

FlexEVility



Founder Team:

- Florian Kühlkamp
- Dr. Severin Nowak
- Prof. Dr. Antonios Papaemmanouil



Spin-off
HSLU Hochschule
Luzern



> The eMobility Team



Florian Kühlkamp, M.Sc.
Project Manager

Area of Expertise:

- Modelling of transport systems
- Innovation in the electromobility sector
- Software development



Antonios Papaemmanouil,
Prof. Dr.

Area of Expertise:

- Innovation in modern power systems
- Integration of distributed resources
- Key account management
- Data usage in the energy sector



Severin Nowak, Dr.
Business Development

Area of Expertise:

- Modelling of flexibility services & power grid
- Electromobility
- Data use in energy

> The Advisors

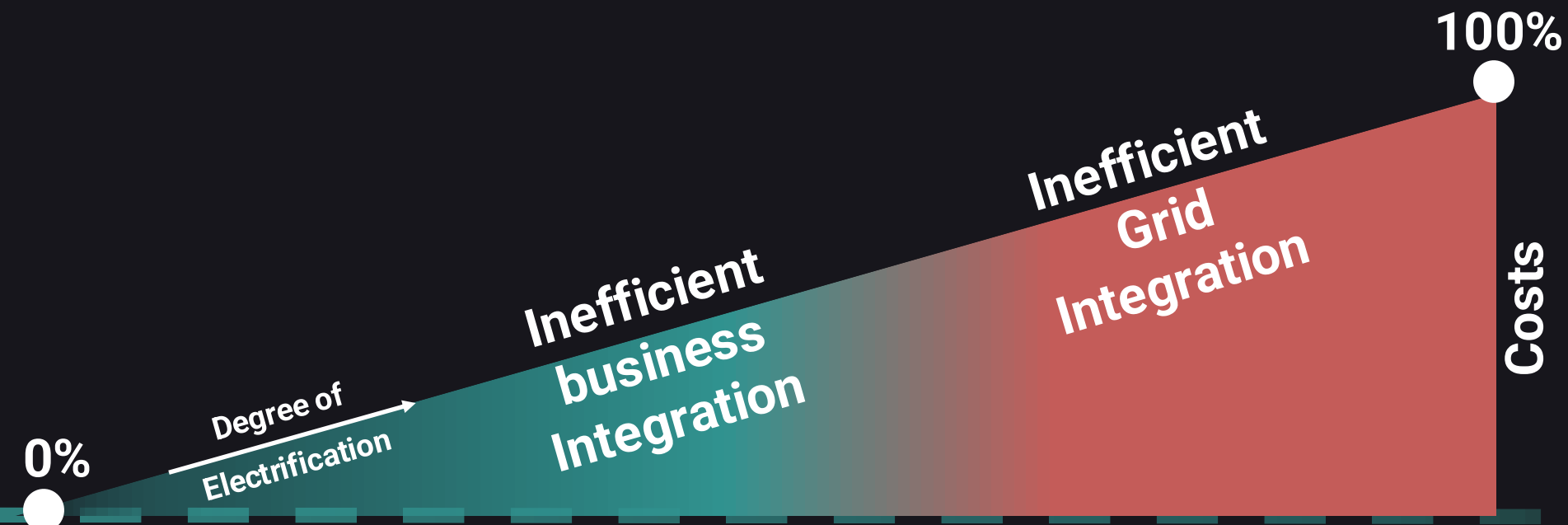


> Challenge



Necessary shift how fleets operate:
Operations are highly dependent
on grid availability, prices and topology

Time to Decarbonize Transport



Short term risks :

- I. Missing competences on electricity assets
- II. High costs for grid and fleet operators
- III. Wrong investments

Long term risks

- I. Very high operational costs due to unused potential
- II. Disturb fleet operation
- III. Endanger grid stability

Stepwise electrification of fleet by operators

- Public Transport
- Logistics
- Company fleets



> Challenge

Anteil Flotten-
Elektrifizierung

Endzustand

Time to
Decarbonize Transport

Today

Time

Hochlauf



Netz-Integration



Depot-Integration

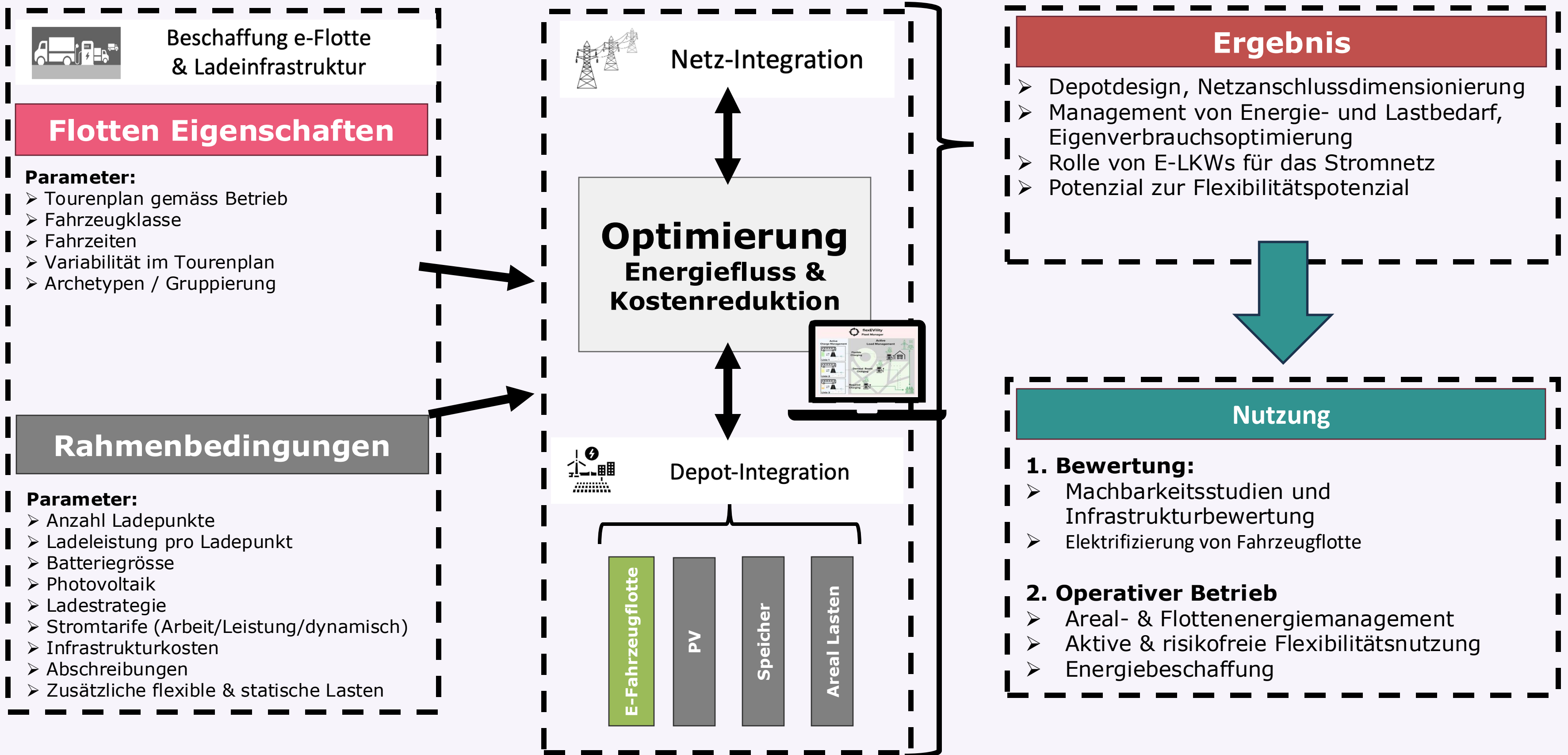


Beschaffung e-Flotte
& Ladeinfrastruktur





➤ Challenge: Interaktionsfelder



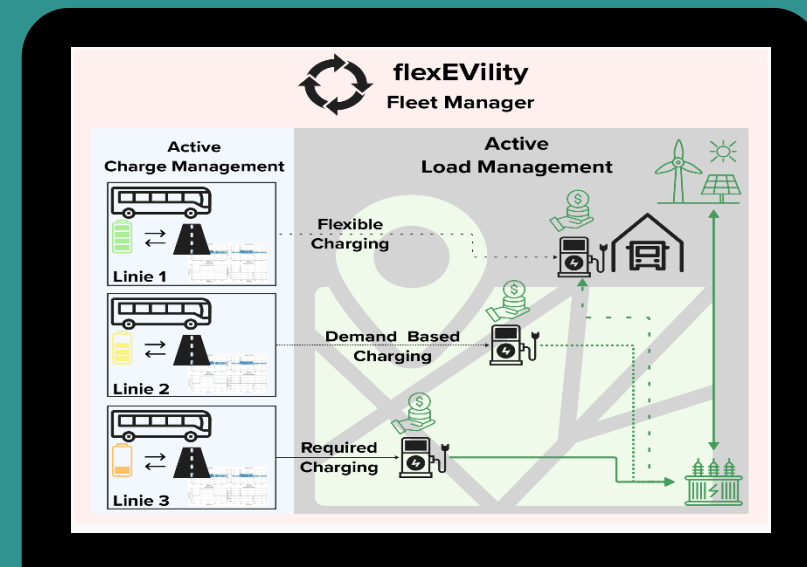
> Solution

“Turn fleets into flexible energy assets”



FlexEVility

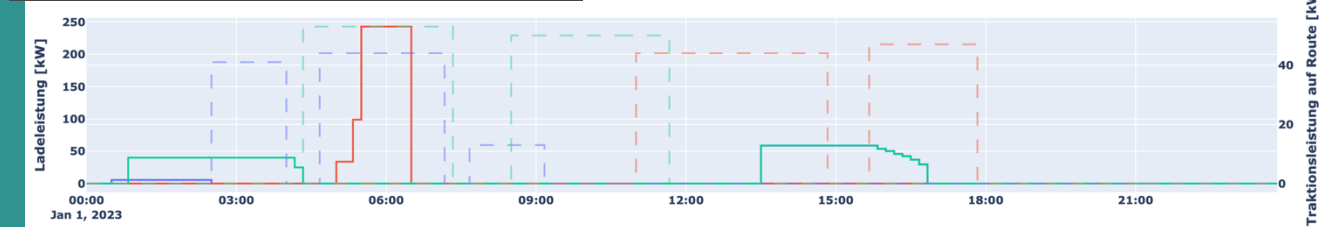
> Perfect EV fleet integration



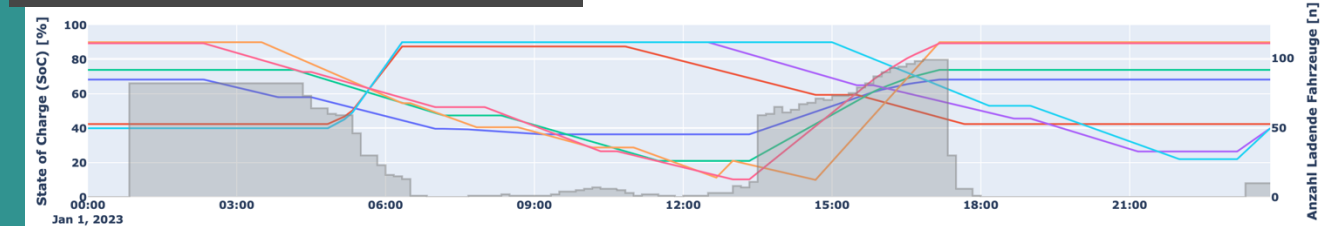
A detailed e-fleet management platform for enabling:

- Precise demand prediction
- Energy costs optimization
- Reaction to e.g. dynamic tariffs

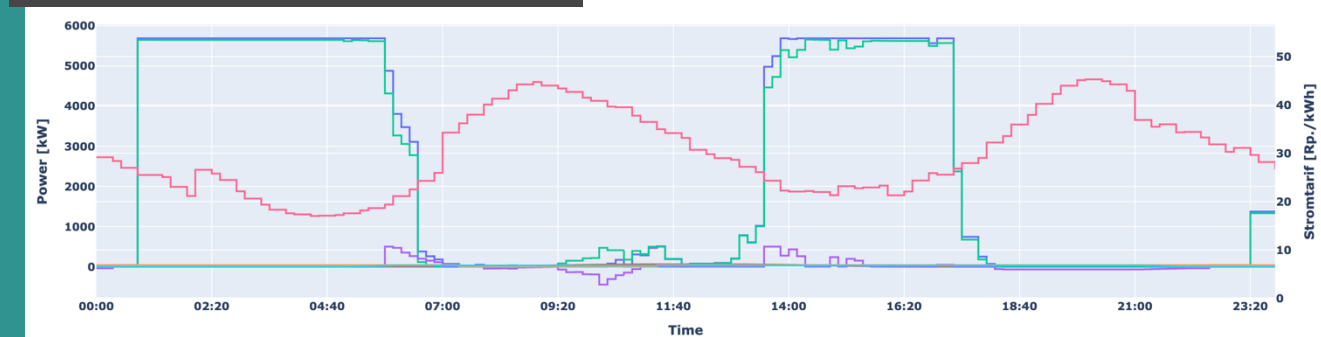
EV Level



Site Level

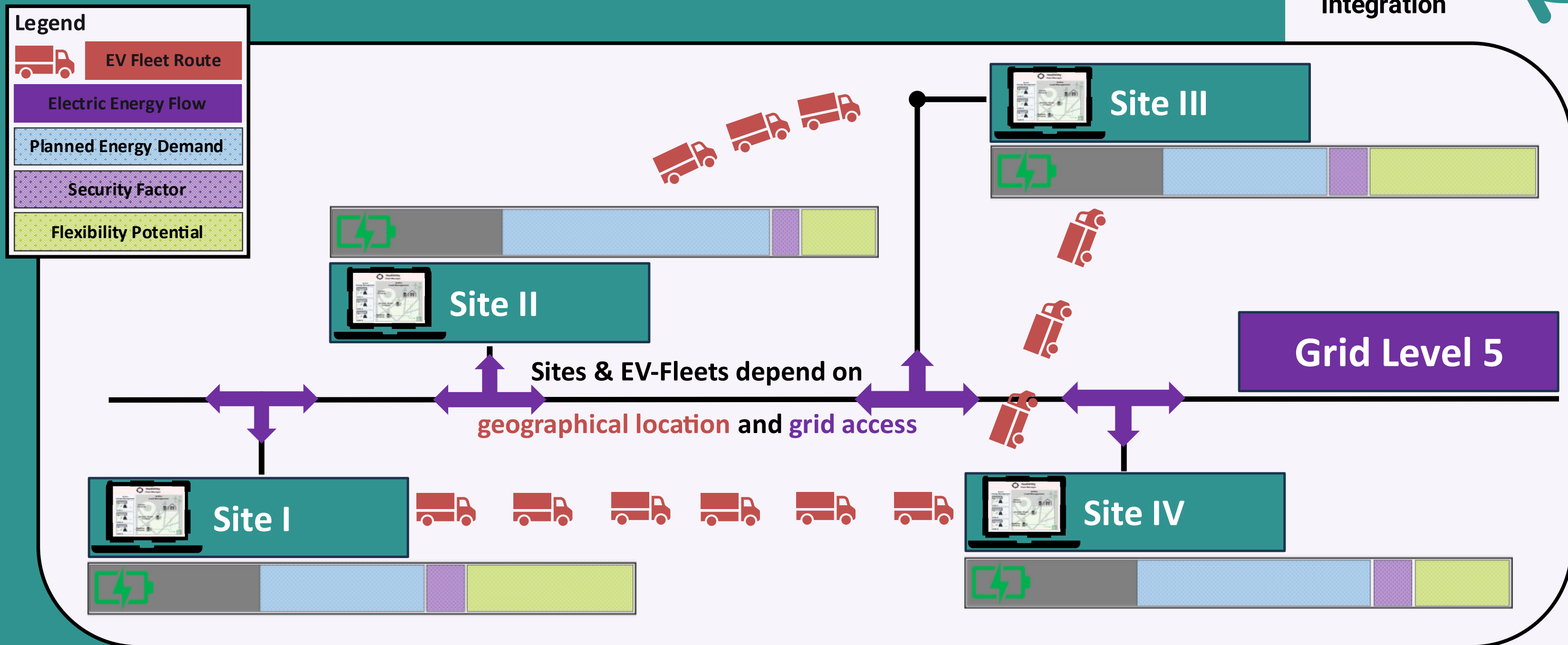
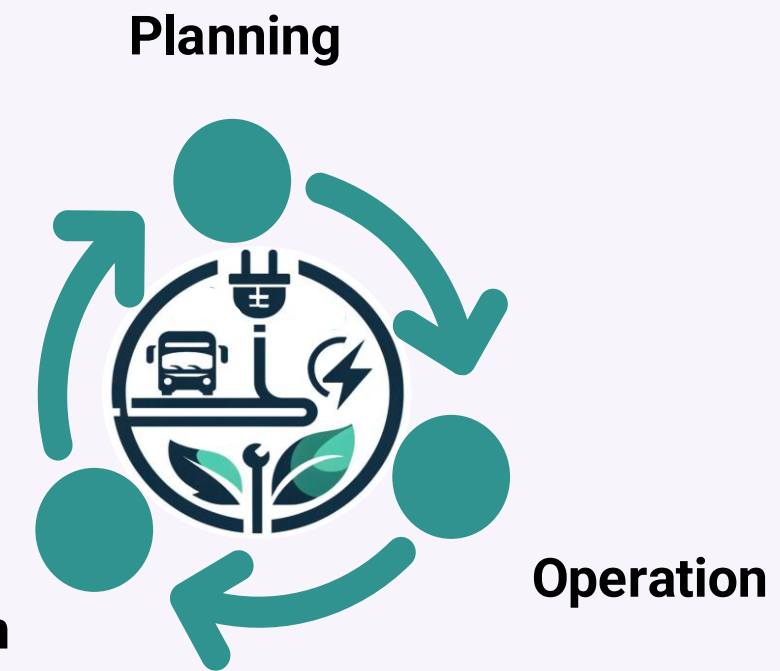


Grid Level



> FlexEVility

“Your flexible aggregator for data-based fleet integration”



The diagram shows a snapshot in time — flexibility, demand, and security margins shift continuously in operation.

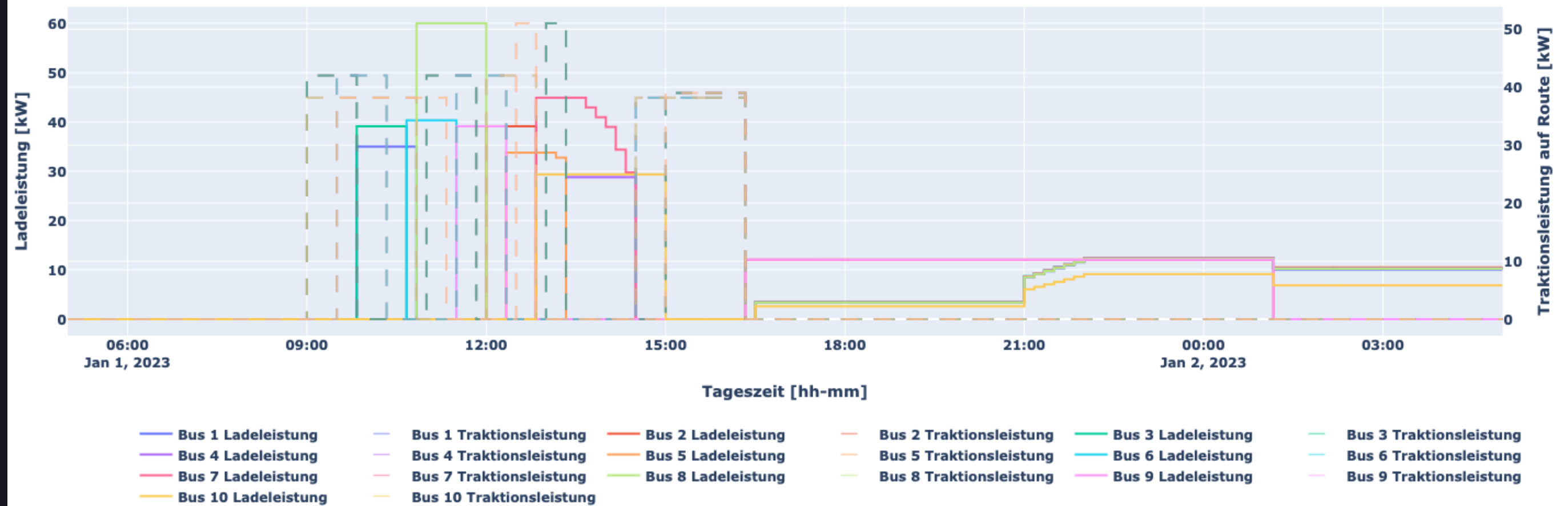


FlexEVility X Heuberge



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Ladezustand der Fahrzeuge

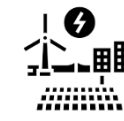


- Spezifische e-Flotte von 10 Fahrzeuge
- Saisonaler & Individueller Fahrplan

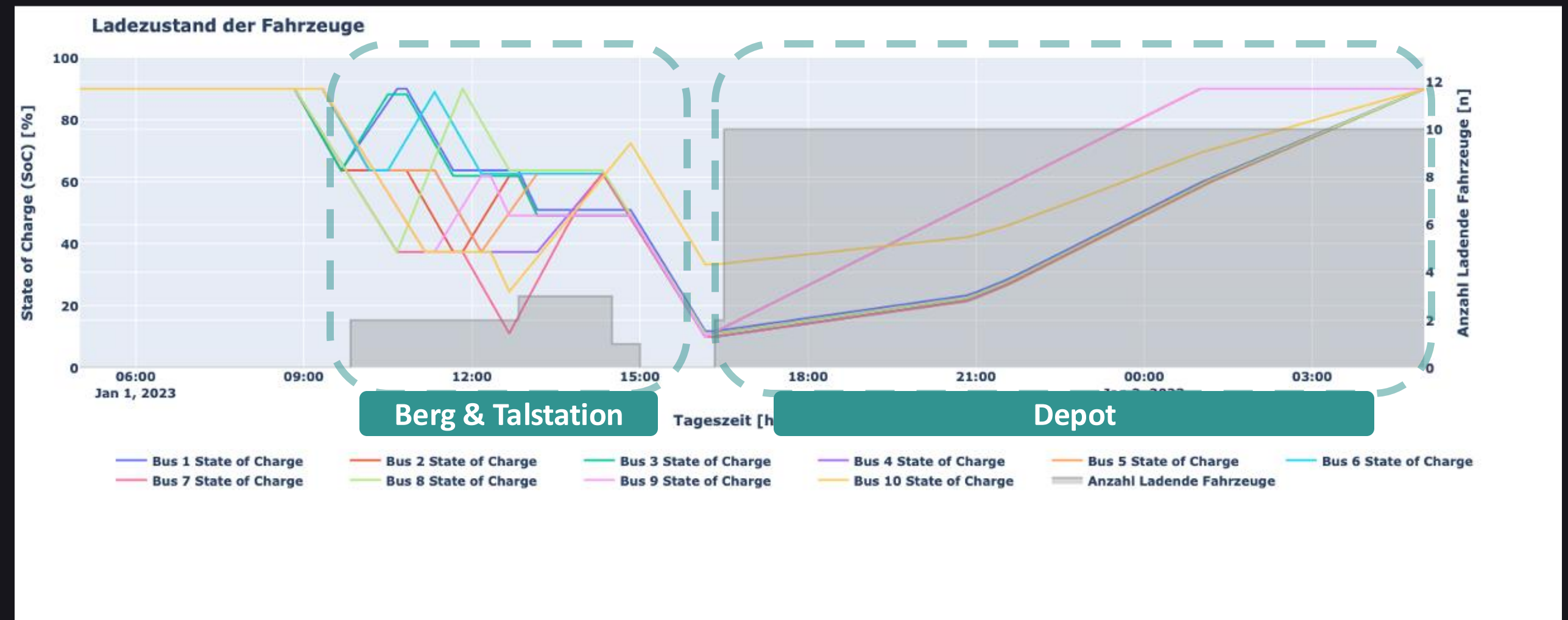
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Depot-Integration

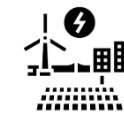


- Insgesamt drei unterschiedliche Ladeparks geographisch und netzseitig getrennt. (Berghaus, Tal & Depot)

FlexEVility X Heuberge



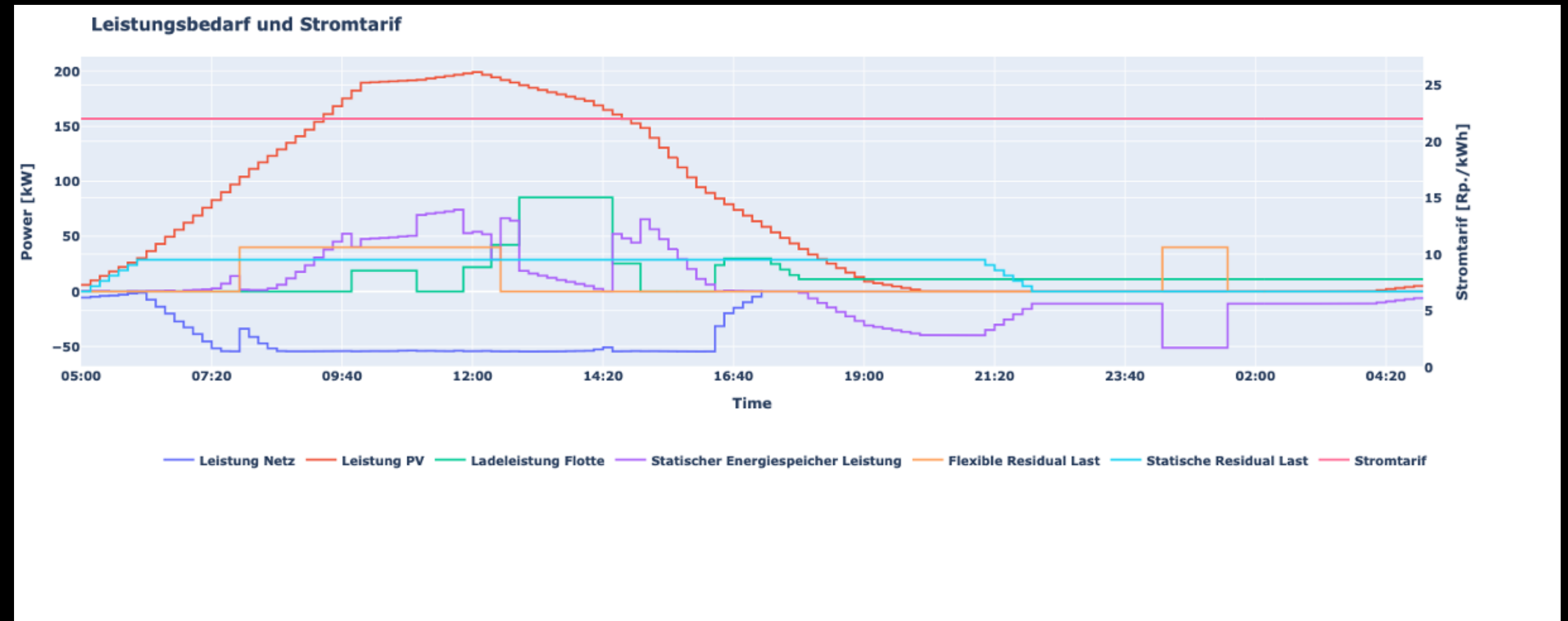
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Depot-Integration



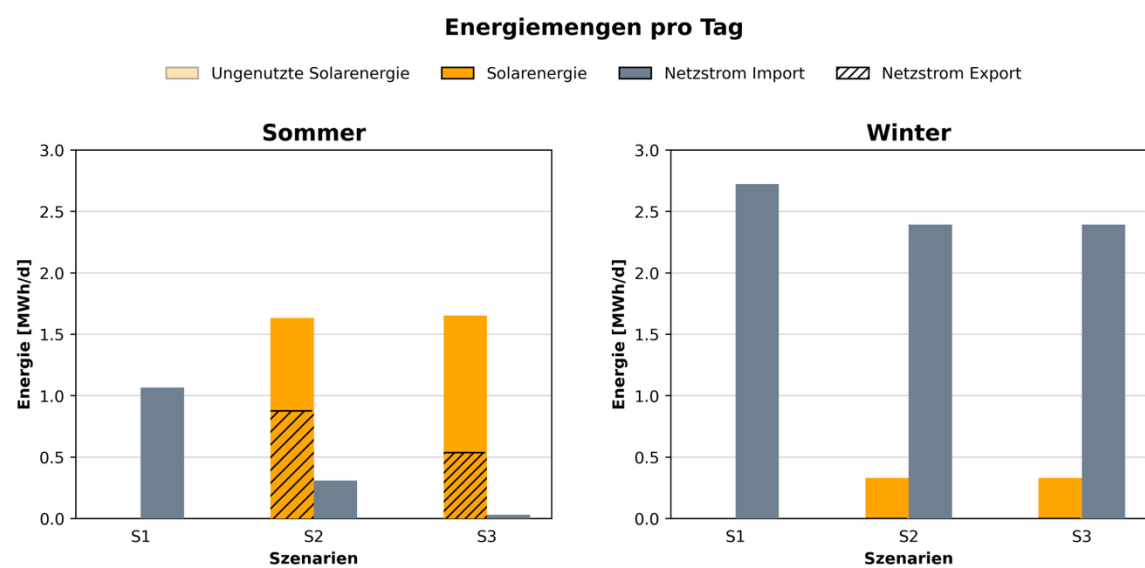
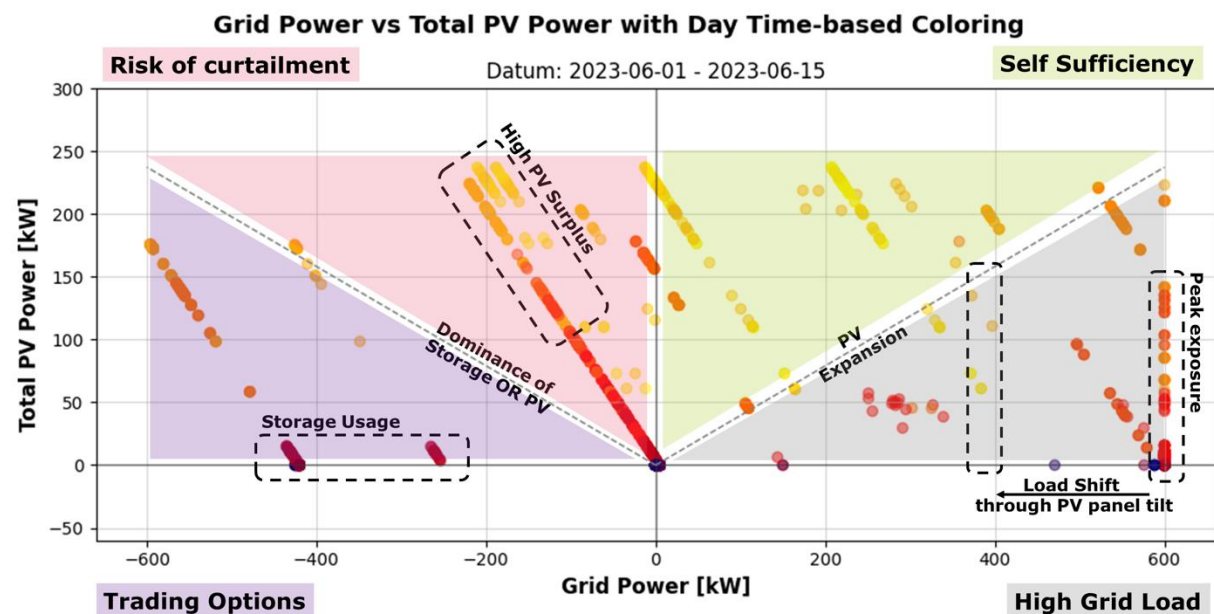
Netz-Integration



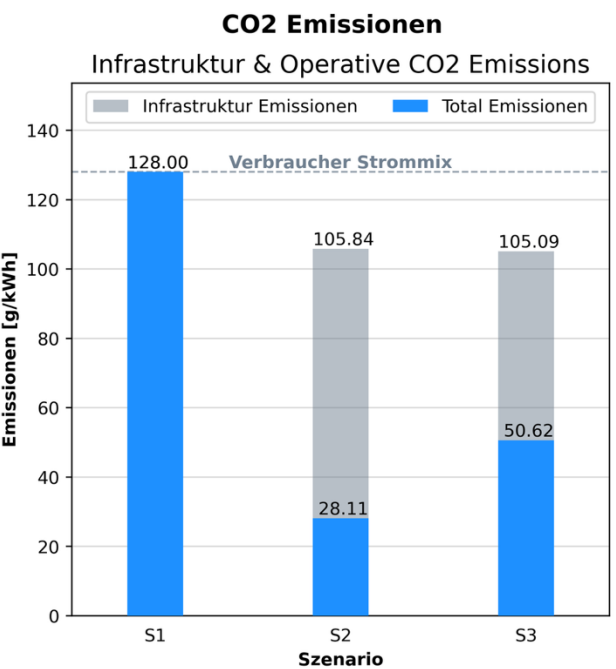
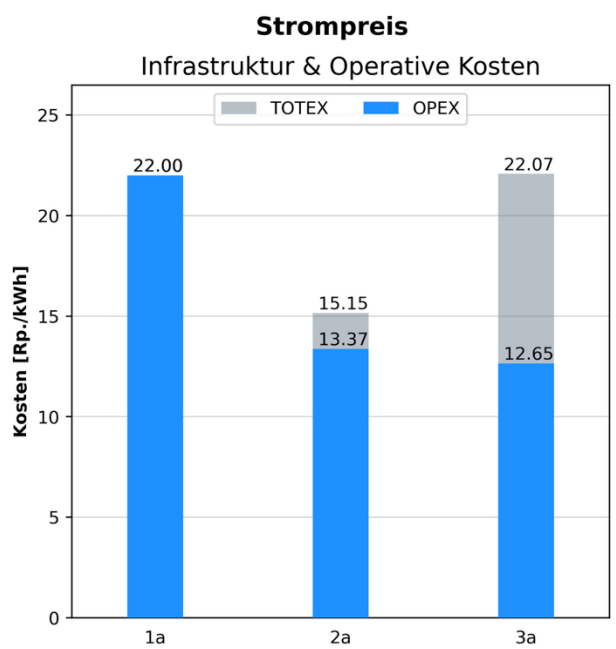
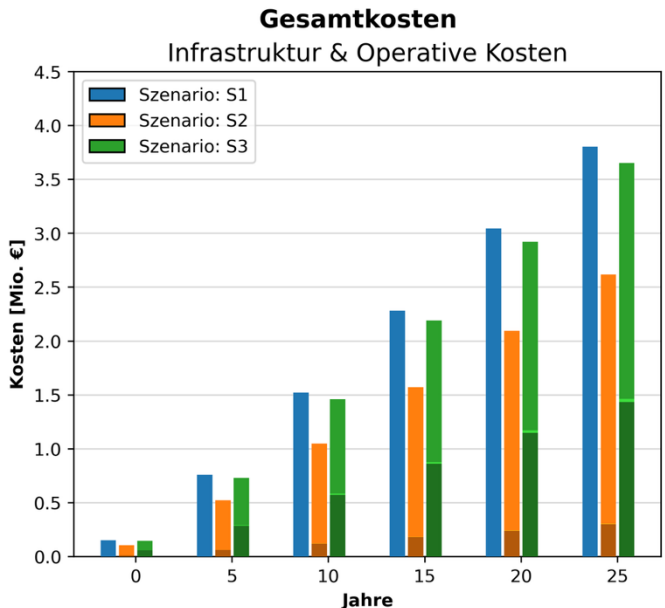
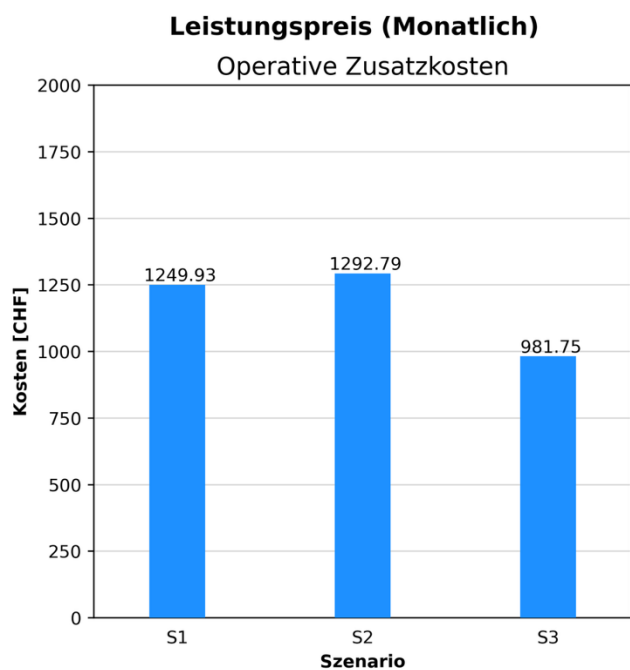
- Individuelle Abbildung von Zusatzverbrauchern, Produzenten & Energiespeichermöglichkeiten.
(Berggasthausbetrieb, Photovoltaik, Wärmepumpe, e-Flotte, zusätzlicher elektrischer Speicher)

➤ Exemplarische Auswertungsmöglichkeiten

Energetische Areal-, und Flottenanalyse

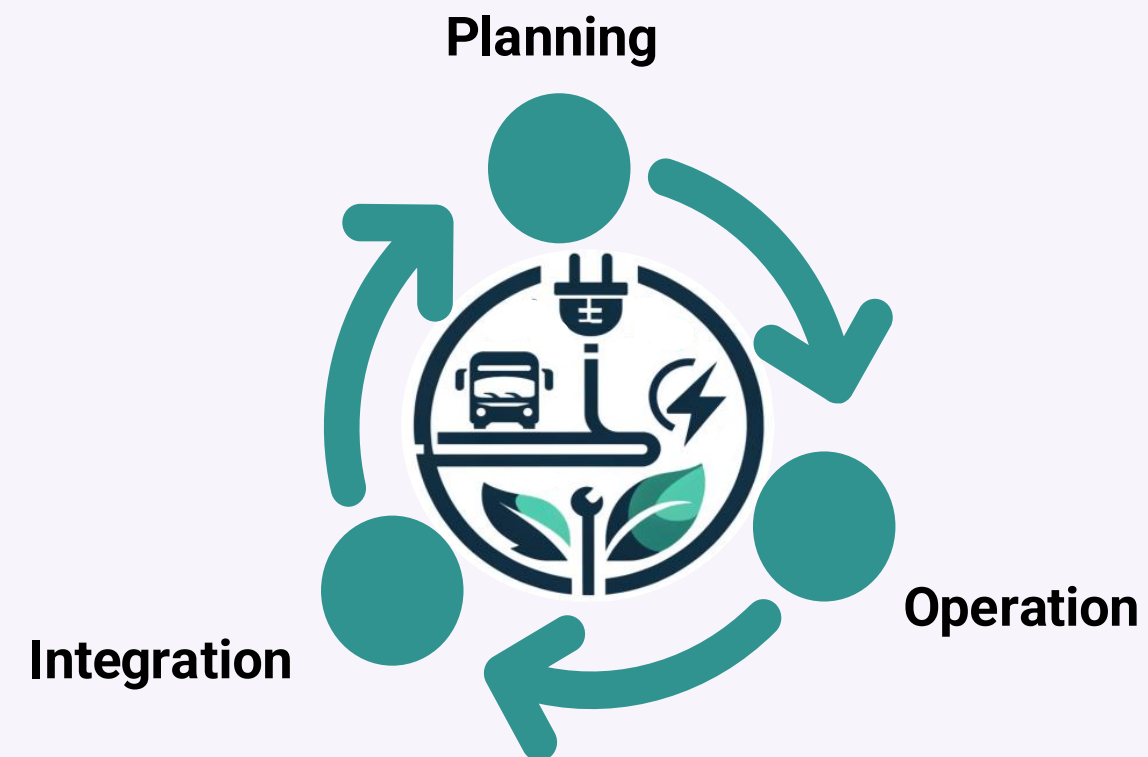
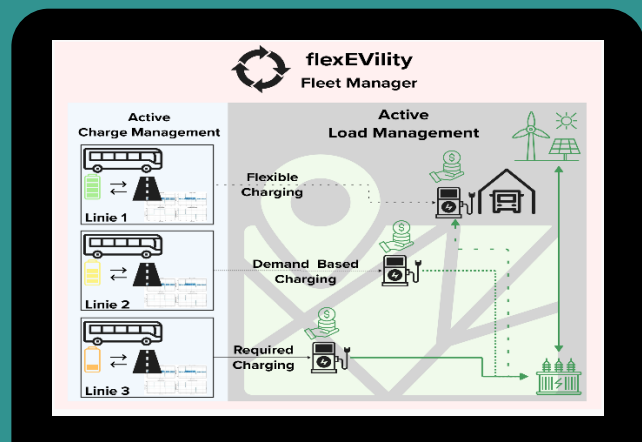


Ökonomische & Ökologische Areal-, und Flottenanalyse



> FlexEVility

“Bring your own fleet”
We help you reach your electrification goals



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