

**INNS'
BRUCK**



Smart **IN**itiative of cities **Fully cO**mmitted to **iN**vest In **Advanced** large-scale energy solutions

Experience and future ambitions

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Innsbruck, 30/06/2020



This project has received funding from the European Union's Seventh Programme for research, technological development and demonstration under grant agreement No 609019

Innsbruck partners



The beginning...



From Call to Sinfonia

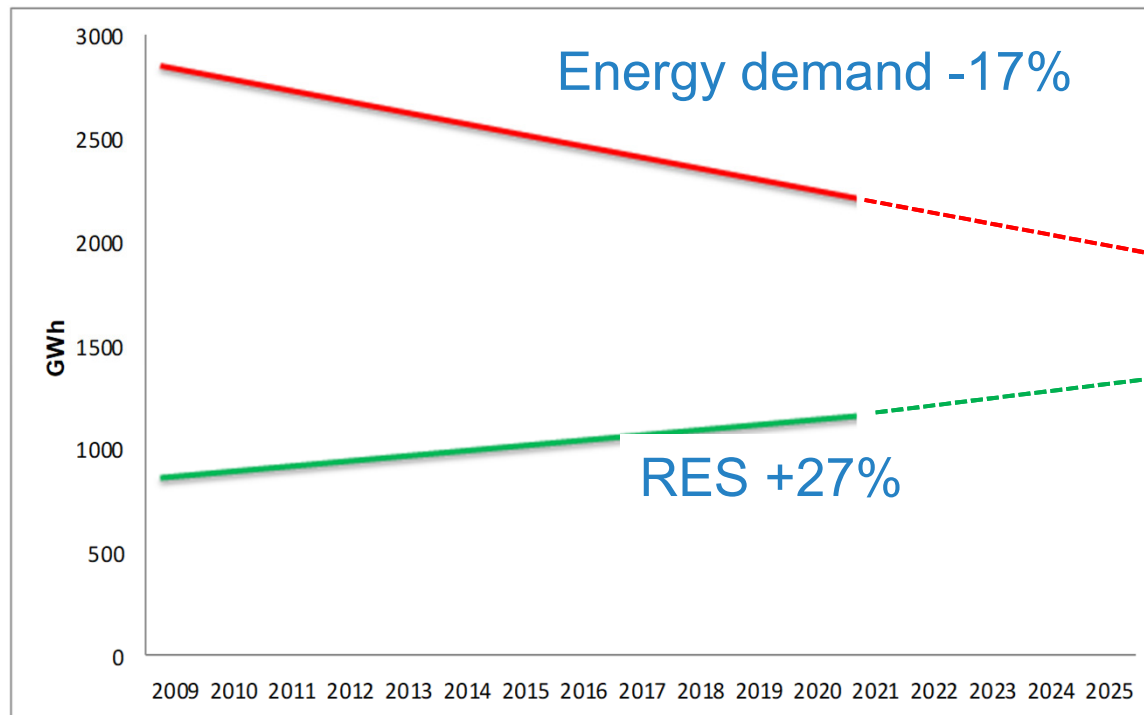
- Trip to Brussels.....
- Cluster renewable energies Tyrol
- EU funding team of SAT
- Municipality of Innsbruck SET Plan
- High standard of building companies
- Concepts for IKB to transform WWTP
- DH extension
- University of Innsbruck



From Call to Sinfonia

- Politics, Bolzano, etc.
- Finding more partners
- Finding a coordinator
- Call Deadline: 12.2012
- Waiting.....
- Consortia agreement
- Project start: 06.2014

EP – Innsbruck Energy Plan 2011



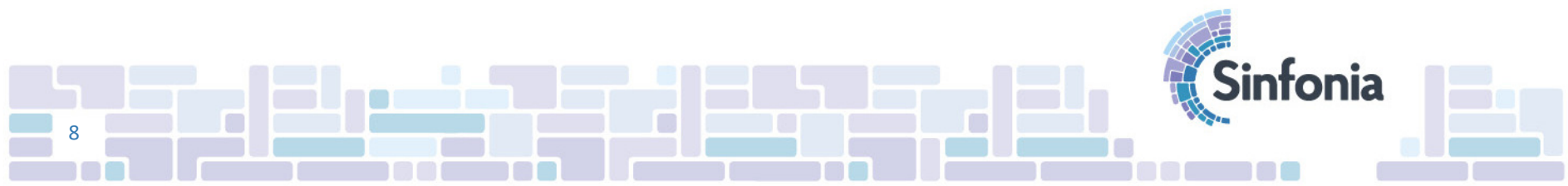
Sinfonia Goals – 3 Main Activities

- 50% energy savings
- 30% more RES
- 20% less CO₂ emission

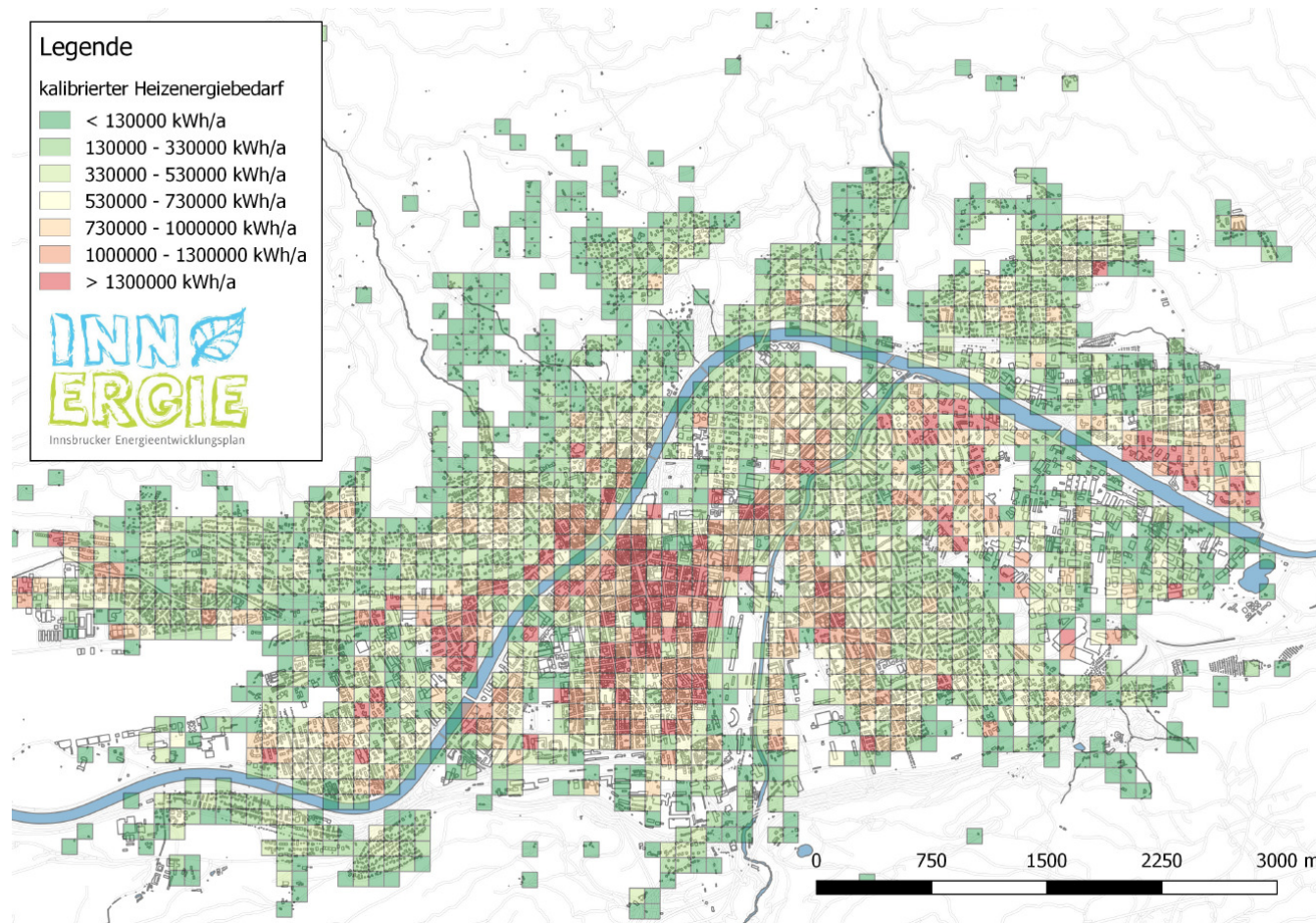


Sinfonia Setting

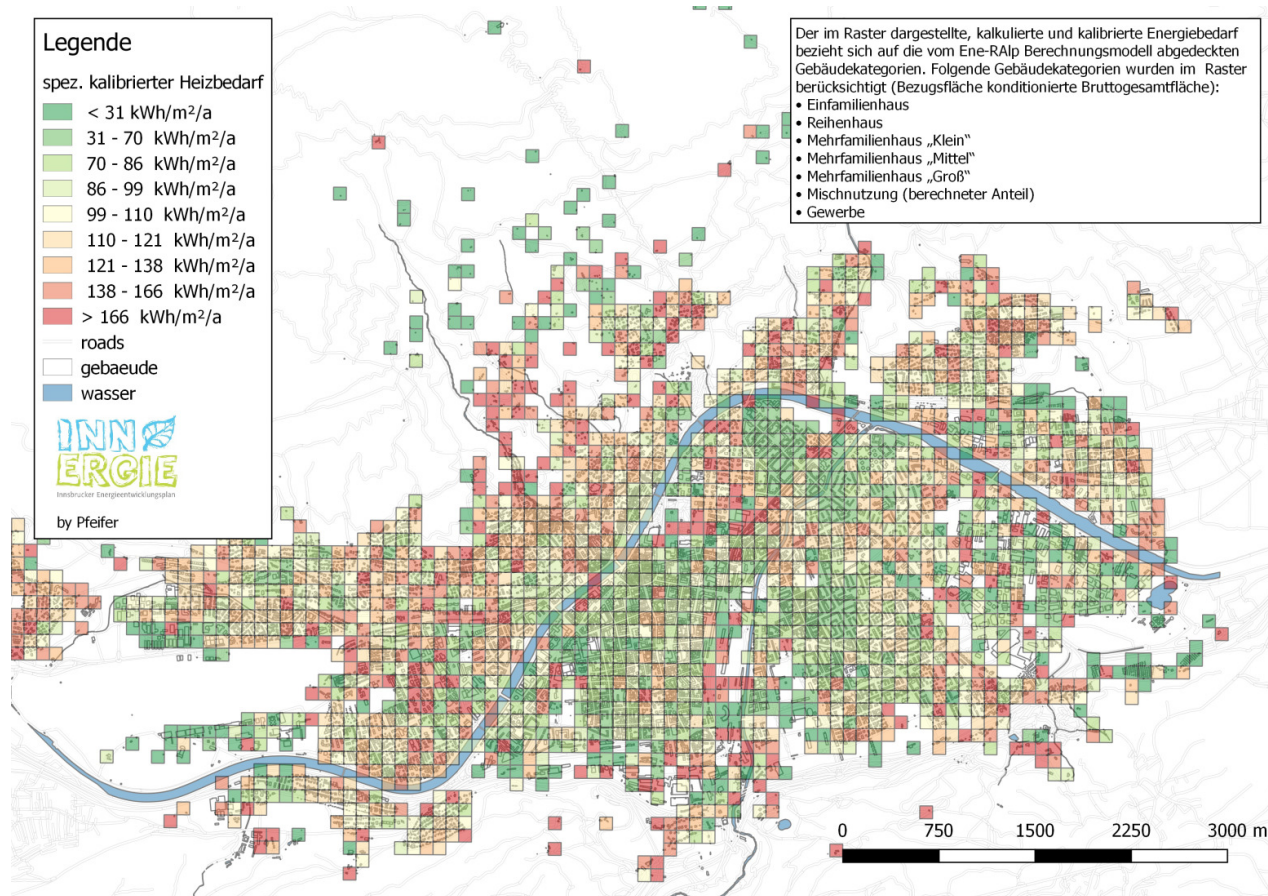
smart
district



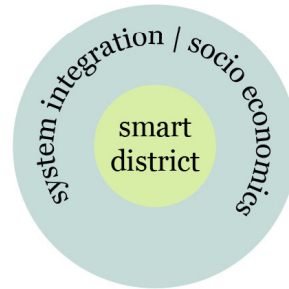
Calculated and calibrated heat demand



Calculated and calibrated specific heat demand



Sinfonia Setting





Demo Measures Pilot City Innsbruck

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IG - Innsbrucker
Immobilien-gesellschaft

- 1 Sebastian-Scheel-Straße 18, 18a, 18b
- 2 Schubertstraße 6 - 12
- 3 Mozartstraße 5 - 7
- 4 Elementary school Rosadlerstraße 10
- 5 Elementary school Siegmairstraße 1
- 6 Elementary school Angergasse 18

NHT

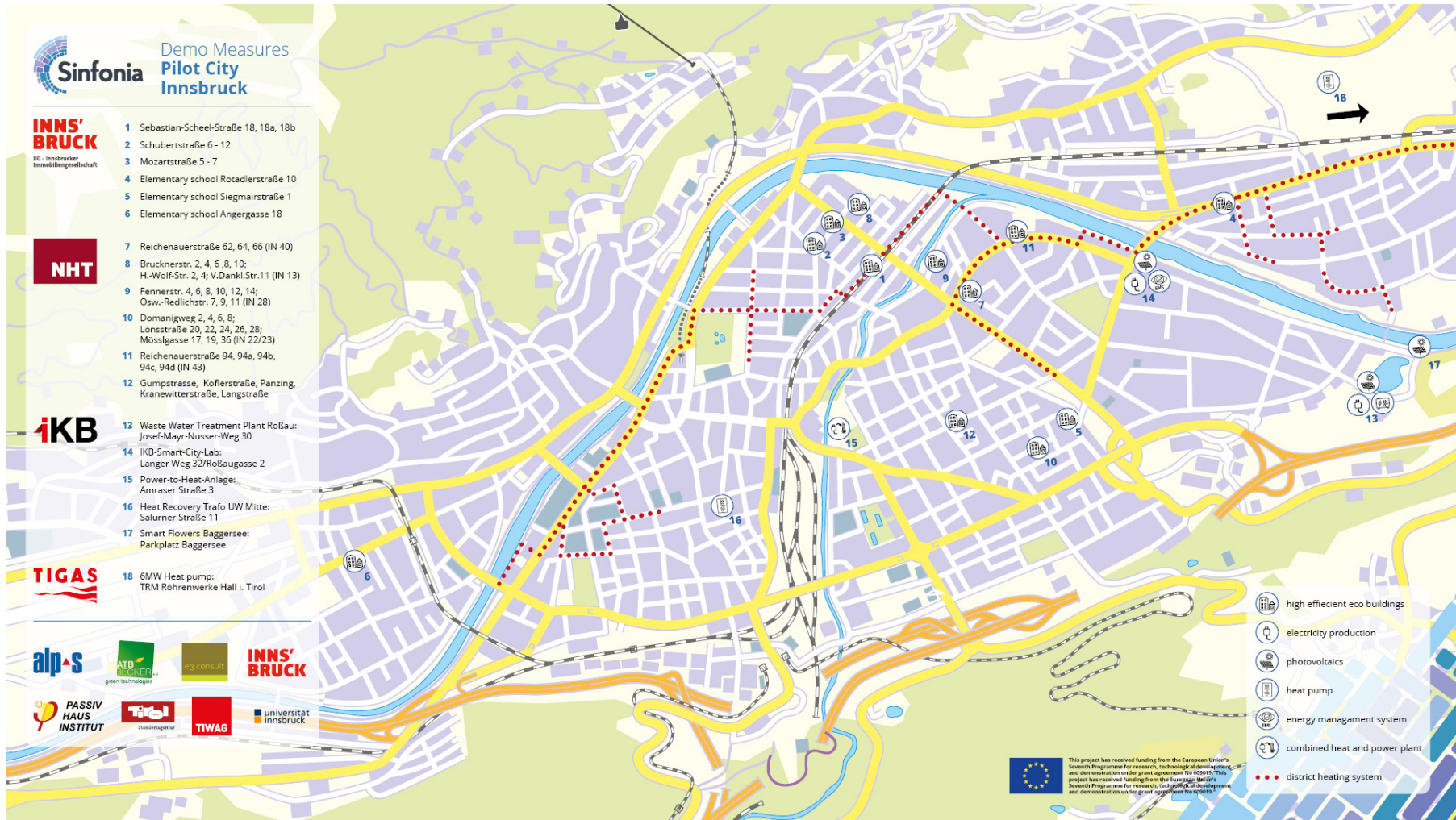
- 7 Reichenauerstraße 62, 64, 66 (IN 40)
- 8 Brucknerstr. 2, 4, 6, 8, 10; H.-Wolf-Str. 2, 4; V.Dankl-Str.11 (IN 13)
- 9 Fennerstr. 4, 6, 8, 10, 12, 14; Osw.-Redlichstr. 7, 9, 11 (IN 28)
- 10 Domanigweg 2, 4, 6, 8; Lonsstraße 20, 22, 24, 26, 28; Mosslgasse 17, 19, 36 (IN 22/23)
- 11 Reichenauerstraße 94, 94a, 94b, 94c, 94d (IN 43)
- 12 Gumpstrasse, Koflerstraße, Panzing, Kranewitterstraße, Langstraße

iKB

- 13 Waste Water Treatment Plant Roßau: Josef-Mayr-Nusser-Weg 30
- 14 iKB-Smart-City-Lab: Langer Weg 32/Roßaugasse 2
- 15 Power-to-Heat-Anlage: Amraser Straße 3
- 16 Heat Recovery Trafo UW Mitte: Salurner Straße 11
- 17 Smart Flowers Baggersee: Parkplatz Baggersee

TIGAS

- 18 6MW Heat pump: TRM Röhrenwerke Hall i. Tirol



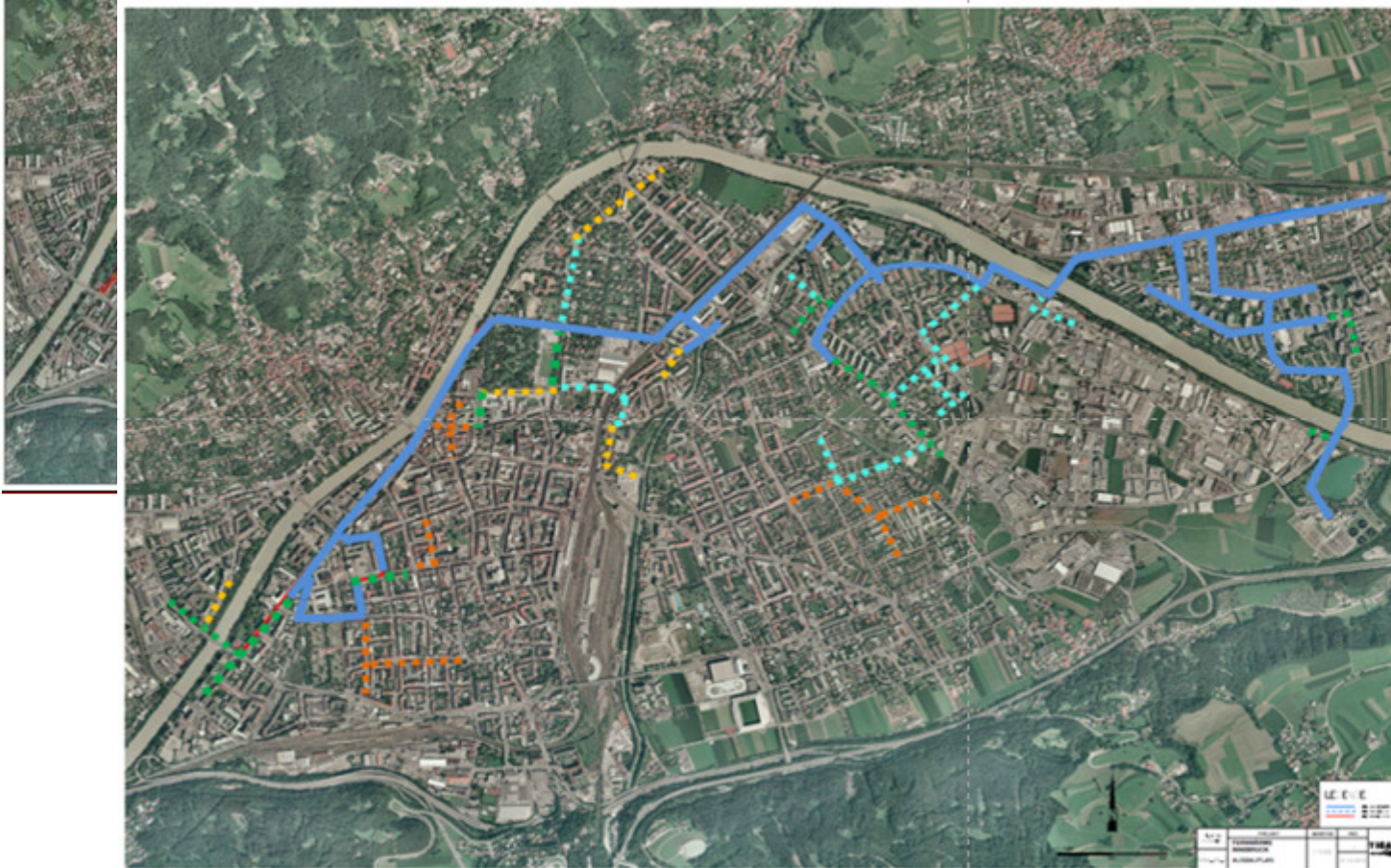
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- high efficient eco buildings
- electricity production
- photovoltaics
- heat pump
- energy management system
- combined heat and power plant
- district heating system



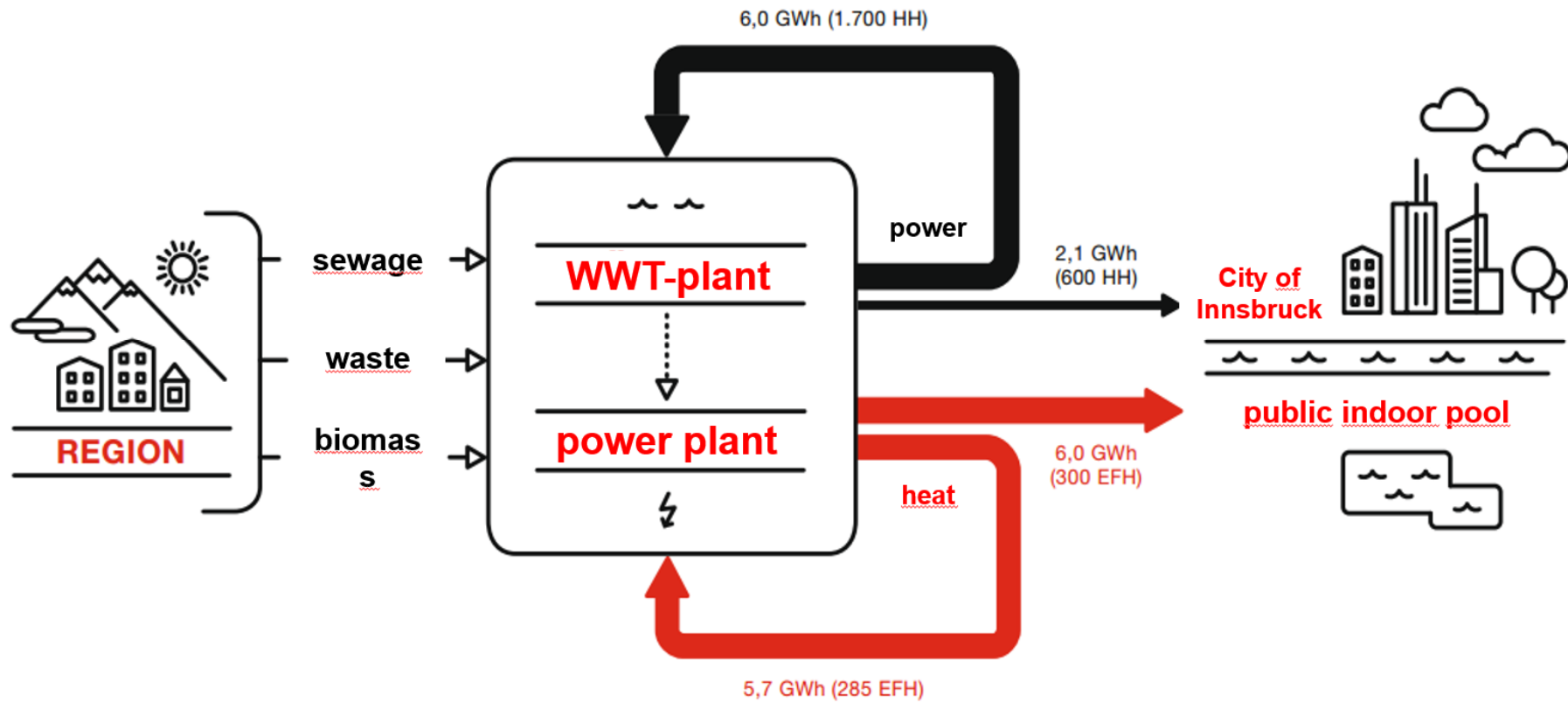


DH extension



- 2017 
- 2018 
- 2019 
- 2020 
- ab 2021 

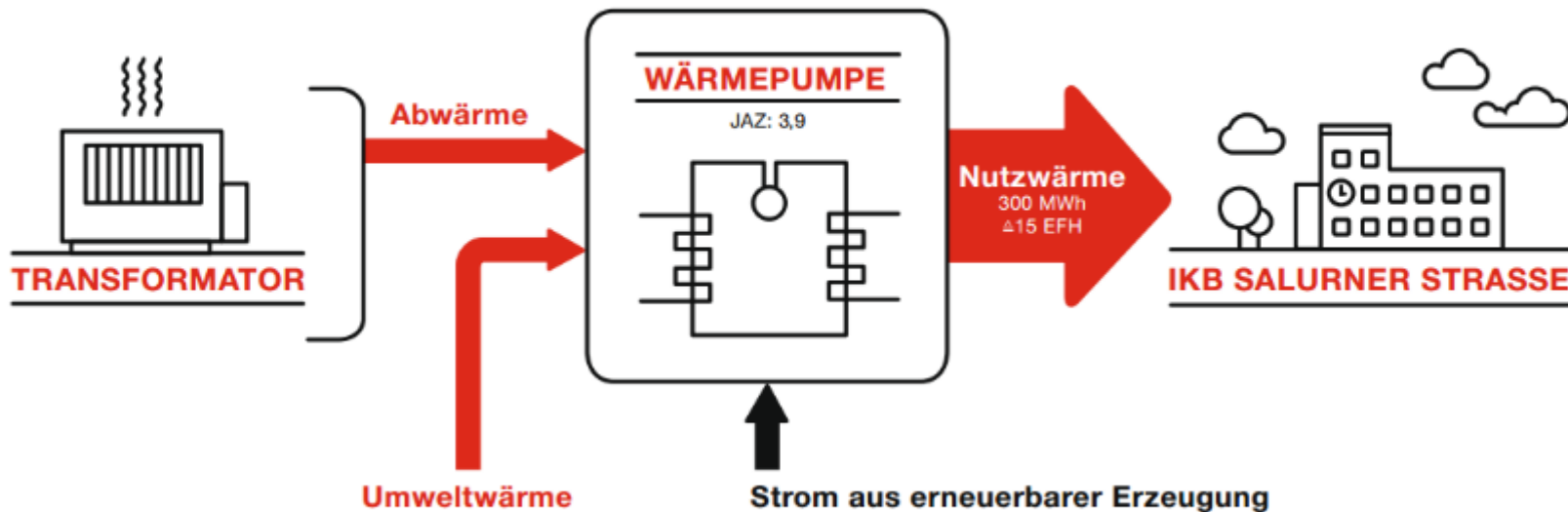
Waste water treatment plant



Transformation station UW Mitte **iKB**

Heizen mit Abwärme

Aus Abwärme eines Transformators wird Nutzwärme für kommunale Infrastruktur



Durchschnittlicher Wärmeverbrauch pro Einfamilienhaus: 2.000 Liter Öl = 20.000 kWh
EFH = Einfamilienhaus
JAZ = Errechnete Jahresarbeitszahl



Friedle

©Andreas Friedle



iKB smart city lab



Innovative refurbishment



School refurbishment

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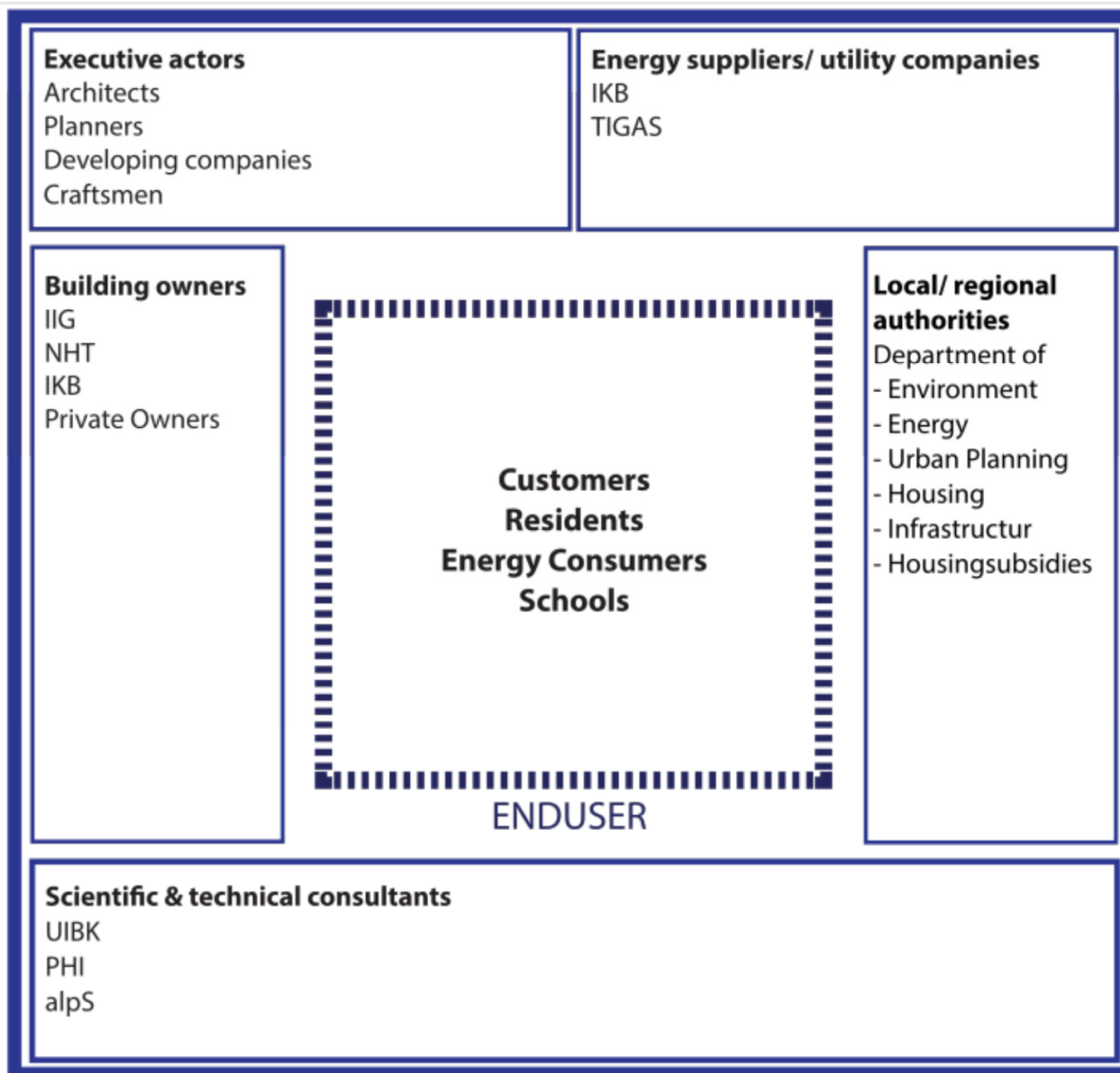


School refurbishment

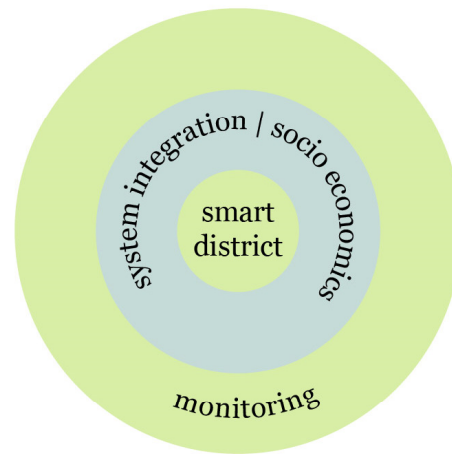
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IIG – Innsbrucker Immobiliengesellschaft

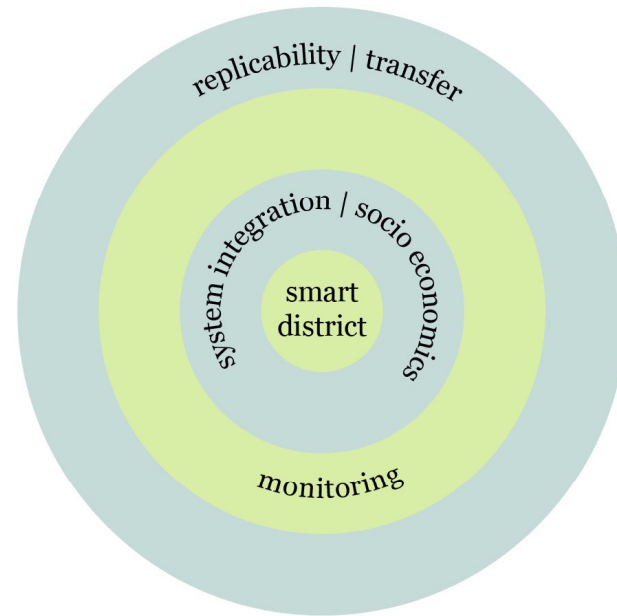




Sinfonia Setting



Sinfonia Setting







www.pafoscity.com

Challenges

- Changes in local consortium
- Legal issues
 - Data protection law (data collection)
 - Contracts between partners (data exchange, etc.)
 - GDPR
- Tenant approval for renovation/monitoring
- Negative press
- Etc.

Benefits for the city of Innsbruck

- Better quality of life
- More efficient energy distribution
- Faster implementation towards low carbon society
- Inter-/transdisciplinary cooperation
- Knowledge transfer
- Change of innovation culture
- New business models

It goes on...

- Follow up projects
- findings will be applied in future
- Establishment of smart city governance structure
- Establishment of smart city office



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