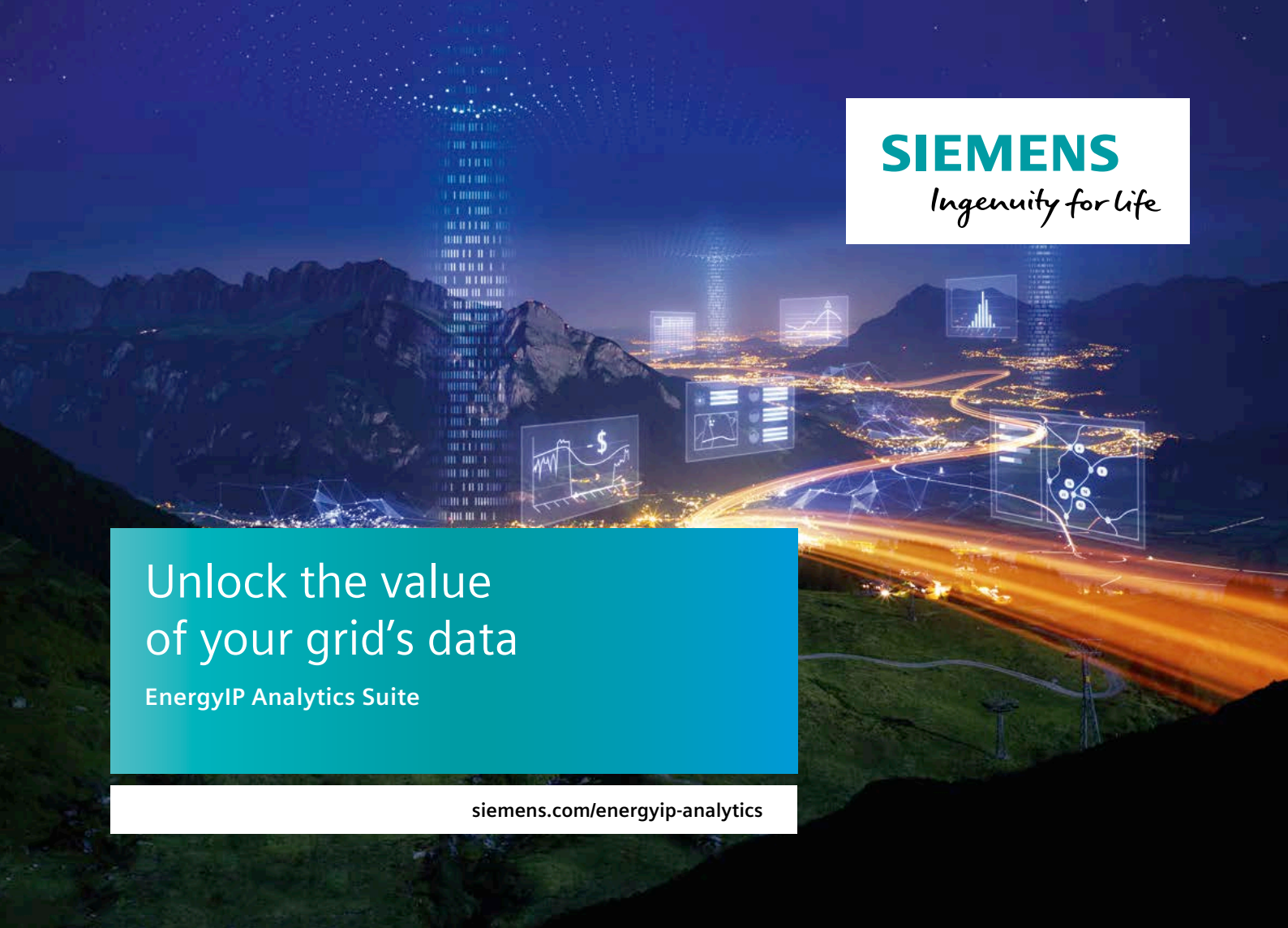# SIEMENS
Ingenuity for life

Unlock the value of your grid's data

EnergyIP Analytics Suite
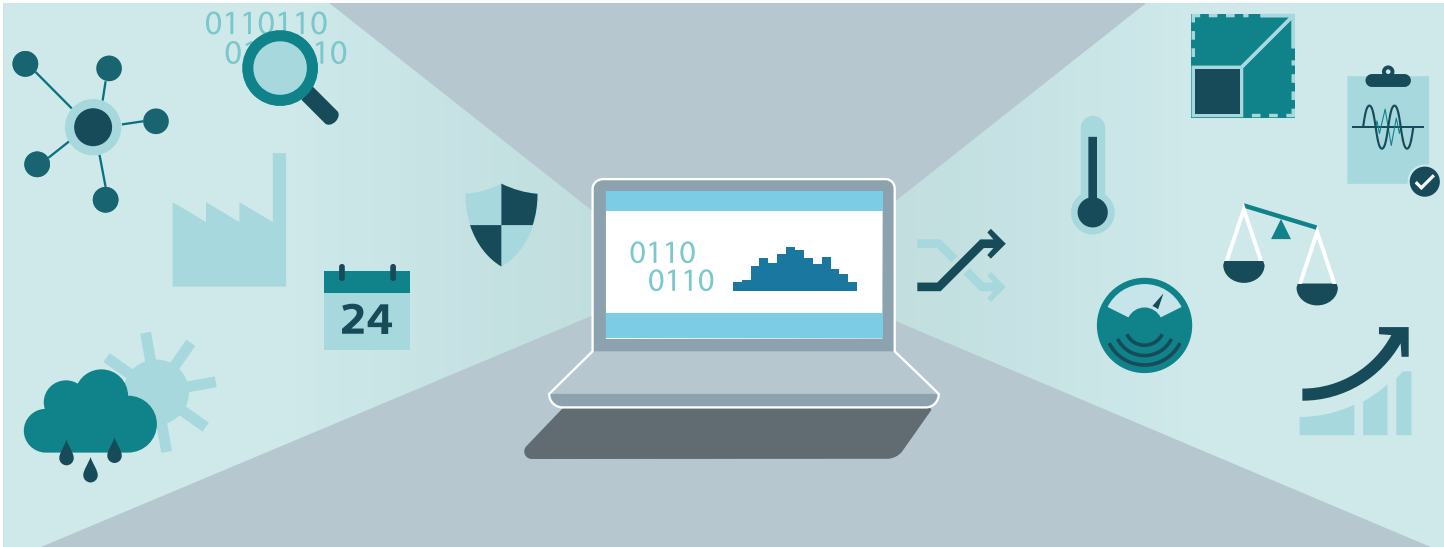
siemens.com/energyip-analytics

The energy system is changing dramatically – posing new challenges, but also new opportunities to distribution grids. New demand patterns caused by electric vehicle charging or generation variability for example from residential photovoltaic installations, are becoming more dominant and has an impact on the reliability of the electric network. By rolling out an advanced metering infrastructure, we are now able to collect more data and use them to tackle the upcoming challenges. All the future opportunities lie in analytics. Transparency about generation and consumption, costs, and power quality is the key intelligence to make the right decisions and to design further use cases. That will pave your way to optimize grid efficiency and security as well as to create additional value for your business.

And the solution by Siemens will help you with that. EnergyIP is an extremely powerful, flexible, and scalable platform that can easily handle millions of sensors and the huge volumes of generated data.

With the EnergyIP Analytics Suite, Siemens offers a comprehensive set of applications that empowers utility professionals to solve complex business problems in a timely and cost-effective manner.
Here is a brief overview of the applications in the EnergyIP Analytics Suite:

- **Analytics Foundation** explores and unlocks the value of AMI meter data. It provides a pre-built framework for developing analytics applications and reports using meter data such us connectivity model verification or non-technical loss identification. The built-in aggregation engine compiles any available parameters along the whole connectivity model. It includes all the tools necessary to deploy advanced analytics applications that suits variety of users and use-cases. A business user accessing the data via BI tool or data scientist using SQL and APIs can build own and customized applications and reports to fit their business needs.

- **Revenue Protection** has a rich suite of sophisticated algorithms that look for patterns, and outliers to identify non-technical losses (NTL), for example, metering inaccuracy, billing and rate class errors and theft of commodities. The application can detect different forms of theft and directly connect it to the distribution lines. By using advanced data mining techniques, and machine learning algorithms, it can isolate false alarms and identify genuine cases of NTL more accurately. To ensure flexibility, more than 50 out of the box algorithms can be expanded to support any custom use case.

- The **Asset Topology Mapping** application runs several analytics algorithms utilizing the time series data to detect errors in the asset topology. It is estimated that between 5% and 20% of meter-to-transformer data is incorrect in utilities' systems of record, which can negatively affect asset stress and fault localization.

Benefits

Deploy rapidly for quick results – Derive immediate value by deploying applications that solve specific business problems. Start with as few or as many applications as needed.

Reduce operating expenses – Create a sustainable and flexible environment to innovate without costly upgrades. Applications are easy to consume with subscription-based pricing and cloud options.

Leverage common data platform – Unify disparate information silos among many IT enterprise and operational systems. You can stop worrying about enterprise architecture, such as extracting data from multiple data stores, and focus on solving business challenges.

Grow with an extensible platform – Leverage EnergyIP Analytics' scalable architecture to develop apps for the future. Develop applications using your in-house development teams or through a partner.