



‘CRYSTALHOOD’

SPIJKERKWARTIER

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CLIMATE RESPONSIVE PLANNING AND DESIGN



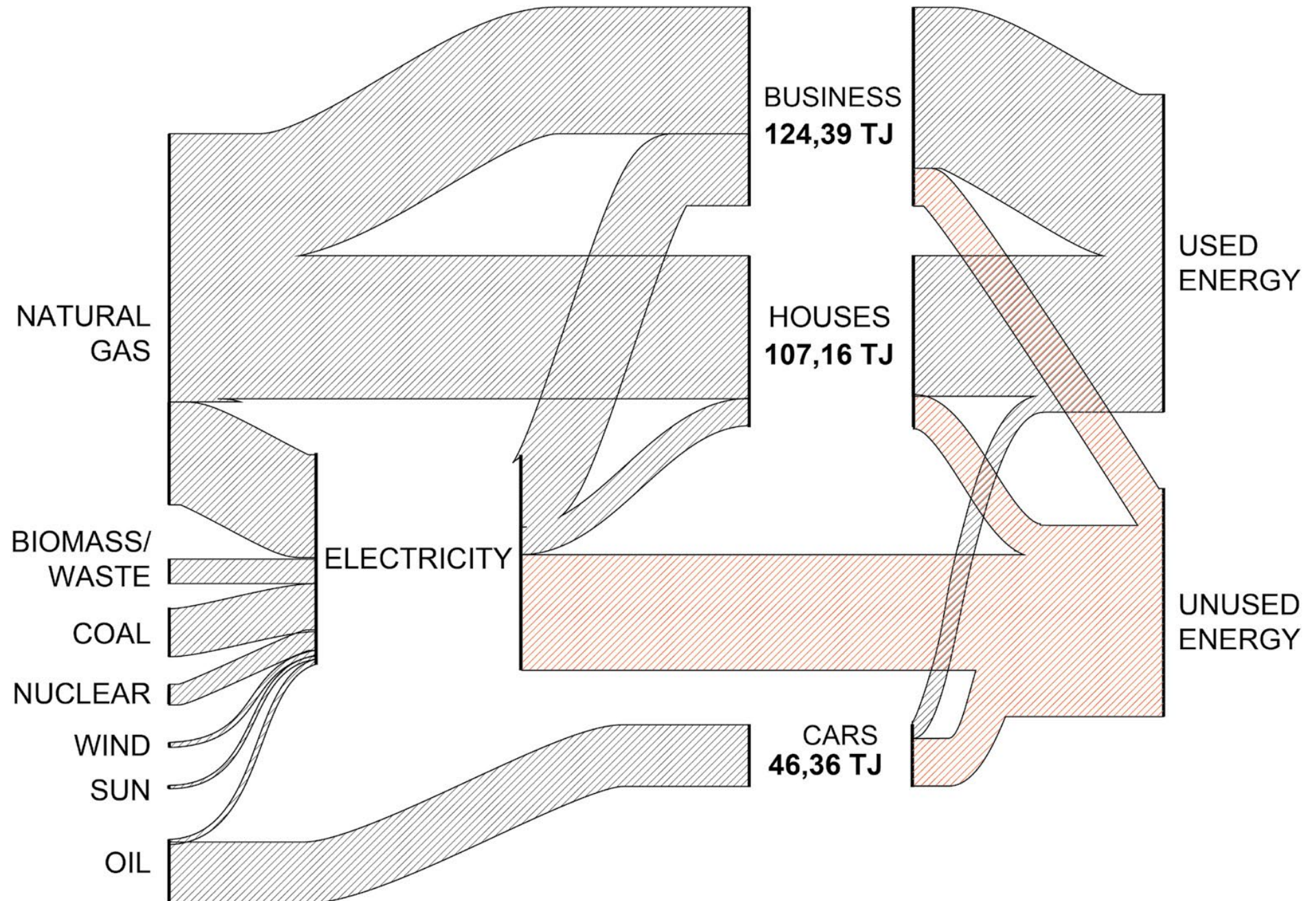


- 'HOTSPOTS'
- RUNOFF DIRECTION
- STREET FLOODINGS
- WIND DIRECTION

250M



Current energy use of Spijkerkwartier (in TJ)



PREDICTED ENERGY USE FOR SPIJKERKWARTIER IN 2050

		BUSINESS (kWh per year)	HOUSING (kWh per year)	TOTAL (kWh per year)
2016	ELECTRICITY	9.291.765,00	5.082.860,00	14.374.625,00
	GAS	25.261.357,70	24.686.834,00	49.948.191,70
	TOTAL			64.322.816,70

		BUSINESS (kWh per year)	HOUSING (kWh per year)	TOTAL (kWh per year)
2050	ELECTRICITY	12.663.270,00	3.223.690,00	15.886.960,00
	GAS	24.265.986,30	10.784.151,29	35.050.137,59
	TOTAL			50.937.097,59

GROTE SCHAAL

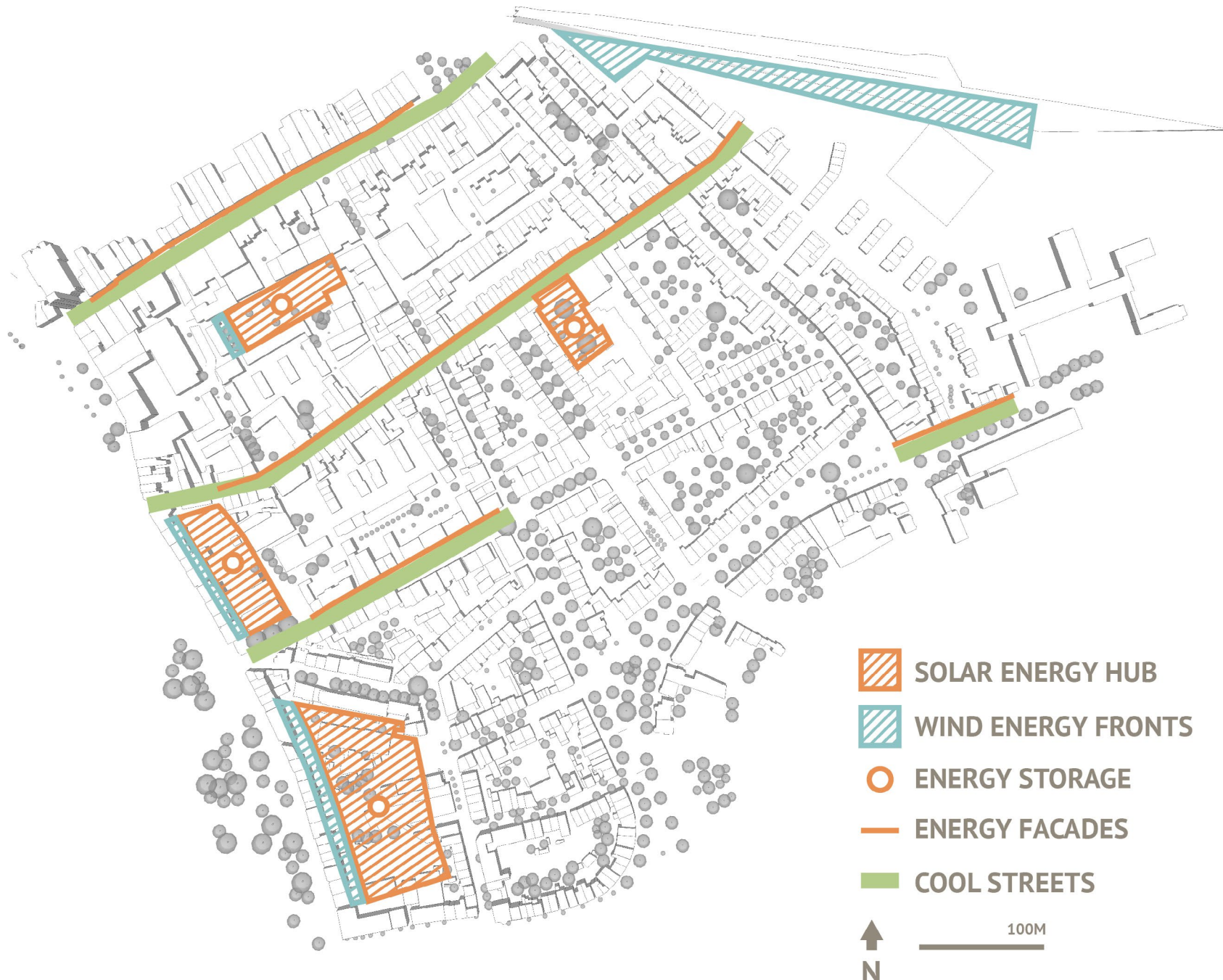
- GROTE, OPEN PLEKKEN:
PARKEERPLAATSEN
- GROTE INPASSING
- PRODUCTIE OP GROTE SCHAAL
- SPECIFIEKE FUNCTIEN

SOLAR ENERGY HUBS
WIND ENERGY FRONTS
ENERGY STORAGE

KLEINE SCHAAL

- KLEINE, SMALLE PLEKKEN:
STRATEN
- KLEINE INPASSINGEN
- PRODUCTIE OP KLEINE SCHAAL
- DAGELIJKS GEBRUIK

ENERGY FACADES
COOL STREETS



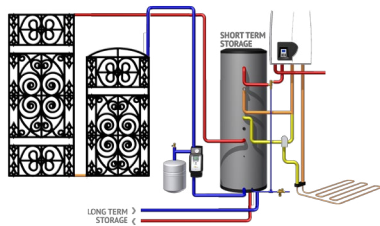
STRATEN



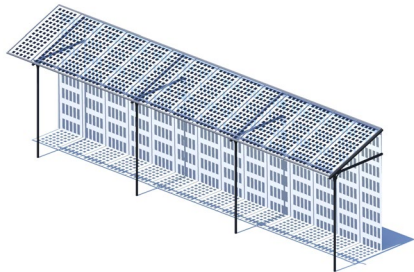
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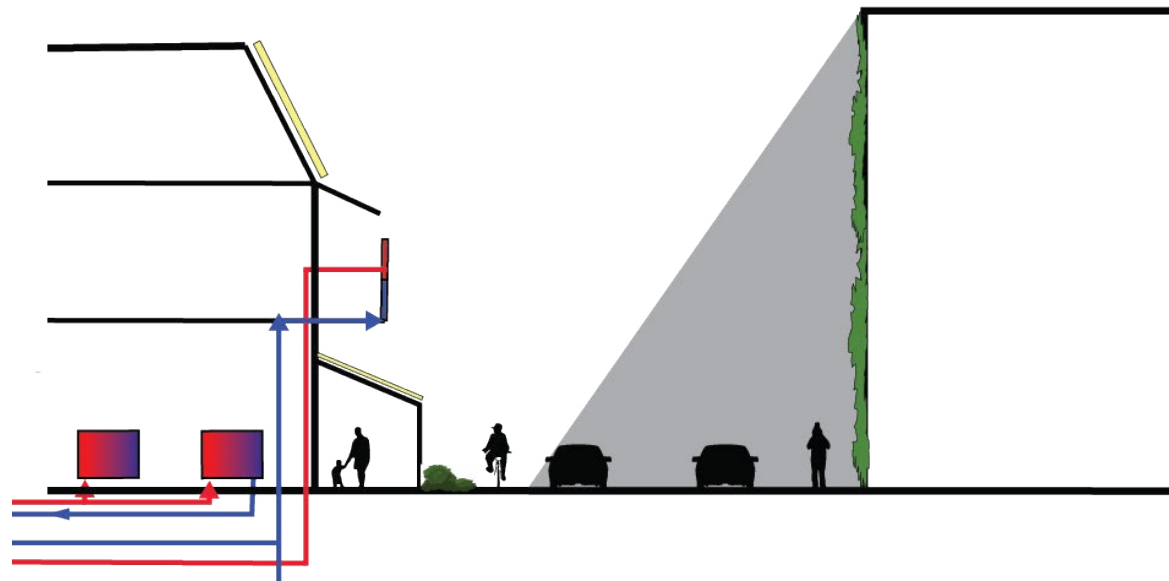
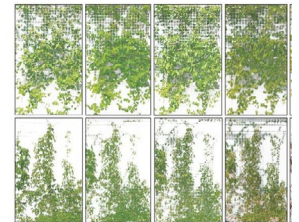
SOLAR BOILER SHUTTERS

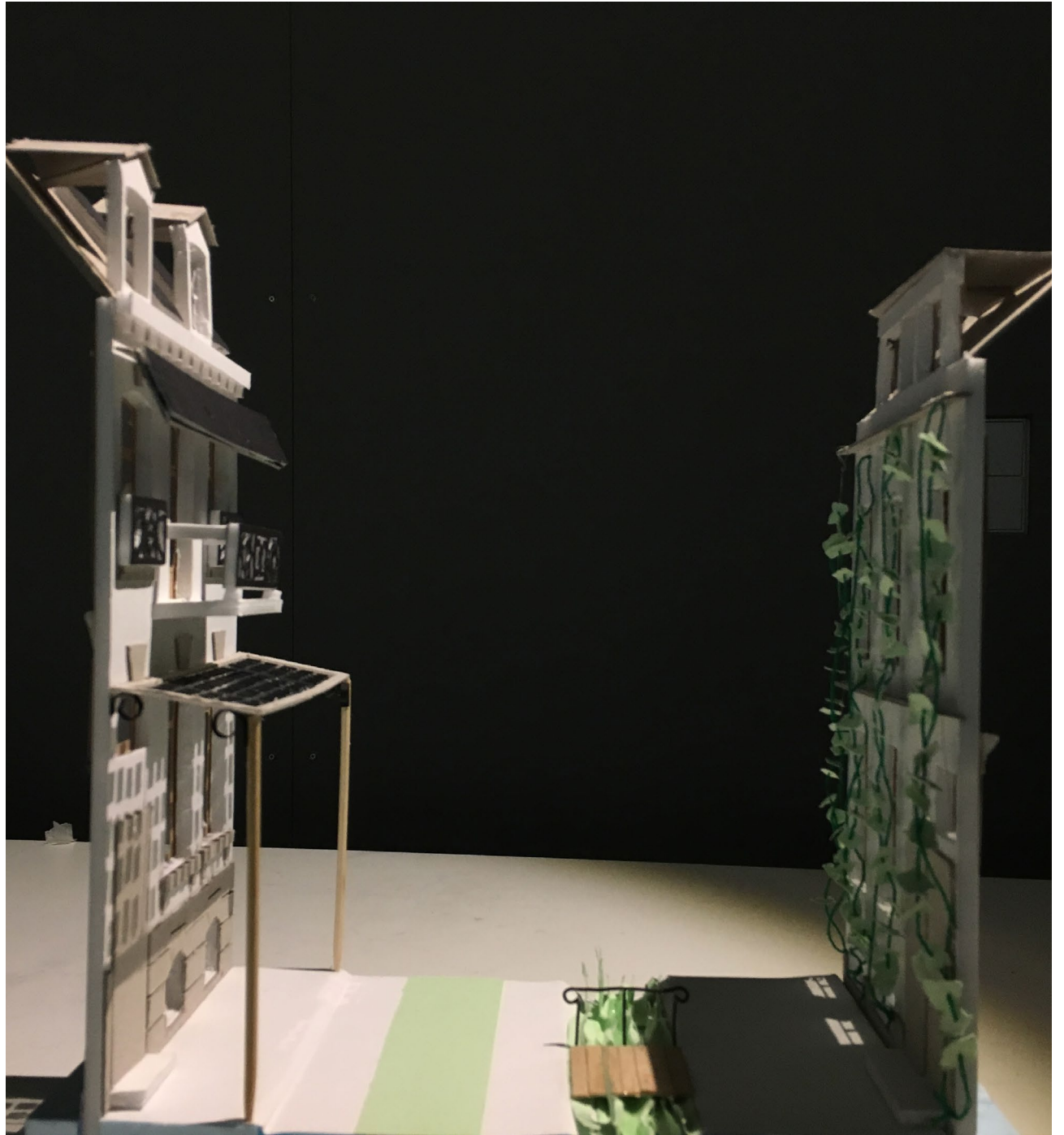


PV PANEL AWNINGS



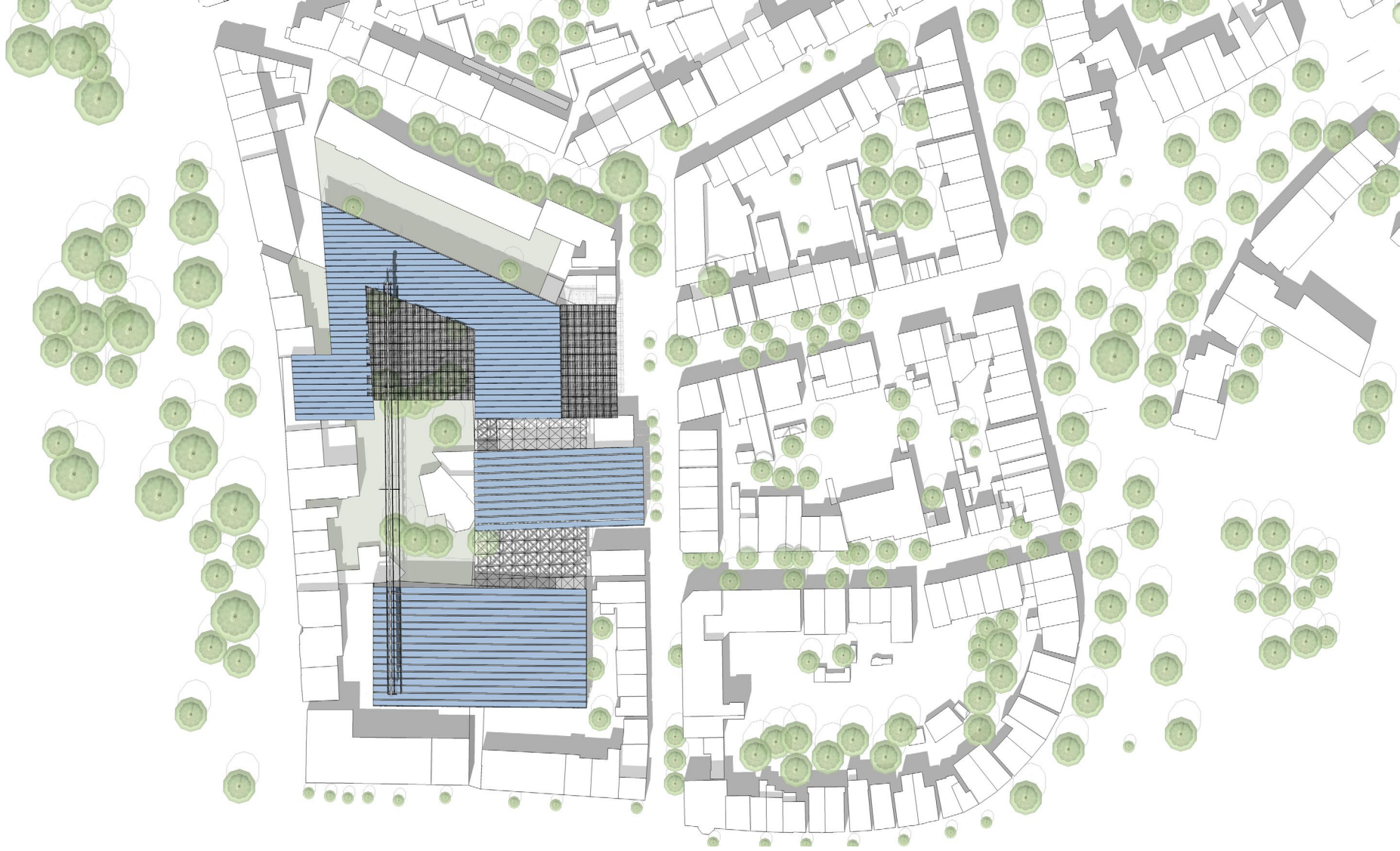
GREEN FACADES/
VERTICAL GARDENS







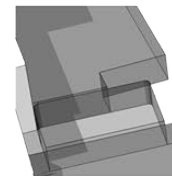




HUBS

GREENHOUSE HUB DESIGN CONCEPT

Existing condition

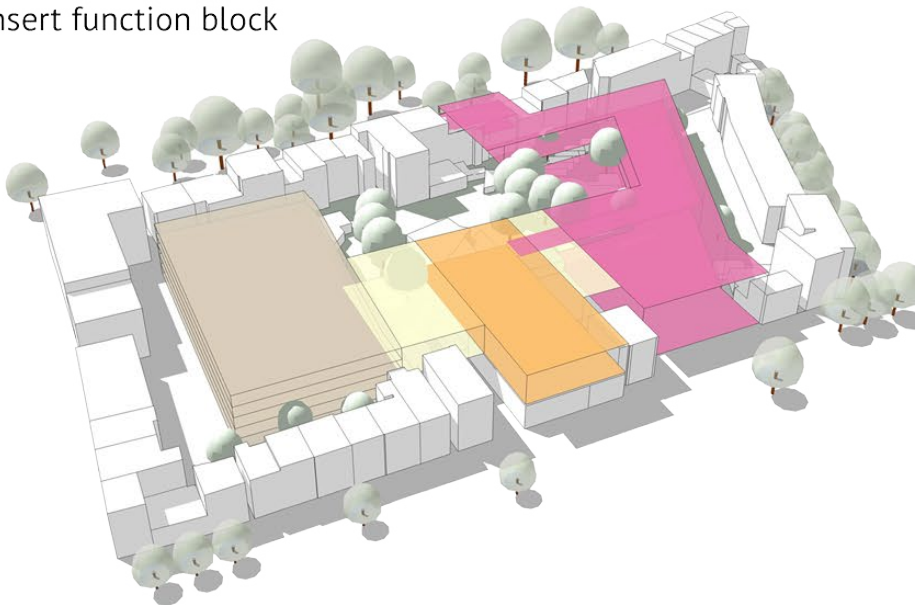


integrate existing storage and parking function into the hub

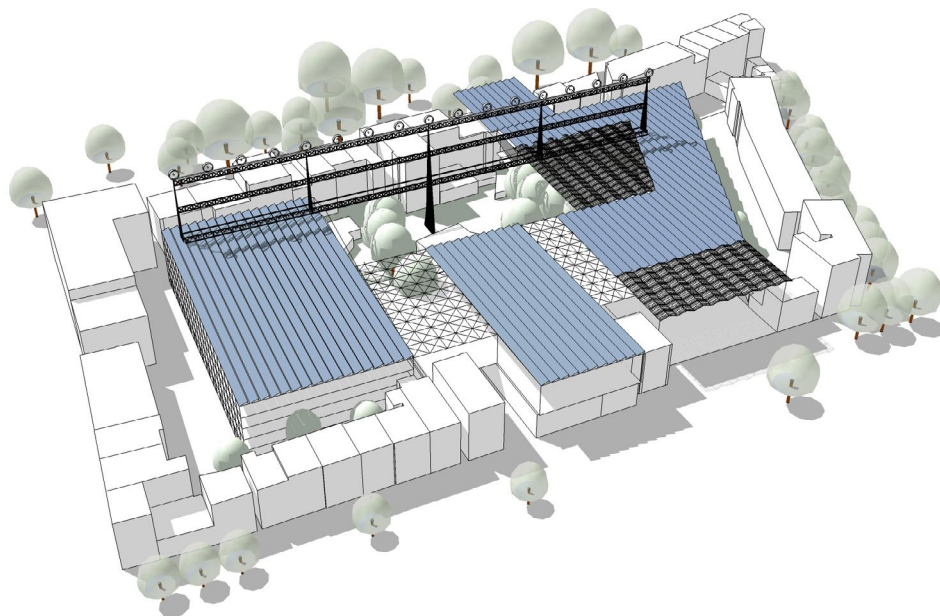


reserve & transform current greenery into community gardens

Insert function block

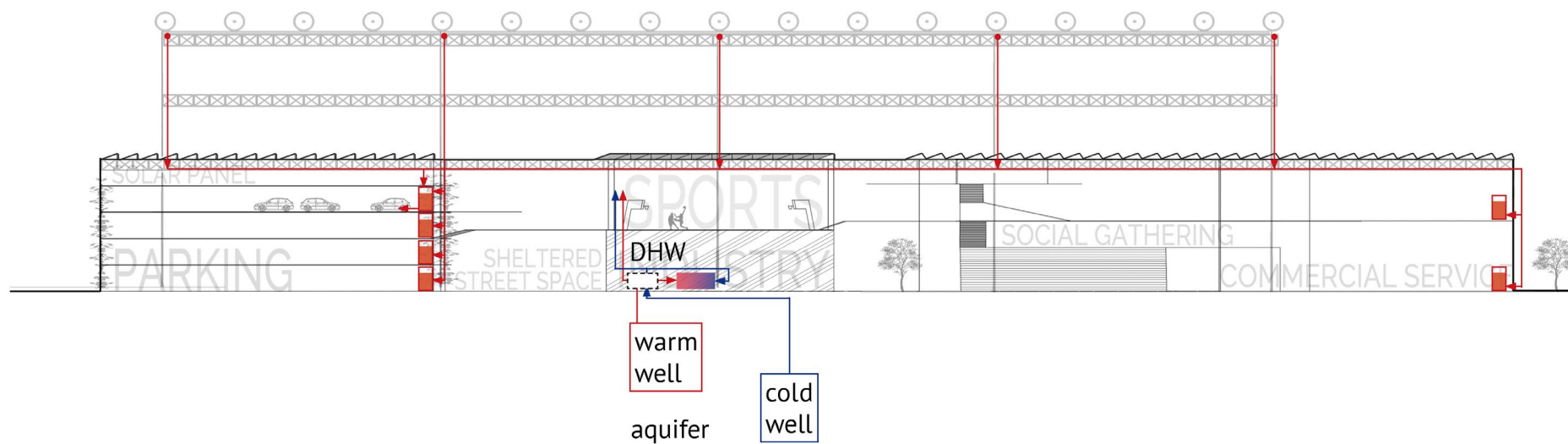


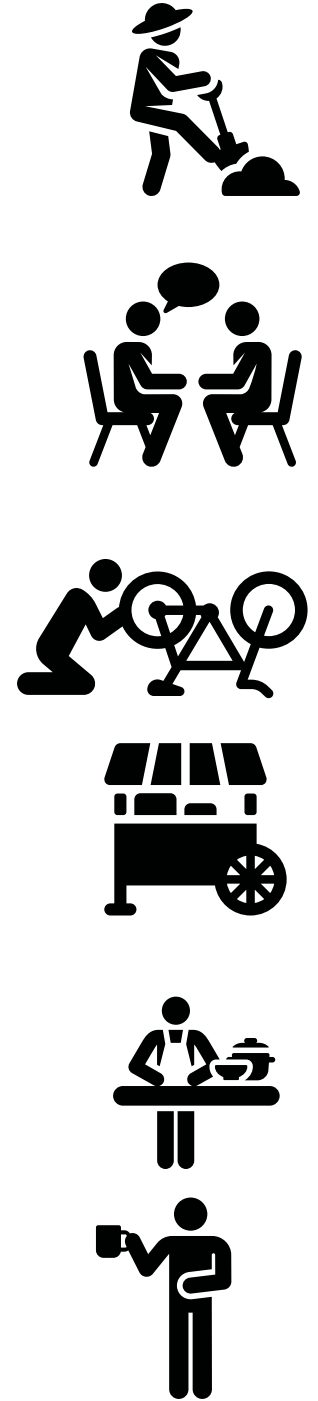
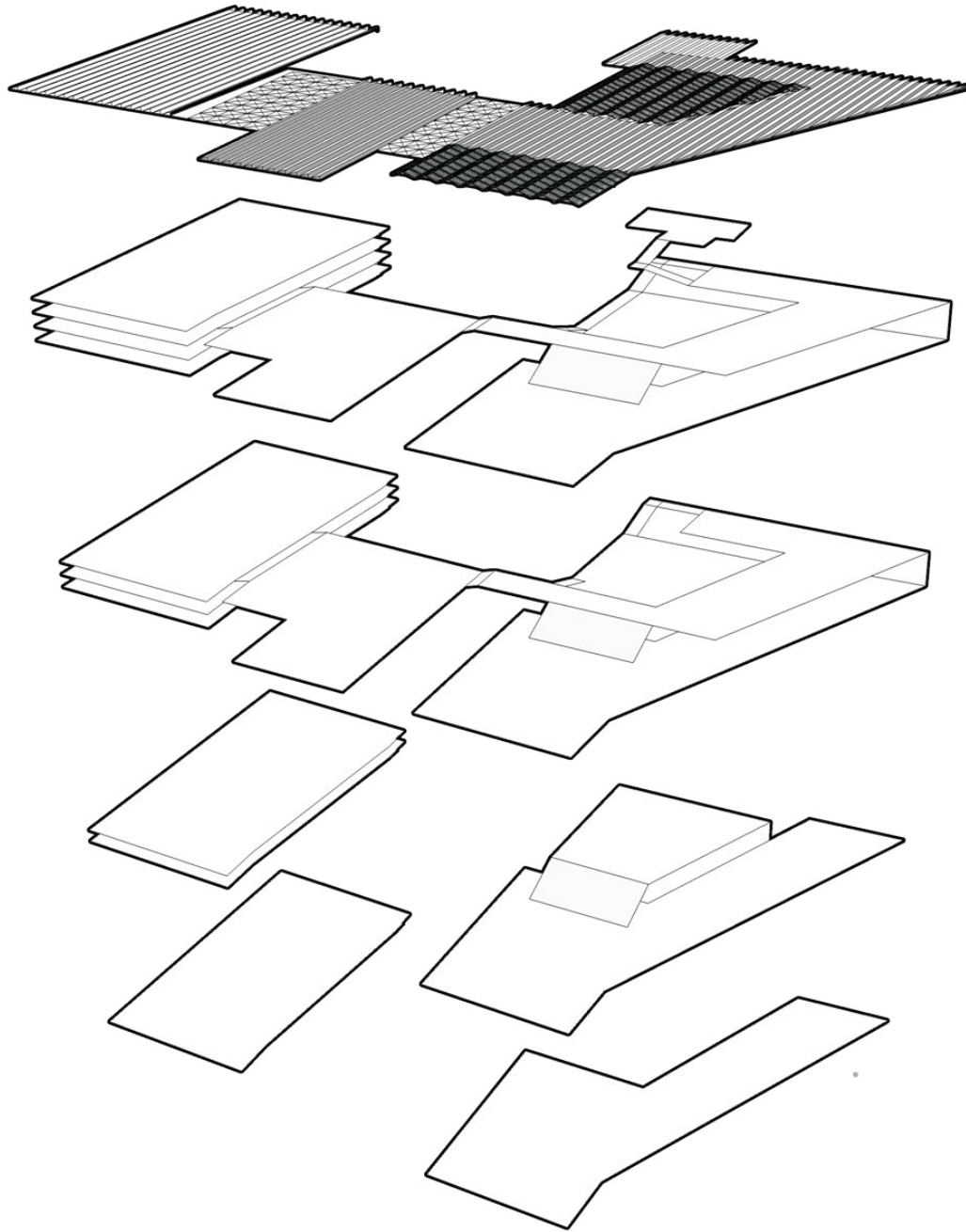
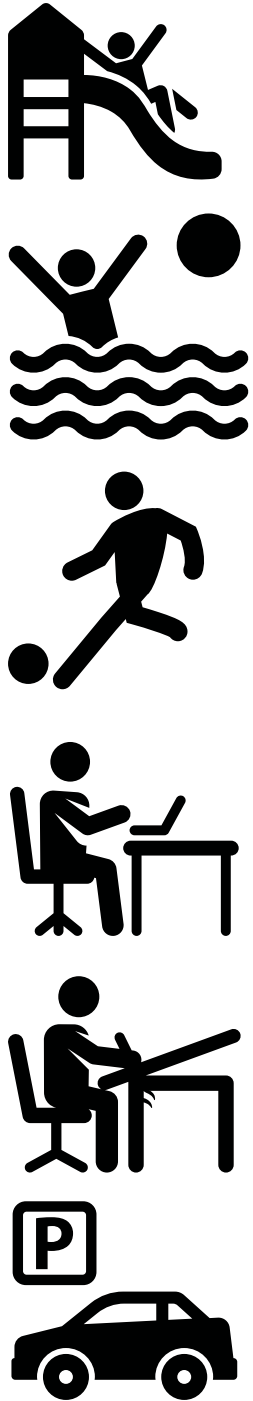
- recreation & commercial service
- sports
- connection
- parking & energy storage

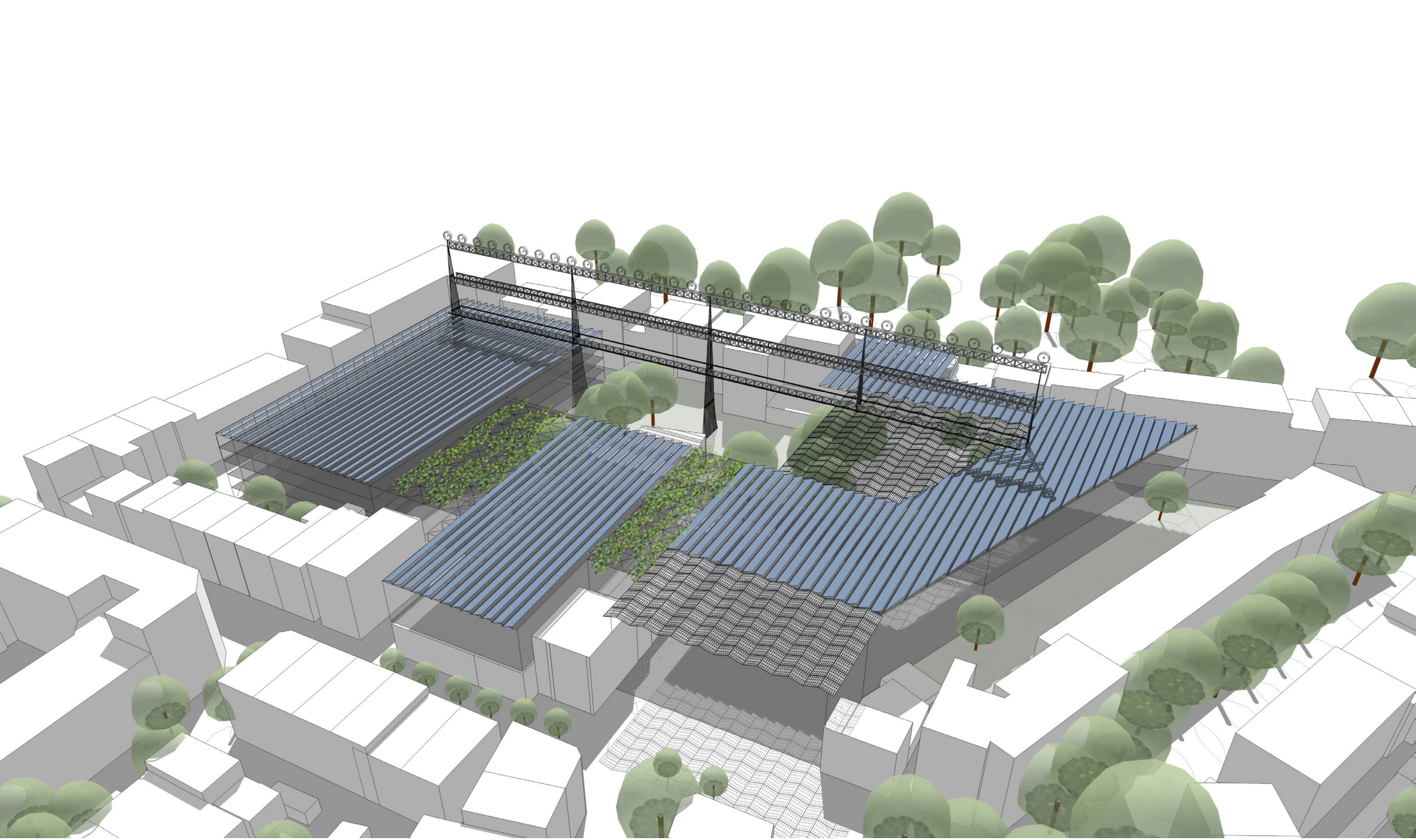


TOPPED OFF WITH AN ENERGY
PRODUCTION AND STORAGE
SYSTEM:

CREATING AN INTEGRATED
MULTI-LEVEL AND FUNCTION
STRUCTURE







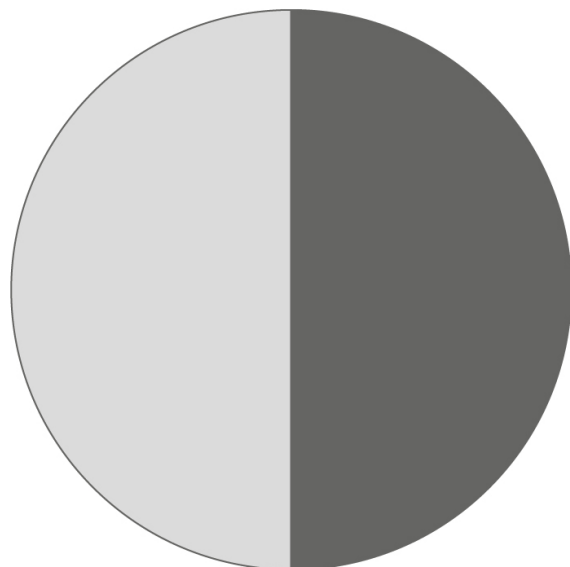
ENERGY HUB #1



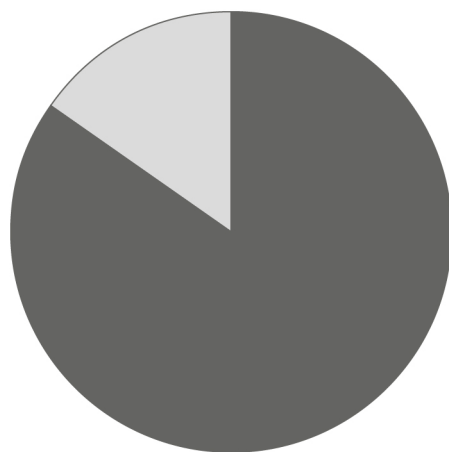
VANDAAG
I.P.V. FRIET
Violet Almus kookt
Maaltijdsop met een
6.50
4.50
Vanaf 18.00



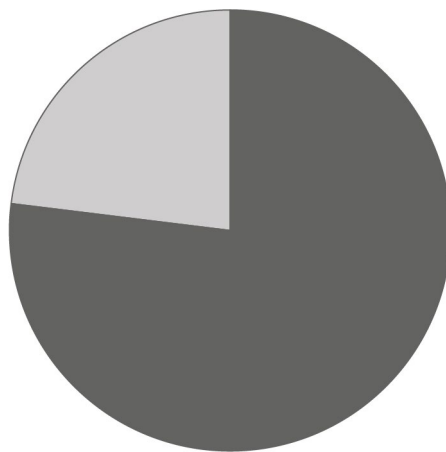
50%



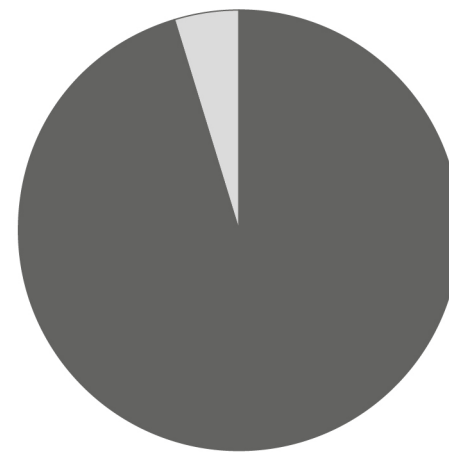
OF TOTAL ENERGY
DEMAND IN 2050
COVERED
(BOTH HEAT AND ELECTRICITY)



PV panels 15%



wind 29%



boilers 5%

LAATSTE ADVIES

- DENK ZOWEL IN GROTE EN KLEINE SCHAAL
- DENK LOKAAL (ZOWEL FUNCTIE ALS CONTEXT)
- INTEGREER MET IDENTITEIT EN LEEFBAARHEID