

The ENSTO logo is displayed in a bold, blue, sans-serif font in the top right corner of the slide. The background of the slide features abstract geometric shapes in shades of blue and green, and a photograph of a car driving at night on a highway, viewed from the driver's perspective, with light trails from other vehicles.In the top left corner, there are two overlapping diamond shapes in shades of blue, one darker than the other, pointing towards the bottom right.

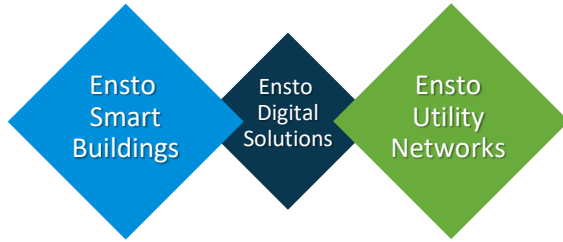
Ensto Smart EV Charging

Smart Otaniemi

Better life.
With electricity.

Ensto – Electrical Solutions Provider

› Ensto's Business Units:



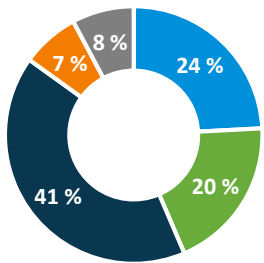
TURNOVER 2017

~ 261 M€

PERSONNEL

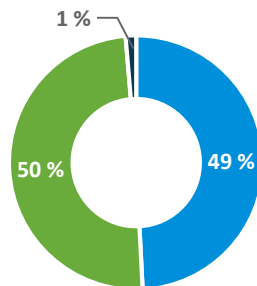
~ 1600

Market Areas



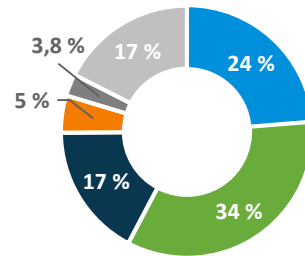
- Finland
- Other Nordic countries
- Other EU countries
- Russia and CIS countries
- Other

Business Areas

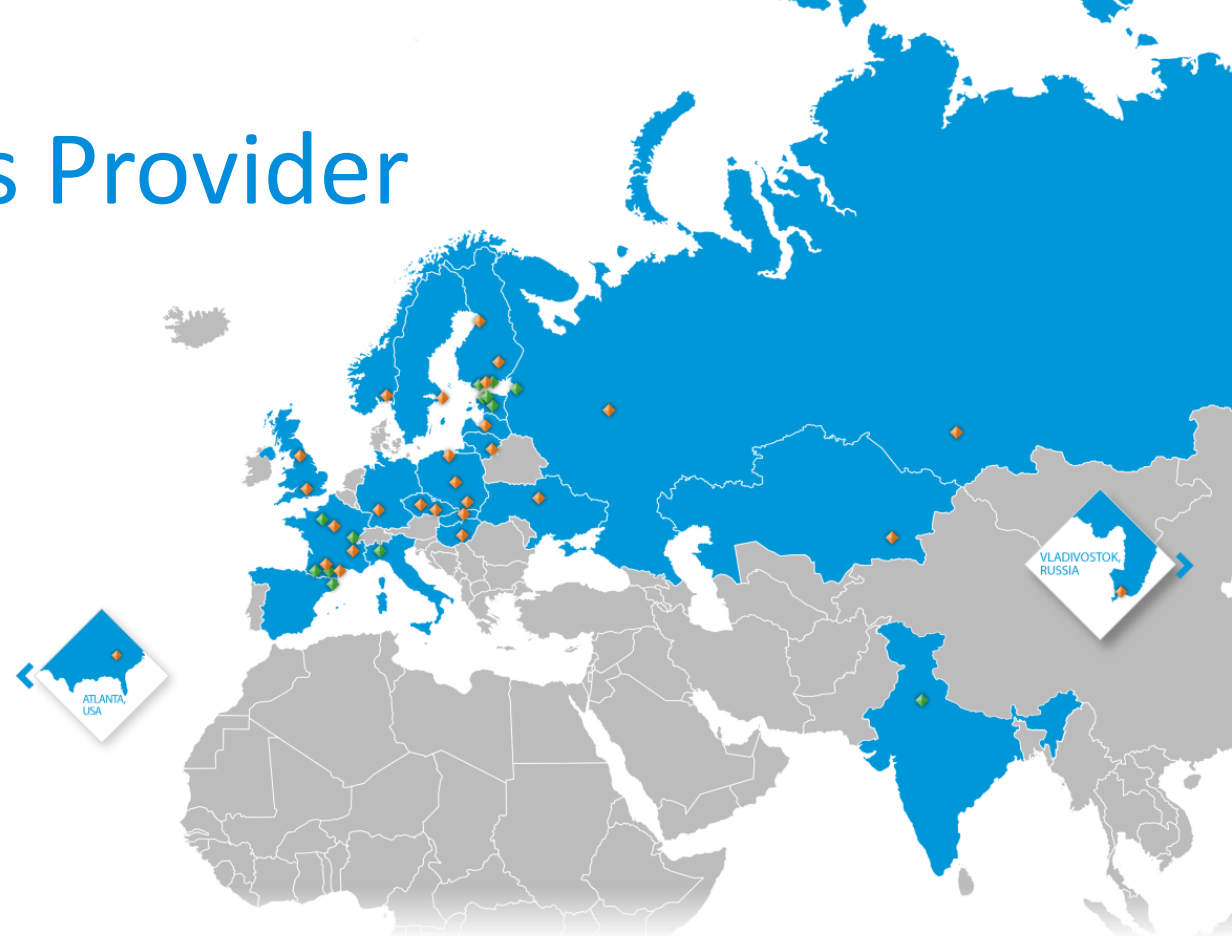


- Ensto Smart Buildings
- Ensto Utility Networks
- Other

Personnel



- Finland
- Estonia
- France
- Russia
- Spain
- Other countries



◆ Sales organizations in 20 countries
 Sales to 100 countries

◆ Production in 7 countries
 R&D in 5 countries

56%

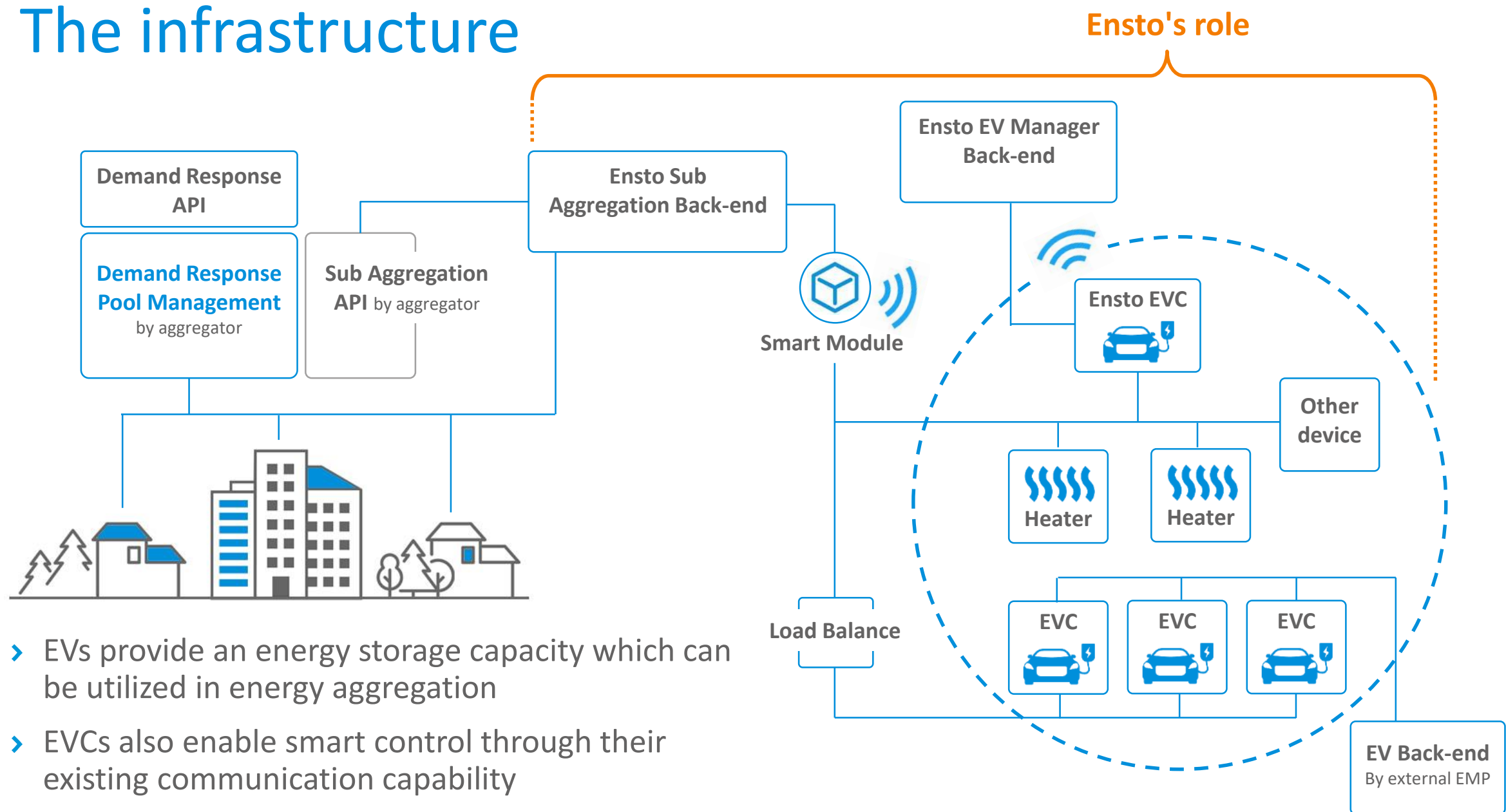


44%

Ensto and Smart Otaniemi (Evalia)

- › Ensto has been in the EVC business for almost ten years
 - › Started as a HW manufacturer
 - › Expanded into the SW side of eMobility
- › Ensto and Smart Otaniemi
 - › Good way to contact with other players on the market, including competitors
 - › Enables collaboration in order to advance eMobility
 - › Research, business potential, piloting etc.
- › Work done so far:
 - › Technical requirements for energy aggregation (e.g. by Fingrid)
 - › What data to collect and how to integrate between systems (e.g. for Smart Otaniemi platform and aggregation integration)

The infrastructure



- EVs provide an energy storage capacity which can be utilized in energy aggregation
- EVCs also enable smart control through their existing communication capability

Future development

- › Focus so far on technical specifications and technical feasibility
- › We've been able to map out the *WHATs* and *HOWs*
- › Now a good stage to think about the *WHYs*
 - › Further research on the customer and the end user
 - › User profiles to guide concept/design work
 - › Customer/user journey mapping
 - › Combine the user knowledge with technical expertise
 - › Involve the user into the process
 - › Keep business feasibility in mind ➡ Sustainability



Ensto EV Manager

Better life.
With electricity.

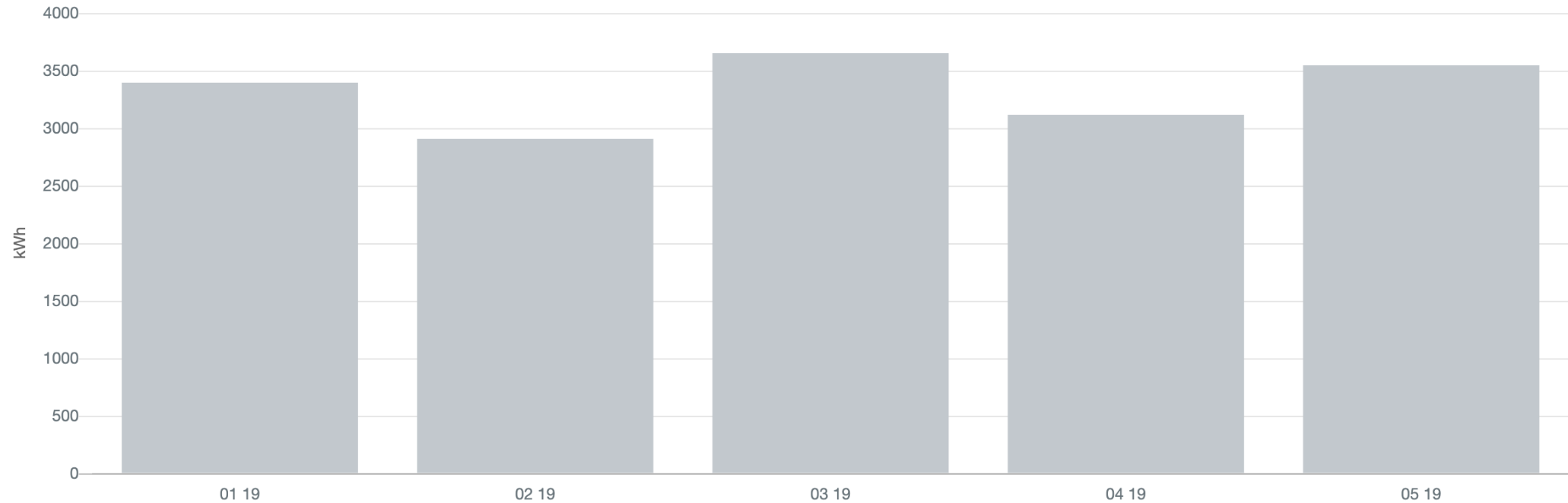
Ensto EV Manager

Total charging volume: **16623.789 kWh**

DECIMAL SEPARATOR IN EXPORT

Use comma

Use point



› Monthly consumption of EV charging at Ensio Miettisen katu 2

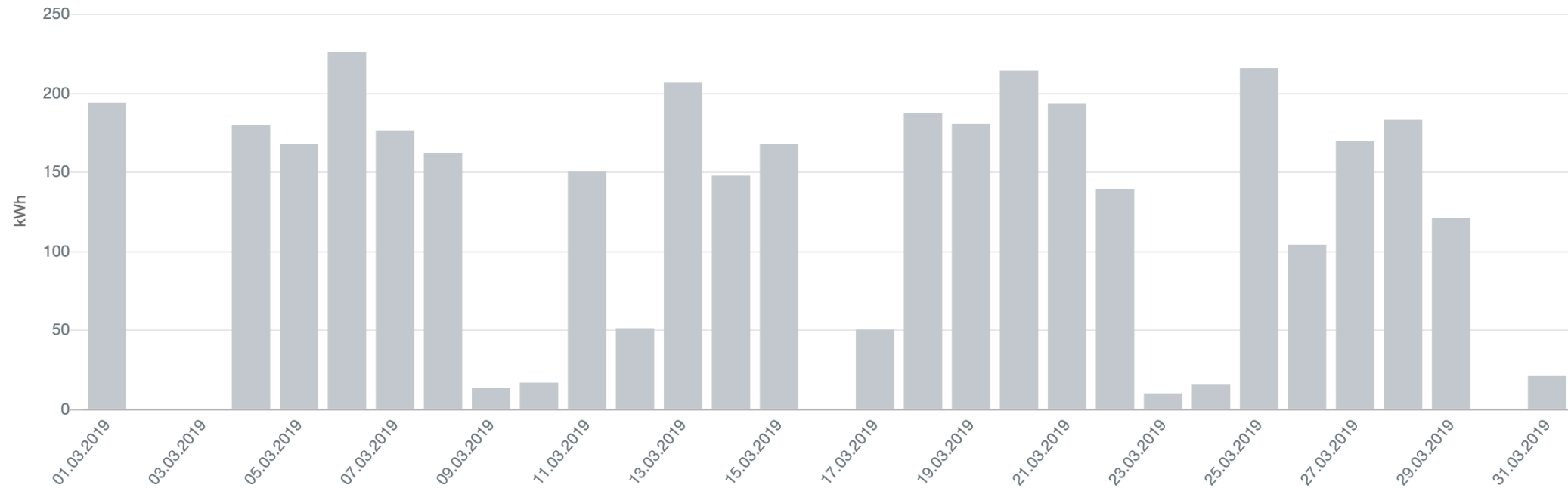
Ensto EV Manager

Total charging volume: **3656.009 kWh**

DECIMAL SEPARATOR IN EXPORT

Use comma

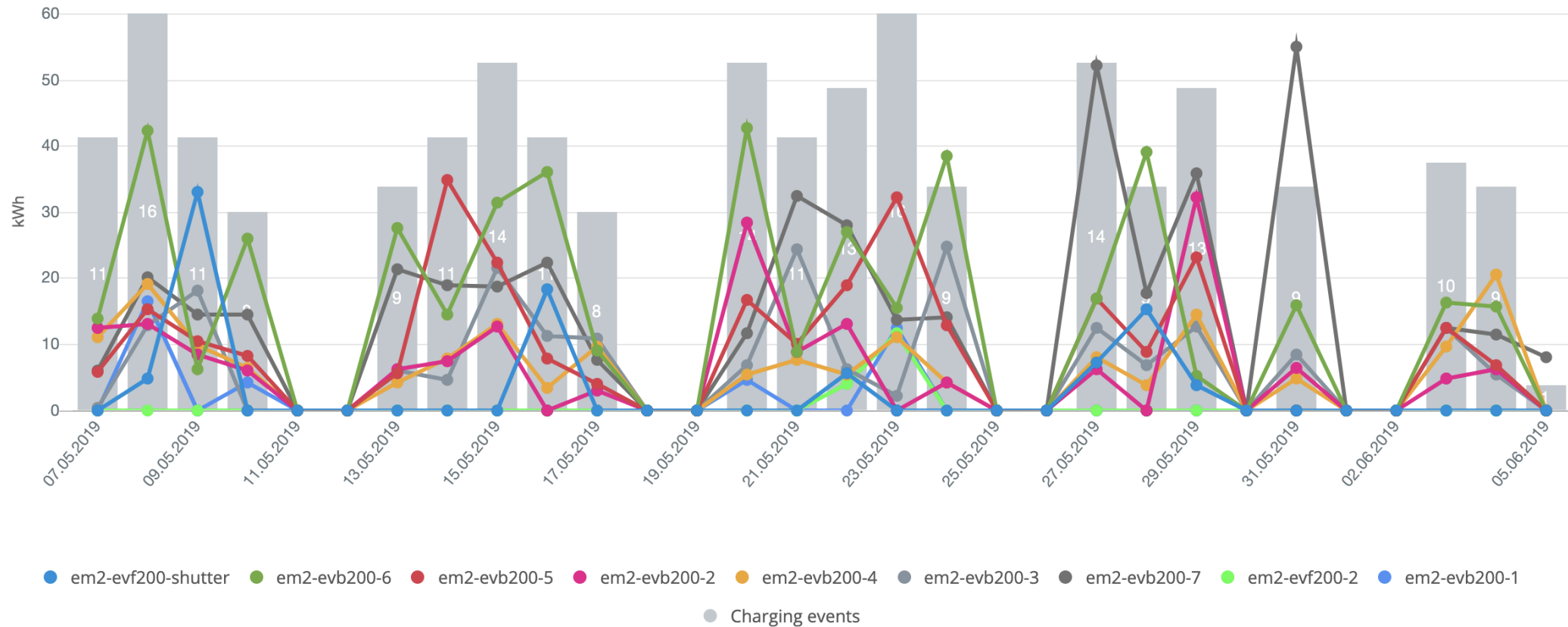
Use point



› Daily consumption in March at Ensio Miettisen katu 2

Ensto EV Manager

Consumption vs Charging events count



- › Daily consumption of last 30 days at Ensio Miettisen katu 2 (5.6.2019)
- › Lines show which chargers are used the most



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