

SCCER FEEB&D

Urbane Energiesysteme

Prof. Matthias Sulzer, 26. Oktober 2020

Research Partners:



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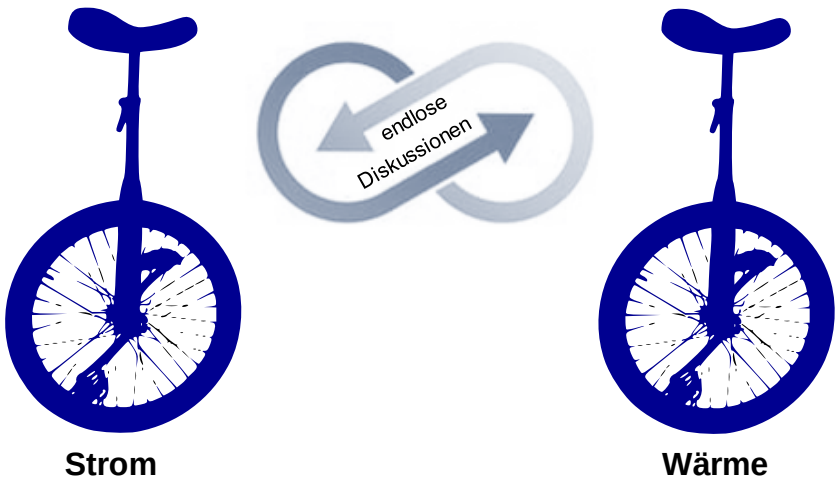
1

CO₂-neutraler Gebäudepark



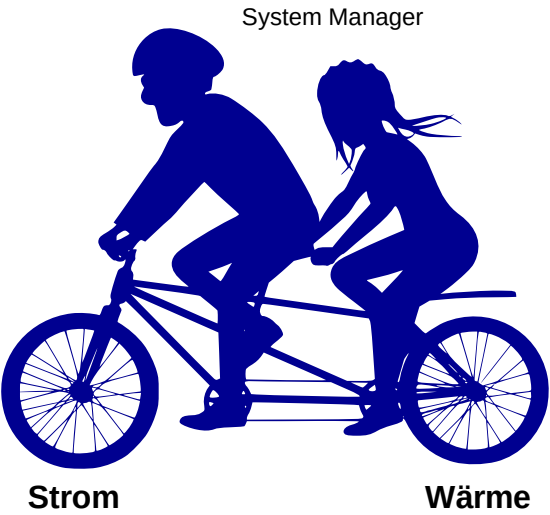
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Fristerstreckung der Gegenwart



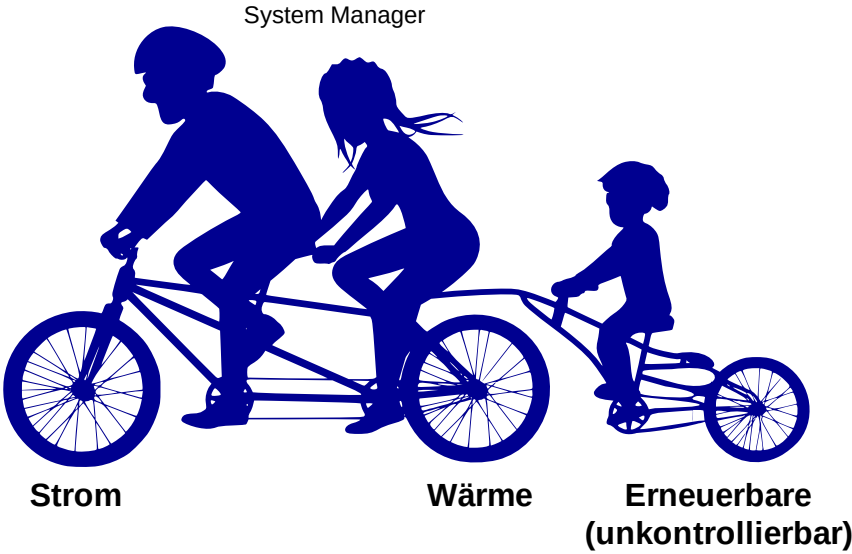
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Sektorkopplung



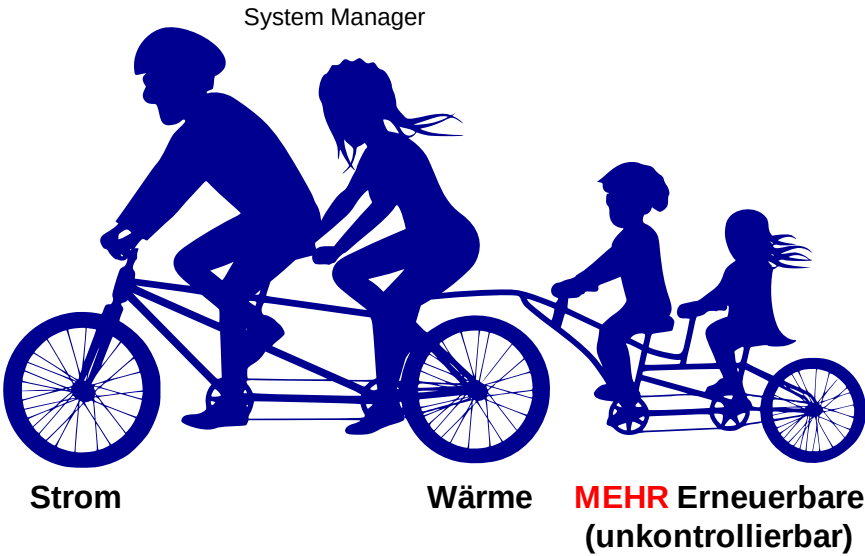
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Integration Erneuerbare



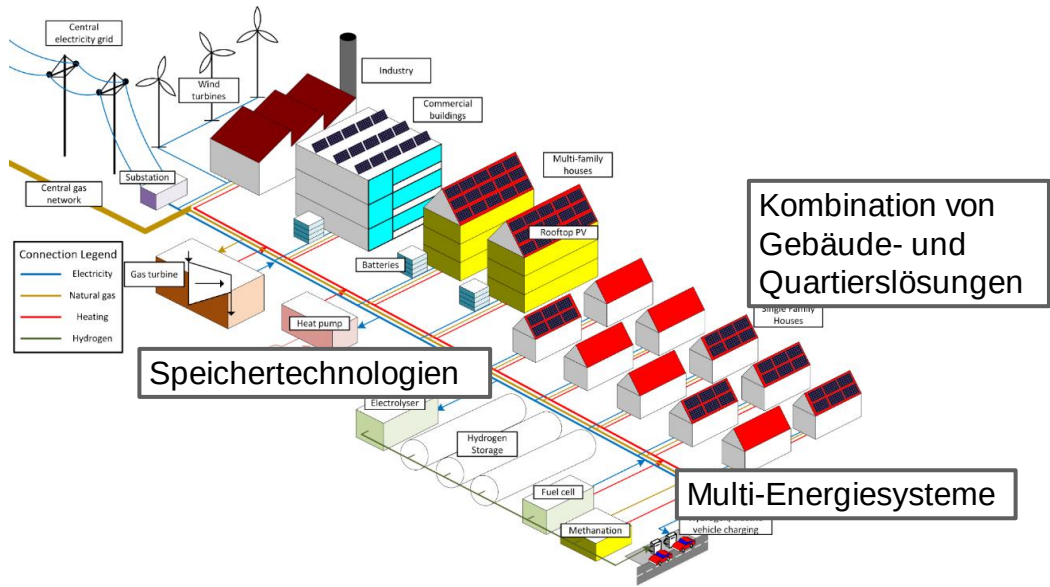
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Integration Erneuerbare



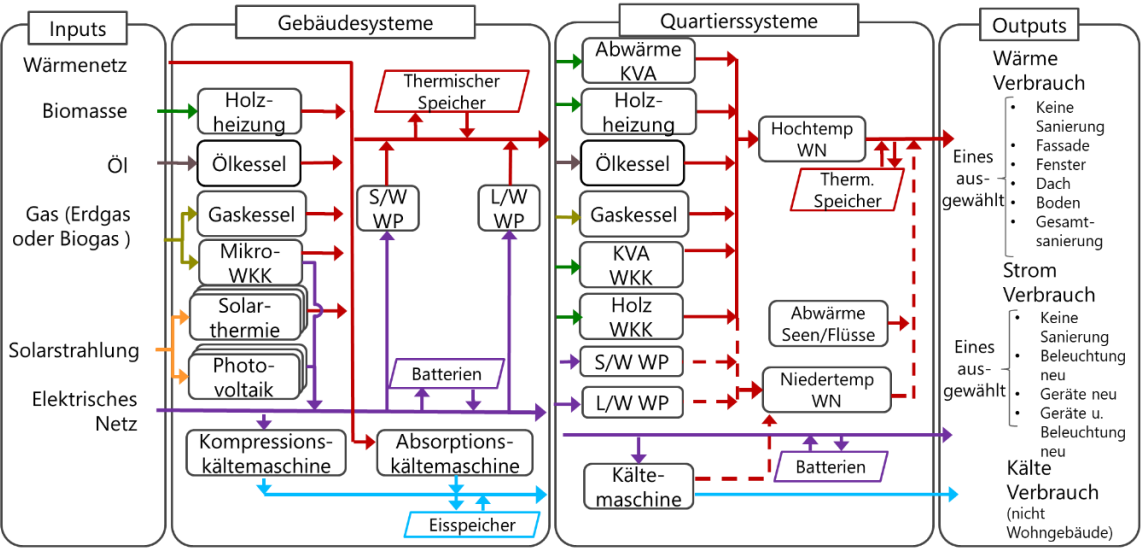
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Ganzheitliche Konzepte – Urbane Energiesysteme



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Energy Hubs



Quelle: Empa, UESL

8

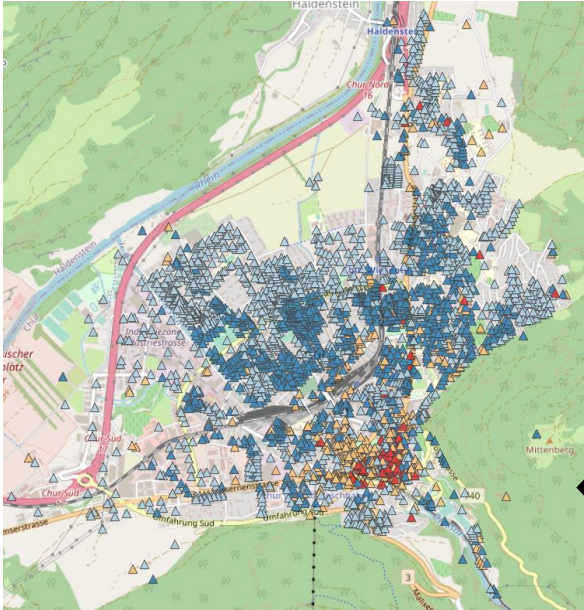
Video: www.empa.ch/web/s313/mes-group



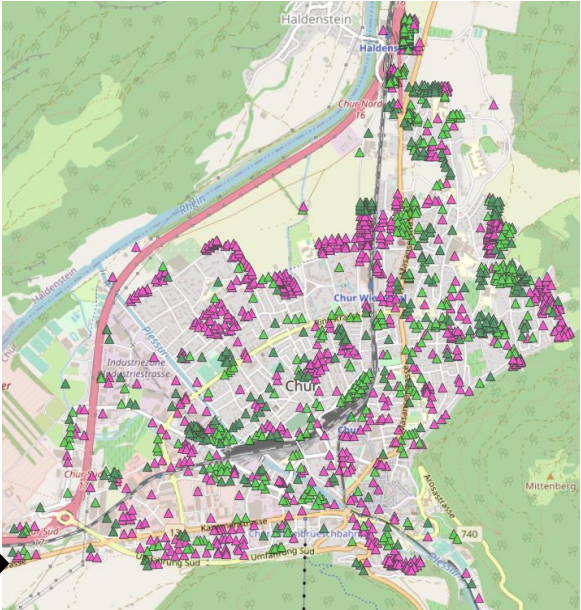
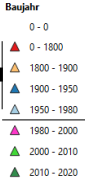
9

Gebäudedaten → Verbrauch

accor future energy efficient buildings & districts

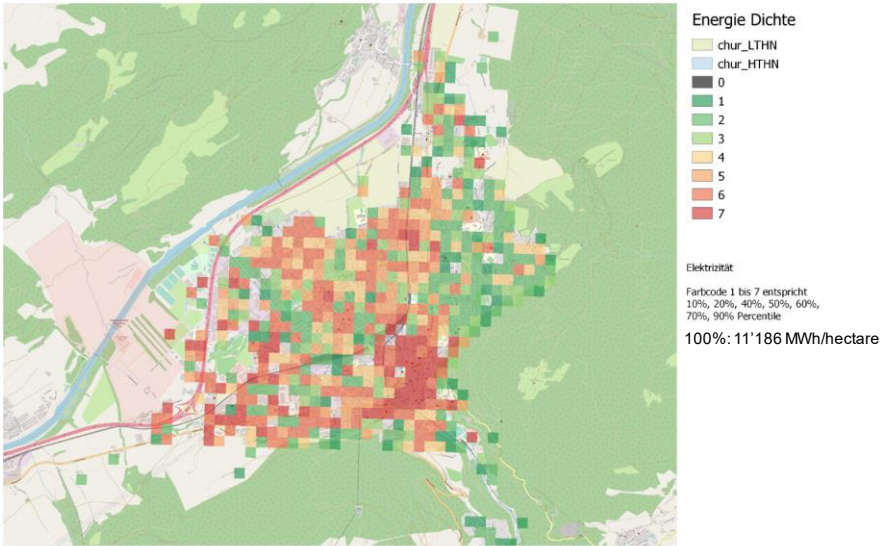


2/3 aller Gebäude <1980



10

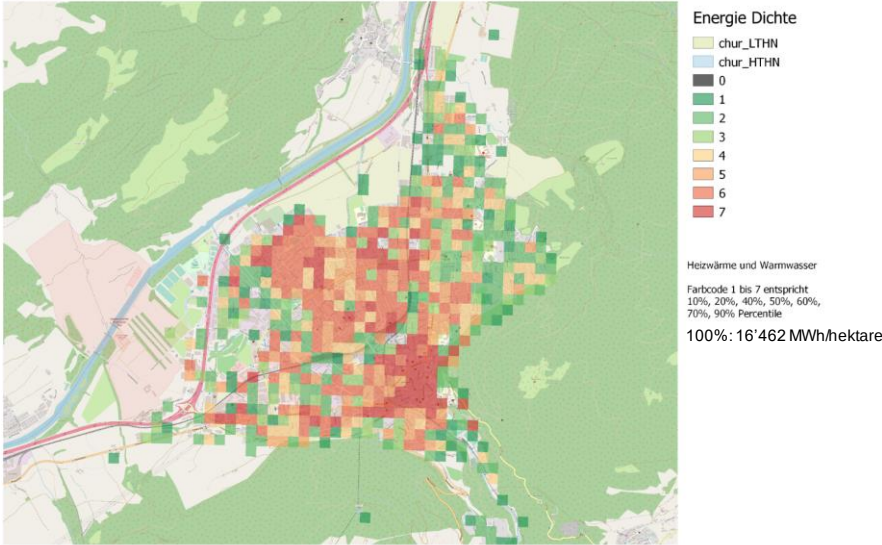
Anlayse Elektrizität 2018



Chambers J., 2020

11

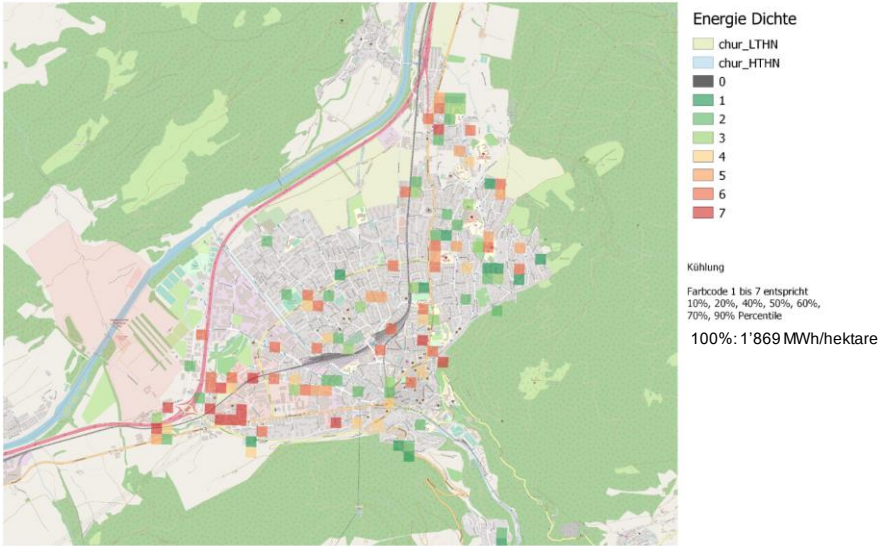
Anlayse Heizung & Warmwasser 2018



Chambers J., 2020

12

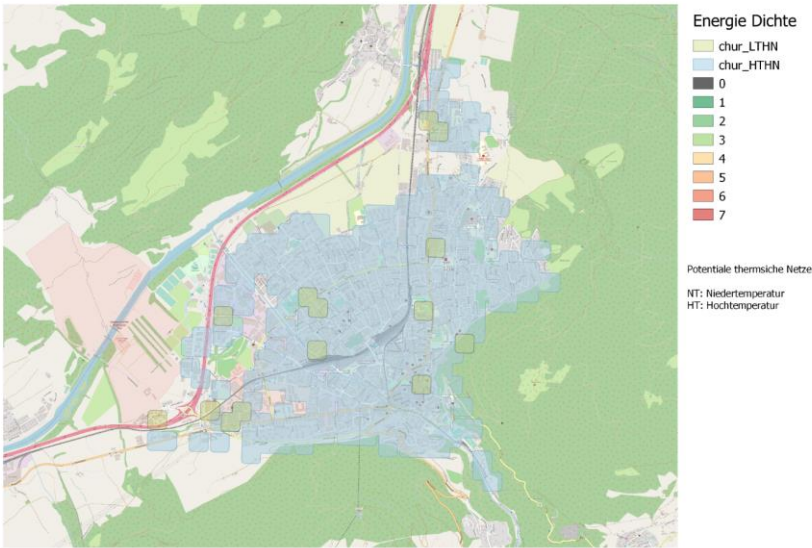
Anlayse Kühlung 2018



Chambers J., 2020

13

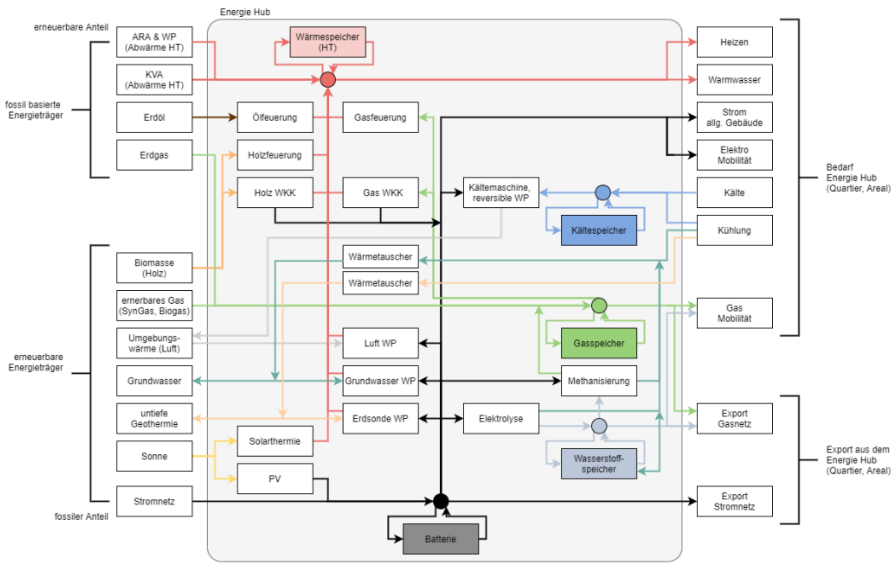
Anlayse Potential thermische Netze



Chambers J., 2020

14

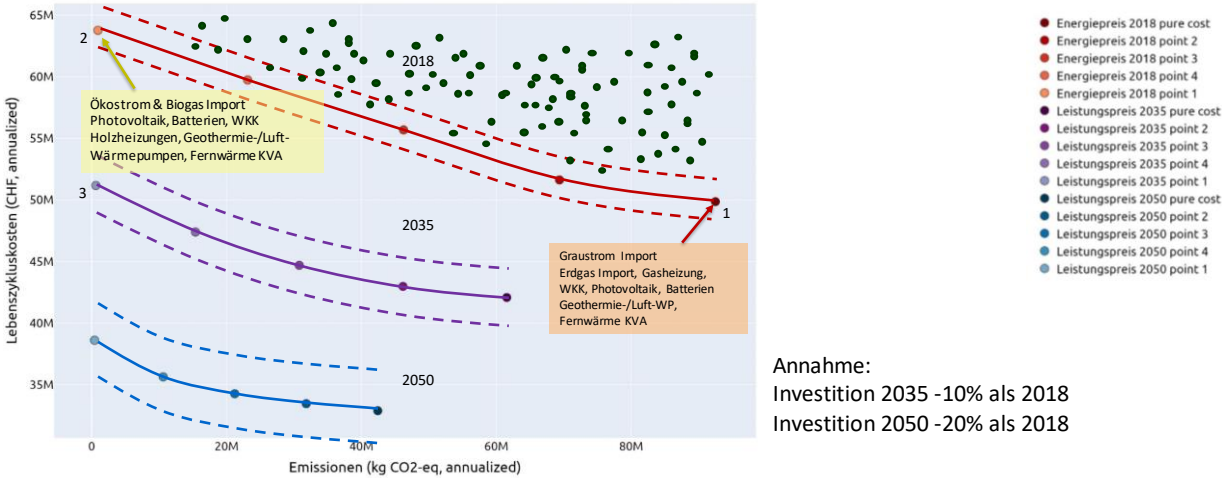
Energy Hubs



Quelle: Urban Sympheny AG

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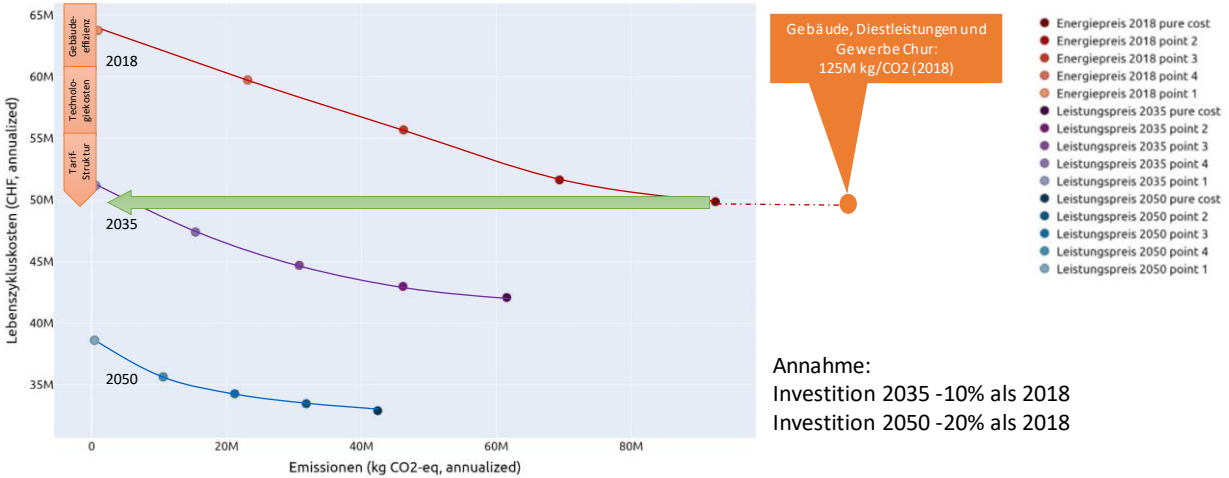
Pareto Fronten Stadt Chur



Annahme:
Investition 2035 -10% als 2018
Investition 2050 -20% als 2018

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Pareto Fronten Stadt Chur



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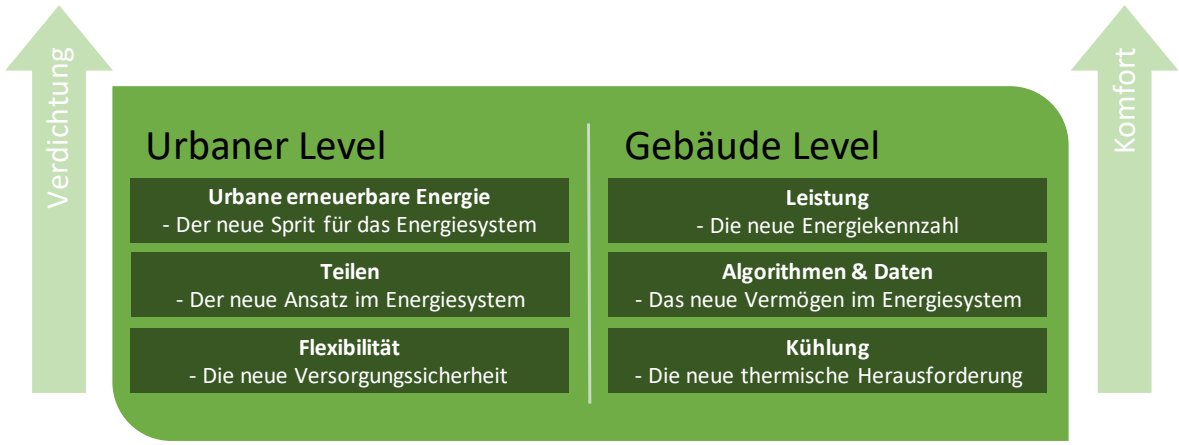


Local energy planning – optimized

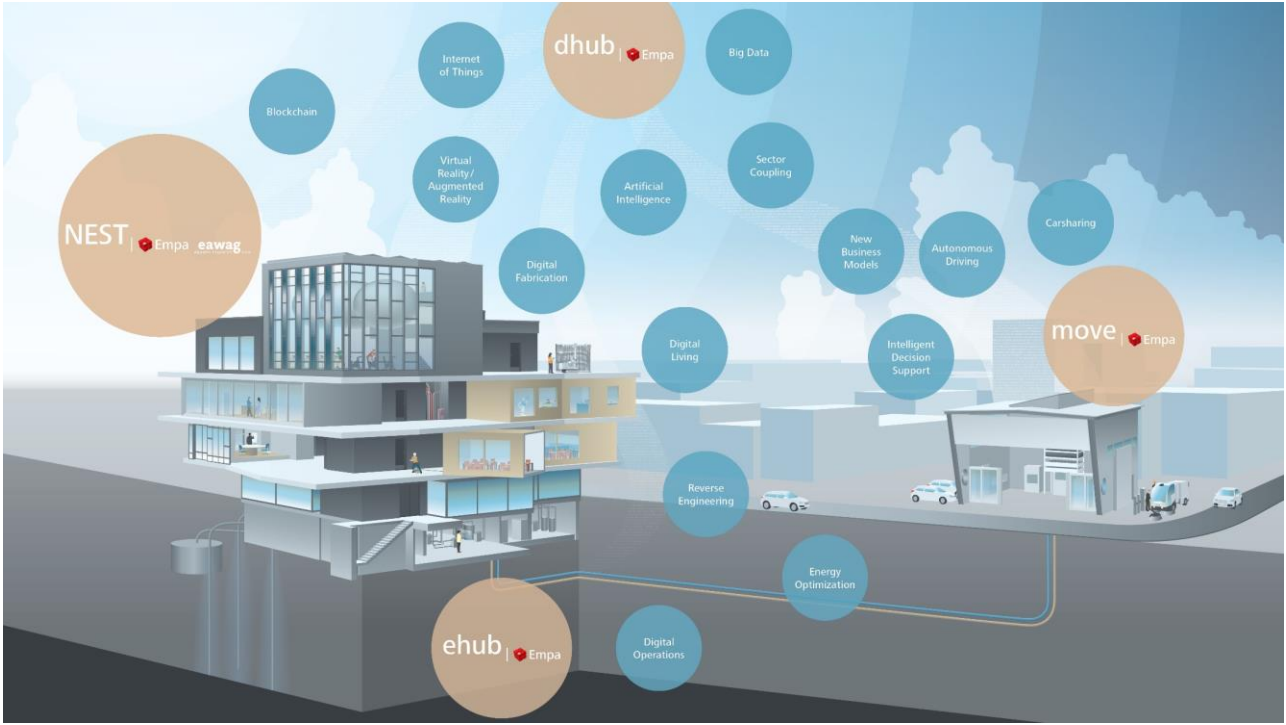
www.symphony.com

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6 Paradigmenwechsel



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