EVBOX

year in review

2017

Drive electric, charge everywhere.

Drive electric, charge everywhere.

Thank you
inventors,
innovators,
early adopters,
trend setters,
and supporters,
for paving the way to
a zero-emission world.

About EVBox

EVBox is the leading global manufacturer of electric vehicle charging stations and charging management software. With over 50,000 charging points across more than 35 countries worldwide, EVBox helps electric drivers get access to charging infrastructure at any point in their journey.

In 2017, EVBox was acquired by energy utility and global service provider ENGIE, who identified EVBox as a disruptive, leading cleantech company making a difference in the fast-growing industry of electric mobility.

Today, with projects running across Europe, North America, South America, and Asia, EVBox moves forward by perfecting its original recipe with a second generation of hardware and software that are energy-efficient, future-proof, and easy to use.

EVBox's mission is to drive sustainable mobility, by bringing leading electric vehicle solutions to the world.

Learn more at **evbox.com**
Download more reports at **evbox.com/learn/reports**

Every drastic change in our lives calls for a drastic change of our habits. Take smoking, for example. A long time ago, I smoked a pack a day when in-flight smoking was still a thing. But I've stopped doing it, because we all know it's incredibly unhealthy. Not just for ourselves, but for the people around us too. Yet today, there are still billions of people that are smoking—involuntarily. Breathing in the air in New Delhi is equal to smoking 44 cigarettes a day, partially due to the pollution from petrol-powered cars and coal energy plants.

About 23% of all CO2 originates from the transportation sector today. This sector is also the fastest-growing CO2 emitter worldwide. Compared to petrol-powered cars, electric cars reduce carbon emissions by 54%. This is why a dozen countries have already announced plans to ban the sale of petrol and diesel cars—some as early as 2025. These regulations have also paved the way for many car manufacturers to fully electrify their fleets.

Evidently, the transportation sector is undergoing a revolution. And it's in urgent need for the right mindset, knowledge, and expertise to facilitate this revolution. This is why we're releasing an industry report every year, looking back on and ahead to the key developments in the market and in EVBox. This report will help you to easily grasp where our industry stands, and where it's heading towards on the road to a zero-emission future.

I'd like to thank you for joining us in this revolution. Your contributions, whether big or small, will make a lasting impact on the mobility and transportation industry. Building a zero-emission world is not something I can do alone, it's something we have to—and will—fix together.

Kristof Vereenooghe
Chief Executive Officer, EVBox

A **personal note**

The energy industry has known unprecedented disruptions in the last decade. From global awareness of climate change and falling renewable energy prices, to the decentralization of energy. This is why ENGIE has decided to embrace disruption, and become a pioneer of a new, "3D" —Digitalized, Decentralized, Decarbonized—energy world. As part of a strategic shift towards this new energy paradigm, ENGIE acquired EVBox in March 2017.

Just like EVBox, ENGIE believes in a future where transportation is free of emissions.
A smart and sustainable charging infrastructure that can facilitate various vehicles is crucial to making this a reality. By combining the capabilities of ENGIE and EVBox, we've created a rare opportunity for ourselves to create a leading, global electric vehicle charging player, uniquely positioned to offer both businesses and consumers the best charging and energy solutions.

I'm thrilled to be on board of the journey to a zero-emission world.

Yves Le Gélard
Chief Digital Officer, ENGIE
Chairman, EVBox

Market in review

1

Electric **cars**

2017 was seen as the year when the electric car market reached a “tipping point.” The reason for this is that electric vehicle sales surpassed the one million mark in 2017, reaching over 1.2 million units sold. This is 51% higher than in 2016.

2017 also was the best year ever for electric vehicle sales in the US, where the number of units (55,000) has gone up 25% compared to 2016.

Europe sold 306,000 units, which is a significant growth against the backdrop of a stagnating (-5%) automotive market in Europe, making plug-ins the fastest-growing segment in the region.

China reached a count of over 600,000 units sold, which is up 71% compared to 2016. As a consequence, China’s EV market hit a record 3.3% market share of the entire Chinese car market, while the global 2017 PEV market share ended at 2.1%. This is firmly ahead of last year’s score (1.5%), and above the US (1.2%) and Europe (1.9%).

The fastest-growing EV markets of 2017 were Finland (+144%), South Korea (+138%), and Australia (+132%). The more mature markets such as China and the Netherlands grew by +113 % and +122 % respectively. EV market share frontrunners such as Norway and Iceland grew by 46% and 26% respectively.

The Renault ZOE, Nissan LEAF, and BMW i3 not only received international acclaim in 2017, but became (yet again) the best-selling models across Europe. And although it was projected for Tesla to hit a rough patch (due to the Model 3 delay), its sales numbers have proven the contrary. With European deliveries up to 15,553 units and US deliveries at 20,882 units, it appears that the Model 3 reveal not only didn’t hurt sales, but actually may have helped them. 2017’s best-selling all-electric models* per region were:

Europe
Renault ZOE (31,410)
BMW i3 (20,855)
Nissan LEAF (17,454)

US
Tesla Model S (20,882)
Tesla Model X (13,356)
Chevy Bolt (11,670)

China
BAIC EC-Series (78,079)
JAC iEV6S/E (25,741)
BYD e5 (23,610)

Electric vehicles are now available in over 80 markets around the world. Sales volumes have nearly quadrupled since 2014. Continuing at the current rate of adoption, this would mean that roughly half of the world’s car sales are plug-in electrics by 2027.

ev-volumes.com
bloomberg.com
ev-sales.blogspot.com
cleantechnica.com
businessinsider.com
*This overview does not include PHEVs and (two-door) minicars.

Charging **infrastructure**

In 2017, Europe counted 131,293 public charging points, which is a year-on-year growth of 27%. Germany saw the highest year-on-year growth in Europe (41%), whereas China accounted for the highest year-on-year growth globally (51%). Below is an overview of regular (AC) and fast (DC) public charging points for a selection of countries.

Netherlands
Regular: 32,181
Fast: 694
Total: 32,875
2016 yoy: 23%

Belgium
Regular: 1,540
Fast: 225
Total: 1,765
2016 yoy: 18%

Denmark
Regular: 2,225
Fast: 356
Total: 2,581
2016 yoy: 25%

Norway
Regular: 8,340
Fast: 1,993
Total: 10,333
2016 yoy: 27%

Germany
Regular: 22,764
Fast: 2,476
Total: 25,240
2016 yoy: 41%

Spain
Regular: 4,463
Fast: 511
Total: 4,974
2016 yoy: 35%

UK
Regular: 12,272
Fast: 1,984
Total: 14,256
2016 yoy: 21%

France
Regular: 14,830
Fast: 1,481
Total: 16,311
2016 yoy: 3%

Europe**
Regular: 113,784
Fast: 17,509
Total: 131,293
2016 yoy: 27%

China*
Total: 214,000
2016 yoy: 51%

US
Total: 48,575
2016 yoy: 23%

The global charging infrastructure is categorized into the following types of charging stations:

Private chargers
placed on private driveways or in private garages at home
owned by the resident
made available based on the resident's preference

Semi-public chargers
placed in (private) parking lots
owned by businesses of any kind
made available mostly during business hours

Public chargers
placed in public areas and public parking facilities
owned by municipalities or workplaces
made available 24/7

Fast chargers (AC 22kW or DC fast charging up to >100kW)
placed in cities and along highways
owned by municipalities and fast-charging providers
made available 24/7

All year-on-year growth rates are rounded up.
All Europe data from European Alternative Fuel Observatory (EAFO).
All U.S. data from the U.S. Department of Energy, Alternative Fuels Data Center.
* Estimation as reported by Xinhua and China Daily.
** Europe meaning EU + EFTA + EAFO + Turkey (33 countries in total).

Number of EVs per charging point in Europe in 2017

According to the EU Directive, all EU countries must have at least 1 public accessible charging point per 10 electric vehicles by 2020.
The overview below displays the number of EVs per 1 charging point in 2017. Having the highest number of EVs on the road, Norway drastically needs more charging points to reach this goal. The Netherlands however, having the second largest fleet of EVs, has already far exceeded this quota.

Iceland	66,57
Belgium	19,58
Norway	**17,83**
Sweden	11,24
United Kingdom	10,01
France	7,71
Finland	7,36
Switzerland	6,26
Portugal	5,85
Austria	5,49
Germany	5,47
Italy	5,27
Denmark	4,23
Netherlands	**3,75**
Spain	3,72

eMobility **outlook**

Reaching price parity
Lithium-ion battery prices have tumbled in recent years. An average battery pack was priced at $1,000/kWh back in 2010. Fast forward to the end of 2017, and average prices hit a low of $209/kWh. This is a remarkable 79% drop in seven years. Average energy density of EV batteries is also improving at around 5-7% per year.

Battery prices may not have a direct impact on the implementation of charging infrastructure, but it would put more cars on the road that would in turn pressure providers and governments to catch up with the demand. The upfront cost of EVs will become competitive on an unsubsidized basis starting in 2024. By 2029, most segments will reach parity as battery prices continue to fall.

More policy support = more commitment from carmakers
Tightening fuel economy standards and quotas are requiring significant electrification, forcing carmakers into EVs faster than most of them would like. In Europe, potential bans are pushing both buyers and carmakers away from diesel. As a result, VW, Daimler, Nissan, Volvo, and other global automakers have all made plans to electrify their vehicles over the next ten years. The number of EV models available is set to jump from 155 at the end of 2017 to 289 by 2022.

Exponential increase of charging infrastructure
As the market grows, charging habits will inevitably start to shift. We expect consumers to charge predominantly in the following parking areas:

- **Charging at home** becomes a necessity.
- **Charging at work** rises significantly, as demand comes from staff and customers.
- **Charging in commercial, public areas** such as hotels, restaurants, shopping areas, sports centers, and so on. Wherever electric vehicle drivers will park for more than 20 minutes, they'll need to be able to charge.
- **Fast (DC) charging in corridors and highways** will become crucial for cross-country and cross-state travel.

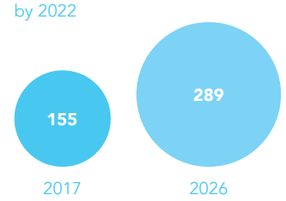
Charging facilities around the world have increased at least ten-fold since 2013. Navigant Research estimates that the global market of residential and commercial charging services (sales revenue + install revenue) will be worth $12 billion by 2026. The total revenue in under ten years (2017-2026) is estimated to be $80 billion. The commercial charging market will be going through a transitional period over the next five years as new electric models are more widely introduced.

Greater market share
Bloomberg New Energy Finance's latest forecast shows sales of electric vehicles increasing from a record 1.1 million worldwide in 2017, to 11 million in 2025, and then surging to 30 million in 2030 as they become cheaper to make than internal combustion engine (ICE) cars. By 2040, 55% of all new car sales and 33% of the global fleet will be electric.

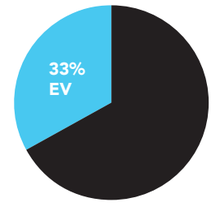
Navigant Research
Bloomberg New Energy Finance, Electric Vehicle Outlook 2018

Battery prices
drop 79% in seven years

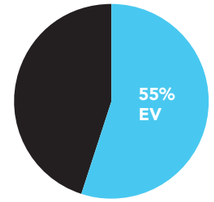
Number of EV models
by 2022



Market share
by 2040



Global fleet



All new car sales

Energy **outlook**

The global energy demand in transport has increased by just under 2% annually on average since 2005; it accounts for about 28% of overall energy consumption and for 23% of energy-related greenhouse gas emissions.

Electricity demand is expected to grow four times faster than all other fuels between now and 2050. The uptake of EVs, the rising availability of charging infrastructure, and car sharing services will be enabling this growth.

Although the electricity consumption of EVs is expected to double by 2022, it will still account for less than 1% of total electricity generation.

This trend is mostly driven by the rapid growth of electric two- and three-wheelers in China, but also results from electric cars in European markets with high shares of renewable generation. The U.S. represents over one-fifth of global electricity consumption in cars, but the estimated consumption of renewable electricity is expected to be less than in China and Europe as a result of the lower share of renewables in the electricity mix.

Naturally, for electric transportation to significantly reduce emissions, it's crucial that all this (new) electricity demand is powered by clean energy. The upside is that the cost of clean energy is decreasing thanks to fast-declining storage and production costs. It's already out-competing new-built fossil capacity today, and it'll even out-compete existing fossil capacity in the next five to ten years.

2016 was the first year in which solar and wind net additions exceeded coal and gas. By 2020, solar and wind will become the most economic new-built option across multiple regions.

The rapid uptake of renewables will shift the role of fossil-fueled power plants, triggering steep declines in utilization rates. Globally, more than 80% of capacity additions will be in solar and wind, with China and India contributing more than half of them. Solar and wind generation will grow five to ten times faster than gas, and coal is expected to decline after 2030.

The impact these developments will have on power systems vary substantially by market. If renewables are delivered at the low bids seen in recent auctions, we could witness even higher penetration of wind and solar, at the expense of gas and coal. According to the latest Bloomberg New Energy Finance projections, electrified buses and cars will displace a combined 7.3 million barrels per day of transportation fuel by 2040.

Even so, CO_2 emissions are expected to peak around 2030, which remains more than double the level consistent with the 2°C pathway that was agreed upon during the Paris Climate Agreement. Needless to say, the process doesn't stop at the electrification of transportation. For resource producers, utilities, governments, cities, financiers, and every one of us, there's work to do.

BNEF Electric Vehicle Outlook 2018
McKinsey Global Energy Perspective, Reference Case 2018, Published December 2017
IEA, Renewables 2017, Published October 2017

China remains the undisputed renewable growth leader

China alone is responsible for over 40% of global renewable capacity growth, which is largely driven by concerns about air pollution and capacity targets that were outlined in the country's 13th five-year plan to 2020. In fact, China already surpassed its 2020 solar PV target, and the IEA expects it to exceed its wind target in 2019. In addition to electric vehicles, China is also the world market leader in hydropower and bio-energy for electricity and heat.

EVBox in review

2

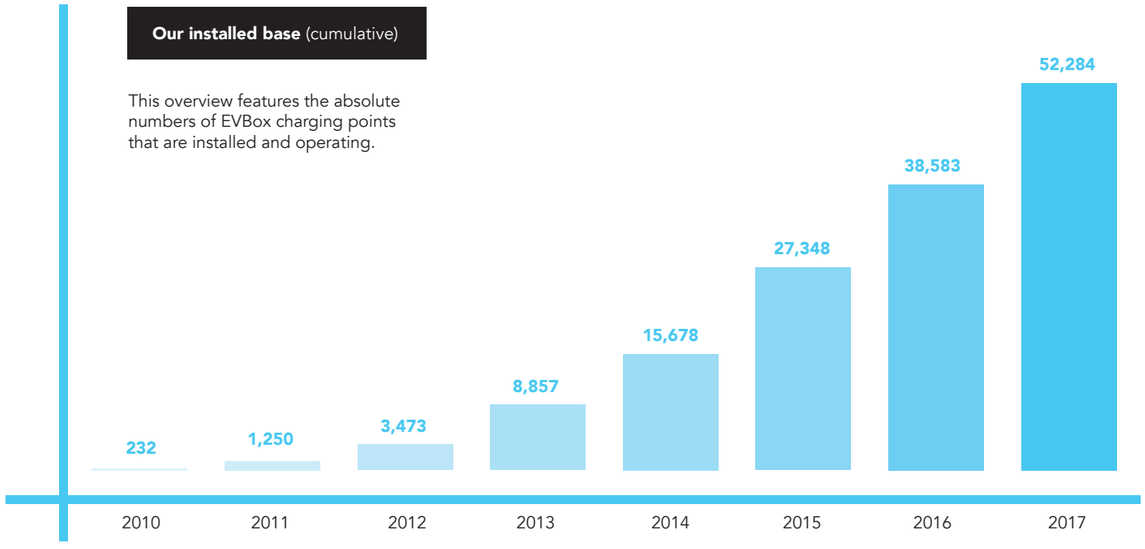
We saved
tons of emissions

In 2017, we charged nearly 36M kWh and saved 12,000 metric tons of CO2 emissions with our charging points. We placed over 13,000 new charging points across 12 new countries, as we reached a milestone of 50,000 charging points worldwide.

Learn more about our previous milestones: evbox.com/learn/reports

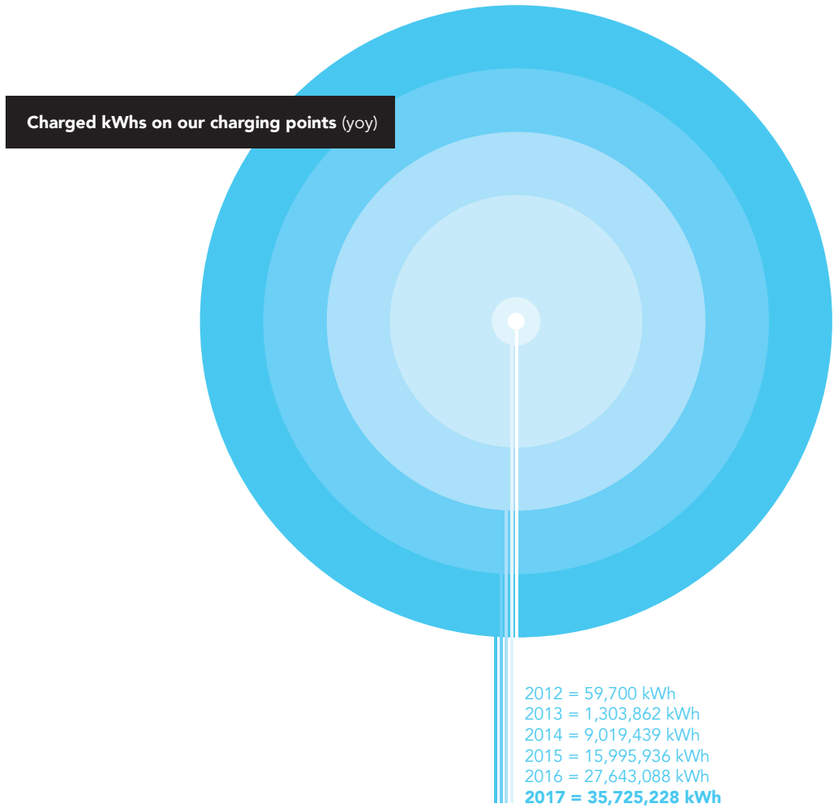
Our installed base (cumulative)

This overview features the absolute numbers of EVBox charging points that are installed and operating.



Note: This overview excludes all EVBox demo units and inactive charging stations.

Charged kWhs on our charging points (yoy)

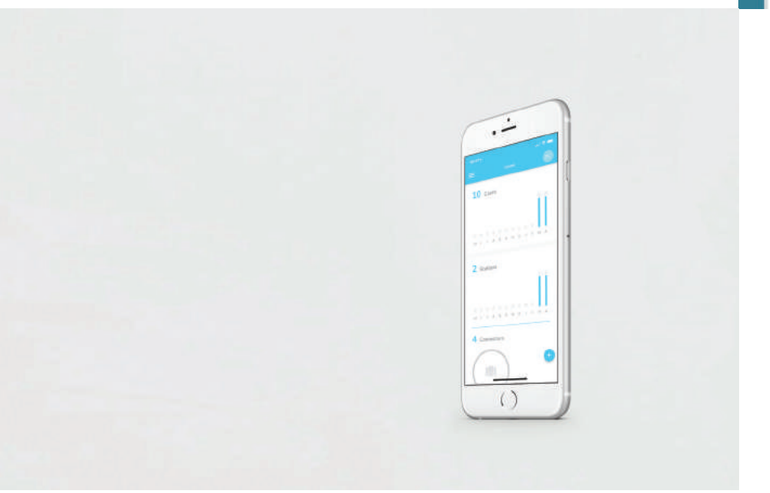


2012 = 59,700 kWh
2013 = 1,303,862 kWh
2014 = 9,019,439 kWh
2015 = 15,995,936 kWh
2016 = 27,643,088 kWh
2017 = 35,725,228 kWh

We created
new software

In 2017, we entered a new era for EV charging management with the creation of Everon. Everon is a widely-customizable charging management platform that helps Charging Point Operators and eMobility Service Providers easily manage, control, and customize charging sessions, costs, and power consumption according to their business models.

Learn more about Everon in our brochure:
info.evbox.com/general-brochure



everon®

We built
new hardware

In 2017, we gave birth to a new suite of charging solutions.
We designed Elvi for charging at home, the Level 2 for business and commercial use, and DC for fast corridor and highway charging.

Learn more about our charging solutions in our brochure:
info.evbox.com/general-brochure

We made **new friends**

In 2017, we joined the ENGIE family, accelerating our growth on a global scale. As a result, we started new partnerships across Europe, North America, and South America, and expanded our operations into five more cities: New York, Los Angeles, Copenhagen, Munich, and Madrid.

Become a partner: evbox.com/partners
See case studies: evbox.com/learn/case-studies

We believe LA should be a global focal point for advancing electric vehicle infrastructure and mobility innovation. That's why we're building a state-of-the-art EV showcase at the La Kretz Innovation Campus where we can demonstrate a variety of smart charging equipment, electric vehicles, and mobility solutions. We're pleased to have a global leader such as EVBox helping us on this project.

Ben Stapleton
Chief Partnerships Officer
Los Angeles Cleantech Incubator (LACI)

We're leading the pack and positioning ourselves as the pioneers of the eMobility market in our region. We're heavily investing in the roll-out of electric fleets across urban areas. By providing us charging solutions that already have an impressive track record, EVBox helps us to become the hub for all of ENGIE's new mobility initiatives in South America.

Rodrigo Sanchez
Head of Green Mobility
ENGIE Factory, Chile

Electric vehicles will only reduce our CO2 footprint if they are being powered by clean energy, such as solar-generated power. Now the eMobility market is taking off, photovoltaics, EVs, and charging infrastructure will have to be part of the same discussion.

Udo Möhrstedt
Founder, CEO
IBC SOLAR

We've selected EVBox as the charging solutions provider for all of our offices, really because of EVBox's competitive advantage within the market, and the support it's been able to offer us since the beginning. As our goal is to scale up our electric car sales in Norway, we need a trusted partner with an established name and an expansive reach. We know we can rely on the EVBox service.

Petter Andersen
Network Development Senior Manager
Hyundai Motors Norway

Along with Nuon-Heijmans, EVBox is the key supplier of charging stations throughout Amsterdam. Our renewed contract will help us reach 4,000 public charging points by 2018. Over the past few years, more than a thousand EVBox charging points have been placed throughout Amsterdam. Its reliable, easy-to-use, and future-proof charging stations, makes EVBox the best candidate for this seven-year project.

Bart Vertelman
Project Manager Amsterdam Electric
City of Amsterdam

We made you **#EVproud**

In 2017, EVBox went global—and so did our social media, with a monthly average reach of over 170,000 viewers. Here's a look back at some of our favorite #EVproud moments, featuring charging stations and EVBoxers who are off to conquer the world!

Connect with us:
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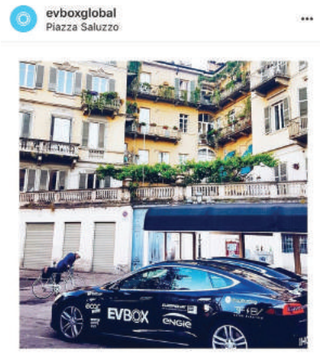
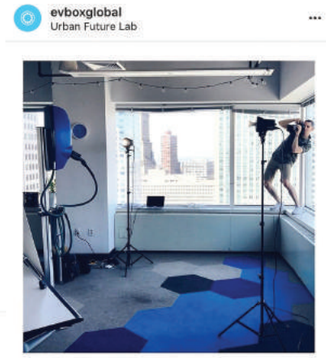
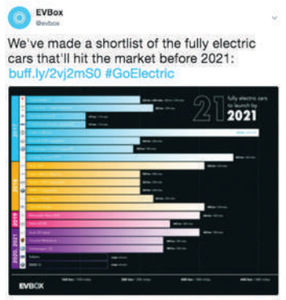
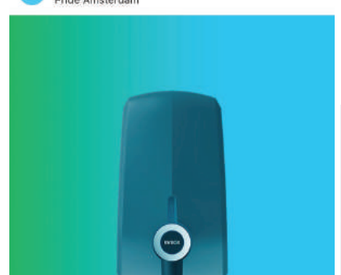
instagram.com/evboxglobal









Outreach & advocacy

3

What's **happening**

rEVolution

Your contributions, whether big or small, will make a lasting impact on the mobility and transportation industry. Building a zero-emission world is something we have to —and will—fix together.

Enter rEVolution. It's the annual networking and idea-sharing conference for the eMobility industry. Each year, the sector's finest gather in Amsterdam for a full day of inspiring presentations and conversations aimed at answering the question: "What can we do to accelerate the adoption of sustainable mobility?"

Featuring a variety of keynote speakers that cover everything from global market predictions to best practices for EV adoption, attendees are encouraged to bring the day's insights back to their markets and utilize their new-found connections to make real progress in the adoption of electric transportation.

Join us at the next rEVolution: revolution19.amsterdam
Explore previous editions: revolution.evbox.com

Manifesto of Electric Mobility

Just before the start of 2017, twelve thought leaders from European energy utilities, car manufacturers, charging networks, and municipalities, gathered around to share their visions about (near-future) electric mobility. A Manifesto of Electric Mobility was in the making.

This "roundtable" was a full-day meeting, where the group was asked to suggest solutions to various statements about the industry, ranging from the availability of infrastructure and technology for electric vehicles, to the future potential of specific charging technologies.

The findings from this meeting, along with the results from an extensive survey that we conducted with 850 electric drivers from Europe and North America, formed the foundation for this Manifesto.

By sharing the insights acquired from these industry experts and consumers, the purpose for this Manifesto is to show the world the importance of electric mobility, and the urgent need for action.

Download the Manifesto of Electric Mobility:
info.evbox.com/manifesto-electric-mobility

What's **next**

Future Citizens

Schools in the Netherlands have long offered dummy petrol stations in the schoolyard. It's nothing to frown upon, if you think about it. Schools are built to prepare kids for the future. And if that future includes polluting fossil fuels, then that's what the schools need to show their students.

However, this is no longer the reality. As an early EV adopter, electric cars already accounted for 9.9% of total car sales in the Netherlands back in 2015. Cities such as Amsterdam and Rotterdam have already made it their mission to become CO2 neutral by 2050.

For this reason, we're donating dummy electric-car charging stations to schools in the Netherlands, so our citizens of the future can already start practice charging up the electric car they'll be driving twenty years from now.

Learn more about this initiative: news.evbox.com

Power to the Heroes

We need clear skies to see the rainbow. That's why for Pride 2018, we're honoring the heroes that are making the world a more sustainable and inclusive place. To empower them in their mission, we'll donate the fees collected from our charging stations in the City of Amsterdam (between July 28 and August 5, 2018) to the COC, the LGBTQ association of the Netherlands.

Learn more about this initiative: evbox.com/pride

Going Circular

Most businesses today operate in a linear economy, which is based on a "take, make, and dispose" model. This means that they source materials as cost-effectively as possible in order to sell the largest quantity achievable. Their operations are based on the assumption that there's an infinite amount of resources available.

The circular economy model, however, treats resources as finite, and is based on a "make, use, and return" model. Here, companies maintain full ownership of market offerings. This model is often achieved via business models based on leasing, subscriptions, or various types of shared economies (think: car sharing).

A recent McKinsey report concluded that circular businesses could boost Europe's resource productivity by 3% by 2030. This equates to annual savings of €600 billion a year!

Adapting to a circular economy model will reduce the dependency on raw materials, and most importantly, it will limit waste. If we really want to turn climate change around, we'll need to take responsibility ourselves. This is why we're currently developing an innovative service model for our charging stations, one which will close the loop—even after disposal.

The new model will be a subscription model in which customers can subscribe to (or "lease") a charging station for a monthly fee.

This replaces the need for fleet owners and EV drivers to purchase and maintain their own residential or workplace solutions; we take ownership and responsibility of these charging stations, covering everything from station maintenance to charging management.

Once the subscription ends, stations are brought back for refurbishment or recycling. The station will then find a second life (e.g. as dummy stations on schoolyards—see "Future Citizens"). This process is repeated until the station is fully recycled.

This subscription will be the first step in a long-term plan to make sure that EVBox is responsible throughout all operations, even after disposal. Because the subscription lasts longer than just the charging station itself, companies can reduce spending and lower their carbon footprint at the same time.

Learn more about this intiative soon: evbox.com

To our team, partners, and customers,

thanks a million for your contributions and achievements. The road to zero emissions may be long, but it's one worth traveling with you on board. Stay tuned for our next "Year in Review." Until then—drive electric, charge everywhere.

EVBox Management
Kristof Vereenooghe, CEO
Peter Van Praet, CCO
Tessel Jarigsma, COO
Arjan van Rooijen, CTO
Rob Blasman, CFO

Charge with us

evbox.com

Visit us in Amsterdam,
Antwerp, Denmark, Los Angeles,
Madrid, Milton Keynes, Munich,
New York, Oslo, and Paris.

evbox **evboxbv** **evbox** **evboxglobal**

Drive electric, charge everywhere.

Drive electric, charge everywhere.