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AUTONOMOUS, SEAMLESS, SECURE.

Plug&Charge Intuitives und Sicheres Laden

E-MOBILITY FORUM Kreis Konstanz

October 21th 2022



COCK DAIMLER SIEMENS



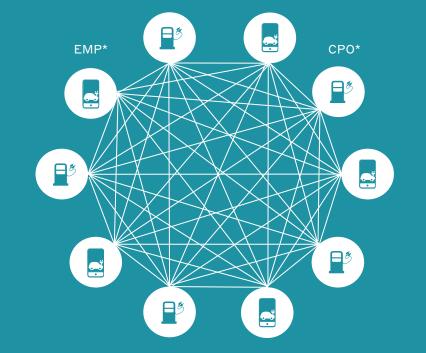
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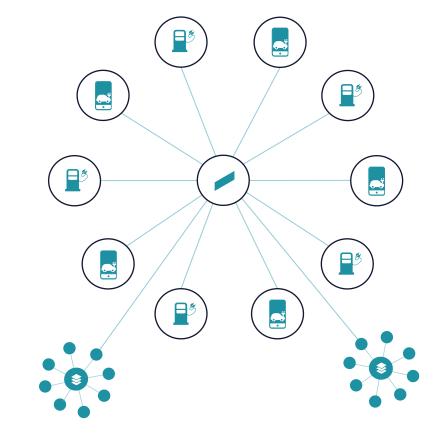
GROUP

SOLUTION

нивјест







WITHOUT HUBJECT

WITH HUBJECT

* CPO – Charge Point Operator; EMP – Electric Mobility Provider



нивјест

What does the future look like?



CHARGING POINTS ALL ON A SINGLE MAP

CHARGE ANYWHERE ANYTIME

SEAMLESS CHARGING WITH YOUR PREFERRED PAYMENT METHOD

ALL CHARGING STATIONS ARE SAFE AND SECURE ABOUTHUBJECT

Our Service

#1

E-ROAMING

WITH MORE THAN 1000 PARTNERS, THE HUBJECT PLATFORM IS THE BIGGEST INTERNATIONAL DIGITAL B2B MARKET PLACE FOR SERVICES RELATED TO THE CHARGING OF ELECTRIC VEHICLES.







#2

PLUG & CHARGE

WITH PLUG&CHARGE VIA ISO 15118 HUBJECT NOW PROVIDES A MARKET-READY, GAME-CHANGING TECHNOLOGY FOR INTUITIVE AND SECURE CHARGING.

> Plug& Charge

#3

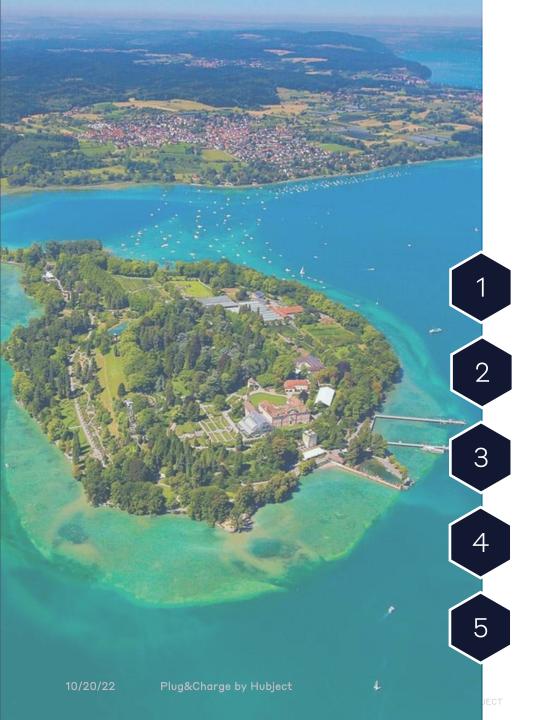
CONSULTING

CATALYST FOR LEADING GLOBAL ENERGY, MOBILITY AND SOFTWARE INDUSTRIES.

SPEARHEADING DIGITAL MOBILITY.



10/20/22





1 l trisiert

Intuitives und sicheres Laden mit **Plug&Charge**

E-MOBILITY FORUM Kreis Konstanz 21.Oktober 2022 Insel Mainau

Einführung und Markt

Grundlagen zu Plug&Charge

Technische Umsetzung

Hubject USP

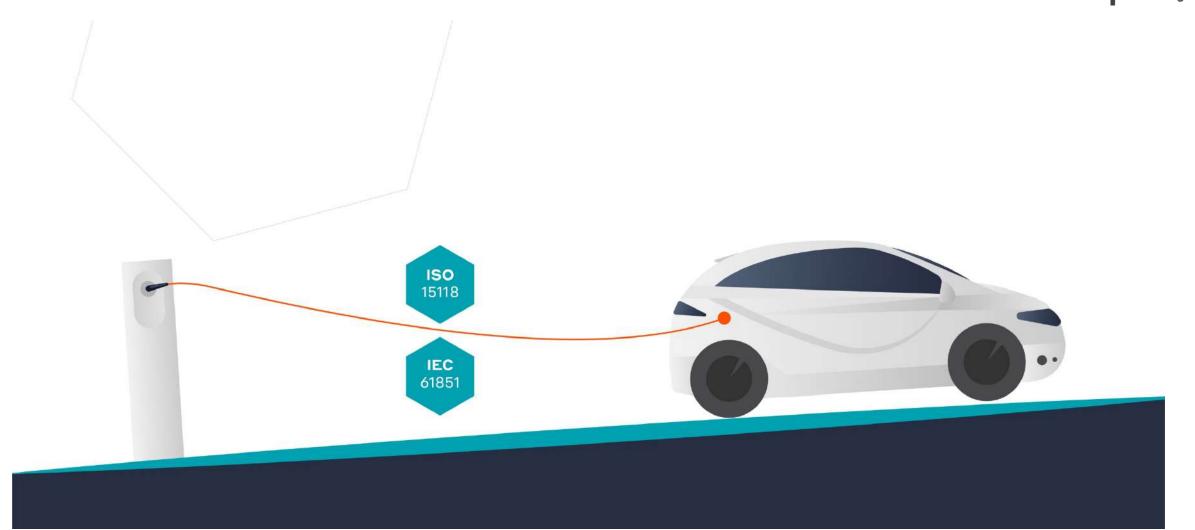
Q&A



Introduction & Market Adoption

What is Plug&Charge?







Introduction to Plug & Charge







Manually activated charging



Automated charging

Best user experience

✓ Fully **automated** digital charging experience

Secure

Most secure method of charging authentication (acc. ISO15118 standards)

Digital communication between EV and EVSE

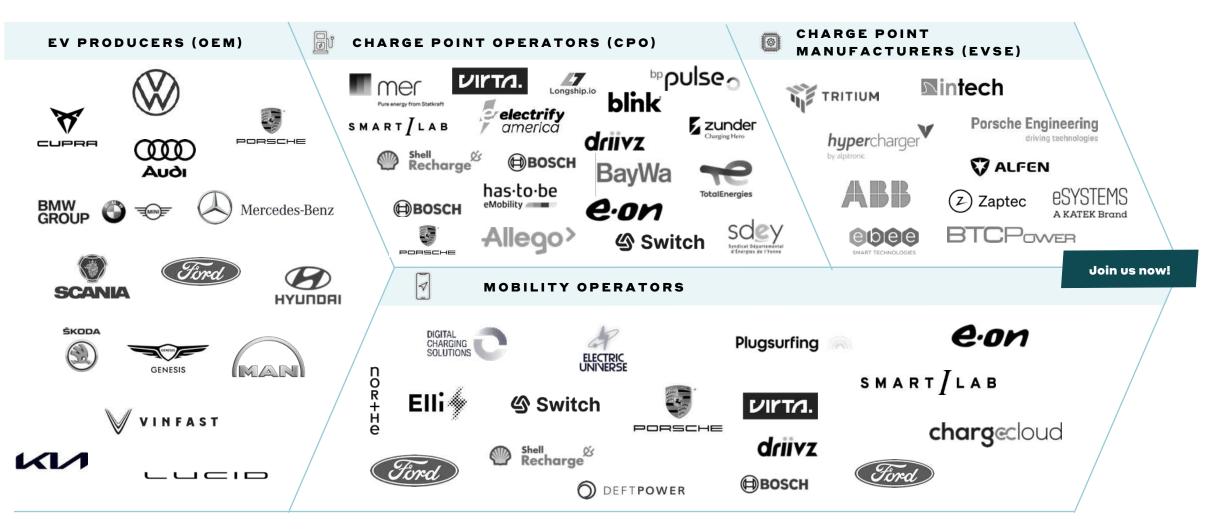
Enabler for communication driven features:
Smart charging, Reverse charging

Facilitating new value adding features

 Prospects of secure information driven, value adding features: Internet, software updates, digital payments etc.



Hubject is establishing the global Plug&Charge ecosystem



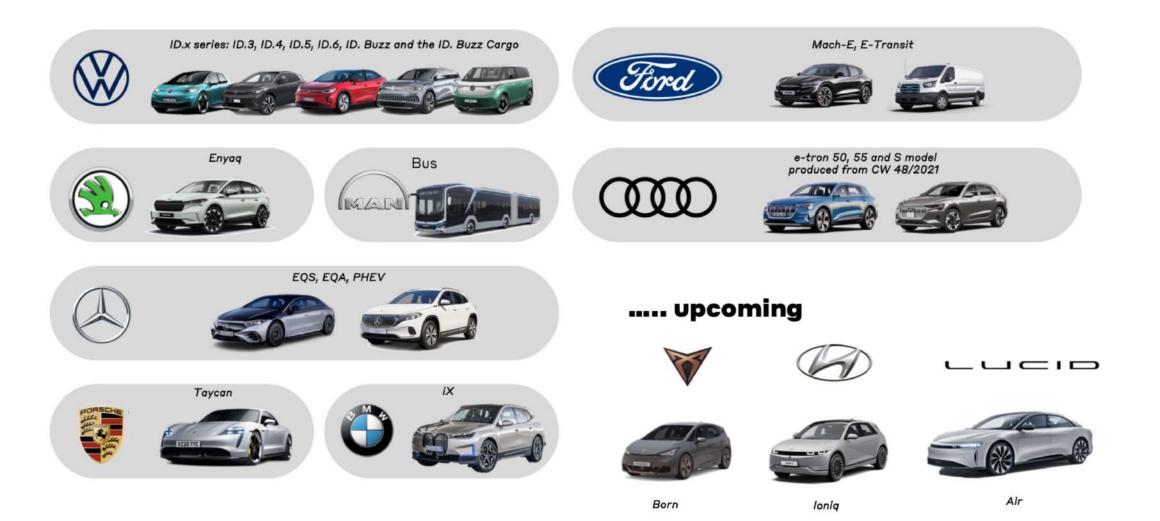
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OEMs Plug&Charge capability*



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Foundations and Technical Implementation



ISO 15118: High level use cases based on secure communication



ISO 15118-2



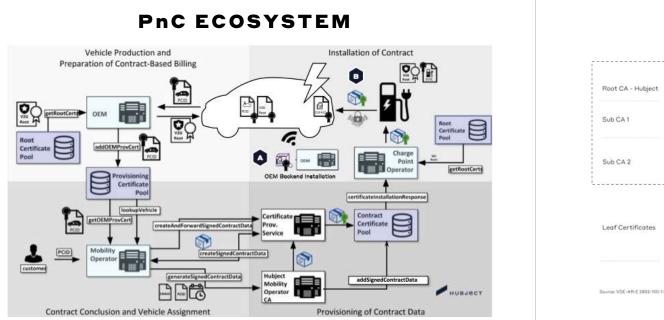
ISO 15118 and the VDE Application Guide are basis to the **Hubject Plug&Charge Ecosystem and V2G PKI**

VDE Application Guide VDE-AR-E 2802-100-1 VDE INTERNATIONAL ISO 15118-2 STANDARD a standard - way the concernment of the approval procedure by distinction DKE Digeniary bland it was introduced in the VDE Doethcators Code of saft largs under the VDE number indicated above and amounted in the " Fest editors 2014-04-01 Reproduction prohibited - also for internal use IC5 43 120 43 040 15 35 240 60 Road vehicles - Vehicle-to-Grid Handling of certificates for electric vehicles, charging infrastructure and backend systems within the framework of ISO 15118 Communication Interface -English translation of VDE-AR-E 2802-100-1:2017-10 Part 2: Network and application protocol Zertifikats-Handhabung für Elektrofahrzeuge, Ladeinfrastruktur und Backend-Systeme in requirements Rahmen der Nutzung von ISO 15118 Englische Übersetzung von VDE-4R-E 2802-100-1:2017-10 Which is not find the interface de communication entre vehicule et dessus Mechagos ---Gestion des centificats pour les véhicules électriques, infrastructure de charge et systèmes backend dans le catire de ISIO 15118 Traducióbon angúsies de VDE-AR-E, 2502-100-1.2017-10 Partie 2: Exigences du protocole d'application et du niseau Document comprises 76 pages Translation by VDE language service In cases of doubt the German original shall prevail Reference number ISO 15118-2-2014/Er ISO IEC 0.00.2014 Parage on B 108-1492-ter Ballion en af Dife. Berlin, ensisible, friendurt en Man. a pro trancas for memory use by VDE VERLAG GARM, 1002 Barrier

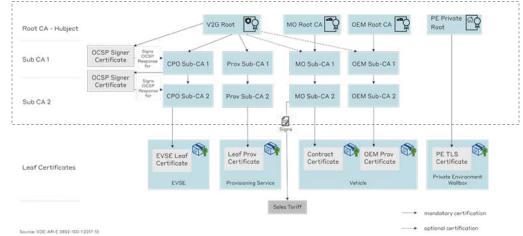




Hubject Plug&Charge consists of two IT Systems: The Plug&Charge Ecosystem and the Public Key Infrastructure (PKI)



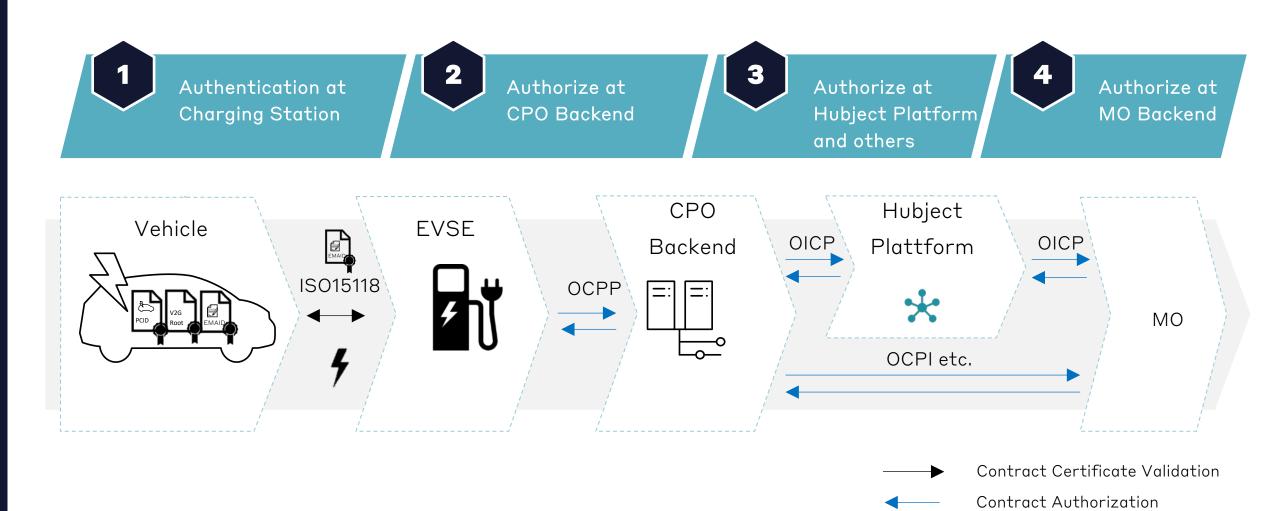
V2G ROOT PKI WITH V2G ROOT CA



TECHNICAL IMPLEMENTATION



Authenticate and authorize Charging Session



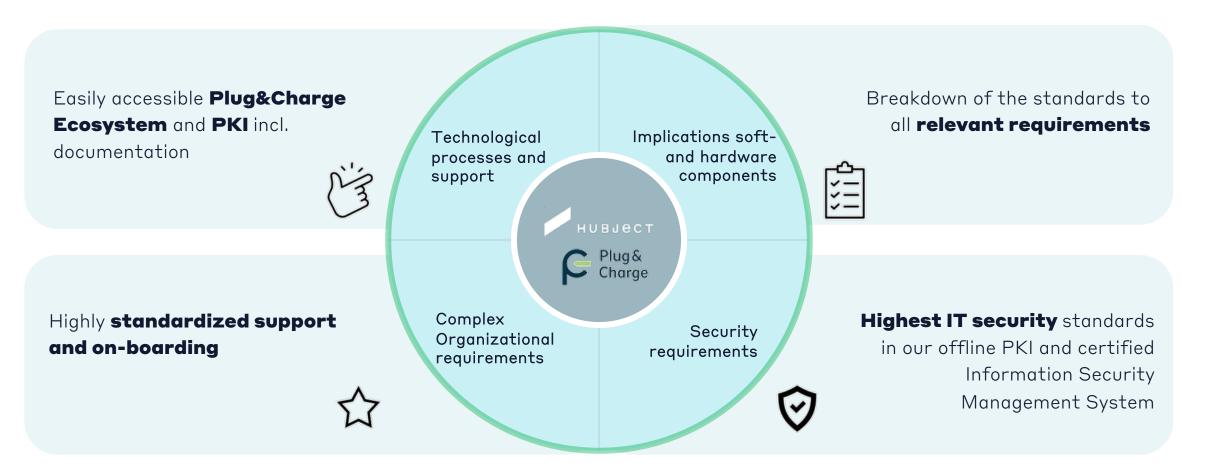
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Hubject Plug&Charge Solutions & USP

Hubject's Plug&Charge Value preposition

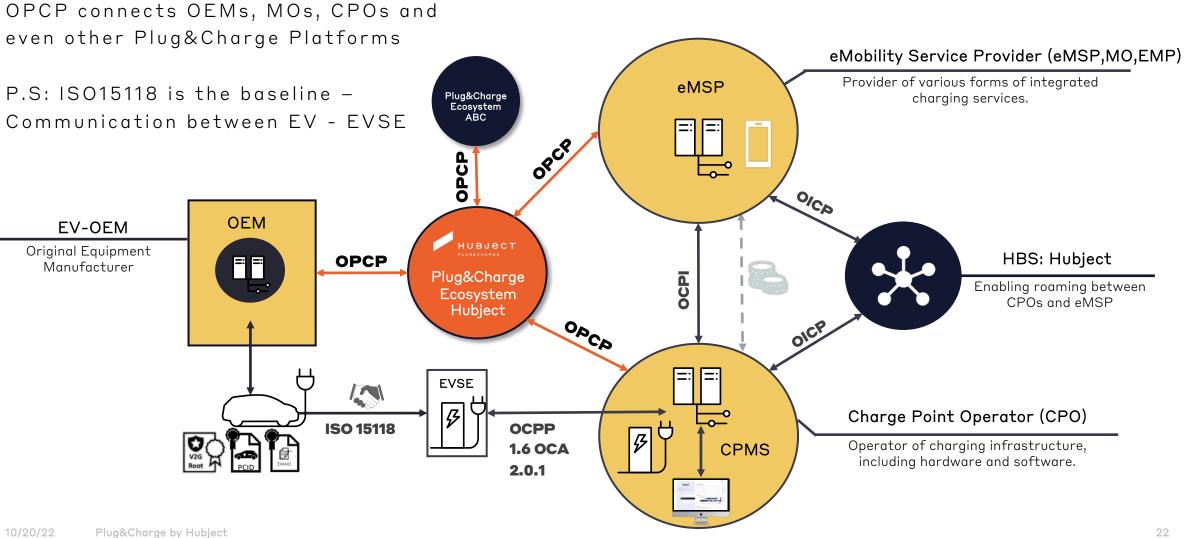




Protocol Landscape

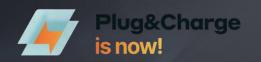


Github - https://github.com/hubject/opcp/





Get in touch with our Plug&Charge experts now!







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