"Turnova project" in Turnhout (Belgium)
TURNNOVA, TURNHOUT
Project surface: 150,000 m²
Developers: Heeren Groep, City of Turnhout

- shopping center
- four-star hotel
- urban art academy
- various housing (9 building structures offering over 250 homes ranging from social housing to luxury apartments)
- underground parking for cars and bikes
- cozy cafés
- restaurants
- terraces
- movie theatre
- fitness- & wellness center
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SUSTAINABLE GEOTHERMAL ENERGY
AT THE HEART OF TURNOVA

- Geothermal ATES system
  - 3 source pairs
  - 100-130m depth
- Decentralized water-water heat pumps
- Passive cooling
- No fossil fuels
SUSTAINABLE ENERGY LOOP AT THE HEART OF TURNOVA

- 3-pipe system
- Heat recovery between functions
- Low transport heat losses
- Decentralized heat pumps and heat exchangers

ATES 3 SOURCE PAIRS

LOOP 3-PIPE

5 - 11 - 18°C
HOUSING TOWER
Local heat pumps
limit heat losses
SHOPS CONNECTION
Local heat pumps limit heat losses
IN SUMMARY

- Low temperature source and sink distribution, and direct heat transfer in the community
- Simultaneous heating and cooling
- Thanks to a mix of building typologies
- Enabling a max R²ES share
- Avoiding on site fossil fuel combustion and CO2 emissions
Thank You for your attention!

Kurt Corvers
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