ViableCities™

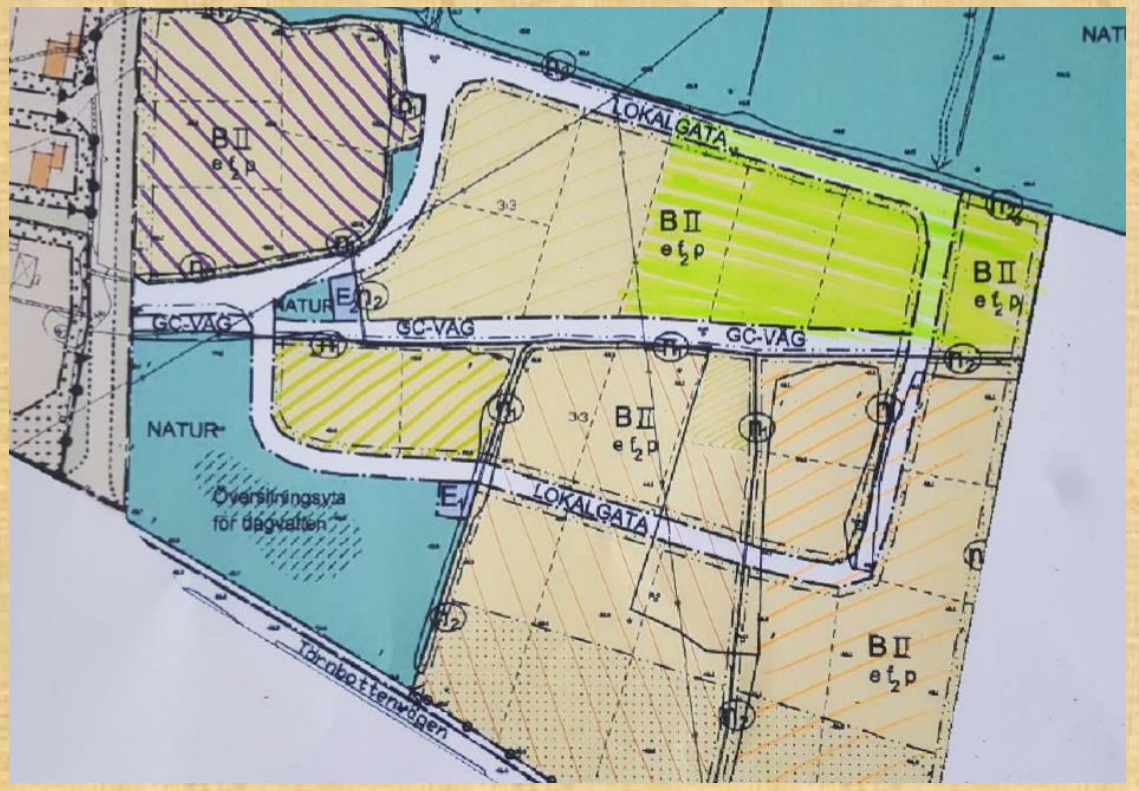
Smart, sustainable and attractive.

Smart Village – zero energy

Finding the golden path for prosumers of new dwellings

The Smart Village

- 75 apartments
- 5300 m² of heated area
- 4 energy scenarios



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Production, storage, financing and intergrid

- Physical environment
- Vertical digitalization
- Innovative financing, operation and maintenance
- User perspective
- Long-term sustainability

On site or elsewhere?

Storage or balance?

Ownership or service?

On demand or default?

Level of self-sufficiency?

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Scenario 1 and 2

- 1. Energy production
  - *Other location*
- Energy storage
  - *By service*
- User interface
  - *Default*
- Off-grid
  - *n/a*

- 2. Energy production
  - *On site*
- Energy storage
  - *By service*
- User interface
  - *Default*
- Off-grid
  - *n/a*

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Scenarios 3 and 4

- 3. Energy production
  - *On site*
- Energy storage
  - *Local storage and service*
- User interface
  - *Intergrid management*
- Off-grid possibility
  - *n/a*

- 4. Energy production
  - *On site*
- Energy storage
  - *Local storage*
- User interface
  - *Intergrid management*
- Off-grid possibility
  - *Yes*

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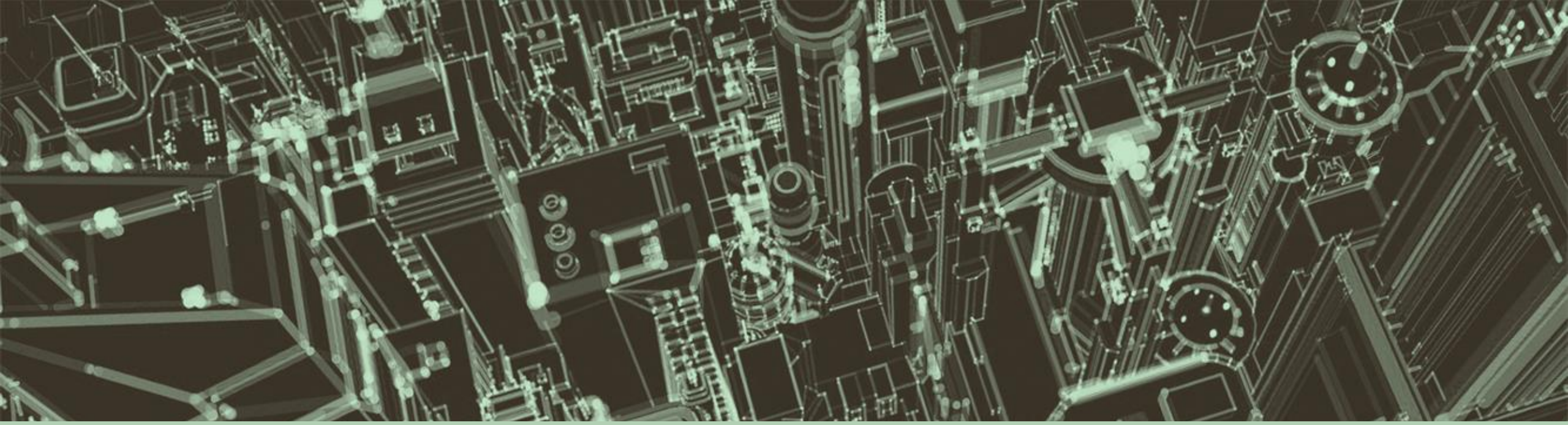

First findings

Production

- Needs adaption to surroundings by spatial planning and building permits
- Difficult to maximize in order to achieve offgrid capacity
- Large financial investment to reach offgrid status

Intergrid management

- Avoiding peakloads
- Nudging behavioural changes
- Cloud dependency

Self-sufficiency

- Yearly basis – by service
- Daily basis – by service and storage
- 24/7 – by storage

Long-term sustainability

- Technical development
- Financial solutions. LCC vs pay-off
- Societal impact

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