



The charge point  
management system  
buyer's guide.

**M. Ö N T A.**  
EV better

# The charge point management system buyer's guide.

The go-to resource for anyone looking to successfully enter the EV charging industry and scale their charging operations.

## Executive summary

If you're looking to provide EV charging services to your customers, employees or even your family, you've come to the right place. In this guide we provide the checklist for success in building and scaling your charging site(s), the pitfalls to avoid, and a process to help get you started.

### Main takeaways:

01

#### Understanding your customers' needs in the EV charging business

Whether you're just starting your EV charging business, or selecting your next site, a deep understanding of what your customer's needs are is crucial. This will inform your decisions around what type of charge points are required, what services you need to provide alongside charging, and will ensure your site is fit-for-purpose with minimum hidden and unnecessary costs.

02

#### Selecting a Charge Point Management System for your business

Selecting a Charge Point Management System (CPMS) is a necessary component of your charging operations, regardless of the volume of charge points you manage (or want to manage) and the customer groups you serve. As a result, selecting the right system should be considered early in planning your business. Ultimately, the technology must meet your customers' needs and be able to scale and adapt with your ambition for your charging business.

03

#### Go for a CPMS that:



is first and always hardware agnostic



gives you full control over pricing



is built with the future in mind (i.e. ahead of new regulations, releases new features to meet new demands)



Is part of an open ecosystem and avoids heavy customization

## Avoid common pitfalls:

01

**Getting locked into a long term contract** - your business may evolve quicker than you think, with the need to pivot quickly if your use case / charging requirements expand beyond the chosen platform's capabilities;

02

**Over-customization, including whitelabel solutions** - often these carry high upfront costs with limited visibility on whether the CPMS can cover all your needs, now and into the future. This may lead to sunk costs early on which are hard to recoup, and 'emergency' development to quickly plug emerging gaps in your offering

03

**Not trying before you buy** - always ask to test the solution before making your final decision. This can provide additional assurance of the overall user experience, the range of features available, the maturity of those features and whether it meets your expectations

04

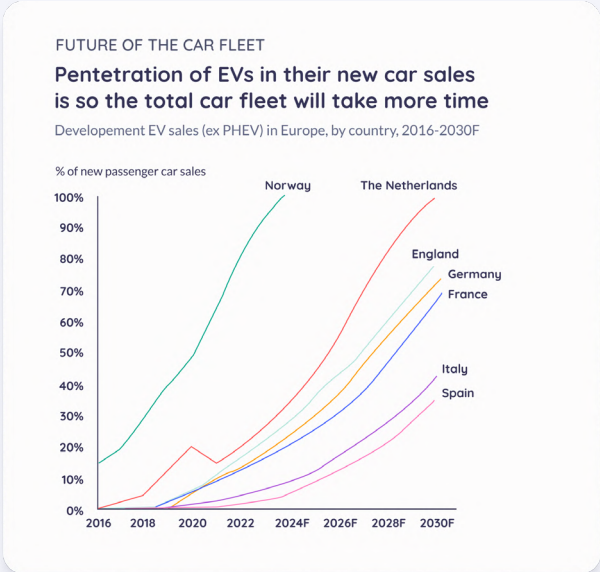
**Underestimating your partner and client's support requirements** - a CPMS should deliver more than just software. Make sure support services are included and provides sufficient coverage of your sites (i.e. regional, cross-country etc)



# Introduction

We are not only on the brink of, but are going through a fundamental breakthrough in widespread transportation electrification. Recently spurred on by governmental ZEV targets, OEM's across the globe are doubling down on their efforts to boost EV deployment even more.

In 2022 10.6 million EV's have been sold, a 57% growth rate over 2021, and an increase of over 575% over the last 5 years. The batteries powering these cars are a far cry from the half-ton lead-acid batteries that propelled the early models (e.g. 1996 GM EV-1), and provide an off-ramp from our dependency on petroleum for personal mobility.



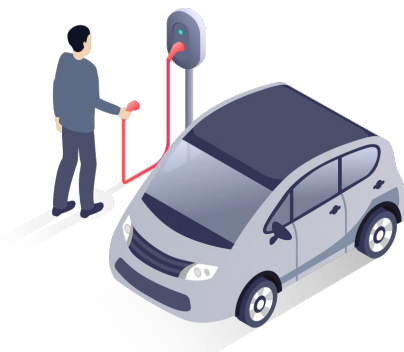
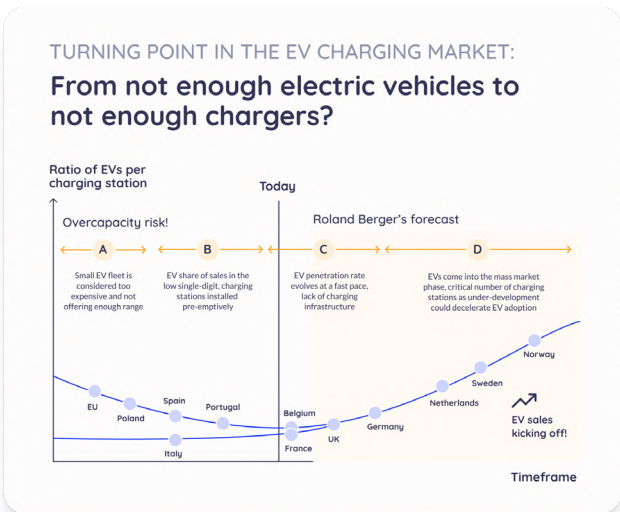
However, the path to this new world is not without its challenges. More specifically, with the increasing incidence of EV's on the road, there is a distinct lack of charging infrastructure to meet travellers' needs across almost all countries.

According to the EU's Alternative Fuels Infrastructure Directive (AFID), countries should aim for a 10:1 EV to public charger ratio to be able to supply sufficient capacity to keep the fleet fully charged and on the road. Many countries are still catching up to this.

With this emerging gap comes a significant opportunity and many organisations have entered the race to help keep up the pace of installations as more EV's hit the road, and to meet the needs of various driver groups.

However, with such growth, anyone looking to provide a charging service is met with an incredibly complex landscape to try to navigate, with many purchasing decisions to make and many stakeholders to manage.

That's why we built this guide - to help site owners and solution providers successfully navigate this complex space, and build an EV charging business to help meet demand now and continue to be successful into the foreseeable future.



Reference: <https://www.rolandberger.com/en/Insights/Publications/EV-Charging-Business-Model.html> - Roland Berger

# The three steps to success in your CPMS quest.

If you have decided to build an EV charging service, you are about to enter a fast-evolving market. You could be the owner of a small parking lot, of a cross-country fleet management service, or an installer looking to operate charging sites. No matter the size, the decisions you will need to make are the same. What charge point hardware should I choose? Who will install the charge points on my behalf? What regulations does my site need to comply with?

There is no one size fits all to answer these questions, and your decisions may change over time as you expand your business to new sites with different charging requirements.

Remember - *>80% of the charge points you will operate in 5 years are yet to be built.*

By following these simple steps, you will be setting a strong foundation on which to scale your charging business now and into the future:

- 1 Define your target use case(s) and understand your customer's charging needs
- 2 Define your ambition and growth targets
- 3 Choose your CPMS



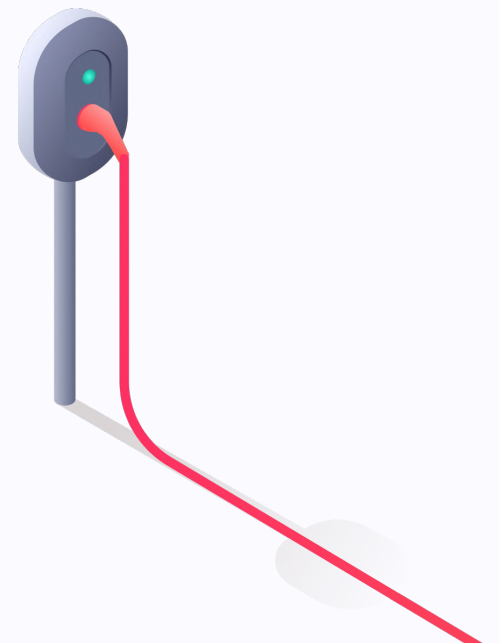
# 1. Define your use case(s)

It's important to define your use case(s) as concretely as possible from the start. Your use case(s) will allow you to narrow your focus on who your customers are and what their charging needs *really* are.

Location	Multi-family home	Hospitality	Commercial Depot/ Fleet	Forecourt (highway)
Parking setup	Private or shared	Shared	Private	Public
Charging need	Multiple hours per day	Multiple hours per day	Depends on fleet volume and requirement	< 1 hour
Users	Multiple tenants	Hotel guests	Fleet employees	Any driver
Contractual party	Real estate owner	Hotel owner	Fleet owner	Investor/ professional charge point operator
Charging technology required	Slow	Slow	Slow to ultra fast	Fast/ ultra fast
Software + services required	User management	User management	User management	User management
	Payment services	Payment services	Payment services	Payment services
		Promotions	Load balancing	Load balancing
		End client support	Fleet monitoring	Promotions
				Queuing and reservation
				End user support

## Use these questions to get you started:

- What charging sites do I have access to, or want to win?
- What type of EV driver will use this site, and what vehicles do they use?
- What are their charging needs? In terms of speed and additional services?
- How many charge points are required to avoid congestion, to meet parking regulations, provide a good service level?



## 2. Define your ambition (and don't be afraid of migration)

Defining your ambition for your charging business is crucial to revealing the functional setup required to effectively manage your charging site(s) now and into the future.

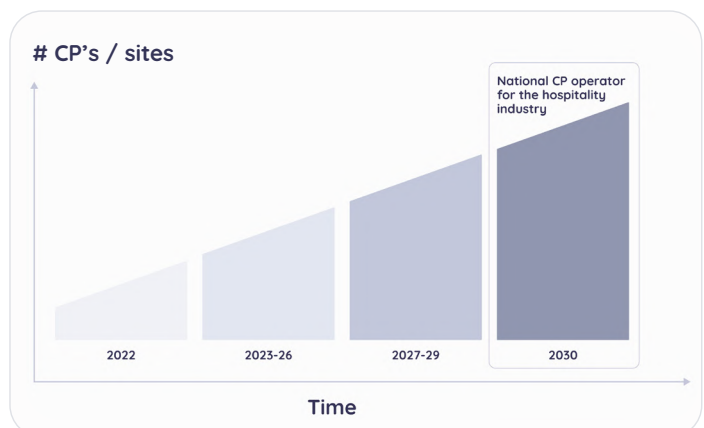
It will help you to:

- Make the right decisions early and avoid costly changes in the short term;
- Avoid the trap of treating growth like a tick box exercise
- Gain a deeper understanding of what is actually required to achieve your goal and to meet the needs of your target customer groups.

For example, in many cases, companies heavily over-customize their solution relative to their customer requirements and growth targets - 'we definitely need a white label solution.' Whilst this approach can be effective in building a brand and delivering a consistent experience, does it match what you're looking to achieve?

A well-defined ambition will keep the following front of mind:

- 01 Start small but build with the end in mind** - define your long term goals, and ensure you account for flexibility and scale, and intentionally plan for change;
- 02 It's a team effort** - find a partner who's experienced and knowledgeable in the EV charging space and start a conversation. Many people are trying to do the same thing, and will have gone through similar thought processes, and will have insights to share;
- 03 Understand the red tape** - ongoing discussions are potentially putting charging infrastructure under the 'critical infrastructure' banner. As a result, regulations are steadily catching up to the industry. Make sure you understand the local regulations and account for compliance in your planning;
- 04 Understand the local incentives** - depending on your local market, the vast majority provide various public funding for charging infrastructure (e.g. purchasing, financing, installations). In France for example, the local government offers business up to €600 per CP as a purchase subsidy. These will be crucial for calculating the actual investment required, and subsequently the volume of charge points you can reasonably purchase;
- 05 Build your roadmap in years** - it sometimes takes 6 - 9 months to install and activate a charge point. Make sure your timelines are realistic, and you have sufficient contingency to manage planning permission, amperage allocations and testing time.



### 3. Choose a CPMS that matches your use case(s) and ambition (aka invest in flexibility)

Allow your understanding of your customer's needs (1), and your ambition for your charging business (2) guide your selection of the right CPMS. A challenge many charging businesses face is that software becomes an early limitation to growth as the industry evolves and new regulations emerge, or as their portfolio of charging sites expands and new hardware models need to be introduced.

The software you choose will play a vital role in ensuring you have sufficient flexibility in your business plan into the future, and will save you time and money.

From our experience, the right CPMS will have the following characteristics as a minimum:

#### **Agnostic first, agnostic always**

There are hundreds of EV charging brands globally to choose from, and new companies are entering the industry on a regular basis. It's highly likely that you will require a mix of brands to be able to best serve your use case and ambition. As a result, it's crucial you select a CPMS compatible with a wide range of charge point brands and models, and as a minimum supports OCPP v1.6. In this way, you can have peace of mind that your sites will be easily consolidated under one system and your customers will receive a reliable and quality experience whilst charging.

#### **In short, a truly hardware agnostic CPMS will:**

- Have a team dedicated to integrating new charge points
- Have automated processes to enable hardware manufacturers to test their firmware's compatibility remotely
- Have short integration times - (2-4 weeks)
- Make their list of compatible charge points public

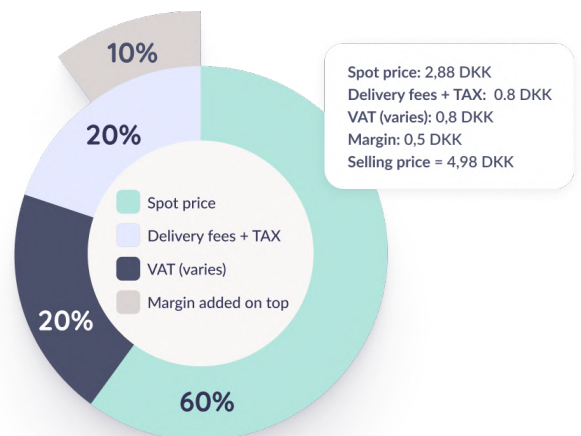
Your teams, charge points and CPMS all have to work in harmony to deliver a high performing and uninterrupted charging experience to all your customers - an agnostic CPMS is critical to harmonization.



#### **Allows complete price control**

Selecting a CPMS that gives you complete control over your pricing will protect your bottom line. As we've recently seen, the energy market can be volatile and electricity prices can fluctuate widely. Having complete control over how you set the price of your charge points (/min, /kWh, spot pricing) minimises your financial exposure to future fluctuations.

#### **Components of complete price control:**



#### **The benefits of complete price control include:**

- Minimisation of your financial risk
- Increased transparency to your partners and drivers
- Encouragement of positive charging behaviours

Ultimately these lead to establishing your charging business as a reputable provider in the market, trusted as a transparent and reliable charging solution provider.





## Built with the future in mind (Scalable and technology-first)

Choose a CPMS which is scalable and provides you with the flexibility to improve the service you offer as you grow, and one that stays ahead of new market developments, customer expectations and regulations.

Here are some of the things you need from your new CPMS if you want to stay ahead of your competitors and in line with the industry's future:

01

Your CPMS should save you and/or your Operations Team time and effort; it should automate or make very fast all recurring tasks and help you and your team focus on your core.

02

Your CPMS needs to be intuitive and scalable across several dimensions: Quick to onboard new sites, easy to use, automated to enable future growth, quick to respond to new market needs, etc.

03

It should have compliance in focus and stay abreast of the new regulations which are continuously emerging as electric vehicle charging expands. As an operator, you have to be able to constantly respond to changes in regulations. It goes without saying that your software provider needs to be flexible, as well.

04

It should enable flexibility and control. Have a clear overview of your accounts, your hardware, and your business model.

05

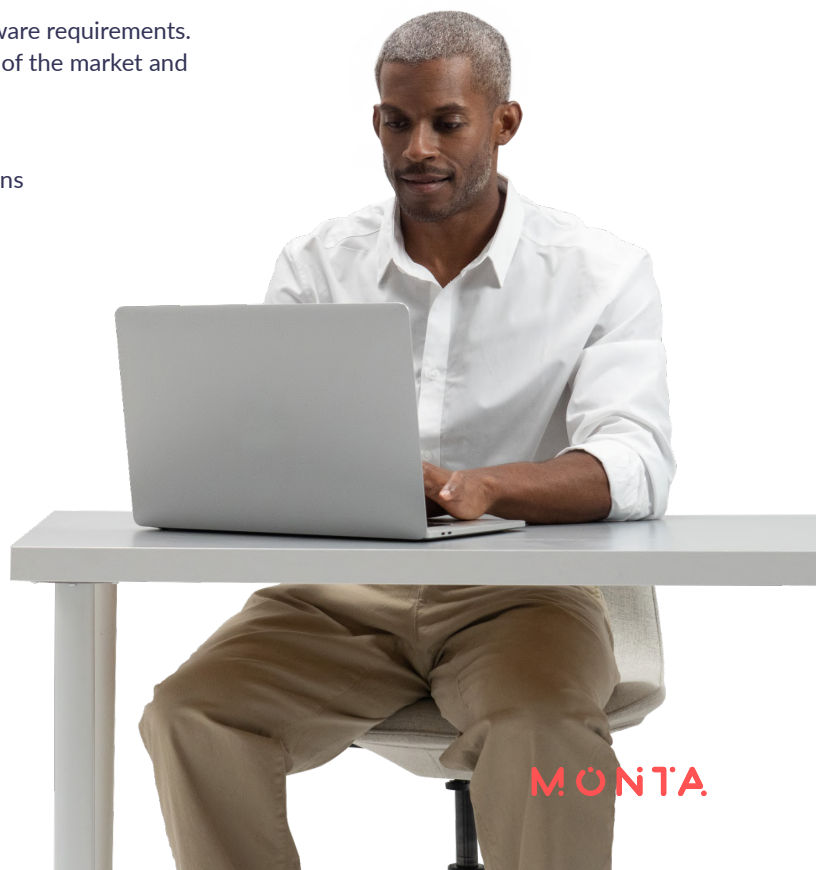
It should be able to keep up with the speed of you growing your business. It should not be a bottleneck when you want to add new charge points, and quickly respond to customer requests or issues.

06

It should be a front-runner when it comes to software requirements. It should be able to understand the new direction of the market and react accordingly.

07

Your CPMS should save you and/or your Operations Team time and effort; it should automate or make very fast all recurring tasks and help you and your team focus on your core.





## Invested in an open ecosystem (no more migration headache)

Lastly, but perhaps most importantly, your selected CPMS provider should be invested in building an open charging ecosystem. In short, this means the CPMS will support and facilitate remote configuration of your charge points to run firmware updates, test performance and allow a smooth migration to another CPMS if your evolving business requires it.

When evaluating against this characteristic, use the following as a checklist:

01

### Remote Configuration:

Ensure the CPMS allows remote configuration of the backend URL (note: this URL is vendor-specific).

As far as process is concerned, there are two options for doing this:

- Remote configuration via OCPP (URL)
- Remote configuration via API: i.e. the software is compatible with the hardware manufacturers API configuration
- Either you can swap the OCPP URL to someone else. Or the OCPP URL is something you control. E.g. buy a DNS (ocpp.monta.app). Purchase one and then point it to your CPMS endpoint

02

### SIM Cards:

If you choose SIM cards as your connectivity option (recommended) make sure they don't lock you to the CPMS vendor. In this case, ensure to purchase the SIMs directly or agree a way of purchasing the

03

### Custom configurations:

Ensure there are no custom configurations built outside the OCPP specification.

This will make migration easier according to the development standards, with no / minimal development effort required.

04

### Stickers:

Make sure charge point stickers (e.g. QR codes on the outside of your charger) can be pointed to another server. Do that by either using shortlink (e.g. bitly) or ensure the vendor will allow you to redirect the sticker away from their url.

## Main takeaways:

Go for a CPMS that:

- is first and always hardware agnostic;
- gives you full control over pricing;
- is built with the future in mind (i.e. ahead of new regulations, releases new features to meet new demands);
- Is part of an open ecosystem and avoids heavy customization.



# How Monta can help you grow your Charge Point Operator business

Monta is the most scalable charge point management platform built for Charge Point Operators (CPOs). It can help you offer the best charging experience to your end-user and win larger deals.

More specifically, Monta allows you to:



## Scale your operator business

Whether you're a new Charge Point Operator, or have been in this industry for years, Monta can help you grow faster.

- Use Monta with any charge point brand or model
- We ensure a smooth hardware integration
- Pricing plans that scale with your business
- Onboard your commercial clients with ease



## Get maximum results for minimum effort

Monta is the result of a long and constructive collaboration with charge point operators.

- Built-in and automated accounting, invoicing, and payment system
- You're in full control of pricing, access, and utilisation
- Create and sell new services from your back-office



## Create a superior EV charging experience

If you want to combine a superior charging experience for your EV drivers with best-in-class service, Monta is here to help:

- One easy-to-use app for home, work, or on the road
- Market-leading charging stability of 98%
- High utilisation with built-in queuing and booking



## GAIN Full control over your charge points

- Monta gives full control over your charge points and the way in which you want to run them.
- Automated scheduling for private, semi-public, or public access
- Set dynamic pricing according to your rules
- Monta's self-healing algorithms reduce your maintenance needs

## Conclusion

Setting up an operating business is tough. There are so many parameters you need to take into account before you and your team embark on this exciting journey. Choosing a CPMS that meets your expectations, while offering you the flexibility you need to navigate a highly competitive industry as this one, it's vital. Following this guide will hopefully help you to navigate this complex industry, and allow you to forge ahead to getting charge points in the ground and plugging the EV charging gap.

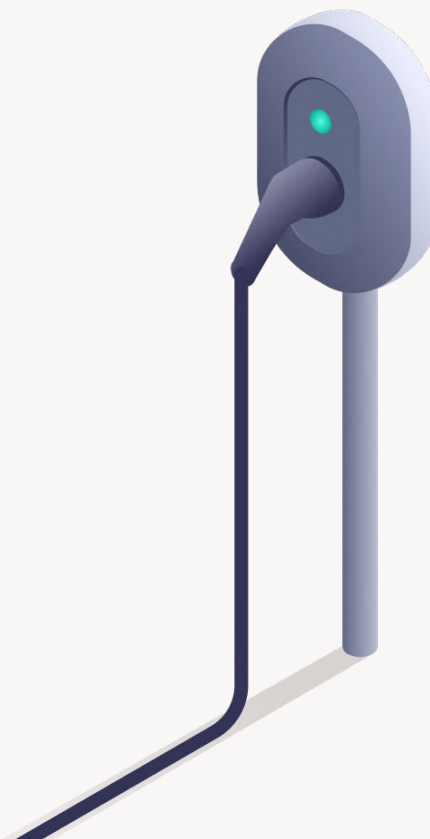
Regardless of your company's size or goals, there are three crucial steps towards a successful CPMS quest:

**01** Start by carefully defining your use case(s)

**02** Continue by defining your ambition  
(don't be afraid of migration)

**03** Let these guide your CPMS decision.

If you still have questions regarding what CPMS is the right one for your business, we are here to help!



# Get in touch with Monta and let us help you scale your operator business!

Monta is the operating platform powering the EV ecosystem serving drivers, companies, cities, and the electricity grid with one integrated software solution.

We believe that accelerating and democratising the adoption of EV technology is key to building a better future.

Monta's mission is to provide the best technology solutions for the entire EV charging cycle.

At our core, we provide access, innovation and reliability to the mobility transformation. We're here to make the transition to electric mobility as seamless and exciting as possible.

With a single integrated software built to **EV better**.



Get in touch.

**MONTA**  
EV better