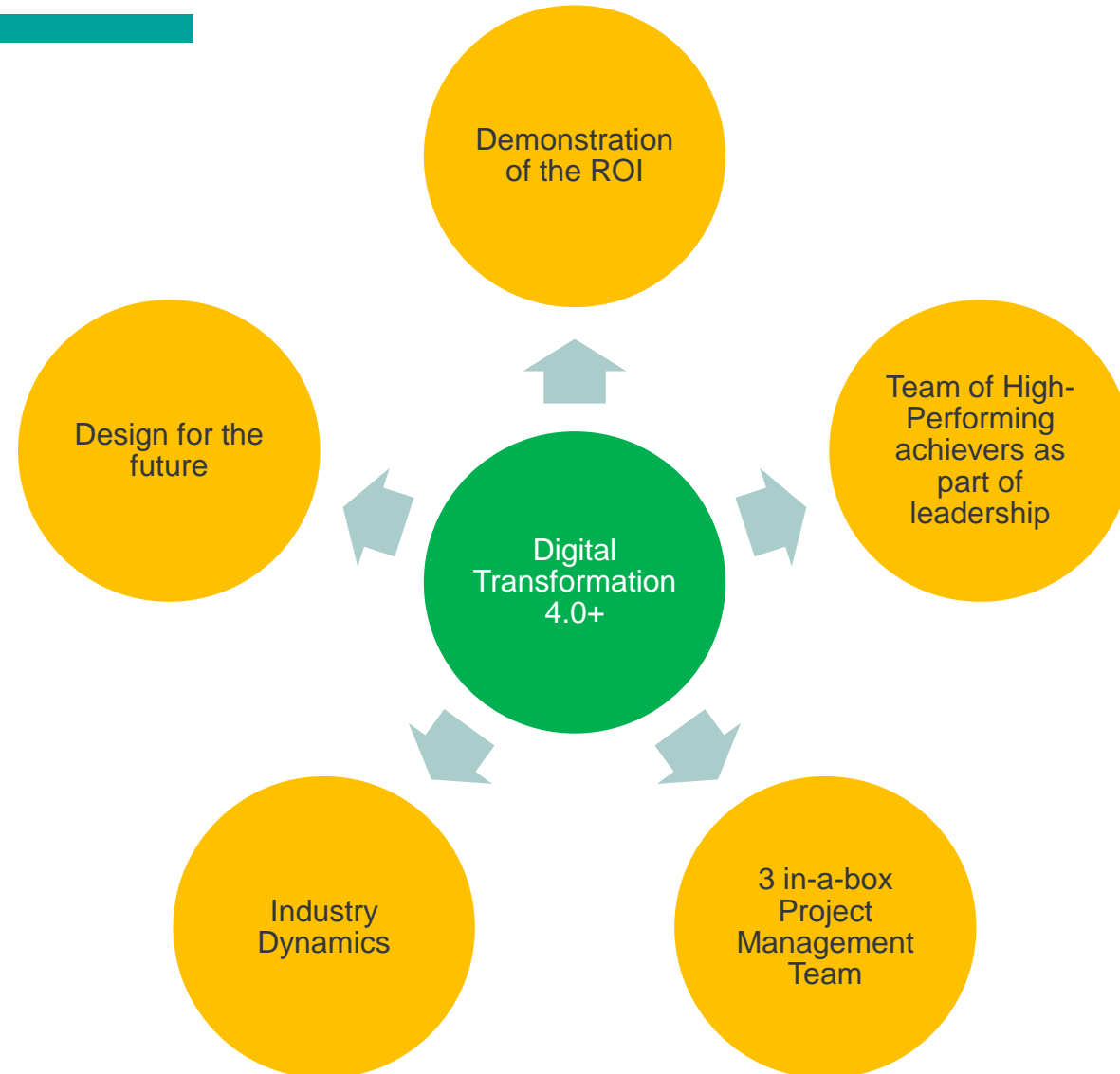
PERFORMATICA
STRATEGY · OPERATIONS · TECHNOLOGY · ALLIANCES



About Us

Performatica LLC provides professional advisory services including Strategic Planning, Operations Management, Technology Transformations and Digital Platform Alliances in select industry verticals such as Energy & Sustainability, Power & Renewables, Manufacturing & Industrials, Transportation & Logistics, Healthcare

Management + Technology Consulting



Our Advantage



Consulting+
Technology solutions
team from Fortune
500 and Tier I
IT/ITES Firms

Members from
consulting,
technology and
operations provide
an **all-inclusive
perspective at an
engagement level**



**Design thinking
and Change
Management** at the
core of any proposed
solution

Leveraging **low-
code/no-code
platforms for MVPs**
as part of our
engagements



Key Services

Transformation Strategy

Baseline Transformation KPIs - Map to enterprise goals and functional/department KPIs

Platform Architecture and Analysis

Identify and validate technology tools for the program. Feature configuration, infrastructure, security and scalable architecture

Center of Excellence (CoEs)

Identify and validate digital technology platform, process and services for the program. Feature configuration, infrastructure, security and architecture

Digital Solution Design & Development

Designing the Deployment pipeline from sandbox, dev, production and change management, software acceptance standards

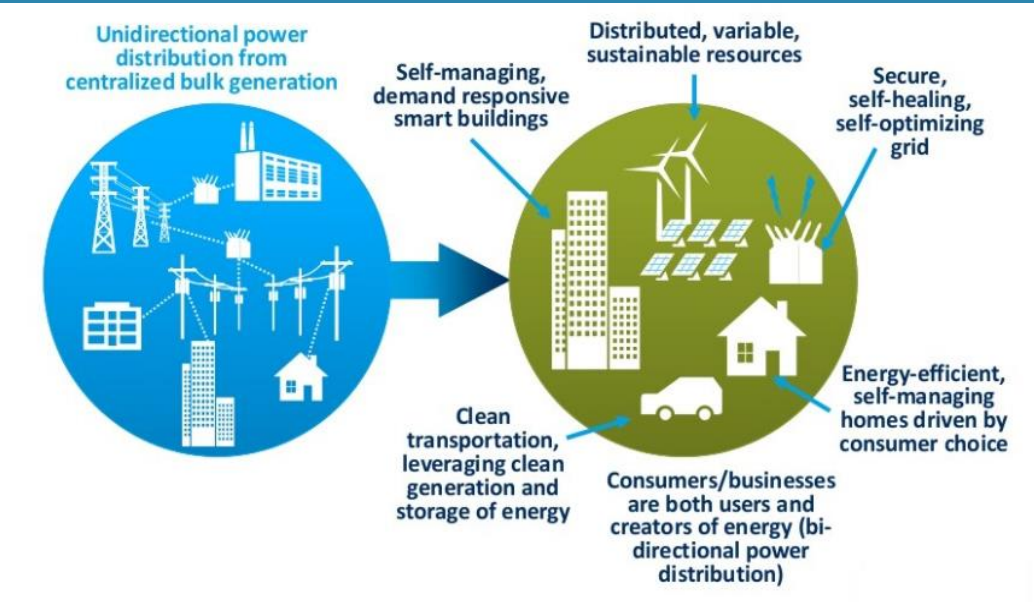
Service Experience Design to Deploy

To be Process design, RACI, SLA baselining, Data and reporting, Exceptions, Human-Bot interactions

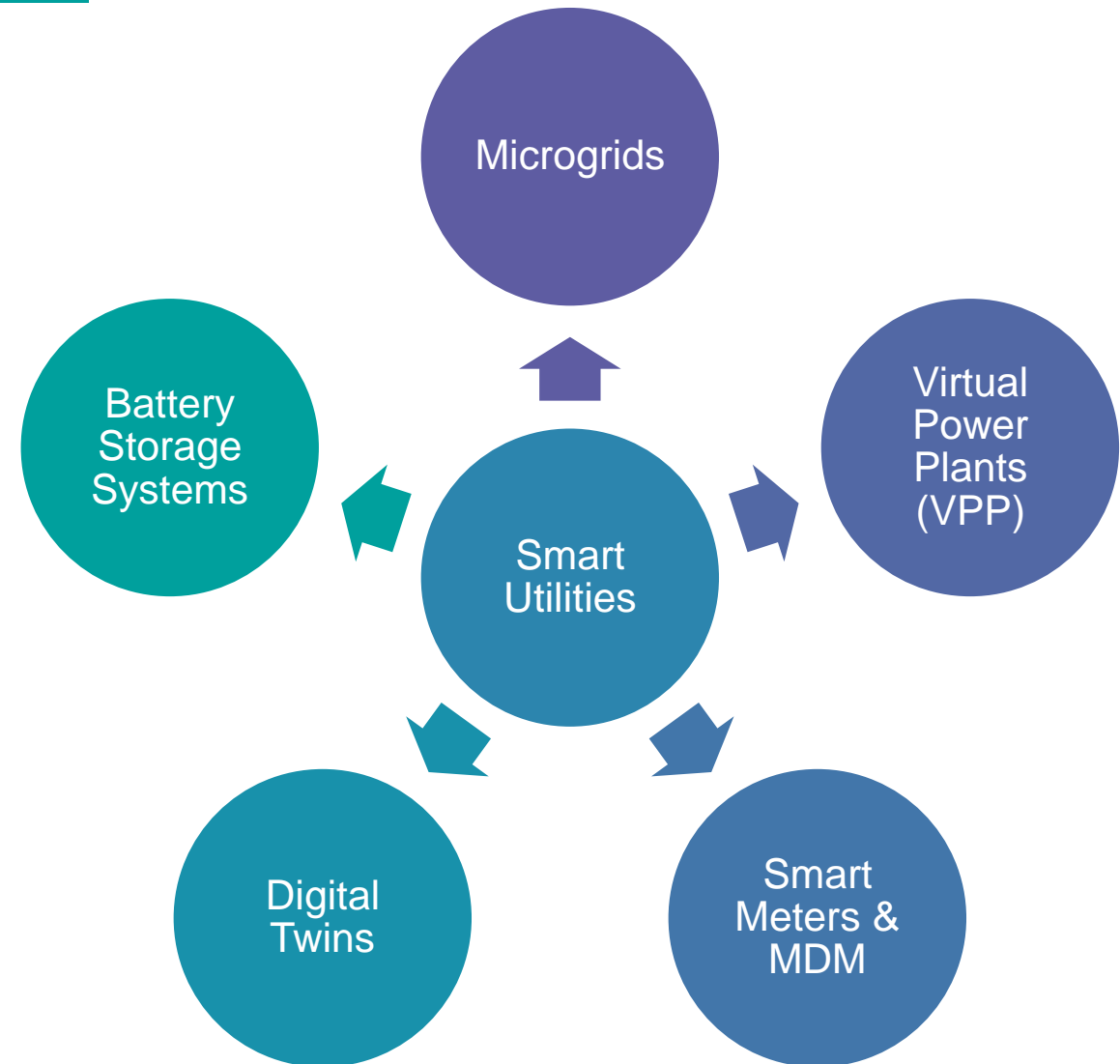
Business Process Reengineering

Lean process redesign, systems integration, continuous improvement metrics, tech strategy for change management

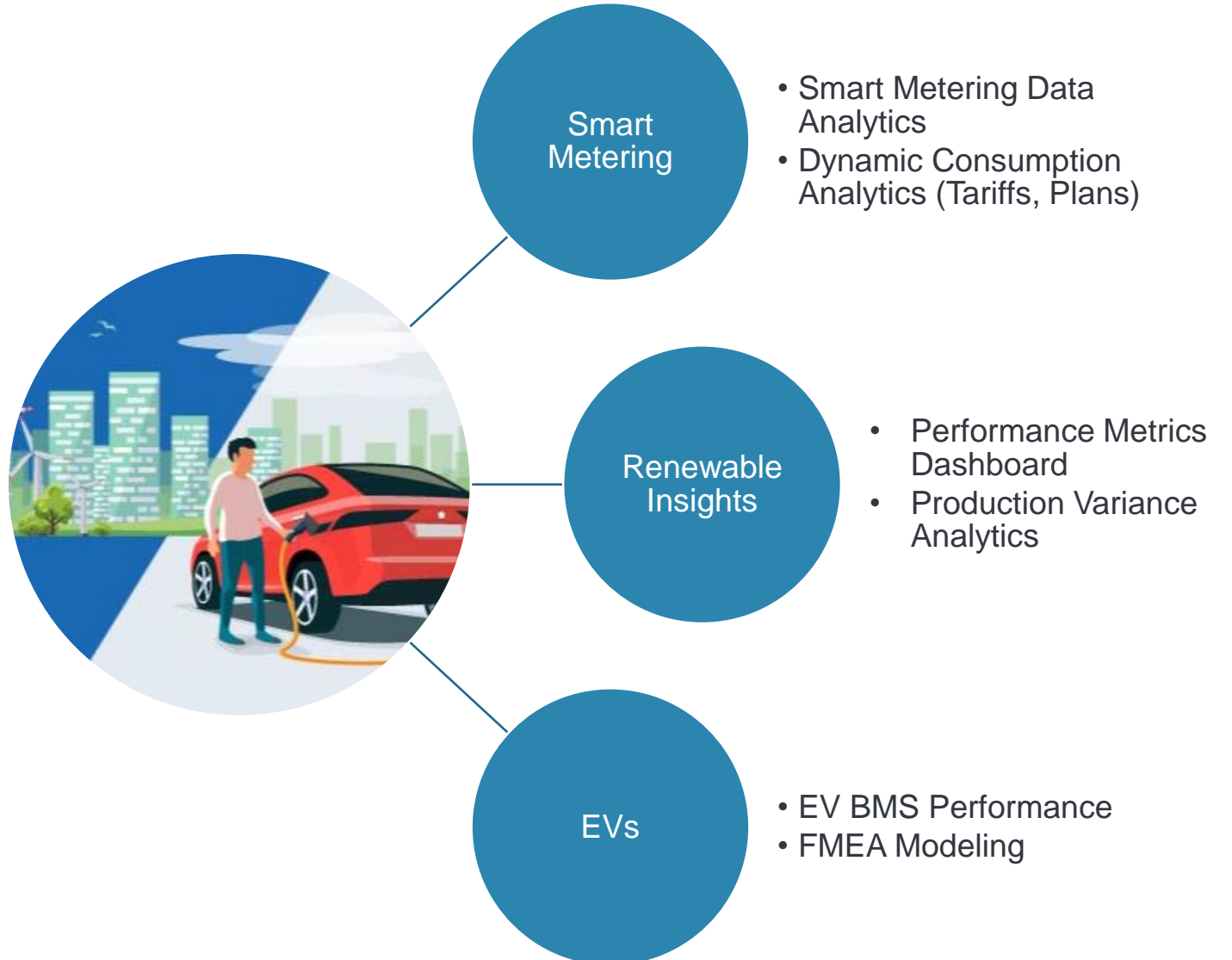
Our Focus Areas

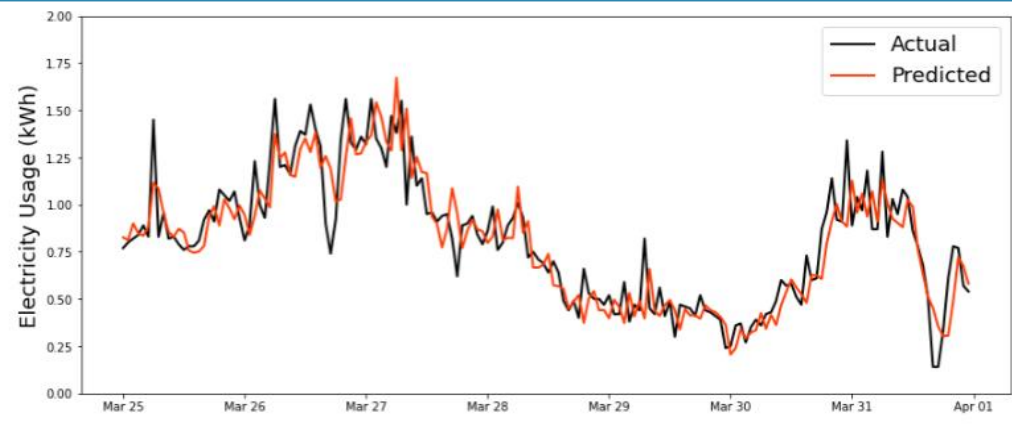


Reference - Black & Veatch
"The future of the utility business model"



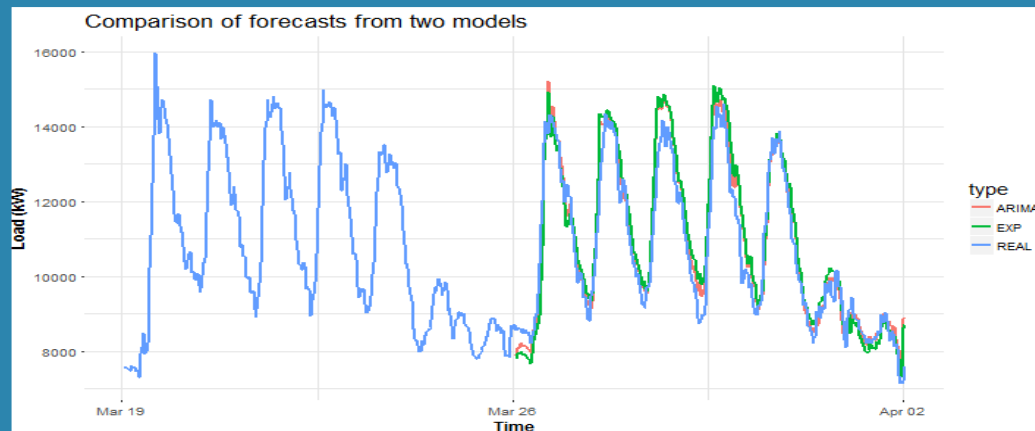
Analytics Use Cases





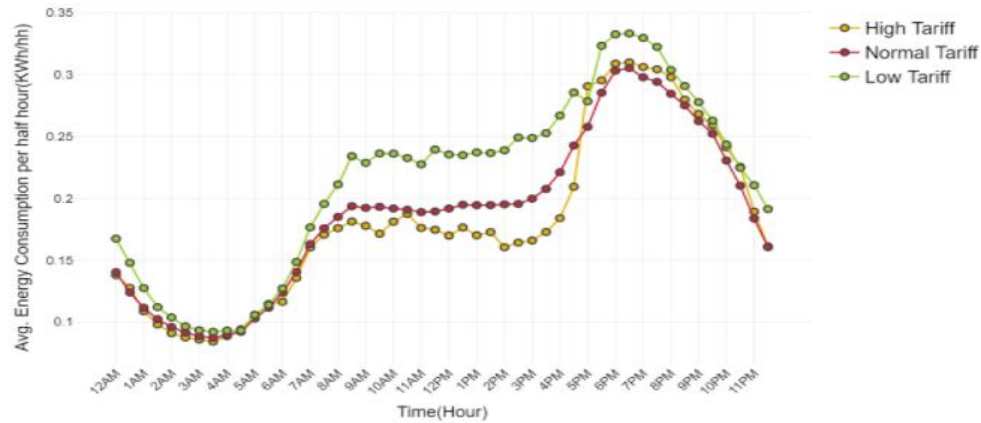
Smart Metering Data Analytics

- Analyze mean load by each of your customer industries
- Analyze daily/weekly/monthly seasonality's pattern for each of your customer industries
- Analyze the load/demand trends vis-à-vis the building size of your consumers
- Forecast the load/demand for each cluster of your consumers
- Generate daily/weekly/monthly profiles of aggregate consumption
- Energy consumption variations vis-à-vis temperature/applied tariff rates/tariff plans
- Prediction of residential electricity bill amounts



Dynamic Consumption Analytics

Half-hourly energy consumption by tariff rates



Tariff Rates & Plans Impact on Energy Consumption

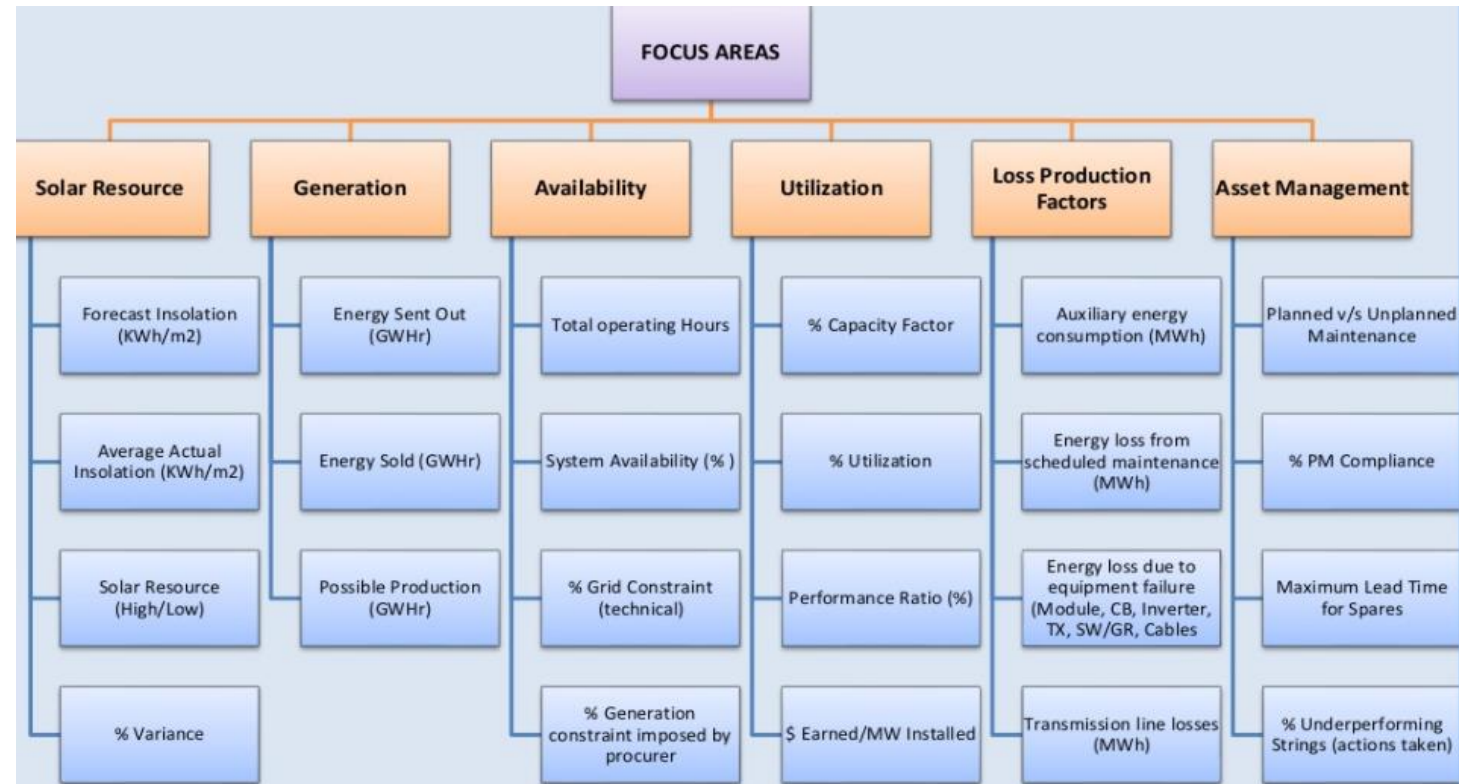
- Analyze energy consumption variation with respect to –
 - Temperature
 - Applied tariff rates
 - Different tariff plans(Std./DToU)
 - Customer segmentation/classification
- Different tariff plans were introduced in one of the key markets in Europe to reduce overall energy consumption.
- Dynamic Time of Use (DToU) plan provided users with different tariff rates(high/normal/low prices) so that subscribers could effectively plan their energy usage, thereby, reducing their overall consumption.

Temperature vs mean energy consumption



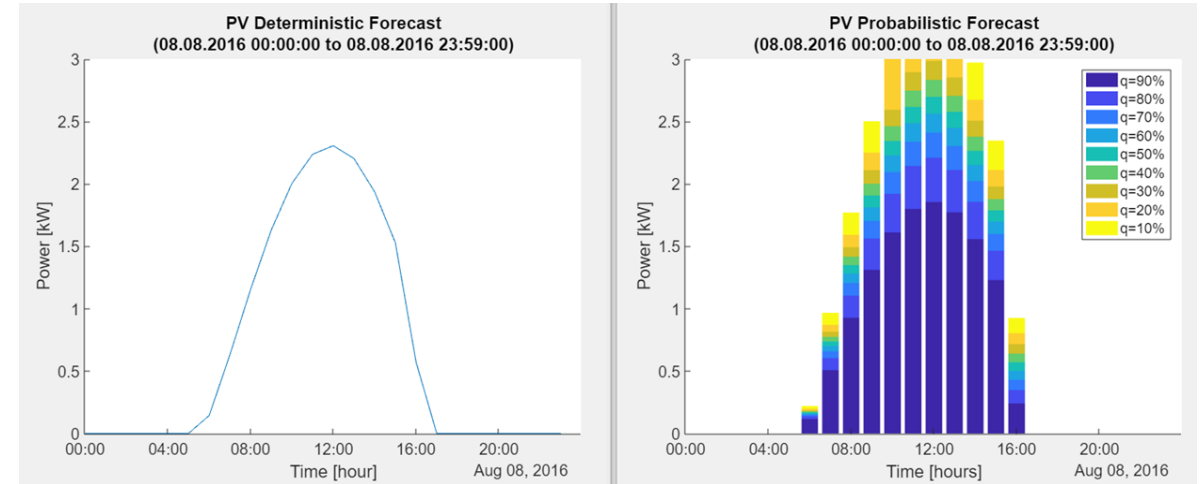
Performance Metrics for Renewable Plants

- **On-demand Performance Analysis:** Our APIs provides preventive maintenance as well as reducing downtime for solar panels and other components
- **Improved Resource Lifecycle:** Our platform helps in the reliability of solar assets and other related resources. Predicting maintenance issues before breakdowns occur helps to reduce maintenance costs.
- **24x7 Monitoring:** Our platform helps in tracking where energy assets are located within a given space
- **Risk Profile Management:** Assessments of different conditions help provide a risk prognosis in various areas, including product creation, logistics, marketplace reputation, and maintenance of the plant and its assets.
- **Continuous Improvements :** The insights provided help improve product quality and enhance performance of the plants and its assets.

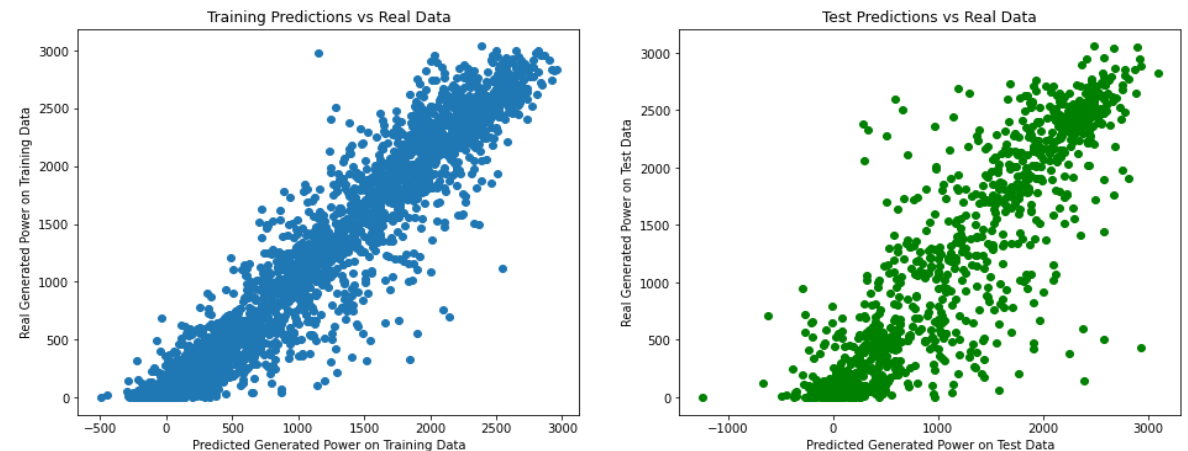


Production Variance Analytics

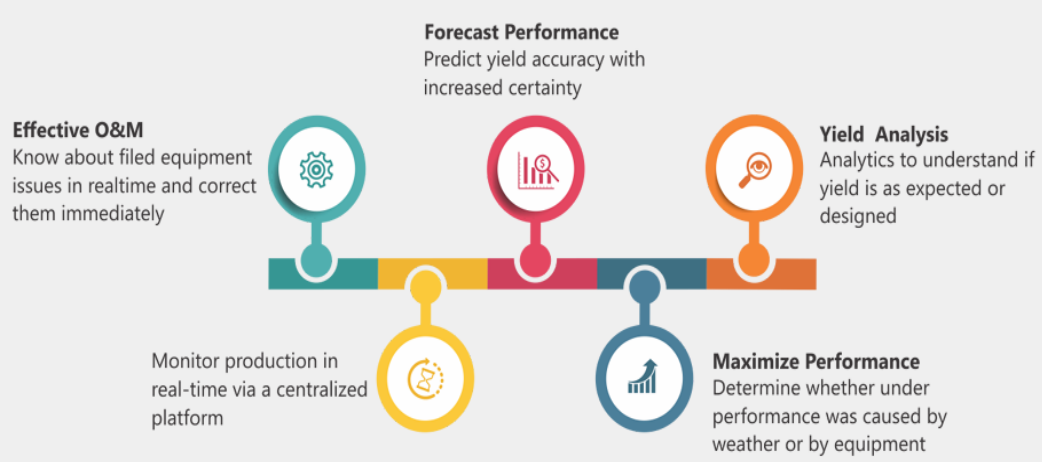
Probabilistic Prediction for PV Systems



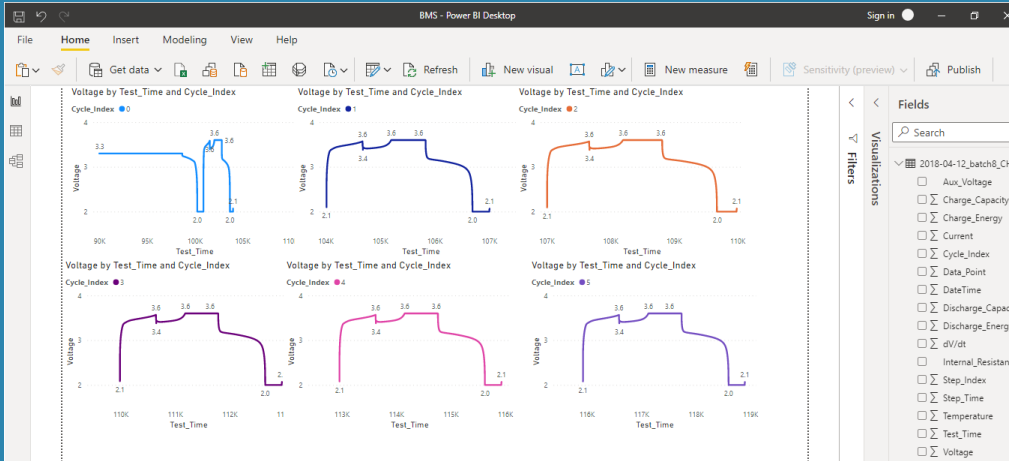
Power Generation Prediction on Training & Test data



O&M, Production, Performance and Yield Use Cases



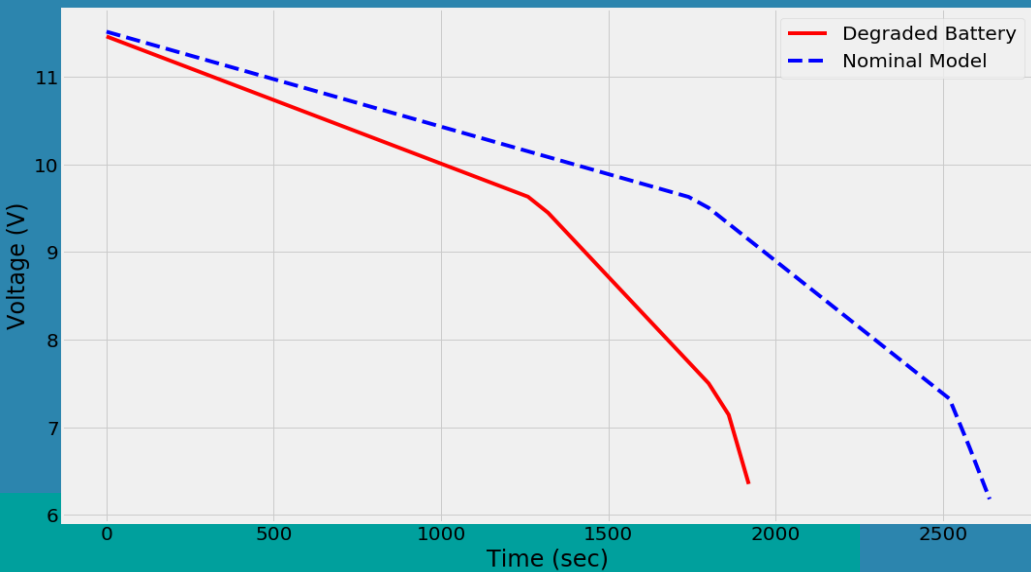
EV's Battery Performance Analytics



EV's Battery Performance Analytics

Solution to monitor and predict battery life, degradation and failure signals.

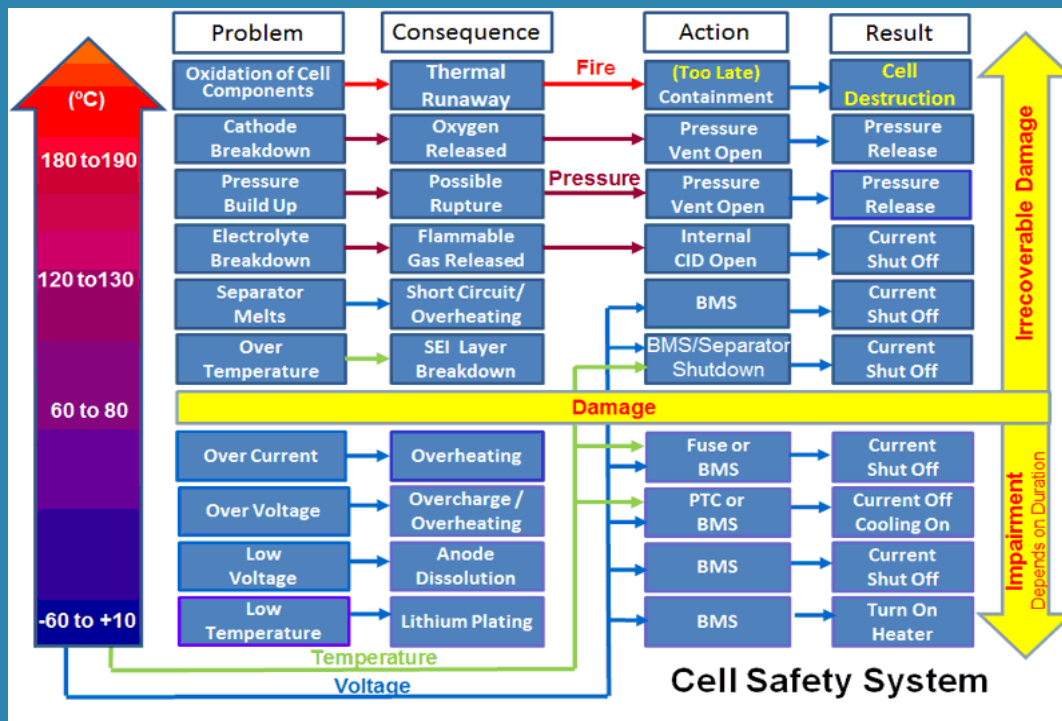
- Applies the AI/ML models for the typical degradation in cell potential, across charge-discharge cycles, for the same current discharge
- It displays the Cell Potential Vs Time and shows the impact of Degradation per Cycle
- Provides flexibility for end users to at least see the performance prediction by using 10+ models and perform their very own "What-If" analysis



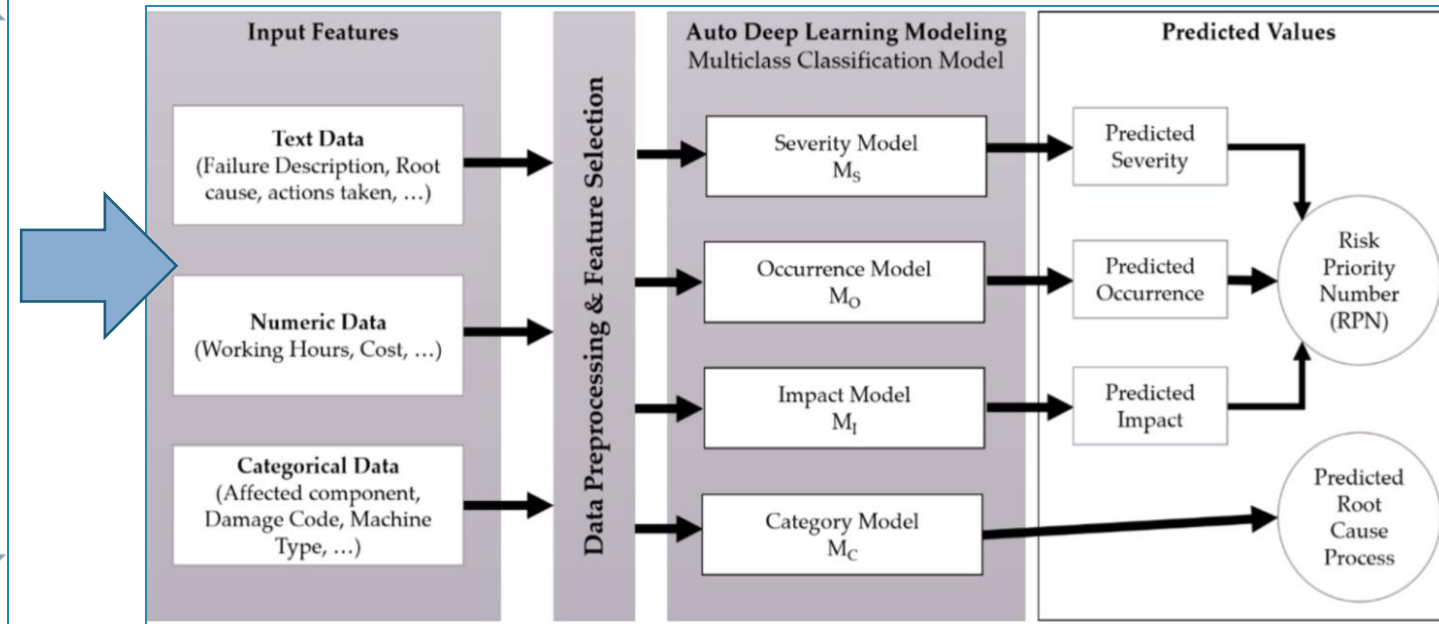
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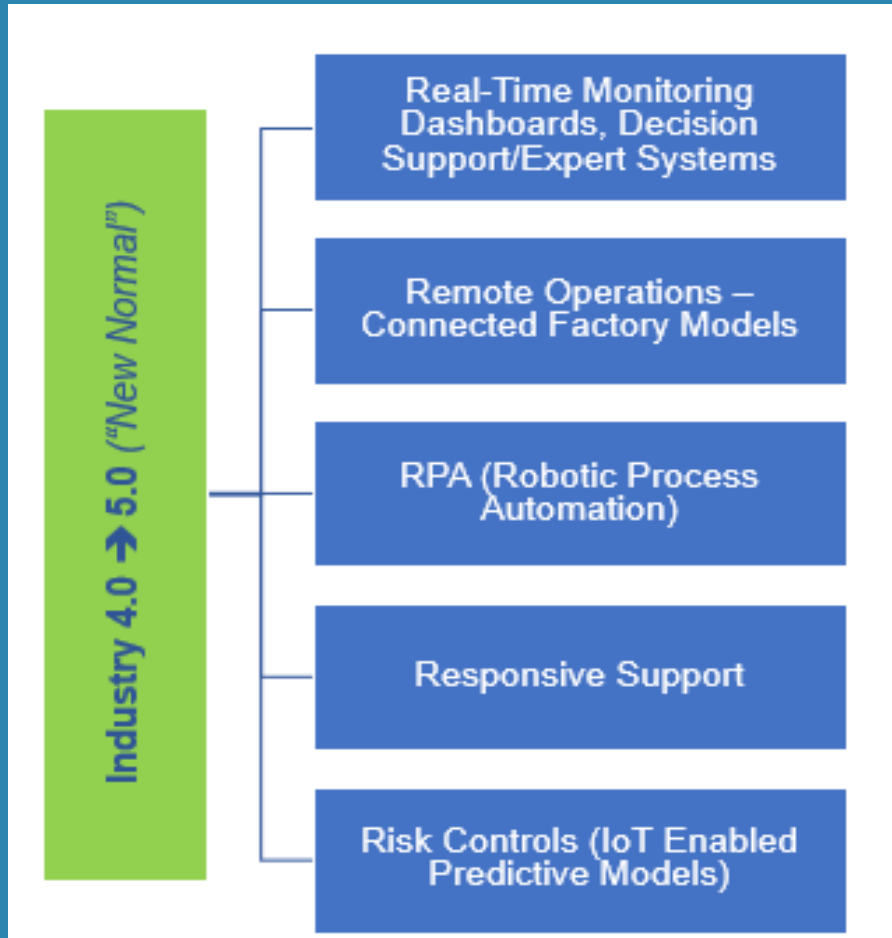
EV's BMS Failure Prediction through FMEA

BMS Failure Scope and Consequences



Enhancing FMEA (Failure Mode and Effects Analysis) using AI/ML for EV's BMS Failure Prediction





Consulting for 5R Services

(Real-Time Monitoring, Remote Operations, RPA, Responsive Support, Risk Controls)

- **Strategic Planning** - Design use-cases, technical and domain related market research, open innovation, agile R&D
- **Operations Management** - Drive business transformation, program management, metrics management/business performance
- **Technology Transformation** - Develop prototyping, applied analytics in these 5R services
- **Digital Platform Alliances** - Discover industry alignment to post covid-19 era, sustainability goals and industry 4.0+ demands by building a responsive digital ecosystem.

Engagement Model

Discover for Innovation

Identify opportunities and classify capability baseline from client stakeholders

Prioritize high impactful/ROI areas where we need to go for digital transformations to align business with Industry 4.0+ initiatives

Design for Transformation

Design use-cases, perform technical research and create specifications on areas for innovation

Study data related to earlier business transformations, in-flight projects, and current performance level KPIs to benchmark against the industry

Develop for Performance

Develop an industry alignment to post covid-19 era, sustainability goals and industry 4.0+ demands

Build a responsive digital ecosystem built on **5R** -
Real-time Monitoring, Remote Operations, Robotic Process Automation, Responsive Support & Risk Controls



Thank You

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