



中瑞零碳建筑项目
Building a climate-neutral future together.

如何通过示范项目加速创新技术及其推广

NEST & Move:

How do demonstrators accelerate
innovation and dissemination?

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中华人民共和国
住房和城乡建设部



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra
**Swiss Agency for Development
and Cooperation SDC**



intep

skat Swiss Resource Centre and
Consultancies for Development

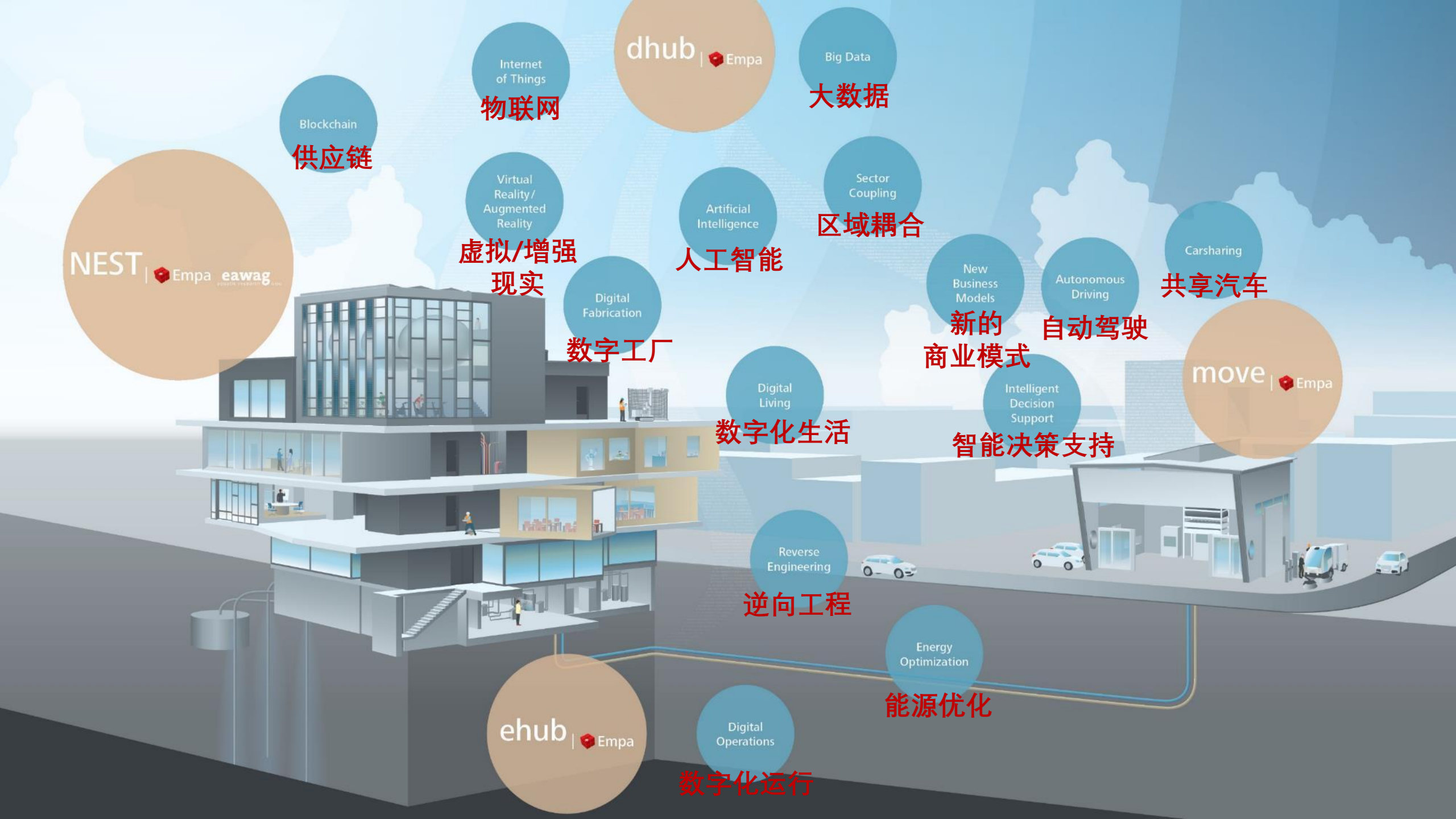


HSLU Lucerne University
of Applied Sciences
and Arts



NEST & Move 示范项目 位于杜本多夫的 Empa 校区

Empa Campus Dübendorf
NEST & Move in the background



NEST | Empa eawag

dhub | Empa

move | Empa

ehub | Empa

Blockchain
供应链

Internet of Things
物联网

Big Data
大数据

Virtual Reality/
Augmented Reality
虚拟/增强现实

Artificial Intelligence
人工智能

Sector Coupling
区域耦合

Digital Fabrication
数字工厂

New Business Models
新的商业模式

Autonomous Driving
自动驾驶

Carsharing
共享汽车

Digital Living
数字化生活

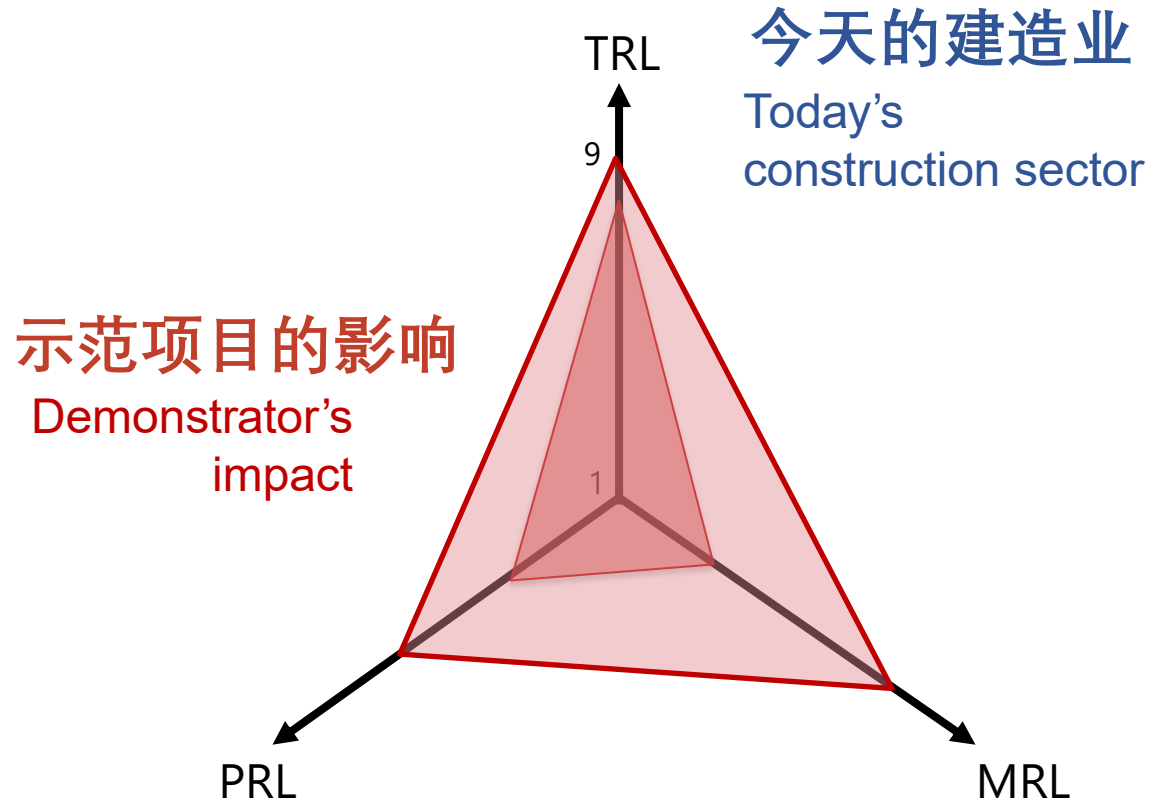
Intelligent Decision Support
智能决策支持

Reverse Engineering
逆向工程

Energy Optimization
能源优化

Digital Operations
数字化运行

为什么？ WHY？



技术成熟度（TRL） -- 产品研发

Technology Readiness Level (TRL) → Product development

市场成熟度（MRL） -- 行业发展

Market Readiness Level (MRL) → Industry development

政策成熟度（PRL） -- 法规条例的制定

Policy Readiness Levels (PRL) → Regulation development

是什么？ HOW ?



合作伙伴
来自研究、工业和公共部门的开放关系网络。

NEST Partners
Open network from research, industry and the public sector.

是什么？ WHAT ?



城市采矿与回收

Urban Mining & Recycling

建筑作为材料来源地

Building as a material warehouse



SolAce单元

Solace

焕然一新的外墙

Facades in a new glow



DFAB之家

DFAB House

数字化建筑和生活

Digital building and living

是什么？ WHAT ?



木结构展望

Vision Wood

木结构创新和模块

Wood innovations & modules



拆卸

Sprint

从拆解到再利用

From dismantling to re-use



高性能低排放

HiLo

UL建筑和适应性外墙

UL construction & adaptive facades

是什么？ WHAT ?



Electric mobility

电网到电动车

Grid-to-Vehicle

利用电动汽车的灵活性

Utilisation of BEV's flexibility



Move 示范项目

Demonstrator Move

关闭和整合C周期

Closing and integration C cycles



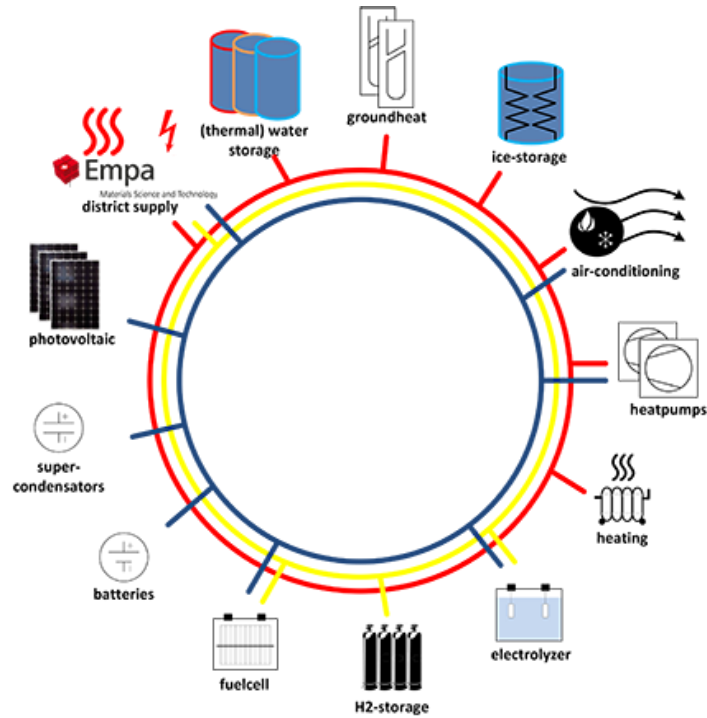
电力转换

Power-to-X

CCU: 新的循环经济产业

CCU: new circular economy industry

是什么？ WHAT ?

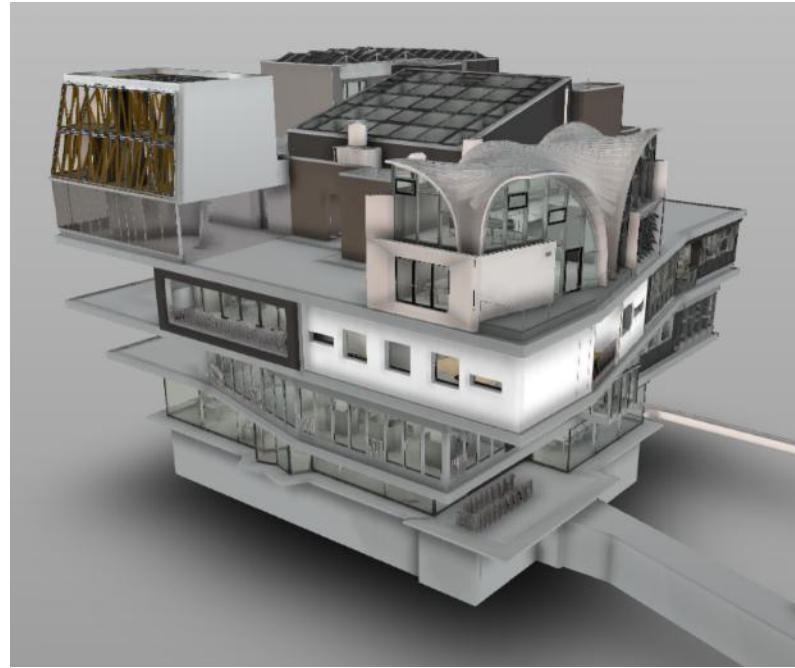


能源枢纽

Energy Hub

分散式能源系统

Distributed Energy Systems

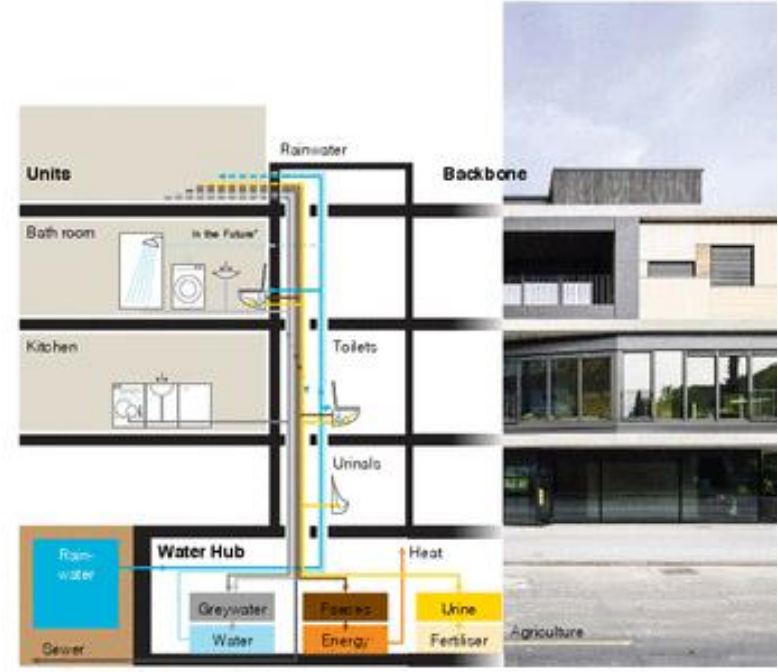


数据中心

Digital Hub

数字映射，物联网

Digital Twin, IoT



供水中心

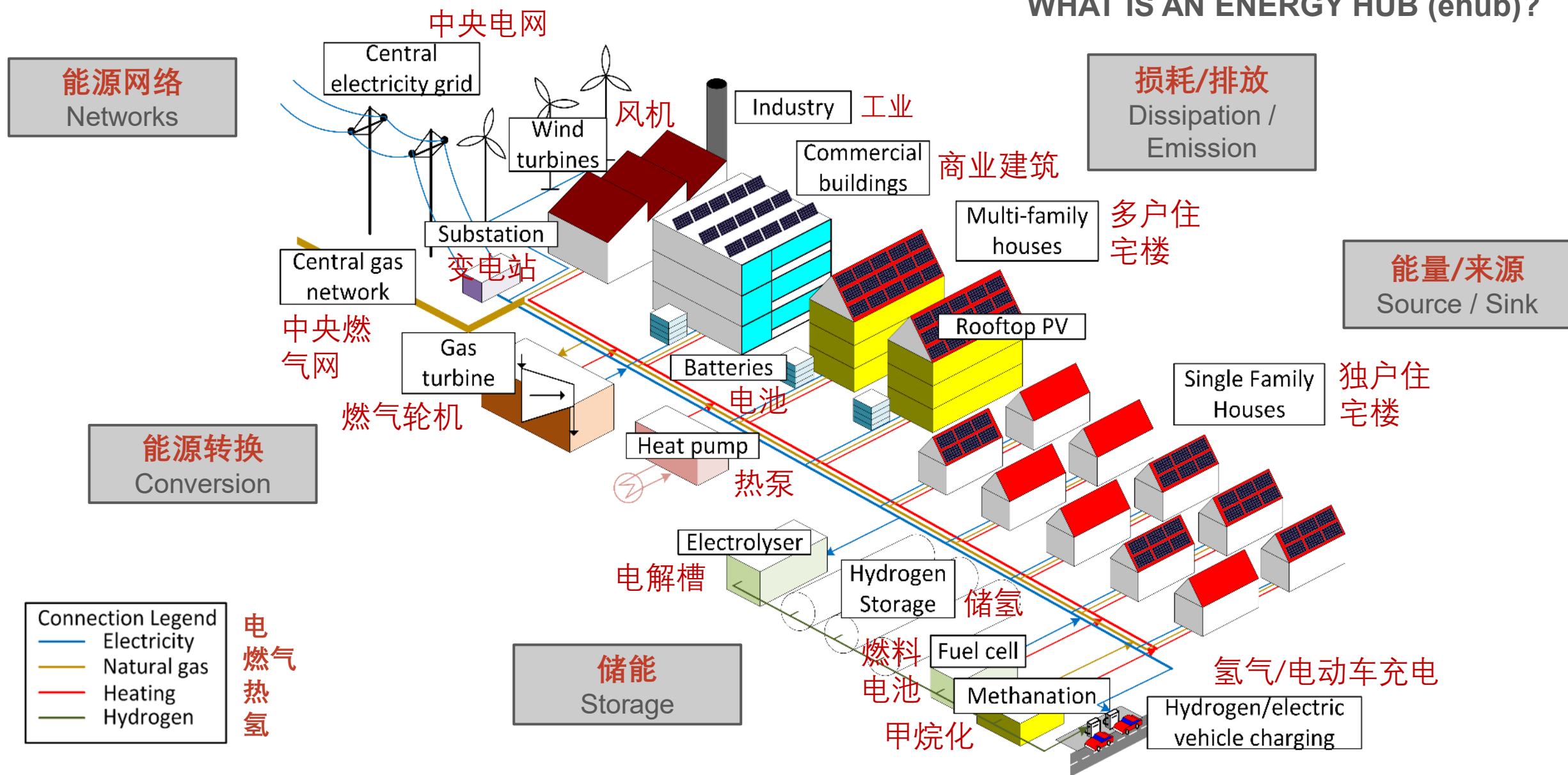
Water Hub

地区一级的水管理系统

Water management at district level

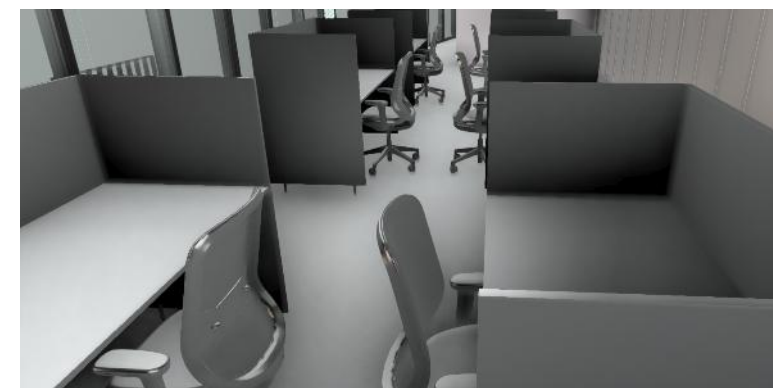
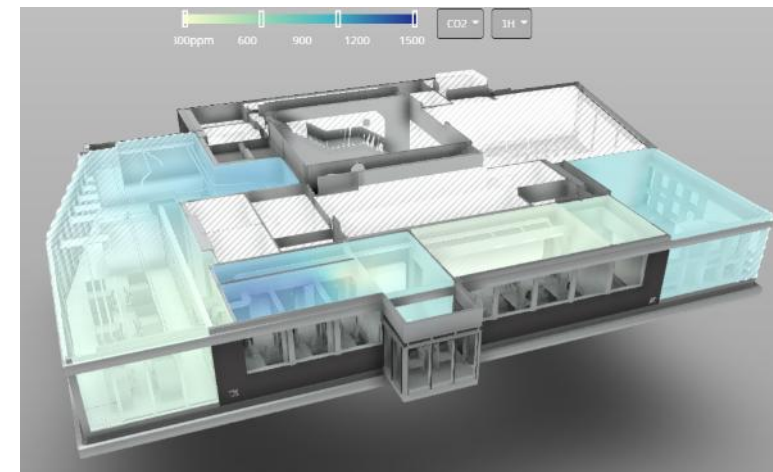
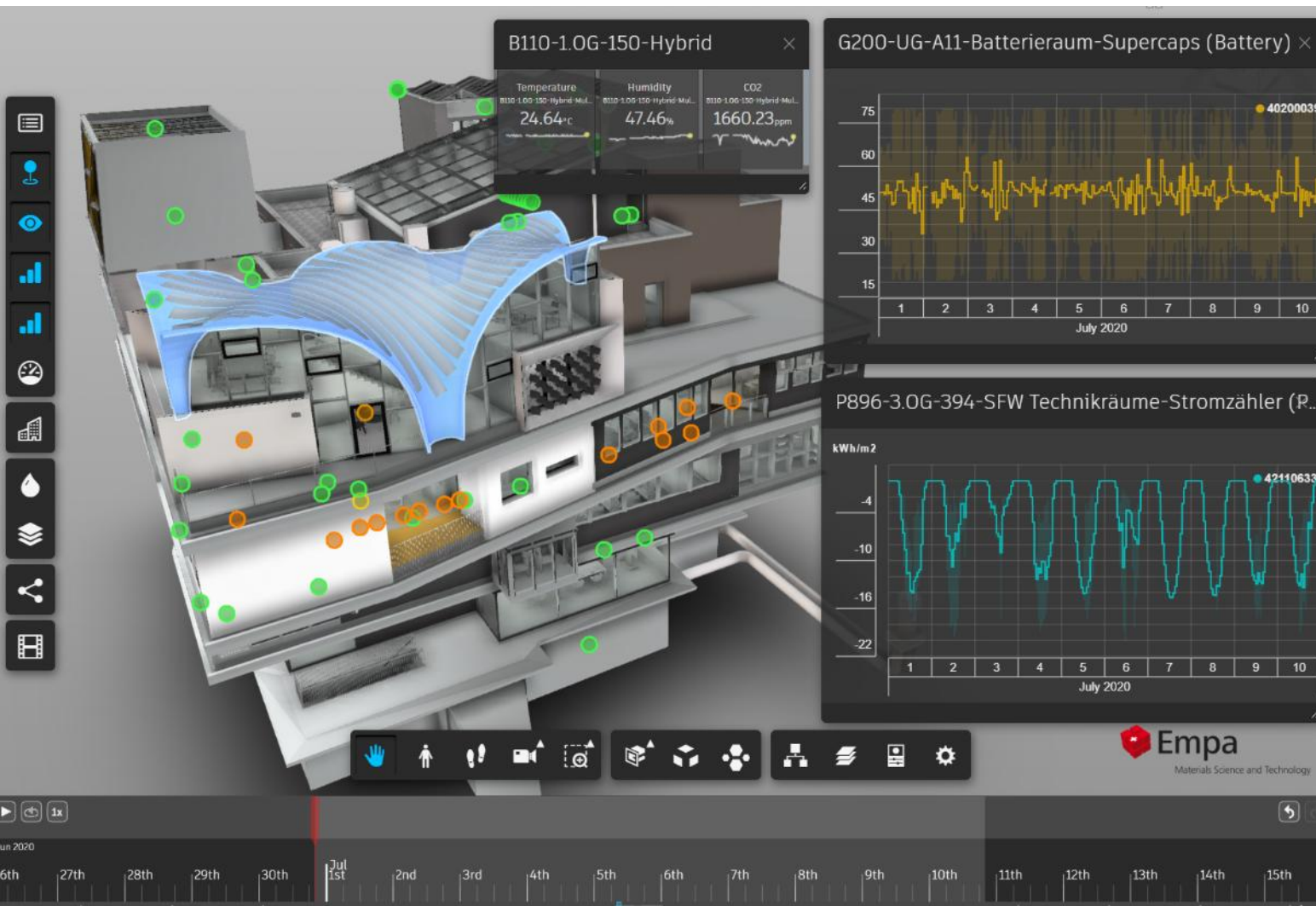
能源枢纽(ehub)介绍 ?

WHAT IS AN ENERGY HUB (ehub)?



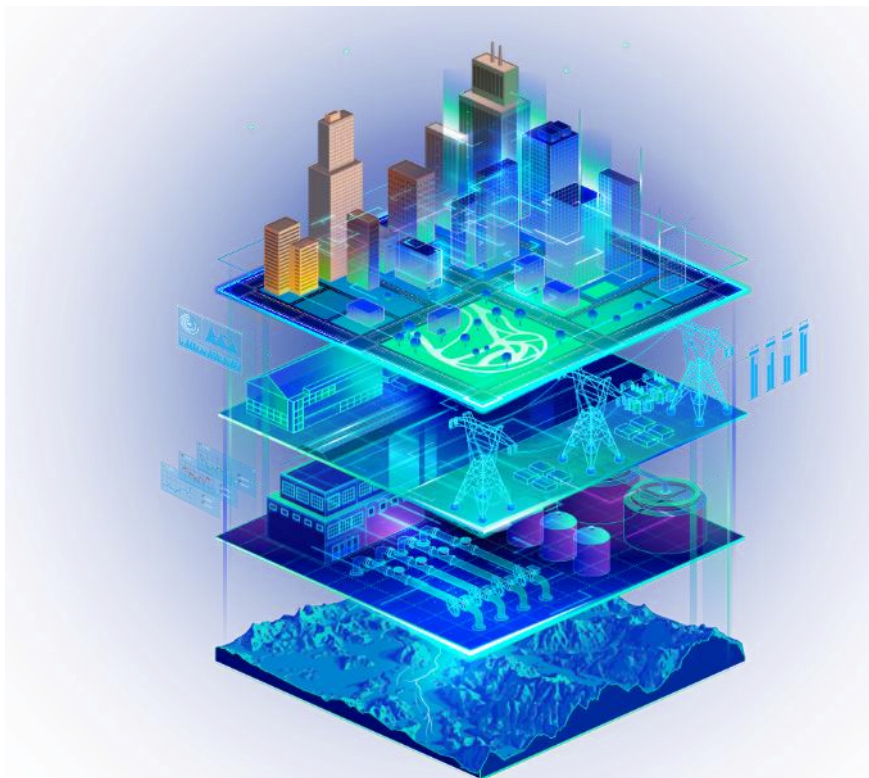
数字映射

DIGITAL HUB



快速创新，推广和脱碳措施

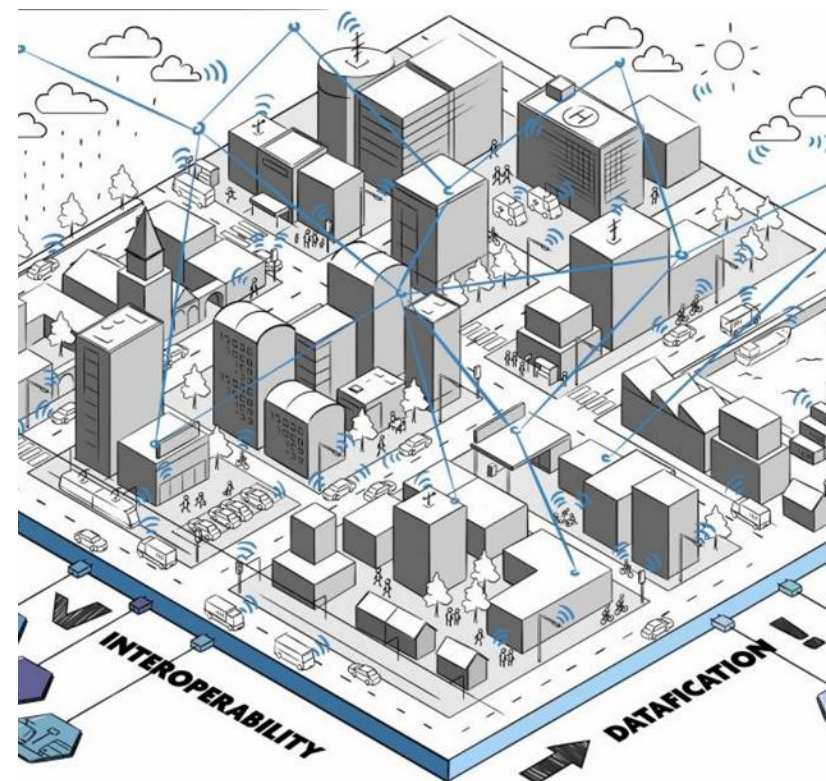
MEASURES FOR RAPID INNOVATION, DISSEMINATION AND DISCARNONISATION



从真实试点工厂到虚拟数字映射
Shifting from physical pilot plants
to virtual digital twins



从静态历史数据到实时数据
Shifting from static historical data
to real-time data



数据组合，模型和计算到设计和运营
能源枢纽中心e-hub
Combining Data, Models &
Algorithms to design and operate
Energy Hubs

网络化 NEST 1

通过提供一个合作伙伴广泛参与的示范平台
缩小科研与工业/政府机构之间的距离

Close the gap between research and industry/authorities
by providing a demonstrator with broad participation of
partners



流动性 Move 2

通过整体概念促进交通和区域能源系统
实现跨学科发展

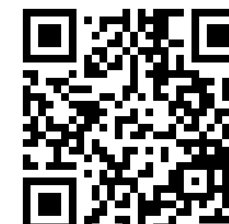
Promoting interdisciplinary development through holistic concepts
for mobility and district energy systems



数字化 Digicities 3

除了物理演示，
数字展示对于快速测试和创新是必不可少的

Beside the physical, a digital demonstrator (digital twin) is
essential for rapid prototyping and innovation





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感谢
Thanks



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Schweizerische Eidgenossenschaft
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Confederazione Svizzera
Confederaziun svizra
**Swiss Agency for Development
and Cooperation SDC**

EET 环能科技
CABR EET



CABEE 中国建筑节能协会
CHINA ASSOCIATION OF BUILDING ENERGY EFFICIENCY

intep

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