



RE/SOURCED

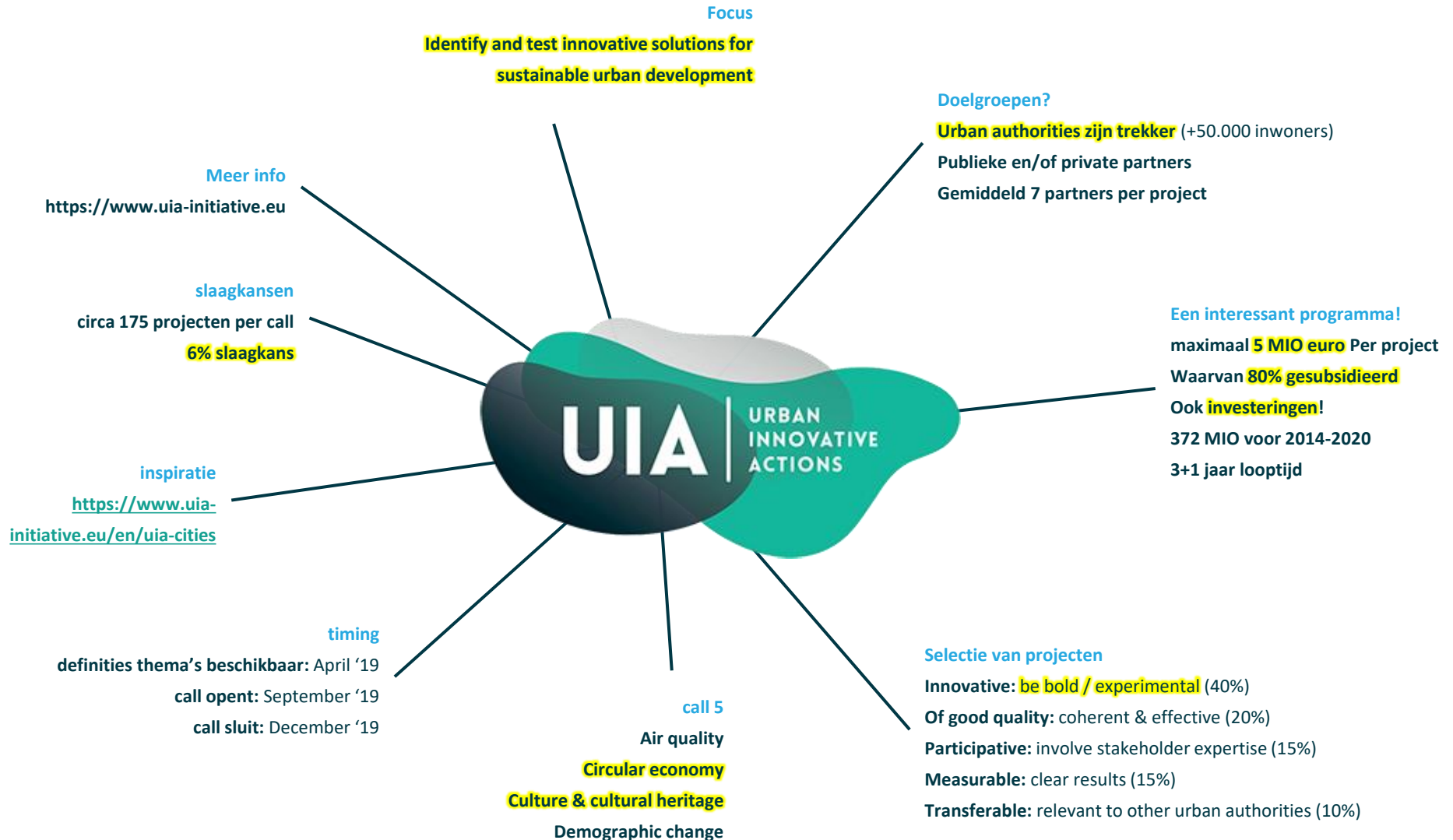
Renewable energy solutions for urban communities
based on circular economy policies and DC backbones



e-stories: transitie duurzame warmte RE/SOURCED

Merel Goossens

17 juni 2021



Identify and test innovative solutions for sustainable urban development

[Learn more about the initiative](#)

5th call selection procedure



UIA 5th Call for Proposals has ended: get an insight of the 11 new UIA projects

[Discover](#)

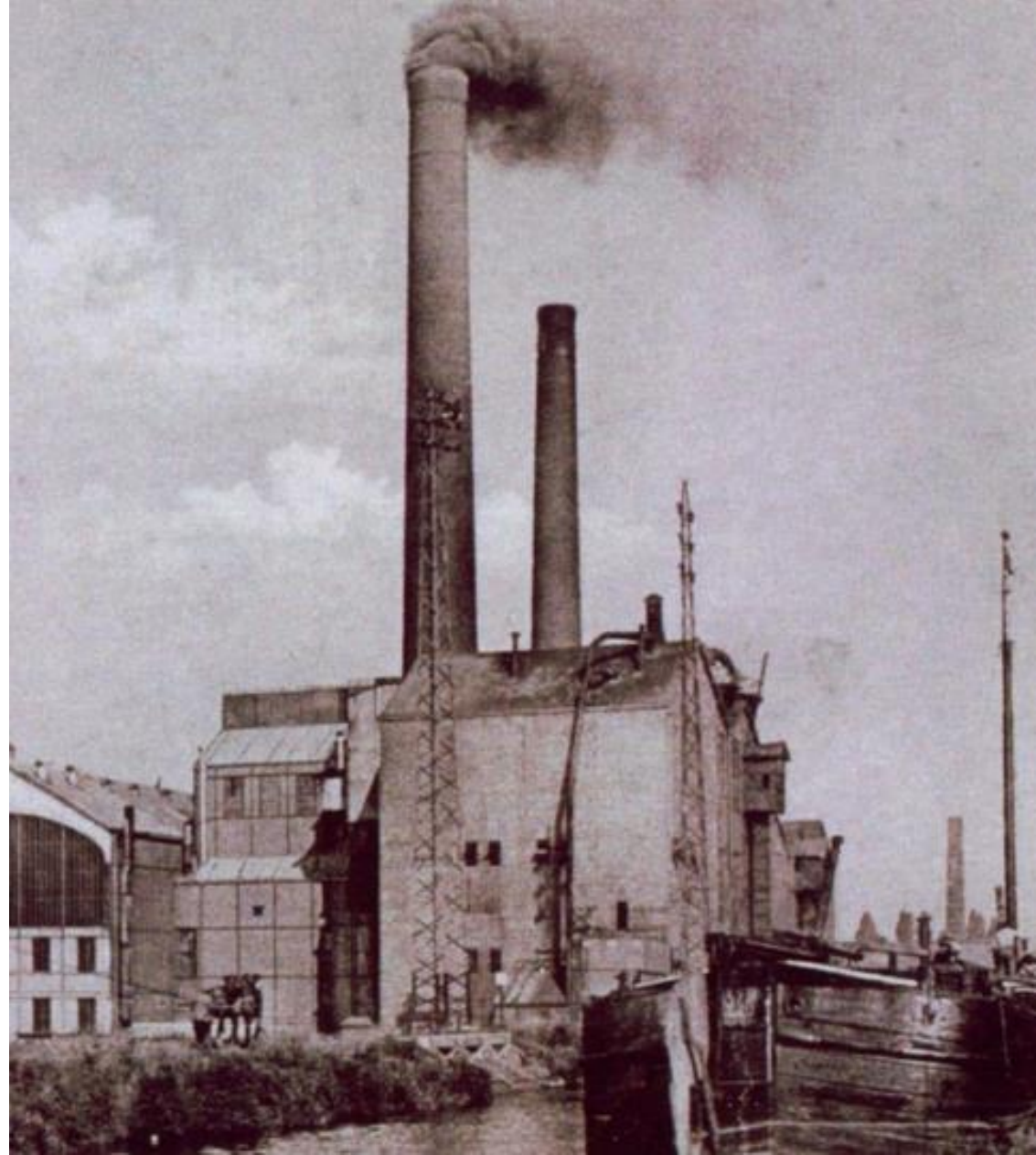


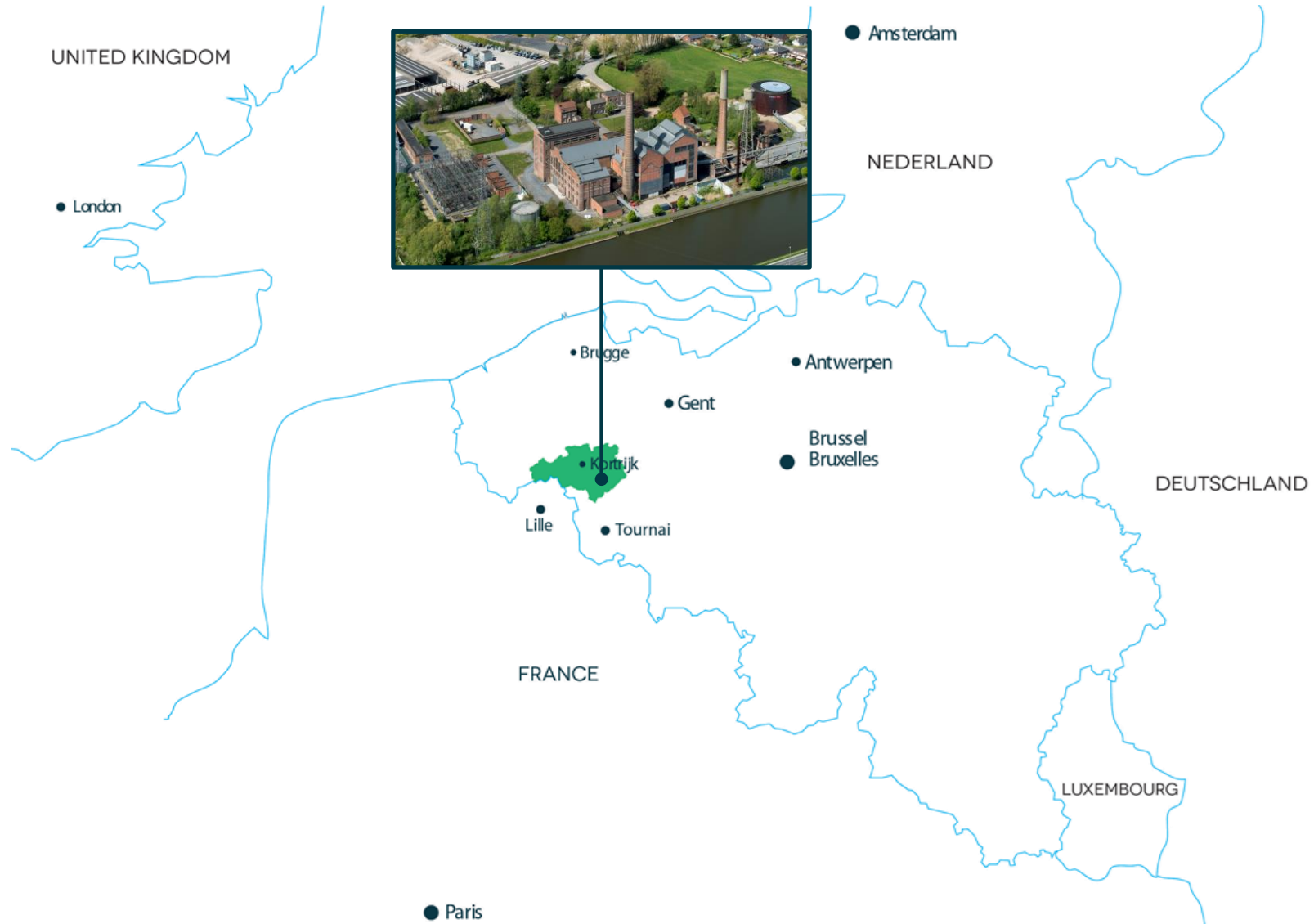
RE/SOURCED introduces a mid-scale and self-sufficient renewable smart grid in an urban environment, based on circular economy strategies like shared use, refurbishment, repurposing and more efficient use of materials

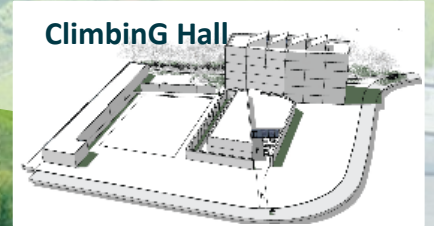


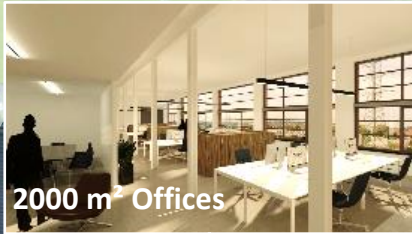
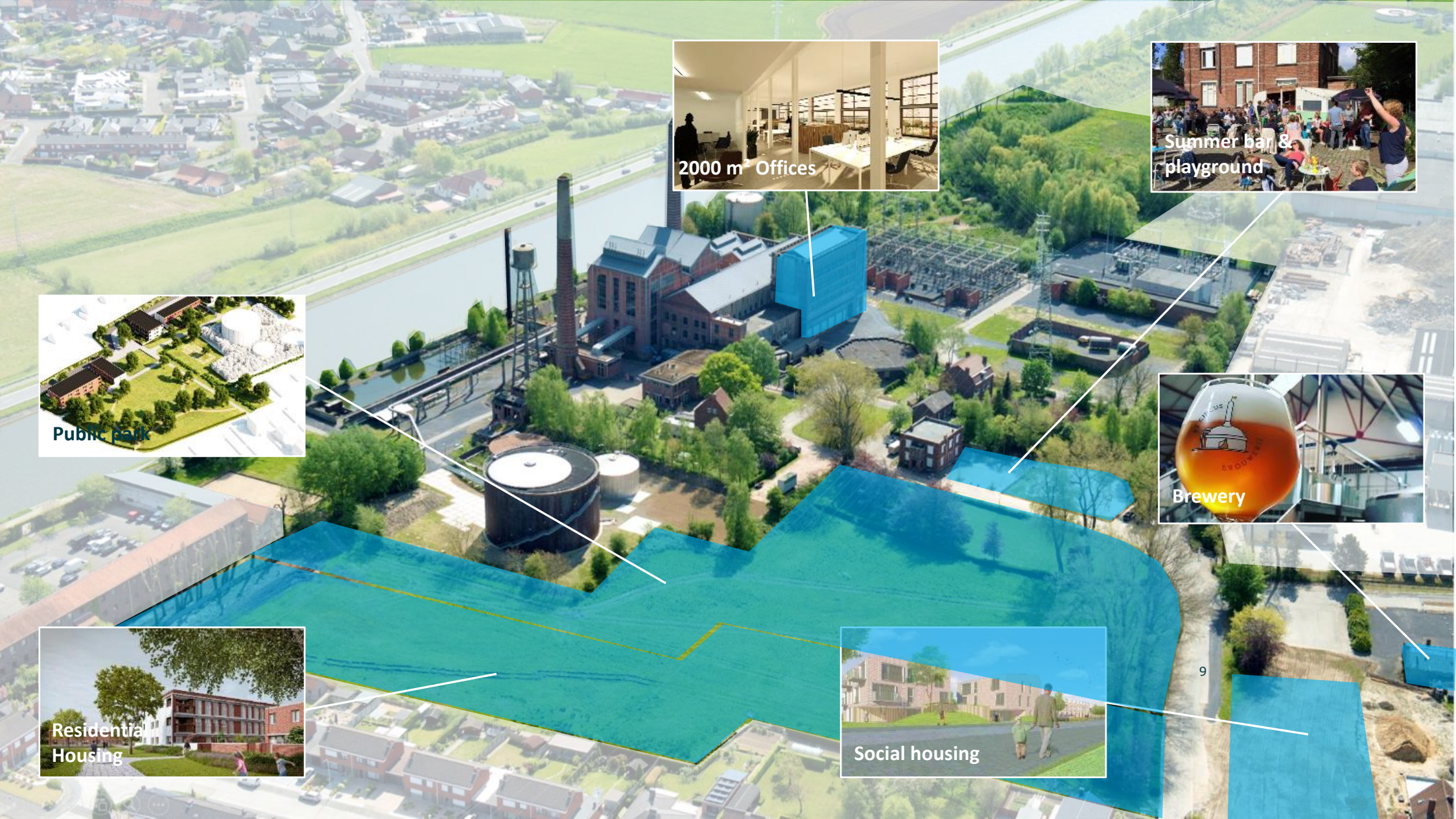


The listed Transfo power plant is the perfect setting for RE/SOURCED, because of the multi-user development of this large heritage site and its historical link with electricity production.









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Z-Energy: Transfo- de energiewijk van de toekomst 20/04/21

20/04/21 om 20:00 Bijgewerkt op 09/04/21 om 17:58 Bron : Kanaal Z



SMART GRID SETUP

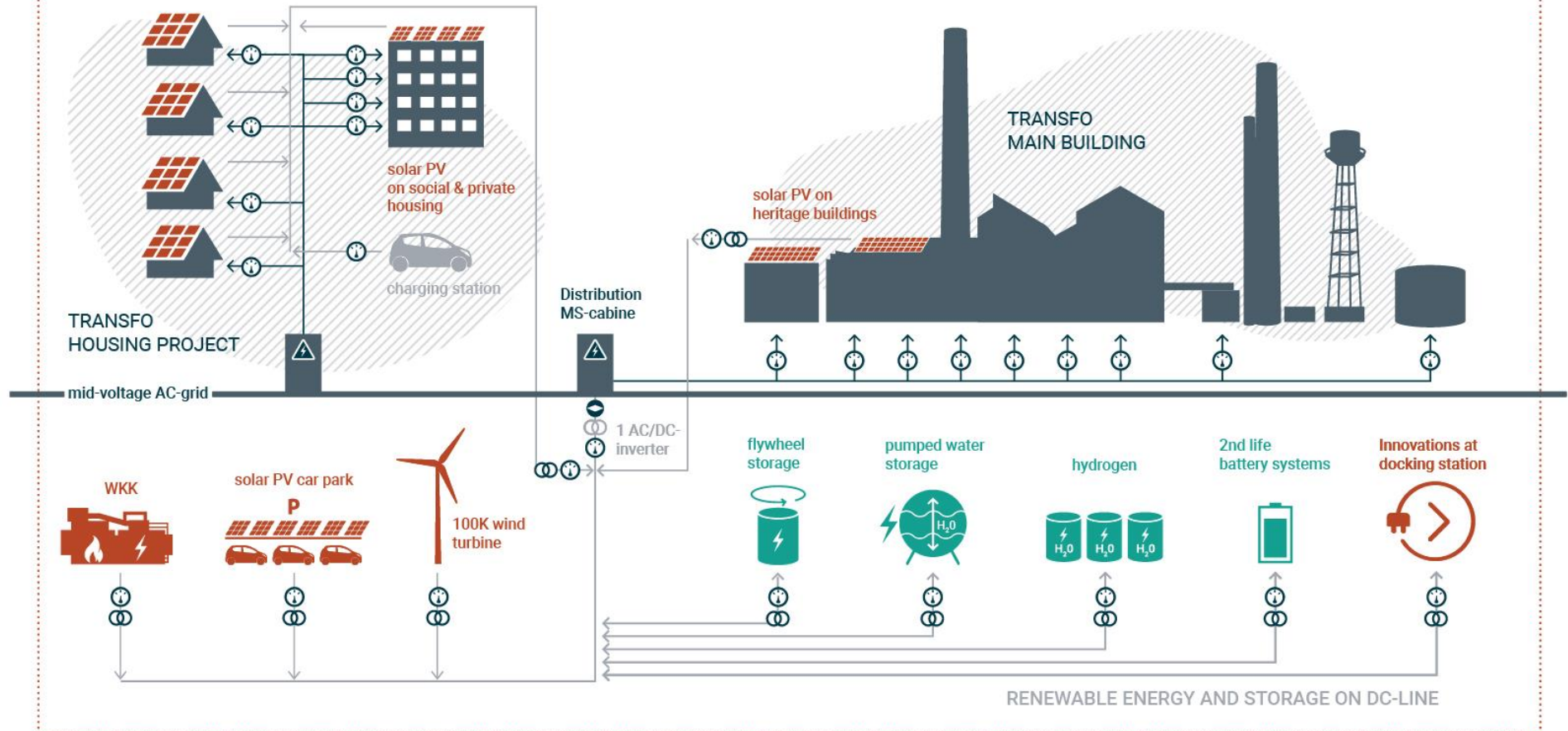
ENERGY COMMUNITY / COOPERATIVE TRANSFO

- Storage
- Renewable energy

- Smart meter
- DC/DC inverter

Monitoring & demand/supply response

EMS Software & hardware systems



Doelstellingen

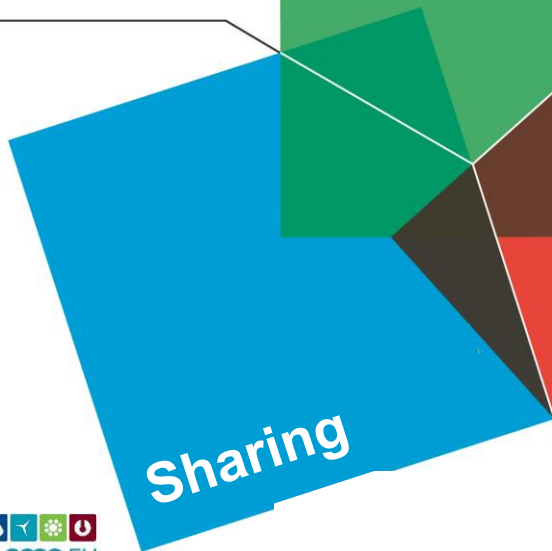
- **Aandeel hernieuwbare energie verhogen door in een stedelijke context oplossingen te zoeken en te integreren**
- **Zoeken naar lokale en decentrale manieren om hernieuwbare energie zowel te produceren, op te slaan als te gebruiken**
- **Minder nood aan nieuwe grondstoffen, maar beroep kunnen doen op circulaire producten**
- **De nieuwe inzichten en kennisopbouw kunnen delen met burgers, scholen, de lokale besturen. Mensen kunnen meegeven wat de voordelen en het belang is van hernieuwbare energie en de daarmee gepaard gaande technologieën.**
- **Ook professionele wereld van belang: bewijzen dat circulariteit geïntegreerd kan worden binnen de energietransitie en voldoende medestanders vinden in de professionele wereld om deze insteek verder uit te dragen**



Smart grid with DC-backbone
WP4&7

Energy
efficiency

Education and training
package
WP6



Sharing

Material
efficiency



Energy Community
WP5

WP4: Build it / realizing the innovation

- A 4.1/ Blueprint for a circular smart grid
- A4.2/ Opening markets for circular energy infrastructure
- A4.3/ Managing the regulatory sandbox
- A 4.4/ Operating the circular smart grid
- A 4.5/ Quality assurance, monitoring & evaluation

WP7: infrastructures for the circular energy system

- Investment 7.1/ PV-installation supporting structure
- Investment 7.2/ PV-installation
- Investment 7.3/ midsized wind turbine
- Investment 7.4/ batteries
- Investment 7.5/ pumped storage
- Investment 7.6/ ancillary equipment
- Investment 7.7/ Smart grid infrastructure

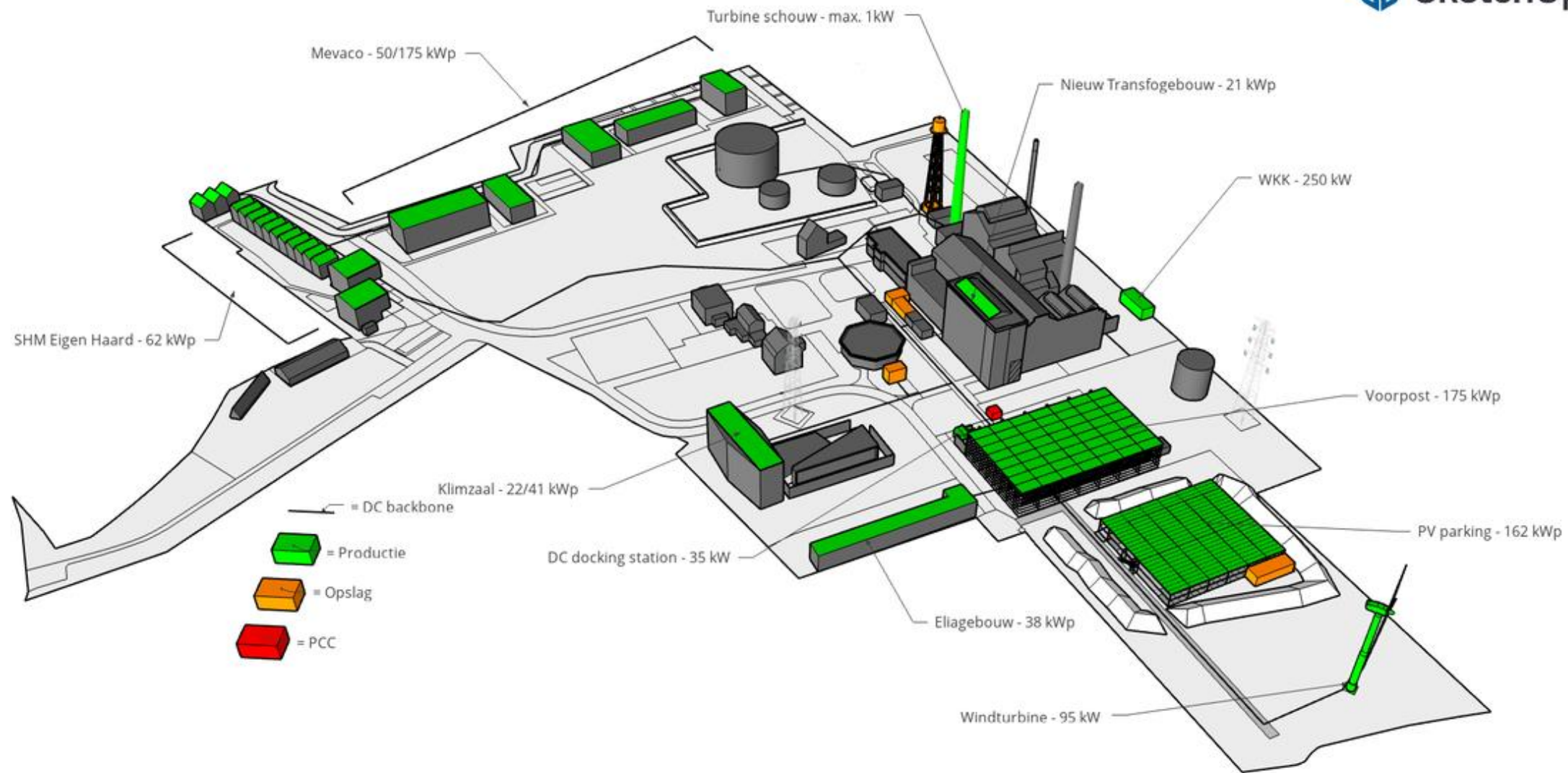
WP5: Share it / setting up a governance framework

- A5.1/ Developing a conceptual blueprint for the cooperative through a participative trajectory
- A5.2/ Developing a system blueprint for the cooperative through a participative trajectory
- A5.3/ Operating the cooperative
- A5.4/ Aligning ASTER and RE/SOURCED

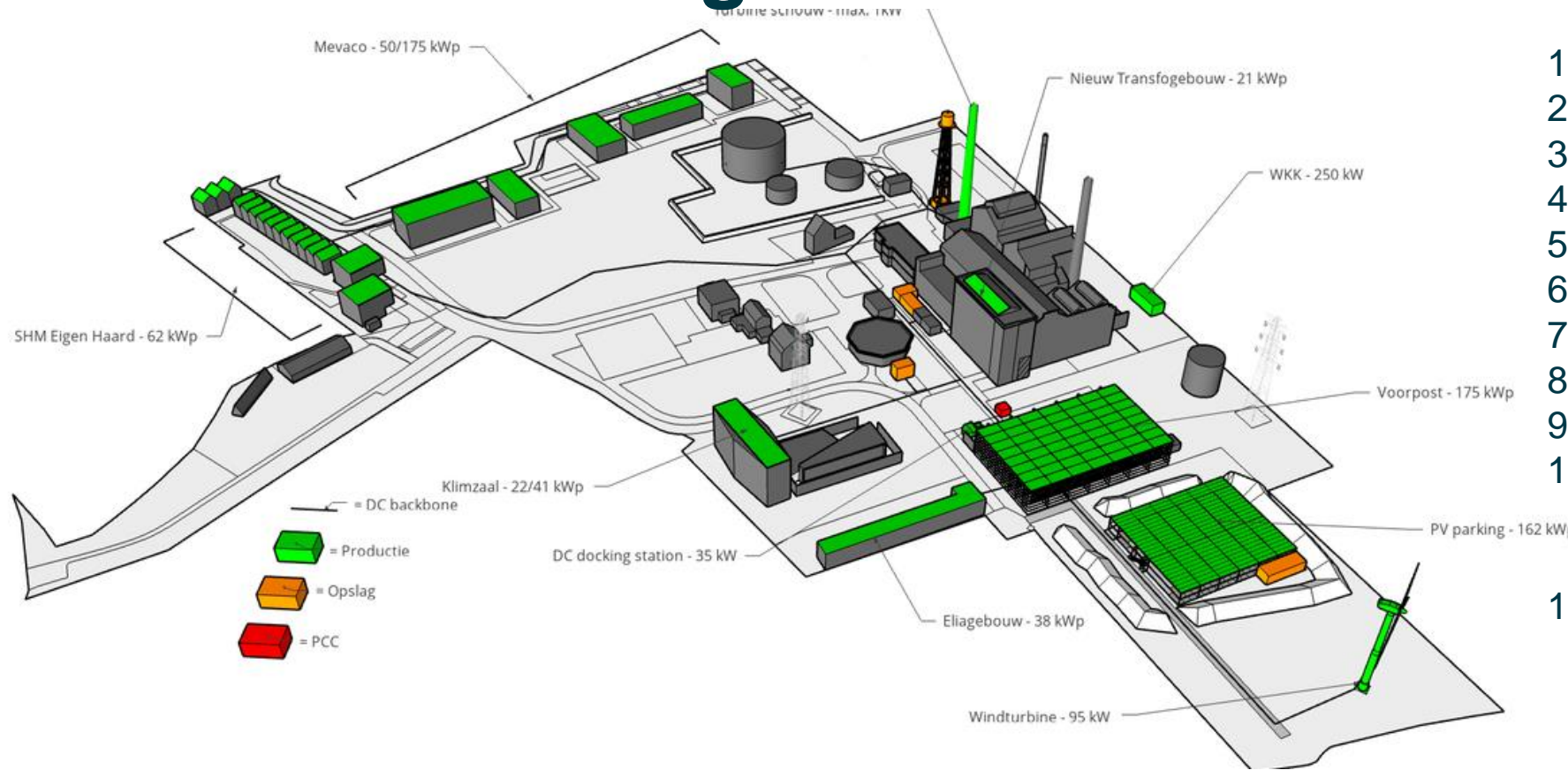
WP6: Expose it / making it known to the world

- A6.1/ Preparing the educational trajectory
- A6.2/ Realising the educational trajectory
- A6.3/ Sharing experiences & expertise with professionals

WP2: project management WP3: communication



Aanbestedingstrail



- 1) Constructie PV
- 2) PV
- 3) Middelgrote WT
- 4) Verticale WT
- 5) Batterijen
- 6) Laadpalen
- 7) Docking station
- 8) Pumped storage
- 9) Flywheel storage
- 10) EMS + sturings-
en
facturatiesysteem
- 11) DC grid + digitale
meters + DC/AC
omvormer

Aanbestedingstrail

Objectieven vanuit project mee te nemen in aanbestedingen:

- Circulaire aspecten (LCA)
- Technische aspecten (DC/DC converters bv)
- Financiële aspecten
- Onderhoud-, monitorings- en beheersaspecten

Verder rekening mee te houden:

- **Materiaalefficiëntie: inzichten VITO**
- **Oprichting energiegemeenschap: centrale beheer binnen de EG**
- **Smart micro grid met DC-backbone: consumptieprofielen en dimensionering net door UGent**

Aanbestedingstrail

Eerste bestekken:

- PV-constructie
- Pumped hydro storage
- PV
- EMS
- Batterijen
- Windturbine

Voorafgaande marktbevraging via bilaterale gesprekken

Bestekken lanceren vanaf zomer





RE/SOURCED

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