Clearthought

Automotive Technology Commerce

Social, technological and economic trends are combining to drive huge change across the automotive industry.

Inside:

- Leasing and rental services
- Subscription services
- Car-sharing
- Digital marketplace and dealerships
- Software
- M&A activity



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Market overview

From car-sharing, rental and subscription services through to innovative software solutions, start-up companies in the automotive commerce space are revolutionising the way cars are used, sold and leased.

The drive towards e-mobility and autonomous driving is already leading to huge shifts across the automotive industry, prompting traditional car brands like BMW and Daimler to explore new car ownership models, particularly in areas such as car-sharing services.

This drive is also in tune with wider social trends as young people increasingly decide not to buy cars and instead use online platforms offering leasing, short-term rental or subscription services. At the same time, leading manufacturers are also grappling with falling levels of traditional automotive sales in the face of various economic headwinds such as technological uncertainties, market downturns, trade tensions and Brexit.

The pace of change towards new automotive commerce models does vary from country to country. For instance Germany has become Europe's largest car-sharing market and consumers have readily embraced these trends and started to give up regular vehicle ownership. However other countries are also now beginning to see fast growth across their car-sharing markets too.

M&A activity

In recent years this dynamic automotive technology commerce landscape (those companies engaged in the selling, buying, leasing, and subscription of cars and fleets) has seen significant deal activity with a very large number of funding rounds.

Leading automotive OEMs are also investing heavily in the full range of automotive commerce services. They are either buying start-ups outright, taking stakes in these fast-moving new players, or sometimes forming alliances with other OEMs. A good example of the latter is Daimler's and BMW's mobility joint venture bringing together car-sharing players car2go and DriveNow under a single business, Share Now.

The market has also seen the emergence of digital marketplaces which are fast replacing traditional dealerships and car rental companies, with increasingly advanced software only accelerating the trend



Leasing and rental services

Buying a new car is unaffordable for many consumers today. For instance in 2018 approximately 40% of all newly registered vehicles in Germany were financed by leasing¹.

In fact the percentage of leasing customers in Germany among B2B and B2C clients now accounts for 49% and 51% of the market respectively, with the share of B2C clients leasing vehicles growing strongly by 19.1%² between 2017 and 2018.

One reason for this shift is that the leasing market, which has traditionally suffered from a lack of comparability, has been transformed by online players. For instance, German B2B specialist Vehiculum offers customers a leasing contract in less than 15 minutes via its online platform. Earlier this year it raised €7m in a funding round led by Runa Capital and said it would use the capital to open its platform, which was previously only available to businesses, to private customers. The company now offers 230 different car models from 23 car manufacturers for private customers.

A strong player in the B2C segment is German company LeasingMarkt which has more than 500,000 customers visiting its website each month.

Fundraisings

The sector has seen a number of fundraisings. For instance Zoomcar, an Indian-based car rental company, raised €21m in a funding led by Ford, while Paul Camper, a sharing platform where users can rent campervans and motorhomes from private individuals, raised €7m in a round led by Norwegian investor Adevinta.

A strong player in the B2C segment is German company LeasingMarkt, which has more than 500,000 customers visiting its website each month and increased its market share last year with the acquisition of start-up Carledo, which has a focus on fleet leasing offerings.

An online leasing platform specialist for B2B clients is Firmen-KFZ which particularly addresses the needs of SMEs. In the UK, Autohorn Fleet Services is a fast-growing player that specialises in fleet management for companies and B2C leasing for private individuals.

Meanwhile French car manufacturer PSA bought TravelCar, a peer-to-peer car rental and parking services company which has more than a million users in over 60 countries. PSA first invested in the company three years ago as part of its drive to invest in new mobility solutions.

- 1: Lease share of new registrations 2018: 4 out of 10 vehicles leased Bundesverband Deutscher Leasing Unternehmen, 2019
- 2: So Least Germany The Leasing Rearview Mirror 2019 Leasing Markt, 2019



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Subscription services

Many believe the future of cars is subscription ownership. In contrast to leasing, customers get access to a temporary vehicle but there is no down payment or final instalment, and the time period is on a monthly, not yearly, basis.

One player is Like2Drive, a subsidiary of Fleetpol, which offers a monthly all-inclusive flat rate for cars to private and corporate customers. The subscription includes fully comprehensive insurance, vehicle tax, and maintenance, and vehicles can be rented for six, 12 or 18 months. The company recently struck a deal with AutoScout24 which is now offering Like2Drive's car subscription model on its website, and shows how quickly the mobility model is taking hold.



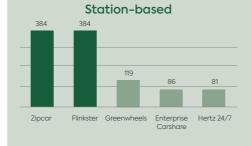
Spanish player Bipi offers a monthly subscription service where you can lease a car from 10 days up to a month via its app. Another player is Cluno which recently raised €140m in debt financing, after a funding round of €24m from Valar Ventures, Acton Capital Partners and Atlantic Labs. The new capital is being used to further accelerate its growth and technological offer. The company claims to be the only independent provider of a flexible and completely digital car subscription service in Germany. The whole process of making the booking, as well as credit checks and signatures, is carried out via an app.

US subscription app start-up Fair buys vehicles that a consumer might want to purchase and then enters into an agreement in which the driver pays for that car on a month-to-month basis. The cars are all pre-owned and Fair carries no inventory beyond what it has under contract with drivers. Last year Fair acquired the active leasing portfolio of Xchange Leasing, a service Uber first established in 2015 to lease new and nearly-new vehicles. Spanish player Bipi offers a monthly subscription service where you can lease a car from 10 days up to a month via its app.

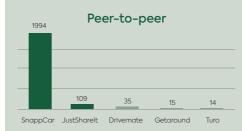
Traditional automotive companies are also being drawn to the model's attractions. Volvo offers a flat-rate model via its Care by Volvo platform which allows customers to drive a car without any minimum contract duration. VW has also entered this space via Volkswagen Financial Services, while car rental company Sixt offers a wide selection of different car models which do not have a fixed contract duration.

Top operators per model¹

(determined by most geographical reach, the number of cities where they have operations)







	Top 10 countries with the most operators		Peer-to-peer		
1	United States	33	7	18	8
2	Italy	27	0	16	12
3	Russia	21	0	14	11
4	Canada	20	2	13	5
5	Germany	19	3	11	5
6	France	14	1	8	5
7	Spain	11	2	4	5
8	United Kingdom	9	1	5	3
9	China	8	0	6	2
10	Australia	8	2	6	0

1: Car-sharing Market Growth and Analysis 2019 - movmi and Carsharing Association, 2019

In recent years the car-sharing model has become a global

phenomenon and latest estimates¹ suggest there are as many as 236 car-share operators in more than 3,000 cities.

Car-sharing

Leading OEMs are certainly grasping the opportunity. Last year Daimler and BMW announced a mobility joint venture and brought car-sharing players car2go and DriveNow together under a single business called Share Now. Share Now has become the world's largest car-sharing provider and offers its service to more than 40 million customers in 31 different cities with a fleet of 21,600 vehicles.

Not every car-sharing operation is alike and different models have emerged:

1. Station-based

This is still the dominant model with 61% of all operators¹ running this model, although other models are catching up fast. One such example is Spanish company Respiro which operates on a pay-as-you-go basis, and was acquired by SEAT last year.

2. Free-floating

Cars are not at fixed rental stations but available across an entire city. One such provider is Miles Mobility which charges customers by distance rather than time, and earlier this year it raised more than €5m in a funding round. A leading Spanish player is Zity which provides access to a fleet of 500 electric Renault cars across Madrid.

3. Peer-to-peer

The model whereby owners charge a fee to rent out their vehicles continues to attract attention. For instance, earlier this year saw US player Getaround acquire French company Drivy, giving it a wider presence across Europe. IAC has also invested €221m in Turo, the world's largest peer-to-peer car-sharing marketplace.

Another player which continues to grow is Dutch platform SnappCar, one of the early pioneers of car-sharing, which is aiming to reach a million users by 2020. Petrol discounter Tango, together with current shareholders, recently invested a further €8m in the business. Last year saw French rental company EuropCar also launch its Drive & Share solution with SnappCar. Under the scheme, customers have access to a long-term car rental which they can share on SnappCar's platform when they don't need it.

Hiyacar is a UK-based platform which allows owners to lend their vehicles for days or months at a time, and uses a keyless smartphone app to give drivers access to lent cars. Last year the company raised €5.7m from Japanese conglomerate Itochu. Meanwhile Spanish players in this market include Social Car and Amovens.

4. Ride-pooling

This model refers to the sharing of car journeys so that more than one person travels in a car.

Clever Shuttle offers a service where users in different cities can book a driver via an app to pick them up, and then the company automatically forms carpools between passengers who have a similar destination. The start-up recently used a funding round to develop its technology and expand into other cities across Germany. In 2018 Deutsche Bahn acquired 60% of the business, while more recently Japanese company Mitsui acquired 12% of the business by participating in a capital increase together with Deutsche Bahn.

In the UK, Liftshare.com is an example of a company which offers a corporate car-share scheme for businesses.



Share Now has become the world's largest car -sharing provider and offers its service to more than

40 million customers

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Digital marketplace and dealerships

In recent years an immense global digital automotive marketplace has emerged, attracting millions of customers on a daily basis.

Auto1 Group has become one of Europe's leading car trading platforms, operating in more than 30 countries. It grew revenues in 2018 by 32% to €2.9bn, and traded more than 540,000 used vehicles via its platforms. Auto1.com, the group's B2B arm, also expanded its dealer network to more than 55,000 partners.

Auto Trader Group is one of the UK's largest players. The group was originally an automotive classified advertising magazine before being turned into an online only portal which today handles more than 10 million transactions a year. Other leading UK players are Lookers, which also operates 165 franchised dealerships, BCA Marketplace, and Moneyshake.com which brings together the UK's leading leasing providers in one place.

In the US, Cars.com was a pioneer in online automotive classifieds and remains a key player. Last year it acquired Dealer Inspire and Launch Digital Marketing, technology companies that provide digital solutions to automotive dealers, for €146m. Leading French companies include Oxylio and Digitcar.

10 million

transactions per year are handled by the Auto Trader Group...

Dealerships

We have also seen the specific emergence of digital dealership platforms. Last year Hg invested in MeinAuto, a leading B2C online platform for new car purchases which has more than 16 million visitors a year. Heycar, backed by Daimler and Volkswagen, currently has more than 1,400 dealers registered and all its listed vehicles come with a warranty, are less than eight years old, and have less than 100,000 miles on the clock

AutoScout24, with 10 million users a month and more than two million vehicle offers, now has a presence in 18 countries and more than 55,000 affiliated dealers, and is represented in all major European markets.

Aftermarket

Digital marketplaces also give customers ready access to information on the prices of parts, and there has been strong growth in the online automotive aftermarket.

Caroobi brands itself 'Europe's first online garage for car repairs' and connects drivers with mechanics, who in turn can access parts suppliers. Last year the company received €17.7m in a funding round led by NGP Capital, and the finance has enabled it to further expand its operations. Another player is kfzteile24 which began life as an eBay power seller and has grown to become a market leader for car parts and accessories.



Software

Automotive commerce software

To gain market share, car dealerships are making ever greater use of software which eases the process of buying or leasing vehicles.

Autengo offers a software-as-a-service solution for car dealerships, providing digital vehicle records, CRM, document management, and integrated financing solutions in order to digitalise processes. Earlier this year the company secured a funding round which it used to further develop its software.

Another provider which recently gained more funding is VEACT, a listed supplier of BMW and MINI and a developer of applications, processes, and products that improve sales successes for car dealerships through data-based marketing. B2B start-up CarOnSale is another player digitising the remarketing process of vehicles for car dealers and car buyers (trade-ins, leasing returns, long-term users) by bringing sellers and buyers together.

Fleet management software

Technological advances are playing a major role in the management of fleets too.

Vimcar connects vehicles from different manufacturers and has developed an on board diagnostic plug built into the vehicle which creates a digital logbook and which can locate vehicles in real time, an especially relevant tool in sectors such as logistics. The service is particularly useful for a customer that uses company cars of different brands as it can access all its vehicles. Last year Vimcar raised €12m in a funding round

led by Acton Capital Partners along with existing investors Venture Capital, Coparion, and Atlantic Labs.

High Mobility combines an online testing environment with a live vehicle data marketplace, whereby users are able to access data from multiple carmakers using a standardised connected car interface. Last year it raised €3m in a venture round led by industry expert Fabian von Kuenheim and the IBB Beteiligungsgesellschaft which invested in the company for the second time.

Wunder Mobility has developed a platform that lets companies and local authorities create their own mobility services. Its customers include Daimler, BMW, Volkswagen and Toyota, and Wunder has just raised an additional €27m to help expand its platform to the US

Azowo is a cloud-based mobility platform for the B2B market that provides companies with software Last year Vimcar raised €12m in a funding round led by Acton Capital Partners along with existing investors Venture Capital, Coparion, and Atlantic Labs.

for fleet management, corporate car-sharing and mobility sharing.
Combined with an attached telematics box fitted to any vehicle, the software enables companies to optimise their occupancy rate and to simplify their

Mandata is a UK-based provider of transport management software, and last year Clearwater International advised on an investment from private equity firm LDC in the business. Its transport management system integrates a suite of end-to-end products, including traffic planning and management, tracking, telematics, and invoicing.

booking process.

Trakm8 provides vehicle telematics solutions for fleet management, as well as vehicle tracking, route planning and logistical improvement solutions.

Trak Global Group develops hardware and app-based connected vehicle data platforms for the high-growth usage-based insurance and mobility markets.

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M&A activity

Global deal activity across the automotive commerce market remains extremely strong, as our overview of recent transactions shows.

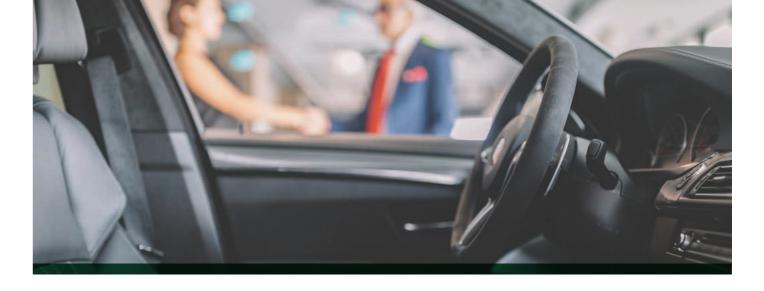
More and more deal activity is being driven by smaller technology companies,

and we are continuing to see a lot of investor interest with fundraisings backed by both venture capital and private equity players.

Meanwhile leading automotive OEMs have also made a string of investments

or acquisitions across the wider sector as they seek to ensure that they keep a seat at the automotive commerce table in the future.

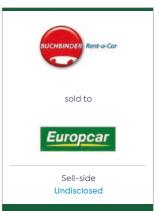
Date	Target	Target Country	Subsegment	Founder	Deal / Financing Rounds	Investor / Acquirer
Oct-19	Clever Shuttle	GER	Car-sharing	Jan Hofmann Stava Tschurilin Bruno Ginnuth	n.a.	Deutsche Bahn, Mitsui
Sep-19	Moneyshake	UK	Leasing and rental services	Eben Lovatt	£500,000, angel round	Tim Scholes, Development Bank of Wales
Sep-19	Cluno GmbH	GER	Subscription services	Andreas Schuierer Christina Maria Polleti Nico Polleti	€140m, debt raise	n.a.
Sep-19	WunderCar Mobility Solutions GmbH	GER	Automotive software and software supply	Gunnar Froh Samuel Baker	\$30m, series B	Blumberg, KCK
Aug-19	Trak Global	UK	Automotive software and software supply	Nick Corrie Alan Cottrill	€44m (minority stake)	Three Hills Capital Partners
Aug-19	Paul Camper GmbH	GER	Car-sharing	Dirk Fehse Franziska Schulz Alex Gluchowski	€7m, series A	FJ Labs, Adevinta Ventures, MairDurmont Ventures, Russmedia International, All Iron Ventures
Jun-19	Bipi	ESP	Subscription services	Alejandro Vigaray Hans Christ	€6.5m, series A	Maniv Mobility, IDC Ventures, TA Ventures, Kibo Ventures, Stella Maris Partners, Avianta Capital
Jun-19	Castle Tech GmbH (CaronSale)	GER	Digital marketplace	Tekin Has Tom Krüger Fabian Roth Oguz Özgüler	Series A	Creandum
Jun-19	Ornikar SAS	FRA	Digital marketplace	Alexandre Chartier Benjamin Gaignault	\$40m, series B	IDInvest Partners, Bpifrance SA, Brighteye Ventures
Apr-19	autengo - Gebrauchtwagenheld GmbH	GER	Automotive software and software supply	Sebastian Fischer	Pre series A	STS Ventures
Apr-19	Drivy SA	FRA	Car-sharing	Paulin Dementhon Nicolas Mondollot	EV €232m (100% stake)	Getaround, Inc.
Mar-19	MILES Mobility	GER	Car-sharing	Alexander Eitner Florian Haus Timo Nuehrich	€5m, series A	Flash, Inventure Partners, Lukasz Gadowski, Team Europe, Weller Venture Capital, WestTech Ventures
Feb-19	Cluno GmbH	GER	Subscription services	Andreas Schuierer Christina Maria Polleti Nico Polleti	€28m, series B	Valar Ventures, Atlantic Labs, Acton Capital Partners
Feb-19	MHIRI Innovation SAS	FRA	Car-sharing	n.a.	n.a.	Peugeot S.A.
Jan-19	Vehiculum mobility solutions GmbH	GER	Leasing and rental services	Lukas Steinhilber Melchior Bauer Guy Moller	€7m, series A	Runa Capital, coparion, MobilityFund, Alexander Artope
Jan-19	easyCar Club	UK	Car-sharing	Stelios Haji-loannou Brent Hoberman	EV n.a. (100% stake)	Turo Inc.
Dec-18	EYSA PSA Smart City Mobility Services SA	ESP	Car-sharing	n.a.	EV €12m (51% stake)	Peugeot S.A.
Dec-18	Vimcar GmbH	GER	Automotive software and software supply	Andreas Schneider Christian Siewek Lukas Weber	\$13m, series B	Acton Capital Partners, Atlantic Labs, coparion, Unternehmertum Venture Capital Partners
Oct-18	Hiyacar Limited	UK	Car-sharing	Graeme Risby Rob Larmour	£5m, equity round	Itochu Corporation
Sep-18	WunderCar Mobility Solutions GmbH	GER	Automotive software and software supply	Gunnar Froh Samuel Baker	\$30m, series B	Blumberg Capital, iEurope Capital, KCK, Kingsway Capital, Piton Capital, Struck Capital
Sep-18	Veact	GER	Automotive software and software supply	Philip Junge Philipp Posselt	Series B	Bayern Kapital, Senovo, KfW, Seventue Partners
Aug-18	Carledo.de	GER	Leasing and rental services	Patrick Waringer Lennart Buck	n.a. (100% stake)	LeasingMarkt.de GmbH

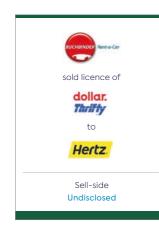


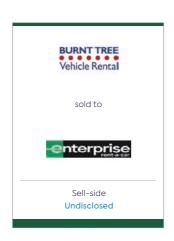
Date	Target	Target Country	Subsegment	Founder	Deal / Financing Rounds	Investor / Acquirer
Aug-18	Paul Camper GmbH	GER	Car-sharing	Dirk Fehse Franziska Schulz Alex Gluchowski	€3.7m, seed	MairDumont Ventures GmbH, Russmedia International
Jul-18	High Mobility GmbH	GER	Automotive software and software supply	Kevin Valdek Risto Vahtra	€3m, venture series	Fabian von Kuenheim, IBB Beteiligungsgesellschaft
Jun-18	Caroobi GmbH	GER	Digital marketplace	Mark Michl Nico Weiler	\$20m, series B	BMW i Ventures, Cavalry Ventures, Cherry Ventures, DN Capital, NGP Capital, Target Global
Jun-18	Azowo GmbH	GER	Automotive software and software supply	Andreas Kopf Patric Schneider Peter Jegutzki	Seed	MBG Baden Wuerttemberg, Project A
Jun-18	Abracar GmbH	GER	Digital marketplace	Orhan Koroglu Sebastian Jost	€11.5m, series A	Allianz X
Mar-18	Mandata Limited	UK	Automotive software and software supply	n.a.	EV £20m (majority stake)	LDC
Mar-18	Drover	UK	Subscription services	Felix Leuschner Matt Varughese	£5.5m, series A	Partech, Cherry Ventures, BP Ventures
Feb-18	Respiro	ESP	Car-sharing	Claus Biernoth Ian Paterson Inés de Saralegui Philippe Remise	EV n.a. (100% stake)	SEAT
Jan-18	Auto1Group	GER	Digital marketplace	Christian Bertermann Hakan Koc	€460m, venture series	SoftBank Vision Fund
Jan-18	E-Vai Srl	ITA	Car-sharing	n.a.	n.a.	FNM S.p.A.
Jan-18	MeinAuto GmbH	GER	Digital marketplace	Alexander Bugge Carsten Seel	Private equity	Hg
Nov-17	Firmen-KFZ.de	GER	Leasing and rental services	Thomas v. Hake	€1m, seed	Catagonia Capital, GPS Ventures
Sep-17	CarShare Germany GmbH	GER	Car-sharing	n.a.	EV n.a. (100% stake)	SnappCar
Jul-17	Croove GmbH	GER	Leasing and rental services	n.a.	EV n.a. (100% stake)	Turo Inc.
Jul-17	Caroobi GmbH	GER	Digital marketplace	Mark Michl Nico Weiler	Series A	Axel Springer Digital Ventures, BMW i Ventures, Cavalry Ventures, Cherry Ventures, DN Capital, Fabrice Grinda, FJ Labs, TA Ventures
Jul-17	Amovens	ESP	Leasing and rental services	Diego Hidalgo Demeusois	€5m, venture round	Macif
Apr-17	Vimcar GmbH	GER	Automotive software and software supply	Andreas Schneider Christian Siewek Lukas Weber	\$5.5m, series A	Atlantic Labs, coparion, Groupe Arnault, Le Peigne, Unternehmertum Venture Capital Partners
Feb-17	Clever Shuttle	GER	Car-sharing	Jan Hofmann Stava Tschurilin Bruno Ginnuth	€3m, series A	Deutsche Bahn, EvoBus, Unger Group
Oct-16	Happy Car	GER	Leasing and rental services	Anna Lena Mibach Robert Schütze	€2.6m, series A	Capnamic Ventures, Creathor Ventures, HR Ventures, Nordwest-Zeitung, TruVenturo GmbH
Sep-16	Clever Shuttle	GER	Car-sharing	Jan Hofmann Stava Tschurilin Bruno Ginnuth	€1m, seed round	Unger Group, Ted Beteiligungs GmbH, Deutsche Bahn
Mar-16	Veact	GER	Automotive software and software supply	Philip Junge Philipp Posselt	Series A	Unternehmertum Venture Capital Partners
Mar-16	High Mobility GmbH	GER	Automotive software and software supply	Kevin Valdek Risto Vahtra	€1m, seed	Ali Alghanim, Fabian von Kuenheim, Hampus Jakobsson, IBB Beteiligungsgesellschaft

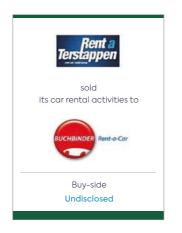
Recent automotive technology transactions

Working for many years with leading suppliers, OEMs and more recently with new digital players, we have built up an extensive network and knowledge of the sector, becoming a trusted adviser for many of the world's leading automotive players and completing 284 automotive deals. Our unique automotive transaction experience covers virtually every system and component of a vehicle, all relevant materials, process technologies and business models.

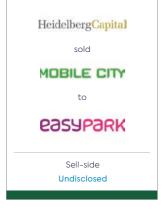
















Our international automotive team

With offices in Europe, the US and Asia, our automotive team can deliver seamless, integrated global advice to SME/owner-managed, corporate and private equity clients. Our team is supported by a number of high-profile senior advisers who are all former top tier executives with relevant product knowledge and a far-reaching network of contacts.



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