Stakeholder mapping

Interreg North Sea



Super Smart Charging Hubs

Deliverable D1.1 Transnational stakeholder mapping related to endusers

Deliverable D1.2 Transnational stakeholder mapping related to suppliers

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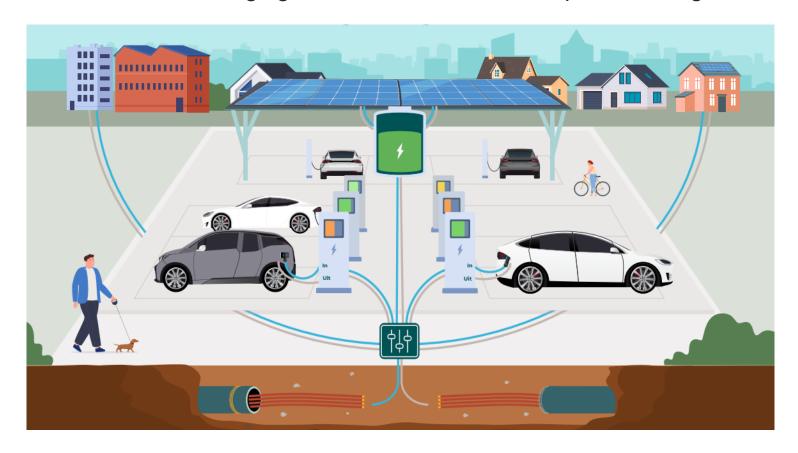
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Introduction

The Super Smart Charging Hubs project aims to enable the uptake of novel super smart charging technologies for 25 SMEs by launching three Super Smart Charging Hub Living Labs, addressing the grid challenge caused by the increase of BEV electricity demand and supply from renewable energy, resulting in more Super Smart Charging Hub innovations, more charging infrastructure and less impact on the grid.



What is a Super Smart Charging Hub?

A Super Smart Charging Hub (SSCH) is:

- A charging hub with multiple bi-directional smart charging stations.
- A SSCH provides charging infrastructure for V2X enabled electric vehicles (these could be shared cars, private cars and vans and possibly also light electric vehicles).
- The SSCH is connected to the electricity grid and makes use of locally produced renewable energy sources. It consists of an energy management system for load balancing and optionally also energy storage capabilities (next to the V2X EV's).
- The SSCH includes a 'virtual power plant' (VPP) that solves the business case as it aggregates energy within a portfolio.
- The SSCH interacts directly with the grid operator, using a smart energy management system to
 optimize electricity use. This will reduce strain and have a positive impact on the grid, often allowing for
 a smaller connection to that grid.
- The SSCH may also provide energy for other energy users than the energy for charging the EVs. For instance, office buildings or houses.

Deliverable description

This report concerns two, combined, tasks:

- WP1, task 1:Transnational stakeholder mapping related to end users:
 Identify in each LL the potential end-users such as fleet owners (taxi's, shared mobility providers, logistics, ferries and boats, public transport and services (pilots for ships on Westerschelde for instance), private car owners, energy supplier or traders, local energy communities and district system / grid operators.
- WP1, task 2: Transnational stakeholder mapping related to suppliers: Identify in each LL the potential suppliers or stakeholders related to building and exploiting the SSCHs such as grid operators, owners of solar panels, real estate.



Approach

- Three SSCH living Labs (in Belgium, Netherlands and Sweden) have made an inventory of their stakeholders.
- These Living Labs completed the questionnaire for stakeholders in their project and region.
- Province of Zeeland then processed the information and drafted this deliverable.
- The deliverables was by the Living Labs.
- The document is presented and discussed during a meet-up for the SSCH.
- According to consensus the report was finalised.

8		D	E .	T.	G				K	L.	M
Importance f project (++/+/-/)	r How	"Quotes" / opinions	Role Wishes/Needs	Vision on future		Already contacte d	Interested ?	Contact	Who contacts who	Actions taken	Information / Reports / Data
	Users		Companies around the Machinefabriek					Gemeente Viissingen	Igor	User tab	See tab Users. Based on EV-tools: 156 EV are ex 2028 in the nearby area.
	Users	N/A	Explicit parking contract for 250 spots	,	Kees Maas Kees Maas@damen.com, Edwin de Kok E.de.Kok@damennaval.com	Yes	Yes	Gemeente Vlissingen		First meeting took place. Appointment for exact numbers of users and V2G.	Transisition to EV within 5 years. Commitment to V2G is a challer are willing to investigate this tog
	Users	N/A	We expect no substantial demand from self employed	Switch to EV in future (3-5 yrs)	Website of KVK	N/A	We expect	PZ	Kaya	PDF downloaded	We expect very little or no self er
	User		Gebruiker Laadplein AC Laders	Taxi's worden geelektrificeerd. Openbaar laden vaak lastig. Centrale laadgelegenheid is oplossing	Kees de Steur. K.desteur@citax.nl	Yes	Yes	Agrisnellaad		Contact Citax Tiel augustus 2025. Hebben interesse in V2G. Volgen ontwikkelingen	Citax staat open voor gebruik ce laadplein
•	Users	N/A	N/A	transport system in Zeeland,	First region Schouwen-Duiveland (2025), Taxi de Vlieger + De Noot will operate. See taxi companies	No	Possible	PZ	Kaya/Kim	None yet	Flex-taxi companies don't have tot electric, expected this chang 5 years. And when switching to b probably chanse in their own ho
•	Assets (wheels)	Voor Onzelluto is het delen van elektrische autor en smart charging duidelijk complementals. Simme laadoplossingen, zools uitgesteld laden en bidirectioneel laden, klunnen immera en behangilijke bijdrage leveren aan een stabiele en erreigenouzierinige, en daarmee vereigenouzierinige, en daarmee beschilbaasheid von laadopunten als bespaning op de laadokouten. Onzeluko gaat daaroom graag de sammeenseling aan om concrete	Mobility Provider	Voor Orsekuto is het delen van elektrische aufs es en mart charging duidelijk complementais. Simme laadoplessingen, zoals uidgesteld laden en bidirectioneel laden, kaunen immer en belangrijke bijdrag einveren aan een stabiede entrejlevoorderiiking en daarmee metrejlevoorderiiking en daarmee ook en de daarde en	Onzelvato, Otto Smit ottosmik@onzeauto.com	Yes	Yes	Gemeente Vlissingen	lgor	First meeting 19/06/25	Zie tabblad Users'
					Teun de Zeeuw,	Yes		Gemeente	Igor	Mail set out 22/8/25	
					teun@kloegcollection.com			Wissingen			
*/-	Users	Only interested in super fast charging, in this set-up in the Machinelabriek only 2 fast chargers will be installed. Chances that the pilot cars have no spot is too high for them to consider charging there.	Wish to charge vehicles super fast since they have to pick up/bring pilots from Antwerpen to Vlissingen and the other way around.	If more super fast chargers will be installed they are open to have a new conversation.		Yes	Not yet				
**	Network Operator	We are searching for the right solutions with clients to look for flexibility in their use of energy." We are still not shure what kind of contract is best for the net." We advise customers to do their enryly producing and -consuming as much as possible behind the meter?	Netcongestion 5-10 years		Jaco Verburg, 06 12279773, jaco.verburg@stedin.net	Yes	Yes	PZ	Kim	20250819 Jaco Verburg Stedin gesproken;	
	Energy supplier				Timvan't Wel,	Yes	Yes	PZ/Gem Vliss/A	eri All	First meeting 26/11/24	Tim very interested in SSCH pro
++	Roof, possible user			?	Eric Roland, 06-53364308	Yes	Yes	PZ	Igor	contact aanleveren Gem	IQ: zij zijn enthousiast.
	Ground		optie 2, preference building site			Yes		Gemeente	Igor		IQ: Machinefabriek blijkt geen o

Stakeholders

Stakeholders are organisations with an essential role in a SSCH.

We divided stakeholders into two main groups:

- Group 1 Suppliers (included are project partners in a SSCH):
 - Governmental bodies,
 - Grid operators,
 - CPO's (charge point operators)
 - Companies supplying hard- and software for the SSCH
 - Property owners
 - Consultants (energy, legal)
- Group 2 End users:
 - Shared mobility companies,
 - Companies with car fleets,
 - taxi companies,
 - Households and individual car owners
 - Property owners

Stakeholder - Suppliers' quotes

Network Operator: "We are searching for the right solution with clients to look for flexibility in their use of energy"

Municipality: "It is our responsibility to provide the structure for our growing city and the ecosystem regarding energy resilience"

Charging point operator: "We want to test our new software/understanding and technique regarding charging points and end user experience"

Energy Agency: "More charging points is main focus, bidirectional is interesting"

Stakeholders group 1 – Suppliers (slide 1)

Governmental bodies, mostly municipalities:

- Want less cars, less pollution in their cities, making their cities more attractive to live in and visit.
- Need to think ahead to develop a structure for energy that is resilient, including future expansion and developments like electrification of society
- Are looking for solutions to accommodate more EV loading capacity in congested area's

Grid operators:

- Are looking at ways to reduce grid-congestion
- Want to contribute to a sustainable future
- Want to develop knowledge and a technical and legal framework regarding bidirectional energy-supply
- Are asking their customers to combine energy production, storage and usage "behind the meter"
- The larger companies question the capacity of a SSCH to have substantial influence on gridcongestion
- Some are somewhat doubtful if the SSCH will have a small footprint on the grid
- Are searching for a way to cope with companies (e.g. a SSCH) returning electricity to the grid to help them balance the grid.

Stakeholders group 1 – Suppliers (slide 2)

CPO's:

- Want to extend their business in area's with netcongestion (where they are now limited in their capabilities)
- Want to explore ways to lower prizes for their customers
- Want to explore ways to diversificate their business (energy generation and storage)

Companies supplying hard- and software for the SSCH:

- Want to use the SSCH project to develop their Energy Management System (EMS) to help companies, not only CPO's, conducting their business in congested areas.
- Want to test new software/hardware regarding charging points and end user experience
- Have solutions on how to connect different components in a non consession grid and want to further develop and enlarge their expertise.

Stakeholders group 1 – Suppliers (slide 3)

Property owners:

- Supply space for SSCH's because of wanting to have better added value for their customers.
- Are interested to supply space for SSCH's for better financial incentives for residents.
- Want to be part of a sustainable future

Consultants (energy, legal):

- Want to gather knowledge, build a technical and legal framewok for grids, storage and energy sharing.
- Want to make SSCH have a positive effect for every stakeholder.
- Want to create a "holistic" energy solution (with regard to sustainablity and the common good)
- Want to generate business-opportunities for themselves from the learnings



Stakeholders – End users' quotes

Property owner: Better use of locally produced energy, better financial incentives for residents, more sustainable transportation

Sea pilots: "We need superfast charging for our service and a secured spot to do it"

Carsharing company: "Smart charging solutions, such as deferred charging and bidirectional charging, can make an important contribution to a stable energy supply and, at the same time, stimulate the use of electric shared cars, both through wider availability of charging points and savings on charging costs"

Private EV owner: "parking spot nearby is more important than charging, but to charge my car is an extra feature I like"

Stakeholders group 2 – End users (slide 1)

Shared mobility companies

- Want to be at a hub location for mobility
- Want to supply carsharing in dense inhabited area's
- Ideally want more carshare-cars in one location.
- Want to be able to be more affordable for customers through V2G

Companies with car fleets

- Know their demand for EV charging
- Have a good prognose for growth of charging demand
- Want their fleet to advance in sustainability
- Want to reduce costs



Stakeholders group 2 – End users (slide 2)

Taxi companies

- Are electrifying their car fleet
- Have problems finding good charging-spots nearby their hotspots of activity
- Need fast charging and guarantee of accessibility of charge points on certain timeslots

Households and individual car owners

- Want cheap parking and charging, especially when they have a parking spot that belongs to their apartment or house.
- Are at this moment rather indifferent on the charging, when they do not have an obligation to park their car and load in the SSCH when they're at home (through a parking space belonging to the house).

Stakeholders group 2 – End users (slide 3)

Property owners

(as a supplier provide a place for the SSCH to conduct their business but also could be a part of the VPP; or just selling energy from their PV panels or buying energy from the SSCH.)

- Are interested in better use of local energy and less problems with congestion when building new projects
- Want to investigate in sustainable solutions for their customers...
- Want a "one stop shop" for local for local energy production and storage, parking space and dealing with the grid operator.
- Are interested in lowering costs for grid connections and energy consumption/ loading of EV's.



Obstacles

What obstacles, concerning stakeholders, are encountered?

- Not every grid operator is interested join a SSCH initiative
- Grid operators do not have, or are developing, control software to be able to communicate with a SSCH and manage double-sided supply of energy
- EMS's regarding bidirectional energy supply have to be developed
- Car fleet owners are hesitant to step into V2G
- Some car fleet owners (in particular taxi companies) want a secured place and timeslot in the SSCH.
- Charging demand is not in every location enough to justify a SSCH
- There are not many V2G EV's at the moment
- Regulations have not yet been established, so there is no standard protocol for V2G yet
- Individual EV owners seem not very interested in charging in a SSCH.

Conclusion

A Super Smart Charging Hub has a broad band of stakeholders, from municipalities, grid operators, property owners, companies that build and operate the SSCH to car fleet owners and private individuals.

The interests are primarily focused on avoiding or reducing grid congestion by minimizing the burden on the electricity grid and creating a cost-effective and sustainable charging option for EV's, in an environment where this would not be possible with a conventional charging plaza.

The SSCH pilots will have to overcome a number of hurdles, such as regulations that need to be implemented, grid operators' doubts about the impact, and the growth in the supply of V2G-compatible cars that is not yet available but is expected.

It therefore seems the project has been launched at the right time; this will allow the uncertainties to be tested in practice. And the experiences will lead to recommendations for further development of these types of solutions, which are likely to increase with the growth of EVs and increasing grid congestion.



SSCH Consortium









Thank You

For more information:

www.interregnorthsea.eu/super-smart-charging-hubs

www.linkedin.com/company/super-smart-charging-hubs

