We believe in a world powered by **100% renewable energy**.

Our **Energy IoT platform** as the key to a successful energy transition and sector coupling

KIWIGRID

Kiwigrid: **Numbers & Facts**

📅 founded 2011   🌐 located in Dresden, Deutschland

8bn Data points per day

18+ Countries in operation

50k+ User

500k+ Devices and Things

3k+ Registered installers

160+ Employees

90+ IT-Specialists

100+ Successful projects

Shareholder

AQTON

Partner/customer logos grid: tibber, Energiekonzepte Deutschland, EWE, e·on, envia M, MITNETZ STROM, GALVANY., SWLB, SPOT MY ENERGY, iwb, SIG, ubbink, eregio Energiekonzepte, SOLAX POWER, SOLARWATT powering a better tomorrow, LEW Lechwerke, Panasonic, HUAWEI, bn, SMA, EKZ, BayWa r.e., FOX ESS, rabot.energy

Product portfolio | secure, scalable and cross-sector

Manufacturer-independent with the know-how from over 10 years of industry experience

The Independent Home | TIH (SaaS)
enables energy optimization, intelligent charging of electric vehicles and the year-round supply of clean, self-generated energy for homes.

Own Application (PaaS)
APIs offer modular, turnkey functions that enable B2B customers to bring their own application to the market in a targeted and customized approach.

The Transactive Grid | TTG
Is the bridge from the building to the energy market. Dynamic tariffs are optimized and control interventions in accordance with §14a are ensured.

KiwiOS | KOS
the most powerful service platform for decentralized energy. KiwiOS X: highly secure, scalable also for international markets, completely independent of device manufacturers, PaaS-capable.
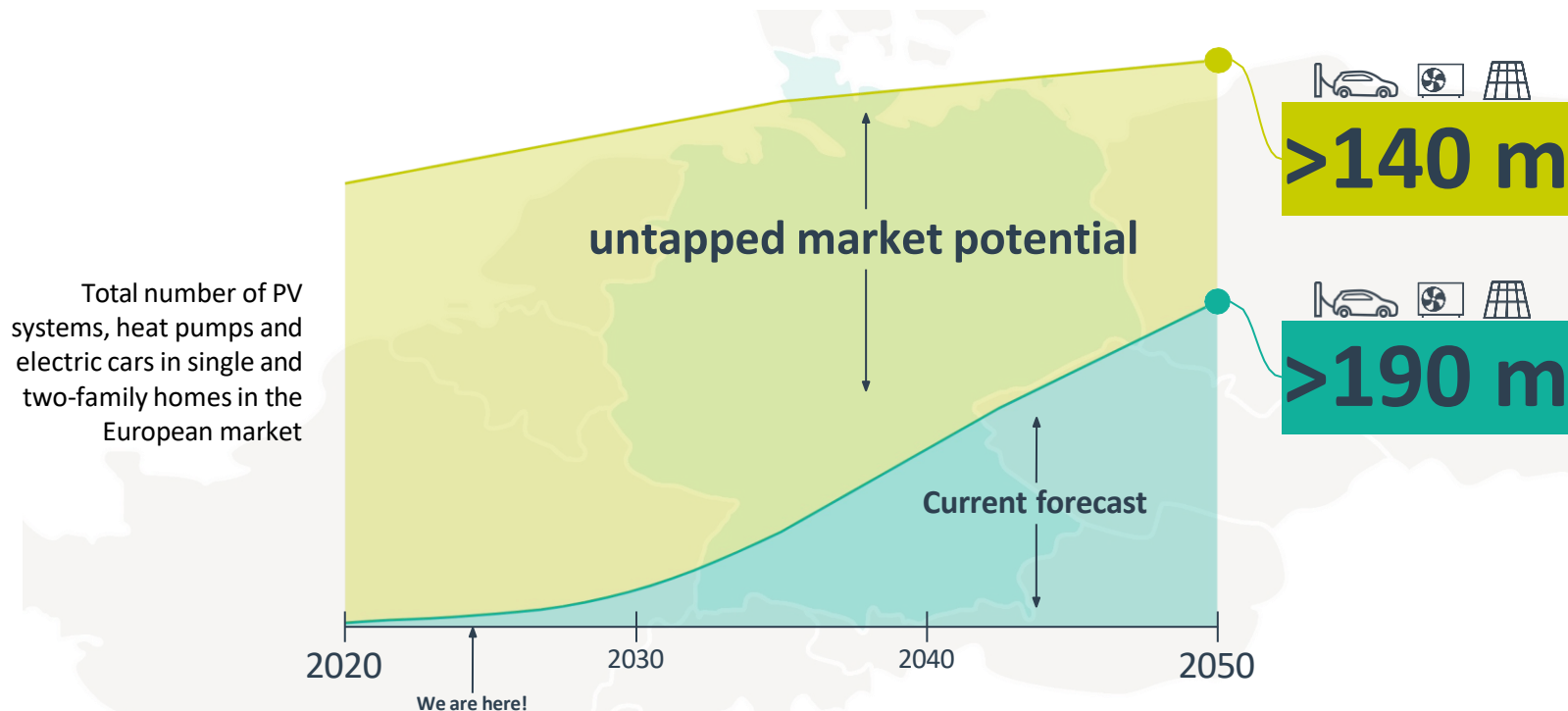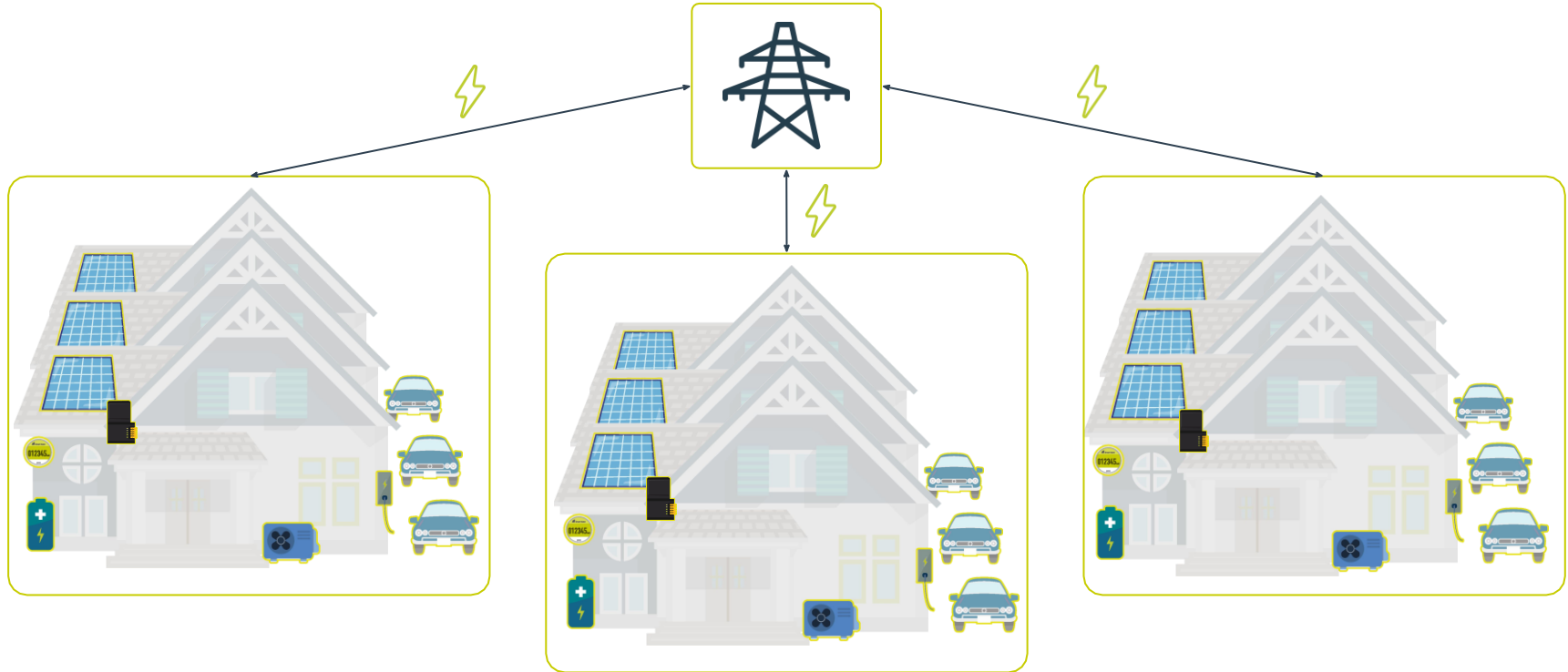
Energy Manager | EM
EM.VoyagerX and EM.RailX automatically detect and install devices in the field and provide standardized connectivity based on Eclipse IoT and OpenHAB.

KIWIGRID

The **market for decentralized home energy** is huge and will grow faster than we think

Total number of PV systems, heat pumps and electric cars in single and two-family homes in the European market

untapped market potential

Current forecast

>140 m

>190 m

2020   2030   2040   2050

We are here!

KIWIGRID

More and more houses have PV systems, and the number of heat pumps and electric cars being sold is rising constantly
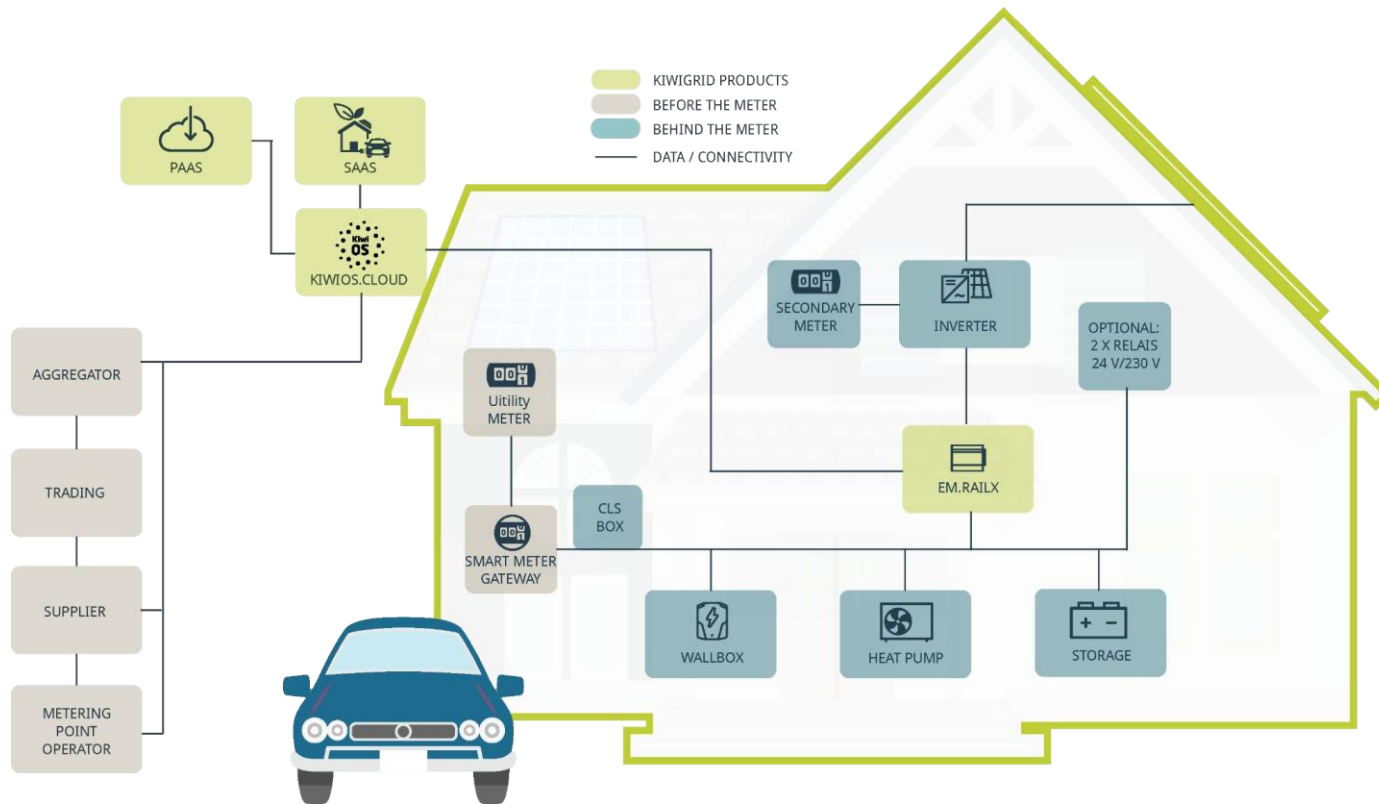
Thousands of homes with solar PV systems, electric vehicles, and heat pumps in Germany alone
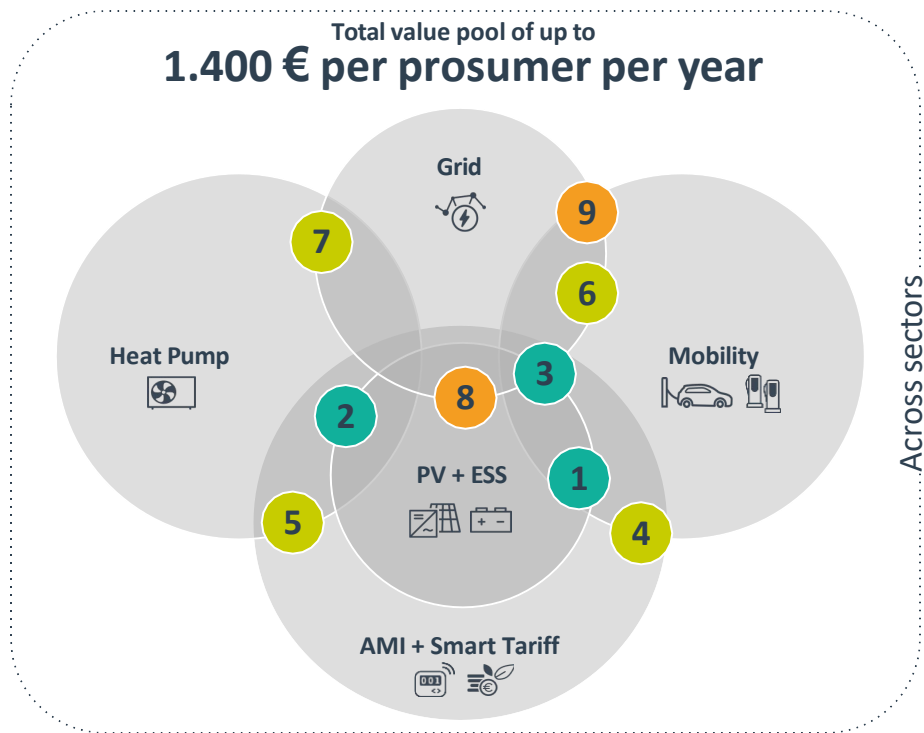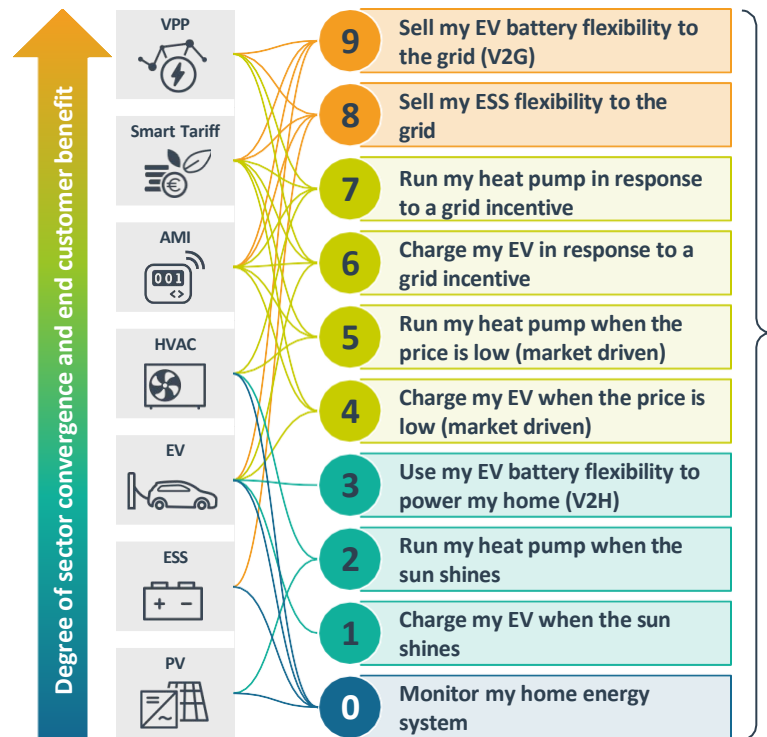
This leads to an unprecedented level of **complexity**

Challenge #1: Integration of heterogeneous hardware and energy market systems

KIWIGRID PRODUCTS
BEFORE THE METER
BEHIND THE METER
—— DATA / CONNECTIVITY

PAAS

SAAS

KIWIOS.CLOUD

AGGREGATOR

TRADING

SUPPLIER

METERING POINT OPERATOR

SECONDARY METER

INVERTER

OPTIONAL: 2 X RELAIS 24 V/230 V

Uitility METER

EM.RAILX

CLS BOX

SMART METER GATEWAY

WALLBOX

HEAT PUMP

STORAGE

KIWIGRID

This leads to an unprecedented level of **complexity**

Challenge #2: Optimization of energy across sectors and value streams

Degree of sector convergence and end customer benefit

VPP
Smart Tariff
AMI
HVAC
EV
ESS
PV

9 Sell my EV battery flexibility to the grid (V2G)

8 Sell my ESS flexibility to the grid

7 Run my heat pump in response to a grid incentive

6 Charge my EV in response to a grid incentive

5 Run my heat pump when the price is low (market driven)

4 Charge my EV when the price is low (market driven)

3 Use my EV battery flexibility to power my home (V2H)

2 Run my heat pump when the sun shines

1 Charge my EV when the sun shines

0 Monitor my home energy system

Total value pool of up to
1.400 € per prosumer per year

Grid

Heat Pump

Mobility

PV + ESS

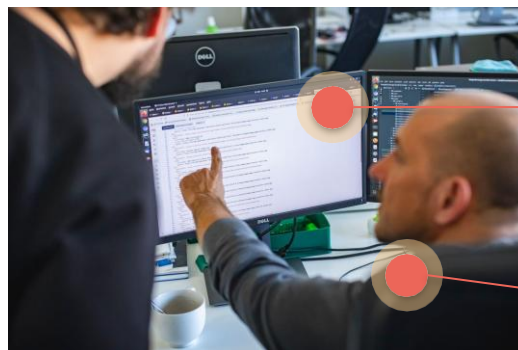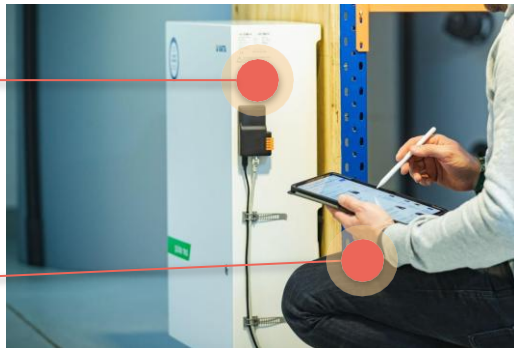AMI + Smart Tariff

Across sectors

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This leads to an unprecedented level of **complexity**

Challenge #3: Development and operation of a complex IoT infrastructure in the energy sector on a large scale

1 Agile **SW and HW development** and maintenance

2 Development of **device integration and managing partnerships** with device manufacturers

3 Ongoing **testing and validation** of sector-coupled energy systems

4 **Hosting** and operational **management** of cloud service

5 Monitoring and **technical support** of hardware and software infrastructure

6 **Introduction and maintenance** of an IT/data security and quality management system (e.g. ISO 27001)

7 **Recruiting and retaining** highly qualified software and electrical engineers
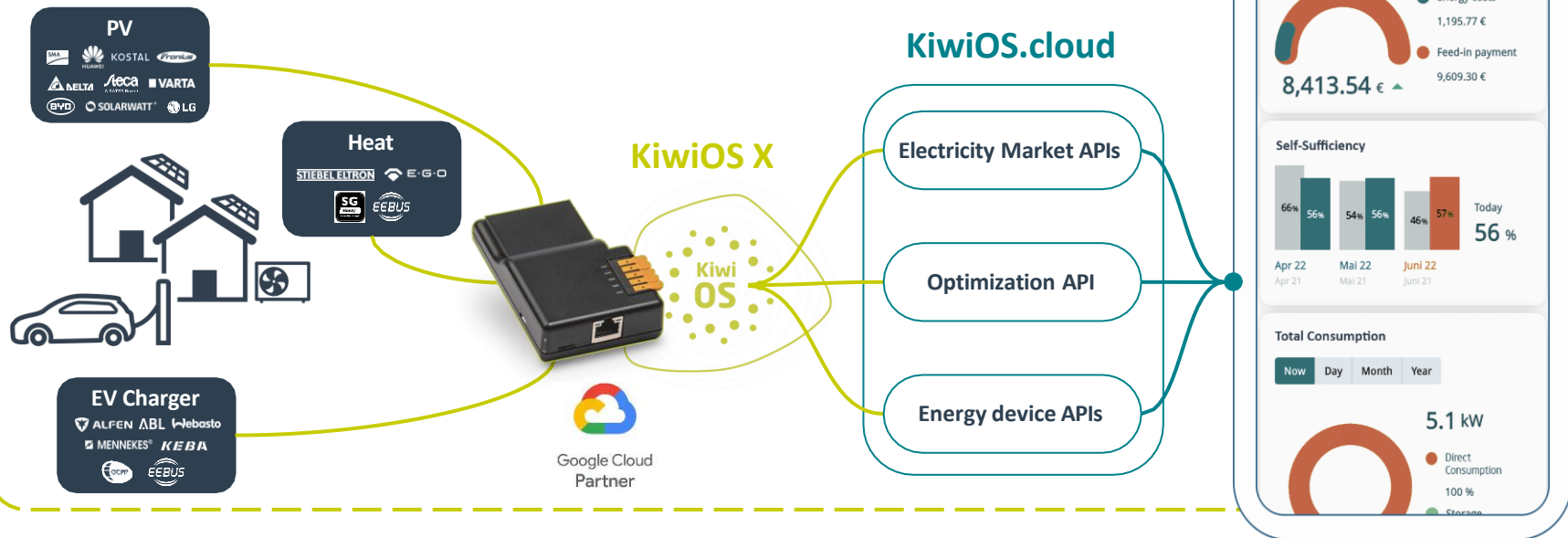

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Unlocking complexity: Kiwigrid's solution for every use case

Works with **most popular** devices → **Easy-to-install** and easy-to-upgrade → Offers **modular, turnkey** functions → Enables custom solutions **via APIs**

PV

SMA · HUAWEI · KOSTAL · Fronius
DELTA · steca · VARTA
BYD · SOLARWATT · LG

Heat

STIEBEL ELTRON · E·G·O
SG Ready · EEBUS

EV Charger

ALFEN · ABL · Webasto
MENNEKES · KEBA
OCPP · EEBUS

KiwiOS X

Kiwi OS

Google Cloud Partner

KiwiOS.cloud

Electricity Market APIs

Optimization API

Energy device APIs

07:15

Energy Monitor Home

Plant Balance

Day | Month | Year

● Energy costs
1,195.77 €

● Feed-in payment
8,413.54 € ▲ | 9,609.30 €

Self-Sufficiency

66% 56% | 54% 56% | 46% 57%

Today
56 %

Apr 22 | Mai 22 | Juni 22
Apr 21 | Mai 21 | Juni 21

Total Consumption

Now | Day | Month | Year

5.1 kW

● Direct Consumption
100 %

● Storage

Ready-to-use, user-friendly and **easy-to-integrate** software products
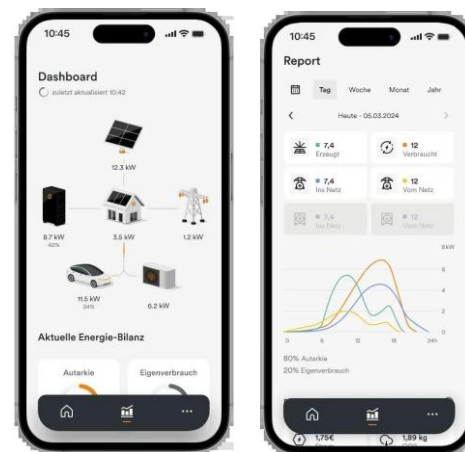

SaaS
Products

Our customers' own **PaaS applications**

Our API cloud products offer a wide range of possible applications

Application example

Energiekonzepte Deutschland GmbH

Source: ekd-solar.de

A decade of experience in efficiently integrating and operating devices at the cross-industry system level

- Kiwigrid operates two independent system validation sites with an area of more than 600 m^2

- Both facilities allow for the installation of various configurations consisting of EV charging stations, PV/hybrid inverters, energy storage systems, heat pumps, smart meters and smart home devices, as well as the ability to connect and charge multiple EVs

- Instead of installing all available device configurations individually, a networking matrix has been set up that enables a quick and uncomplicated combination of device configurations with different device types from different manufacturers

90+ engineers with brilliant SW and HW development skills

Software

- Kiwigrid has been developing energy applications since 2011

- More than 90 professional software engineers in the areas of frontend, backend and embedded development

- Many years of engineering experience in the development of fully regulated smart meter gateways with EAL4+ and ISO 27001 security levels

- Unique expertise in implementing connectivity for a wide range of energy devices

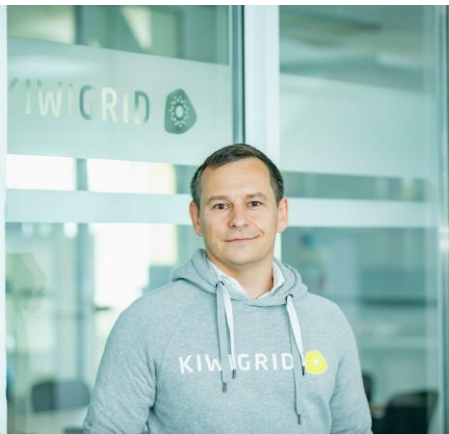- Experts in site reliability engineering on the Google Cloud Platform

Hardware

- Kiwigrid has been developing gateways for energy applications since 2011

- Over 70,000 of Kiwigrid's Energy Manager have been produced in the last 10 years

- Interfaces and their installation are extensively tested by installers from the PV industry

- Unique expertise in the implementation of fieldbuses for the PV industry and their user-friendly application via software

KIWIGRID

Our mission is huge. We have a fantastic team to accomplish it.

Janek Schuffenhauer
Managing Director

Lars Schwarzelt
Managing Director

Dr. Carsten Bether
Managing Director

+160 Kiwis
Chief Energy Transition Officers

Shareholders

AQTON   e·on   LG

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We rethink energy

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