

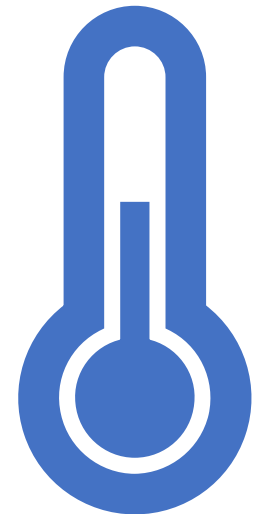


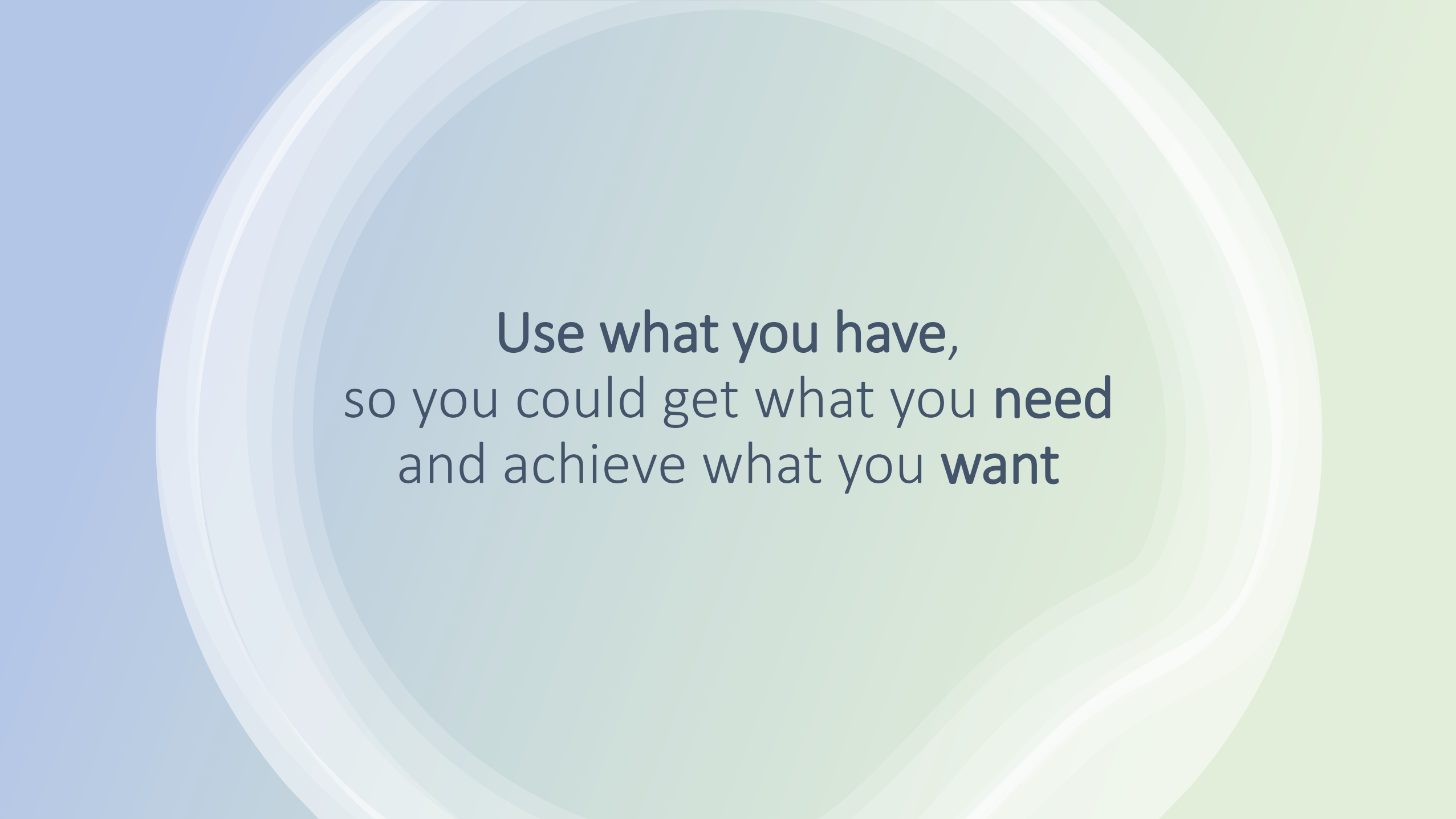
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The Present and the Tomorrow of Heating & Cooling

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21.03.2023





Use what you have,
so you could get what you **need**
and achieve what you **want**

Context

- “Fit-for-55” package → **carbon neutrality** by 2050
 - GHG emissions by 55%
 - energy efficiency by 13%
 - renewable energy to 45%
(curr. electricity sector 23,1% vs. H&C sector 37,5%; *Eurostat, 2020*)
- ~45% of EU en.cons. → heating or cooling:
27% for space heating and 15% in the industry
- **2/3** of EU heating systems (80 million units) **inefficient**.

REPLACE

01.11-2019-31.10.2022

- **22** campaigns to promote heating and cooling equipment
- Old + inefficient fossil-fueled **stoves** with inverters; pellet or fuel oil **boilers**
- Direct contact and carefree boiler replacement offering → **trust**
- **Knowledge creation** → replacement handbooks (consumers and intermediaries)

AT: Federal State of Salzburg

BA: Canton of Sarajevo

BG: Rhodope Mountain Region

DE: Bavarian Oberland

ES: Castilla y León Region

HR: Primorsko goranska County; City of Zagreb incl. three bordering counties

MK: Skopje Region

SI: Slovenia

H&C for the people

- 55% live in cities → 68% 2050
- (*UN; World*)

- **75% live in cities → 80% 2050**
- (*Eurostat, European Commission; EU*)



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Why H&C ?

- **Security**
 - Climate change adaptation
 - Imports
 - Independence and autonomy
 - Resilience
 - Diversification
- **Savings**
 - Monetary
 - Resources – climate change mitigation
 - System cost
- **Earnings**
 - Most competitive EU sector
 - Rewarding the negawatt

Individual	Society
X	X
X	X
X	X
X	X
X	X
X	
	X
	X
	X
X	

H&C vectors

- **Planning** (databases; digital twins; logbooks+ passports; NEB)
- **Electrification**
- **RE's race**
- **PE efficiency** (excess heat use)
- **Low-temp** use
- **Back to the basics** (solar=thermal; passive elements)
- **Decentralisation**
- **Demand response**
- **Storage**

Tapping into H&C

- **Awareness**
- **Fairness** (collaboration)
- Best practice **examples**
- **Standardisation** (what's waste heat?)
- **Tech** advancement
- **Value** (grants vs gain)

Pick your H&C

- Industry
- Shopping Centres
- Data Centres
- Wastewater

Managing

risk

convenient & cheap

| vs |

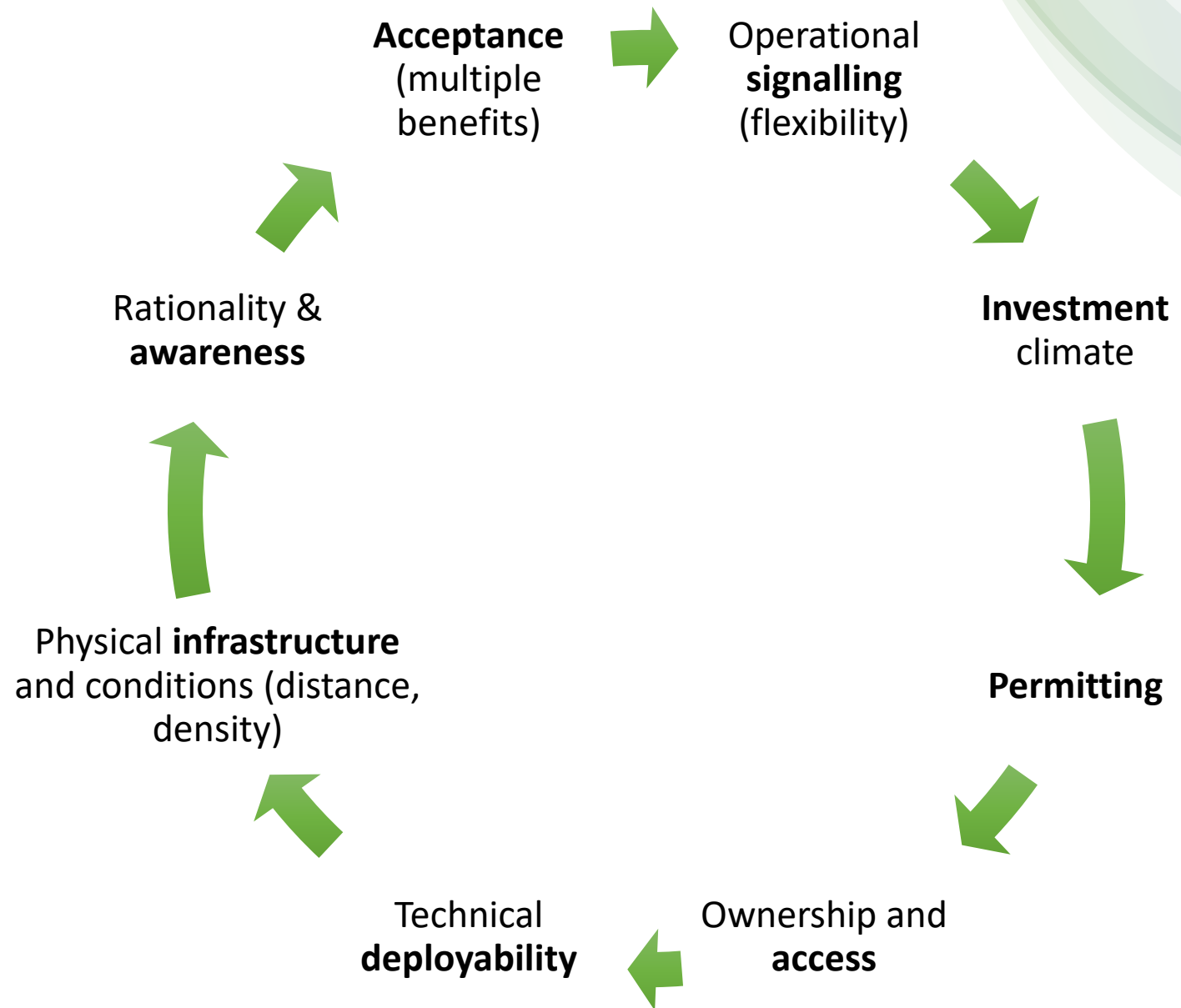
clean & complicated

*„A scenario
in which losing something of value
is probable“*

H&C

&

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t H & C s

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