

# AXIMA

POWER

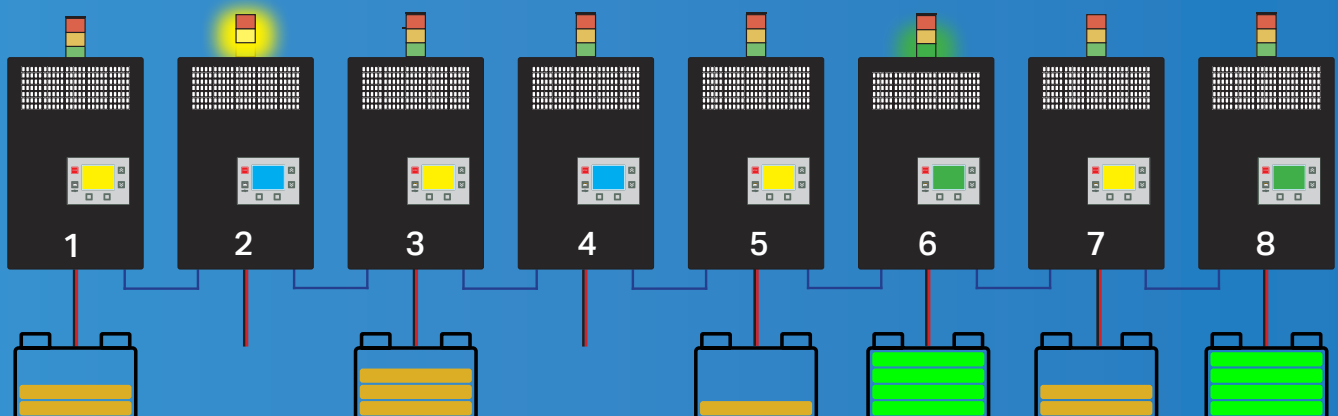
# AXINET

## CHARGER MANAGEMENT SYSTEM

SMART system for effective managing and monitoring of the charging station

[www.axima-power.com](http://www.axima-power.com)

GROUP	GIVE	TAKE
24 V / 345 Ah	2	6



## KEY FEATURES

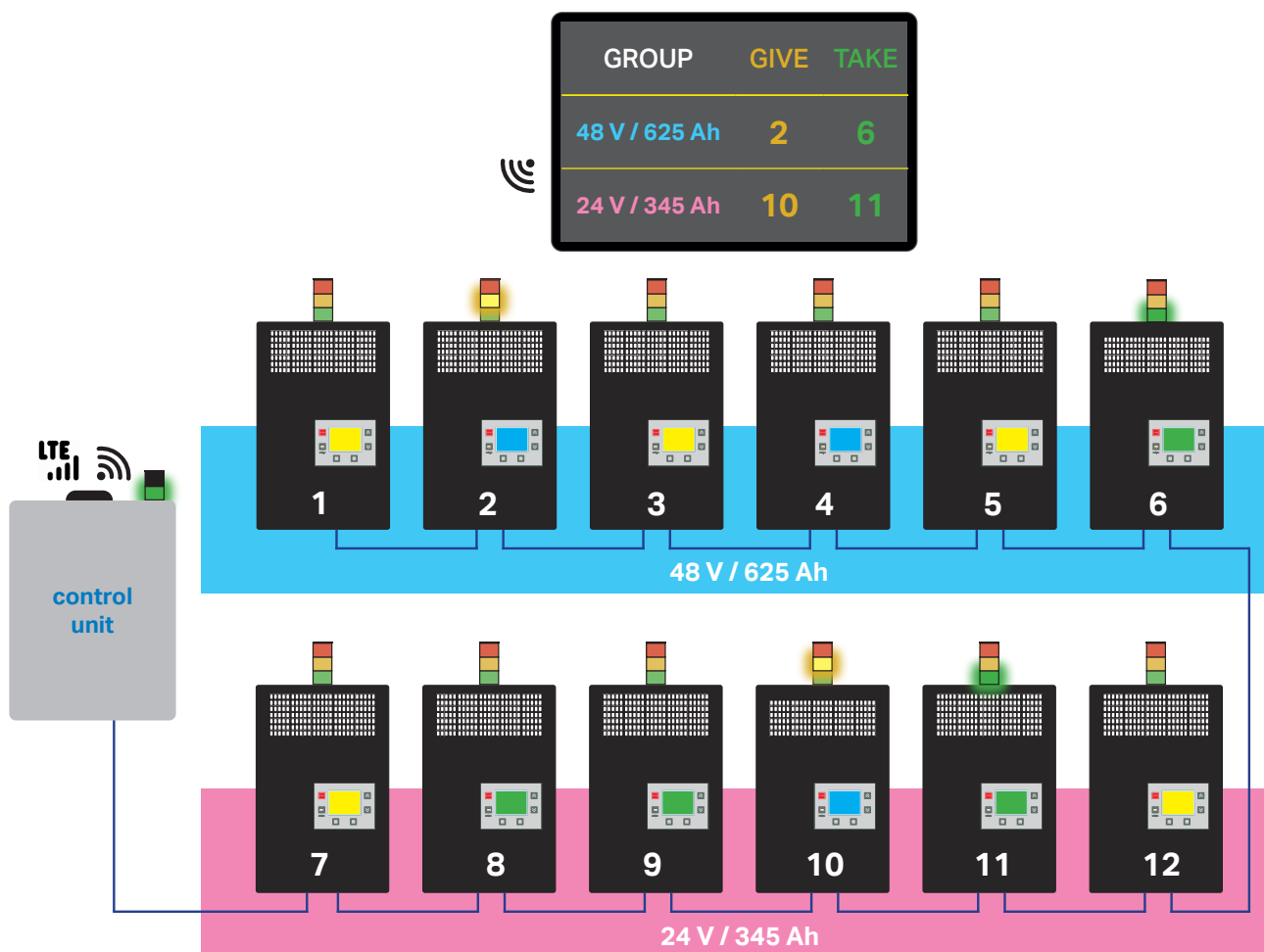
- low operation cost
- equal use of batteries
- minimizing operator mistakes
- clear operational statistics
- remote access and reports



**AXINET brings the order to the charging station!**

# INTRODUCTION

AXINET is a smart system for optimizing operations in the charging station with FLEXIS chargers. The system helps the operators during the battery exchange. AXINET marks the right position for GIVE the discharged battery and position for TAKE the most suitable charged battery. It allows equal use of all batteries, eliminates operator's mistakes and results in reduction of operating costs and more accurate prediction of service costs and replacement of batteries. The system allows perfect real-time overview of operations in the charging station.



- Up to 255 chargers in net divided into groups by battery types, forklift types...
- LED Signalization for GIVE discharged battery and TAKE the best charged battery on charger
- Sophisticated web app for easy setting
- App shows status of chargers, archive of charging cycles...
- Identification of batteries, personal and forklifts
- Remote access and reports
- Statistics of battery use
- Quick overview

## QUICK OVERVIEW

Fri 06/15/2018	
Charging station details	
10 finished charging cycles	
1 misplaced battery	...
4 incorrectly removed batteries	...
0 deeply discharged batteries	
< 06/14/2018 06/16/2018 >	

## SYSTEM CONFIGURATION

Every customer can customize the AXINET system according to his own needs. Each software module requires appropriate hardware equipment.

FLEXIS chargers are equipped with:

- FLEXIS EXT UNIT - communication board
- AXI FF LED - parts of optical LED signal tower (green, yellow and red)
- Chargers and Control unit are connected by UTP cables with RJ45 connectors.

## AXINET Modules:

### BASIC



### MONITORS



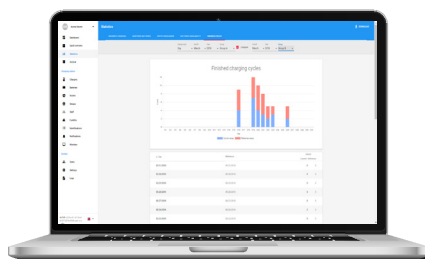
### REMOTE ACCESS AND REPORTS



### IDENTIFICATION



### STATISTICS



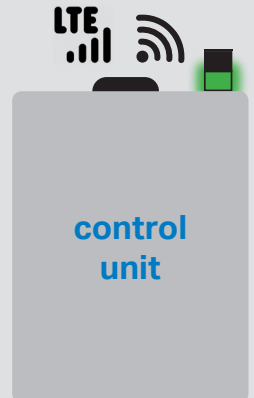
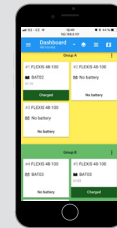
The BASIC module has to be a part of each configuration. Other modules can be activated according to customer requirements. The activation of other modules can require additional hardware for full functionality of the AXINET system.

## MODULE BASIC

The basic module provides main system function, it is marking the suitable positions for connection of discharged and disconnection of charged batteries. Module BASIC is a vital part of each configuration.

### SOFTWARE:

- web app for setting the charging station and realtime overview
- quick overview about operations in charging station
- signalization of charging positions GIVE and TAKE
- division into groups
- archive of charging cycles and export



### HARDWARE:

- control unit - industrial PC, combine LTE + WiFi antenna
- signal tower with green LED part and acoustic part

## MODULE MONITORS

Module MONITORS shows name of groups and charging positions for GIVE and TAKE batteries on industrial monitor for 24/7 use. Monitor could be connected with control unit via WiFi or UTP/STP cabel. System can be used with up to 6 monitors in standard version. Monitors are available in 32", 40" and 49" version.

### SOFTWARE:

- positions showed on monitor
- 1 or more monitors can be used according to user settings

### HARDWARE:

- industrial monitor for 24 / 7 use
- mounted on the wall
- UTP/STP cabel - in case of cabel connection

GROUP	GIVE	TAKE
48 V / 625 Ah	2	6
24 V / 345 Ah	10	11

# MODULE REMOTE ACCESS AND REPORTS

Module REMOTE ACCESS brings the possibility of monitoring and setting the charging station from everywhere. Remote access allows to have an overview everytime and to solve situations regarding charging station immediately. Online access is available on the website [www.axinet.cz](http://www.axinet.cz).

Another possibility is individual setting of e-mail REPORTS about charging station operations. Setting of reports consists of errors, time schedule of sending, e-mail addresses and attached archive of cycles.

## SOFTWARE:

- REMOTE ACCESS from everywhere
- setting and overview

## HARDWARE:

- LTE SIM card (AXIMA does not supply)

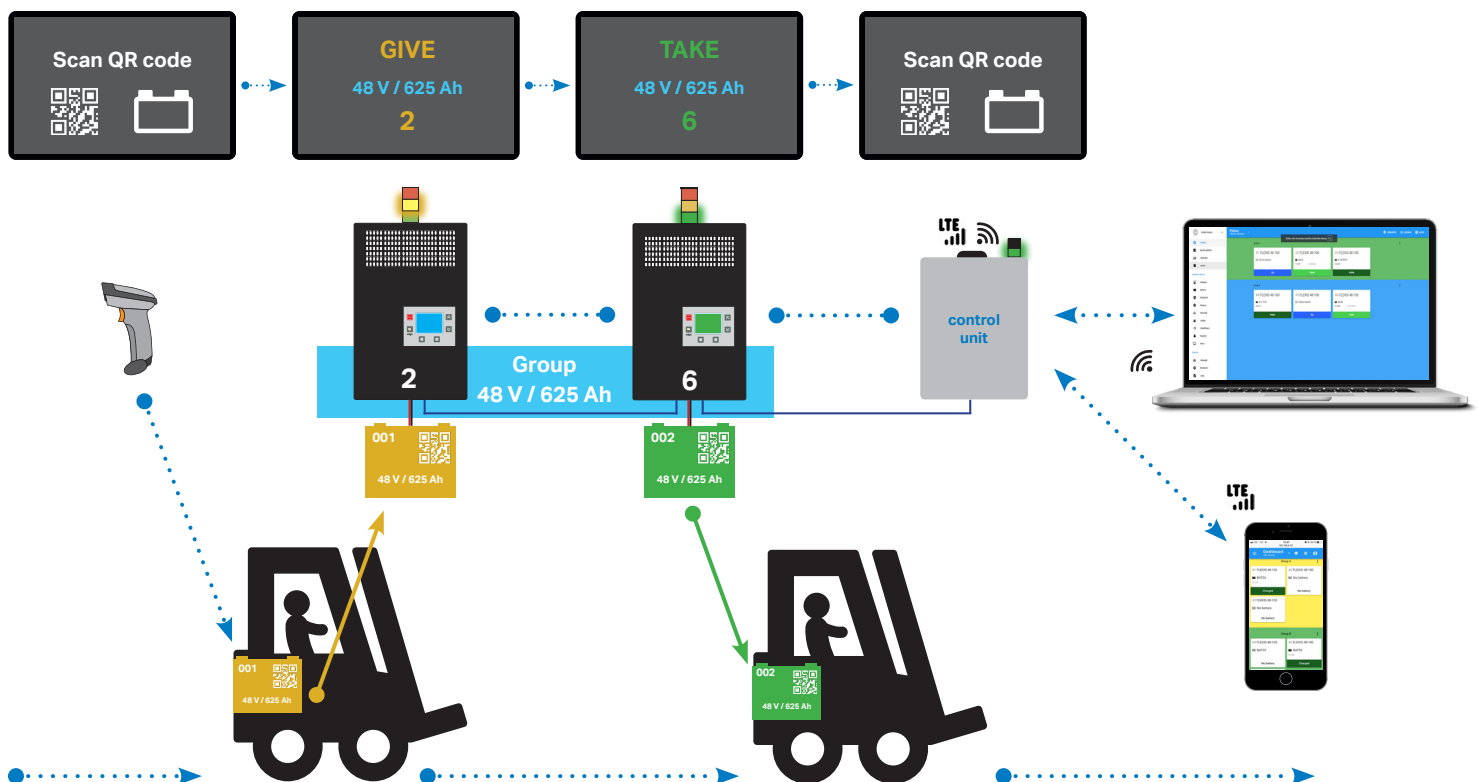


## MODULE IDENTIFICATION

IDENTIFICATION module brings perfect and detail overview about batteries, staff and forklifts in your fleet. Every identification object (battery, staff and forklift) has a unique code in the system, and it is marked by QR sticker. Before battery change, the required identification objects are scanned by wireless QR scanner. AXINET system starts the battery change and it determines a suitable position (GIVE) for connection discharged battery. After connection battery to the charger, the system determines charger with the most suitable charged battery for disconnect (TAKE) and go to service. This process is displayed on the industrial monitor and at the same time, it is signalized on the charger LED signal tower. By this way of battery change gives instructions to operators and makes battery change much easier and eliminates mistakes during the change.

Identificaton objects:

- batteries
- staff
- forklifts



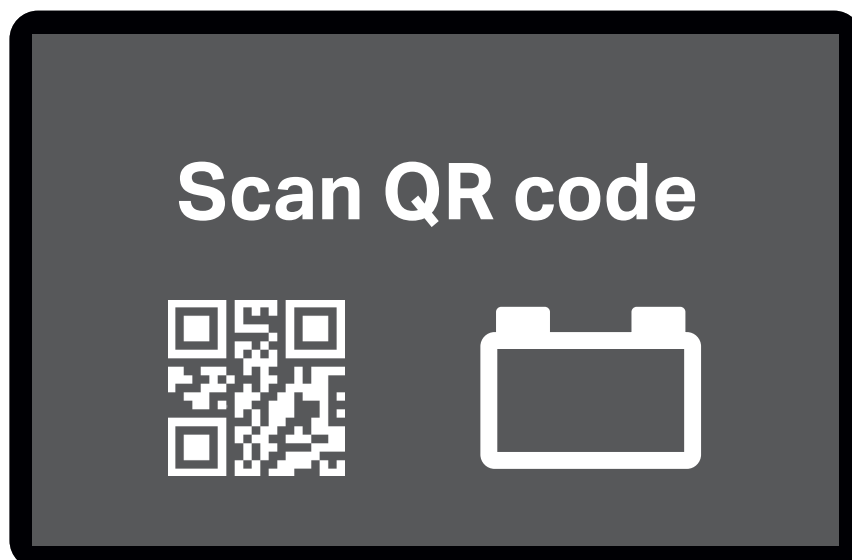
## MODULE IDENTIFICATION

### SOFTWARE:

- navigation durring battery change
- assigment of QR to identified objects
- overview of the charging cycles of each battery
- display of charging positions on the industrial monitor
- configuration of monitors

### HARDWARE:

- wireless QR scanner
- QR stickers
- industrial monitor for 24 / 7 use
- wall mounting
- UTP / STP cabel - in case of cabel connection



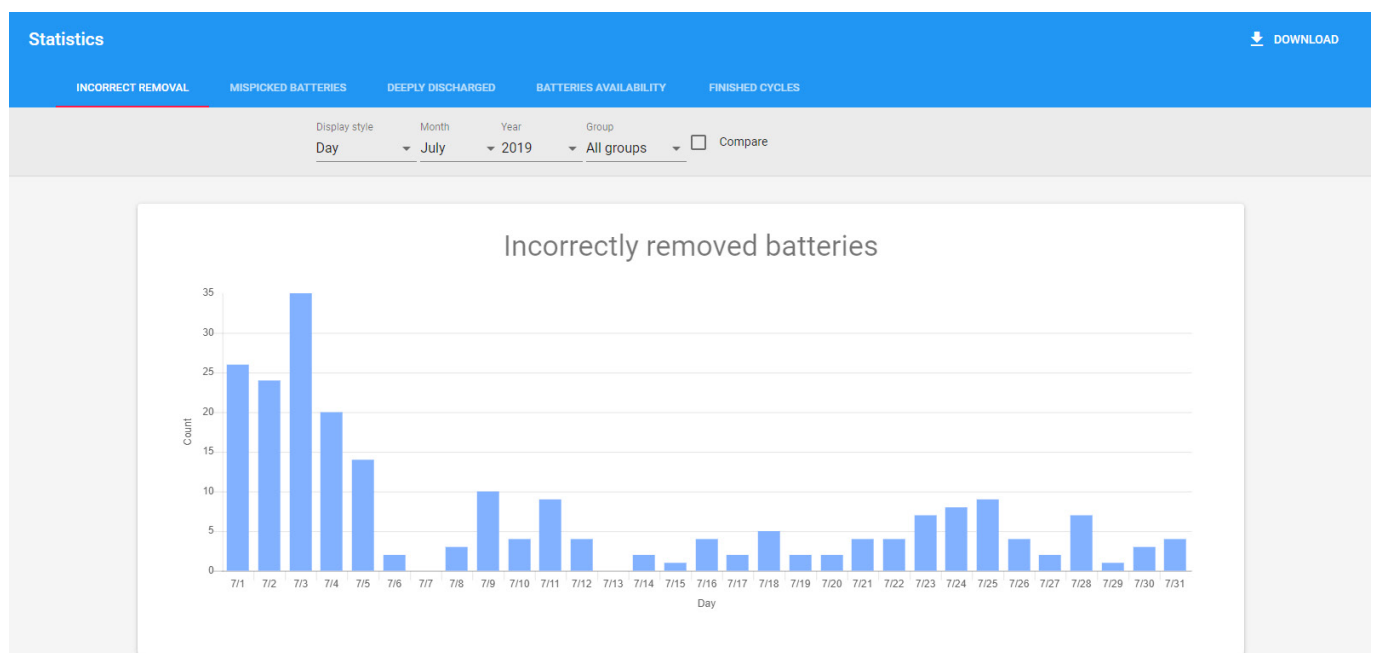


## MODULE STATISTICS

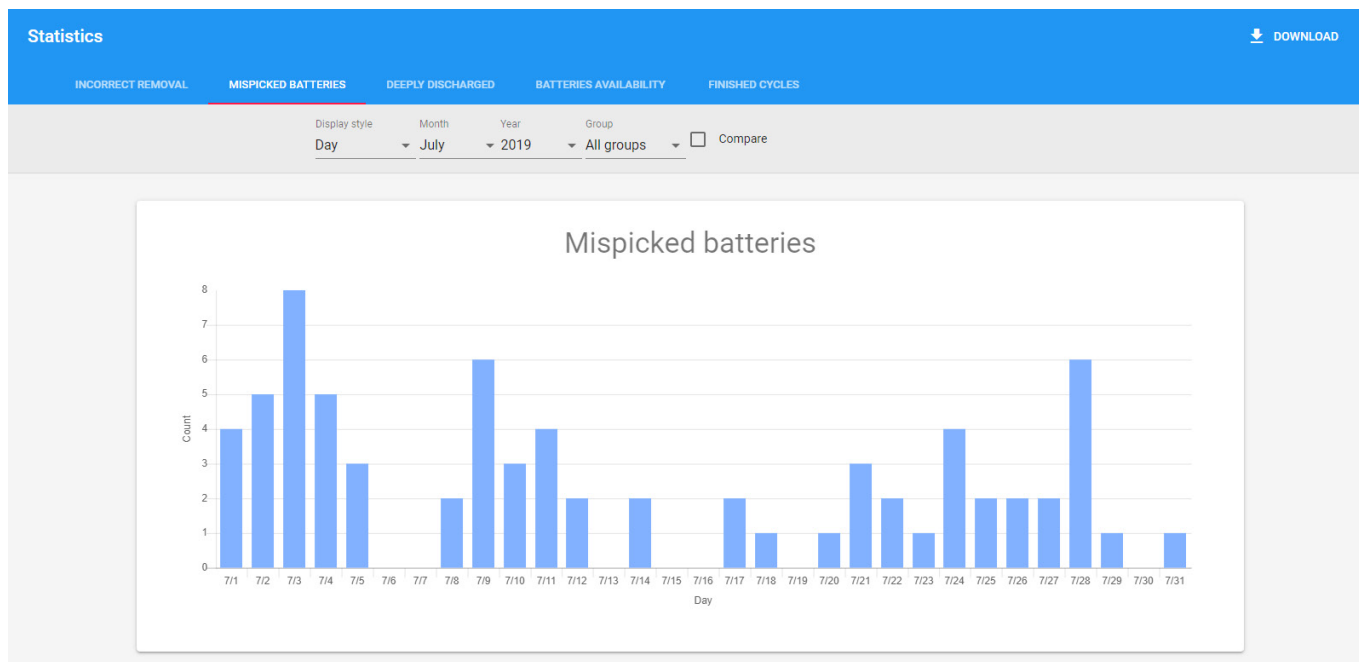
Module STATISTICS shows straightforward graphs of operations in the charging station, of charging cycles and mistakes. These graphs are intuitive and easy to use. They bring an individual time setting, sorting by groups and so on. Module brings a detailed overview of all operations in charging station, of batteries and their cycles, of the staff and handling trucks. Obtained data from AXINET system are the basis for analysis and for decision of corrective measures. For example increase or decrease in the count of chargers or batteries in station, incorrect battery use or necessary service. A manager has the exact information in one sophisticated web app. It is a very beneficial tool to save time and to reduce costs.

### SOFTWARE:

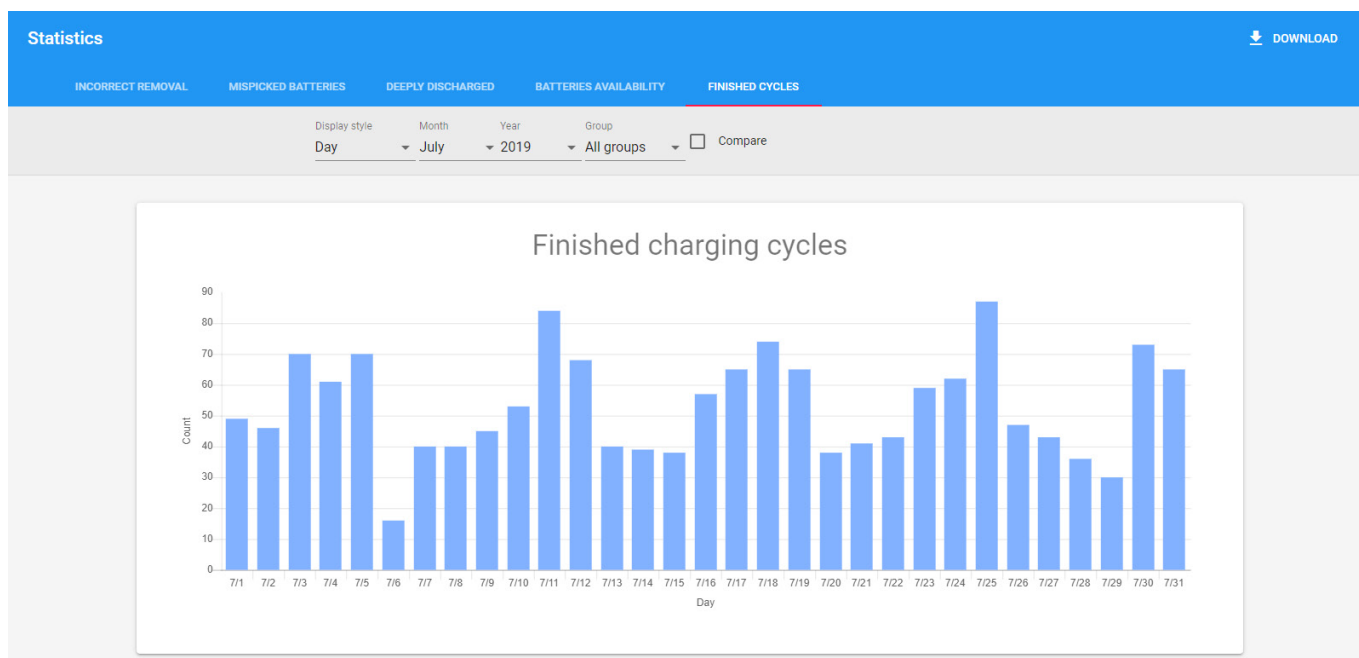
- rendering clear graphs in the application with the ability to edit and compare them
- export values in standard format



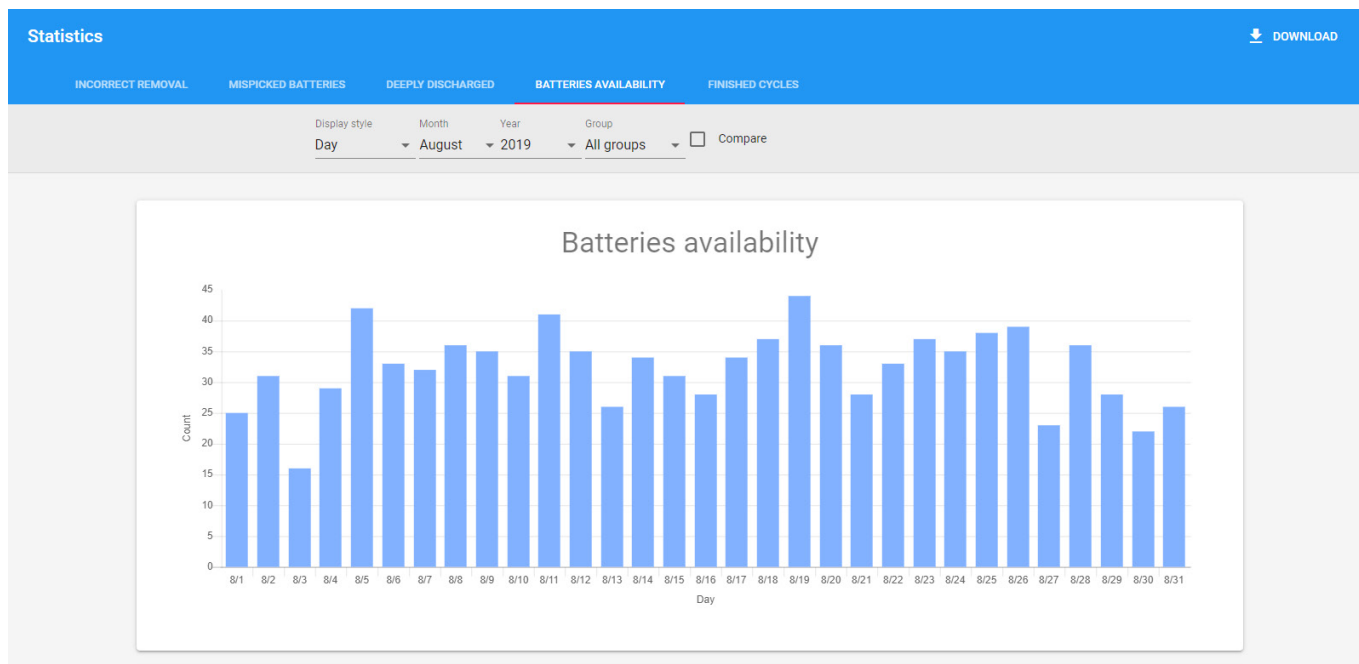
Incorrectly removed batteries graph shows the count of batteries which were disconnected from bad positions. It indicates if operators do battery change according to the system. High values of the graph should be lead to corrective measures.



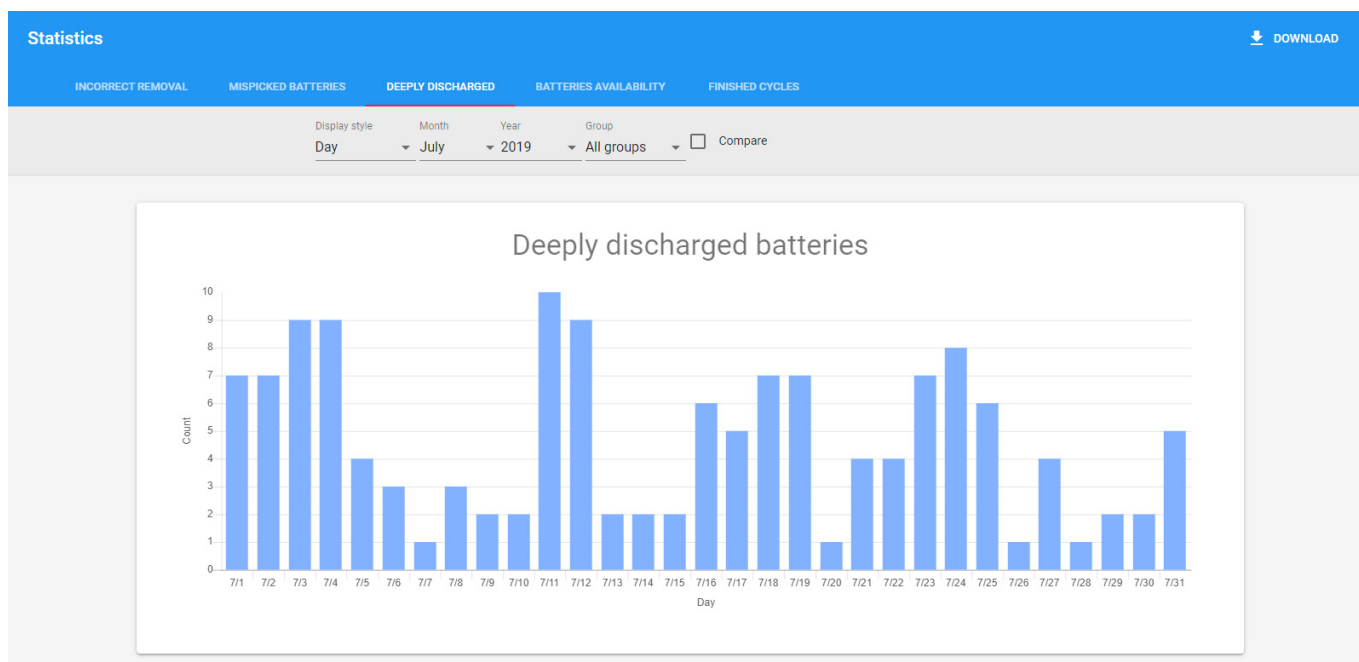
Mispicked batteries graph shows the count of batteries which were disconnected from charger during charging. It indicates if operators do the right battery change according to the system. High values should lead to corrective measures. Mispick of the battery during charging has a negative effect on its lifetime.



This graph shows the count of finished charging cycles in a time period. It shows how the charging station is used. The manager can find out whether the charging station is over- or underdimensioned.



Batteries availability graph shows the count of batteries which were charged, connected to the charger and prepared for take. High values can indicate too many batteries in the charging station, on the other hand low values indicate a lack of them.



Graph of deeply discharged batteries shows the count of connected deeply discharged batteries. High values suggest an incorrect setting of the capacity indicator in the handling truck or wrong behavior of staff towards batteries.

