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Friday 31st August 2018

4th Annual Conference, Exhibition & Networking Forum

Grid Analytics Europe 2018

Big Data Management, Analytics and Visualisation to Power the Smart Utility

3-Day Conference, Exhibition & Networking Forum

25-27 September 2018 | London, United Kingdom

Hear in-depth Insights on:

- ✓ **Unlocking Value** – integrating advanced big data platforms and tools into legacy infrastructures and implementing data governance procedures to unlock the full value of your big data system
- ✓ **Data Management** – creating an effective data cleansing and processing procedure to maximise the value of smart meter, sensor, IoT, SCADA, GIS, weather, social media and other data
- ✓ **Data Analytics** – effectively combining multiple streams of structured and unstructured, complex and simple, real-time and historical data, and applying advanced models and algorithms to create detailed, accurate and actionable insights
- ✓ **Data Visualisation** – translating complex data-driven insights into compelling visual intelligence that communicate with impact for a variety of stakeholders
- ✓ **Real-time Data** – establishing a real-time data management and analysis framework to process data in the order of milliseconds to support daily network activity
- ✓ **Use-Case Expansion** – maximising the value of established grid performance use cases and identifying opportunities for new use cases across the wider smart utility
- ✓ **Future Technologies** – applying Machine Learning, AI, Blockchain and Cloud to drive the next phase of smart utility big data analytics

18+ Utility Case Studies From:

Jeff Montagne
Chief Data Governance Officer
Enedis

Miguel Moreira da Silva
Head of Data & Analytics
REN

Mario Namtao Shianti Larcher
Data Scientist
Enel

Jon Black
Load Forecasting Manager
ISO New England

Samuel Young
Analytics Development Leader
National Grid

Luca Grella
Innovation Workstream Lead
UK Power Networks

Madis Männink
Head of Network System Unit
Elektrilevi

Borsu Shahnavaz
Innovation Analyst
UK Power Networks

José Gonzalez Pastor
Economic and Adequacy Analyst
Elia

Oliver Motz
Principal, New Technologies & Projects
Innogy SE

Gunnar Hoffmann
Head of Big Data Analytics
Innogy SE

Marina Grujic Milosevic
Business Strategist
Vattenfall SE

Jean-Pierre Hollevoet
Director Network and Asset Management
Fluvius

Stefan Lanz
Data Scientist
BKW

Ana Filipa Ribeiro
Project Manager
EDP

Ivan Sturlic
Head of IT Department for Power System Planning, Analysis and Market Support
HOPS

Liga Sadovica
Head of Data Analysis
Augstprieguma tikls

Petr Lang
Project Manager, Asset Strategy & Projects
E.ON Česká republika

Technology Innovations From:

Bas Van Dorst
Principal Solution Specialist, Data & Artificial Intelligence
Microsoft Advanced Analytics

Ebisa Negeri
Data Solution Architect
Microsoft Advanced Analytics

Jennifer Major
Head of IoT
SAS

Guillaume Leclercq
Senior Consultant
N-Side

Andy Gay
Programme Manager for Advanced Utility Analytics
GE Power

Iain Stewart
International Practice Partner, Utilities & Smart Cities
Teradata

Expert Advice from:

Prof Emil Lupu
Professor of Computer Systems, Faculty of Engineering
Imperial College London

Prof David Shipworth
Professor or Energy and the Built Environment
UCL Energy Institute

Dieter Vonken
Manager, Asset Management Excellence & Data Analytics
Deloitte

Robin Hagemans
Partner
Infiniot

Supporting Organizations:

Gold Sponsor:

Live Demo Lab Sponsors:

Produced By:

Dear Colleague,

Welcome to the 4th annual **Grid Analytics Europe 2018** conference, exhibition, and networking forum. Our audience research for this year's event has revealed that European utilities are now fully invested in big data.

Many have implemented internal centres of excellence utilising state-of-the-art platforms and processes, operated by extensive teams of data engineering, data science and data visualisation specialists, recruited from outside of the industry and charged with injecting fresh thinking into the smart utility big data challenge.

But whilst the operational foundations are now firmly in place, many are struggling to go beyond the well-understood asset management applications and expand their suite of use cases to achieve the return on investment expected at board level.

It is with this in mind that we designed this year's agenda. Drawing together 120+ utility big data professionals for 3 intensive days of implementation reviews, 18+ utilities are scheduled to share how they are implementing cutting-edge tools and technologies for advanced data collection, management, analysis and visualisation to deepen their insights into grid performance, fraud prevention, and new product development in preparation for the energy transition.

Event highlights include:

- ✓ **Case-Study Programme** – gain in-depth insights into the big data experiences of 16+ pioneering European utilities and understand how new use cases are being introduced in the context of organisational objectives and pressures
- ✓ **Technology Innovation Panel** – quiz the technology innovators on the strength of their current product offerings, their R&D pipelines and their vision for the future of smart utility big data
- ✓ **Roundtable Discussions** – bring your specific big data challenges to the table and brainstorm and problem solve intensively with the entire smart utility big data community
- ✓ **Live Demo Labs** – through a dedicated 1:1 session gain hands-on experience of the most advanced and forward-looking big data platforms and tools on to the market
- ✓ **Solution Zone** – get up to speed with the latest big data solutions and services, discuss your specific challenges and get tailored advice to help propel your big data strategy to the next level
- ✓ **Networking Reception** – relax and unwind after an intensive day of presentations and panel discussions, meet with colleagues from across the European smart utility big data community, allow new ideas to cement and new partnership opportunities to emerge

We look forward to welcoming you to the event in September 2018.

Kind Regards,

Robin Sarfas
Conference Producer | **Smart Grid Forums**

PS: Early-Bird Rates - Save €200 on delegate places by booking before Friday 31st August 2018!

PPS: Group Booking Discounts – Save a further 10% on 3+ delegates booked from the same organisation at the same time!

Sponsorship & Exhibition Opportunities

Would you like the opportunity to raise your brand profile, demonstrate your products and services, and share your expertise with a highly concentrated and influential group of utility data analytics implementation leaders and decision makers? Our adjoining exhibition area provides the perfect platform for you to do this and more! Capped at 10 stands, we ensure a focused and relevant display of the latest tools, technologies, and services for our audience and maximum visibility for each exhibitor.

To find out more about the various sponsorship and exhibition opportunities:

Call: +44 (0)20 8349 6360
Email: registration@smartgrid-forums.com
Download: Exhibition Opportunities Brochure

Gold Sponsor:

N-SIDE is an innovative software consulting company in advanced analytics designing optimization solutions for Supply Chain, Operations and Energy management. From strategy down to operations, N-SIDE leverages the value of your data and business knowledge into decision-making power. Our solutions use cutting-edge technologies such as machine learning and powerful algorithms to solve the most complex industry challenges and turn them into opportunities. We empower organizations with agility and data-driven decisions to optimize processes and use resources wisely while efficiently managing risk and maximizing profits. We ensure our customers are ahead of the game! N-SIDE optimizes decisions of some of the largest companies around the world, across a vast range of industries: Pharmaceuticals, Chemicals, Steel, Pulp & Paper, Power Exchanges, TSOs and DSOs, etc.

For more information, please visit www.n-side.com

Follow news about the company at @nsidecom

Live Demo Lab Sponsor:

Cyient (Estd: 1991, NSE: CYIENT) provides engineering, manufacturing, geospatial, network and operations management services to global industry leaders. Cyient leverages the power of digital technology and advanced analytics capabilities, along with domain knowledge and technical expertise, to solve complex business problems. As a Design, Build and Maintain partner, Cyient takes solution ownership across the value chain to help clients focus on their core, innovate, and stay ahead of the curve.

Relationships form the core of how Cyient works. With over 14,000 employees in 21 countries, Cyient partners with clients to operate as part of their extended team, in ways that best suit their organization's culture and requirements. Cyient's industry focus includes aerospace and defense, medical, telecommunications, rail transportation, semiconductor, utilities, industrial, energy and natural resources.

For more information, please visit www.cyient.com

Follow news about the company at @Cyient

Exhibitor:

GE Energy Connections designs and deploys industry-leading technologies that turn the world on. We transport, convert, automate and optimize energy to ensure we provide safe, efficient and reliable electrical power. Uniting all the resources and scale of the world's first digital industrial company, we connect brilliant machines, grids, and systems to power utility, oil & gas, marine, mining and renewables customers, that keep our world running. Grid Solutions, a GE and Alstom joint venture, is part of GE Energy Connections.

For more information, please visit www.ge.com/power & www.gegridsolutions.com

Conference Day One | Tuesday 25th September 2018

08:00 Registration & refreshments

08:45 Opening address from the chair

09:00 **Unlocking Value Panel – optimising your big data infrastructure and investment to meet immediate organisational requirements and the demands posed by the energy transition**

- Drawing a roadmap for your data strategy which ensures optimal return on investment and supports increased resilience and flexibility in the network
- Identifying use cases that maximise the value from your current data capabilities
- Developing the infrastructure to take your data capabilities to the next level
- Building the internal competencies to implement and carry out new analytics
- Managing expectations and delivering results in a timely fashion
- Futureproofing your investments by ensuring their readiness to deal with internal and external changes
- Building data capabilities which improve grid operations and provide the robustness to thrive despite the uncertainties of the energy transition

Miguel Moreira da Silva, Head of Data & Analytics – **REN**
Petr Lang, Project Manager, Asset Strategy & Projects – **E.ON Česká republika**
Oliver Motz, Principal, New Technologies & Projects – **Innogy SE**

10:15 **Data Governance – establishing a framework that balances business advantage with regulatory compliance in a post-GDPR environment**

- Formulating robust strategies for the collection and handling of data and implementing these throughout your business
- Understanding the regulatory requirements for data-driven organisations and interpreting these in the context of the power industry
- Enforcing best practice and instilling a culture of compliance among staff with data handling responsibilities
- Using collaborative innovation and algorithms to effectively audit the business from end-to-end to eradicate shadow IT and identify problem areas in data architecture
- Using accessible visualisations and dashboards to facilitate internal monitoring and external reporting
- Determining the scope of the Chief Data Officer role and how it will drive governance post-GDPR
- Communicating your approach with regulators to avoid penalties, encourage access to potentially useful data, and promote flexibility in the face of unpredictable technological shifts

Jeff Montagne, Chief Data Governance Officer – **Enedis**

11:00 **Morning refreshments, exhibition and networking**

11:30 **Legacy Infrastructure – developing a big data system architecture that leverages legacy systems, integrates state of the art functionalities, and enables easy access to multiple streams of data**

- Effectively integrating multiple systems from across the organisation with new data infrastructure to maximise the depth and breadth of your analytics capabilities
- Taking necessary steps to integrate systems without putting critical functionality at risk
- Obtaining buy-in from the key personnel responsible for different business units to make integration as smooth as possible
- Comparing different standards and interfaces for adapting data of varying quality and structure to meet organisational needs
- Deciding between different types of data platform including on-premises and outsourced solutions to meet data governance, capacity and complexity requirements
- Quantifying the immediate benefits of system integration versus alternative options

Samuel Young, Analytics Development Leader – **National Grid**

12:15 **Smart Meter Data – extracting deep value from smart meter data whilst delivering a capability to work with other forms of data**

- Leveraging AMI to deliver advanced business insight to network operators
- Building an infrastructure to manage smart meter data which is interoperable with a variety of sources of network data
- Identifying the challenges of integrating and processing high data volumes
- Prioritising high-value use cases to add value for network operators today and in the future

Iain Stewart, International Practice Partner, Utilities & Smart Cities – **Teradata**

13:00 **Lunch, exhibition and networking**

14:30 **EMS/DMS Data – effectively preparing and analysing historic and real-time data to support a range of grid planning and development use cases**

- Identifying the complete range of data available in EMS/DMS systems and determining how it can best be accessed and compiled for a range of use cases
- Effectively pulling together data streams from multiple systems across the grid
- Overcoming variations in data structures and quality to deliver useable inputs for analysis
- Determining the highest value use cases made possible by EMS/DMS data
- Selecting the best tools to perform the desired modelling and analysis
- Quantifying the grid awareness and performance improvements possible through advanced EMS/DMS data analytics

Gunnar Hoffmann, Head of Big Data Analytics – **Innogy SE**

15:15 **Low Voltage Network Data – leveraging the new data generated from IoT deployment to the grid edge to gain deeper insights into the end to end network and support a more extensive set of use cases**

- Extracting and utilising data from smart meters in low voltage networks to allow more complete grid awareness and extend analytics benefits to the whole grid
- Expanding coverage of the grid through the deployment of sensors and power quality meters
- Processing large quantities of real-time data captured in complex grid topologies
- Extracting valuable performance insights from the grid edge and empowering control rooms to monitor low voltage networks

Marina Grujic Milosevic, Business Strategist – **Vattenfall SE**

16:00 **Afternoon refreshments, exhibition and networking**

16:30 **Cyber Security – identifying the points of vulnerability specific to big data infrastructure and determining appropriate prevention, detection, recovery and response strategies to mitigate risks**

- Identifying, detecting and diagnosing threats to the integrity and availability of data including malicious data injections
- Building methods for dynamic risk assessment, impact analysis and resilience
- Managing threats arising from a combination of the human, physical and cyber aspects of systems
- Balancing the need to integrate more systems with minimising the attack surface for cyber threats
- Evaluating new approaches to dealing with the inherent security weaknesses of legacy systems
- Exploring vulnerabilities associated with the use of Machine Learning algorithms
- Ensuring the protection of systems containing sensitive data to minimise business risk

Prof Emil Lupu, Professor of Computer Systems, Faculty of Engineering – **Imperial College London**

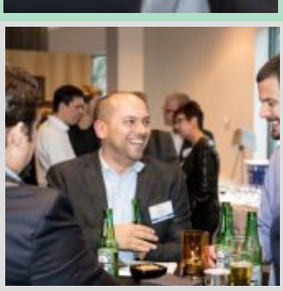
17:15 **GIS Data – using available grid topology data from GIS to efficiently gain new insights into the grid and achieve more accurately targeted actions**

- Preparing GIS data to meet the demands of data analytics
- Identifying the best use cases to generate the most value from GIS data
- Incorporating GIS data into a variety of models to provide tools and insight which support complex network operations
- Exploring the development of algorithms to automate aspects of engineering processes including network planning and monitoring compliance with best practice

Stefan Lanz, Data Scientist – **BKW**

18:00 **Roundtable Discussions** – during this session the audience breaks out into several small working groups, each focused on specific themes that arose during the day's presentations. Each working group will comprise of representatives of the entire utility big data community to ensure a well-rounded and holistic discussion. Key issues raised, and solutions proposed will be collated for presentation to the wider group at the end of the session.

19:30 **Networking Reception** – time to relax and unwind after an intensive day of presentations and discussions! All participants are invited to join this networking reception where you will have the opportunity to enjoy the company of colleagues from across the European smart grid technical community.



21:00 Close of conference day one

"The world of utilities is becoming better in getting their insights from data with advanced analytics. This conference showed that we have made a step forward again but still struggle in making the right IT platform selections, open source, or better still not having data management challenges and prioritise our key use cases. Let's go on and inspire each other. Plenty of value ahead."

Robin Hagemans, Manager Data & Insights – **Alliander**

Conference Day Two | Wednesday 26th September 2018

08:00 **Welcome refreshments**

08:50 **Welcome back from the chair**

09:00 **Combining Data – creating an intuitive framework for combining multiple data streams of varying structure, quality, and time series to deliver more meaningful insights and actions**

- Gathering data from distinct sources and uniformly compiling it to produce more complex and detailed data sets for analysis
- Overcoming structural differences between data drawn from a variety of systems implemented without consideration of interoperability
- Enforcing standards for the recording of data to ensure its consistency and completeness and minimise the data preparation required to perform analytics
- Integrating real time data with historic time series data
- Incorporating data from every source possible to build a complete picture of your operations and inform a wide suite of operational and commercial use cases

Robin Hagemans, Partner – **Infiniot**

09:45 **Real-time Data – extending your real-time data capacity and capability to allow instantaneous response from operations and maintenance**

- Defining the challenges and opportunities posed by gathering and processing data in high resolution for use in daily network activity
- Developing data architecture capable of processing vast quantities of data generated in real time
- Creating accessible dashboards and monitoring systems fed by real-time data for use by asset management and network control teams
- Measuring the impact of real-time data for better grid performance

Luca Grella, Innovation Workstream Lead – **UK Power Networks**

10:30 **Morning refreshments exhibition and networking**

11:00 **Technology Innovation Panel – evaluating the latest innovations in data analytics platforms and tools designed specifically for the smart utility environment**

During this session, each technology innovator will give a 15-minute presentation on results achieved from the application of their solution in the smart utility environment, as well as their research and development activity to meet future utility needs. The presentations will be followed by 30 minutes of Q&A and panel discussion, whereby you will get the opportunity to quiz the tech experts, understand their innovation plans more fully, and influence the direction of new product development to better meet your data analytics requirements.

Andy Gay, Programme Manager for Advanced Utility Analytics – **GE Power**
Jennifer Major, Head of IoT – **SAS UK & Ireland**

12:30 **Lunch, exhibition and networking**

14:00 **Dynamic Sizing of Balancing Reserves – exploiting machine learning techniques increase the reliability of the balancing mechanism while reducing the cost of procurement**

- Designing innovative methodologies to cope with the increasing variability of imbalance risk by dynamically dimensioning FRR needs in D-1 timescales
- Determining the highest impact factors driving imbalance risk and converting these metrics into a selection for optimal features
- Applying machine learning algorithms to optimise reserve sizing based on system condition forecasts including solar and wind generation or planned outages
- Selecting a machine learning algorithm to guarantee transparency and intuitiveness, thereby eliciting trust from key users
- Collaborating with relevant end users throughout proof-of-concept and implementation to ensure the needs of all market participants are considered
- Guaranteeing the robustness of the dynamic sizing methodology for future system evolutions such as nuclear phase-out, additional RES increase, and new HVDC cables

Guillaume Leclercq, Senior Consultant – **N-Side**
José Gonzalez Pastor, Economic and Adequacy Analyst – **Elia**

14:45 **Non-Technical Loss Use Case – combining granular grid and consumer data to isolate and efficiently eliminate non-technical losses**

- Optimising revenue protection by locating non-technical losses and moving more quickly to curtail them
- Using a combination of historical inspection results and smart meter data to train a supervised machine learning model to predict where losses are located
- Automatically extracting important features related to demand such as the identification of drops in consumption
- Estimating the amount of energy which will be recovered to guide future inspections
- Enabling a targeted approach to guide investigations into energy theft, protect revenue, and reduce bills for law-abiding customers

Mario Namtao Shianti Larcher, Data Scientist – **Enel**

15:30 **Afternoon refreshments, exhibition and networking**

16:00 **Visualisation – utilising innovative tools to provide impactful and accessible reports and dashboards to internal and external stakeholders**

- Empowering data science teams to translate complex data-driven information into powerful insights for an array of business functions
- Interpreting clients' requirements and establishing a realistic scope of work for visual output
- Employing multiple visualization tools to meet the notably different demands of distinct business units
- Enabling self-service business intelligence for advanced users
- Combining analyses of multiple data sources to produce complex yet intuitive visualisations such as heat maps and dashboards
- Meaningfully communicating your data analytics output to enhance the performance of multiple business units and meet the demands of external agents

Ivan Sturlic, Head of IT Department for Power System Planning, Analysis and Market Support – **HOPS**

16:45 **Grid Planning Use Case – identifying the optimal range of data sources and analytics models to support accuracy in long range grid planning and investment decision making**

- Developing situational awareness of the grid and enhancing this by overcoming data quality issues including those in geospatial data
- Developing a "digital twin" model for the connectivity and topology of a low voltage network
- Identifying underperforming spots within the grid
- Using data on consumption and grid capacity to inform efficient future development of the network
- Producing models for likely network requirements which incorporate a vast number of variables
- Developing projections for multiple energy scenarios while accounting for the potentially unpredictable uptake of new technologies
- Increasing the depth of analytics to generate prescriptive insight into your grid planning strategy

Dieter Vonken, Manager, Asset Management Excellence & Data Analytics – **Deloitte**
Jean-Pierre Hollevoet, Director Network and Asset Management - **Fluvius**

17:30 **Close of conference day two**

Conference Day Three | Thursday 27th September 2018

08:00 **Welcome refreshments**

08:45 **Welcome back from the chair**

09:00 **Power Generation and Demand Forecasting Use Case – increasing forecasting accuracy through more sophisticated data sourcing and analysis in the transition to a more complex generation and consumption landscape**

- Using new insights about consumption in tandem with heightened grid awareness to achieve better demand foresight
- Translating end-user behaviour data into meaningful insight about patterns of consumption based on a variety of factors
- Building models to predict the impact of newer developments such as intermittent generation or EV uptake
- Identifying and accounting for relevant external factors such as the impact of temperature and home insulation on heating/cooling requirements
- Combining profiles for multiple sources of generation and changes to consumption patterns to build an overall picture of the demand landscape
- Reducing penalties for load imbalance and increasing resilience of the network in the face of a changing energy mix

Jon Black, Load Forecasting Manager – **ISO New England**

09:45 **Settlement Use Case – effectively processing data from a variety of energy market participants for a more accurate and timely settlement process**

- Using data from each grid domain to make the settlement process more precise and quick to complete
- Developing the infrastructure to access and prepare data streams from multiple organisations
- Combining the relevant data and performing calculations more quickly to shorten the timetable for final settlement and move to more precise settlement periods
- Increasing the level of automation in the settlement process while improving accuracy and reducing costs for users

Liga Sadovica, Head of Data Analysis – **Augstprieguma tikls**

10:30 **Morning refreshments, exhibition and networking**

11:00 **Active Performance Enhancement Use Case – identifying the data sources and analytics models that produce KPIs which maximise performance efficiency and extend equipment lifespan**

- Leveraging more accurate asset data to identify critical metrics, actively monitor asset life-cycle, and respond accordingly to fluctuations in performance
- Installing monitoring capabilities to generate precise data on more parameters pertaining to asset condition
- Analysing data from a large sample of assets to minimise the impact of anomalous behaviour on predictions
- Identifying the key conditions and predictors which govern asset life-cycle, degradation, and failure
- Moving from routine to targeted maintenance, informing changes to increase asset life-cycle, and optimising grid upkeep

Borsu Shahnavaz, Innovation Analyst – **UK Power Networks**

11:45 **Outage Management Use Case – exploiting data from network systems and advanced metering infrastructure to improve responses to network faults and minimise downtime**

- Developing software to compile and analyse data collected at multiple points in the network to identify problems or likely causes of faults
- Filtering data from multiple grid domains, of varying quality, to ensure reliable analytics performance
- Responding proactively to results to restore power quickly during an outage or make preventative repairs outside of routine maintenance
- Developing software to ingest data and generate intuitive graphical output, providing clear insight for operations teams
- Expanding the analytics capabilities of the software to enable new use cases supporting organisational teams and improving customer service

Madis Mannink, Head of Network System Unit – **Elektrilevi**

12:30 **Lunch, exhibition and networking**

14:00 **Machine Learning & AI – understanding the potential of AI for processing and interpreting large volumes of multi-dimensional data to support a more complex and dynamic future grid environment**

- Leveraging artificial intelligence tools with the ability to recognise complex patterns and give valuable insight into otherwise unpredictable behaviours
- Creating deep learning algorithms capable of processing information vastly beyond the capabilities of human intelligence
- Building large data sets to "teach" machine learning systems to recognise and evaluate the full range of factors which impact network performance
- Safeguarding against unpredictable behaviour to ensure confidence in handing over critical decision-making functionality
- Utilising AI technology to facilitate automated decision making in the grid while considering the ever-increasing range of variables impacting demand

Ana Filipa Ribeiro, Project Manager – **EDP**

14:45 **Blockchain – leveraging blockchain technology to better manage distributed data sources inherent to a decentralised energy system**

- Storing data from behind-the-meter assets on distributed ledgers to facilitate DSO support for innovations such as EVs, microgeneration, and battery storage
- Fully understanding blockchain technology and making informed decisions about its application in the smart utility big data infrastructure based on a full appraisal of its benefits and drawbacks
- Facilitating the integration of a wide variety of peers into blockchain platforms through the development of APIs
- Reducing vulnerabilities by ensuring the security of any legacy systems writing data onto blockchains
- Navigating questions of compliance such as the immutability of distributed ledgers and the "right to be forgotten"
- Providing real time information to DSOs about the consumption and behaviour of decentralised assets and facilitating innovations in the energy system

Prof David Shipworth, Professor of Energy and the Built Environment – **UCL Energy Institute**

15:30 **Afternoon refreshments, exhibition and networking**

16:00 **Big Data in the Cloud – integrating cloud services with internal big data infrastructure to rapidly scale up use cases and flexibly meet future analytics requirements**

During this 90-minute tutorial, the team from Microsoft will provide in-depth insight into how Cloud services are being utilised within the smart utility environment, to maximise speed of deployment, take advantage of advanced analytics functionalities, and launch new use cases cost effectively. Key issues that will be addressed include:

- Making the case for cloud platforms as a powerful means to store data and perform more powerful analytics in a cost-effective manner
- Assessing different analytics challenges and choosing between on-premises, private cloud, third-party cloud, and hybrid solutions where appropriate
- Choosing the right provider for cloud services to deliver the required technical capabilities while providing reliable support and adequate security measures
- Integrating multiple systems across the business into the chosen platform in a time- and cost-efficient manner without impeding day-to-day operations
- Foreseeing and mitigating potential data governance issues before they become critical problems
- Utilising the cloud's increased capacity for parallel processing to flexibly support advanced analytics tools as and when required

Tutorial Leaders:

Bas Van Dorst, Principal Solution Specialist, Data & Artificial Intelligence – **Microsoft Advanced Analytics**
Ebisa Negeri, Data Solution Architect – **Microsoft Advanced Analytics**

17:30 **Close of conference day three**

Speaker Biographies

Miguel Moreira da Silva
Head of Data & Analytics
REN

Miguel Moreira da Silva is an expert on Energy Systems and an experienced manager at multinational companies. Miguel was selected, in 2013, one of the 100 "Future Energy Leaders" by the World Energy Council. He holds a PhD in Sustainable Energy Systems from the MIT Portugal Program and is a chartered Electrical and Computer Engineer from U.Porto.
He has handled engineering and management roles in the energy value chain (REN, Itron, Iskraemeco, EDF). Besides the industry activity, Miguel has been lecturing energy fundamentals at U.Lisbon and served has technology advisor the Portuguese Government.
Miguel has been working at REN (Portugal's power and gas TSO) for 7 years, firstly as Head of Innovation and then as Head of Electricity Asset Management. In the last 2 years he has launched the Data & Analytics department, aiming at developing a data-centric organization, including asset sensing, BigData, AI models, and business intelligence.

Robin Hagemans
Partner
Infiniot

Robin Hagemans MSc has broad experience in developing data-driven organisations and enabling IT-architectures. Within the scope of 'Sensor to Sense', he is capable of growing organisations and technology from the first steps of data-innovations through to large-scale implementations at the Enterprise level. He studied Process Engineering and Business Science in the Netherlands, and recently moved to Infiniot, on the High Tech Campus, as Partner for Data Intelligence. He worked for more then 10 years in the utility sector with Alliander (Senior Manager Data & Insights) and Stedin (Lead Data Competence Center).

Jeff Montagne
Chief Data Governance Officer
Enedis

Jeff Montagne is working as Chief Data Governance Officer for Enedis. He is also a member of the ETIP/SNET working group on digitisation of the electricity system and customer participation. With 20 years of experience in IT systems and control for utilities, Jeff has worked successively on SCADA communication protocols and market exchange platforms for the French TSO, on modernizing security and architecture policies for EDF IS Group, and then on digitalisation for Enedis. He also spent several years in finance within EDF Group. He graduated in engineering from Telecom ParisTech/Stuttgart university and holds an MBA from ESCP Europe.

Samuel Young
Analytics Development Leader
National Grid

Samuel is an Analytics Development Leader working at National Grid within the Electricity Transmission Owner. He focuses on identifying innovative uses for analytics within the organisation, as well as designing and delivering modern analytics solutions to replace legacy platforms. Most recently he has been leading the transfer of National Grid's asset condition monitoring data and analytics onto a new in-house data lake. Prior to joining National Grid, Sam worked in financial services, developing strategies and models to manage consumer credit risk.

Mario Larcher
Data Scientist
Enel

Mario is a Data Scientist in the Infrastructure and Networks Digital Hub of Enel, a multinational energy company generating energy with a managed capacity of more than 88 GW and with almost 72 million end users around the world. He has a B.Sc. in mathematics and a M.Sc. in statistical sciences.
Since joining Enel, his main task has been to improve the analytical approach in identifying fraud and anomalies related to electric meters. After a deep dive regarding the strategies used by seven Enel distribution companies located in South America, he defined a new machine learning pipeline applicable to the circumstances of each of these.
Current results obtained by the project show that a modern machine learning approach in a big data context can indeed boost the performance of classical statistical approaches.

Luca Grella
Innovation Workstream Lead
UK Power Networks

Luca Grella is an electrical engineer with a master degree on Power Systems. He is a Chartered Engineer in Italy and a member of the IET in the UK. Luca has experience in construction and design of electrical systems as well as project management focused on technical project delivery matured while working for the Danish consulting engineering group Ramboll. Luca joined UK Power Networks as Innovation Workstream Lead and he is responsible for the successful delivery of the technical elements of a number of NIC and NIA projects including Kent Active System Management and Active Response.

Borsu Shahnavaz
Innovation Analyst
UK Power Networks

Borsu Shahnavaz is a Chartered Engineer and an Innovation Analyst at UK Power Networks. He has over 10 years UK and international experience mainly in energy sector. Borsu specialises in distribution and transmission electricity networks and has experience in low carbon innovative projects, generation planning, electricity wheeling, design and development of information system and project management.
In the UK, Borsu has worked on a variety of innovation projects for UK Power Networks including Network Visibility and Control, energywise, Smart Urban LV Networks, Flexible Urban Network Low Voltage, Distribution Network Visibility, and PD Condition Monitoring System.
Before joining UK Power Networks, Borsu worked as an energy consultant at Ricardo Energy and Environment. He was involved in various international projects including development of a wheeling charging model for Jamaica, development of a generation planning model for Uganda, research and development of a decision support system for energy policy makers in the EU countries and developing an information system for performance management in power sector in Bangladesh covering KPI analysis of six power utilities. Borsu has an MSc in Engineering projects and System Managements, and MSc in Mining Engineering. He is a member of Energy Institute and the British computer society (BSC).

Oliver Motz
Principal, New Technologies & Projects
Innogy SE

Oliver Motz is working as R&D Manager at innogy SE Grid & Infrastructure Segment. He develops and heads data driven projects mainly for innogy's DSOs in order to raise transparency and save opex and capex. Oliver's passion is to develop services with internal clients and bring them to the market. He studied Business Administration at the Private University Witten/Herdecke and holds a PhD in Economic.

Gunnar Hoffmann
Head of Big Data Analytics
Innogy SE

Gunnar studied mechanical engineering and computer science at the University of Freiberg. Following this he began his professional career at RWE Power within the department for "Hard Coal and Gas Fired Power Stations" with a focus on the further development and optimisation of business processes as well as operation management systems. For several years he was then engaged in the corporate research and development department at innogy SE with an emphasis on conventional power plant technology, decentralised energy supply and Smart Energy. Since April 2017 he has been in charge of the Big Data Analytics department delivering platform services and solutions across all innogy segments and corporate functions.

Ivan Sturlic
Head of IT Department for Power System Planning, Analysis and Market Support
HOPS

Ivan Sturlic graduated at the Zagreb Faculty of Electrical Engineering and Computing in 2003. Since then, he has been working at the Croatian Transmission System Operator (IT Department) for 15 years, and is currently responsible for power system planning, analysis and market applications. He is highly experienced in the development of wide area monitoring, data warehouse, scheduling, energy accounting, and settlement applications. He is now a Project Manager responsible for the development of a new data warehouse system and a common data model according to IEC standards. In addition to this, he actively participates in the local implementation project for the cross-border intraday energy market.

Liga Sadovica
Head of Data Analysis
Augstprieguma tikls

Liga Sadovica is the Head of Data Analysis Group at Latvian Transmission System Operator AS "Augstsprieguma tīkls". She has BSc in Economics and Business and MBA and is currently working towards a doctoral degree in Power Engineering. She has worked on IT system development and Business Intelligence solutions implementation for a wide range of industries including telecommunications, forestry and education. Currently she is involved in the development of the Latvian national electricity market data exchange platform, the development of the common Baltic electricity data exchange platform; introduction of the demand response service market in Latvia and development of AS "Augstsprieguma tīlks" balance management system.

Speaker Biographies

Guillaume Leclercq
Senior Consultant
N-Side

Guillaume Leclercq (Msc Mathematical Engineering, UCLouvain 2007) holds a PhD. in Mathematical Engineering from UCLouvain. He is a Senior Consultant in the Grid&Market group at N-SIDE, where he has worked on industrial process (steel), energy and research & innovation topics. Guillaume is the project manager of multiple projects focusing on the use of advanced analytics in the field of electricity markets, multi-carrier energy synergies, flexibility services for system operators.

Andy Gay
Program Manager
GE

Andy Gay is a recognized expert in Energy Utility operations and geospatial systems. He has over 30 years' experience delivering Analytics, GIS, Grid Operations, and Asset Management software projects to T&D utilities globally. Andy previously worked for Xcel Energy as an IT Manager, for Schlumberger as Manager of Software Projects, and for the past 15 years at General Electric in various software delivery roles. Andy is currently the Program Manager for GE at Exelon Utilities' (USA) Business Intelligence Data Analytics (BIDA) project.

Ana Filipa Ribeiro
Project Manager
EDP

Ana Filipa is a Project Manager at Mission Critical Application Development Unit at EDP Distribuição, the Portuguese electrical DSO. She has spent the last three years managing projects related to Big Data and BI-SCADA platforms which support decision-making and operational management of the distribution network. She received her PhD in Applied Mathematics in 2014 from the Faculty of Sciences of Porto University. She was a member of the Institute of Systems and Robotics – Porto; an Invited Assistant at both the Polytechnic of Porto School of Engineering and at the Faculty of Engineering, University of Porto.

José Gonzalez Pastor
Economic and Adequacy Analyst
Elia

Jose works for Elia, Belgian Transmission System Operator, as Economic & Adequacy Analyst. He has an MsC in Electrical Engineering from ULB and a Management degree from Solvay Business School. Prior to his current position, Jose was responsible for the evolution of the metering, business intelligence and transparency systems at Elia. He has been working for Elia since 2011. Before joining Elia, Jose was working in the Aviation sector as data scientist. He has accumulated several years' experience in business intelligence and data science.

Iain Stewart
International Practice Partner, Utilities & Smart Cities
Teradata

Iain is an executive consultant with experience in many industries, currently focused on utilities and smart cities. He is UK based with extensive global experience working throughout Europe, Asia Pacific and the USA. Iain co-ordinates Teradata go-to-market for utilities in our international region, also working closely with colleagues in the Americas to bring their experience to our international utilities. He has 17 years' experience working across the utilities value chain and in regulation on projects including customer experience, asset management, and supply chain and workforce management.
Iain also focuses on the emerging smart cities market from both a utilities specific and cross-industry perspective and is part of a wider Industrial Internet of Things team focused on data integration and analytics across all heavy asset based industries.

Stefan Lanz
Data Scientist
BKW

Stefan Lanz is a Data Scientist in the Network Information Systems division of BKW, the largest distribution grid operator in Switzerland. After several years as a researcher in theoretical particle physics, he has switched into the energy sector as a load forecast expert in energy trading. He has worked on the development of software that allows distribution grid operators to understand and actively optimise flexible loads in their grid. More recently, he has focused on data from network information systems with the goal of digitising time-consuming and complex processes and gaining new insights into the grid.

Bas Van Dorst
Principal Solution Specialist, Data & Artificial Intelligence
Microsoft Advanced Analytics

Bas is active in several customer centric roles for more than 25 years. The last 17 years of his career he is more focused on Software solutions within several industries and all kind of organizations. The last 4 years of his career Bas was intensively involved in Data & AI developments within the Utility Industry working for SAS Institute. This year Bas started at Microsoft being a Principle Solution Specialist PSS. He is responsible for identifying, driving and closing complex data & AI use cases for Microsoft's Azure cloud computing platform to drive adoption of public cloud for Dutch Enterprise customers like Eneco, Stedin and Enexis.

David Shipworth
Professor or Energy and the Built Environment
UCL Energy Institute

David Shipworth is Professor of Energy and the Built Environment at the UCL Energy Institute. His research focuses on ways to provide demand flexibility within the energy system and roles of consumers, regulators, and buildings in delivering these. He has a particular interest in peer-to-peer energy trading, time of use tariffs, and home energy management systems. He speaks and consults widely in the UK and internationally on peer-to-peer energy trading – particularly on the design, conduct and evaluation of field trials for testing the consumer acceptability and response to different flexibility product offerings.

Dieter Vonken
Manager, Asset Management Excellence & Data Analytics
Deloitte

Dieter is a Senior Manager within the Risk Advisory team of Deloitte Belgium, where he leads the Asset Management Excellence service line. The focus relates to Asset & Process Performance within Energy, Infrastructure and Utility companies, providing services with respect to various asset management processes, such as Asset Performance, Asset (Risk) Management, Asset Data & Information Management, Data Quality Management, Investment & Maintenance Planning, Dashboarding (BI), Change Management and Organizational Design.

Jon Black
Load Forecasting Manager
ISO New England

Jon is currently Manager of Load Forecasting at ISO New England, the not-for-profit corporation responsible for keeping electricity flowing across the six-state New England region. In this role, he provides technical direction for energy analytics and both short-term and long-term forecasting of load, distributed photovoltaic (PV) resources, and energy efficiency.
Formerly, Jon served as the ISO's Lead Engineer on efforts to efficiently and reliably integrate distributed PV into the regional power system. Upon joining ISO in 2010, Jon assisted with the New England Wind Integration Study and the design of wind plant data requirements for ISO's centralized wind power forecasting system.
Jon is currently a PhD student researching advanced forecasting techniques within the Big Data Energy Analytics Laboratory (BigDEAL) at the University of North Carolina at Charlotte. He received his MS degree in Mechanical Engineering from the University of Massachusetts at Amherst, where his research at the UMass Wind Energy Center explored the effects of varying weather on regional electricity demand and renewable resource availability.

Jennifer Major
Head of IoT
SAS UK & Ireland

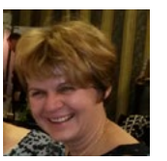
Jennifer has spent her career at SAS working as an analytics consultant across a range of industry sectors. Her job is to help organisations to create and act on insight from data. She has found her recent work in the energy sector particularly fascinating. Balancing reliability and cost against the increasingly urgent need to transition to renewable energy sources creates a significant challenge for policy makers and industry. The innovation required to balance increasingly volatile energy supply and demand got Jennifer seriously interested in the potential of using IoT data to help manage energy – this includes the whole 'smart' paradigm of Smart Grid, Smart Homes and Smart Cities.
This realisation of the potential of harnessing IoT data and analytics across all industry sectors prompted Jennifer to transition to a new role heading up the IoT practice for SAS UK & Ireland.

Ebisa Negeri
Data Solution Architect
Microsoft Advanced Analytics

Ebisa is a data solution architect at Microsoft with a strong expertise in smart grid. In his PhD thesis titled "Smart Power Grid – A Holonic Approach", he has presented his research results on prosumer-centric smart grid with a comprehensive approach covering control architecture, demand response, and network analysis. Ebisa's industry experience as a data scientist in various industries also includes applying advanced analytics techniques to extract valuable insights from energy consumption data. In his current role at Microsoft, Ebisa has been leveraging Azure Cloud capabilities and his industry expertise to empower Power & Utilities industry customers across Western Europe in their digital transformation journey.

Prof. Emil Lupu
Professor of Computer Systems, Faculty of Engineering
Imperial College London

Emil Lupu is Professor of Computer Systems in the Department of Computing at Imperial College London where leads the Academic Centre of Excellence in Cyber Security Research and the Resilient Information Systems Security Group at Imperial College London. He serves as Associate Director with the Institute for Security Science and Technology and is the Deputy Director of the PETRAS IoT Security Research Hub – Cybersecurity of the Internet of Things. His research interests focus on the cyber security and resilience of systems including their physical, digital and human characteristics and their ability to continue operating even when they have been partially compromised.



Marina Grujic-Milosevic
Business Strategist
Vattenfall

Marina Grujic Milosevic employed at Vattenfall Distribution Sweden. Marina has a Master's in nuclear physics and has a broad interest in research – interested in everything from climate change, machine learning, and energy distribution. In her current role at Vattenfall, Marina is focusing on monitori

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