Public charging: today’s jungle
NEW EV-owners

Jane
- Married with kids
- IT Career with travel obligations
- Loves holidays
- Engaged with hobbies
  and lives in country X

Paul
- Married with grandchildren
- Pension
- Meet mostly friends in town
  and lives in country Z
Public charging points

Jane is confused
• Home it takes 6h
• At work 3h
• On the highway only 20min
• ...

Paul wonders the connectors:
• Type1, Type2
• Others?
• ...

AVERE
The European Association
for Electromobility
Ready to charge

Jane
• Has a charger at work
• Browse around for the best apps and cards
• Jane has now 5 cards: blue, green, red, yellow and orange

Paul
• Installs a home charger
• Receives a charge card Red with the delivery of his new EV
Jane charges her EV
- At home
- At work
- Uses opportunity charging
- Fast charging when necessary
- ...

Paul charges his EV
- At home
- At the supermarket
- ...

EV-charging
Paul is stuck
• Doesn’t have a smartphone
• Only has a debit card
• And the GPS of his car
• Paul has no possibility to charge, but has a granny charger?
• With help from the dealer, he finds out and talks for hours with his friend during charging

Paul visits an old friend
• Drives further then usual
• Can’t make round trips without recharging
Jane receives her invoices
• Prices per kWh (and session fee)
• Prices per time (and session fee)
• Prices per kWh and time
• Prices per kWh, time (and session fee)
• Fixed prices per session
• ... 

Her accountant has questions:
• What is the price
• What is cheap or expensive?
• What is the difference between blue, green, red, yellow and orange?
EV-charging prices

Jane pays for charging
  • At home she has no idea
  • At work, there is a system
  • Public charging price are unknown
  • There is no system

Paul pays for charging
  • At home he has no idea
  • At the supermarket, it’s free
  • The received card is activated but has no further info.
EV-charging prices country

Jane’s country X has
• Charging operator x-blue: 0.45€/min
• Charging operator x-green: variable
  0.396€/kWh (22kW)
  0.11€/min (22kW)
  0.264€/kWh (22kW)
• Charging operator x-red: variable
  0.48€/kWh after 8h adding 0.011€/min
  after 20h 0.48€/kWh (3.7kW, 11kW)
• Etc until Charging operator x-orange

Paul’s country Z has
• Charging operator z-blue: 0.55€/min
• Charging operator z-green: variable
  2€/session + 0.80€/kWh
• Charging operator z-red: variable
  0.28€/session + 0.10€/min + 0.28€/kWh
• Etc until Charging operator z-range

* Operators are not necessary the same in the countries
Jane is planning to travel to the country of Paul
- Card blue doesn’t work abroad
- Card red has the same tariffs as always
- Card green charges extra’s for the use abroad
- Card yellow charges the same as Paul would pay
- Card orange doesn’t work without any explanation

Jane’s does research about the prices:
- Operator blue has a display and offers also ad-hoc payment with wireless bank cards.
- Operator red has a sticker with the tariffs.
- Operator green gives the information by the app
- Operator yellow indicate a QR-code
- Operator orange has a helpdesk available between 8h and 20h without any explanation
Travelling abroad

Paul does a road trip in several countries but has anxiety

- Doesn’t find the price he will pay
- Relies on his car’s GPS navigation
- Has only a debit card and doesn’t have a smart phone
- Is interested in more operators but: operator blue and green only work with apps
  operator orange and red only accept credit card
Transparency
Customers point of view

Tarification:

• Prices displayed?
• Or prices available with one access point?
• Transparancy: price per kWh? (optional extra cost when not charging)
• Significant choice of payment options? (ad hoc payment)

Roaming:

• Seamless travelling in Europe?
• Parallel roaming options as with mobile phones?

Paul & Jane are only two profiles of so many...
Improvement areas

Put the consumer at the heart of the charging system:

- Transparent and non-discriminatory pricing
- Consumer Assistant
- Quality information
- Ease of payment