



O futuro das redes de distribuição em tempo real //
The future of distribution grids in real time

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- VENIOS is a young IT company that develops software solutions for the efficient grid operation of the future.

We are

Innovative | Founded in 2012 | At home in Frankfurt a.M. and Hartberg (AT) | Owner-managed | Award-winning | Digital | Fast | Always available | Reliable

We are excellent for

innovative utility software | pioneering cloud technology | among the top 10 energy technology solutions in Europe | outstanding energy software solution in Germany | winner of the VDE | FNN - InnovationHub "Grid Monitoring"





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Energy suppliers | municipal utilities | distribution system operators | mostly satisfied | the most important thing for us

STEDIN.NET

stadtwerke
gronau

NetzDienste
RheinMain

Stadtwerke
Pirmasens



**NÖ
Netz**
EVN Gruppe

Stadtwerke
Bochum|Netz

thuga
ENERGIENETZE GMBH

GELSENWASSER
ENERGIENETZE

BSES
BSES Rajdhani Power Limited

enercity
Netz
Ein Unternehmen
der enercity-Gruppe

bayernwerk

**DIE KREUZNACHER
STADTWERKE**
Die Nahe Energie.

Stromnetz
Berlin

Distrocuyo

BonnNetz.
Ein Unternehmen der Stadtwerke Bonn

**primeo
energie**

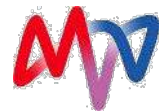
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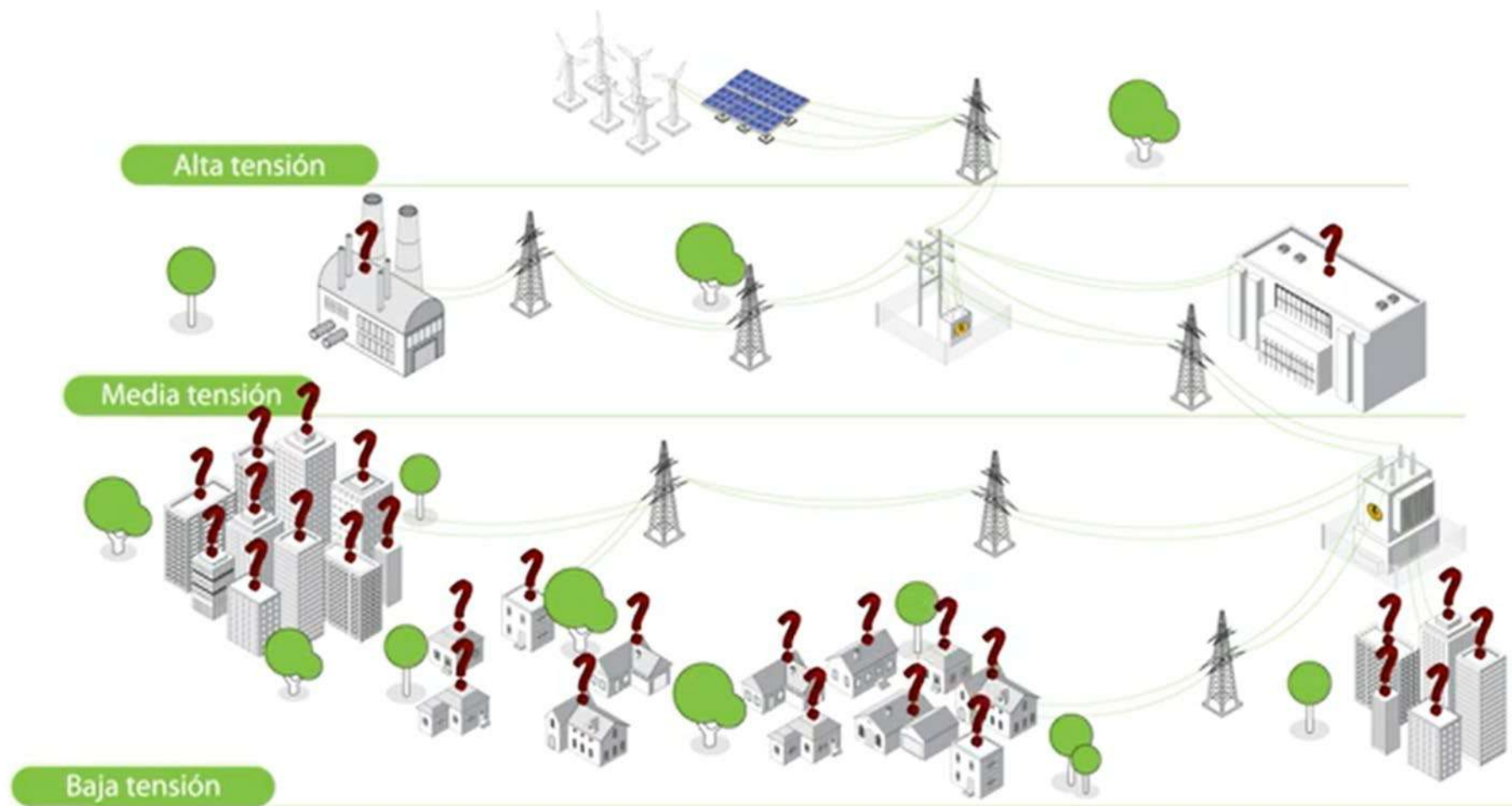
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Venios.NET

É uma solução inovadora para o monitoramento,
planificação, controle e gestão inteligente
de redes de distribuição elétrica,
impulsionando a transição energética.

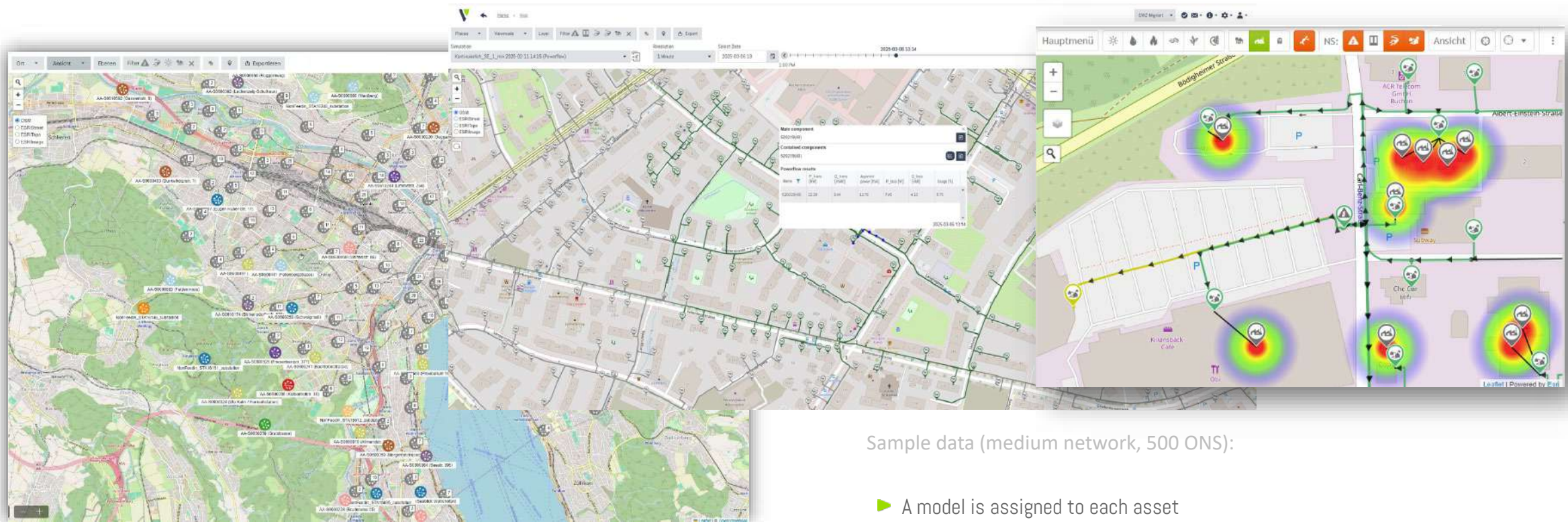


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Übersicht über die Venios-Netzwerkmodellierung

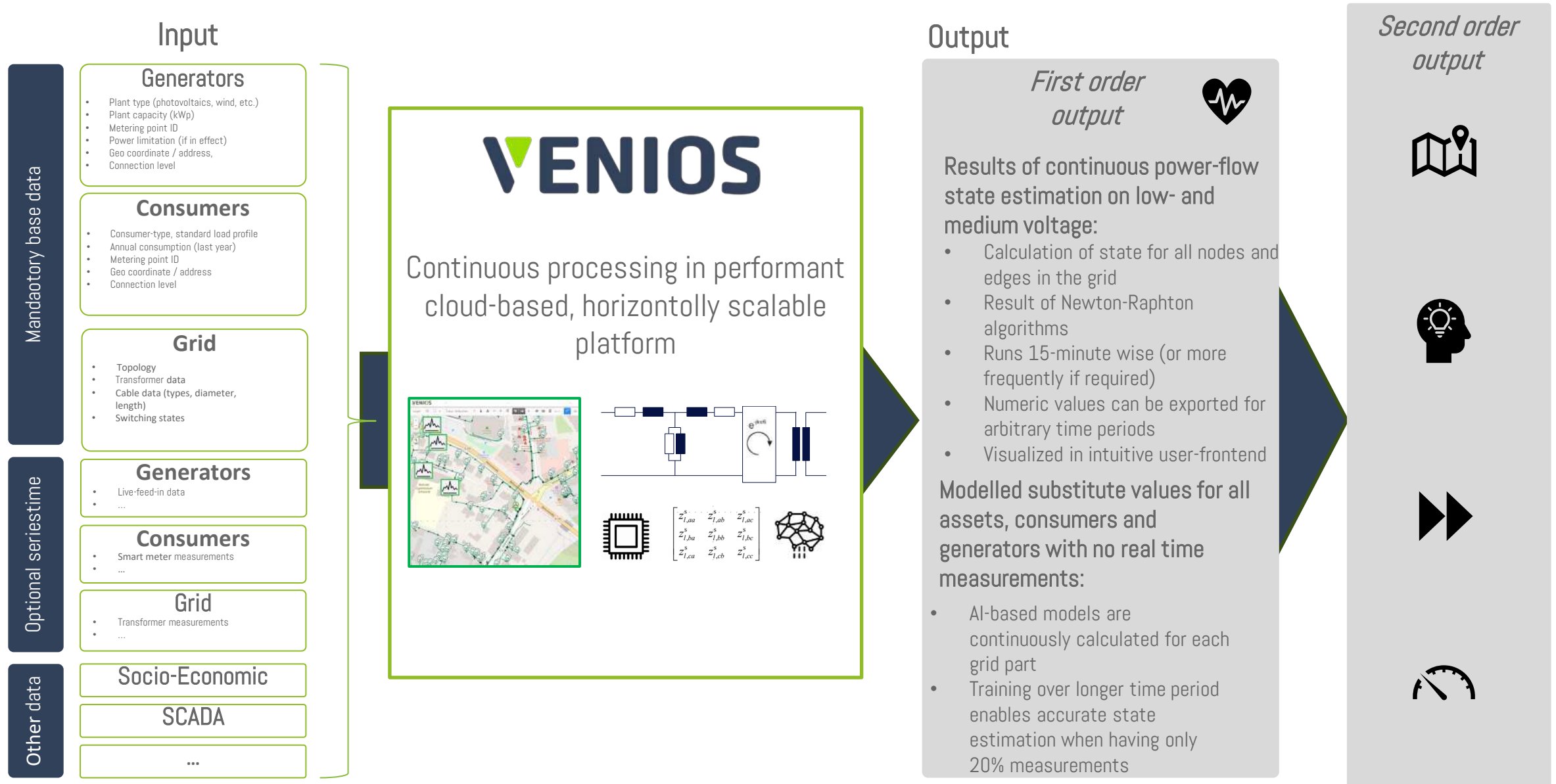


Sample data (medium network, 500 ONS):

- ▶ Venios.NET is fail-safe, transaction-proof, audit-proof and real-time capable, regardless of the volume of data
- ▶ The network model in Venios.NET includes all assets, including technical parameters and the exact electrical wiring
- ▶ Network model contains 3,000 - 4,000 objects per ONS

- ▶ A model is assigned to each asset
- ▶ Measurement/model data standardized to minute values
- ▶ State estimation every 15 minutes as standard
- ▶ State estimation generates approx. 144,000,000 index values per day
- ▶ Load flow calculation per ONS incl. valuation in 200 mSec.
- ▶ Calculations can be parallelized as required

How Venios works



Benefits for different user groups

Grid operation



Real-time insights and continuous forecasts on current, voltage and power quality

- Enable real-time grid insights with only a small fraction of measurement device coverage
- Get automated forecasts of grid capacity and congestions and alerts for threshold violations
- Enable field crew to directly interact with mobile devices to document changes immediately
- Control or delimit assets to resolve congestions

Grid planning



Use digital twin as a sandbox for modern network planning

- Handle more connection requests in shorter time periods
- Generate and plan different scenarios for the future evolution of your grid
- Get automated suggestions for grid upgrades based on techno-economic optimization

Asset management



Improved monitoring and prediction of grid asset utilization

- Increase asset lifetime by steadier asset utilization
- Increase grid efficiency by optimizing asset usage
- Predict failures based on asset usage patterns

IT



Scalable cloud-native platform that integrates different isolated solutions

- Non-relational databases for a powerful and efficient data processing
- Security compliant cloud-connection
- Better data quality enabled through direct visualization and crew interaction

Balance group management



Reduce imbalance costs by improved forecasts

- Integration with flexibility management to automatically settle deviations
- Better forecast the generation and consumption by using state-of the art AI-based models
- Continuous usage of available AMI data offers unique accuracy

Consumer management & grid fees



Empower consumers with self-service and automation

- Frontend for end-users for automated grid connection requests
- Automatically calculate grid tariff schemes to optimize grid capacity usage
- Automatically inform customers in case of incidents about status and recovery



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