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Challenges and opportunities when implementing e-mobility

A systemic approach

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(E-)mobility as a cross-crutting discipline

Efficient transport mix based on various factors

- E-Mobility includes **diverse transport modes** for goods and people
- EV adoption **increases electricity demand**, requiring **infrastructure investment**, such as overhead lines, full electrification, hybrid vehicles, battery-electric trains etc.
- **Strategic infrastructure** siting minimizes travel and enhances accessibility
- **Geography:** solar-rich areas with affordable electricity, but need the infrastructure; consider hydrogen and e-fuels.
- **Storage**: distance, security, durability, costs, charging speed, and weight are critical factors
- **Reducing footprints**: climate friendly diesel (e.g., HVO100), hydrogen, LPG, natural gas, etc.
- **Optimal transport mix** based on cargo, destination, frequency, rural/urban, distance, and available infrastructure & systems
- **Public participation** can address potential lack of interest or even resistance of the public towards (e-)mobility transition measures
- **Cross-sectoral policy integration** is necessary that considers land use, decarbonisation, and efficiency

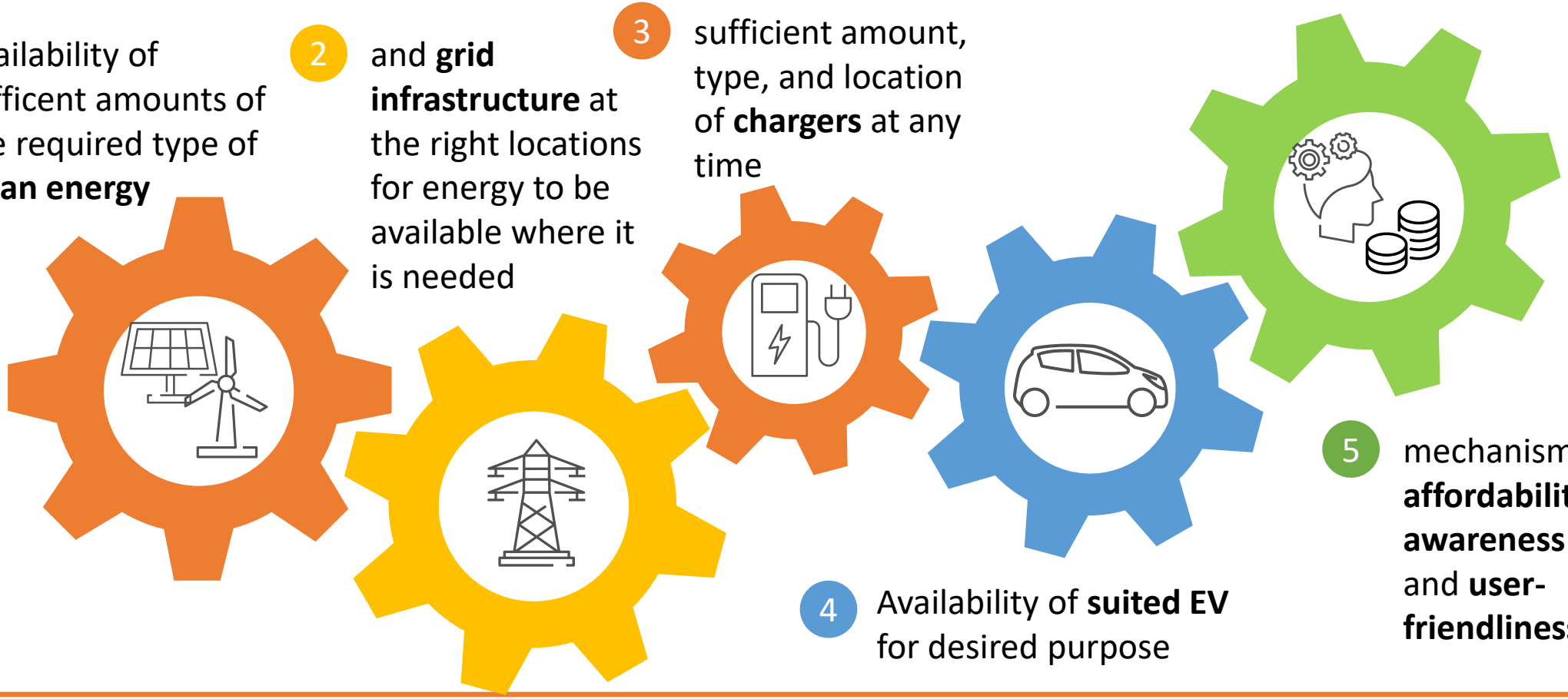
➔ Location Efficiency: “Mobility is only necessary when what you need is not where you are”

Prerequisites for a successful e-mobility transition

Taking multiple dimensions into account simultaneously

Sucessful implementation of e-mobility necessitates a simultaneous progress in five key areas

1. Availability of sufficent amounts of the required type of **clean energy**
2. and **grid infrastructure** at the right locations for energy to be available where it is needed
3. sufficient amount, type, and location of **chargers** at any time
4. Availability of **suited EV** for desired purpose
5. mechanisms for **affordability**, **awareness** raising, and **user-friendliness**



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