**Sector Snapshot** 

# Smart Grid

Software and IT

### **Smart Grid Definition\***

- Digitalized, self-monitoring electricity network with automation, real-time control, and self-healing capabilities
- Bi-directional electricity flow & realtime data exchange between generation, storage, and consumers
- Integrates renewables, demand response, and smart devices for efficiency, reliability, and sustainability

## Sector Segmentation

Architecture, Engineering and Construction

## Hardware and Components

Transformers, switchgear, cables, smart meters, sensors, energy storage systems, inverters etc.

#### Software and IT

Energy management systems, data analysis, demand response platforms, virtual power plant software etc.

**Grid Operators and Energy Suppliers** 

**Independent Service Providers** 

Grid maintenance, certification services



### Market Size & Growth\*

- Global Market: Valued at USD 60 bn in 2024, projected to reach 289 bn in 2034 (CAGR 16.9%)
- Main Growth Areas: Renewable energy integration, grid automation & digitalization, electric vehicle infrastructure, energy storage
- Regional: North America leads the market, with rapid growth expected in Asia-Pacific due to urbanization and renewable energy adoption



## **Underlying Key Drivers**\*

- Energy Efficiency & Modernization:
   Demand for grid optimization,
   distributed energy resources (DERs),
   renewables integration & EV charging
- Tech Advancements & Growth:
   Integration of smart meters, sensors, Al and IoT enables real-time monitoring, and digitalized grid management
- Investments & Government Support: Policies, incentives & investments for grid modernization, e.g. U.S. Inflation Reduction Act and EU's Green Deal

## Recent Key Trends\*

- Technological Advancements:
   Growth in Al-driven grid optimization, demand-side management, real-time monitoring & predictive maintenance
- Decentralization & Grid Resilience:
   Shift towards decentralized energy production, microgrids, and resilience measures to prevent outages
- Cybersecurity & Data Management: Increased focus on protecting grid infrastructure & managing vast amounts of real-time data

### **Sector Definition**

- Purpose: Develop and implement software & IT solutions to enhance grid reliability, efficiency & cybersecurity
- Key Customers & Applications:
   Primarily utilities and grid operators, enabling real-time monitoring, automation, and renewable energy integration
- Products/Services: Software for grid management, Al analytics, cybersecurity, SCADA/EMS, demand response, and DER integration

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## Market Structure

- Mix of Global and Niche Players:
   Dominated by large software providers but with many specialized regional firms
- Utility-Centric Market: Key customers are utilities, grid operators, and energy infrastructure providers integrating renewable energy and automation
- Regional Influence: Market dynamics depend on government policies, grid modernization efforts, and investment in digital infrastructure



## Selected Key Players

Large

Size

**ARGONAS** 

ORACLE Schneider thüga 🛨 solutions next enel x CANCOM nagarro S ARVATO SYSTEMS NER BTC PSI **KISTERS eSmart** envelio Focus **Focused** Diversified

## **Transaction Market**

#### **Historical Activity:**

- Software-Led M&A Surge: Demand for grid software, energy analytics, VPPs & cybersecurity drives deal activity
- Strategic Consolidation: Niche providers acquired to expand SaaS portfolios and regional presence
- Tech Integration Fuels M&A: Synergies between software and energy storage, smart meters, and renewables drive deals



## **Transaction Market**

#### **Key Drivers of Potential Deal Activity:**

- Surge in demand for VPPs, Al-based forecasting & dynamic pricing platforms
- Grid operators & OEMs seek software to enhance flexibility, stability & asset control
- Strategic buyers push to integrate end-to-end digital solutions (e.g. EMS + storage + DERs)



## **Transaction Market**

#### **Outlook & Potential Opportunities:**

- Consolidation & Buy-and-Build:
   Fragmented market offers opportunities in demand response, digital twins & predictive maintenance
- Cross-Sector Synergies: Integration with energy storage, e-mobility, and digital services
- Investment in SaaS: Continued capital inflow targets SaaS solutions for AI forecasting, VPPs & dynamic pricing



## Selected Deals



















## Get in Touch



Christian Berkhoff

Managing Partner / Co-Founder

+49 (172) 99 05 977 c.berkhoff@argonas.de



Sascha Männel

Managing Director /
Co-Founder

+49 (173) 39 38 216 s.maennel@argonas.de



Maximilian Bechtold

Associate

+49 (173) 29 25 948 m.bechtold@argonas.de