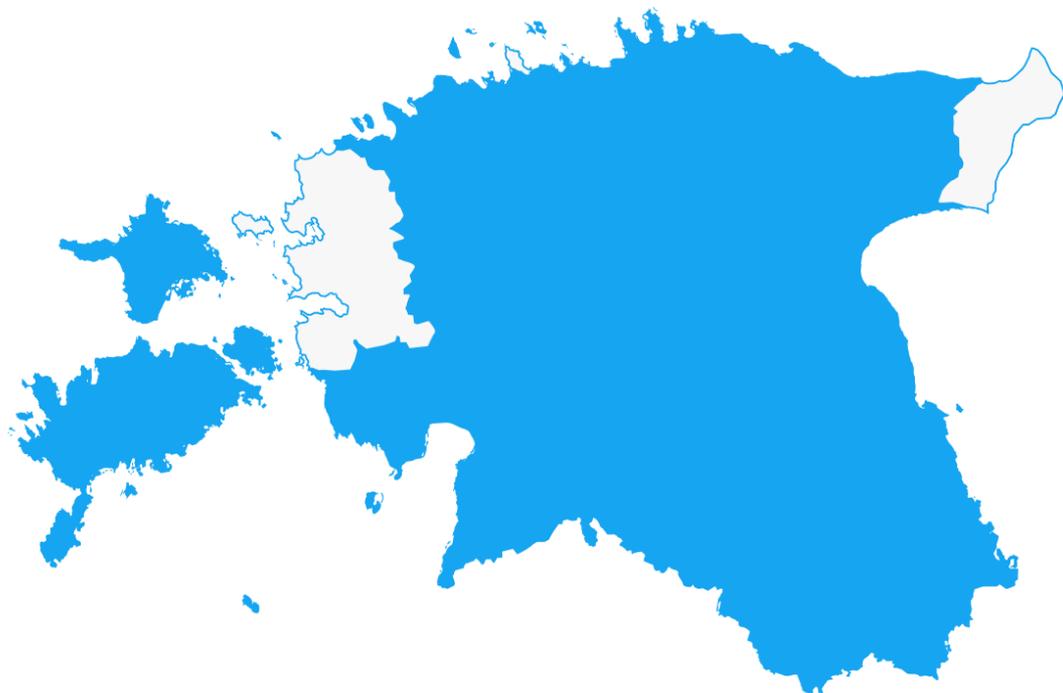


# REGULATORY FRAMEWORK & INNOVATION – IN COOPERATION WITH DSO

## LIBERAL REGULATION – INNOVATION ENABLER

Elektrilevi | Priit Treial  
Member of the Management Board

# ELEKTRILEVI – ESTONIA'S DISTRIBUTION NETWORK OPERATOR



 Elektrilevi Networks     Other service providers

**730** employees

**253** million € turnover  
in 2017

**750** million € RAB value

**0.66** million clients

**61 000** km of power lines



# GLOBAL TRENDS WE CAN'T IGNORE

## Electricity demand growth



## Data traffic growth



## Distributed generation (DER)

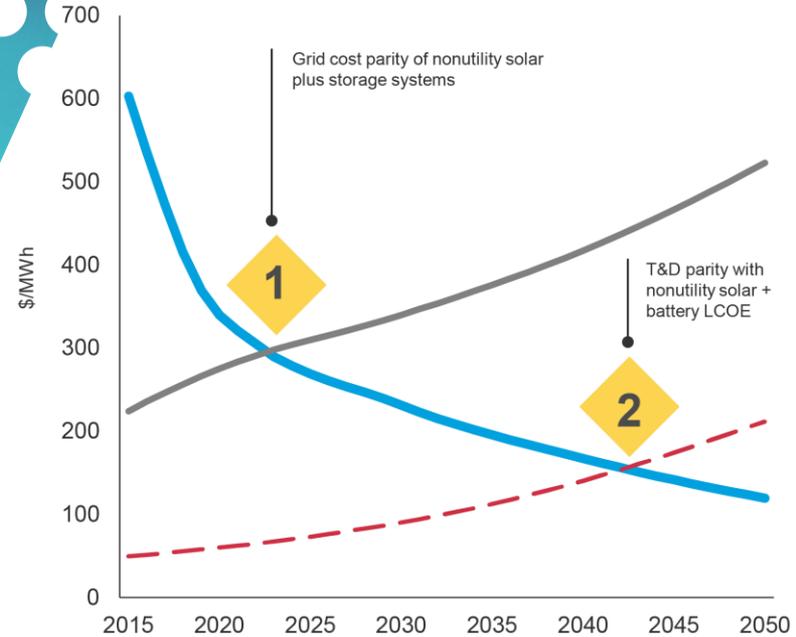


Source: 1. Global EV Outlook 2017 2. Cisco VNI, 2017. 3. PV Status Report 2017



# THE RACE IS ON - NEW TECHNOLOGY VS. GRID!

- A new level of efficiency
- New challenges to integrate, control and steer all DER
- An enabler of new business models



— Non utility solar + battery LCOE — Fully delivered cost of electricity - - - Cost of transmission and distribution

REGULATION IS LEANING TOWARDS THE  
INNOVATION AND DIGITALISATION



# OUR SUCCESS: SMART METERS

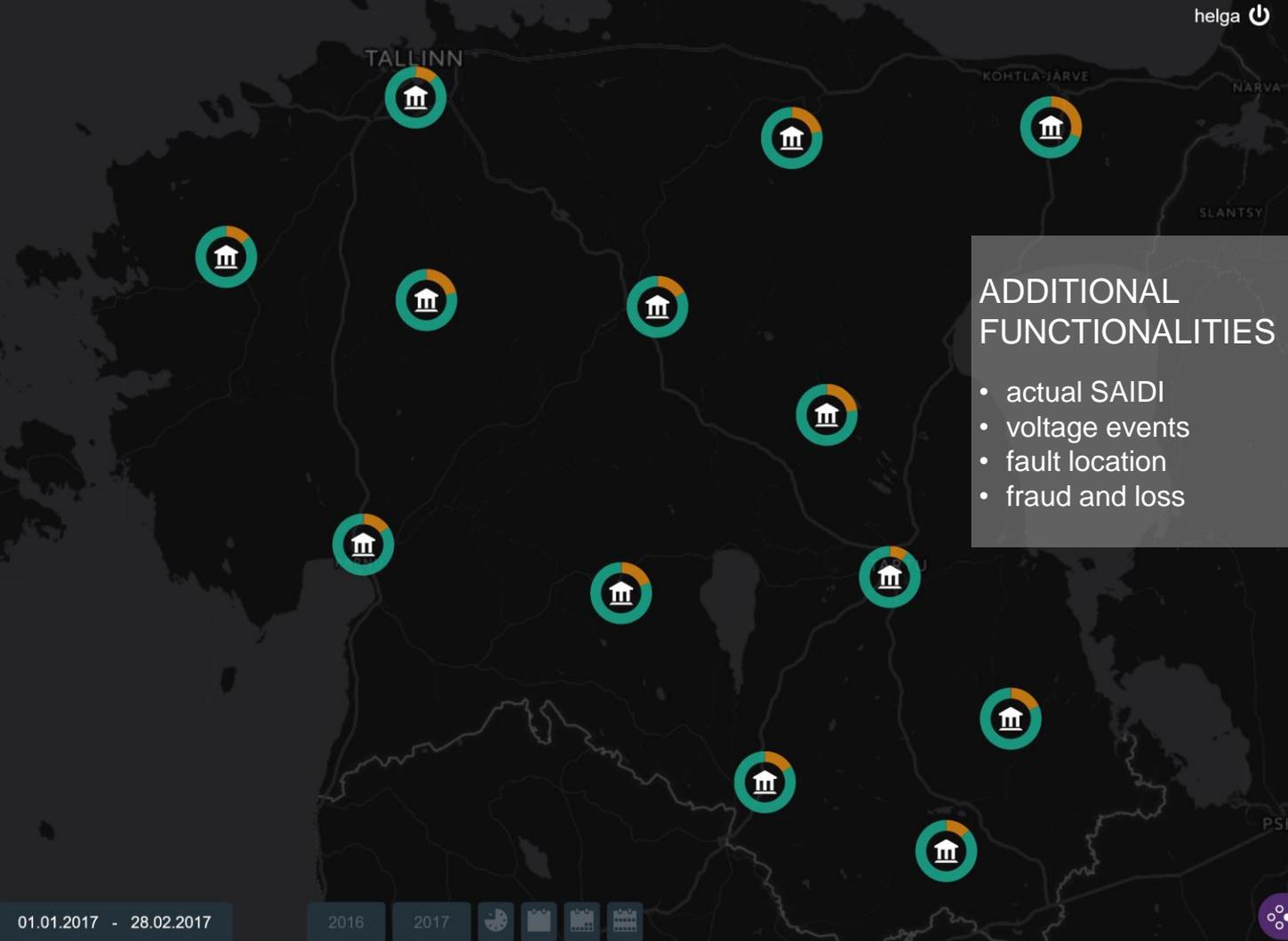
- 100% smart meters + smart metering
- Reduced network losses 5.7% => 4.1%
- Client satisfaction has doubled
- Improved grid planning & investments
- 15m hourly based consumption data - big data opportunities



# Eesti



	Pämu maakond	0/15/85
	Viljandi maakond	0/19/81
	Põlva maakond	0/18/82
	Rapla maakond	0/21/79
	Jõgeva maakond	0/23/77
	Lääne-Viru maakond	0/21/79
	Tartu maakond	0/10/90
	Järva maakond	0/17/83
	Saare maakond	0/14/86
	Harju maakond	0/12/88
	Võru maakond	0/13/87

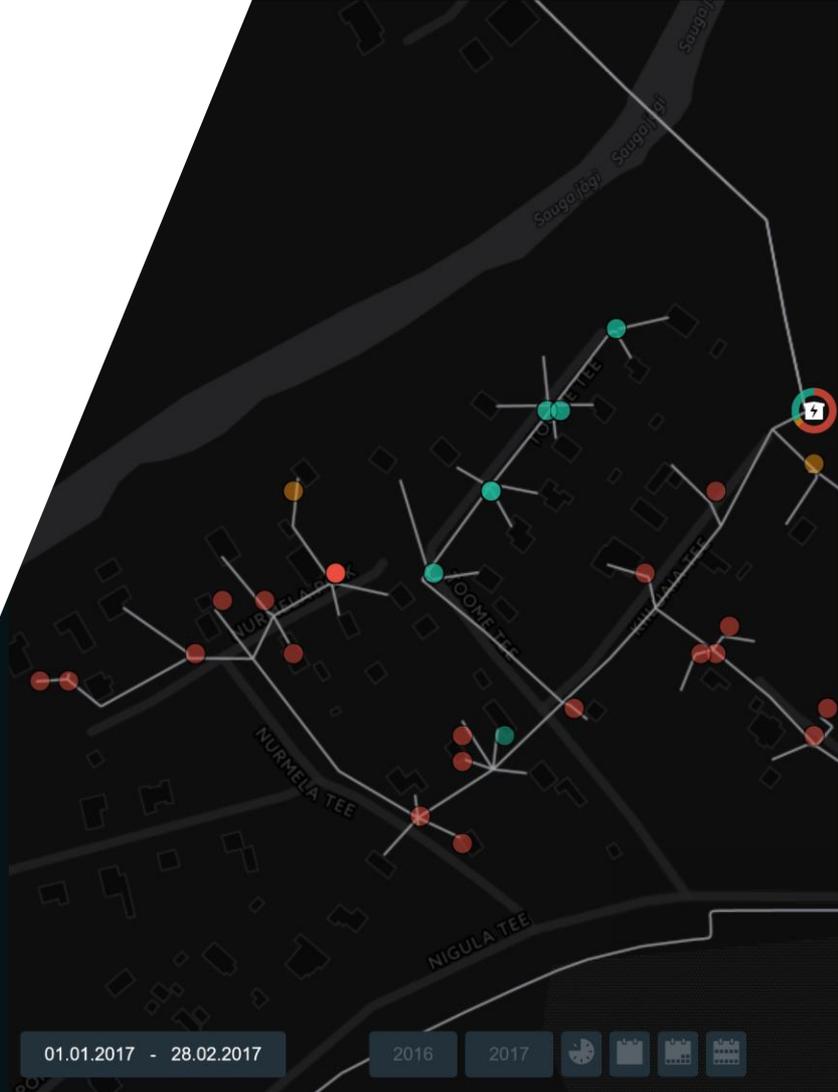


### ADDITIONAL FUNCTIONALITIES

- actual SAIDI
- voltage events
- fault location
- fraud and loss



# REMOTE READING MAKES THE GRID VISIBLE – PREVENTIVE MAINTANANCE



Quality log: Overvoltage L3	04/01/2017 21:15:44
Quality log: Voltage L3 resume	04/01/2017 21:15:49
Quality log: Overvoltage L3	04/01/2017 21:17:31
Quality log: Undervoltage L1	04/01/2017 21:17:59
Alarms and events: Missing ne...	04/01/2017 21:18:24
Quality log: Voltage L1 resume	04/01/2017 21:23:21
Quality log: Undervoltage L1	04/01/2017 21:24:03
Quality log: Voltage L1 resume	04/01/2017 21:24:50
Quality log: Undervoltage L1	04/01/2017 21:24:57
Quality log: Voltage L1 resume	04/01/2017 21:25:18
Quality log: Undervoltage L1	04/01/2017 21:26:28
Quality log: Voltage L1 resume	04/01/2017 21:27:02
Quality log: Voltage L3 resume	04/01/2017 21:27:29
Quality log: Overvoltage L3	04/01/2017 21:27:42
Quality log: Voltage L3 resume	04/01/2017 21:27:49
Quality log: Overvoltage L3	04/01/2017 21:27:58



**ALTERNATIVE SOLUTIONS ARE  
ALLOWED TO REPLACE GRID  
CAPEX**





# ELECTRICITY EVERYWHERE - with minimum CAPEX

- We will substitute the classic grid investment with off-grid solutions
- Allowed in legislation
- Around 1000 connection points the investment is worthwhile
- Long-term effect 30-50 m€

„NO REGRET“ CAPEX IS ALLOWED  
TO FACILITATE INNOVATION





## COST CUTTING BY PV PARKS

- We target to generate network loss via PV capabilities
- Around 50% i.e. 150 GWh can be generated via PV parks owned by DSO
- TOTEX decrease up to 2m € per year





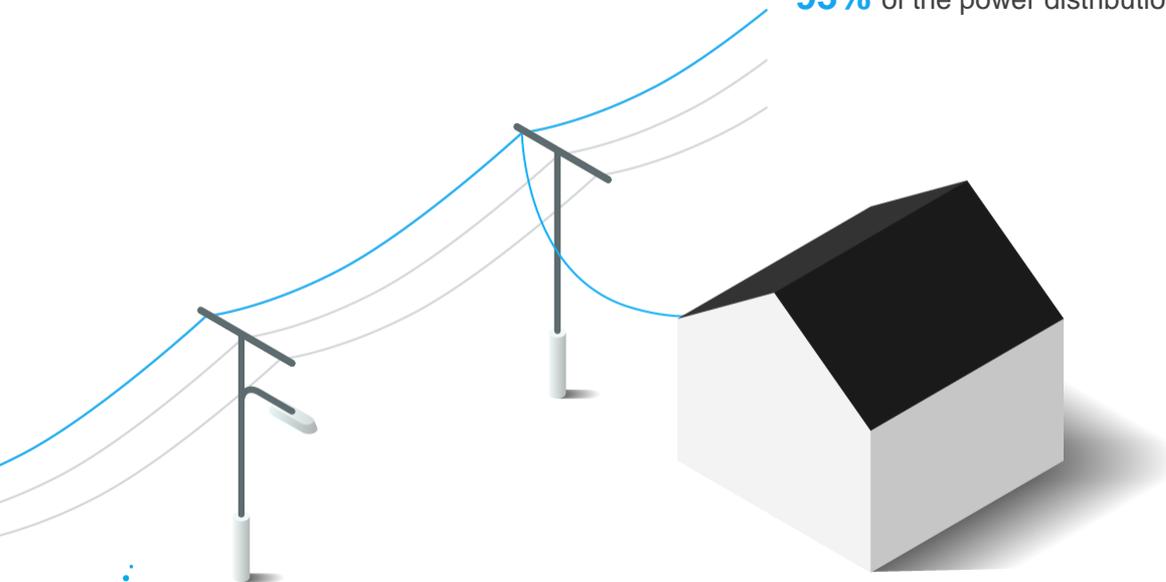
**SIMILAR SIDE ACTIVITIES ARE  
ALLOWED**





# JOINT MANAGEMENT OF INFRASTRUCTURES – A STORY OF VALUE

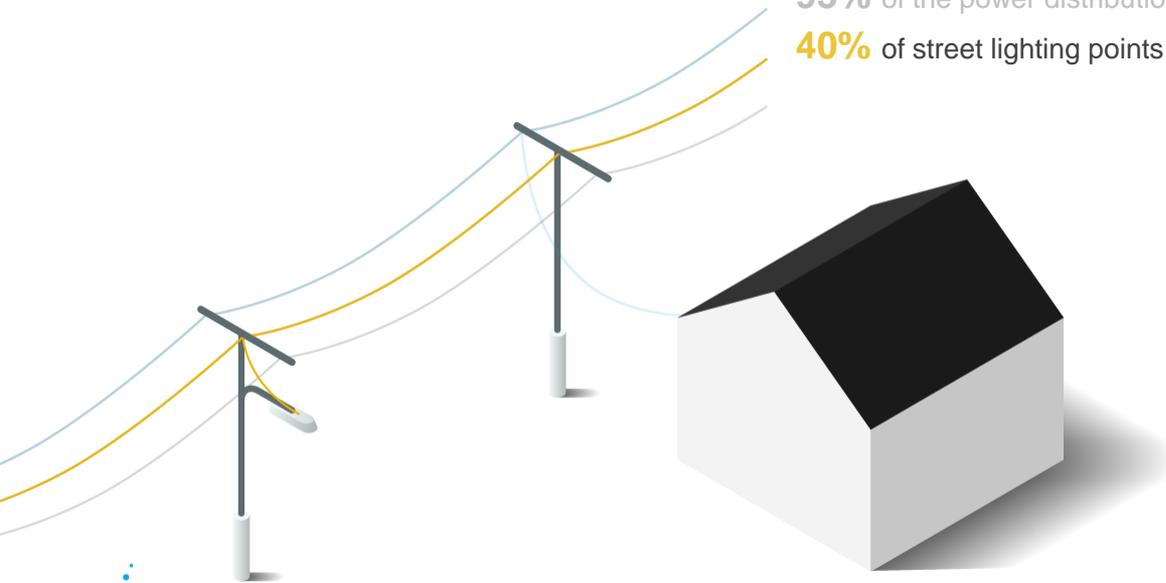
93% of the power distribution network





# JOINT MANAGEMENT OF INFRASTRUCTURES – A STORY OF VALUE

93% of the power distribution network  
40% of street lighting points



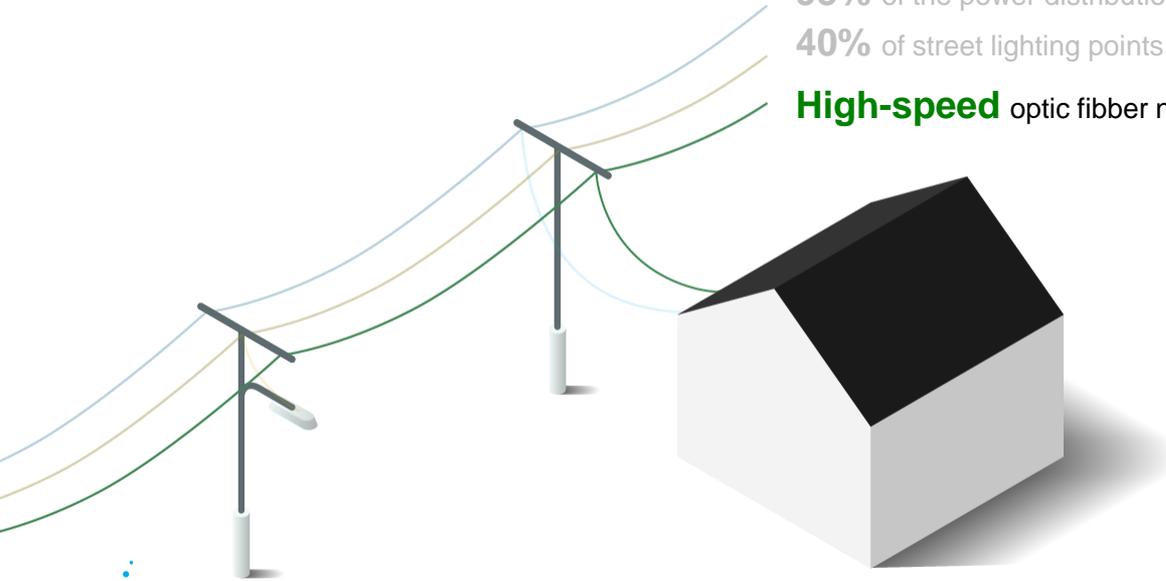


# JOINT MANAGEMENT OF INFRASTRUCTURES – A STORY OF VALUE

93% of the power distribution network

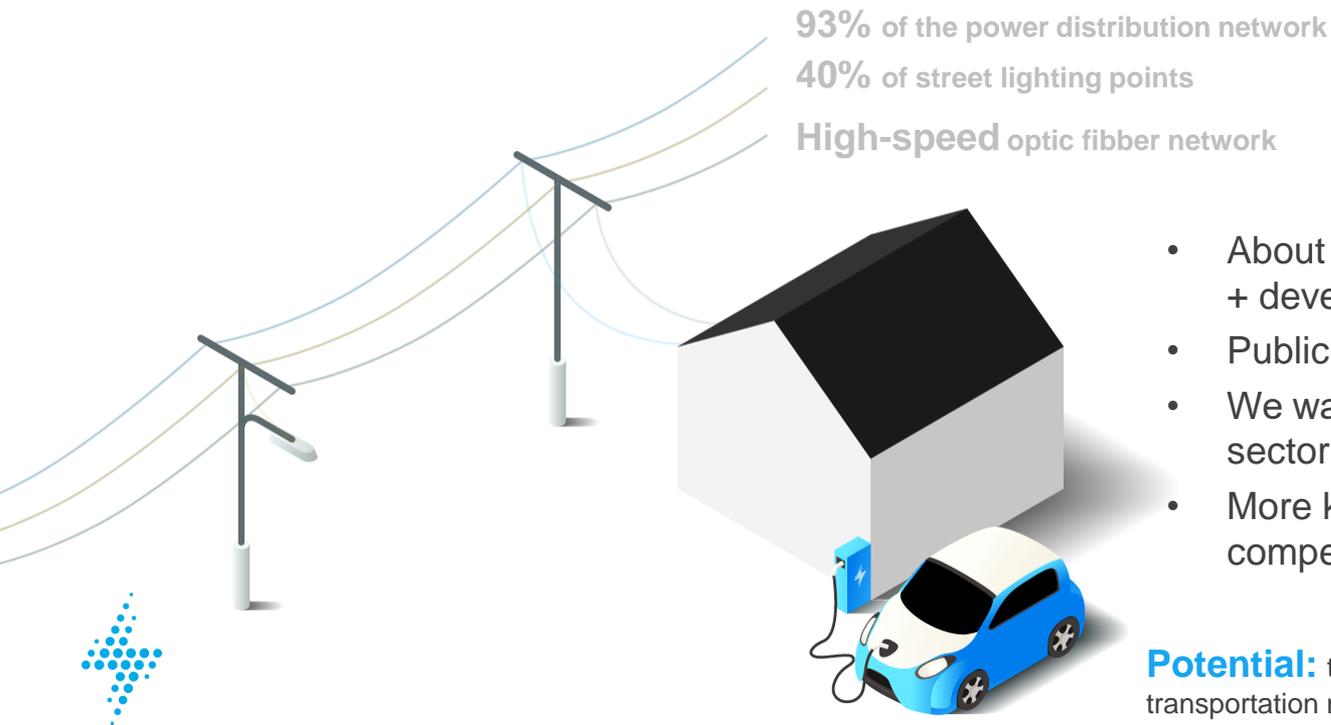
40% of street lighting points

**High-speed** optic fibber network



- We great new „market place“
  - Target by 2023: 0,3m clients
  - Investment up to 200m € within 5Y
  - After stabilization the OPEX split among grid & fibber
  - win-win-win outcome
- 

# JOINT MANAGEMENT OF INFRASTRUCTURES – A STORY OF VALUE



- About to obtain 160 charging stations + development plan
- Public transportations: trains & buses
- We want to be the „spokesman“ of the sector
- More kWh in grid – the more competitive is the price

**Potential:** the development of the electric transportation network

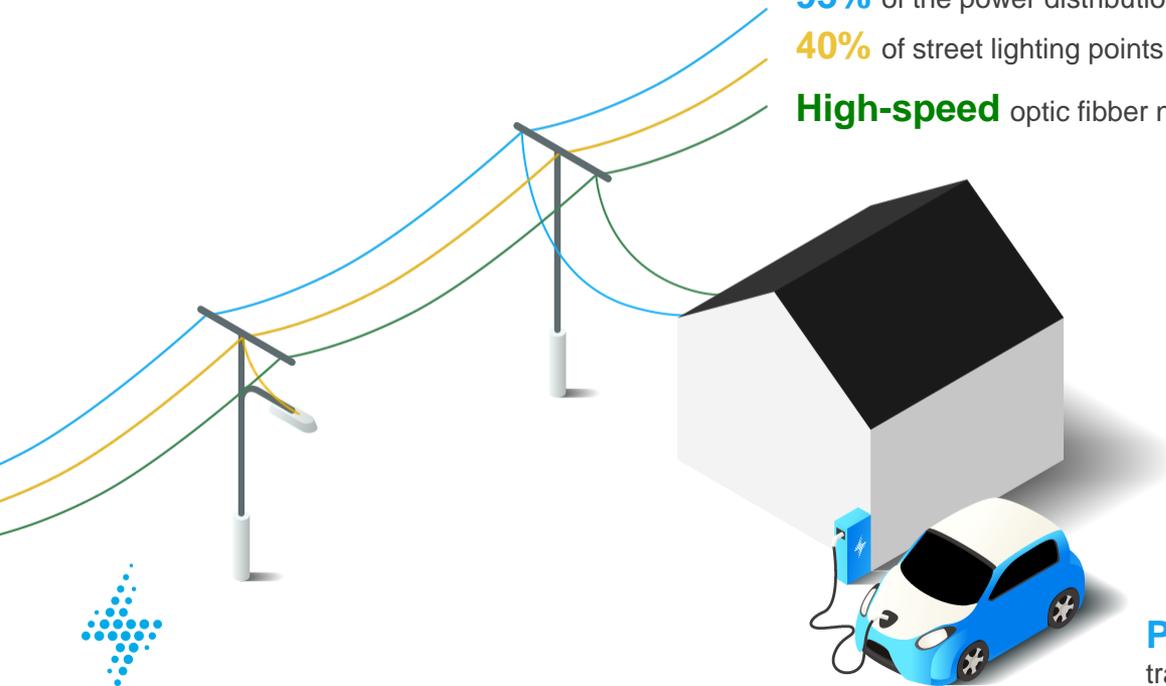


# COMBINED MANAGEMENT OF INFRASTRUCTURES – A STORY OF VALUE

**93%** of the power distribution network

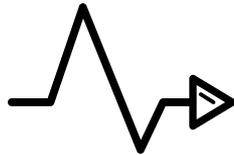
**40%** of street lighting points

**High-speed** optic fiber network



**Potential:** the development of the electric transportation network

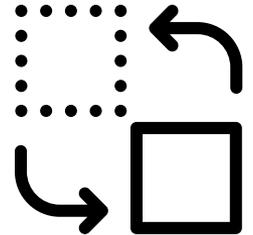
# WHAT'S NEXT – NEW PRICING MODELS



Dynamic



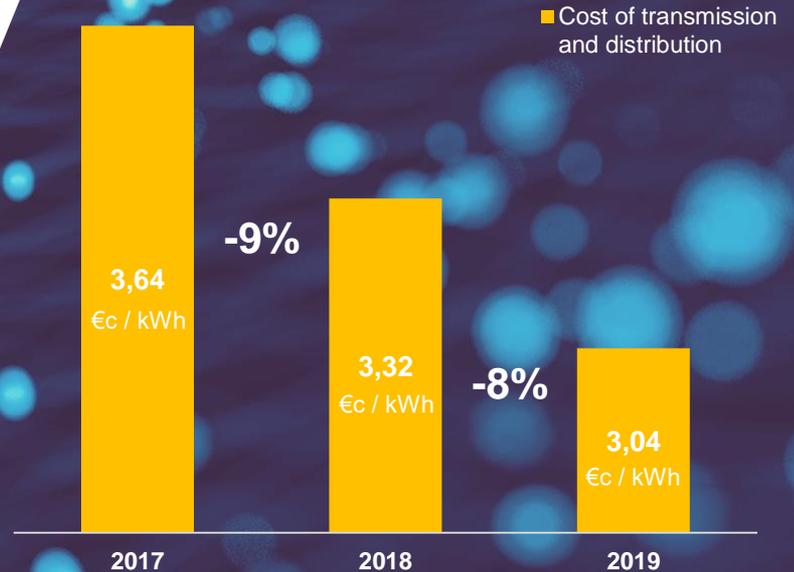
Client based



Flexibility (D&R)

# DECREASING TREND IN NETWORK FEE

- Increased network volumes and more efficient grid
- Stabilized long-term OPEX & CAPEX
- Low interests rates (WACC)





@elektrilevi

THANK YOU!

Q&A?

