

Annual Report

# ECOBAT 2017



## Introduction

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In sports, we often hear that it is harder to defend the title than to win it. As for ECOBAT, last year we managed to defend our title by exceeding a legal limit for efficiency of the take-back system for portable batteries for the second time in a row. Therefore, the Czech Republic may be perceived as one of the more developed EU countries that have successfully met the demanding objectives of Directive 2006/66/EC on batteries.

The take-back system for portable batteries in this country has been stabilised and efficient. At present, however, we see the seed of future problems in the field of industrial batteries as, with the development of e-mobility and new technologies, new types of batteries emerge on the market whose recycling is supported by neither legal regulations nor technical and economic conditions. That is why ECOBAT started to address this issue last year by offering its services to industrial battery producers.

I would like to use this opportunity to thank all of our clients and partners for their excellent cooperation. Thank you for your loyalty and continuous support.

RNDr. Petr Kratochvíl  
Managing Director, ECOBAT s.r.o.



## Company introduction

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ECOBAT is a not-for-profit organisation providing for the take-back and recycling of waste portable batteries in the Czech Republic since 2002. It was founded by six major battery producers. On 16 December 2009, ECOBAT was granted an authorisation to operate a collective take-back system for portable batteries and accumulators. It is a member of the European Association of National Collection Systems for Batteries (Eucobat), which currently represents 18 major battery take-back systems from 16 European countries.



## Members

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Bateria Slaný CZ, s. r. o.  
EMOS spol. s r. o. (GP)

Energizer Czech, spol. s r. o.  
Panasonic Energy Europe N.V.

Spectrum Brands Czech spol. s r. o.  
(VARTA)

## A word from towns and municipalities

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Our member towns and municipalities only have positive experience with ECOBAT. They perceive this collective system as very helpful and clearly beneficial. Thanks to its operation and cooperation with towns and municipalities, regardless of their size or location, every citizen can engage in everyday sorting of waste and thus contribute to environmental protection.

It is true that waste batteries are small but ECOBAT is able to achieve big things with them by continuously recovering large amounts of raw materials. And I am very glad that towns and municipalities make a significant contribution because they are close to the hearts of and trusted by their inhabitants. And trust is one of the pillars of successful waste sorting and utilization. I believe that ECOBAT absolutely deserves to be trusted by the Union of Towns and Municipalities of the Czech Republic because they offer quality services and achieve excellent results. I wish they continue that way to become a widely recognised and beneficial institution.

On behalf of Czech towns and municipalities, I would like to thank ECOBAT for cooperation in 2017. I look forward to further cooperation in 2018 and years to come.

Mgr. Pavel Drahovzal  
Executive Director

Office of the Union of Towns and Municipalities of the Czech Republic



## Key numbers in 2017

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Take-back of batteries and accumulators in tonnes

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1,681



Take-back rate

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46%



Number of producers involved in the ECOBAT collective system

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945



Number of collection points

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22,205

## We promoted sorting and recycling of batteries on bicycles

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In order to further support the sorting of batteries in regions, we launched our new Recycling Tour project and set for a journey on e-bikes across the Czech Republic. The route was planned from Aš to Bukovec, the easternmost village in the country. And since the key part of the Recycling Tour was to enhance relations with representatives of municipal and local authorities and meet with people to whom the purpose of the event was to be explained in great detail, the e-bikes were tamed by ECOBAT marketing manager Eva Gallatová, expert journalist Pavel Mohrmann and PR agent Jana Čechová.



In ten days, every member of the three-member group travelled 798 km and visited 23 towns and municipalities. In addition to meetings with mayors and councillors, our team members had countless discussions with school children and pre-schoolers, people on squares and elsewhere along the route. During the meetings they handed out ECOGHEESE boxes for household storage of batteries. The main topic was the importance of battery recycling.



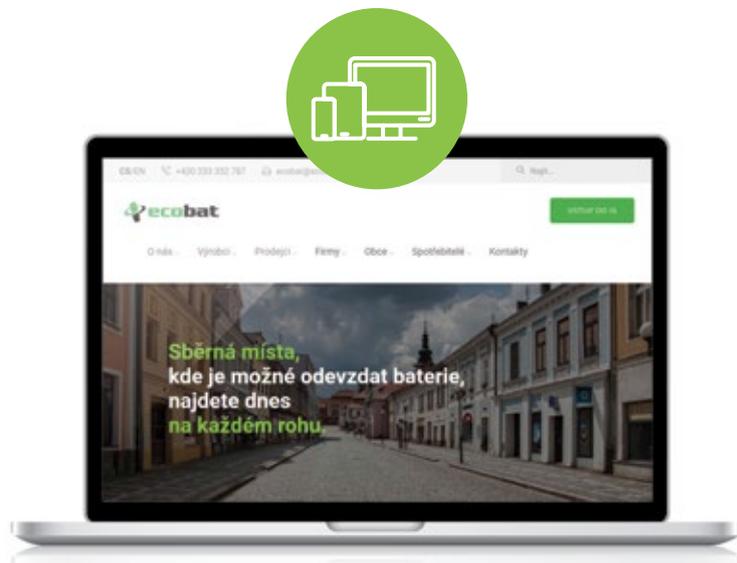
The Recycling Tour took almost six months of hard work to prepare. Every day of the journey was carefully scheduled. From meetings with officials through promotion and preparation of PR events to common production and organizational issues. The project involved intensive work with the media which resulted in more than 100 media coverages. The public could follow our project on the [recyklojizda.ecobat.cz](http://recyklojizda.ecobat.cz) website and the RECYKLOJÍZDA FB profile.

There were many enthusiasts who joined the Recycling Tour on their own bikes – some for a few kilometres, others for a whole day. We should not forget handicapped athletes from the Journey to a Dream organization on hand bikes, people from FitKoloběh, Pardubice, or bikers from the K4 Cycling Team. Their fighting spirit and ability to cope with unfavourable destiny can be simply contagious. Along the route, the Recycling Tour team was accompanied also by mayors and deputy mayors.



## We launched a new responsive website

The maximum amount of information about sorting and recycling of batteries is now available on our new website. Please visit [www.ecobat.cz](http://www.ecobat.cz) where information is now sorted based on user types and needs: municipalities, businesses, producers, vendors and average consumers. The purpose of our website is to provide information but, at the same time, it is a very important service and communication platform. There is a search engine to identify used battery collection points and a catalogue of collection containers. It can be used by businesses and authorities to order transportation of collected batteries. The website is fully responsive and can be viewed conveniently on a desktop or a smart phone.



The MUNICIPALITIES menu comprises also the INVOLVE CITIZENS section. In order to facilitate communication with their citizens, regional, municipal or local authorities may download a variety of texts and layouts on battery sorting and recycling.



## ECOCHEESE fan base is growing

We use our ECOCHEESE FB profile to convince the public that used batteries must be sorted and recycled. At the end of 2017, we had a crowd of 4,000+ followers. We use our profile to inform about latest developments in battery collection, introduce good practices, organize thematic competitions with prizes, make our activities and partners' activities visible and, of course, promote the ECOCHEESE box for household storage of batteries.

## School children were learning and sorting with “Recycle with Fun” and “Battery Harvesting”



For 10 years, we have supported the Recycle with Fun to Clean Up the World program that teaches children from kindergartens, primary and secondary schools to sort waste. We also co-organized a three-month collection campaign held in autumn. During the campaign, schools returned for recycling nearly 53.4 tonnes of used batteries. “Increasing the life of your battery” was the name of an accompanying hands-on activity used to explain to children and students that waste sorting alone was not enough and should be complemented with reasonable consumption. Batteries should be used in an efficient way and rechargeable batteries should be preferred to disposable ones. Due to our ever-increasing battery consumption, this is a very important way of saving primary sources of raw materials used for battery production (and therefore the environment). In close cooperation with the Highlands and South Moravia Regions we focused on schools and school children also during the Battery Harvesting competition. It goes without saying that Bat the Frog and Asik the Hedgehog could not miss the awards ceremony either.

## Sorting alone is not enough

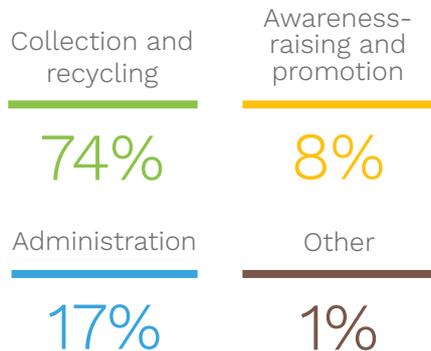
Over the last 7 years, battery consumption in the Czech Republic has increased by 19%. And since it is clear that this trend will continue, we do our best to spread awareness that battery recycling alone is not enough. We should be more picky on what batteries we use and how. We recommend that people prefer greener rechargeable batteries to disposable ones. And we also emphasize that batteries should be discharged down to zero, because one in eight batteries is handed over for recycling prematurely, i.e. still charged up to over 50% of its capacity.



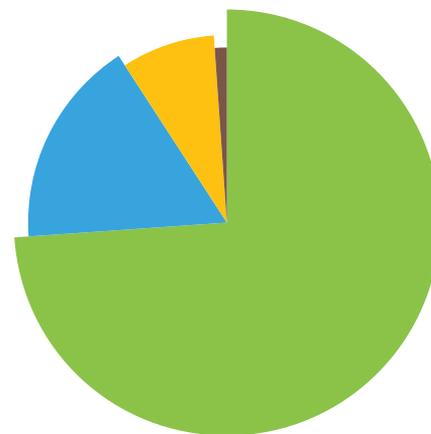
## Funding

In 2017, ECOBAT reported a gross profit of CZK 111,000, which accounts for 0.2% of its total turnover. Similarly to the past years, the generated profit will not be distributed among the owners, it will be used to further develop the collection network. The cost of processing of 1 kg of collected batteries amounted to CZK 21.85. Last year's slight increase (from CZK 21) is mainly due to costly processing of certain types of batteries. In 2017, for instance, ECOBAT had to pay for recycling of NiCd batteries for the first time in history.

## Expenditures



**CZK 36,737,330**  
in total



In 2017, ECOBAT spent a record-breaking amount of **CZK 2,830,764** on education and publicity. This is quite unique at the time when other collective systems are cutting their budgets.



In 2017, ECOBAT supported the Recycle with Fun to Clean Up the World educational program for schools with the amount of CZK 1,493,000. The program was attended by over 3,600 schools from the whole country and they won unprecedented amount of **1,048,828** points.



From municipalities, ECOBAT accepted 387,631 kg of batteries for recycling. Thanks to the efficient battery take-back system in the Czech Republic, they saved a total of **CZK 10,853,668** for the collection and recycling of the batteries that had been handed over by citizens to community waste management systems instead of ending up in mixed household waste.

## Number of producers

# 945

Number of producers\* involved in the ECOBAT collective system.

\*Pursuant to S. 31 (i) of Act No. 185/2001, on waste

Do you know that there are only two exceptions that are not subject to take-back or separate collection obligations? They are batteries for appliances used in space industry and those designed for special military purposes.

During the past five years, rechargeable lithium batteries sales doubled. They include e.g. power banks, batteries for cell phones, laptops, e-carts, torches and cordless power tools. At the same time, last year, button battery sales tripled compared to 2012.

## Batteries placed on the market in 2017

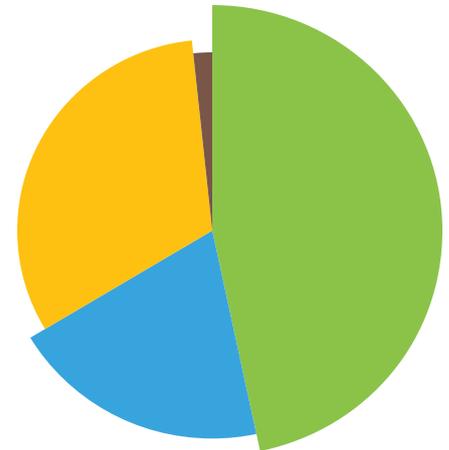
Alkaline	Accumulators
1,713	1,174
Zinc	Other
723	57

# 3,667

Total (in tonnes)

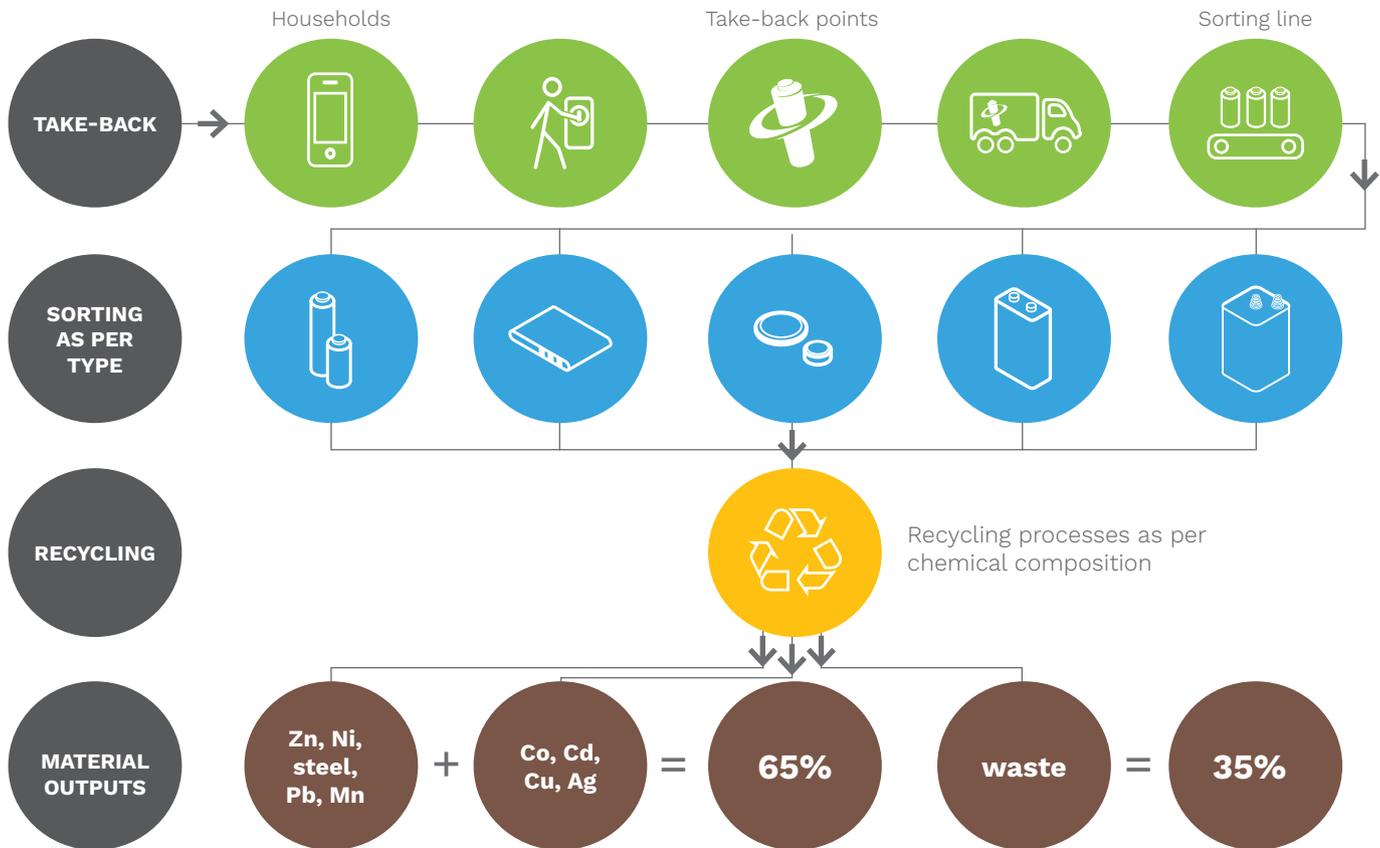


Since 2017 ECOBAT provides services for all used batteries and accumulators – portable, but also industrial and automotive. In 2017 its services attracted **118** new clients. Apart from Czech and Slovak clients, ECOBAT is trusted by clients from Germany, Poland, Hungary, Austria, Netherlands, Belgium, France, United Kingdom, Ireland, Sweden, Finland and even from the United States.



Every single day, over **400,000 pieces** of mignon (AA-sized) batteries are sold in the Czech Republic. Alkaline batteries continue to be a hero product on the market and they are still the most commonly used batteries in many appliances. AAA-sized batteries are also becoming increasingly popular.

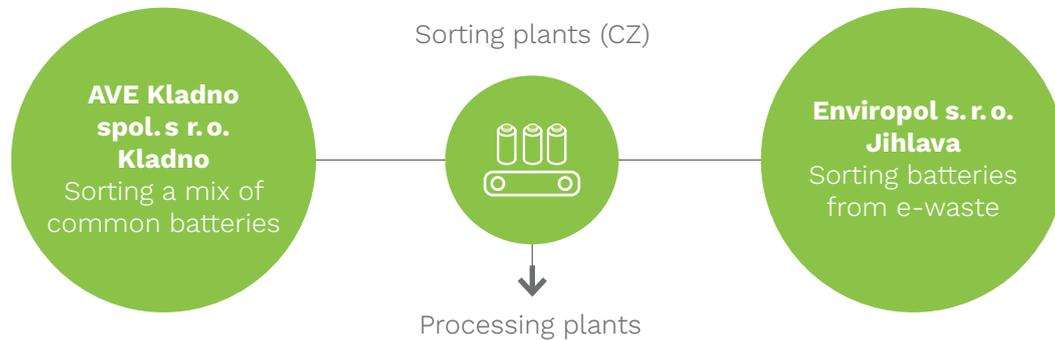
## From take-back to materials



According to tests that we performed in the Kladno municipal sorting line, 13% of the batteries are handed over for recycling prematurely. They still have over a half of their original capacity, and they could have been used longer. If they were used properly, we could have spared 200 tonnes of batteries.

From one tonne of mignon batteries collected for recycling we get 167 kg of steel, 210 kg of zinc, 205 kg of manganese and approx. 15 kg of nickel and copper. These metals will be used to make new products and perhaps even new batteries.

## Recycling partners



Germany

4%

NiMH

Spain

2%

Li-Ion



Poland

37%

Zn+Alk

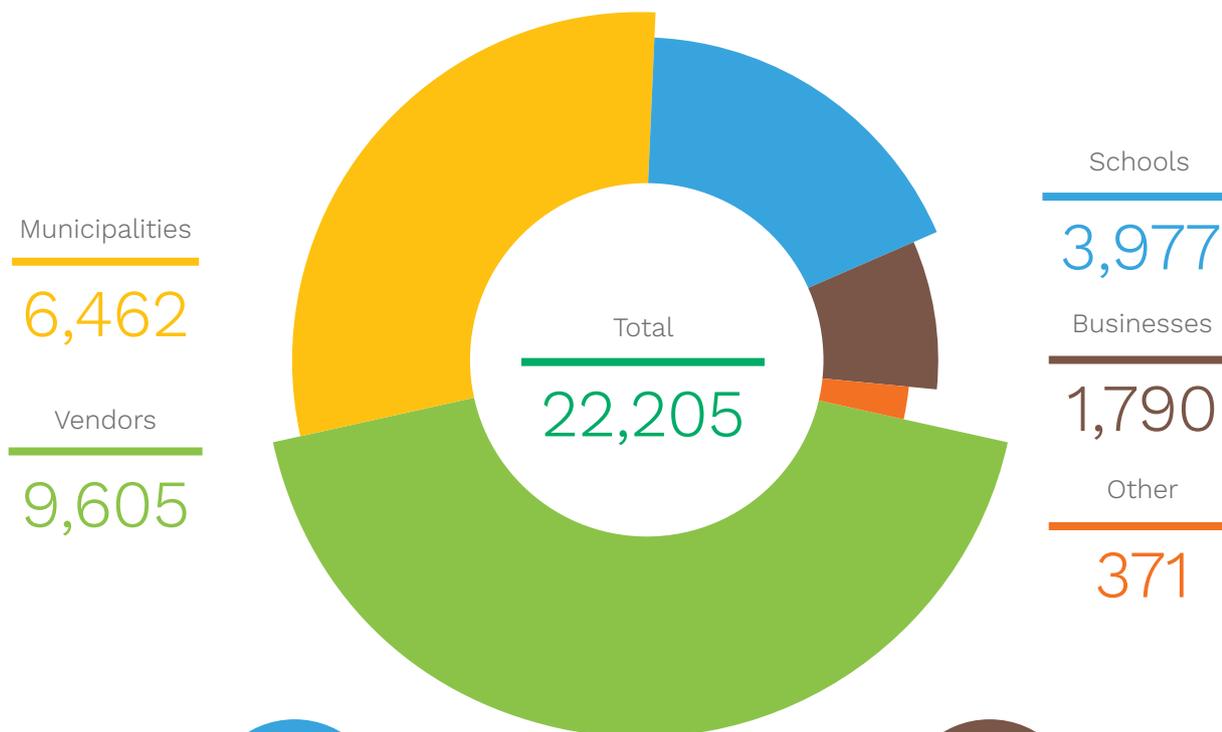
Czech Republic

57%

Pb, Zn+Alk, Ag

Efficient and economical recycling of portable batteries in processing plants requires sufficient amount of raw materials that are not available in the Czech Republic. Therefore, part of the collected batteries must be exported for recycling abroad.

## Collection points



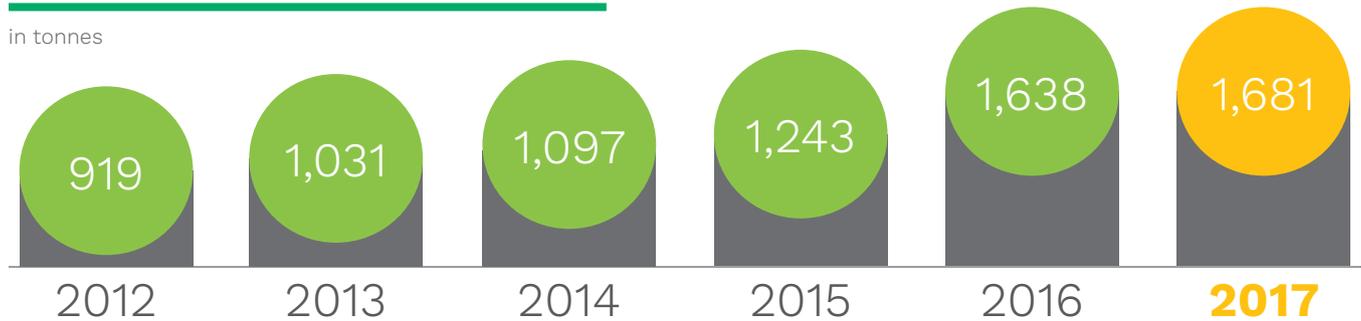
In 2017, ECOBAT provided for transportation of **8,911** loads of batteries. In addition, batteries were collected 16,937 times along with e-waste from red outdoor containers.



An increase in the number of collected batteries is supported by growing availability of collection points. There is now over **22,205** points in the Czech Republic where used batteries can be handed over for recycling. Please go to [mapa.ecobat.cz](http://mapa.ecobat.cz) to find your closest collection point. You can search by address and use filters. The map is designed and administered by ECOBAT.

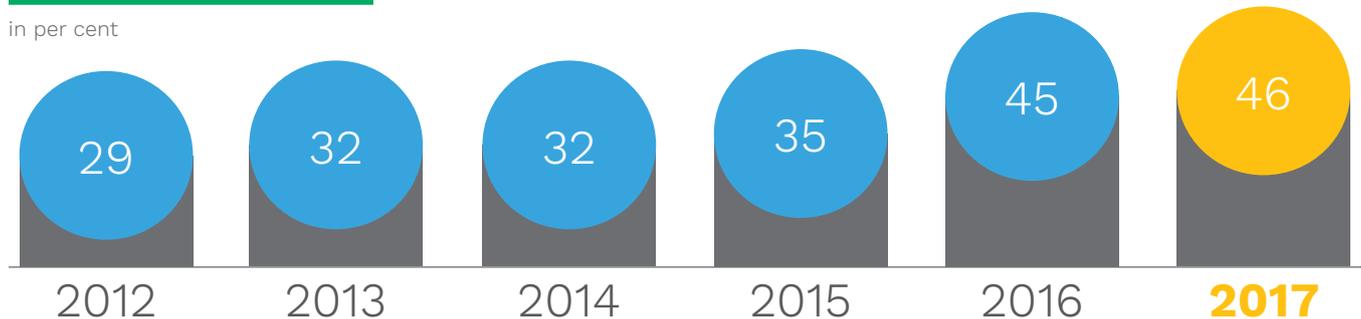
## Take-back development

in tonnes



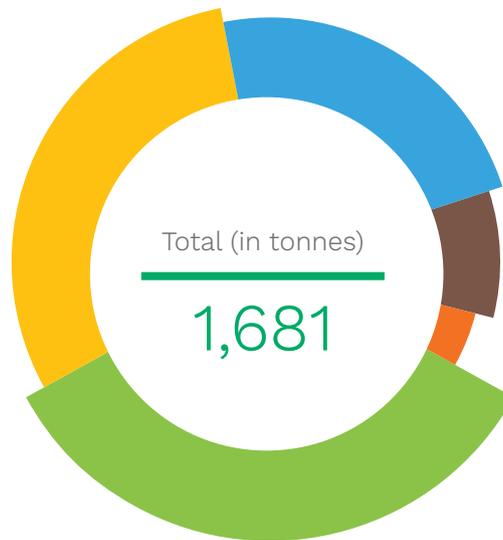
## Take-back rate

in per cent



The average life cycle of a portable battery in Europe is **5.2 years**. It takes 3 months for a battery to get to an end user and the rest of the time accounts for usage and storage. Over three years, only 42% of batteries return to collection systems. The average life cycle of a rechargeable lithium battery is 6.2 years. Therefore, due to circumstances, it is very difficult to comply with the EU standard implying a three-year battery life cycle while demanding the minimum collection rate of 45 per cent and there are many countries that fail to satisfy this criterion.

## Collection channels



Municipalities

23%

Schools

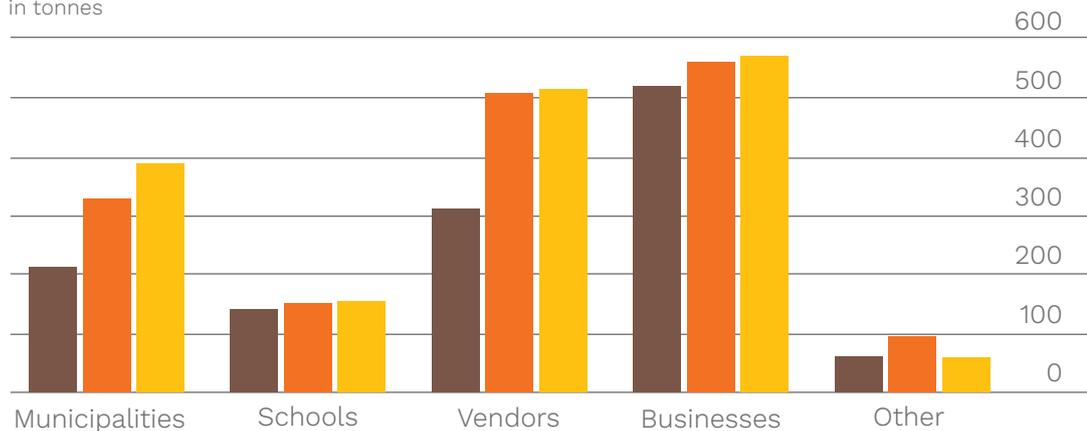
9%

Other

4%

## Development as per collection channels

in tonnes



2015

Total  
1,243

2016

Total  
1,638

2017

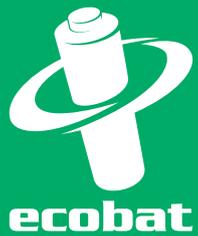
Total  
1,681

The total amount of 1,681 tonnes of batteries collected in the Czech Republic for recycling in 2017 equals the approximate weight of the metal structure of the famous London Eye – the largest observation wheel in Europe weighting 1,700 tonnes.

## Collection of batteries in the regions



Every inhabitant of the Czech Republic sorted 159 grams of batteries on the average, which equals approximately 6.5 mignon (AA-sized) batteries.



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