

Maria Kalli

Vexve Oy



#18DEdays



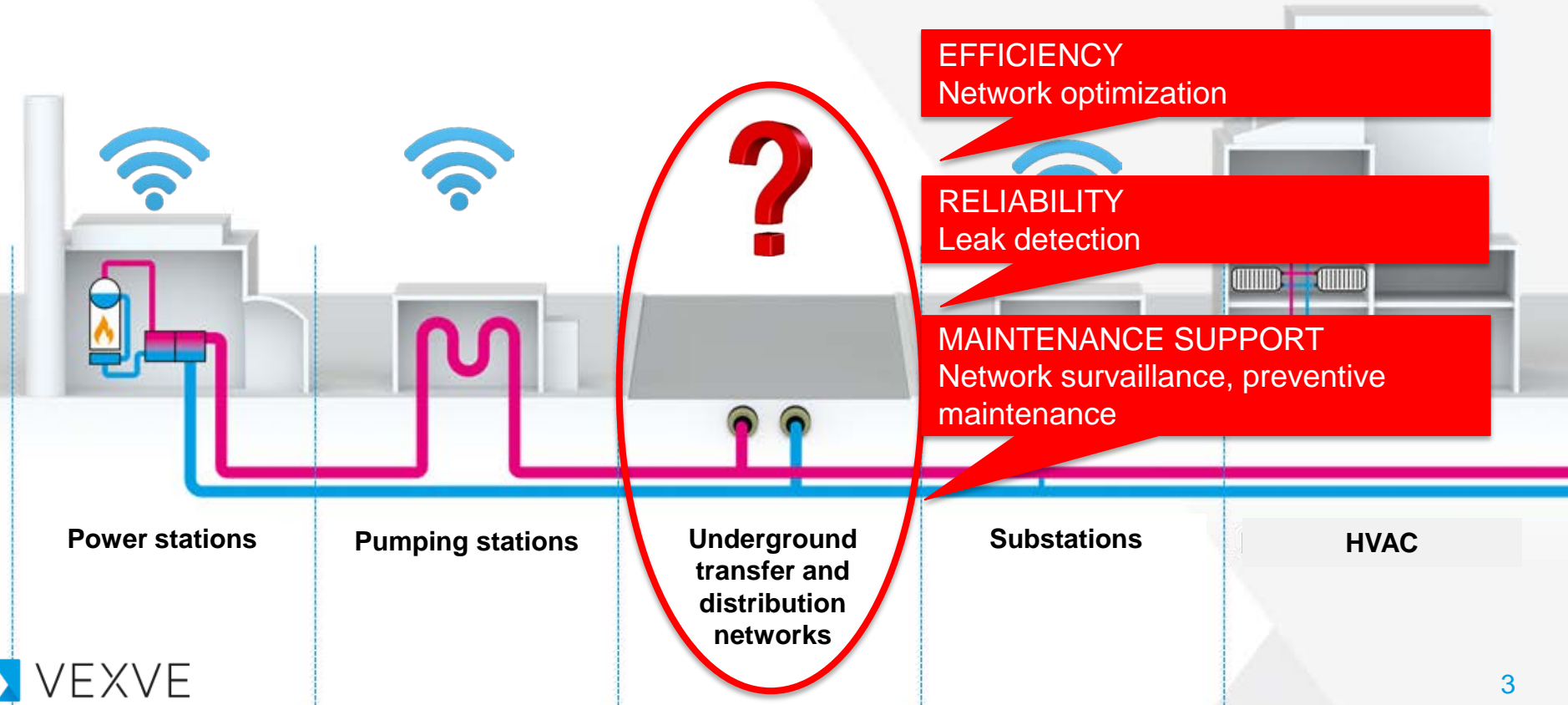
26.9.2018 Global District Energy Days

Increasing intelligence in underground networks - new role of valves?

Maria Kalli, Regional Sales Director & Smart Solutions –project owner at Vexve Oy

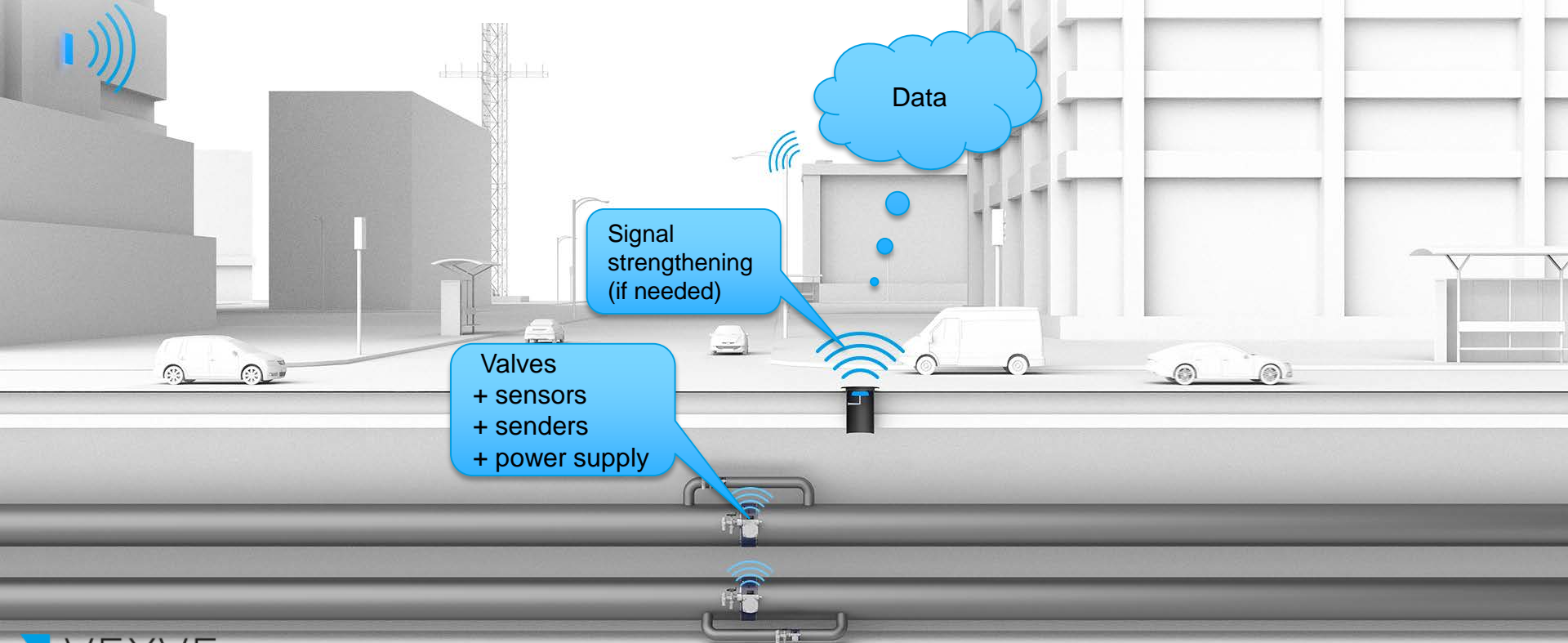


Intelligence in traditional district energy systems



Increasing intelligence in underground networks requires...

- ✓ Underground operation
- ✓ Wireless operation
- ✓ Own powered
- ✓ Post-assembly



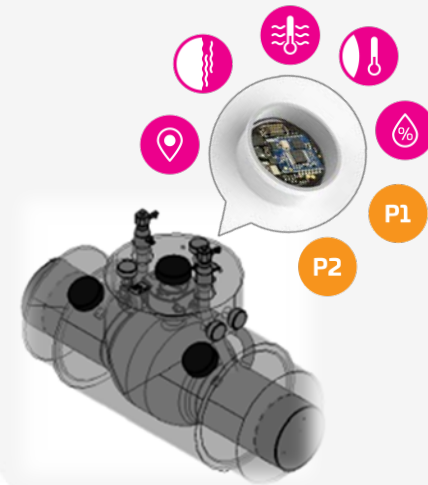
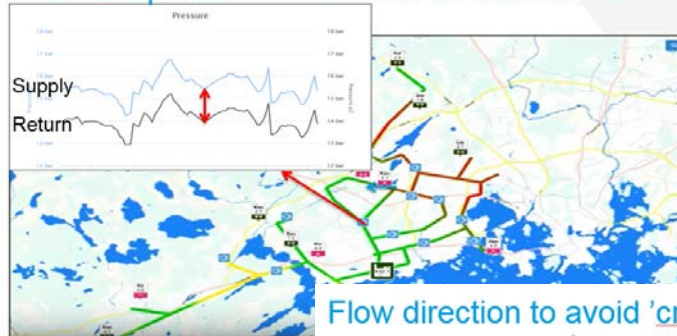
Pilot project 1) Efficiency

Challenge: "Network conditions are not known"

Cooling of district heating water (network efficiency)



Available pressure differential for the customer



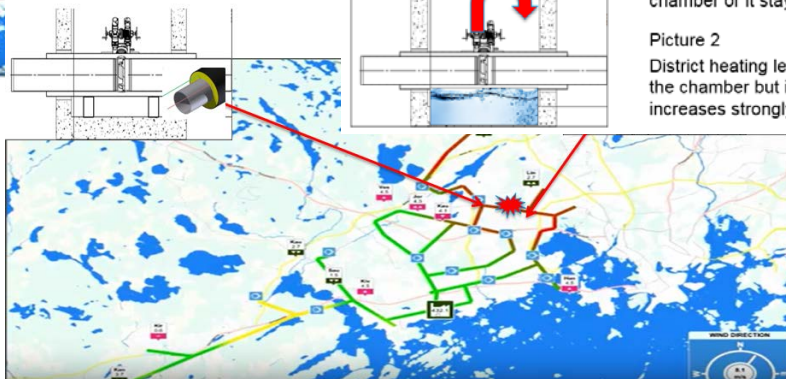
Pilot project 2) Reliability

Challenge: "Locating leakages takes long time"

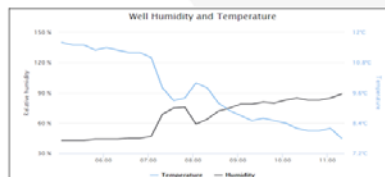
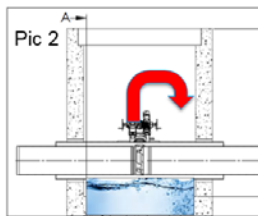
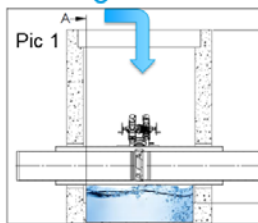
Big leakages based on pressure



Real time online data f



Leakage in a well

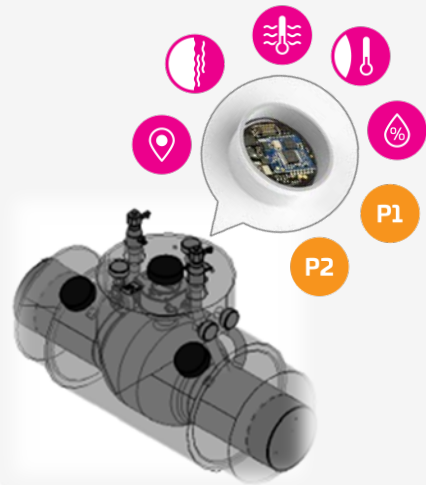


Picture 1

Water comes outside of the chamber, for example from the street. In this case humidity is growing and the temperature drops. The water is cold and lowers temperature in the chamber or it stays unchanged.

Picture 2

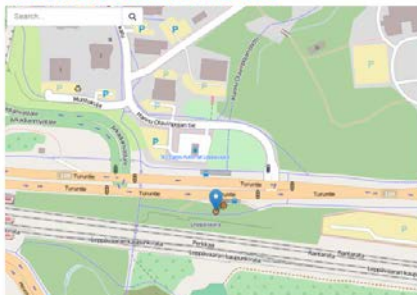
District heating leak increases the humidity of the chamber but in this case the temperature increases strongly.



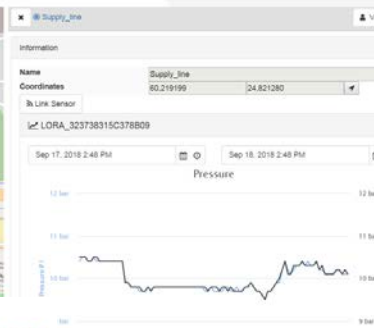
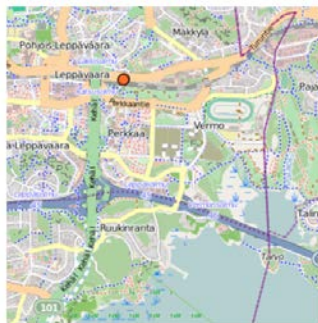
Pilot project 3) Maintenance support

Challenge: "Preventive maintenance"

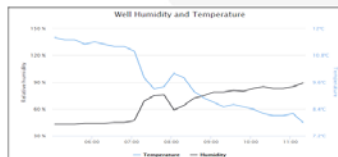
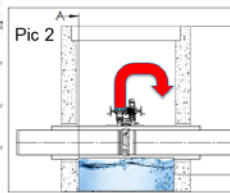
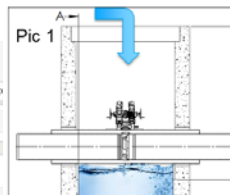
Network surveillance



Valve location



Well conditions



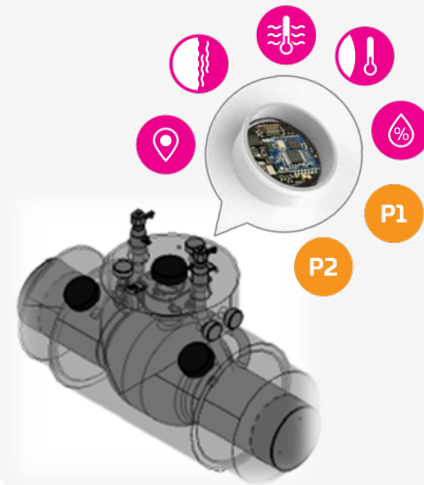
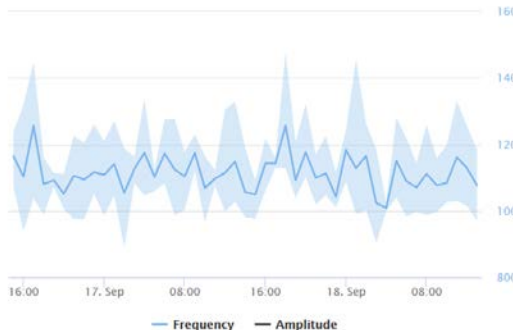
Picture 1
Water comes outside of the chamber, for example from the street. In this case humidity is growing and the temperature drops. The water is cold and lowers temperature in the chamber or it stays unchanged.

Picture 2

Dist the incr QR - Digital valve data

Cavitation and valve condition

Vibration

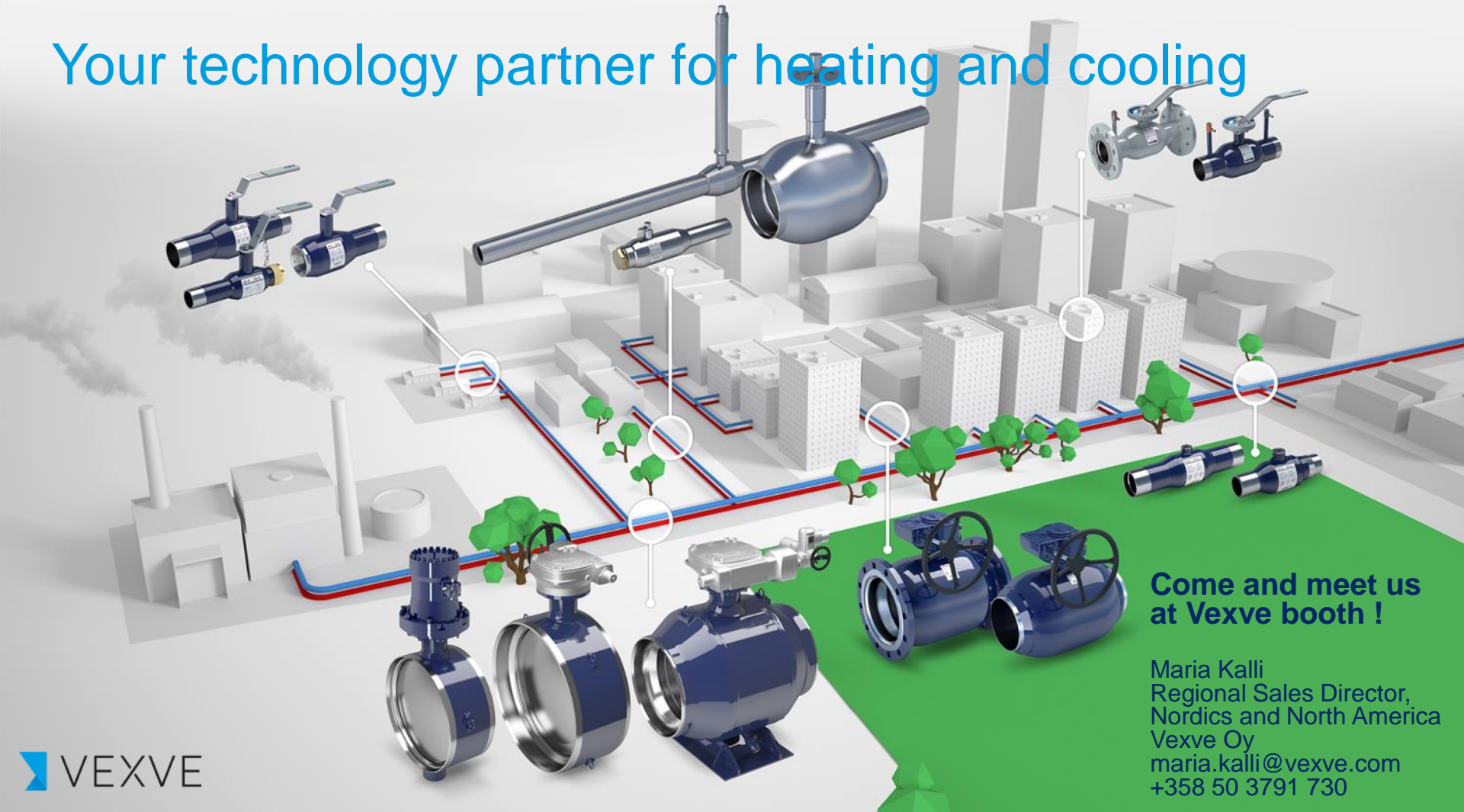


How do you see the future role of valves in your underground networks?

Where would you see the most need for new innovative valve solutions

1) Efficiency 2) Reliability 3) Maintenance ?

Your technology partner for heating and cooling



**Come and meet us
at Vexve booth !**

Maria Kalli
Regional Sales Director,
Nordics and North America
Vexve Oy
maria.kalli@vexve.com
+358 50 3791 730