

# The battery gap

Investment into battery  
and electro-mobility  
technology companies

April 2021

Faraday Battery Challenge



UK Research  
and Innovation

**Beauhurst**



# Contents

4	Introduction	17	Section 2:
6	Company classification		Electro-mobility companies
7	Section 1: Battery technology companies	18	Electro-mobility demography
8	Battery company map	19	Investment overview
9	Battery company demography	20	Notable investments
10	Investment overview	21	Top funds by number of deals
11	Notable investments	22	Top funds by company stage of evolution at deal date
12	Investment by stage of evolution	23	Section 3: Investors in focus
13	Top funds by number of deals	24	Investor perspectives
14	Top funds by company stage of evolution at deal date	28	About us
15	Deals by region		
16	Amount invested by region		



## Introduction

Henry Whorwood  
Head of Research and Consultancy, Beauhurst

**“This report was born out of the desire to answer questions about the perceived gap of investment into battery technology companies.”**

Through the Faraday Battery Challenge, UK Research and Innovation (UKRI) is committed to growing a battery technology business in the UK marked by collaboration, innovation and strong commercial potential. This report was born out of the desire to answer questions about the perceived gap of investment into battery technology companies. Supply and demand are hard to unpick when it comes to the creation of new ventures, and the investment of capital into those ventures. Nonetheless, by quantifying existing investment flows into the sector and by identifying the recipients and providers of that data, it is hoped that some of the issues have been elucidated.

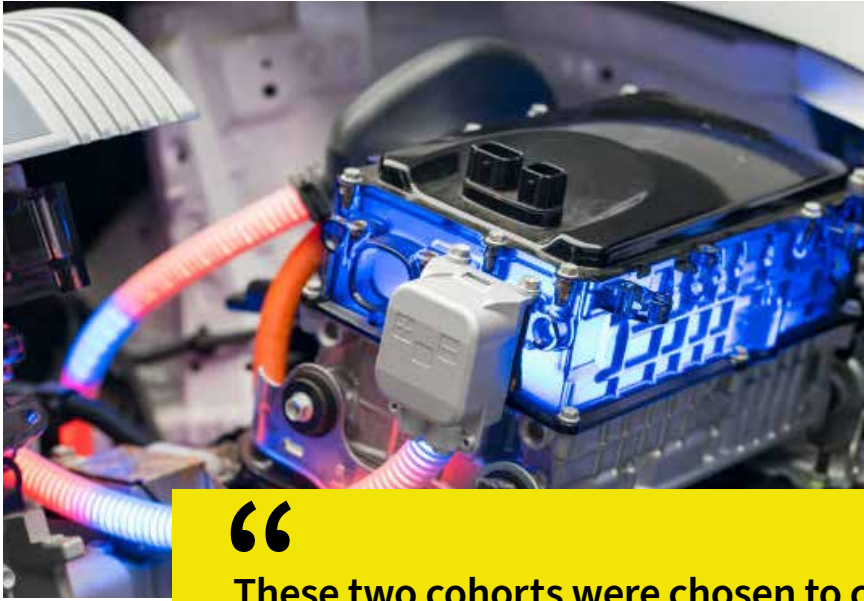
Beauhurst tracks the UK’s high-growth companies and the ecosystems that support them. We look at companies across all sectors and across the UK. We identify firms by looking at private companies that have raised any amount of equity investment or venture debt, received substantial innovation grants, have attended an accelerator, have spun out of a university or have become

a visible scaleup. We therefore hold details on every private high-growth company that is either directly or indirectly participating in or contributing to the battery sector in the UK. The only exceptions are smaller companies that are bootstrapped, or larger companies using conventional debt.

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**We therefore hold details on every private high-growth company that is either directly or indirectly participating in or contributing to the battery sector in the UK.”**

In order to identify the battery sector, Beauhurst created two long-lists: the first was a list of all high-growth companies that could be identified as working directly on battery technologies (the ‘battery cohort’); the second was



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**These two cohorts were chosen to compare the investment landscape in the UK and investigate why prominent electromobility investors are not investing in battery companies.”**

all high-growth companies that could be identified as working somewhere in the battery technology value chain. This the second group typically—but not exclusively—comprised companies working on part of electric vehicle applications and therefore the cohort has been dubbed the ‘electromobility cohort’. These two cohorts were chosen to compare the investment landscape in the UK and investigate why prominent electromobility investors are not investing in battery companies.

In both cases, the cohorts were identified through a combination of sectoral and keyword searches across a variety of data. This included looking at company descriptions as written by the Beauhurst in-house team, as well as the descriptions written by the companies themselves. It also included searches across grant project abstracts, and manual inputs from industry stakeholders. Some of the companies in

each cohort are working on battery or electromobility technologies directly; for others it is more tangential to their main business. In the latter cases, the investment received by the company may not have been used primarily for the technologies that made them eligible for the cohort, but for simplicity the full value of the investment has been attributed to the cohort.

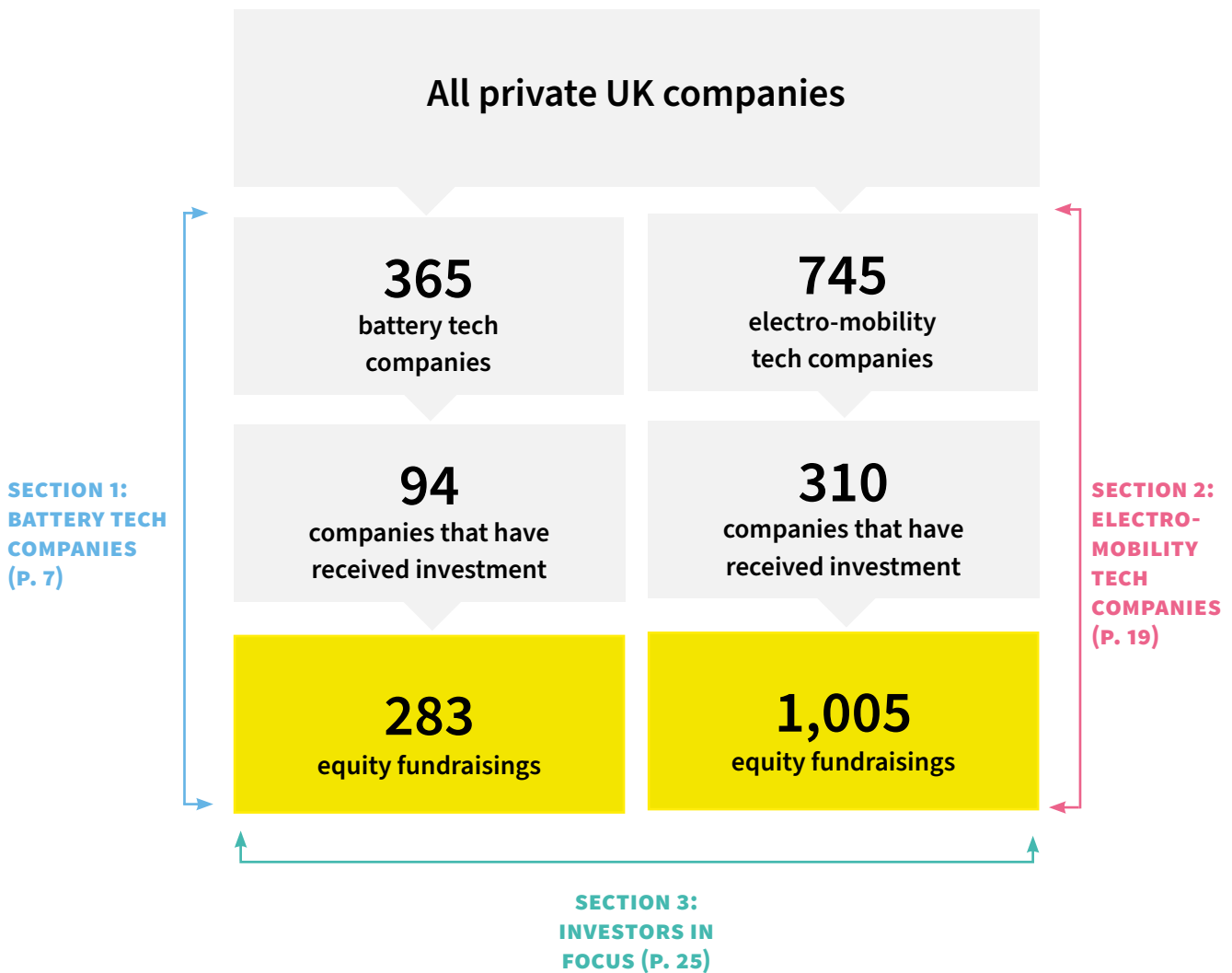
The following report is divided into three sections: the first provides summary statistics of investment into battery companies; the second provides summary statistics of investment into electromobility companies; and the third provides a qualitative summary of interviews conducted with investors in the space. We’d like to thank everyone who contributed to this report; any errors or infelicities are Beauhurst’s sole responsibility.

# Company classification

## CLASSIFYING PRIVATE BATTERY AND ELECTRO-MOBILITY TECHNOLOGY COMPANIES

The private companies included in this report were identified using Beauhurst’s unique sector classification system, SIC codes, Innovate UK grant descriptions and manual research. The group of battery technology companies is comprised of battery manufacturers, road vehicle manufacturers (excluding hydrogen-powered vehicle makers), service providers and manufacturers that work with batteries, and specialist materials and chemical providers.

The electro-mobility group is comprised of companies involved in advancing transportation technologies other than batteries. It includes but is not limited to charging equipment, electronics and engine manufacturers; autonomous vehicle companies; and alternative fuel companies.



# Section 1: Battery technology companies

The battery technology companies have been identified using Beauhurst's unique sector classification system, SIC codes, Innovate UK grant descriptions and manual research.

These are companies that are engaged in activities related to the materials, technology and application of battery technologies. Only private companies have been included.

This group includes:

- battery manufacturers
- road vehicle manufacturers (excluding hydrogen-powered vehicle makers)
- service providers and manufacturers that work with batteries
- specialist materials and chemical providers

# Battery company map

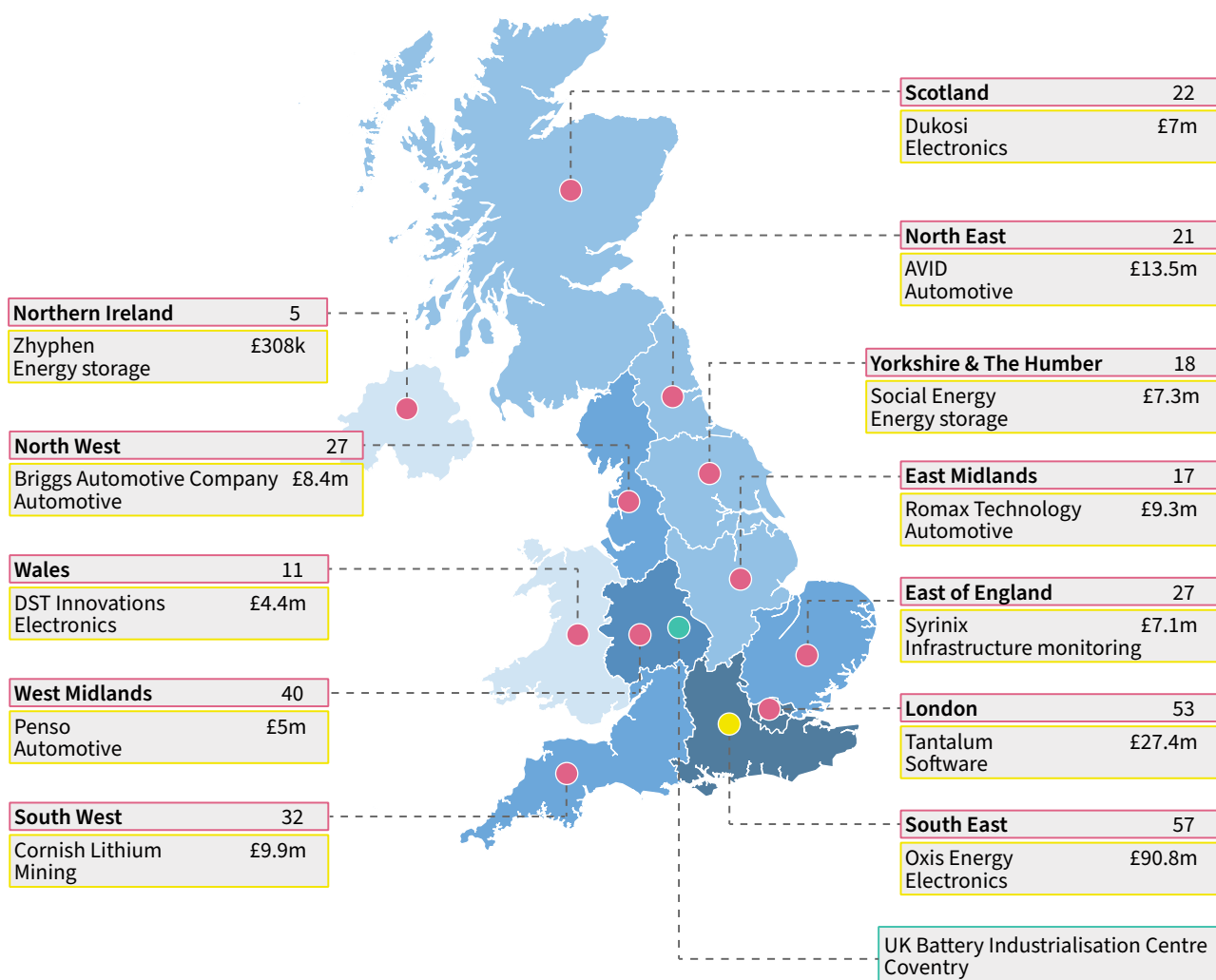
The South East is home to the most battery technology companies, accounting for 17% of the active firms. It is followed by London with 16% and West Midlands with 12%. The South East is also home to the battery tech company that has raised the most equity; Oxfordshire-based Oxis Energy has raised £90.8m via six rounds since 2011.

## ACTIVE BATTERY TECH COMPANY POPULATION BY REGION AND COMPANIES WITH MOST INVESTMENT (SINCE 2011)

Number of companies  
5 60

Region	Number of companies
Company with most investment	Total investment
Sector	

- --- Region
- --- Company with most investment
- --- Location of UKBIC





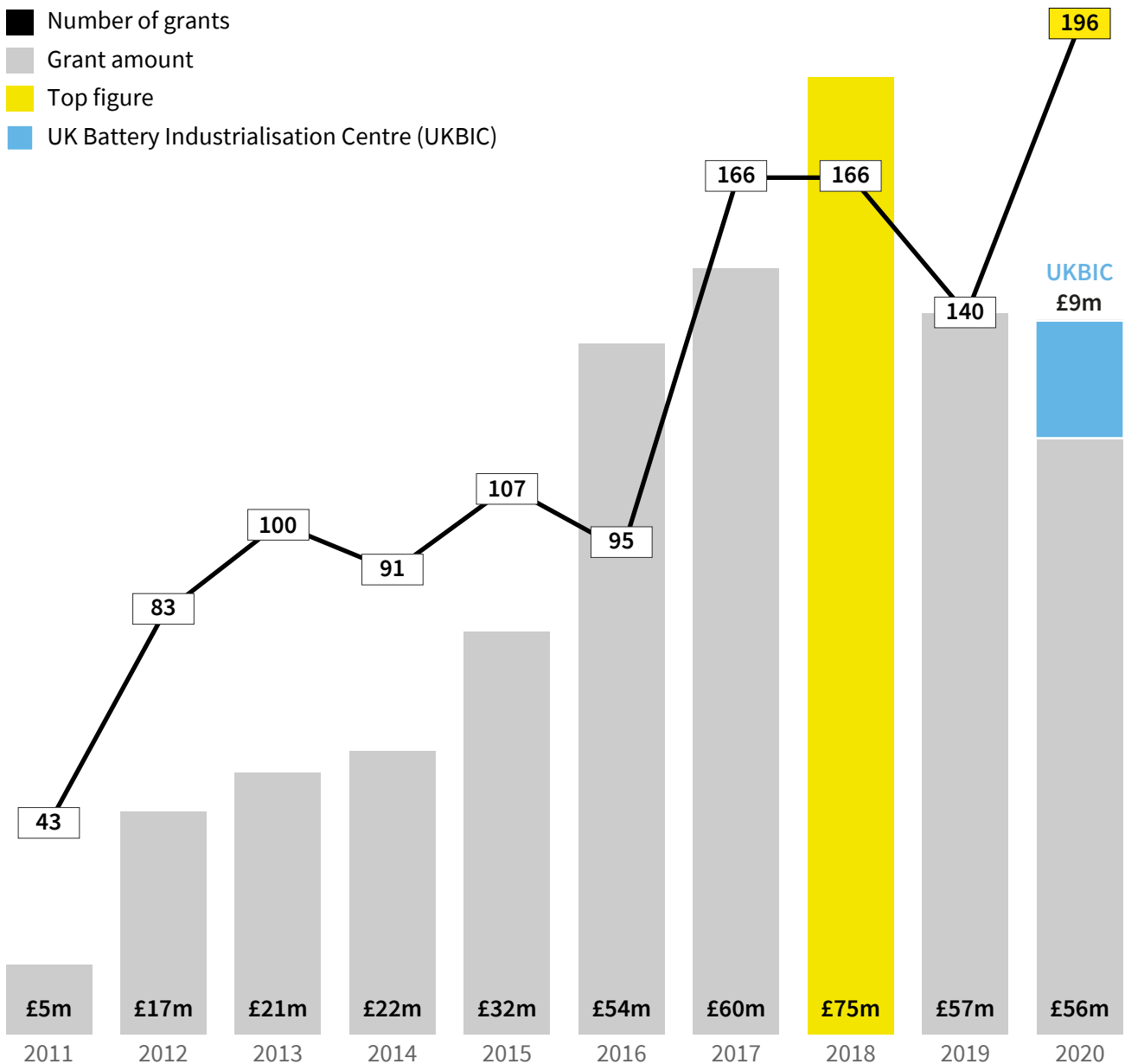
# Battery companies demography

Of the 365 battery technology companies analysed, 175 (48%) have received an Innovate UK grant via more than 1,500 awards. Battery companies have seen an increase in grants awarded per year, particularly since 2016 perhaps due to the launch of the Faraday Battery Challenge. However, the average grant of £337k is less than that of the electro-mobility companies, which received £477k on average (see page 18).

## KEY FIGURES



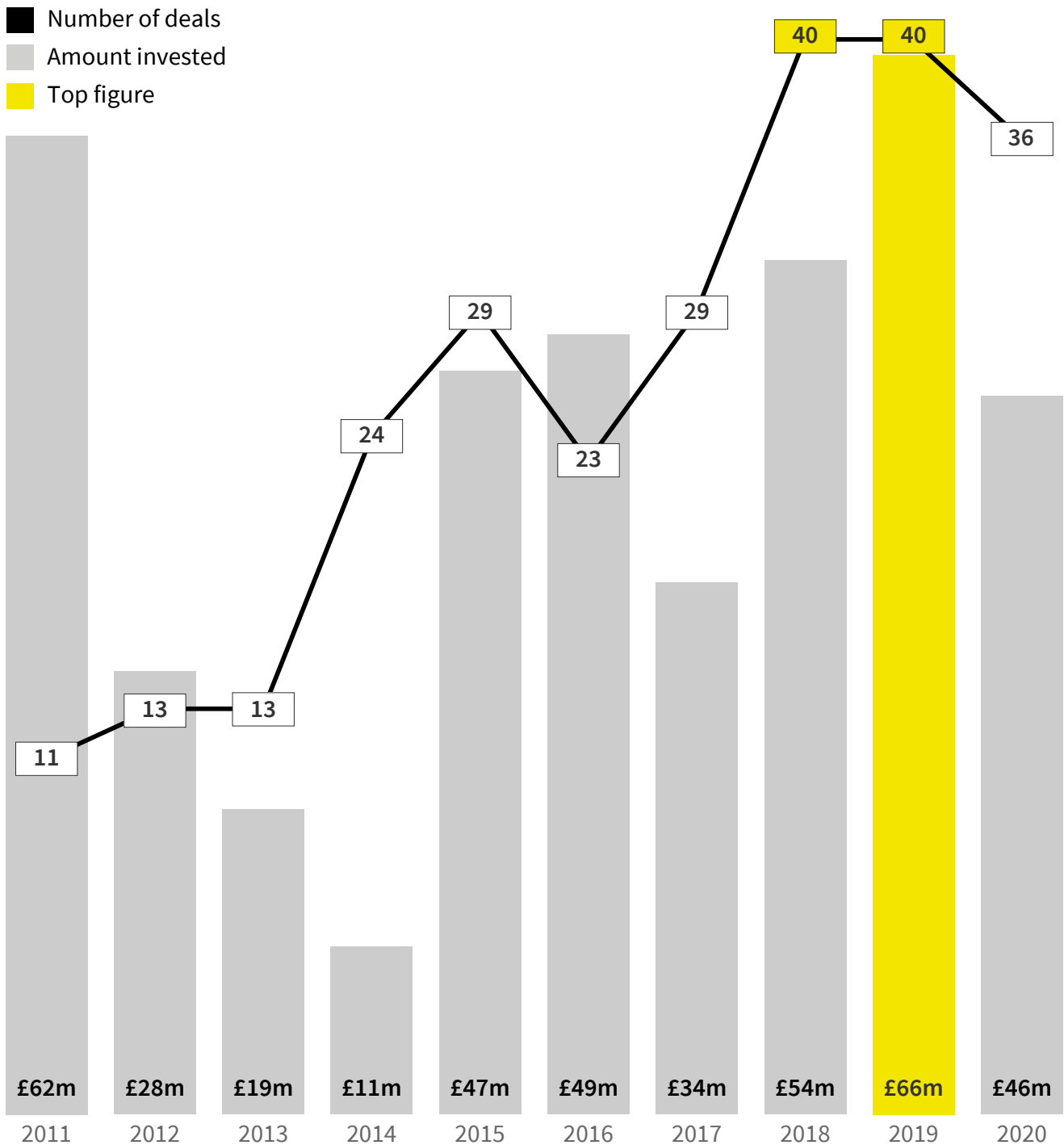
## INNOVATE UK GRANTS AWARDED TO BATTERY TECHNOLOGY COMPANIES (2011–2020)



## Investment overview

Deal numbers for the battery technology companies have slowly increased over the 10 years analysed, aided by the founding of new companies. Just over 20% of the companies are less than three years old. While 2019 was a top year for investment into the sector, the figure of £66m is inflated by Everledger's £16.1m raise which is significant for the sector (page 10). Similarly, the figure for 2011 is inflated by battery material maker Nexeon's £40m raise.

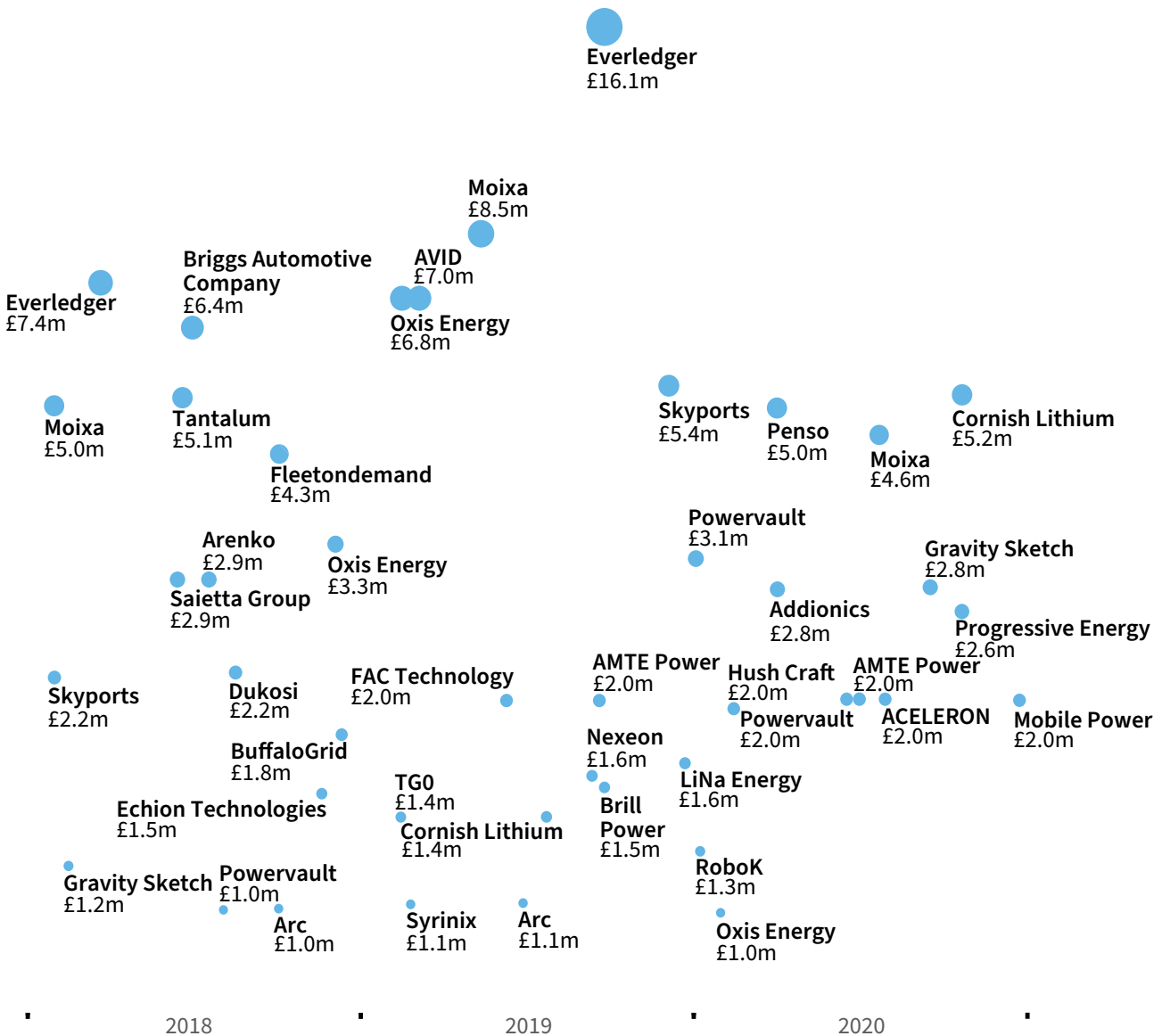
### EQUITY INVESTMENT INTO BATTERY TECHNOLOGY COMPANIES (2011-2020)



# Notable investments

Everledger's £16.1m raise in 2019 is the largest from the last three years. Other notable deals include Moixa's £8.5m round in 2019 which was led by Honda. The largest deal in 2020 was Cornish Lithium's £5.2m round which was raised from investors on equity crowdfunding platform Crowdcube.

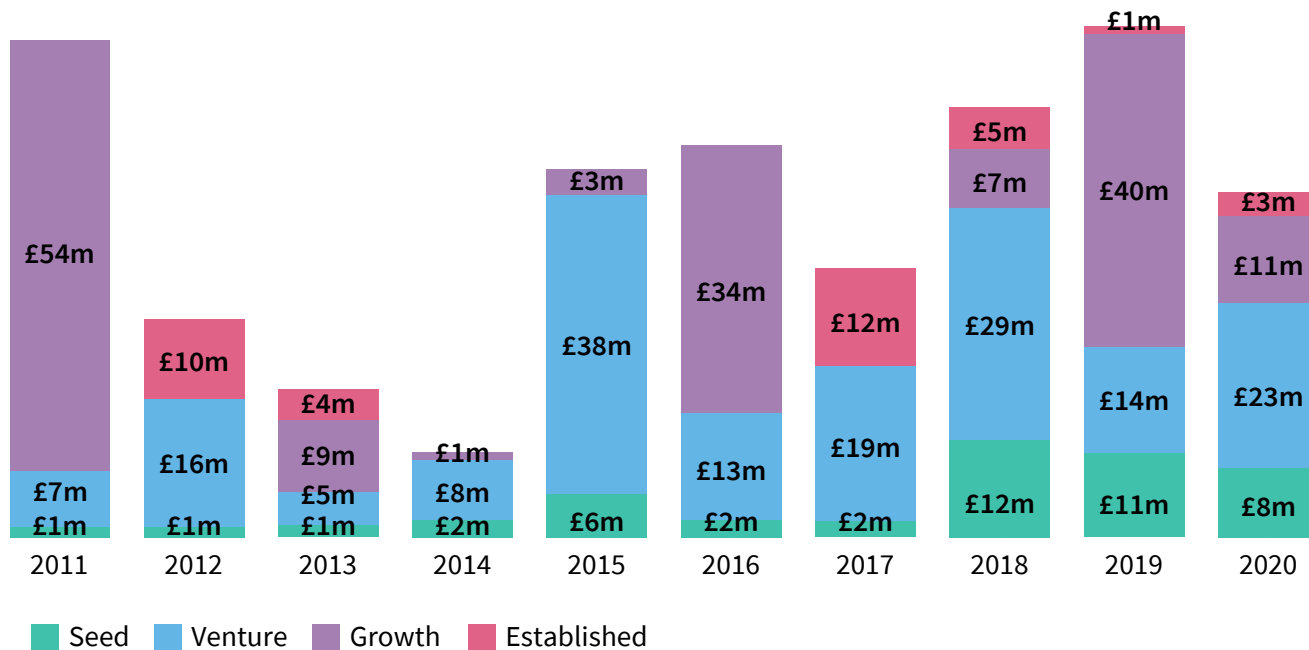
EQUITY INVESTMENTS OF £1M OR MORE (2018-2020)



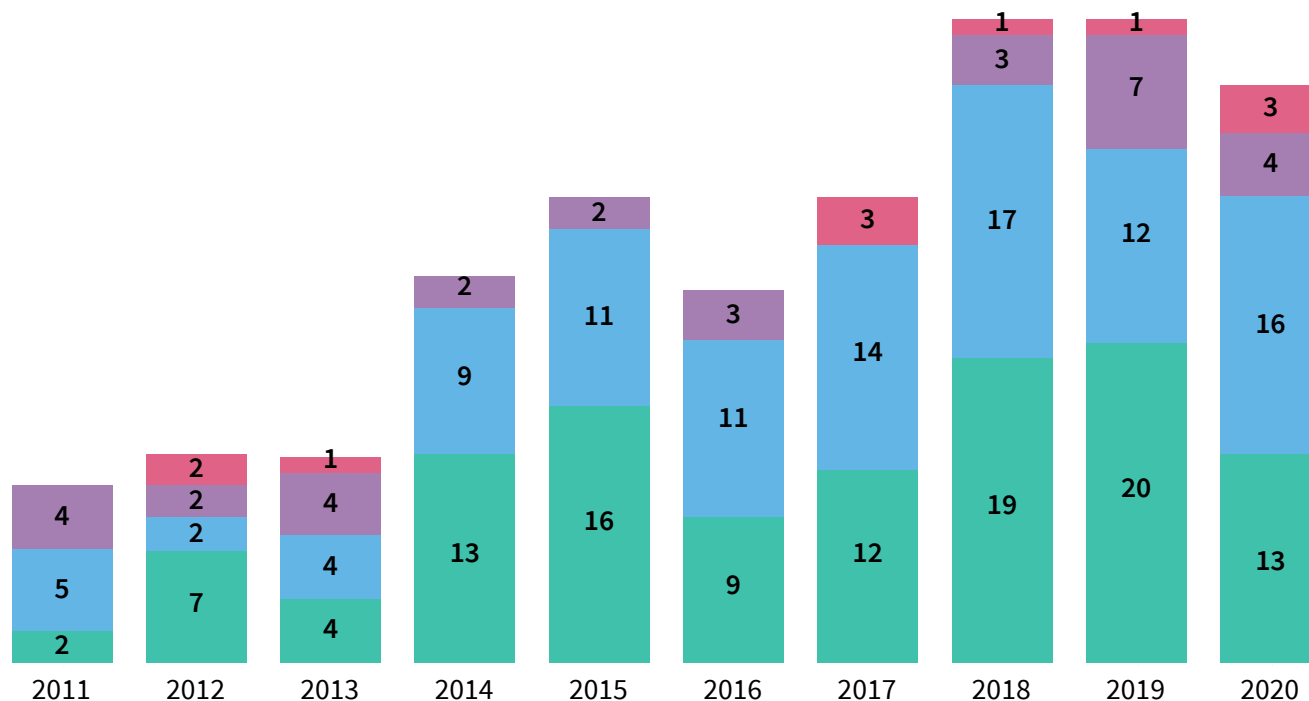
# Investment by stage of evolution

Analysis of deal numbers by stage of evolution shows that most deal activity is surrounding seed and venture-stage companies. Similarly, much of the total investment goes to venture-stage companies. The lack of more deals at growth and established stage may reflect a youthful ecosystem or the difficulty of raising funding for battery technology beyond the venture stage.

INVESTMENT AMOUNT BY STAGE OF EVOLUTION AT DEAL DATE (2011-2020)



DEAL NUMBERS BY STAGE OF EVOLUTION AT DEAL DATE (2011 - 2020)



## Top funds by number of deals

Analysis of investors into battery companies reveal the lack of a clear champion for the sector. The relatively high number of deals conducted via equity crowdfunding platform Crowdcube suggests that battery companies may struggle to raise capital from institutional investors, although crowdfunding is a dominant means of equity finance raising among all UK companies.

### TOP FUNDS BY NUMBER OF ANNOUNCED EQUITY DEALS (2011–2020)

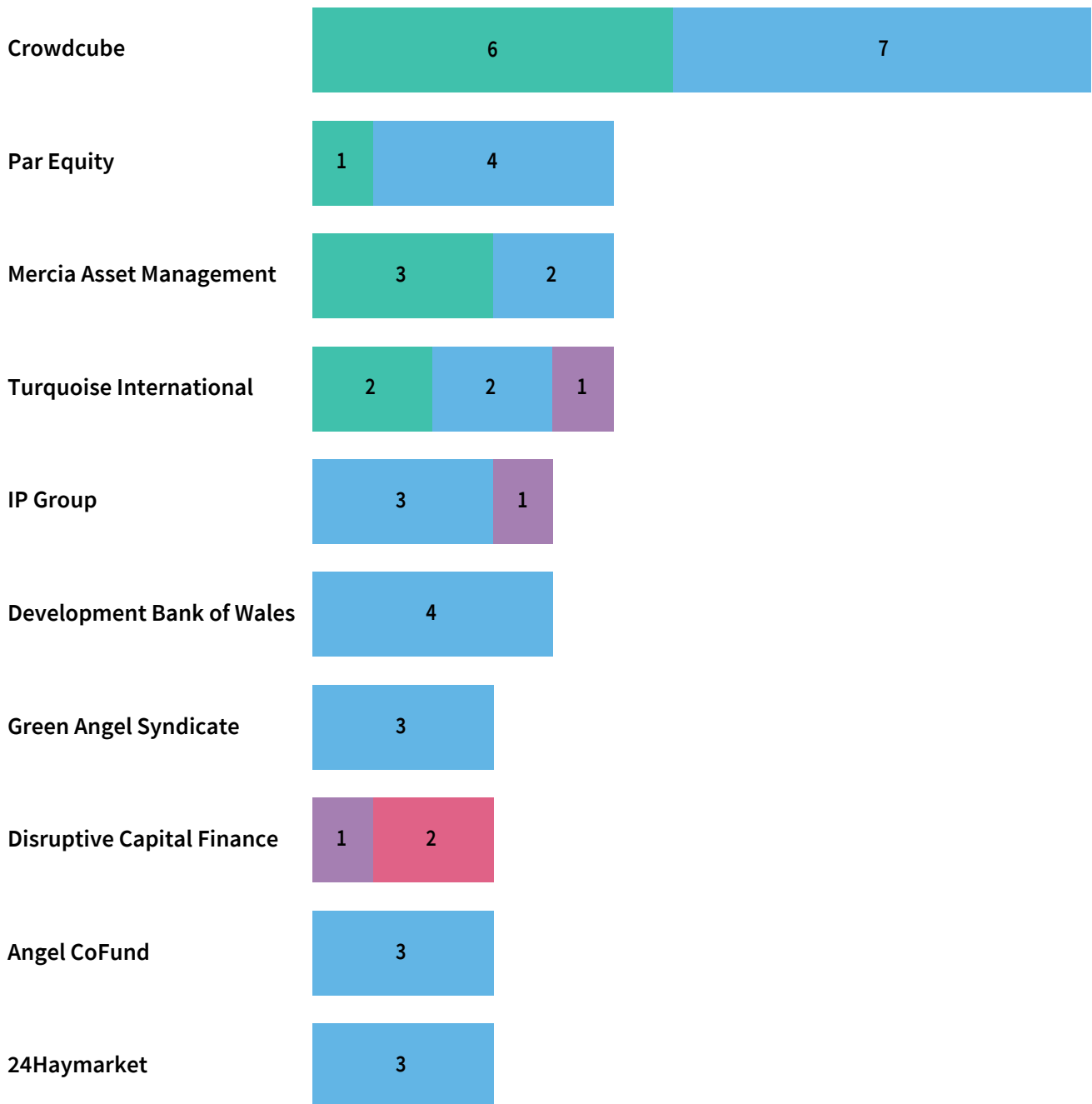
FUND	FUND MANAGER	DEALS
Crowdcube	Crowdcube	13
Low Carbon Innovation Fund	Turquoise International	5
Start Up and Early Stage Capital	Development Bank of Wales	4
24Haymarket	24Haymarket	3
Angel CoFund	Angel CoFund	3
Disruptive Capital Finance	Disruptive Capital Finance	3
Green Angel Syndicate	Green Angel Syndicate	3
IP Group	IP Group	3
Midlands Engine Investment Fund	Mercia Asset Management	3
Par Syndicate EIS Fund	Par Equity	3
BGF Growth Capital	BGF	2
Downing Ventures	Downing	2
Fidelity Investments	Fidelity Investments	2
First Imagine! Ventures	First Imagine!	2
Forward Partners: Pre-Seed and Seed	Forward Partners	2
Graphene Ventures	Graphene Ventures	2
Invesco Perpetual	Invesco Fund Managers	2
Itochu Europe	Itochu Europe	2
Lancashire County Council Rosebud Business Finance	GC Angels	2
Levitate Capital	Levitate Capital	2

# Top funds by company stage of evolution at deal date

This breakdown of top fund managers by number of deals suggests that there is a funding gap for growth-stage battery technology companies. The top 10 investors by number of deals are predominantly focused on venture-stage companies.

FUND MANAGERS BY DEALS AND BY COMPANY STAGE OF EVOLUTION AT DEAL DATE (2011-2020)

Seed Venture Growth Established

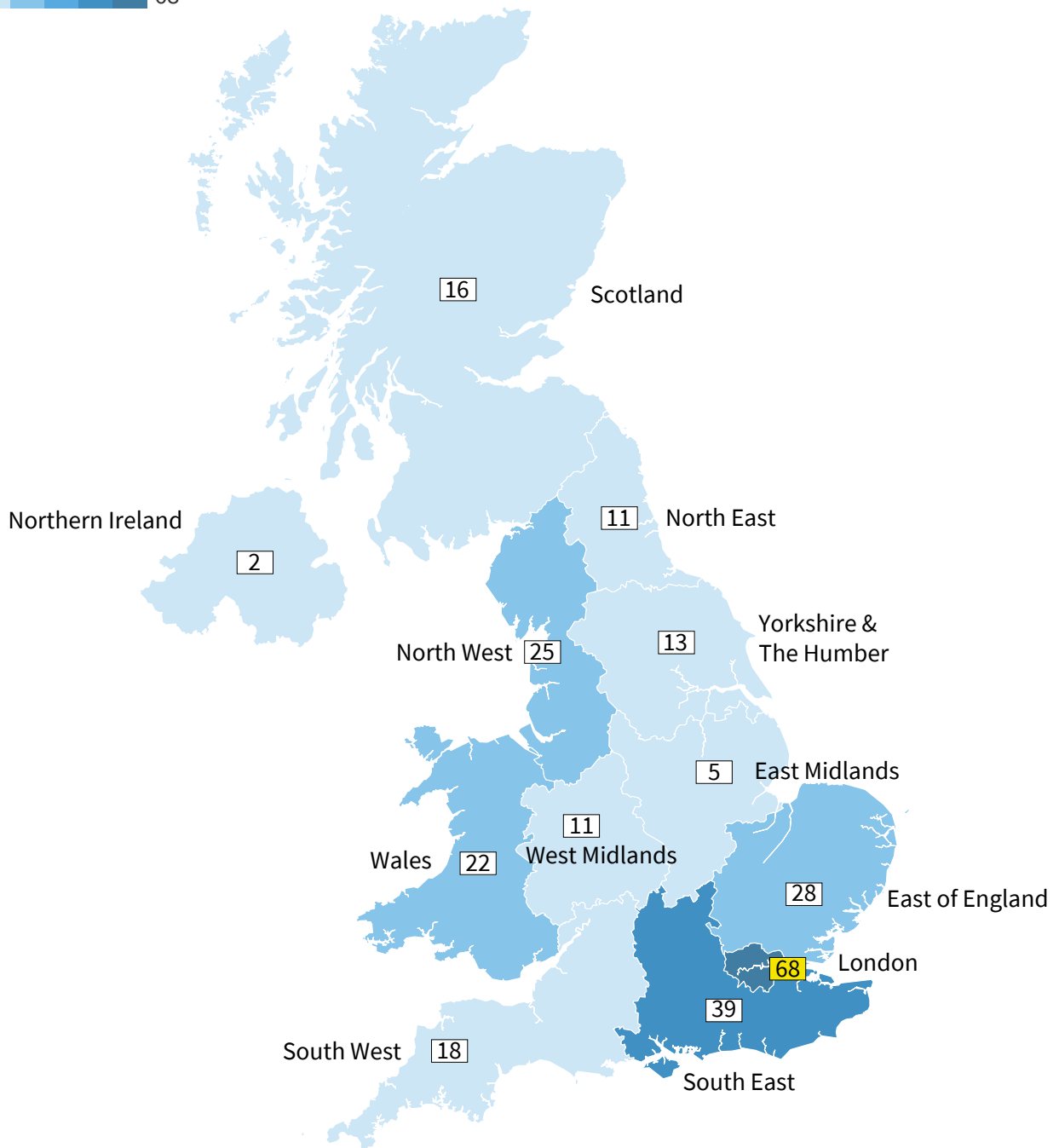


# Battery deals by region

Companies based in London and the South East account for the majority of equity deals, which aligns with the UK overall. These regions are followed by the East, North West and Wales by number of deals. The Midlands show a low number of deals, which is surprising given the concentration of automotive industry players in the region.

NUMBER OF DEALS PER REGION BY COMPANY HEADQUARTER LOCATION (2011-2020)

Number of deals  
2 68



## Amount invested by region

The high number of deals in London and the South East translates into high overall investment. These two regions are also well represented in the ranking of regions by average deal size. Though the East Midlands only has five deals, its average is buoyed by Romax Technology's £9.3m raise in 2012.

### TOTAL AMOUNT INVESTED PER REGION (2011-2020)

South East	£149m
London	£126m
East of England	£24m
South West	£20m
North East	£20m
North West	£18m
Scotland	£13m
East Midlands	£13m
Wales	£11m
Yorkshire and The Humber	£11m
West Midlands	£10m
Northern Ireland	£0.3m

### AVERAGE DEAL SIZE PER REGION (2011 - 2020)

South East	£3.8m
East Midlands	£2.6m
London	£1.9m
North East	£1.8m
South West	£1.1m
West Midlands	£1.0m
Yorkshire and The Humber	£0.9m
East of England	£0.8m
Scotland	£0.8m
North West	£0.7m
Wales	£0.5m
Northern Ireland	£0.2m



# Section 2: Electro- mobility technology companies

The electro-mobility technology companies have been identified using Beauhurst's unique sector classification system, SIC codes, Innovate UK grant descriptions and manual research.

These companies are involved in advancing transportation technologies other than batteries. The purpose of this group of companies is to provide a relevant benchmark for the battery technology companies that has similar opportunities and headwinds. Only private companies have been included.

This group includes:

- charging equipment
- electronics and engine manufacturers
- autonomous vehicle companies
- alternative fuel companies

# Electro-mobility companies demography

Of the 745 electro-mobility companies analysed, 474 (64%) have received an Innovate UK grant via more than 3,200 awards. This is a higher proportion than the battery technology companies where 48% had secured an Innovate UK grant. On average, electro-mobility companies also received more money via grants and raised larger equity rounds.

## KEY FIGURES

745

EV tech companies

£2.5m

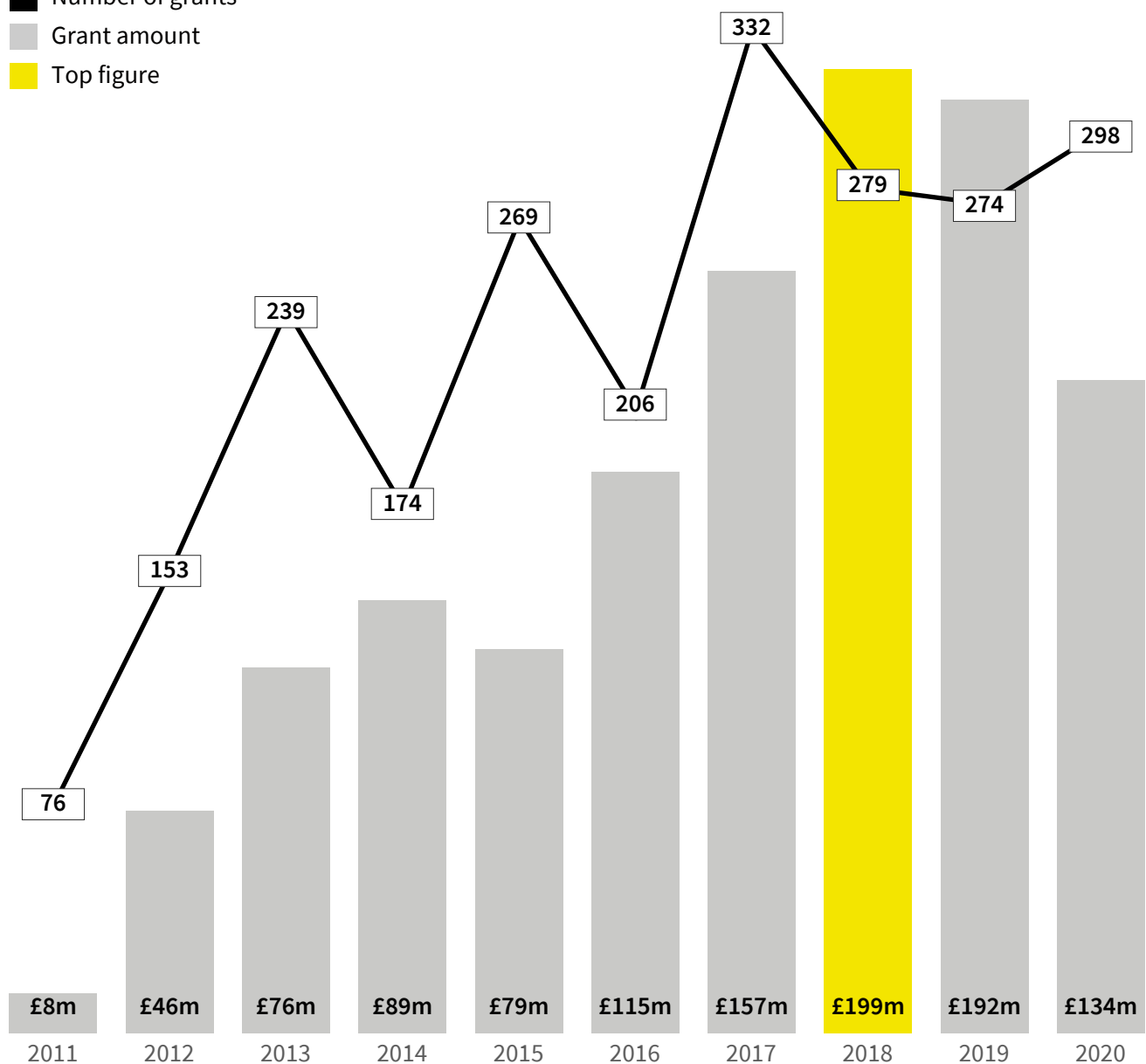
average equity investment

£477k

mean grant received

## INNOVATE UK GRANTS AWARDED TO ELECTRO-MOBILITY COMPANIES (2011-2020)

- Number of grants
- Grant amount
- Top figure

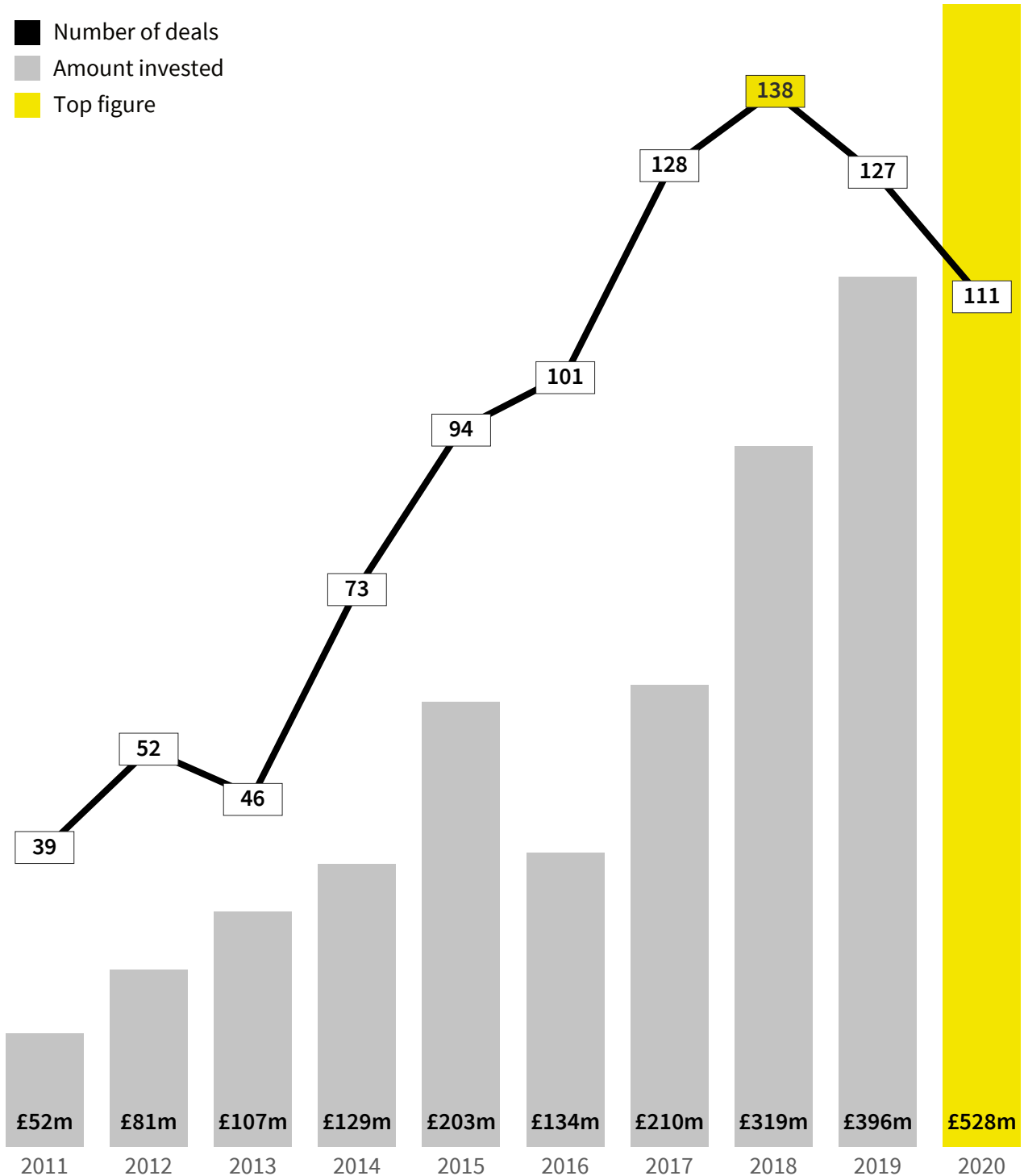


## Investment overview

Deal numbers for the electro-mobility companies have increased rapidly since 2013. Last year was a record year for investment with companies in the sector raising £528m via 111 deals. Page 20 shows a breakdown of individual deals for the last three years.

### EQUITY INVESTMENT INTO ELECTRIC VEHICLE TECHNOLOGY COMPANIES (2011-2020)

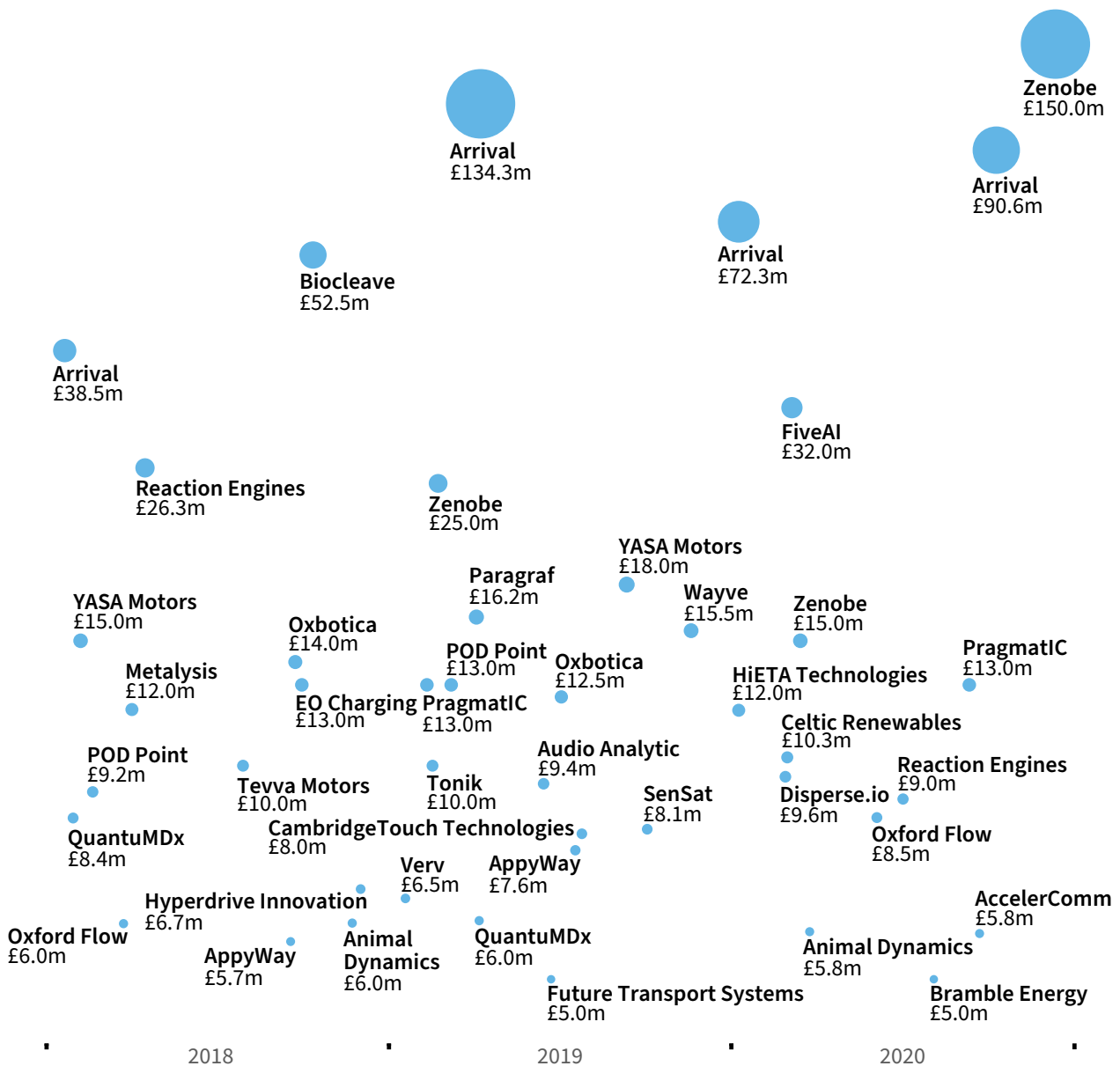
- Number of deals
- Amount invested
- Top figure



# Notable investments

The electro-mobility companies have raised far larger rounds than the battery technology companies, including several ‘megadeals’ of £50m+ over the last three years. The largest round was raised by EV infrastructure provider Zenobe last November when it secured £150m from Infracapital.

EQUITY INVESTMENTS OF £5M OR MORE (2018-2020)



## Top funds by number of deals

As with the battery technology companies, equity crowdfunding platforms are the most popular source of funding for electro-mobility companies, with Crowdcube and Seedrs topping the ranking. However, there are clear institutional champions of electro-mobility companies which is not the case for battery companies.

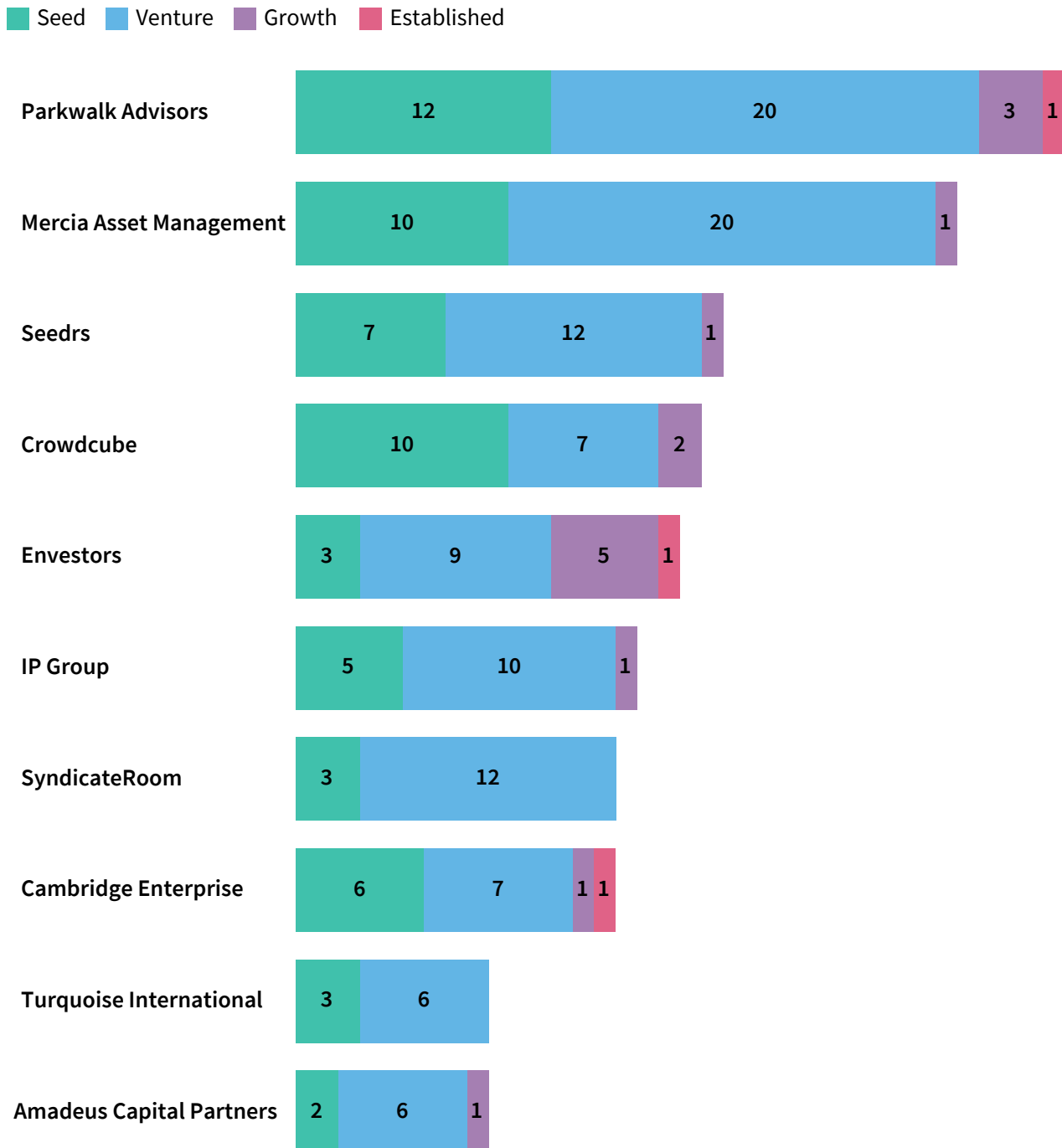
### TOP FUNDS BY NUMBER OF ANNOUNCED EQUITY DEALS (2011–2020)

FUND	FUND MANAGER	NUMBER OF DEALS
Crowdcube	Crowdcube	20
Seedrs	Seedrs	20
Investors	Investors	19
IP Group	IP Group	15
Mercia Fund Managers	Mercia Asset Management	15
Parkwalk Opportunities EIS Fund	Parkwalk Advisors	14
SyndicateRoom	SyndicateRoom	14
University of Cambridge Seed Funds	Cambridge Enterprise	14
The University of Cambridge Enterprise Fund	Parkwalk Advisors	13
NPIF Equity Finance	Mercia Asset Management	10
Amadeus Capital Partners	Amadeus Capital Partners	9
Low Carbon Innovation Fund	Turquoise International	9
Cambridge Angels	Cambridge Angels	8
Cambridge Innovation Capital	Cambridge Innovation Capital	8
Parkwalk UK Tech Fund	Parkwalk Advisors	8
Entrepreneur First	Entrepreneur First	7
IQ Capital Fund	IQ Capital Partners	7
Oxford Sciences Innovation	Oxford Sciences Innovation	7
Par Equity	Par Equity	7
Scottish Enterprise	Scottish Enterprise	7

# Top funds by company stage of evolution at deal date

Fund managers Parkwalk Advisors and Mercia Asset Management have made the most overall investments into electro-mobility companies via their various funds. Similar to the investment landscape for battery technology companies, there is a lack of specialisation at the growth stage of evolution. Again, most investors are focused on venture-stage companies.

FUND MANAGERS BY DEALS AND COMPANY STAGE OF EVOLUTION AT DEAL DATE (2011-2020)



# Section 3: Investors in focus

# Investor perspectives on battery technology

## INTRODUCTION

For the purposes of better understanding the attitudes of investors to battery technology businesses and investments, Beauhurst categorised investors into three groups: those actively investing in battery technology companies, those investing in electro-mobility companies, and those investing in neither. The group investing in electromobility companies can be further divided into two sub-groups: those with no investments at all in battery technology companies and those with a small number of investments in the sector.

## ABOUT THE INTERVIEWEES



### **Dr Hermann Hauser, Co-founder & Venture Partner, Amadeus Capital Partners**

Amadeus Capital Partners has over 20 years' experience investing in early-stage technology businesses from its offices around the world. Amadeus is focused on AI and machine learning, online consumer services, cyber security, digital health and medical technology, digital media, enterprise SaaS, fintech, regtech and insurtech.



### **Dr Andrew Williamson, Managing Partner, Cambridge Investment Capital**

Cambridge Innovation Capital (CIC) provides early-stage capital to disruptive, deeptech companies and life sciences businesses including those focused on therapeutics, medtech, digital health and genomics. CIC is the preferred investor for the University of Cambridge, giving it access to academic spinouts.



### **Pippa Gawley, Founder and Managing Director, Zero Carbon Capital**

Zero Carbon Capital backs early-stage companies that are seeking to address the hardest problems posed by climate change. It is focused on innovative hard-science solutions for sectors that are challenging to decarbonise such as agriculture, long-haul transport, and heating and cooling.



### **Dr Sarah Petrie, Innovation Director, Michelin Scotland Innovation Parc**

Dundee-based Michelin Scotland Innovation Parc (MSIP) is a joint venture between Scottish Enterprise, Dundee City Council and Michelin. The project has seen Michelin's former 32-hectare manufacturing site transformed into an innovation centre focused on mobility and decarbonisation.



### **Kerry Baldwin, Partner, IQ Capital**

IQ Capital invests at seed and series A in UK-based tech companies, focused on AI, data science, IoT and more. Kerry co-founded IQ Capital in 2006 and has over 20 years deeptech venture capital experience.



### **Dr Daniel Carew, Principal, IQ Capital**

IQ Capital invests at seed and series A in UK-based tech companies, focused on AI, data science, IoT and more. Daniel joined IQ Capital in 2019 and has deeptech venture capital experience from several funds.



## Battery technology companies

We identified 365 businesses working on battery or battery-related technologies. 102 (28%) of those businesses have received investment across 290 transactions since the beginning of 2011. 119 different funds or organisations have participated in at least one of the 290 investments; 32 (27%) have participated in more than one round; and only 11 (9%) have participated in three or more rounds. The largest deal was the \$60m investment into Oxis Energy in 2019, followed by the £40m received by Nexeon in 2011. It's worth noting that a significant chunk of the Oxis Energy investment was funding for a real estate deal in Brazil. Over half (52%) of the £495m received by these battery companies was raised by the top five companies (by total amount raised since the company's start).

81 (68%) of the 119 funds or organisations that have invested in a battery or battery-related technology company are headquartered in the UK; 30 (37%) of those are headquartered in London. 10 of the funds are headquartered in the United States. Beauhurst is tracking the activity status of 70 of the 119 funds: 57 are still actively investing, 11 are closed and the remaining two are theoretically still investing but Beauhurst has not observed any recent activity. Nine of the 70 investing organisations that Beauhurst tracks are angel networks or crowdfunding platforms; 28 are private equity / venture capital funds; 17 are central, devolved, regional, or local government investors; three are corporate funds; the remaining 13 are a combination of private investment vehicles and investments facilitated by asset managers.

We identified the following funds or investing organisations as the top three investors into battery or battery-related technology companies, over the period from the beginning of 2011 until the end of 2020: Crowdcube facilitated 13 deals into seven companies; the Low Carbon Innovation Fund, managed by Turquoise, was involved in five deals into five companies; the Development Bank of Wales, involved in four deals into two companies. In the same period across all sectors Crowdcube facilitated 1,147 deals into 885 companies; the Low Carbon Innovation Fund invested in 47 deals into 42 companies; and invested in 409 deals into 272 companies.

It is interesting to note that although 4,173 people have shares in at least one of the battery companies, only five people are shareholders in four of them

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**More grants will lead to matching private funding, as they help to de-risk the tech and provide strong credibility indicators.”**

**PIPPA GAWLEY**

(and no one is a shareholder in more than four of them). Two of those five are shareholders via crowdfunding platforms so their stakes are very small. This constitutes a severe dearth of serious angels in the sector.

## Electromobility companies

We identified 745 businesses working on or in the value chain of electro-mobility technologies. 318 (43%) of those businesses have received investment across 984 transactions since the beginning of 2011. 339 funds or organisations have participated in at least one of the 984 investments; 116 (35%) have participated in more than one round; 59 (18%) have participated in 3 or more rounds. The largest deal was the £150m investment into Zenobe in 2020, followed by the £134m received by Arrival in 2019. Under half (43%) of the £2.18b received by these electro-mobility companies was raised by the top five companies (by total amount raised since the company's start).

Forty-seven of the 339 funds or organisations that have invested in an electro-mobility business have also invested in a battery or battery-related technology company. The following analysis is based on the 292 funds that have only invested in electromobility businesses. 202 (69%) of the 292 funds that have invested in an electro-mobility company are headquartered in the UK; 89 (44%) of those are headquartered in London. 19 of the funds are headquartered in the United States. Beauhurst is tracking the activity status of 164 of the 292 funds: 124 (76%) are still actively investing, 32 are closed and the remaining 10 are theoretically still investing but Beauhurst has not observed any recent activity. Twenty-four of the 164 investing organisations that Beauhurst tracks are angel

networks or crowdfunding platforms; 66 are private equity or venture capital funds; 35 are central, devolved, regional, or local government investors; 10 are corporate funds; the remaining 41 are a combination of private investment vehicles and investments facilitated by asset managers.

We identified the following funds or investing organisations as the top five investors into electro-mobility companies, over the period from the beginning of 2011 until the end of 2020: Crowdcube facilitated 20 investments into 13 electro-mobility companies; Seedrs facilitated 20 investments into 10 companies; Envestors facilitated 19 deals into eight companies; IP Group invested in 15 deals into eight companies; and Mercia also invested in 15 deals into eight companies. In the same period across all sectors Crowdcube facilitated 1,147 deals into 885 companies; Seedrs facilitated 1,145 deals into 656 companies; Envestors facilitated 170 deals into 122 companies; IP Group invested in 132 deals into 80 companies; and Mercia invested in 218 deals into 120 companies.

Over 7,650 people have shares in at least one of the electro-mobility companies. Six people have shares in five or more electromobility companies. All of these people's stakes are worth many thousands of pounds. Nonetheless, this is a low number of angels in the sector, compared to AI or fintech.

#### Comparisons between the two sectors

There are clear differences between the investment landscape for battery companies and electro-mobility companies. Nearly half of electro-mobility companies have received some external investment, whereas less than a third of battery companies have. This makes it clear that although there is a smaller supply of battery technology companies, the lower investment figures for the sector are not solely a function of that. The international versus domestic split of the investors in both sectors is roughly the same. A larger proportion of battery investment is received the top companies. Fewer battery investors participate in more than one deal. There are almost no serious angels to speak of in the battery sector, and only a handful in the electro-mobility sector. Perhaps most critically, there are roughly two electro-mobility companies to every investor in electro-mobility, whereas there are three battery companies for every battery investor—all of which prompts the question, why?

#### Investor perspectives

Some investors are clearly wary of investing in battery technologies. As Dr Hermann Hauser of Amadeus Capital Partners put it: “The problems of investing in battery technology are the long-time scales and the capital-intensive nature of any investment in materials or processes. It would need to be an extraordinary technical breakthrough for us to make such an investment.” Amadeus Capital Partners has invested in five of the companies in the electromobility cohort but has not to date disclosed any investments in the battery cohort. The latest Confirmation Statement for Nyobolt, however, shows that Amadeus invested alongside IQ Capital in its most recent round. Dr Andrew Williamson of Cambridge Innovation Capital expressed similar reservations to Dr Hauser: “the margins are low and the field is competitive.

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**Over 7,650 people have shares in at least one of the electro-mobility companies. Six people have shares in five or more electromobility companies. All of these people's stakes are worth many thousands of pounds.”**

It costs a lot to get to [the point of a commercially viable product] and even then it's not clear how profitable it may be.” Cambridge Innovation Capital invested in three of the companies in the electromobility cohort, but none of the battery cohort. Dr Williamson warned that the experiences of investors in the sector in 2010–2015, who lost a lot of money, may be salutary to prospective investors. Pippa Gawley, of Zero Carbon Capital, gave thoughts on the sector that are more wholly positive, seeing strong prospects for the battery technology sector in the electrification of the grid and transportation, but cautioning that each of those use cases (and others) requires different technologies and chemistries.

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**The margins are low and the field is competitive.”**

**DR ANDREW WILLIAMSON**

Nonetheless, the future capital requirements of battery businesses would need to be factored into any investment: “The companies will need to have a plan in place for how to deal with this, most likely through licensing or joint ventures, and some indication that there is appetite from the partners on the other side.” Pippa Gawley was particularly positive about the impact of the UK BIC (Battery Industrialisation Centre) and the Faraday Battery Challenge programme, as well as hoping that the new “ARIA funding will help to de-risk some of the more edgy ideas.” As she puts it, “more grants will lead to matching private funding, as they help to de-risk the tech and provide strong credibility indicators. They signal the policy direction of the government and indicate what techs are likely to get further support in the future.”

Dr Williamson was positive about the role of the Catapult [the High Value Manufacturing Catapult] which has lowered entry costs for new companies. He also pointed out the advances in technology were also lowering the entry costs, with more materials discovery now possible on computers. Overall the capital equipment costs are much lower now than they were five years ago. Or rather, they are lower for the discovery phase. Dr Daniel Carew, of IQ Capital, points out that “the cap-ex costs for the battery supply chain are eye-watering” and “they’re only going to get worse.” And that’s before other infrastructure costs are factored in. For example, not only is investment needed in the factories to produce batteries for the approximately 33m cars that the government has committed to electrifying, but huge investment is needed in, for example, the charging network (which means investment not only in the charging points themselves but also the grid). According to Dr Carew and Kerry Baldwin, also of IQ Capital, (and also Vice-Chair of the British Private Equity and Venture Capital Association (BVCA) and a Fellow in Entrepreneurship at the University of Cambridge Judge Business School), battery technologies are for this reason a “strategic decision for governments,” but if that leads to the right infrastructure investments “that will improve the investability of startups and scaleups in the space.”

But given that the discovery costs are now lower, should we expect to see a surge in new battery technology companies? Our research has shown the UK’s battery technology company population is concentrated in the South of England. Pippa Gawley said that a lot of Zero Carbon Capital’s battery technology deal-flow was coming from ‘the usual suspect’ universities (Oxford, Cambridge, Bristol). Similarly, and somewhat necessarily, Cambridge Innovation Capital is exposed to the technologies emerging from that university. Cambridge University has so far spun out four battery companies and 14 electromobility companies. There are a total of 14 battery spinouts and 68 electromobility spinouts, so direct university IP is only one source of these companies. The other companies are founded by experienced engineers and Dr Williamson suggested that this may be whence the biggest pressure on the supply of battery companies stems: at times the experienced engineers may need to be imported, particularly from the US. That said, Beauhurst data show that the US, France and Germany have each contributed three founders to UK battery companies. The other side of the talent coin concerns networks: the lack of angels will mean fewer introductions and connections are brokered. Accelerators may be able to fill this to an extent, and, as Dr Williamson suggests, UK Research and Innovation (UKRI) could also have a useful role as a convener of expertise. Dr Carew and Kerry Baldwin believe it would be useful for knowledge transfer between the corporates and the startups to be encouraged.

Whatever the supply of new battery companies looks like in the future, it’s clear that there are failings on the investment side. Dr Sarah Petrie, Innovation Director at Michelin Scotland Innovation Parc, says that a battery company looking to locate on her campus has side-stepped the investment supply issues in the private market by looking directly at a listing on AIM. This is counter to the trend seen in most sectors where thanks to abundant private capital, companies can stay private for longer. It is for similar reasons that Dr Williamson was encouraged by the forthcoming Future Fund: Breakthrough which will look to fund larger tickets in knowledge and capital-intensive sectors. At the moment, one has to look abroad to find funds that could back a £20m+ deal in the battery sector. With a domestic fund catalysing these investments, the funding landscape for battery companies may look different in just one or two years.

## About us

# Beauhurst

Beauhurst is a searchable database of the UK's high-growth companies.

Our platform is trusted by thousands of business professionals to help them find, research and monitor the most ambitious businesses in Britain. We collect data on every company that meets our unique criteria of high-growth; from equity-backed startups to accelerator attendees, academic spinouts and fast-growing scaleups.

Our data is also used by journalists and researchers who seek to understand the high-growth economy, and powering studies by major organisations – including the British Business Bank, HM Treasury and Innovate UK – to help them develop effective policy.

For more information and a free demonstration, visit [beauhurst.com](http://beauhurst.com)

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UK Research and Innovation (UKRI) is a non-departmental public body sponsored by the Department for Business, Energy and Industrial Strategy (BEIS). We work with the government to invest over £7 billion a year in research and innovation by partnering with academia and industry to make the impossible, possible. Through the UK's nine leading academic and industrial funding councils, we create knowledge with impact.

The Faraday Battery Challenge is part of UK Research and Innovation and is designed to support a world class scientific, technology development and manufacturing scale-up capability for batteries in the UK. Innovate UK on behalf of UKRI is responsible for delivering £88m of funding for businesses to lead feasibility studies and collaborative research and development projects in battery technologies as part of the Faraday Battery Challenge.

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# Beahurst

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