



Kunnen innovatieve energieconcepten de markt veroveren?

Introductie en inleiding in innovatieve energie concepten

1999

Founded

100

Experts

20

Nationalities

40

Countries

7

Offices

3

Spin-offs



Scope

Consulting



Solar



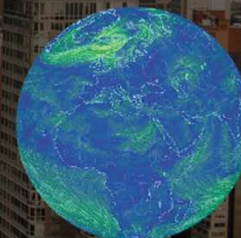
Grids & markets



Wind



Buildings & sites




iLAB

Innovation

Software

Sell the problem you solve, not the product you offer

- **Affordability issues of real estate**
- **Ambitious energy regulation**
- **Increasing complexity of HVAC**
- **Increased mobility / flexibility of users**
- **Internet of things**



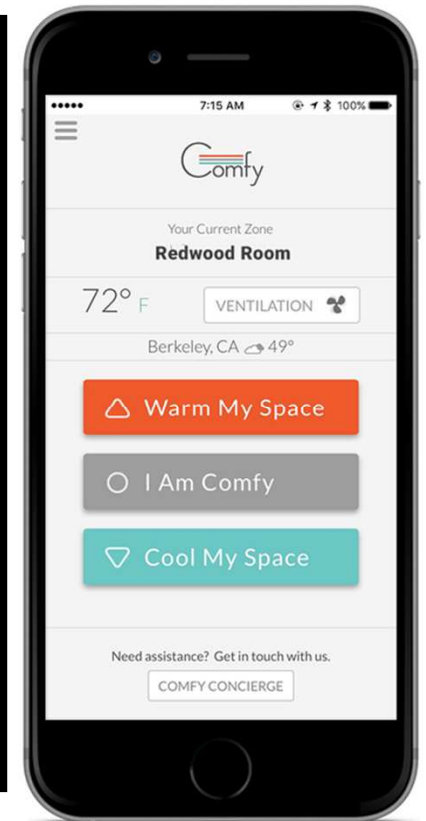
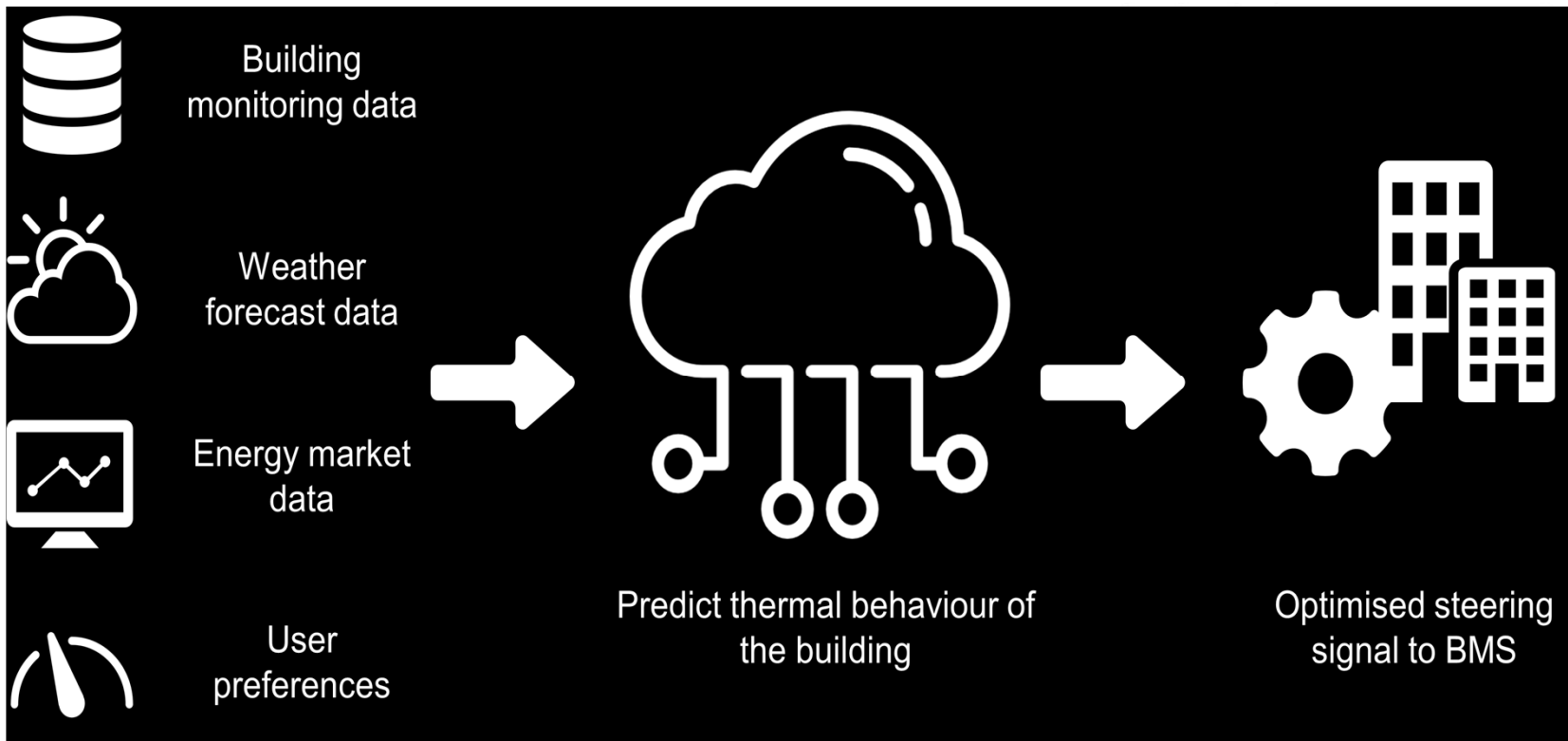
**Shift from Capex-driven towards
service-driven real estate: TCO**

Landlord Services are Back

- **3rd party taking over HVAC, heat networks, PV, HP, storage**
- **Comfort as a service (from Capex to Opex)**
- **Performance based (TCO)**

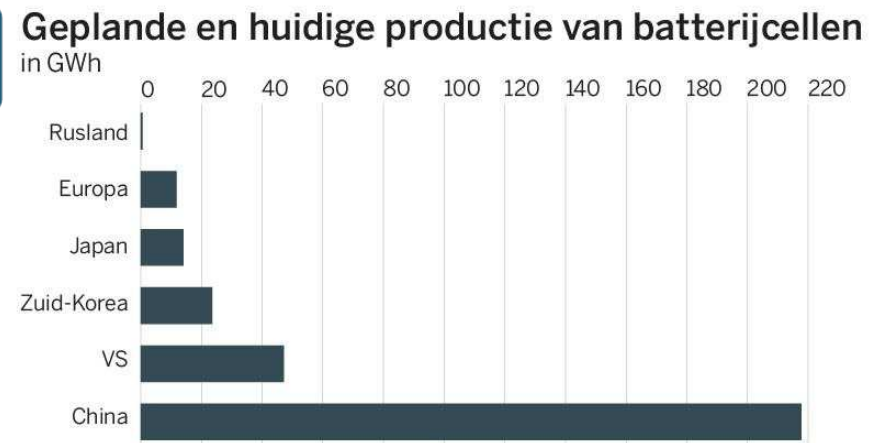
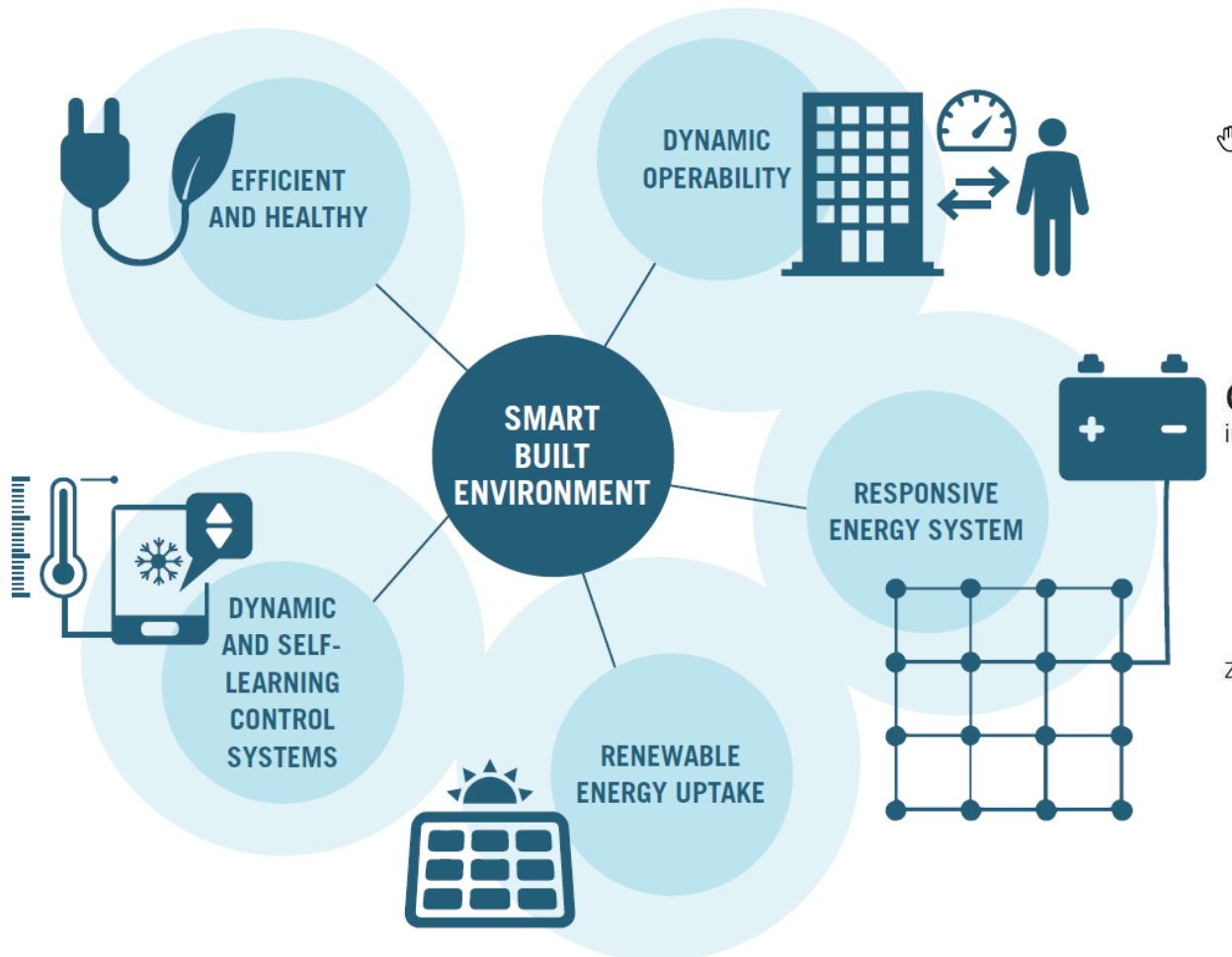


IoT: Potential Disruptive Impact on Real Estate



“SMART”

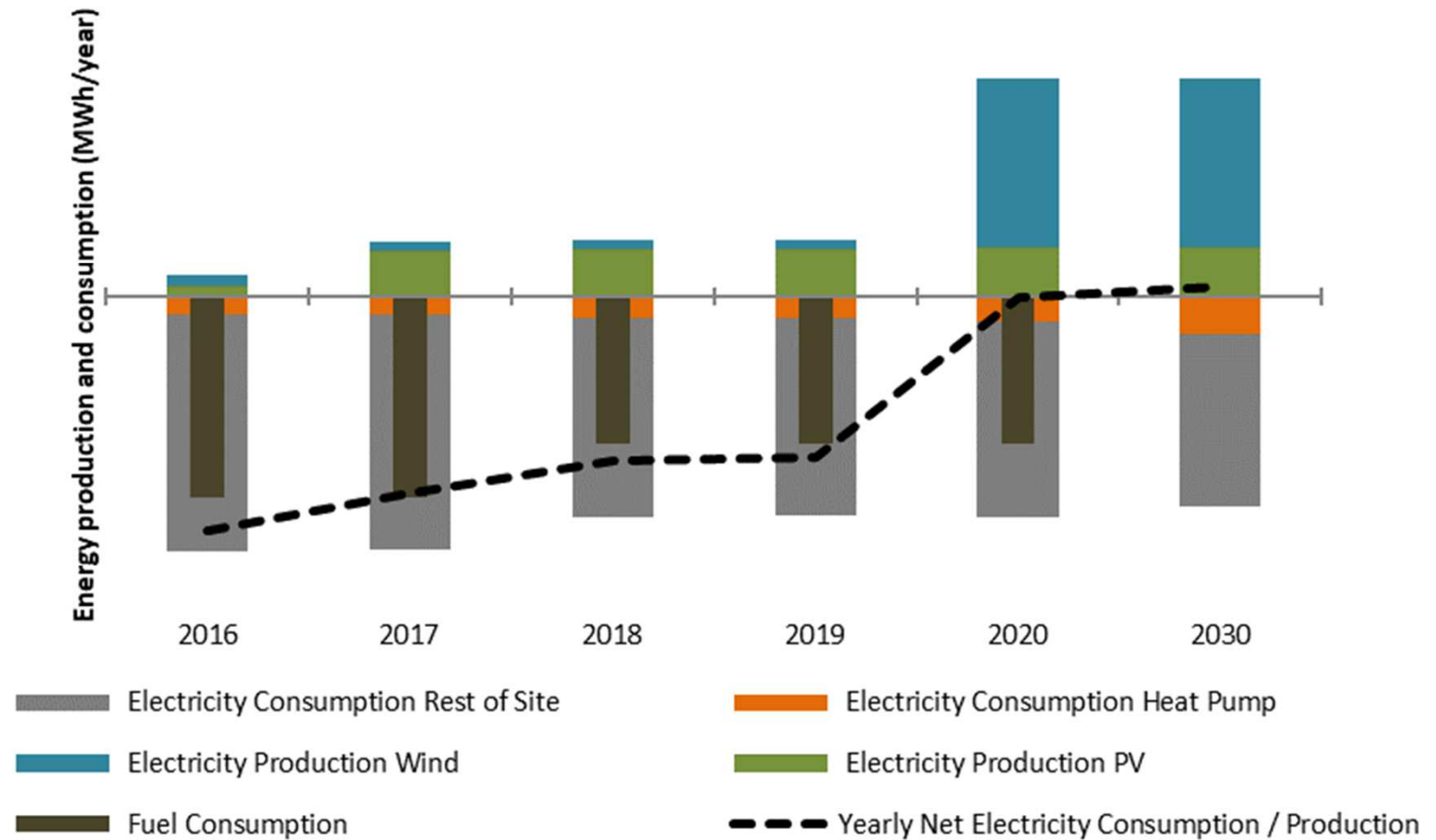
Figure 1 - Five pillars of a smart built environment (Source: BPIE own analysis)



DS Infografiek | Bron Bloomberg

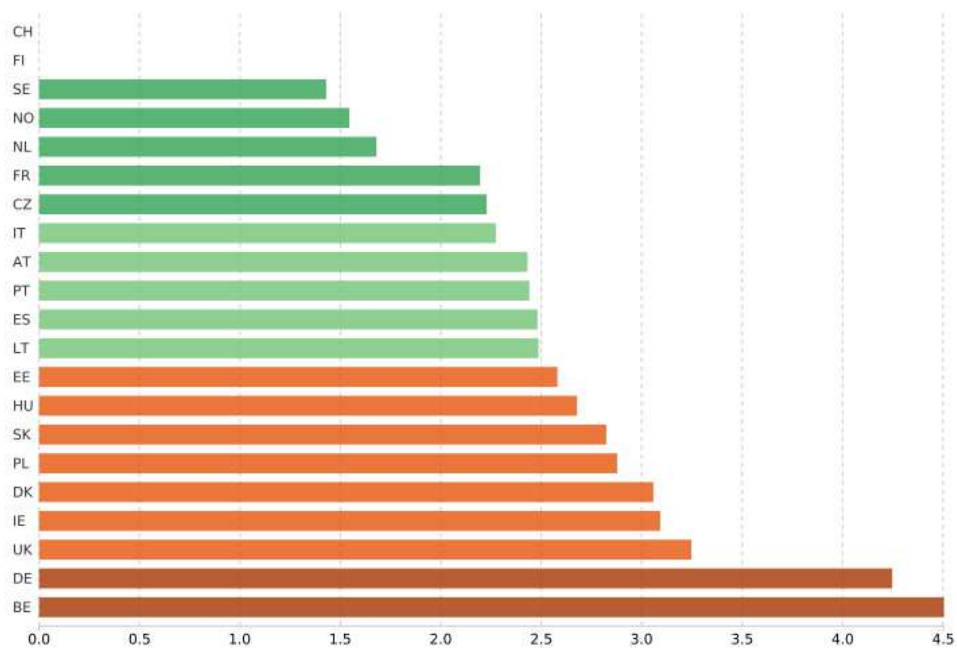
Innovative energy concepts - what?

- (Collective) systems with green heating/cooling
- Energy production
- Energy storage

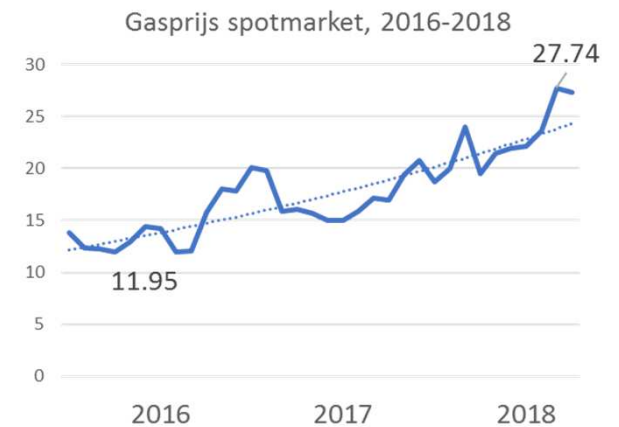


Innovative energy concepts – barriers & solutions

- Mismatch natural gas / electricity price



Source: EHPA



Innovative energy concepts – barriers & solutions

- Restrictions on electrical grid connection

Prosumer tariff

Smart metering

VEA restrictions for collective PV in apartments

Value of injection



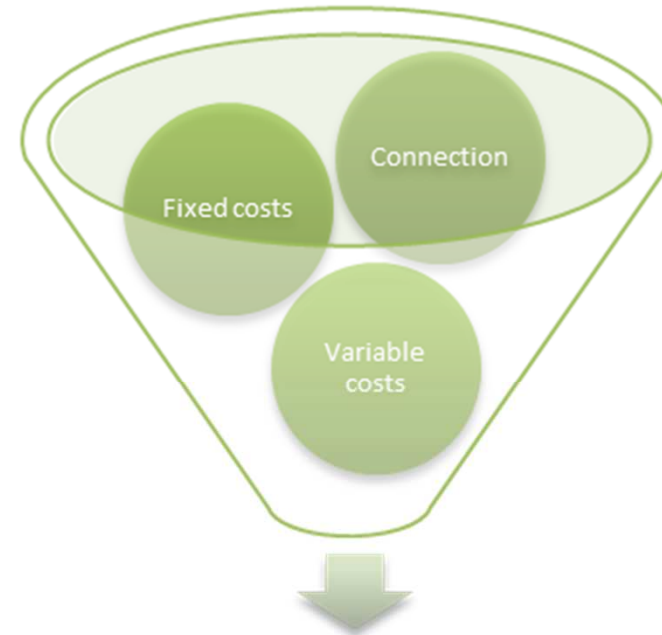
Innovative energy concepts – barriers & solutions

- **Affordability**

increased CAPEX (and OPEX)

NMDA principle

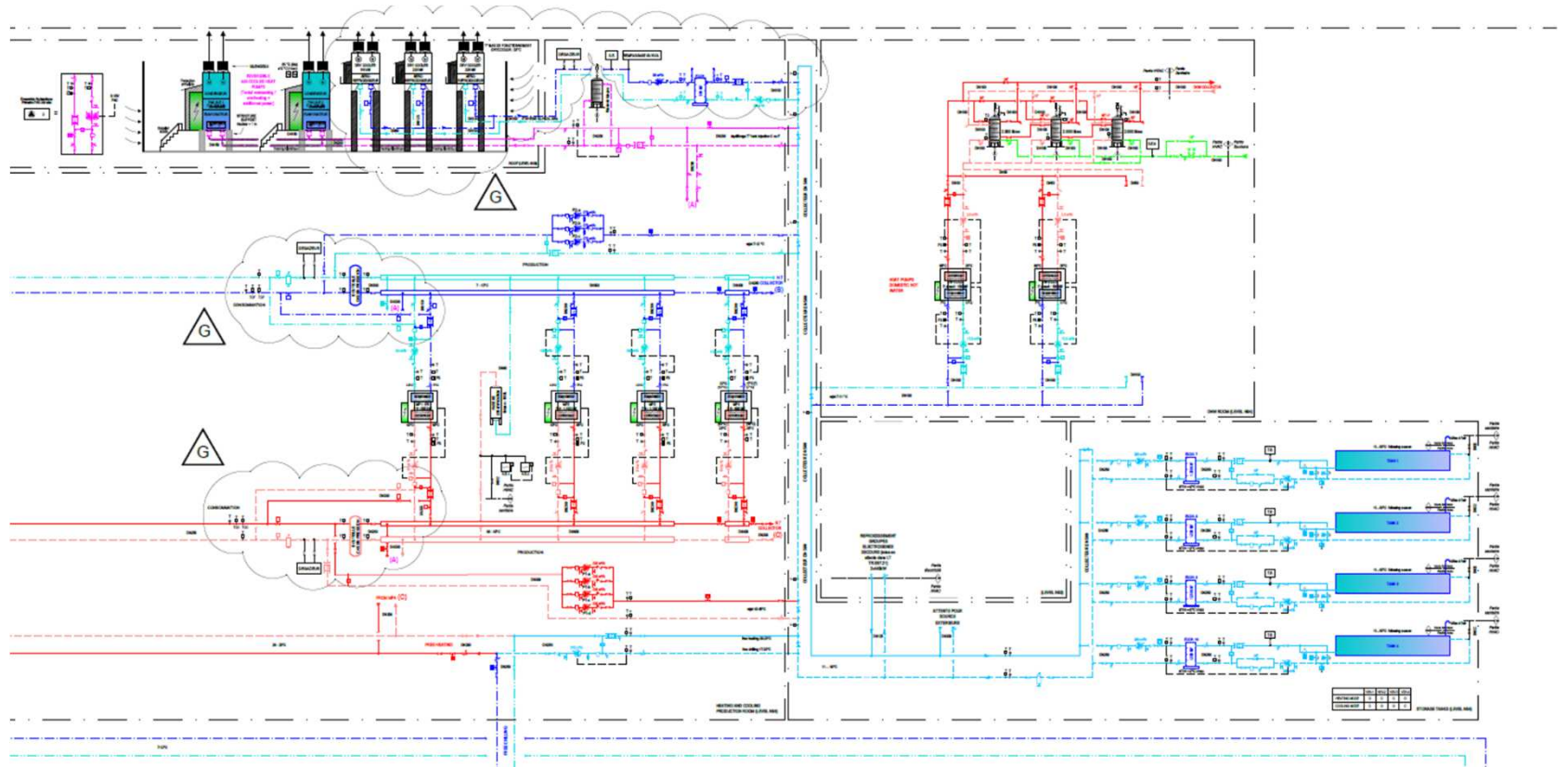
Subsidies



Heat tariff at the cost of the next-alternative technology

Innovative energy concepts - barriers & solutions

- Complexity
 - technical
 - juridical



Innovative energy concepts – why?



Source: De Standaard

- **Paris climate ambitions**

+1.5°C

- **IPCC 2018**

investments in RE * 7

forest with size of Australia

CO₂ capture

Sense of urgency

Thank you!

Brussels
Paris
London
Delhi
Toulouse
Istanbul
Cape Town

WWW.3E.EU