

CONNECTING AN ALL-ELECTRIC WORLD

Sello – A shopping center as a virtual power plant

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Not just a shopping center

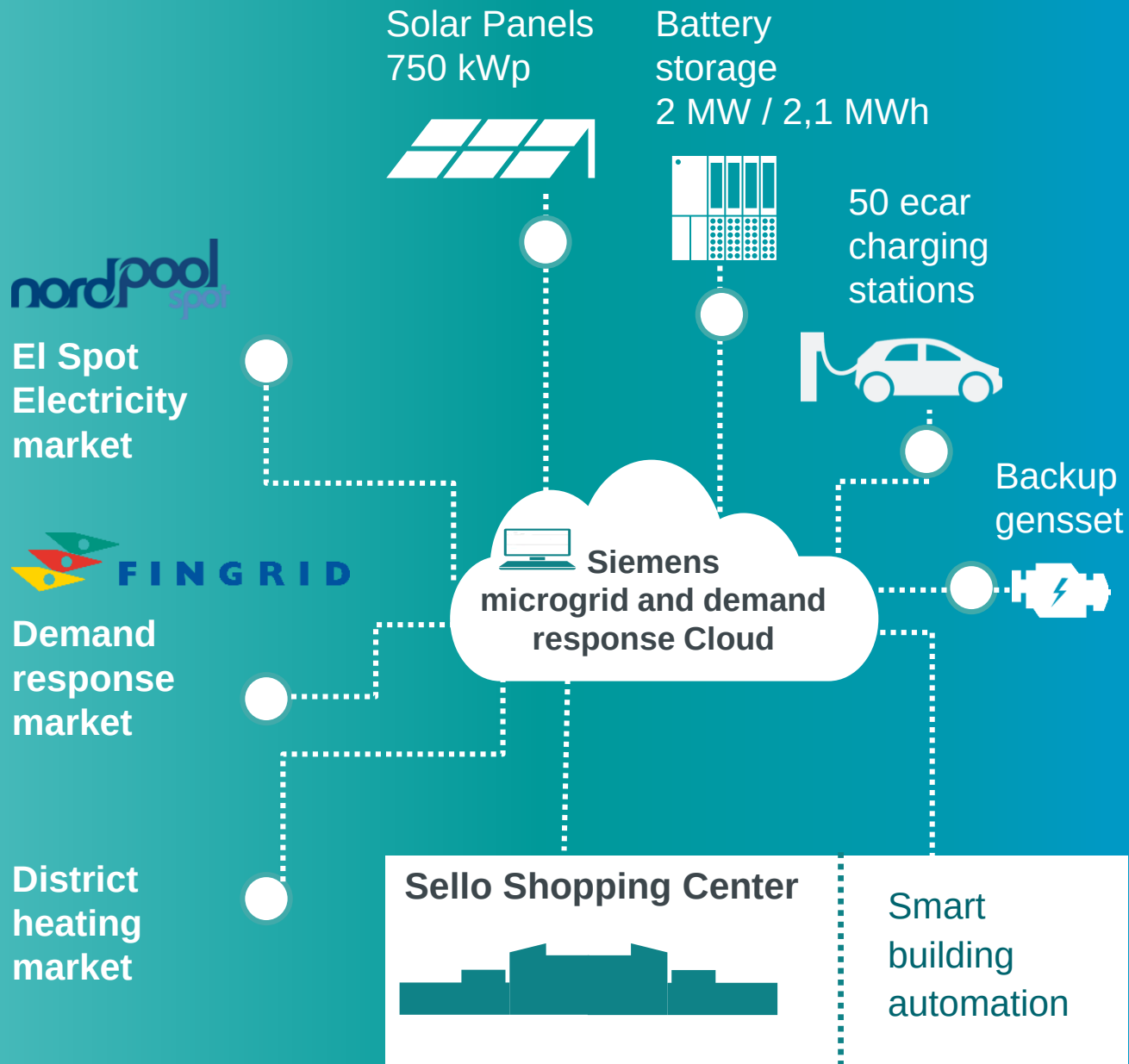
Sello is a community

The largest shopping center in Finland
100.000 m² of shopping space
23 million visitors per year



Services

- 170 Shops
 - Medical center, eye clinic
 - Library
 - Event venue Sello hall
 - Entertainment: movie theatre, bowling center
 - Hotel Glo
-



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Battery SieStorage (2 MW, 2,1 MWh)

LED lighting dali control (3000 pcs)

Fans (0-848 kW scale)

Ground heater electric (0-390 kW scale)

Ground heater pump (0-35 kW scale)

Generators (1000 kW)

Solar power (0-750 kW scale)

EV charging (0-300 kW scale)

Next steps,

Cooling 3 MW

Other assets 1 MW



Earnings

From the reserve markets €483.000 /a
From the solar system €57.500 /a

Savings

Energy efficiency €78.200 /a
Maintenance costs €40.000 €/a
Reduced maintenance back log
investments €650.000

Environment

Own energy production 640 MWh/a
Emission reduction 281 t/co²/a



City of Lappeeranta

First city in the world to benefit from the service
9 buildings, 50 more as an option
Reduction of environmental impact

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From Sello to a virtual power plant

- The new company established
- Siemens stake: 100 %
- To increase the benefits of increasingly decentralized energy systems.
- Intelligently balanced electrical loads from buildings
- €8,4 million funding from Ministry of Economic Affairs and Employment of Finland for first movers
- Value creation for a sustainable society



VR Group

Helsinki main railway station, Pieksämäki depo, Oulu depo

Responsibility
Profitability increase





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The world needs new approaches.
We create environments that care.

Contact



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Thank you.