



GIREVE

Interoperability of EV Charging



GIREVE, the company

Timeline

2018-2019 - Development of our activity

Roaming: **+500k drivers** charging on **+75k charge points** in **20 countries** in EU
ePOI: **+135k charge points description** including 70k with real-time availability

FULL EUROPEAN COVERAGE
EXTENDED RANGE OF SERVICES



2018
2019

2017

2017 - Roaming services

Launch of our Roaming services
Interoperability platform for E-mobility operators

2016

2016 - EU Development

Development of our services
throughout Europe

2014

2014 - Database creation

Launch of our ePOI services + Creation of an
aggregated ePOI Database

2013

2013 - Creation

Creation of the company by
5 stakeholders

The company – Team & Shareholders

GIREVE's organisation

EXECUTIVE COMMITTEE



**Bruno
Lebrun**
CEO



**Sophie
Duval**
COO



**Jean-Marc
Rives**
CTO



**Vianney
Devienne**
CSO

- 23 employees based in Paris
- GIREVE's experts are dedicated to our core activities:
Innovation, Operations, Marketing
- Additional flexible outsourced IT team (5 to 15 IT developers based in France)

SECURED START-UP WITH SOLID SHAREHOLDERS



Introduction to Roaming

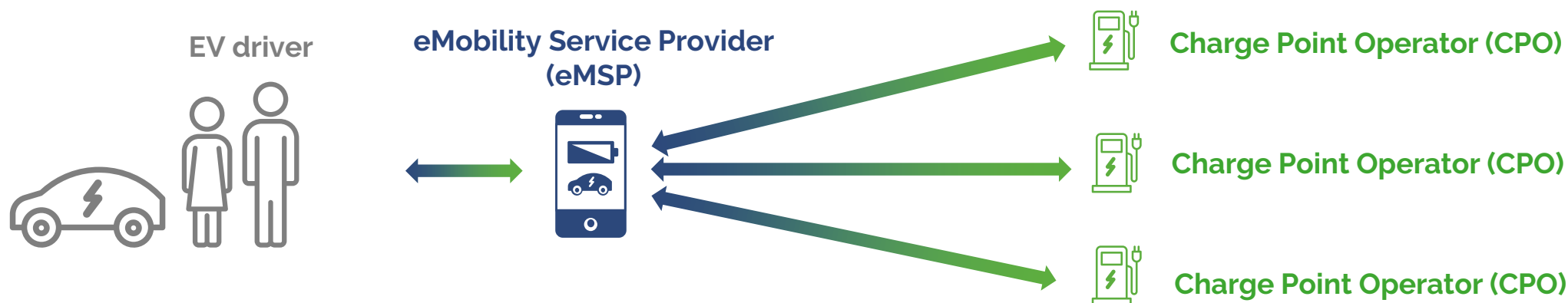


Introduction to Roaming – Explanation of the concept

Roaming: ability for a consumer to use the services of network without dedicated subscription



Roaming in the e-Mobility sector: ability for an EV-Driver to charge on charging stations, using only one subscription provided by one operator



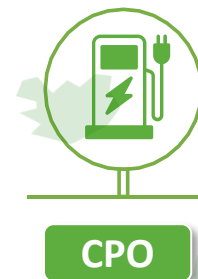
Direct payment brings kWh where an eMSP brings mobility service



>80% of public charges in EU

- 1 unique subscription
- Aggregated EU coverage
- Connected services (App)
- Comes along with the EV

eMSP Subscription plan

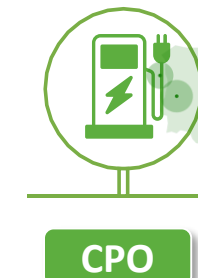


CPO



- 1 payment app per network
- No connected service
- Higher price

Direct payment (anonymous)

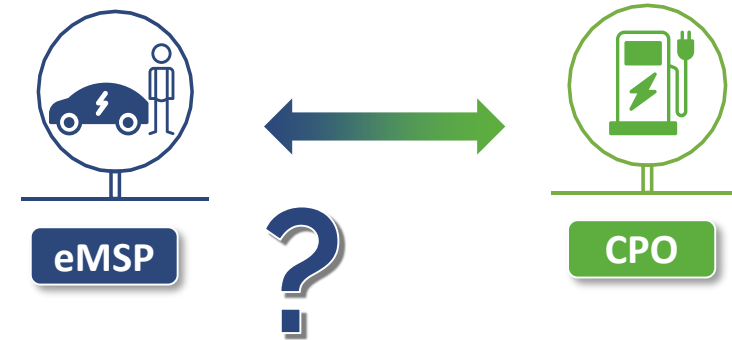
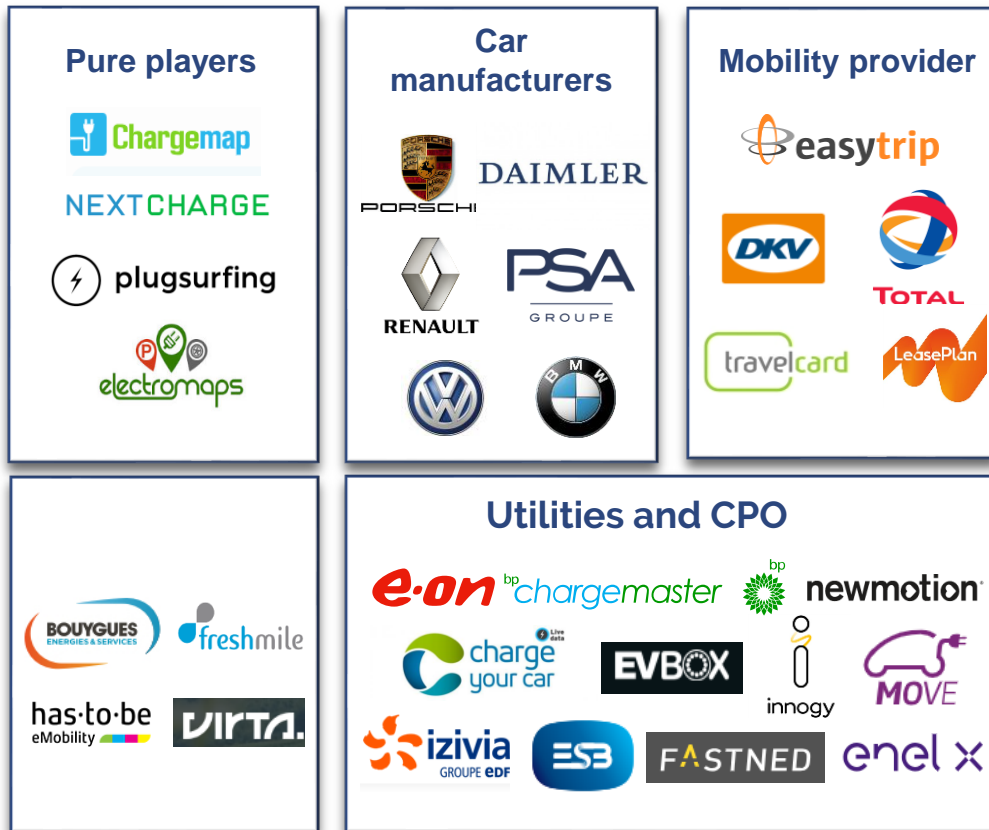


CPO



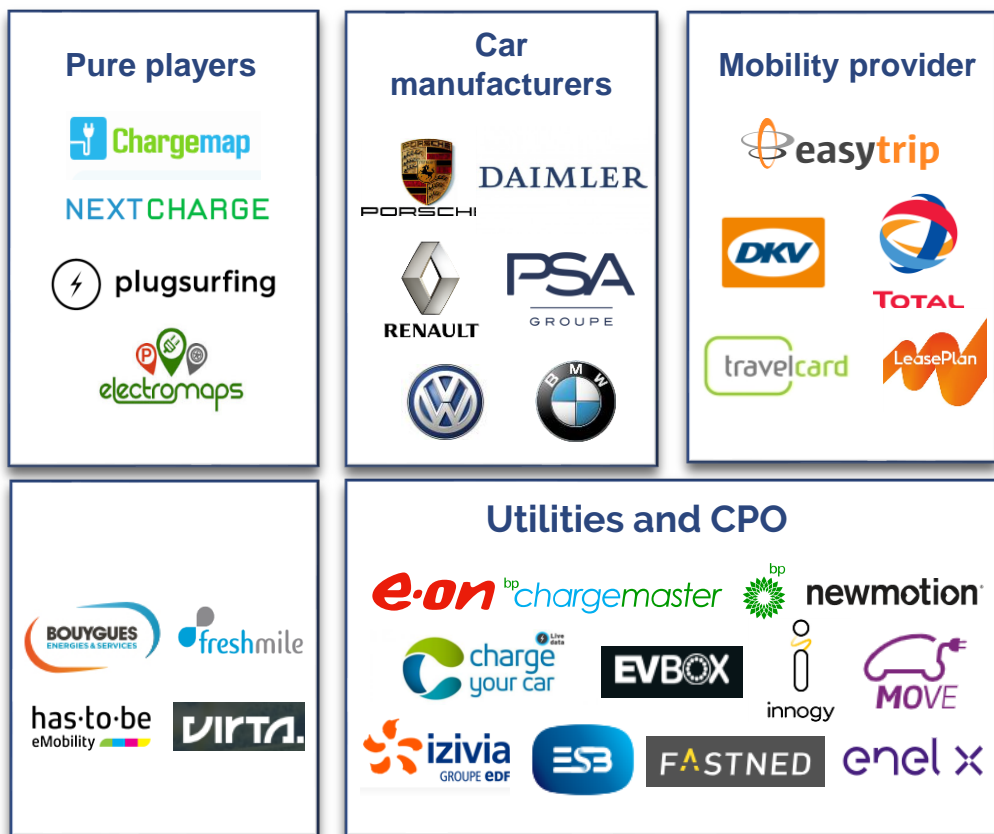
1. EV charging services require connected services delivered by eMSP
2. eMSP services require eRoaming capabilities

eRoaming implies costly business relationship between eMSP and CPO



1. eRoaming requires complex and costly business relationship between a large number of eMSP and CPO (> 1000)

eRoaming from an eMSP or CPO standpoint: “Make” or “Buy”?



Most of eMSP and CPO go for a mix of << make >> and << buy >> options

Introduction to Roaming – GIREVE offers a one stop shop for Roaming

GIREVE reduces the complexity between operators, to lower the total cost of roaming



Interest for the CPO

- Simplified contact with multiple eMSP
- Increased traffic without any additional cost
- Quicker ROI on installation fixed costs

Interest for the EV driver

- Access to a European network with thousands of charging points through only one subscription plan

Interest for the eMSP

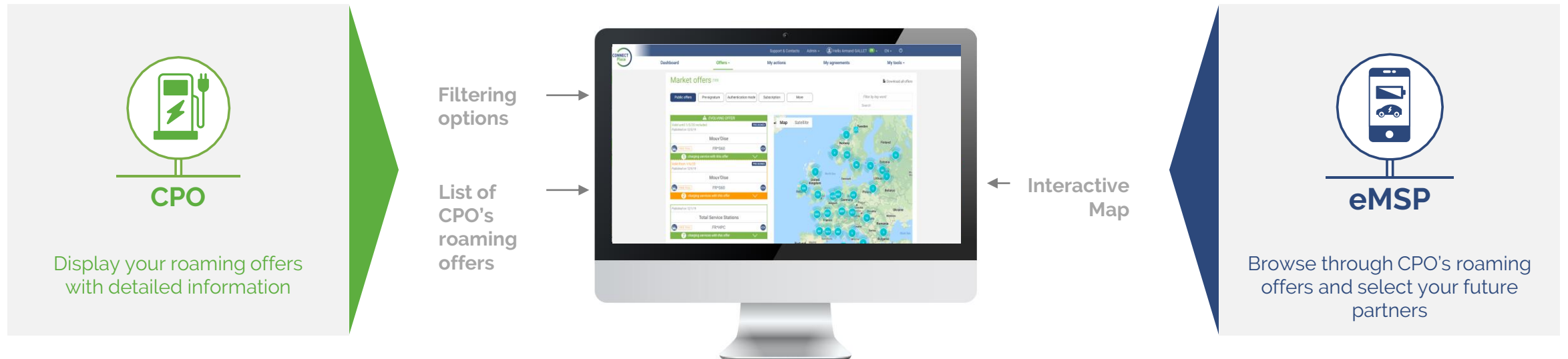
- Simplified contact with multiple CPO
- Access to a great number of charging points, removing the hurdle of mass EV adoption



Business Services

- Setting up your Connect Place account
- Publishing & Selecting roaming offers
- Signing & Managing roaming agreements
- Messaging

Connect Place: publish, select, sign your roaming agreement in one place



Key Features

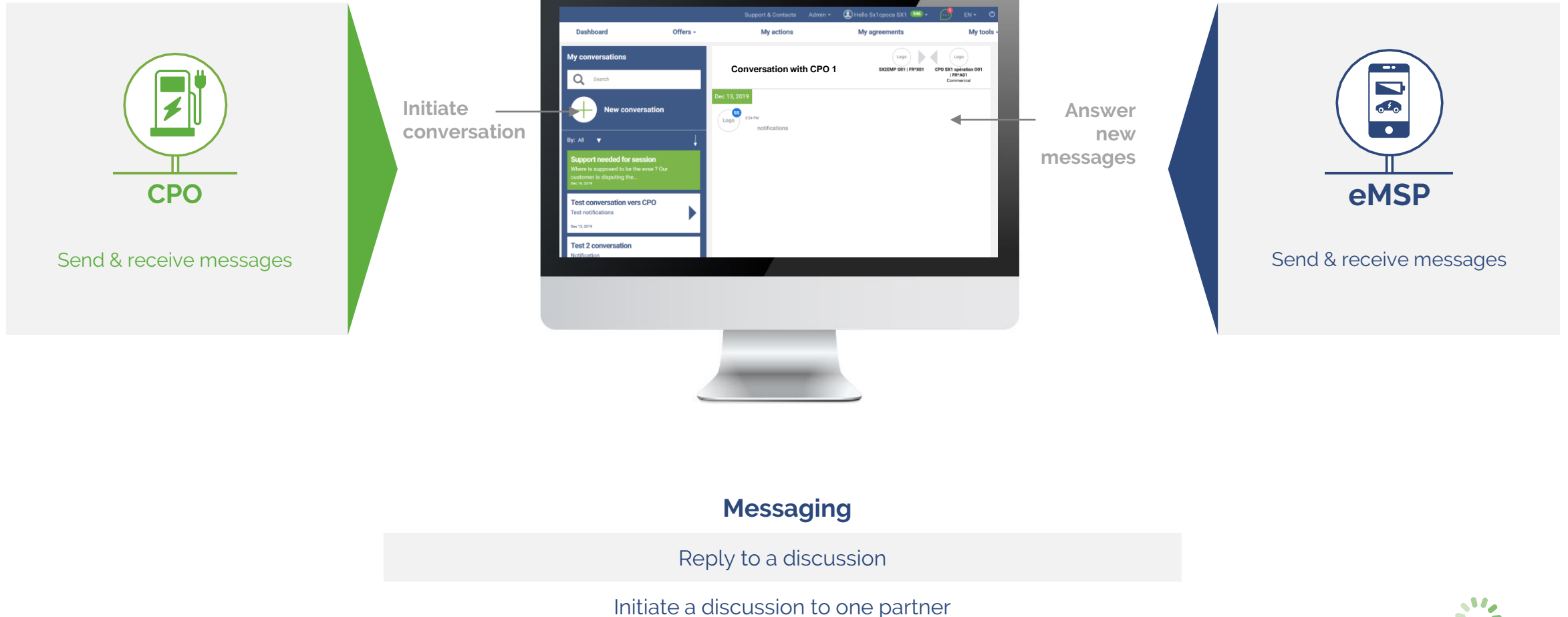
Set Up Your Account

Roaming Offers

Standardized Roaming Agreement Template

Messaging Services

Messaging: negotiate & exchange with future partners on the Connect Place





Roaming Services

- Location
- Booking
- Charging
- Monitoring
- Messaging

Roaming Services

Charging: Enable EV drivers to charge everywhere, no matter the network



Charging services

Local & Remote authentication

Send/Receive Charge Detail Records

Action request (eMSP to CPO during a session)

Event report (CPO to eMSP during a session)

Intermediate CDR (CPO to eMSP during a session)

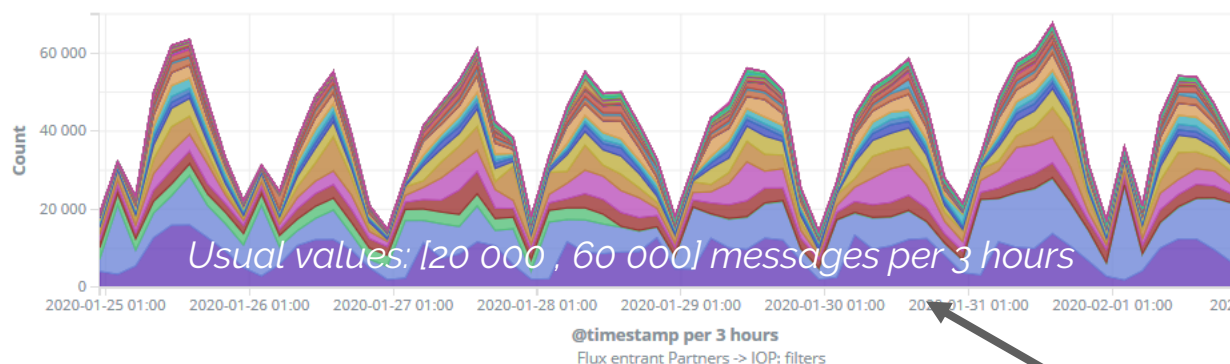
API for dynamic tariff data upload & reception of tariff change

Roaming Services – smart data flow monitoring

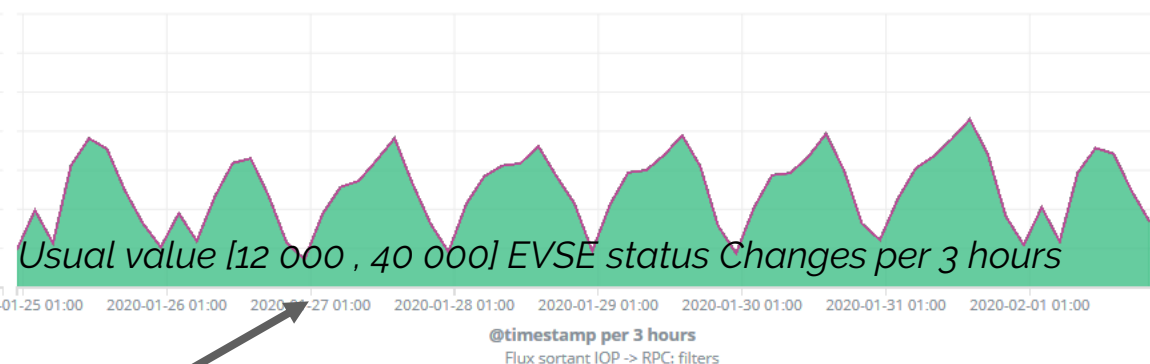
Usual situation



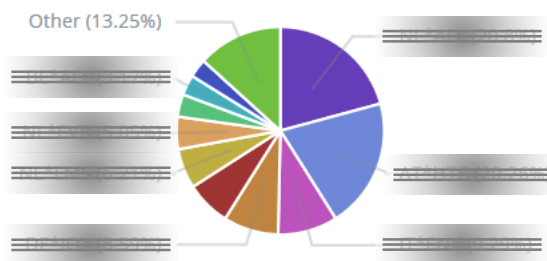
Incoming Flows: Nb of messages (per CPO comm-Partner)



Outgoing Flows: Nb of EVSE Status Charge

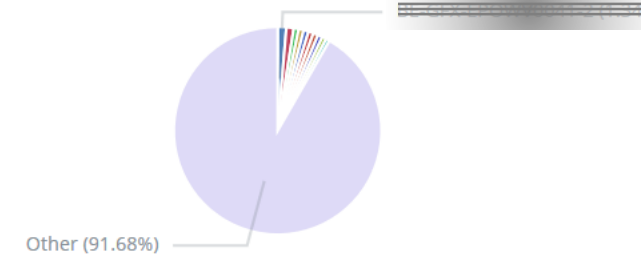


Main CPO comm-Partner



> 100 000 msg
filtered each day

Main EVSE

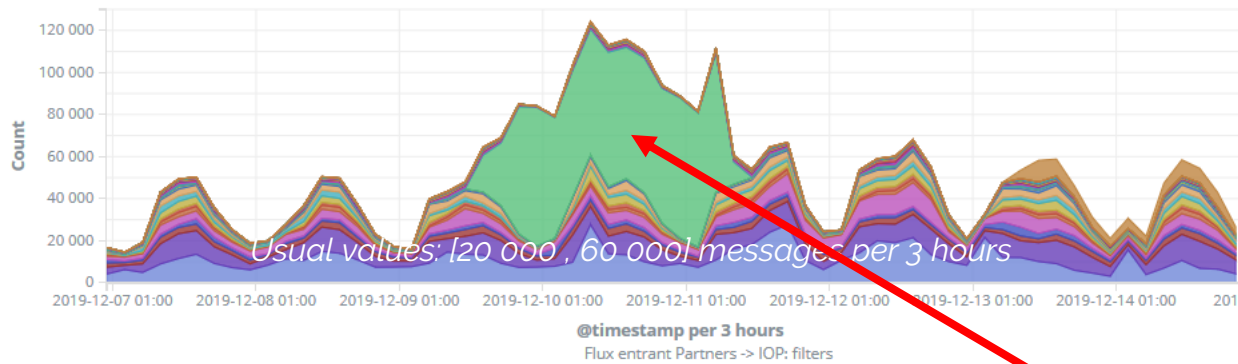


Roaming Services - smart data flow monitoring

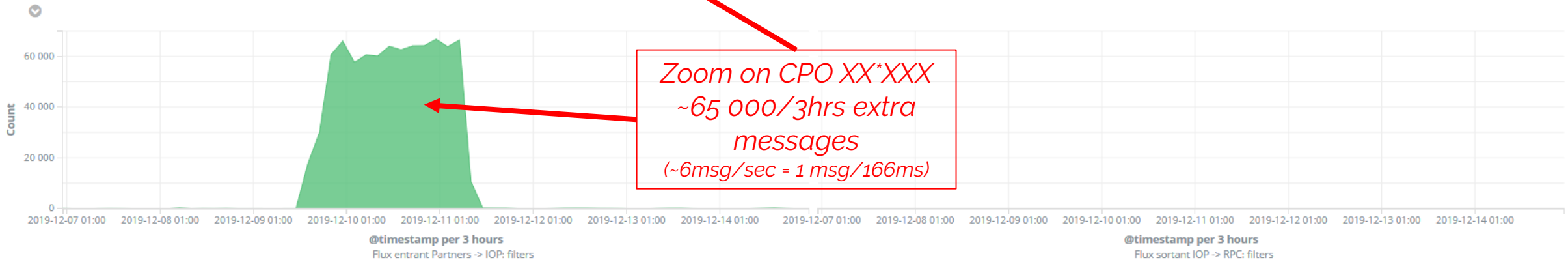
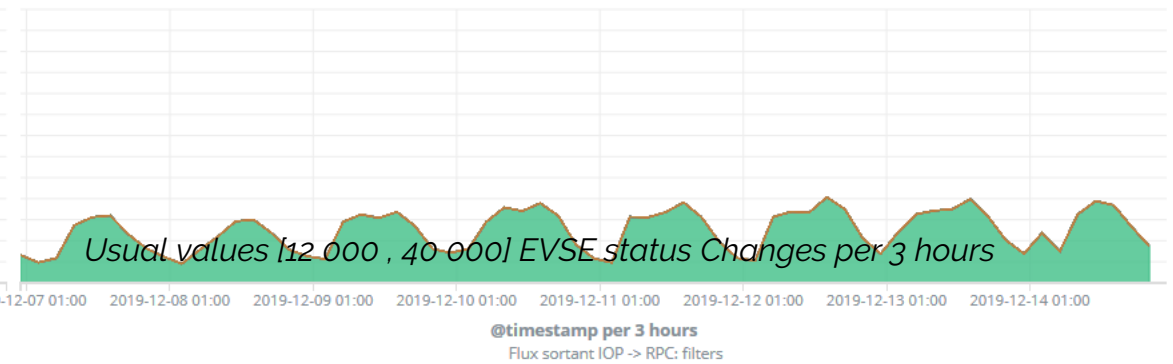
Abnormal situation
(dec 9th 2019)



Incoming Flows: Nb of messages (per CPO comm-Partner)



Outgoing Flows: Nb of EVSE Status Charge





Clearing Services

- Follow-up & Quality Control
- Billing & Invoicing
- Dispute
- Messaging

Quality Control : Detect errors before invoicing your customers



Consumption follow-up

Follow-up of charging sessions on your Connect Place account

Quality control

Access GIREVE's quality control of CDR

Invoicing: bill your CDR automatically and manage your invoicing process



Billing & Invoicing

Calculate a charging session's final price
based on the tariff conditions of your roaming agreement

Send invoices to your eMSP / Receive invoices on your Connect Place account

Dispute: your workflow tool to reduce cost before invoicing



Dispute

Inform your eMSP partners of your invoicing intention for each charging session

Send invoicing intentions to your eMSP / Receive invoicing intentions of CPO

Receive & Reply to disputes / dispute a CDR to your CPO partner

UK, IE - 3,000 charging points



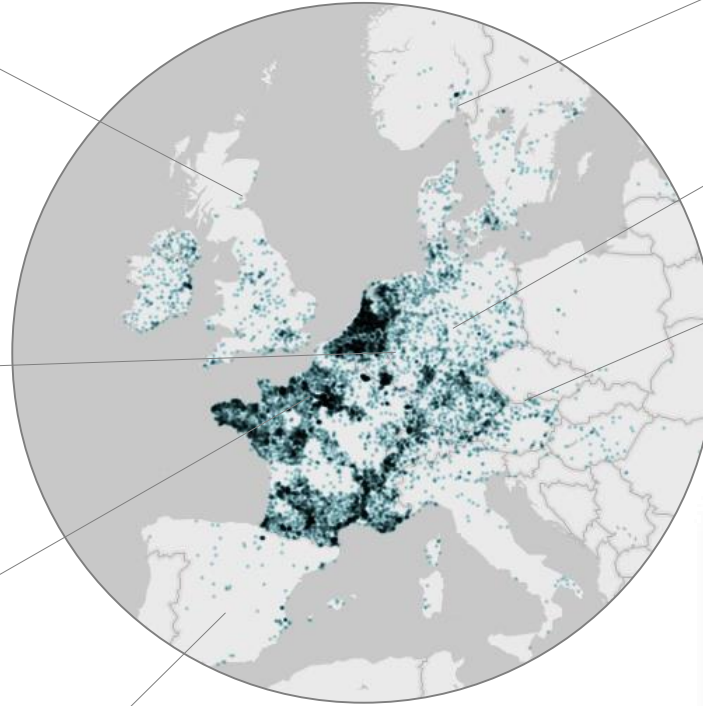
BE, NE, LU - 42,000 charging points



FR - 20,000 charging points



ES - 250 charging points



FI, SE, DK, LV, LT, NO – 1,400 charging points



AT, DE CH, IT – 11,700 charging points



PL, RO, CZ, RU, SK, SV, HU, HR – 172 charging points



75,000

charging points
open through
GIREVE in Europe

>80%

coverage in 5
countries*















2,000














roaming
agreements
signed on GIREVE












List of all our partners available at : <https://www.gireve.com/en/nos-partenaires>

*EAF0 statistics from 11,2019, Note that they include non roaming compatible EVSE.

Our eMSP Partners

	Bosch
	Blue Corner
	Bouygues Energies et Services
	Chargemap
	ChargePoint Network
	CLEM', SAS MOPEASY
	Digital Charging Solutions GmbH (DCS)
	Duferco Energia S.p.A.
	E TOTEM
	Electromaps S.L.
	Eneco eMobility B.V.
	EVBox B.V.
	Freshmile Services
	Go Electric Stations SRLS

	GreenFlux Assets B.V.
	Has.to.be GmbH
	Izivia (ex-Sodetrel)
	Justplugin
	Kiwi Pass Solutions SAS
	Kuwait Petroleum N.V.
	Liikennevirta Oy (VIRTA)
	Mairie de Paris
	Mobilygreen
	MOVE Mobility SA
	Plugsurfing GmbH
	Porsche AG
	Route220 S.R.L.
	ServiceHouse B.V.
	Spark Horizon SAS






















































	The New Motion B.V.
	Threeforce B.V.
	Total Marketing & Services
	Travelcard B.V.
	Vandebron Energie B.V.
	Wirelane GmbH
	ZEborne
	ZE-WATT
	Tank & Rast*
	Get Charge*
	ChargeHub*

* : available soon

Car Manufacturers



Our Backend Provider Partners

	Allego		Connect Groupe E		Go Electric Stations		Porsche AG
	Atomelec		Digital Charging Solutions		GreenFlux Assets		Powerdale
	Blue Corner		DKV Euro Service		Grønn Kontakt		Route220
	Robert Bosch		Driivz Ltd.		Has.to.be		SAP Labs France*
	Bouygues Energies et Services		DRIVECO		Ineo Tinea		SGA Automation*
	Chargecloud*		Duferco Energia		Izivia (ex-Sodetrel)		ServiceHouse
	ChargeHub*		Easytrip		Lafon		SPIE CityNetworks
	ChargeIT mobility GmbH		Electric 55 Charging		Liikennevirta Oy (VIRTA)		Tank & Rast*
	Chargemap		Electromaps		Mobilygreen		Total EV Charge
	ChargePoint Network		ETREL*		PARKNPLUG*		Threeforce
	Chargepoint Services Limited		Enio*		NewMotion		Vandebron
	CLEM', SAS MOPEASY		EV-Box		Optimile*		Wirelane
	Cogelum IDF		Fortum Charge & Drive B.V.		Plugsurfing		ZE-WATT
			Freshmile Services				

"Operational excellence at the lowest costs"

Eric Feunteun, EV & New Business Director, Groupe Renault



"Connecting to GIREVE's platform was essential for Chargemap to achieve its mission"

Yoann Nussbaumer, Chairman of the Board, Chargemap



"Partnerships like the one we are implementing with GIREVE will serve to [...] expand Allego's market position."

Anja Van Niersen, CEO, Allego



"We are very satisfied with the technical platform's stability and reliability, the Connect Place's simplicity and the client service's reactivity."

Sabrine Labiadh, Market Manager, Digital Charging Solutions



"Excellent roaming service"

Robert Byrne, Founder & Managing Director, Franklin Energy



"I found GIREVE to be very professional, supportive and innovative. They offer open technology such as OCPI and many opportunities for network expansion"

Francesco Barrile, CEO, Go Electric Stations



Thank you for your attention