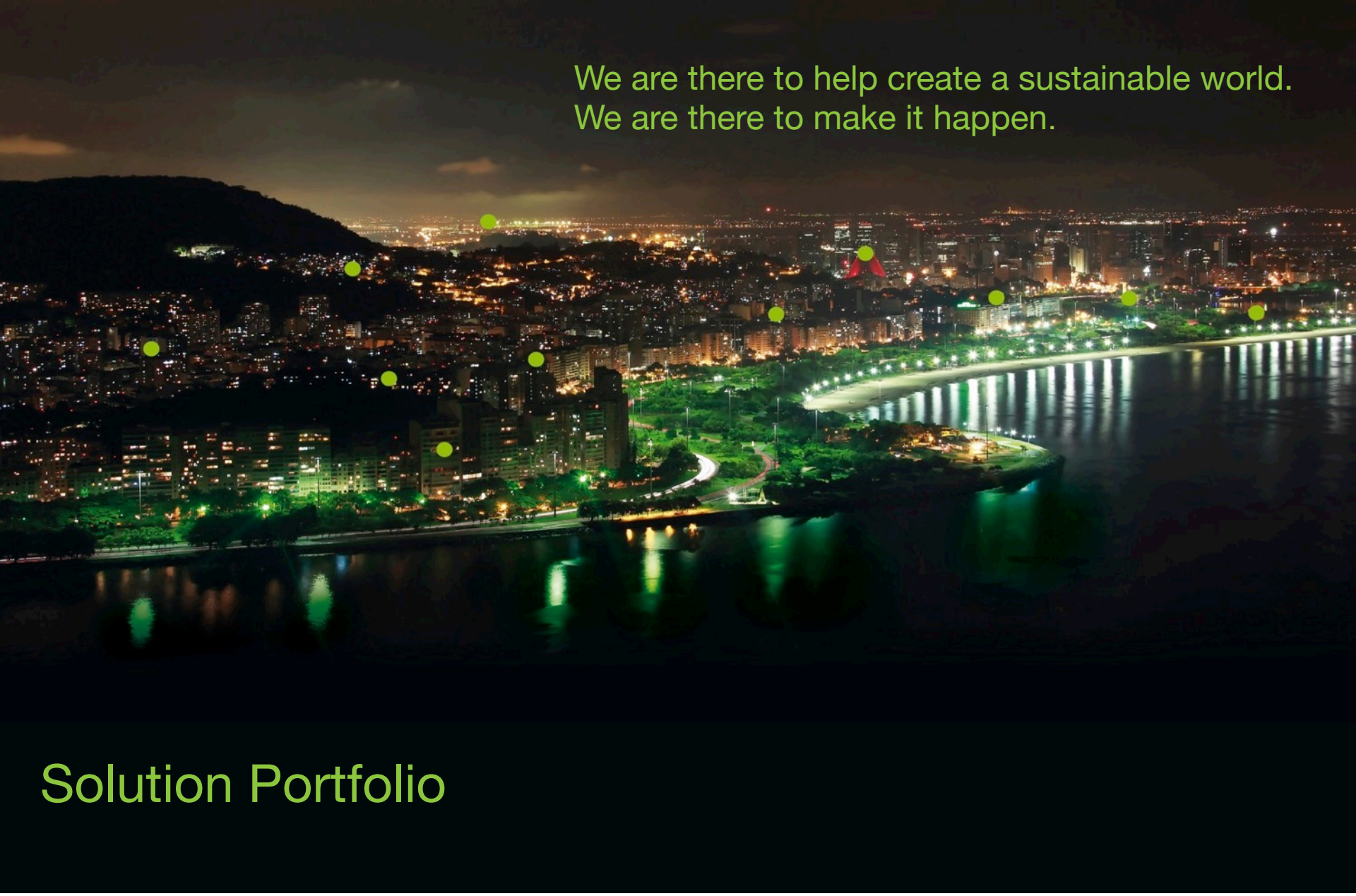


Solution Portfolio

There Corporation
Ilkka Palola & Sami Sailo

there.

There Corporation Ltd

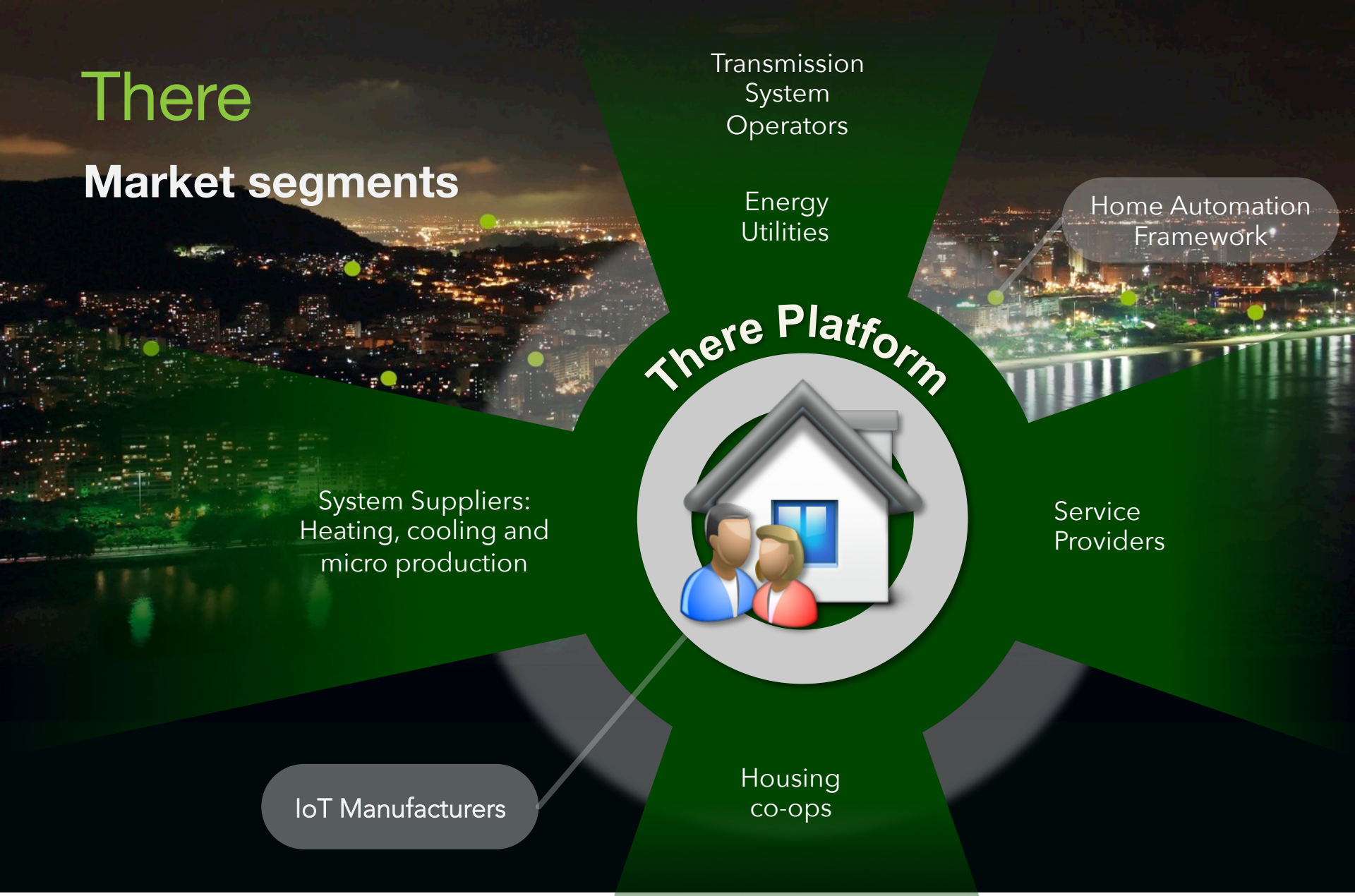
There Corporation is a smart energy company. We provide residential demand management and energy efficiency solutions for utilities, system suppliers and housing co-ops.

Our DSM solution connects utilities and consumers into a common energy market and is also a platform for 3rd party service providers.

there.

There

Market segments



there.

Arenas

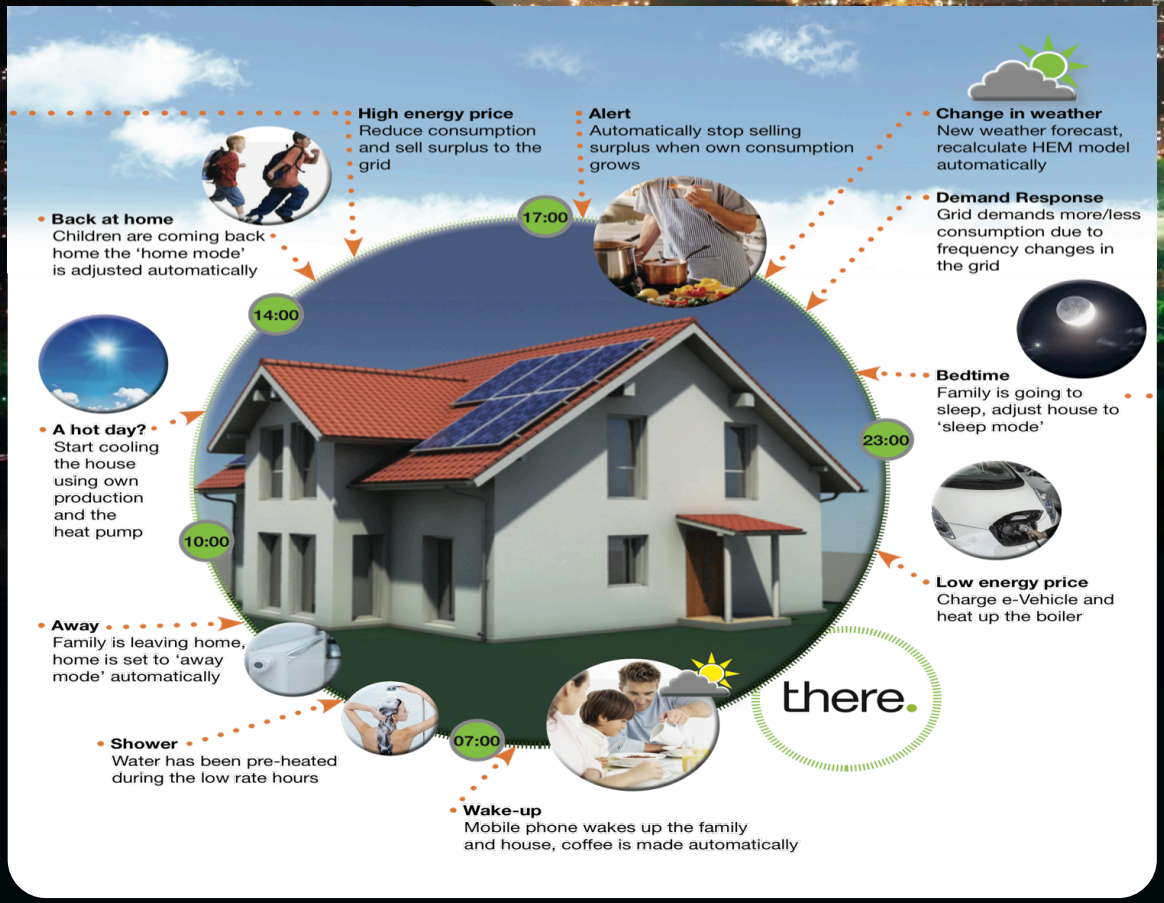
Where are active?

- Home energy and demand management solutions
  - Home cooling and heating management
  - Intelligent algorithms
  - Aggregation and analysis of IoT data
  - Micro production management
  - Global home automation frameworks (e.g. Apple HomeKit)
- Solutions for demand management aggregators
  - Consumer energy load management
  - Supporting energy balancing markets
- Segments:
  - Detached houses, row houses: 1) Electric and 2) Dual Fuel heating, 3) District Heating, 5) Photovoltaic
  - 4) Housing co-ops: District heating
- Regions:
  - Following smart metering/balance Settlement and demand response expansion
  - Finland, Sweden, Norway, Poland, Selected European countries

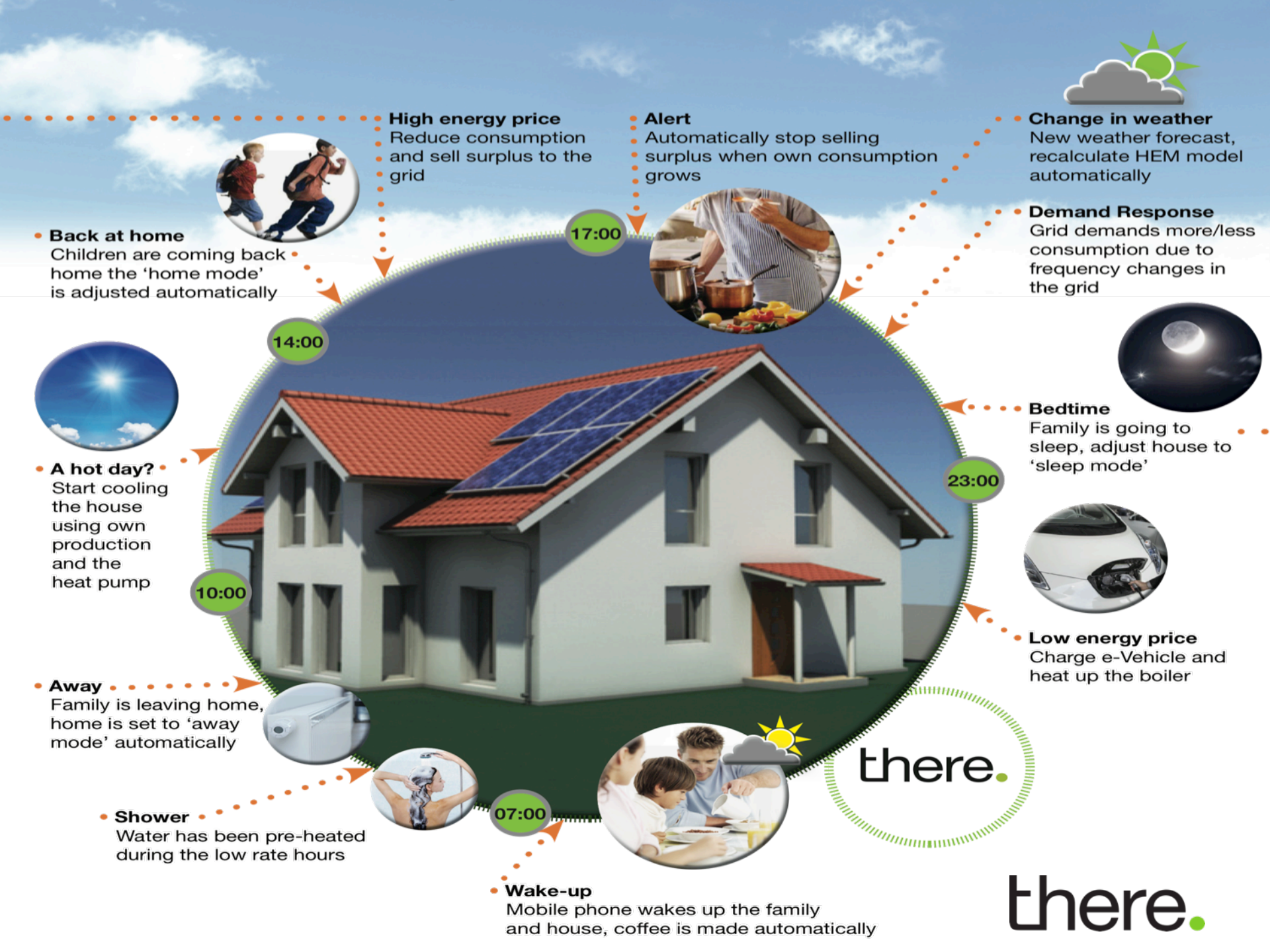
there.

There Solutions

Customer view on energy

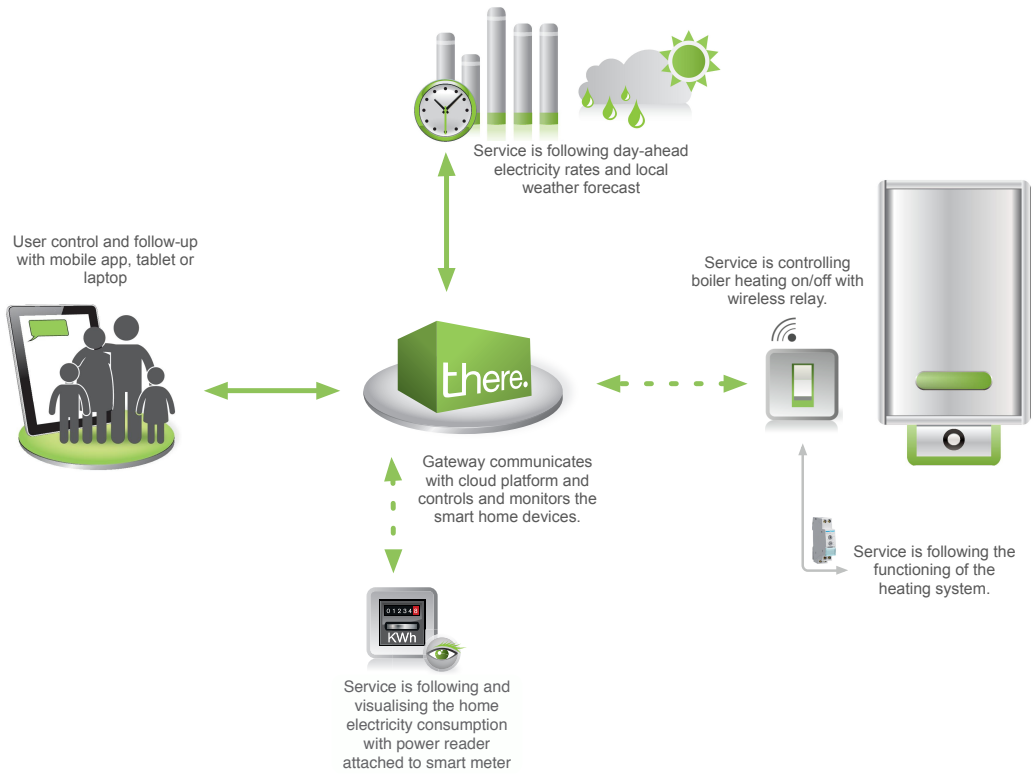


there.


High energy price
Reduce consumption and sell surplus to the grid
Alert
Automatically stop selling surplus when own consumption grows
Change in weather
New weather forecast, recalculate HEM model automatically
Back at home
Children are coming back home the 'home mode' is adjusted automatically
Demand Response
Grid demands more/less consumption due to frequency changes in the grid
17:00
14:00
Bedtime
Family is going to sleep, adjust house to 'sleep mode'
A hot day?
Start cooling the house using own production and the heat pump
23:00
10:00
Low energy price
Charge e-Vehicle and heat up the boiler
Away
Family is leaving home, home is set to 'away mode' automatically
there.
Shower
Water has been pre-heated during the low rate hours
07:00
Wake-up
Mobile phone wakes up the family and house, coffee is made automatically
there.

There Solutions

Smart Boiler Control



User Benefits

- 20% savings in heating costs
- Average savings 400 € / year
- Fully automated heating
- Fast Turn-key installation

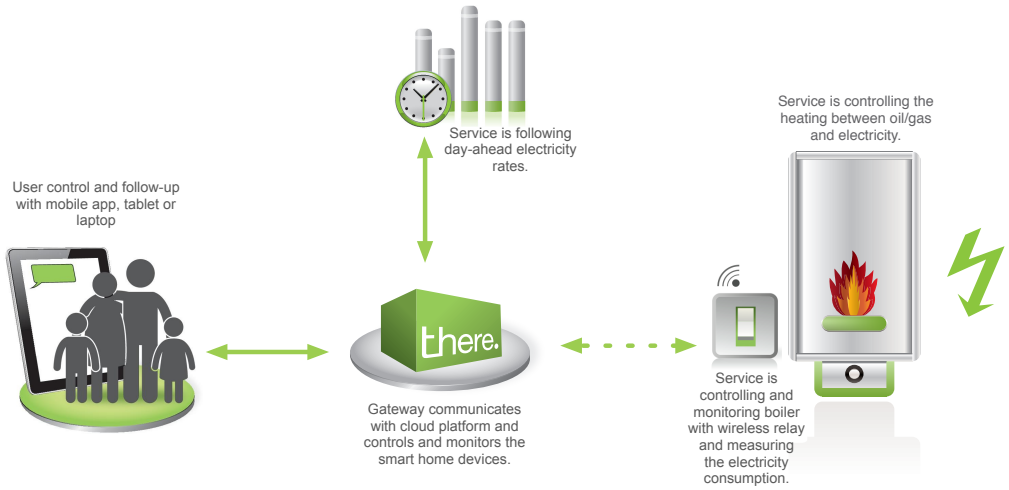
Functionality

- Calculates the house heating need from weather forecast and house parameters
- Selects cheapest hours for heating
- Visualizes solution functionality in user interface
- Sends notifications

there.

There Solutions

Dual Fuel



User Benefits

- 20% savings in heating costs
- Remote access
- Fast turn-key installation

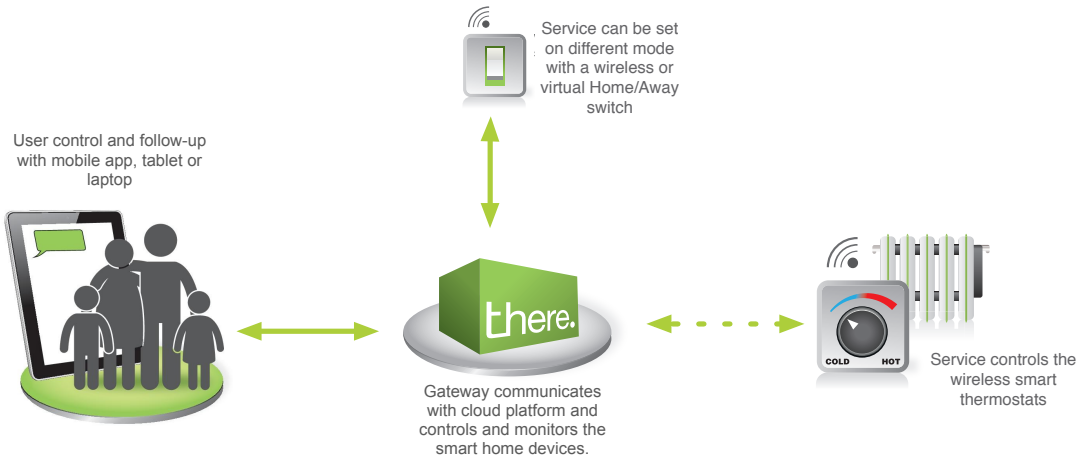
Functionality

- Selects between oil and electricity heating automatically
- Monitors devices
- Visualizes solution functionality and savings in user interface
- Sends notifications

there.

There Solutions

Comfort



User Benefits

- Improved living comfort
- 15-40% savings in heating costs
- Peace of mind when away

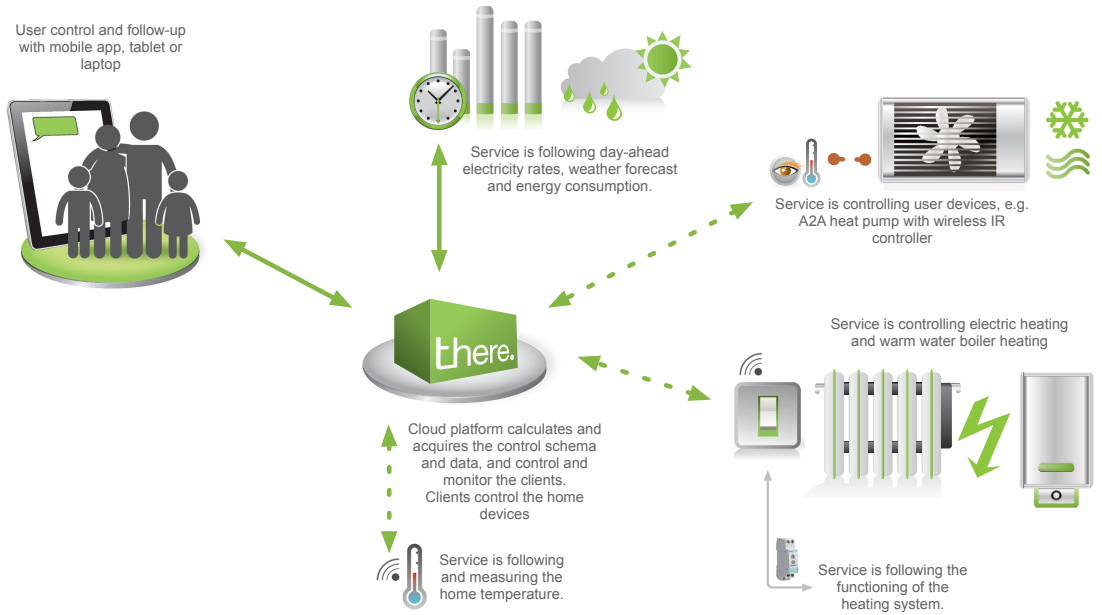
Functionality

- Heating and home appliance control with automated services and tasks
- Personal user interface
- Remote access
- Notifications

there.

There Solutions

Electric Heating



User Benefits

- 15-20% savings in heating costs.
- Improved heating comfort

Functionality

- Automated heating control utilizing weather forecast and hourly rated electricity plan
- User predefined comfort zones
- Heating modes
- Personal user interface
- Remote access
- Notifications

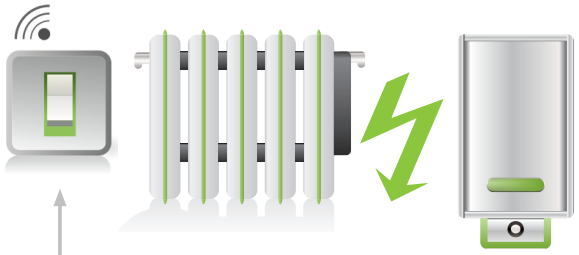
there.

User control and follow-up with mobile app, tablet or laptop

Service is following day-ahead electricity rates, weather forecast and energy consumption.

Service is controlling user devices, e.g. A2A heat pump with wireless IR controller

Service is controlling electric heating and warm water boiler heating



Cloud platform calculates and acquires the control schema and data, and control and monitor the clients. Clients control the home devices

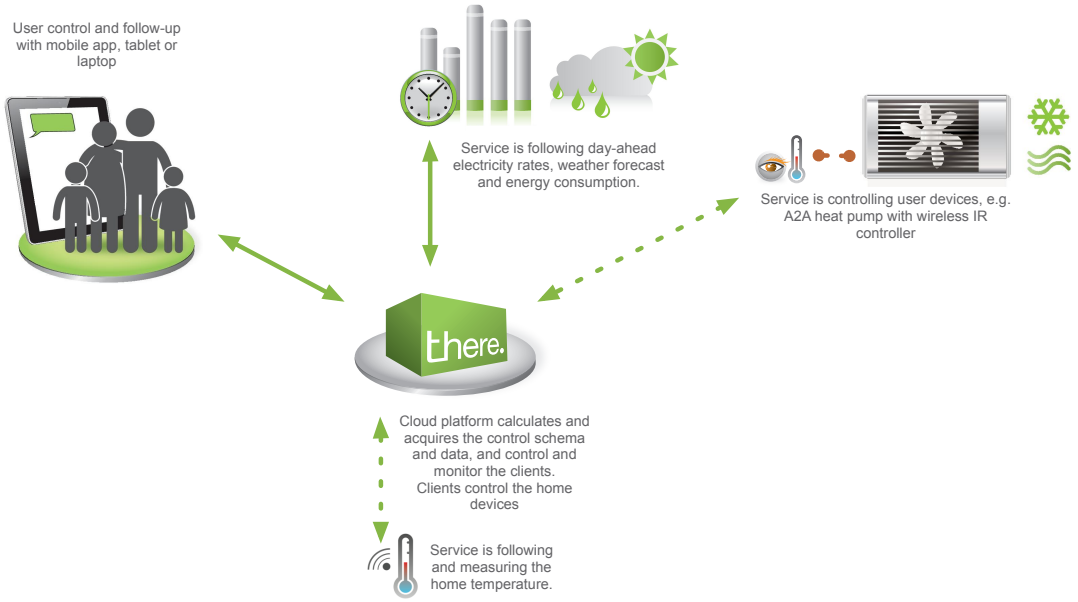
Service is following and measuring the home temperature.

Service is following the functioning of the heating system.

there.

There Solutions

Air-to-air heat pump



User Benefits

- Energy cost savings
- Remote access and control
- Improved comfort

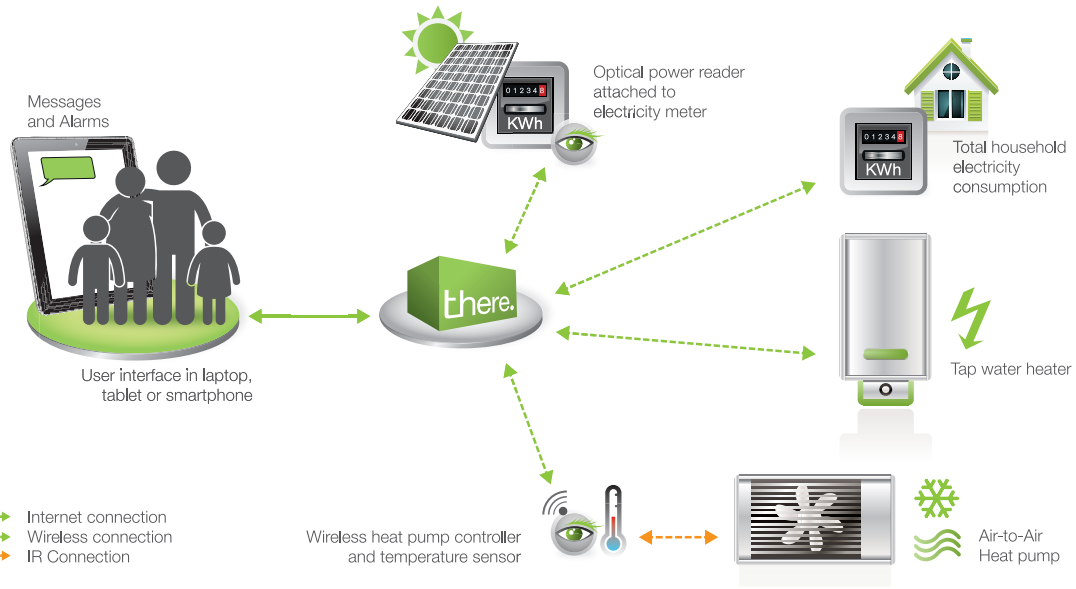
Functionality

- Automated control tasks for heat pump / AC
- Remote access and control to heat pump
- Combine with other applications, e.g. photovoltaics.
- Notifications

there.

There Solutions

Photovoltaics



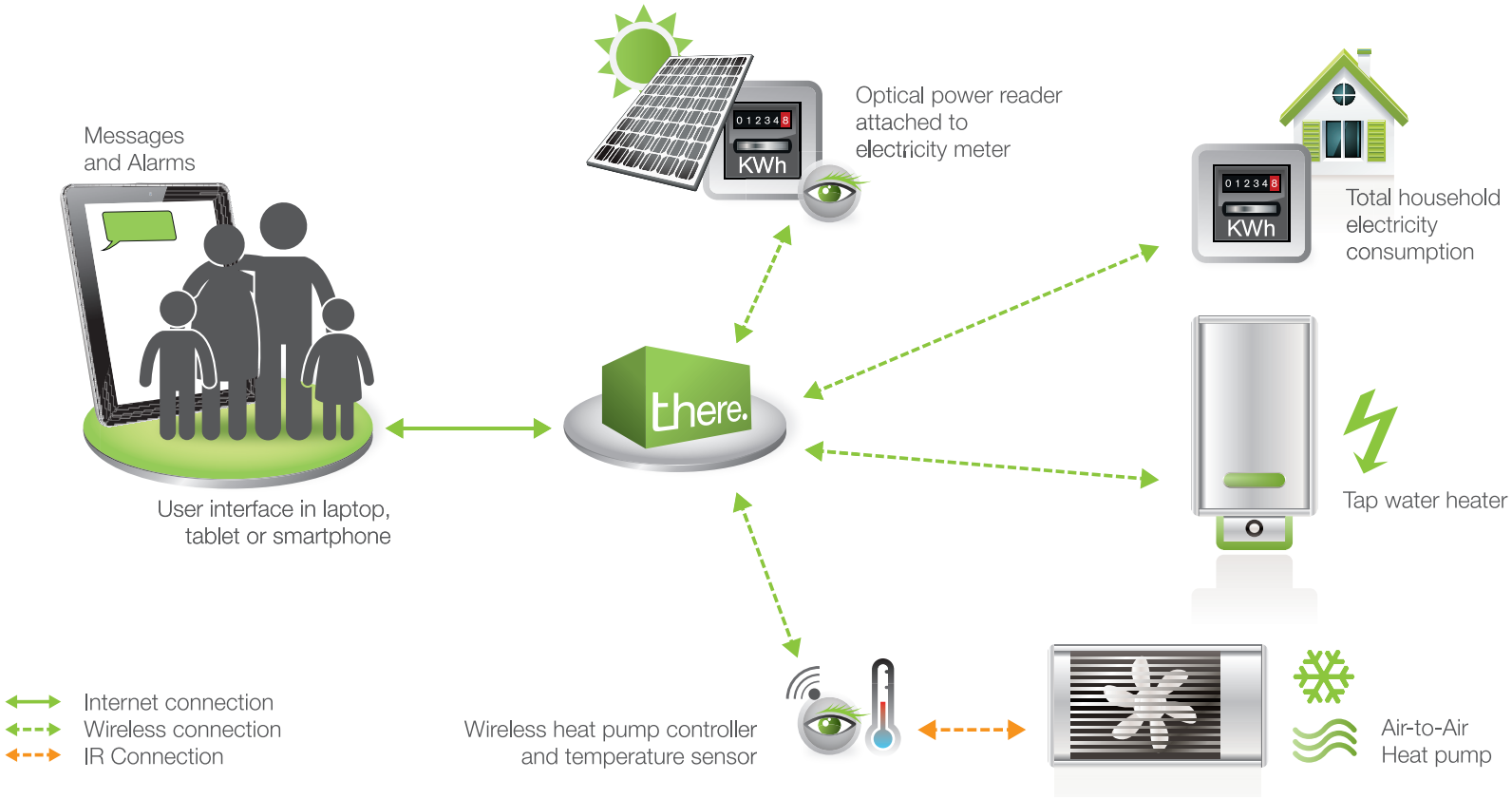
User Benefits

- Electricity cost savings
- Remote access
- Fast Turn-key installation

Functionality

- Controls the household appliances automatically utilizing balance data
- Monitors PV production
- Visualizes production, consumption and balance
- Enables online control of appliances.
- Notifications

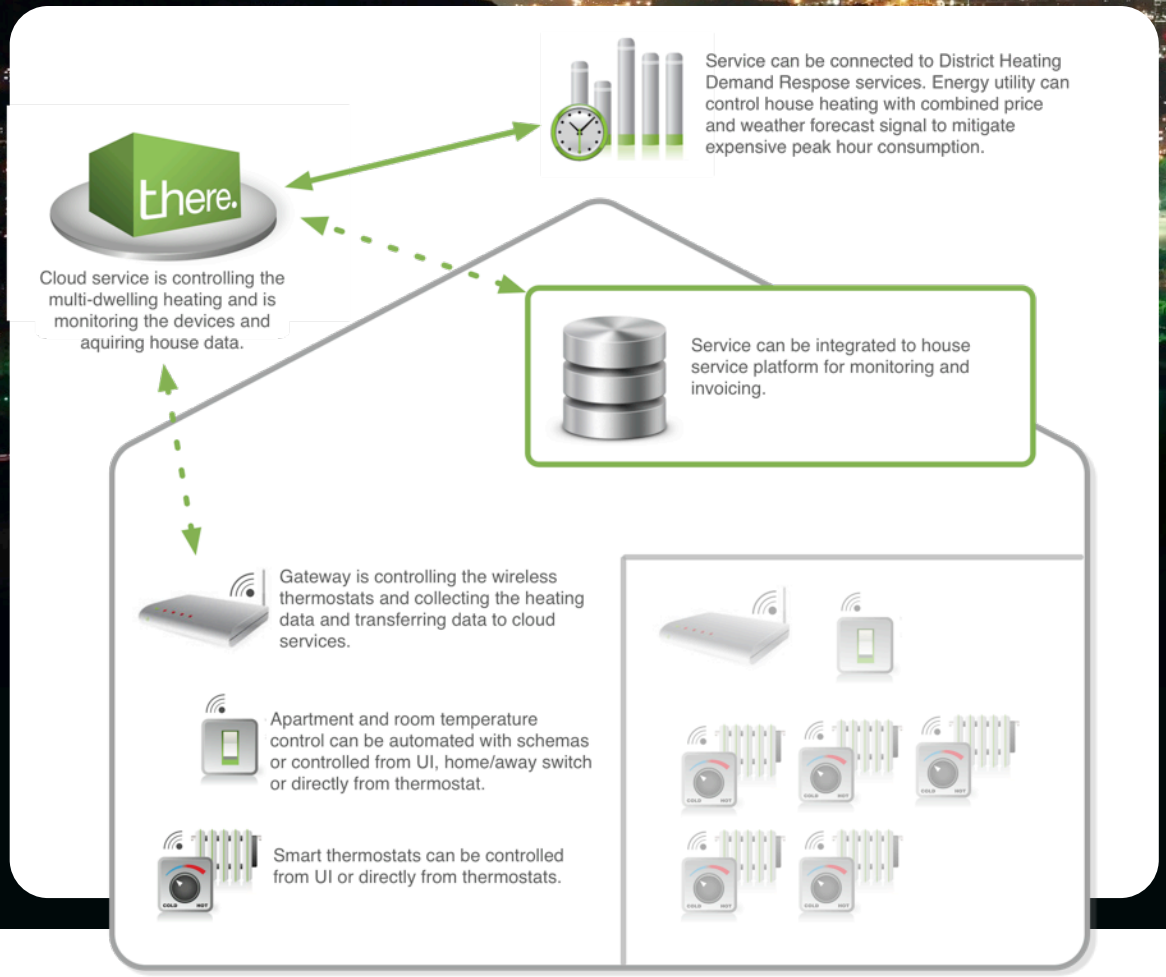
there.


Messages
and Alarms
Optical power reader
attached to
electricity meter
Total household
electricity
consumption
there.
Tap water heater
User interface in laptop,
tablet or smartphone
Internet connection
Wireless connection
IR Connection
Wireless heat pump controller
and temperature sensor
Air-to-Air
Heat pump

there.

There Solutions

District Heating



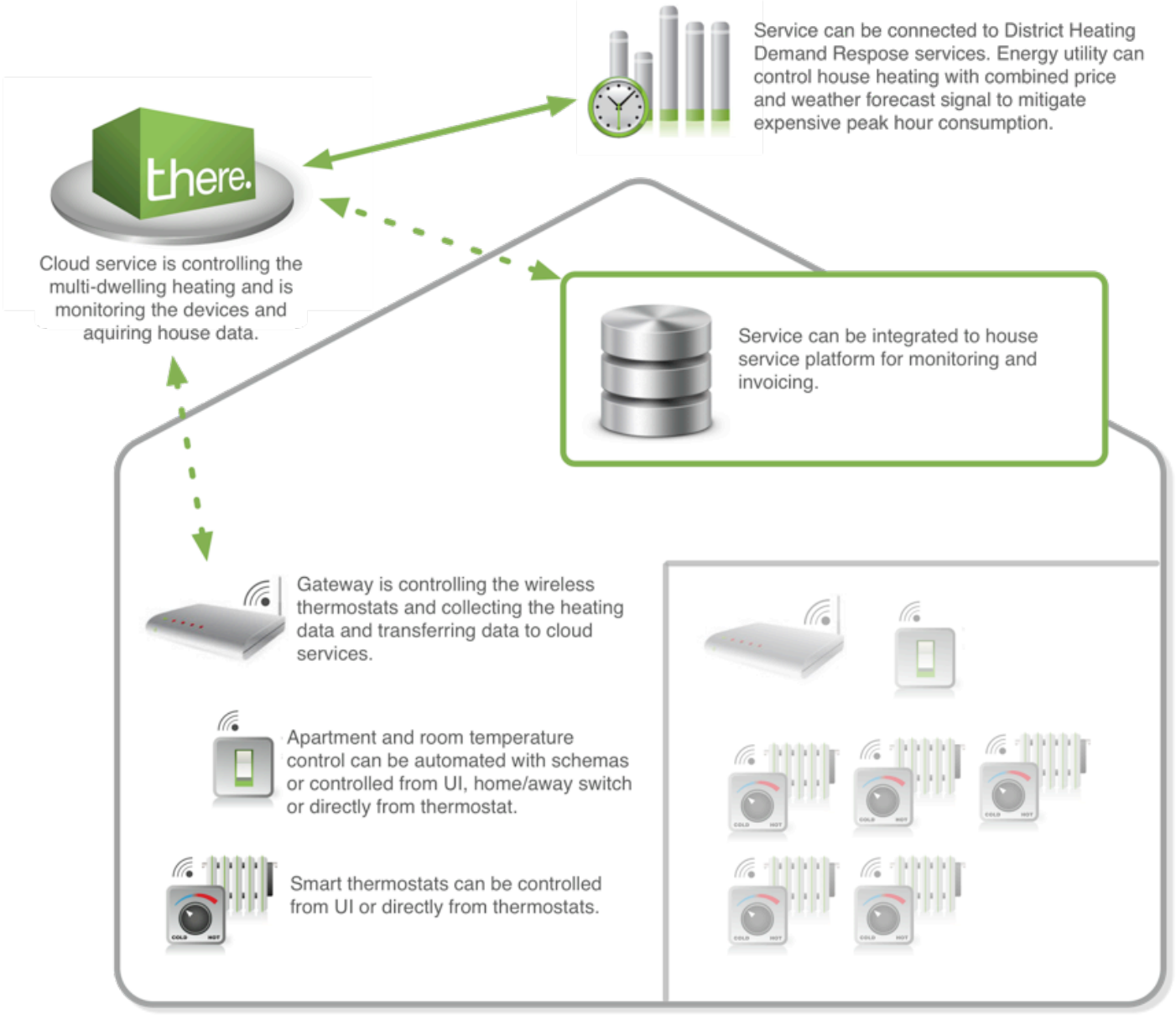
Benefits

- Energy cost savings
- Remote access and control
- Improved comfort

Functionality

- Automated control schema (home/away/night/absence) for heating
- Room specific heating control
- Possibility to extend control on home appliances
- Notifications

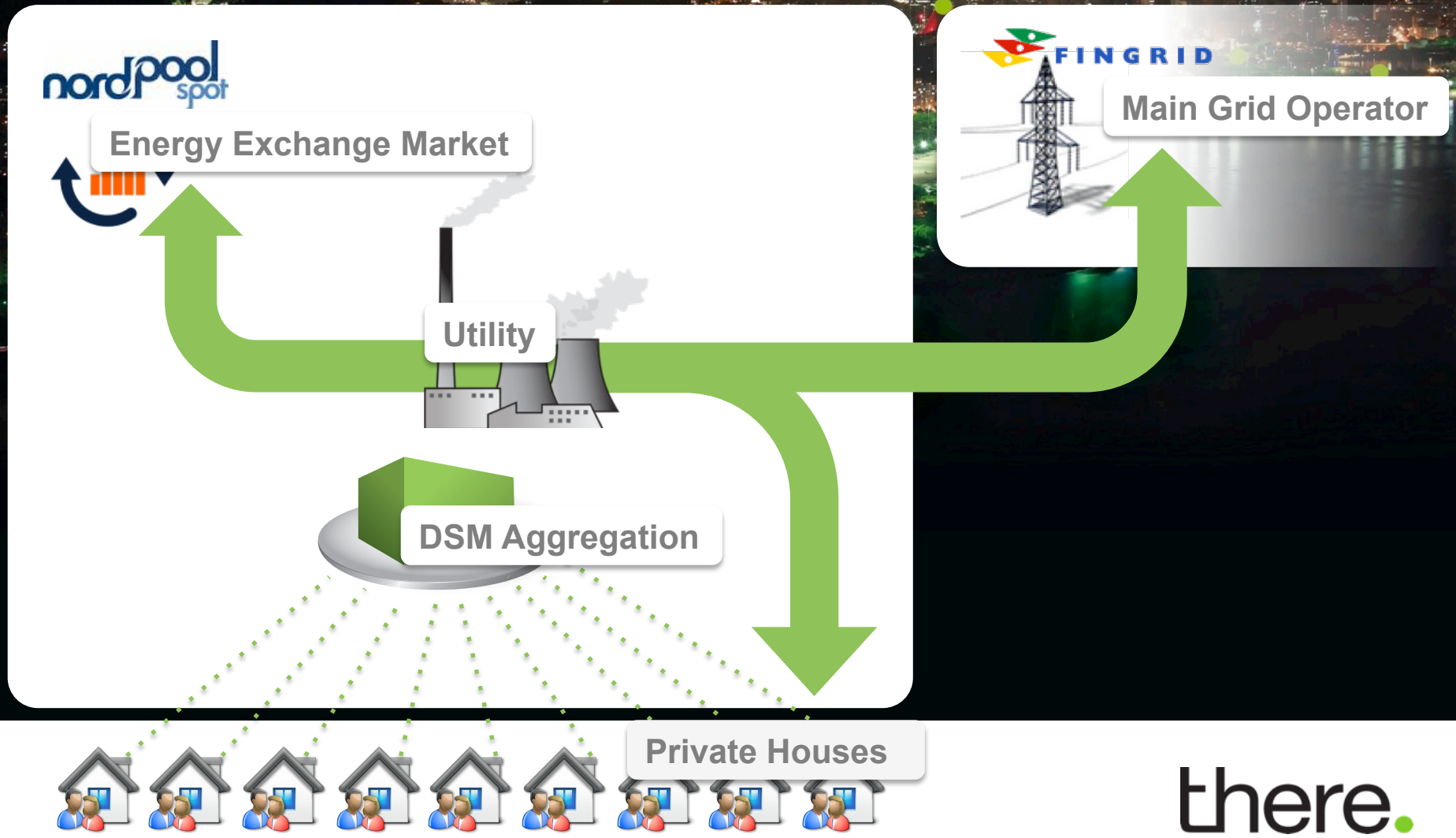
there.


Service can be connected to District Heating Demand Respose services. Energy utility can control house heating with combined price and weather forecast signal to mitigate expensive peak hour consumption.
there.
Cloud service is controlling the multi-dwelling heating and is monitoring the devices and aquiring house data.
Service can be integrated to house service platform for monitoring and invoicing.
Gateway is controlling the wireless thermostats and collecting the heating data and transferring data to cloud services.
Apartment and room temperature control can be automated with schemas or controlled from UI, home/away switch or directly from thermostat.
Smart thermostats can be controlled from UI or directly from thermostats.

there.

There Solutions

Demand Side Management



there.

There Solutions

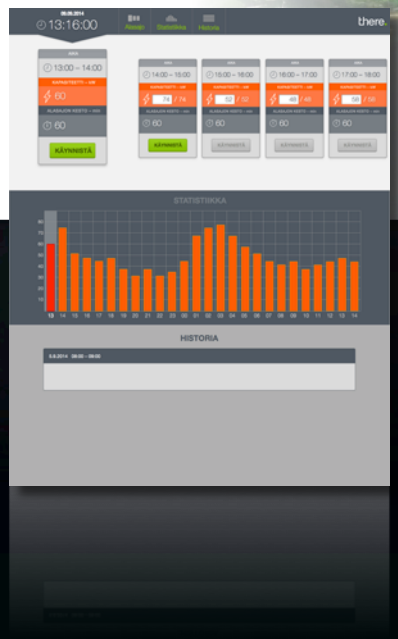
Demand Side Management

Utility **DSM Operator** is using a platform and DSM market place

- to transfer electricity consumption from hours of high load and price to a more affordably priced time, or
- To temporarily adjust consumption for the purpose of power balance management (Distrubance reserve).
- To adjust own production to meet market requirements
- To operate on intraday (elspot, elbas) market

Consumer loads are monitored and aggregated into controllable load (aka virtual power plant).

DSM Operator UI



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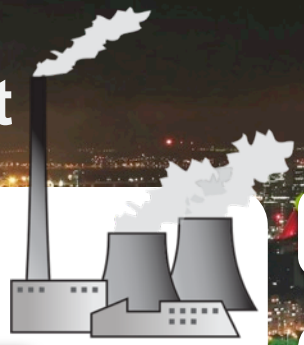
There Solutions

Demand Side Management



Physical power market

Benefit
Steering of energy usage based on hourly Elspot-pricing.

- Benefits to the end-consumer or
- Enabling a competitive fixed price el-contract

Elbas-steering.

165€* /customer/yea

* benefits based on actual achieved benefits from There's solutions

Peak load capacity

Benefit
Improved forecasts of available peak load capacity.

Usage of balancing powe at Elbas-market

120€* /customer/yea

* Fingrids estimation

Derivative and hedging

Benefit
Better predicatbility of consumption provides lower costs for hedging of electricity sales.

Optimization of consumption reduces financial exposure.

90€* /customer/yea

* varies between companies, est. benefit based on 10% of acquisition

Balancing power mark

Benefit
Mitigation and prevention of power imbalances.

Benefit to be tested and evaluated in a current project with Fortum

14€ /customer/ye

After Sales

Benefits
Reduced churn and increased customer satisfaction.

Enables platform for provision of own or 3rd party solutions.

75€ /customer/year

Benefits

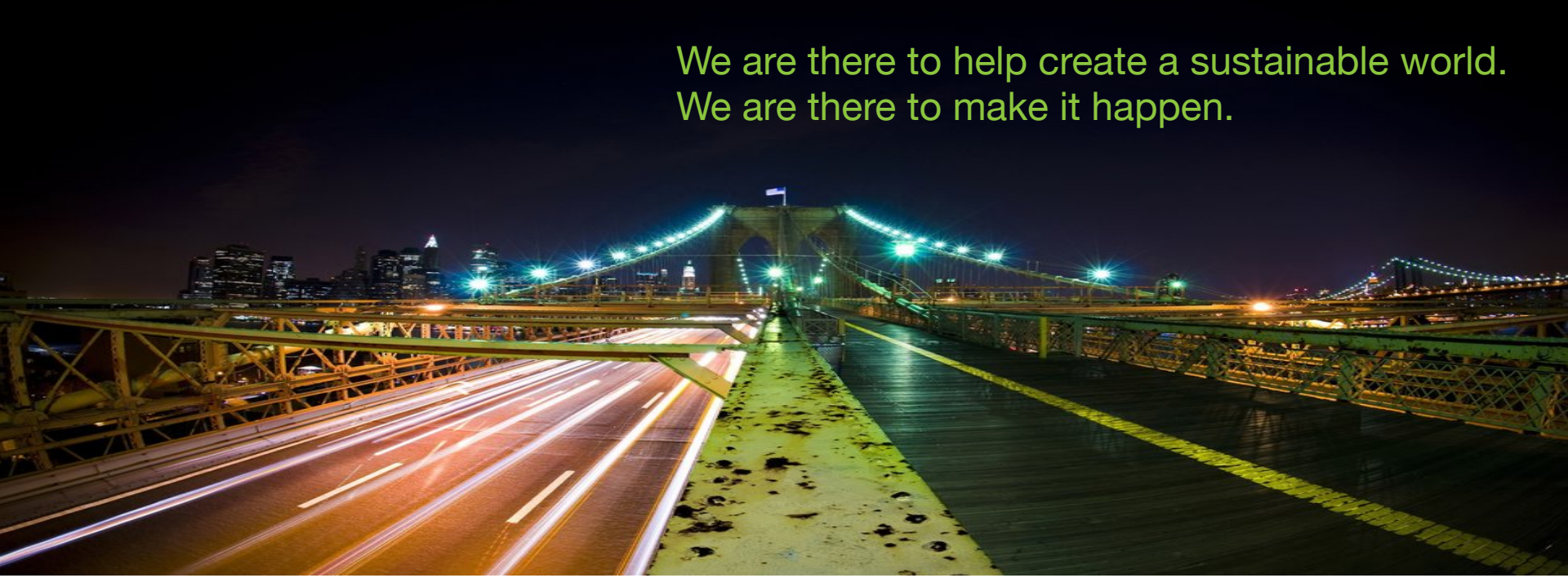
New model how to sell electricity

Lower costs for hedging of electricity sales

Possibility to use balancing power on intraday market

Strong customer lock-up and reduced churn

there.



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