



# Pilotierung eines Datenkreises für Erneuerbare Energien

Herausforderungen und Lösungen

# Digitalization of lower grid layers in Distribution Grids

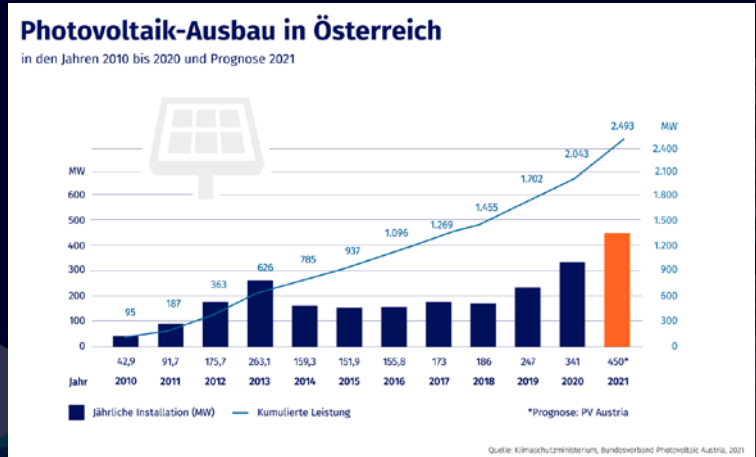
## Why?



# Energy Transition Challenges (1)

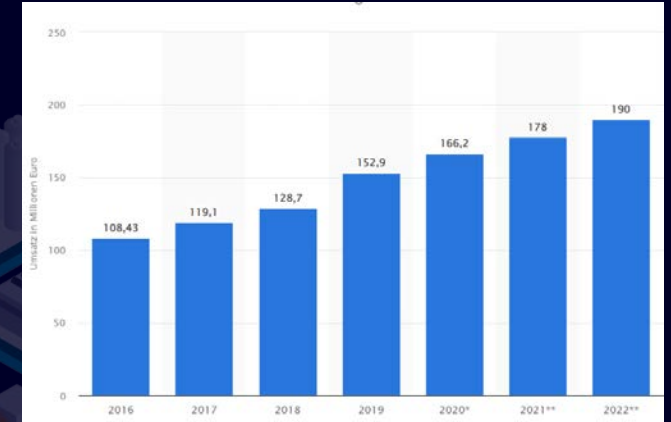
## PV generation

Demand by law (Erneuerbaren Ausbaugesetz) for additional 11 TWh until 2030



## Heat pumps

Expected turn over for heat pumps (heating and hot water) for 2022 (without air conditioners)



## Legal / regulatory framework

- EAG: Renewable Energy Communities – Reduced grid tariff
- In preparation: Power oriented tariff structures, reduced grid tariffs if customers provide DSO access to controllable loads/generation devices
- Reduction of investment hurdles for renewable generation.
- TOR: Relay contacts for controllable customer assets – in the future: Digital interface

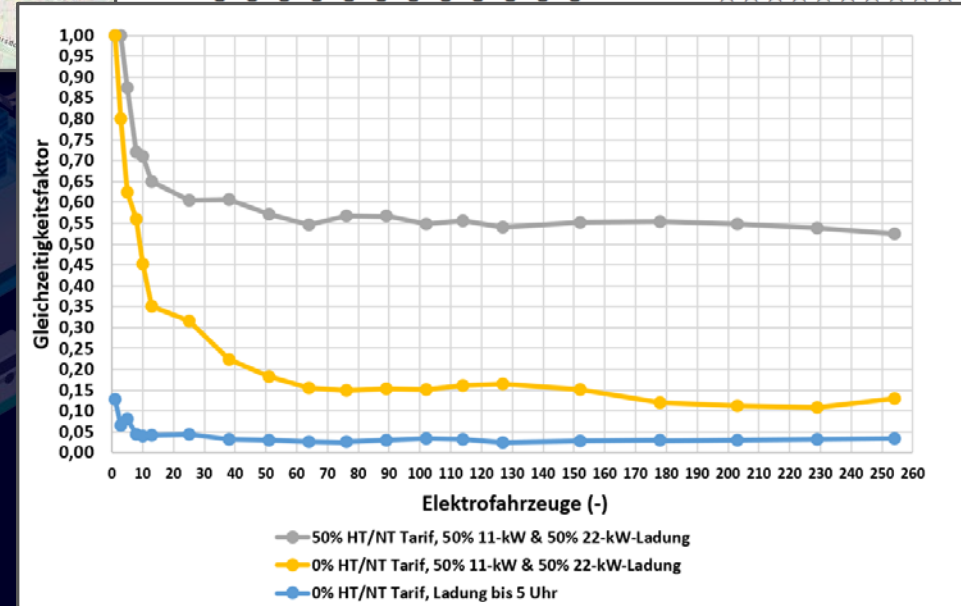
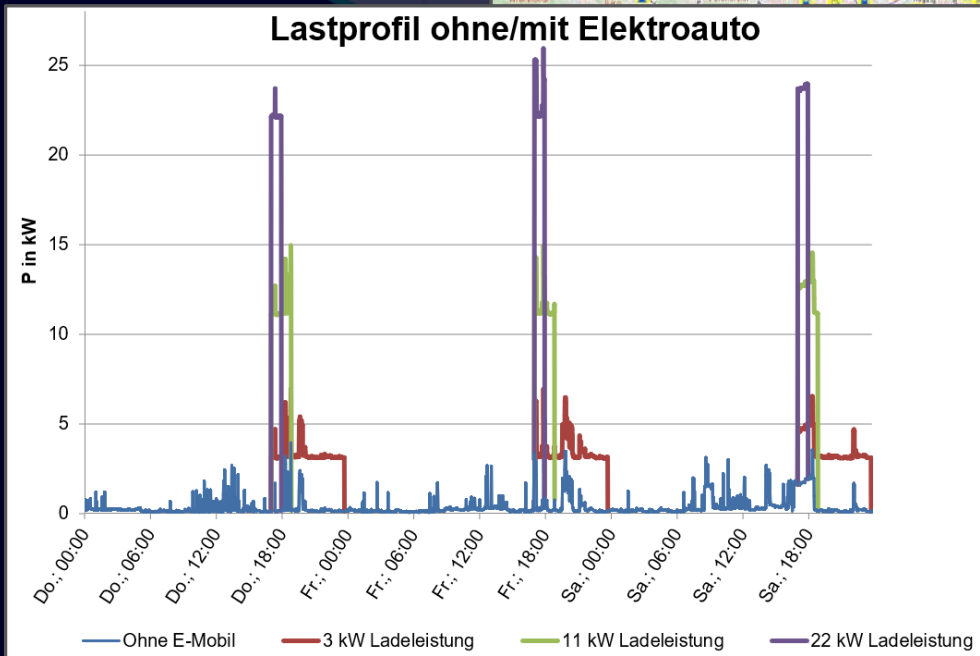
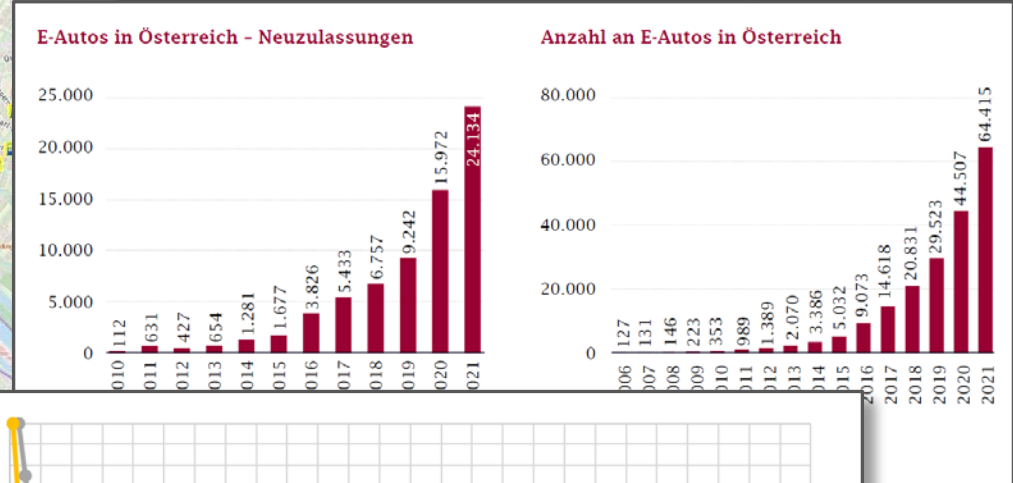
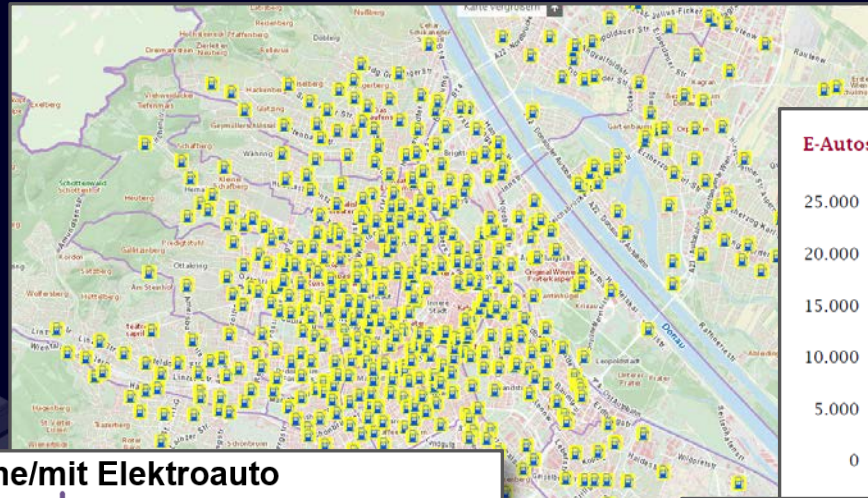


Legislation

# Energy Transition Challenges (2)

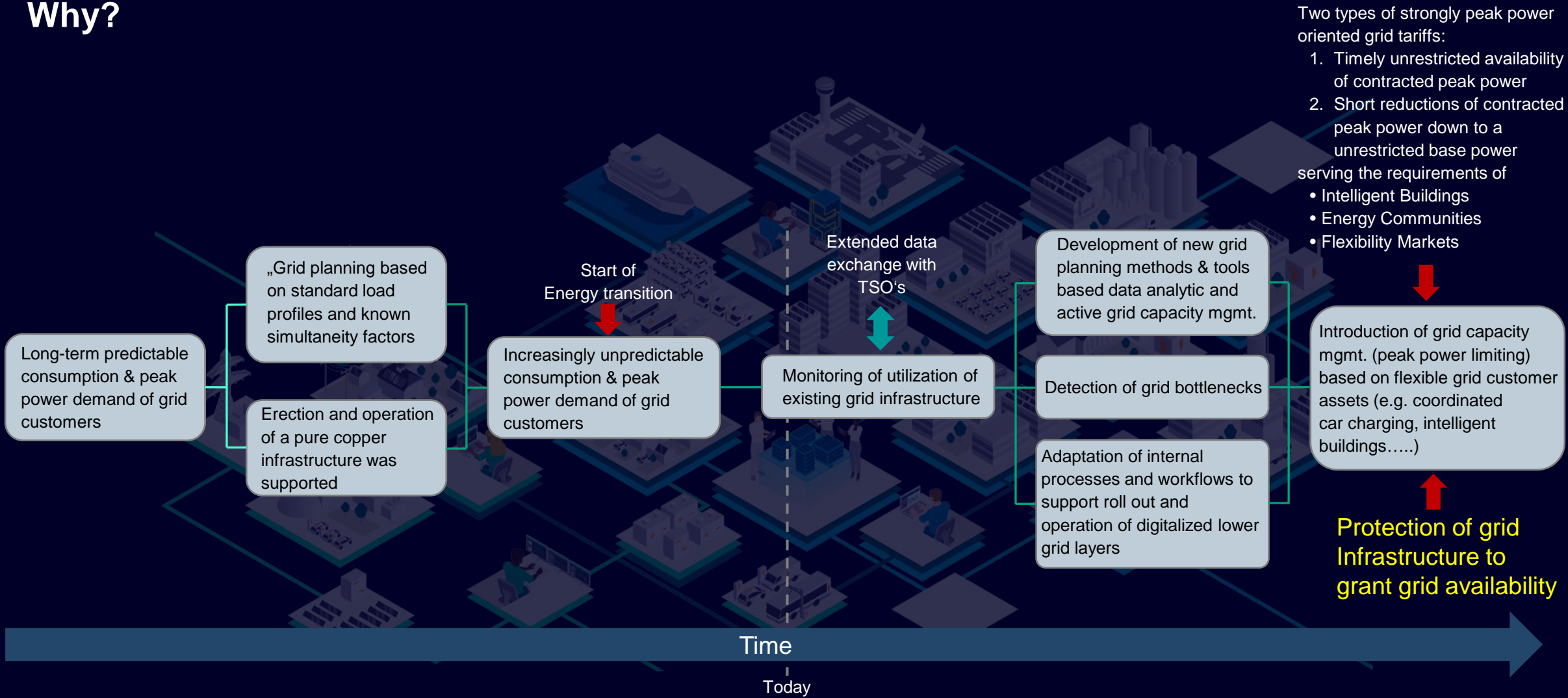
## Charging points, example Vienna (without home chargers)

This year another 200 charging points on top to the 1000 existing ones are planned.



# Digitalization of lower grid layers in Distribution Grids

## Why?



Two types of strongly peak power oriented grid tariffs:

1. Timely unrestricted availability of contracted peak power
2. Short reductions of contracted peak power down to a unrestricted base power

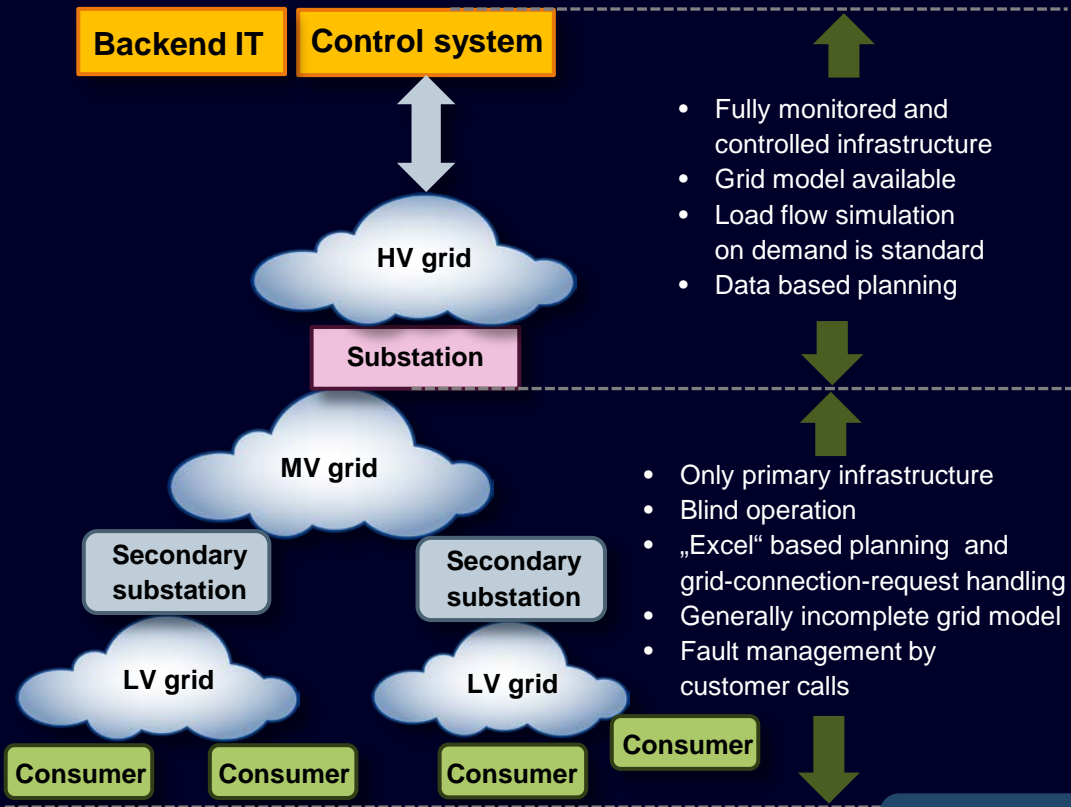
-serving the requirements of

- Intelligent Buildings
- Energy Communities
- Flexibility Markets

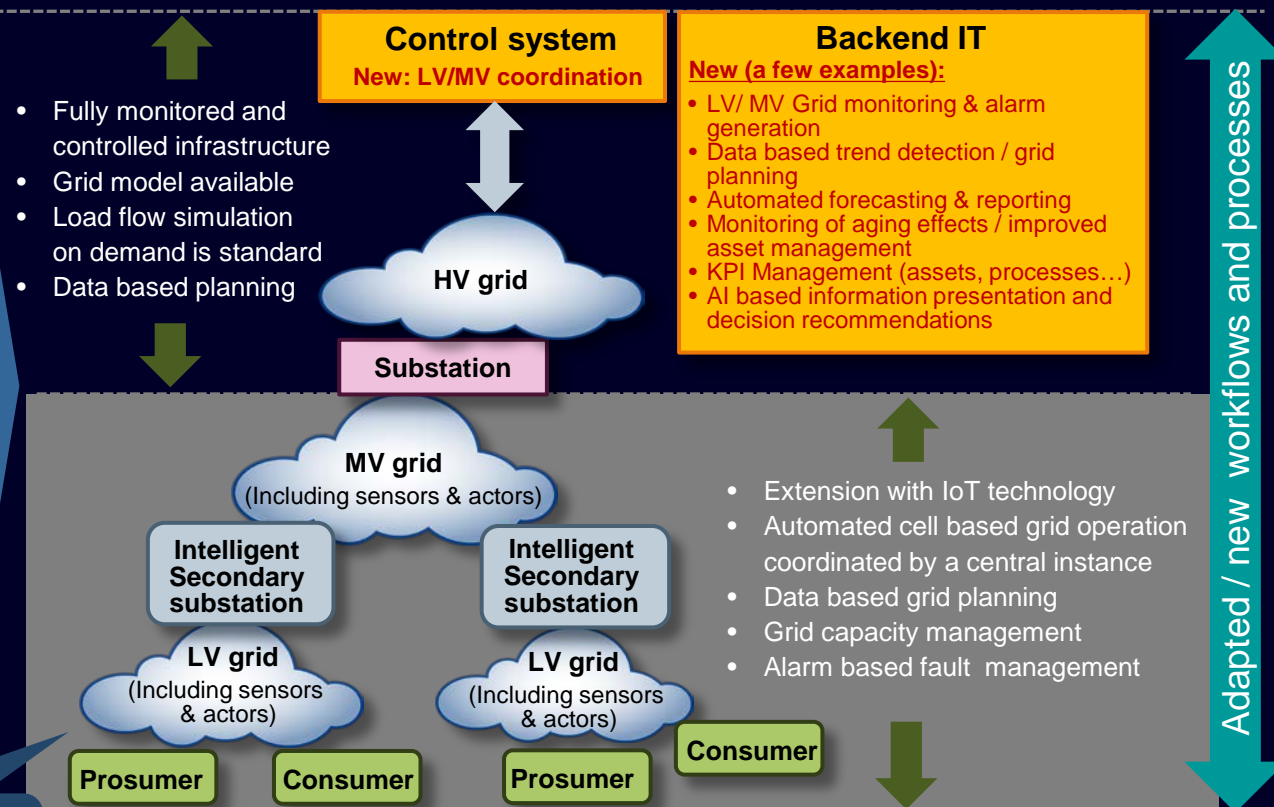
# Distribution Grid Digitalization

## Migration scenario

### Existing grid infrastructure



### Fully digitalized grid infrastructure



scalable migration scenarios

Dominant CAPEX and OPEX

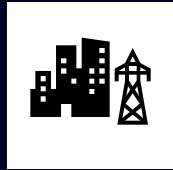
Adapted / new workflows and processes

# Establishing the leading edge ecosystem

## Vision Industrial Edge ecosystem

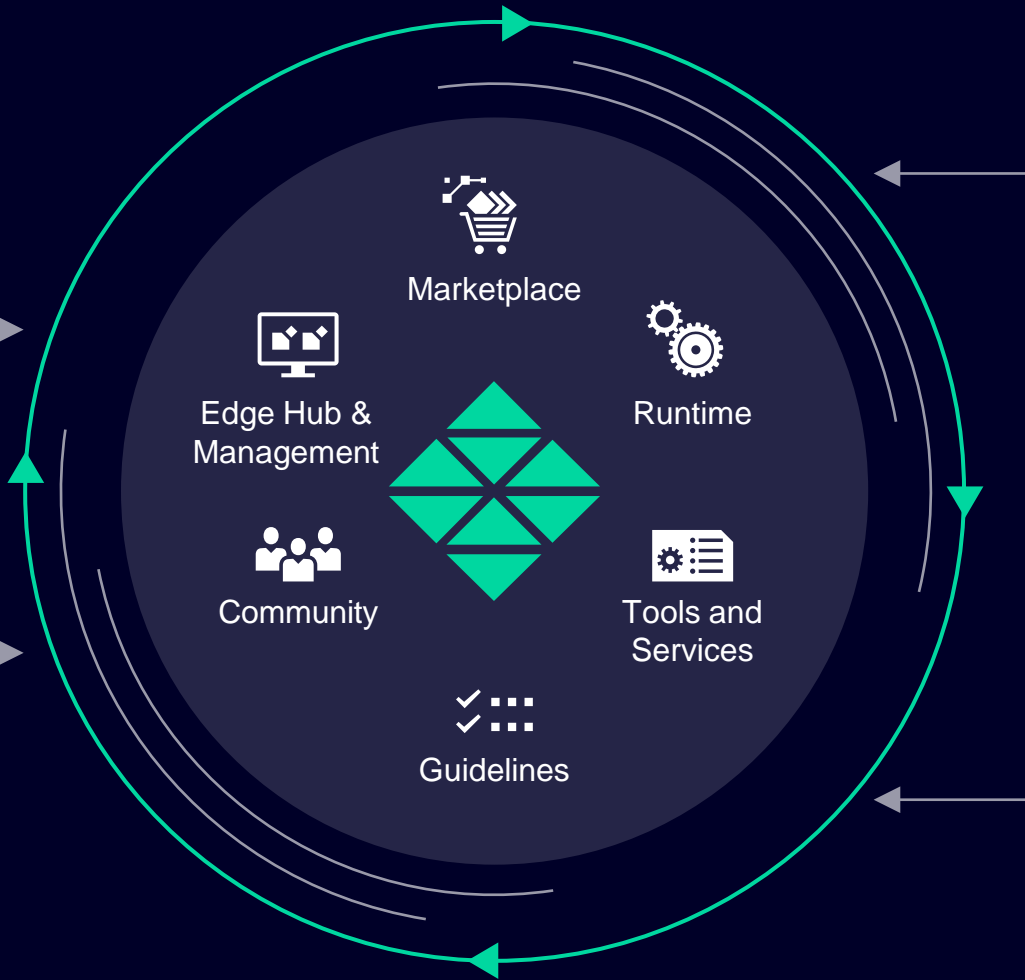
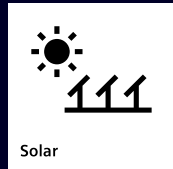
### Grid providers (DSOs)

Increase productivity, efficient solutions for new challenges



### Consumer/Prosumer

Easy access to new energy transition market (energy communities)



### Application Providers

Scale own business, monetize ideas seamlessly  
Apps as connectors to devices in the field



### Device Builders

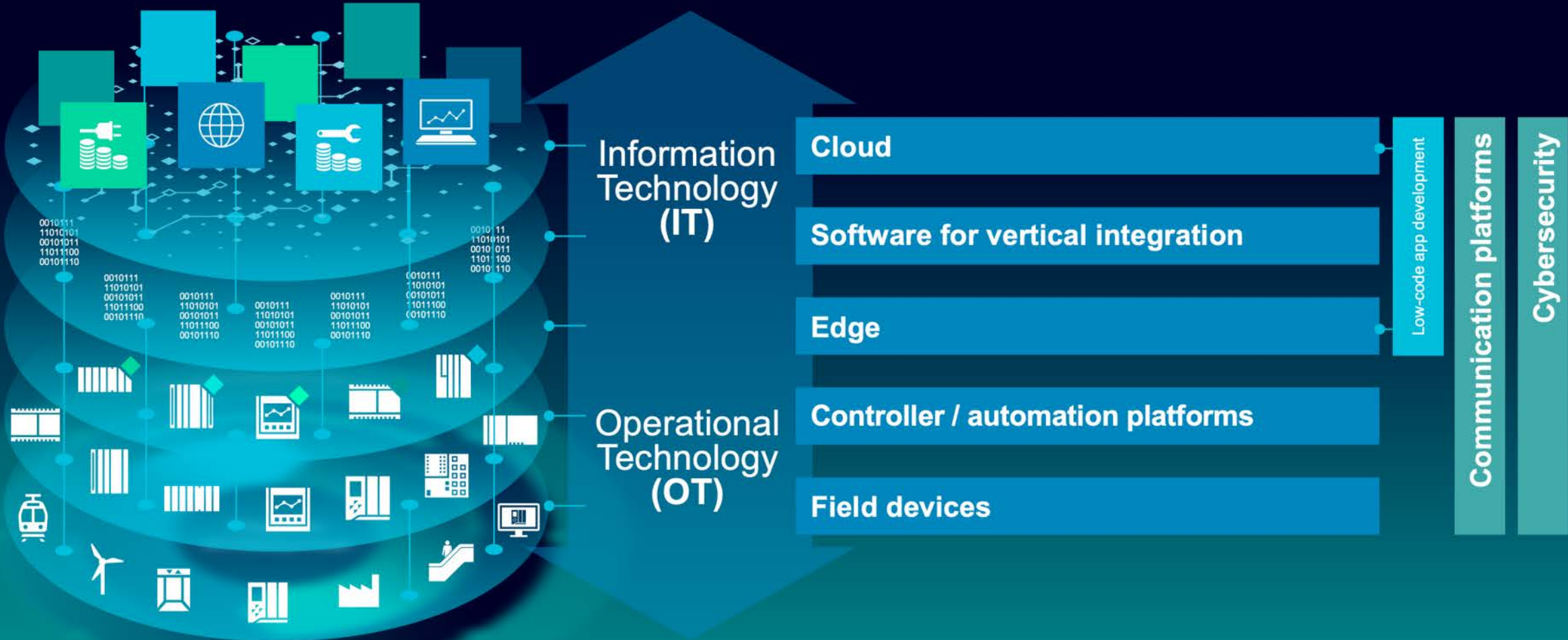
Bring in own edge-enabled devices and benefit from high level of connectivity and flexibility



◆ Customers

● Industrial Edge Platform

# On-premise Edge is the pivot of OT/IT integration





## Next steps

Analyse der notwendigen Daten zur Optimierung der Prozesse der Teilnehmer am Energiesystem (Energieerzeuger, Netzbetreiber, E-Mobility Provider, Betreiber intelligenter Gebäude), Ziel: kostengünstige Umsetzung der Energiewende für die Prosumer – unter Einbindung von industriellen Partnern zur Sicherstellung einer wirtschaftlichen Umsetzbarkeit

Designen eines Datenecosystems zur Bereitstellung und Austausch der erforderlichen Daten (z.B.: EDA Plattform zum Austausch der Zählerdaten)

Erarbeitung einer Gesamtstrategie zur Umsetzung mit realistischen Umsetzungsschritten

# | Contact

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