

NGIoT Thematic Workshop:
Automotive industries and mobility
June 15, 2021

### Pitch By Adnan Özari

M.Sc. EE, B. Com, CEO and owner of the Danintra. Member of CEN DS/S-349 and CEN DS/S 491 (smart and sustainable cities and communities), active in European work groups En 12767 and EN40. Advisory board in Danish outdoor living Lab and "Vej og gadebelysning".



#### The EV charger conundrum

#### We have

- Single chargers
- Charger clusters
- Load balancing

#### We miss

- Smart chargers
- Load balancing that includes buildings and infrastructure (street light cabinets)



#### The EV charger conundrum



| ETAGO LOAD BALANCING SYSTEM WITH PHASE SWITCHING

**HOW IT'S WORK?** 

REALTIMECONSUMPTION OF THE BUILDING 170A

REALTIMECONSUMPTION OF THE BUILDING 130A







CONNECTION TO GRID 200A

We are getting smarter BUT

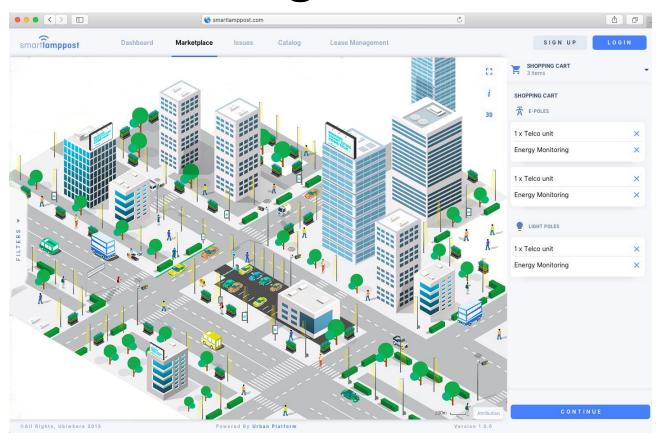


#### The EV charger conundrum

Main issue is not the grid or power or smart load balancing!!!!



#### The EV charger conundrum



Where to put the EV charger...



#### The EV charger conundrum

- Each parking lot has hundreds of spaces
- In 10 years, all spaces need charging capability
- Today we want some, but we cannot make exclusivity and flexibility at the same time
- And the grid capacity



#### The EV charger conundrum

#### Solution is:

- simple cheap connections at each parking space.
   Connector and chip reader.
- Smart cabinet with switching and load balancing
- Flexibility. Start with 5% and scale up when needed.
- SW to identify each connector, load needed and available and billing directions.



## Intra

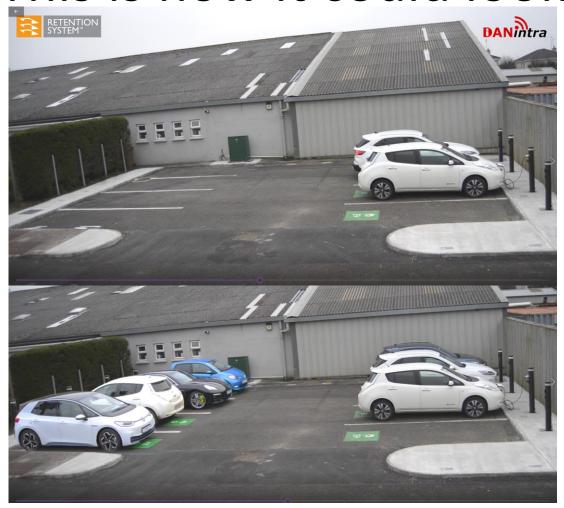


LOAD BALANCING FOR FLATS AND PUBLIC CHARGERS





This is how it could look





#### One to watch

**Danish version** 

https://www.youtube.com/watch?v=jqXcApv 9NI

**English version** 

https://www.youtube.com/watch?v=Ddyq7386qPg



#### **Partners**

- SLP SmartLampPost.
- ETAGO
- MC Magnum Cap
- Designer Mads Odgård
- Rosa
- Technopali LV
- Metalogalva
- IPL



#### **About Danintra**

Danintra is a Danish owned engineering- and trading company, established in the mid 80'ties, with its core business in the pole industry.

We design and calculate our own poles, the production is outsourced to our highly qualified partners in Europe.
We own the rights to our products along with the CE marking process.

Danintra has about 10.000sqm with 2.300sqm indoor for our more than 6.000 poles and accessories.



#### **About Danintra**

Danintra has positioned itself as the market leader in the Danish market for outdoor lighting poles in cooperation with some of the largest Danish professional actors, including Andel (Ørsted and SEAS-NVE), Verdo, Bravida, Energi Fyn, Citelum, Louis Poulsen and many others.

They have all chosen Danintra as their main supplier of outdoor lighting poles.