

# ***T3.3. - Update: User preferences for charging schemes – a survey in eight EU countries***

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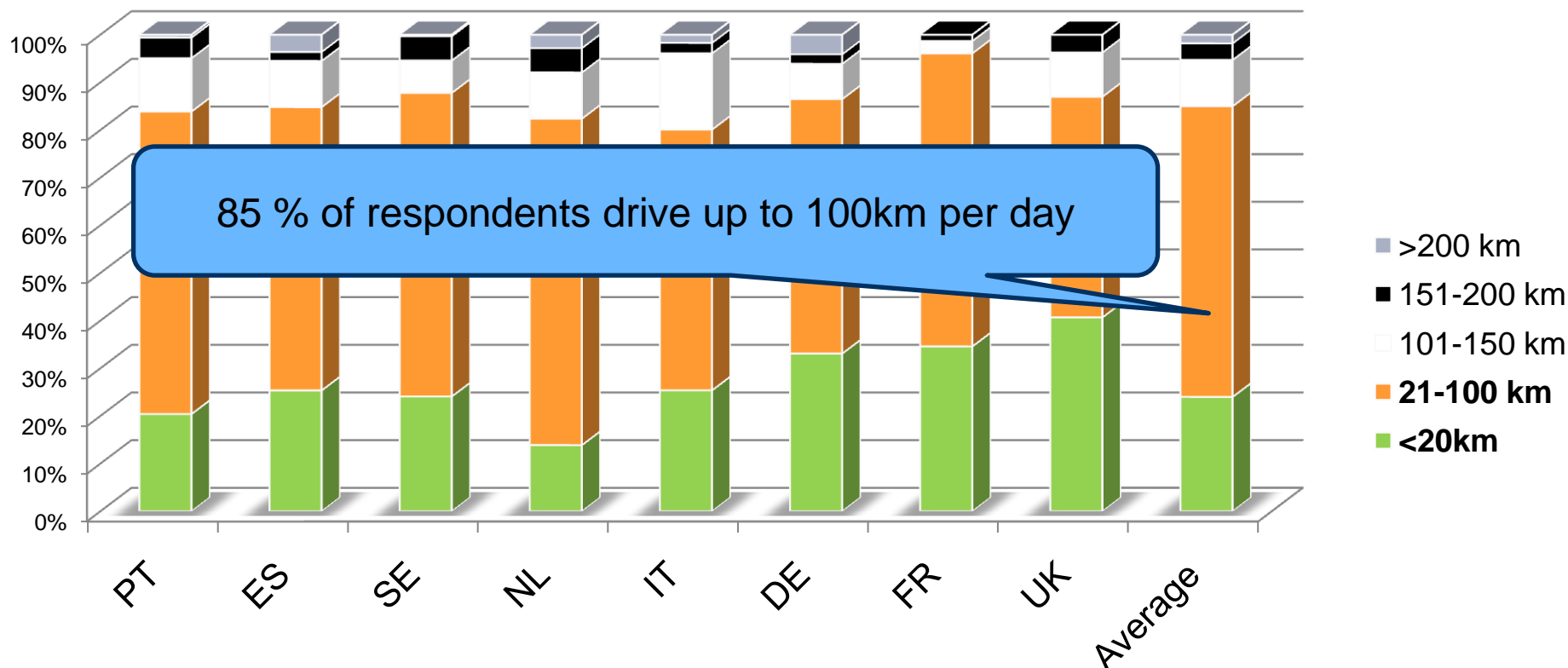
The research leading to these results has received funding from the European Union Seventh Framework Programme (FP7/2007 – 2013) under grant agreement No. 241295.

## Today's presentation

- WP3.3. final outcomes of the charging behaviour survey
- Links and inputs for other WP's → WP7
- Dissemination activities
- Next steps

- Currently moderate interest of consumers to buy an EV
  - Not surprising because limited models & infrastructure available
- People willing to buy an EV in 2 years:
  - Live in smaller municipalities and have a private parking place
- Indicated EV driving range (120km) perceived as not sufficient
- **Keep in mind: No perfect sample selection possible – results should be interpreted to provide directions**
  - Public charging requested to cover larger distances
- Relatively high interest to join delayed (off-peak) charging scheme
  - Less interest to participate in V2G schemes → BUT €60 p.a. can make a difference
  - Leased battery: does not change the picture dramatically
    - High concerns about battery persists (seems odd)

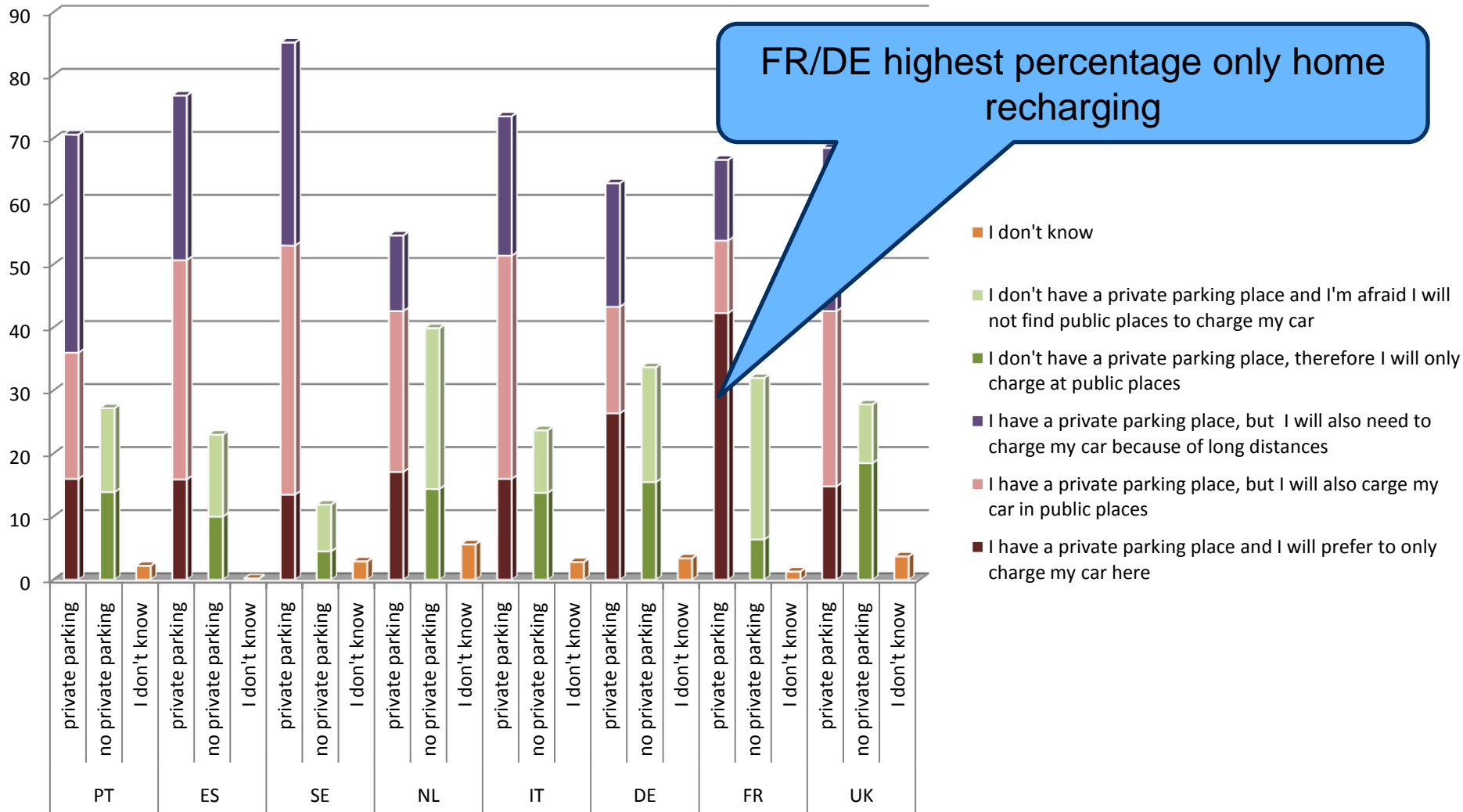
# Survey results: current daily kilometers



**BUT:** required battery capacity to be interested in buying EV: 308km (NL 389km)!

People take into account the occasional longer trip

# Preferred charging location



- 70% respondents has private parking place
  - 1/3 prefers to only charge at home/work
  - 1/3 also wants to charge at public places
  - 1/3 also needs to charge at public places because of long distances

30% without private parking place  
Of these: 12% is afraid they will not find a place to charge

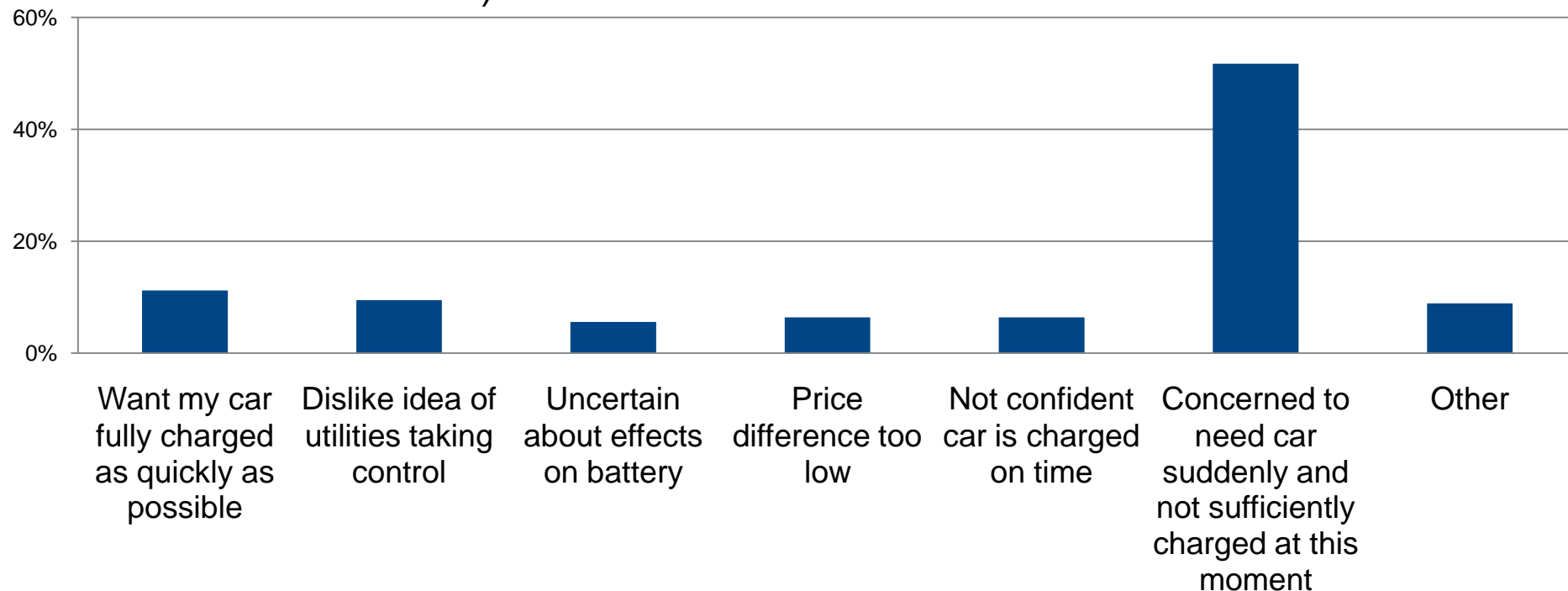
25% of these only want to charge at home with price incentive (!)

With price incentive (€ 5 vs 3)  
53% will only charge at home or work

These people are also more interested in buying EV in coming 2 years

# Survey results: interest in delayed charging (with price incentive)

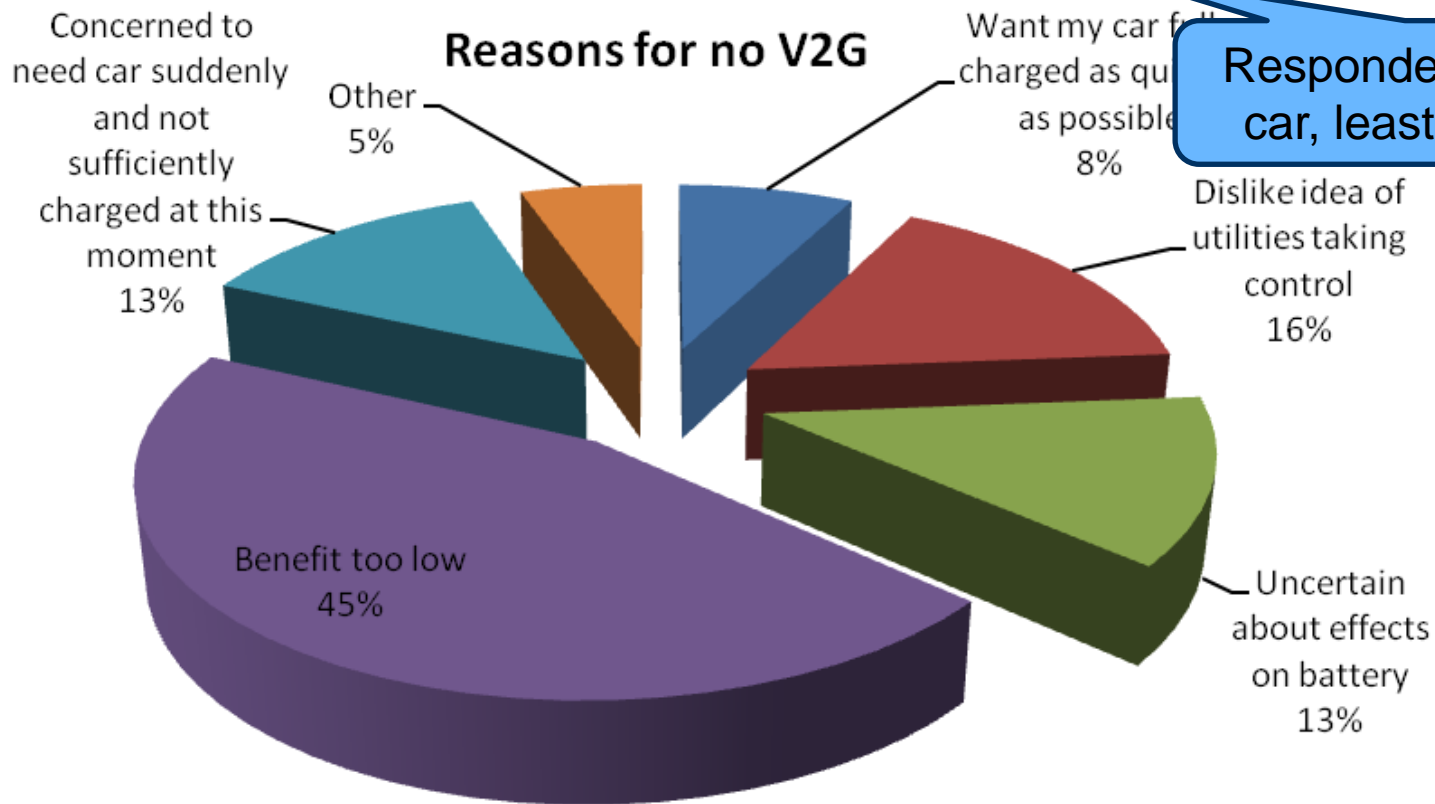
- Delayed charging = night charging, battery full in the morning, 2 vs 3 euro
- Average high interest in delayed charging (5.74 on 1-7 scale)
- Reasons for not being interested in delayed charging (everyone ticking 4 and lower on scale):



# Results V2G

Young people & respondents (currently) without car, most interested

- V2G: unload & recharge whenever plugged in
- Least interest compared to delayed charging (4.4 on 1-7 scale)

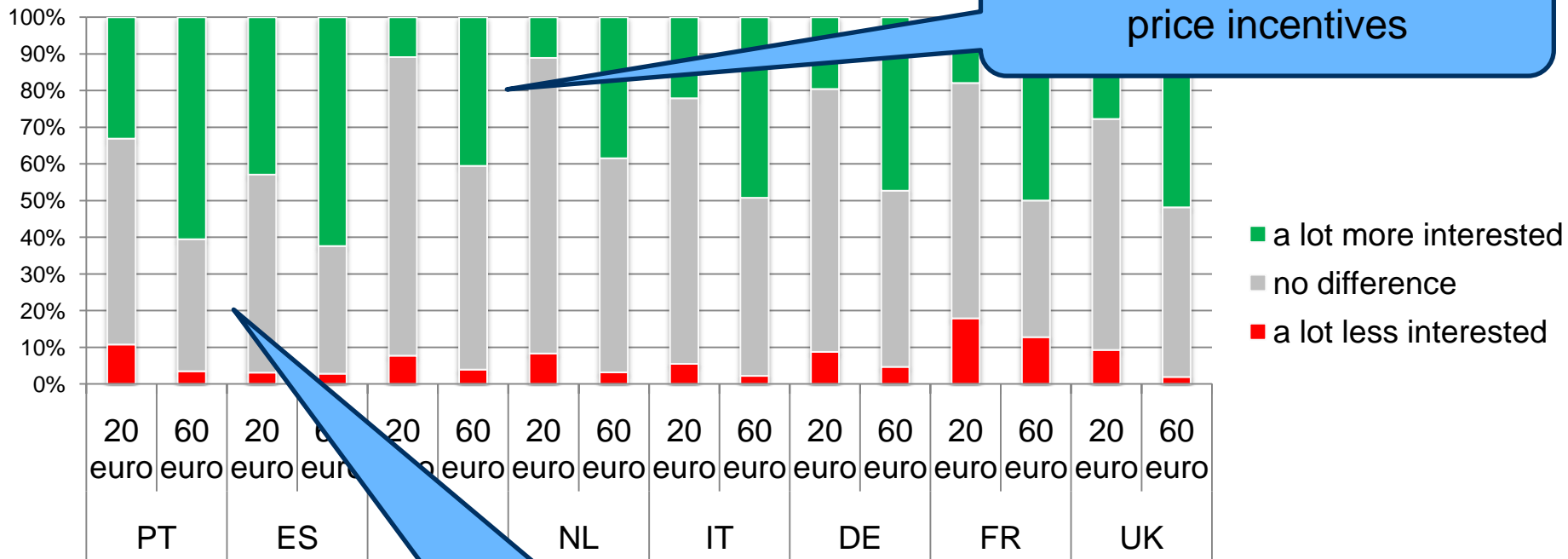


Respondents with big car, least interested



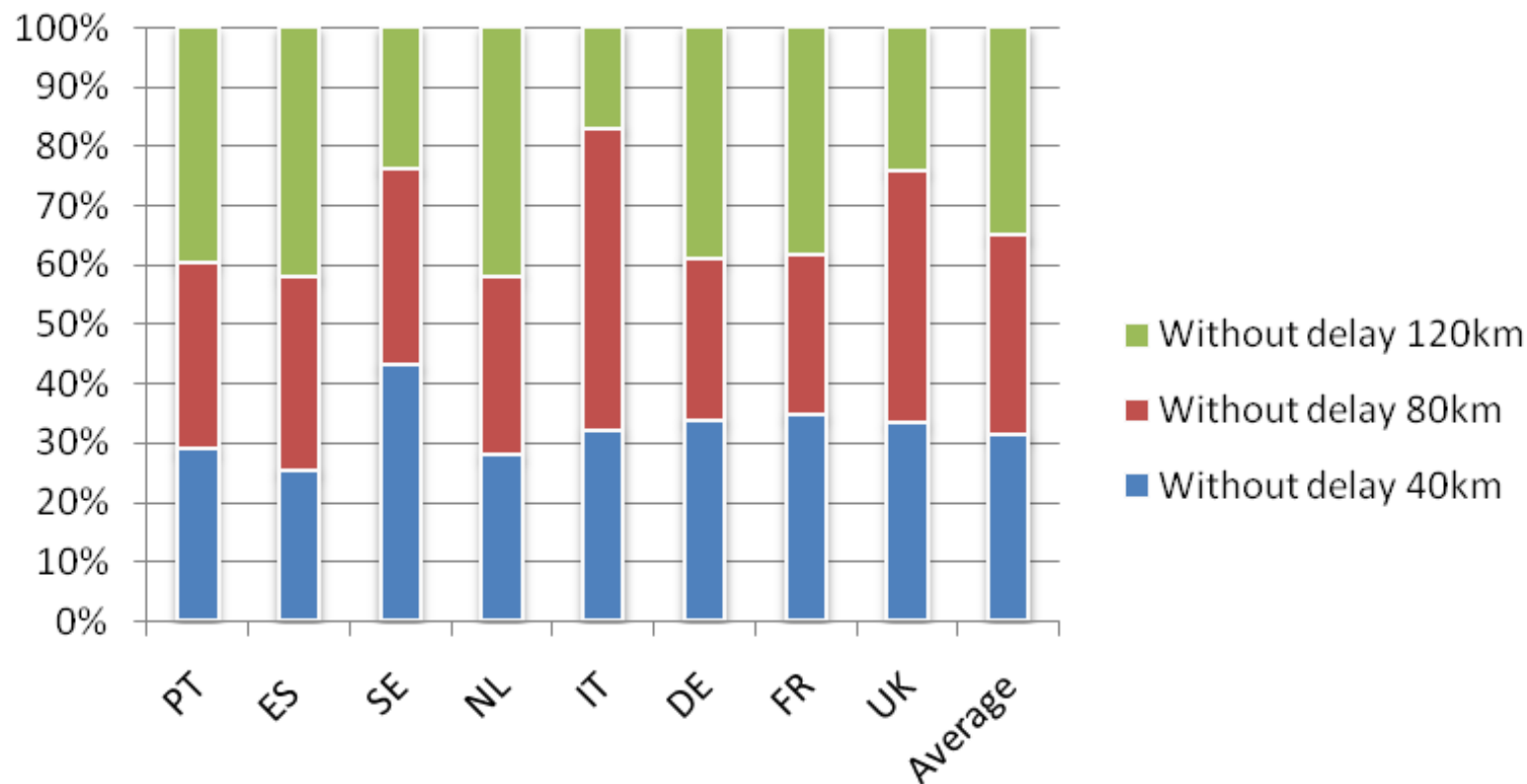
# Interest in V2G – Impact of price incentives

- Interest to participate in V2G services with price incentive of € 20 and € 60 / year:

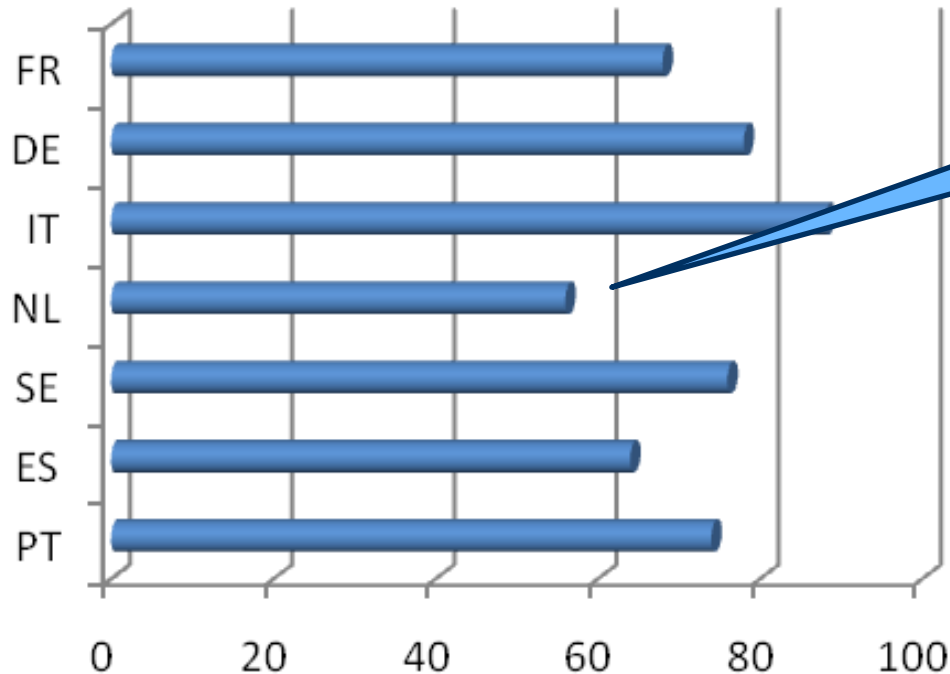


- Options: Recharge battery up to 40km:€2 80km:€2.5 120km: €3

## Recharging with specified battery capacity



## Minimum required battery capacity of 120km or less



On average 70km considered sufficient

■ percentage of respondents indicating 120km or less

# Survey results: Impact of leased battery

## Impact of leased battery



- People want mixture of home/work recharging and public recharging spots
  - French/German: Highest percentages only home recharge
  - With price incentives, it is possible to 'massage' behaviour towards charging at home/work → Users in the next 2 years
- Urban/suburban infrastructure
  - People living in smaller communities (<100,000) will charge at home/work
  - People living in large cities → most afraid of being 'stranded'
  - Cities: Recharging at points of interest (large office parks, shopping centres)
  - Fast charging, inductive charging? → help to reduce fears of city dwellers
- Initial user group willing to participate in delayed charging schemes as they have mostly private parking → home recharging
  - Price incentives positive effect to influence consumer behaviour
- V2G schemes generally lower acceptance levels
  - On average 70km should remain in the battery → provides indication which battery capacity could be used for services

## Task 3.3 Social aspects of large-scale deployment and grid integration of PHEV/EV (t7-t14)

### Next steps:

- Input social parameters for WP7
  - 'Social satisfaction' in the three scenarios
- Dissemination activities
  - Abstract for 2<sup>nd</sup> German Mobility Conference June 6<sup>th</sup> NOT accepted (?)
  - Lunch colloquium at ECN (~100 people)
  - CEPS Electric Mobility Conference 26<sup>th</sup> May Brussels pending
  - Green eMotion WP9 Roadmapping: G4V input charging strategies
  - Still seeking opportunities for the coming months....
- Finalisation of WP3.3. report
  - Last inputs provided by WP3 partners – will be integrated into report

# Grazie mille!

