



HS-Vesi

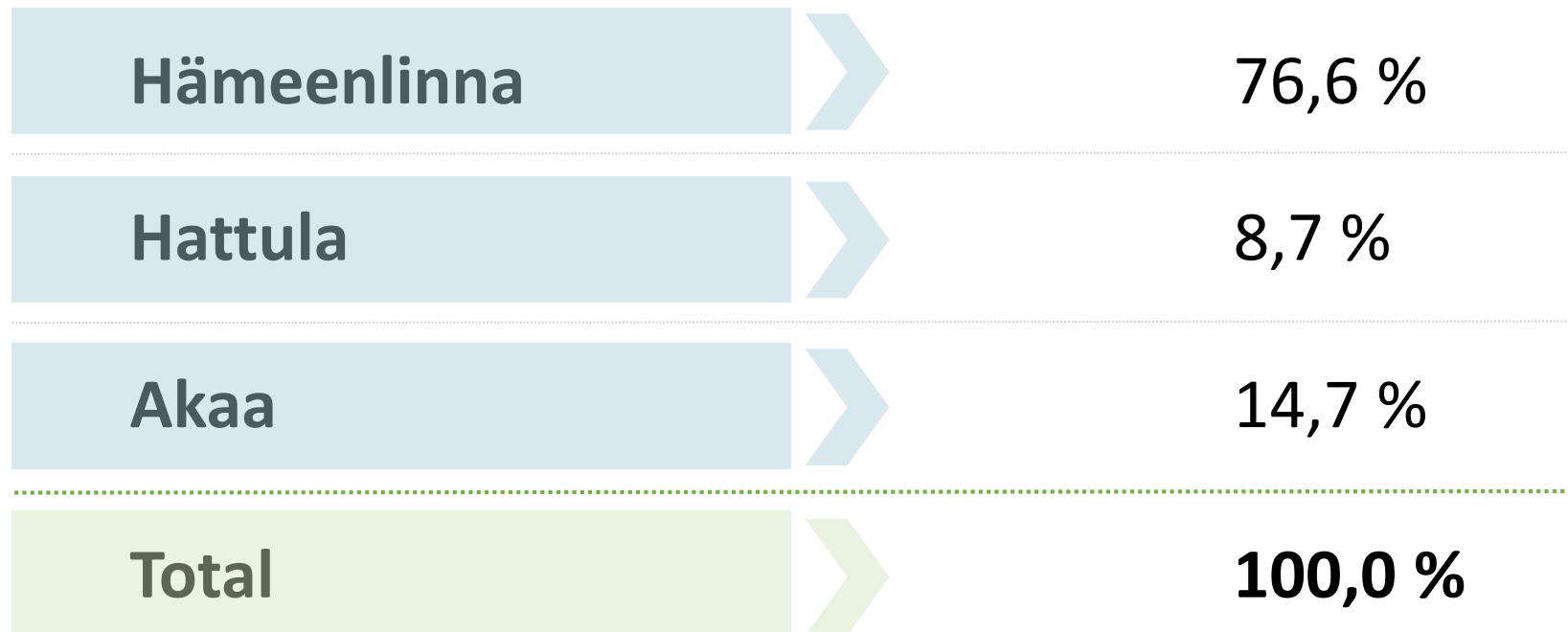
Hämeenlinna Region Water Supply and Sewerage Ltd (HS-Vesi)

- established 2001
- owned by towns/municipalities
- Locates 40 km south from Tampere (100 km north from Helsinki)
- first "big" regional water services utility in Finland
- turnover ~20 M€ (serves about 80 000 inhabitants)
- ~ 60 employees

Limited company can more easily adopt to different situations than ordinary municipal water utilities

- All operational decisions can be made in the company

OWNERS SINCE 1.2.2012



The Board

- 7 members
 - Hämeenlinna (5), Akaa(1), Hattula (1)
 - Municipality Heads ("Mayors") have right to participate in the board meetings
- Board has to follow Limited Liability Companies Act (like in private companies)
- Board decides
 - Economical frameworks and prices
 - Significant items related to business
 - Never voted in the board meetings (→ discussions (of course), but unanimous decisions (so far))

Resiliency?

- Resiliency in HS-Vesi?
 - = Preparedness to maintain (or restore) good service level in case of adverse circumstances
- Our tools
 - Risk based approach to water and sewerage system (WSP and SSP)
 - Action plan to reduce potential risks → typically technical matters
 - operational questions
 - investment needs
 - human resources (expertise?, amount of staff?)
 - Plans for “emergency” situations (~ instructions)
 - Technical aspects
 - Operational instructions to dealing with the problem
 - Informing clients, authorities, media...

Decentralized water supply

- 12 water plants, four separate distribution areas
 - reserve power stations on critical sites
- Groundwater/artificial groundwater 50% / 50%
- Contracts with neighbouring municipalities/towns for water supply in case of water deficiency



Networks

- Length of water distribution network ~ 1200 km
- Length of sewerage network ~1000 km, about 350 pumping station
- Pipe length per capita (~ 14 m)
- Unaccounted-for water ~ 15 %, water leakages about 30 – 40 pcs/year
- Unaccounted-for wastewater ~ 50 %



Networks

- Annual rehabilitation about 10 km → turnover ratio ~ 240 years!
- 3 M€ (book value ~100 M€)
 - 4 M€ in 2021
- How to double annual rehabilitation volume?
 - whole Finnish water services sector is facing the same problem
- Risk of deterioration of networks → decrease in service level in future?



Networks

- Pumping stations
 - Over 300
 - 8 – 10 are fully renovated annually since 2014
 - In addition annually ~ 5 “lighter” refurbishments e.g. electricity (cabinets and cables)



Wastewater treatment

- Three wastewater treatment plants
- Removal of BOD, phosphorus (chem.) and nitrogen
- Critical consumables:
 - Electricity (no reserve power available)
 - Chemicals (replaceable)
 - Ferro → P removal
 - Lime → pH adjustment



Climate change and HS-Vesi

- Regional authorities have carried out surveys on flood risks
 - Flood is not a risk for HS-Vesi
- Extended dry periods (droughts) can be managed by increasing water supply capacity
- Due to increasing precipitation (and rain intensity)
 - amount of inflow/infiltration to sewerage system has to be reduced to minimize overflows and by-passes

