GRIDAID

Low-voltage Power monitoring

the GridAid system

COMTECH

The need for monitoring

Why is LV monitoring is important now?

Millions of household PV systems are already installed worldwide, and this is just the beginning. Electric cars are here and will not stop coming. Low-voltage networks need to adapt, and the first step is to have proper information of the network. COMTECH's Power Monitoring portfolio can help DSOs to start the unavoidable journey that will change the industry.

The EU encourages the deployment of smart grids, which utilize advanced monitoring, control, and communication technologies to efficiently manage electricity distribution. This approach supports the integration of distributed energy resources and enhances grid flexibility.

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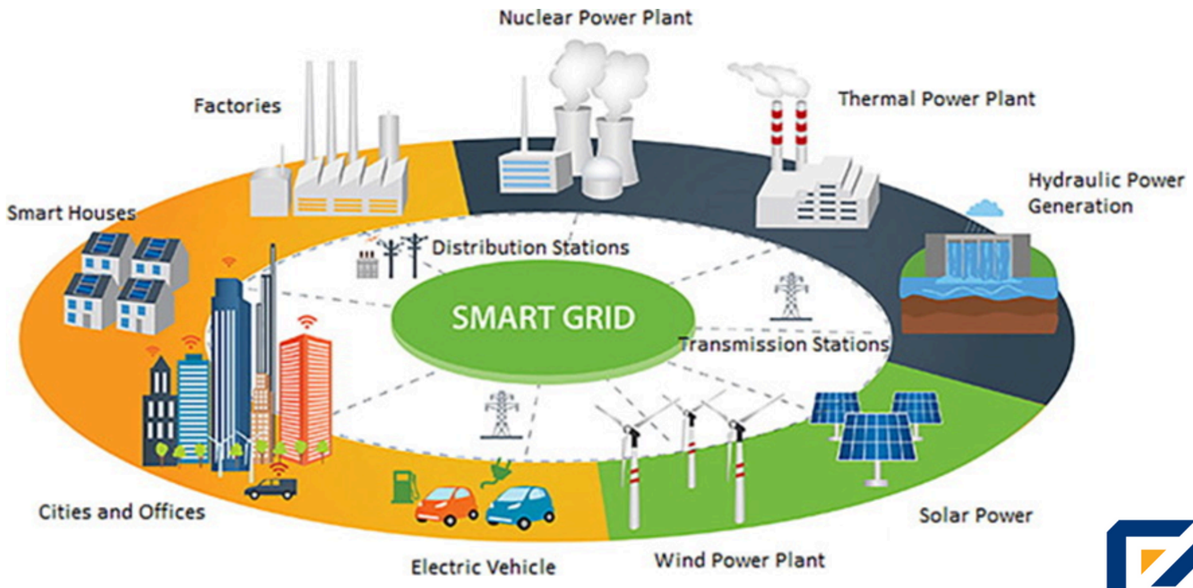
The need for monitoring

Why is LV monitoring important now?

- Maintaining the required quality of service is becoming increasingly harder
  - Bi-directional energy flow
  - Erratic energy production due to the renewable sources
- A rapid increase in consumption is expected with the spread of electric cars

Smart Grid is the generally accepted answer to many questions in the industry



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USPs

Why GridAid system is marketable

- **Cost-efficient** – Significantly cheaper than top-quality products (e.g., Siemens, Schneider).
- **Compact device** – Includes power supply, measurement unit, overcurrent protection module, and communication module.
- **Easy and fast deployment** – Can be used as a standalone system before full integration into company systems, which could take years of development.
- **Flexible deployment options** – Can deploy either the device alone or the entire system, depending on the customer's preference.

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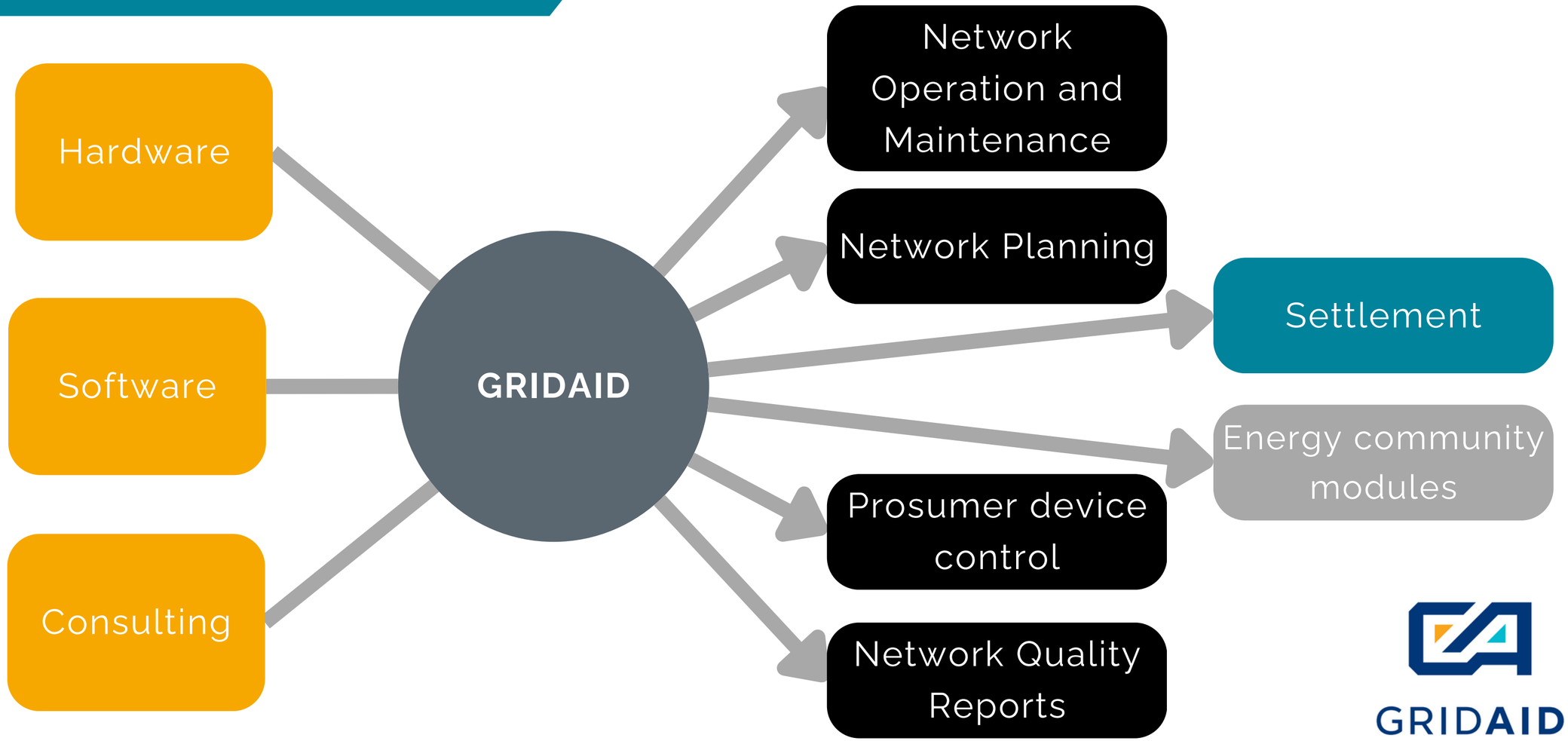
System elements and functions



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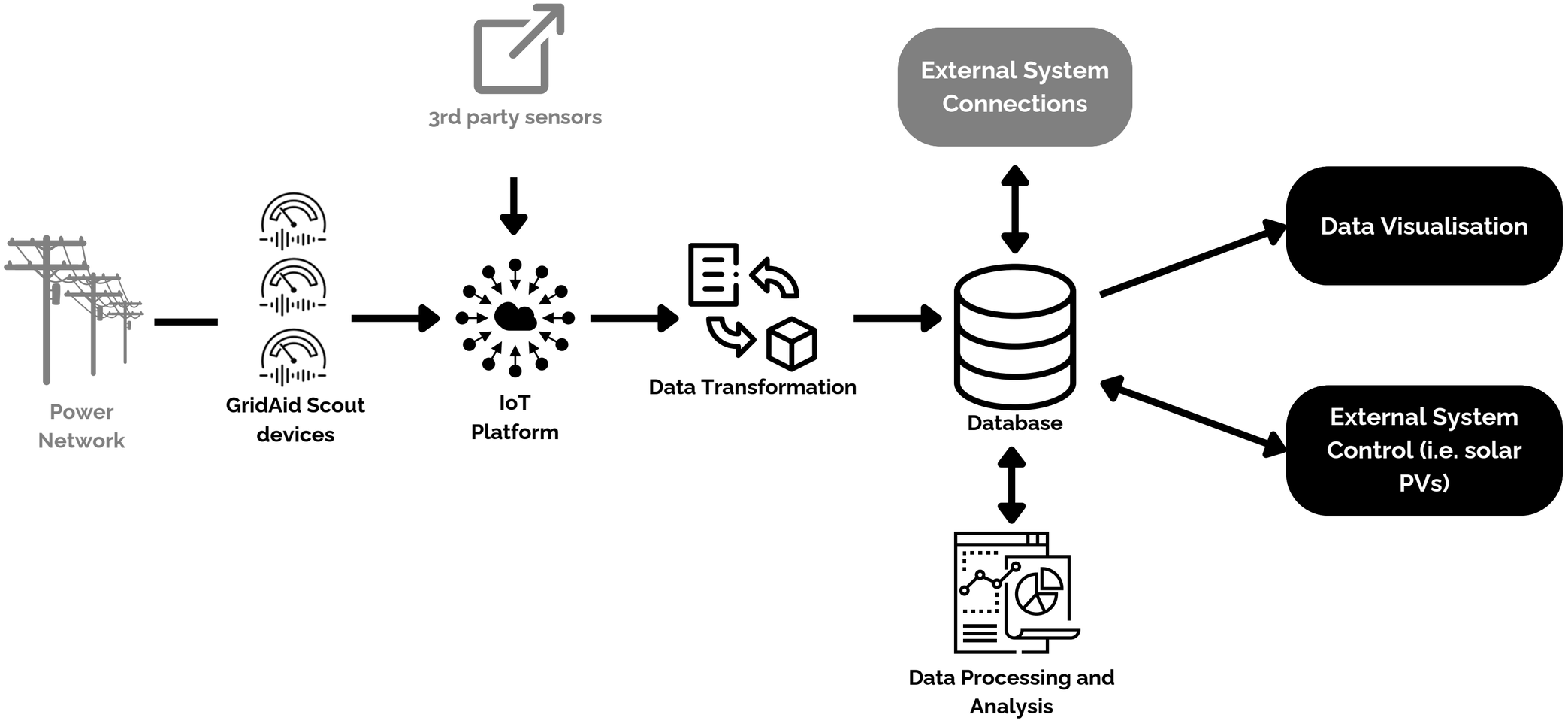
System architecture

GridAid system modules



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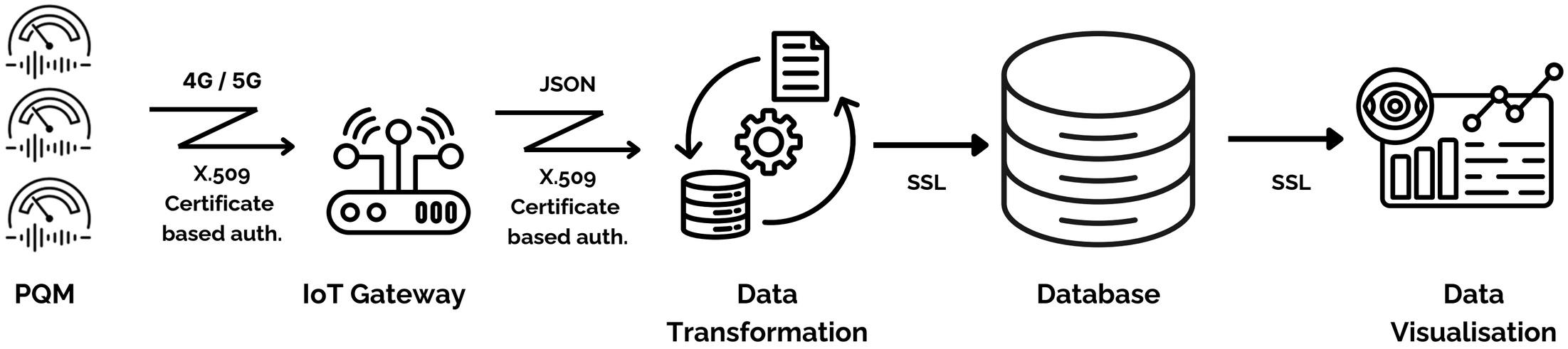
Communication and security



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Use Cases

What can be achieved?

	Transformer point Measurements	Transformer point + Mid-line/Endpoint Measurements	Control + Transformer point + Mid-line/Endpoint Measurements
	Measurement and real-time monitoring of deviation from the residual curve.	Demand Side Management	Voltage problem detection, error handling support	Network loss calculation
	Detection and measurement of unauthorized usage	Load and production estimation	Small-Scale Solar PV system control	Reactive performance estimation
	Small-Scale Solar PV System integration capacity estimation	Data provision for local energy trading	Identification of sensitivity coefficients	Network unbalance measurement

Value Statement

- **Standalone solution!**
- **End-to-end infrastructure (not just sensors!)**
  - Sensors
  - Data transmission
  - Data transformation
  - Integrated data analysis
  - Control
  - Data visualisation and reporting module
- **Together we can achieve more!**

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Thank you for your attention!

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