

# THINK ACT

BEYOND MAINSTREAM

#DIGITAL  
IMPACT



## SHARED MOBILITY

How new businesses are rewriting the rules  
of the private transportation game

JULY 2014

**Roland Berger**  
Strategy Consultants

# THE BIG 3

 **50%**

of car owners in industrialized countries would, in principle, share their vehicle with others.

p. 8

 **USD 18 bn**

is the current value of ride-sharing company Uber, which already has a footprint in more than 30 countries and is still growing constantly.

p. 12

 **10**

management principles make the difference between successful shared mobility companies and their pursuers.

p. 14



**Shared  
mobility to go:  
The growth  
markets at a  
glance  
p. 10**

# Mine, yours, ours. The dawn of a new dimension in today's economy: The idea of sharing and borrowing goods and services is making waves. New offerings in the mobility sector are making the biggest ones.

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The shared economy is in the process of evolving into a significant element of the economic cycle. The idea of sharing things and using them together has worked perfectly well for hundreds of years. All of sudden, however, it has begun to spawn disruptive business models with spiraling customer numbers and revenues to match. Consumers are opening their homes to others (e.g. Airbnb) and clubbing together to fund films, music albums, games, all sorts of things (e.g. Kickstarter), among other examples.

This particular "new economy" is not going to go away again. On the contrary, it will achieve a much more dominant position in the years ahead. Why? Because it accommodates the fundamental human need to be part of a community, share with others, build relationships, make friends – and, specifically, to entrust things to other people. Swapping and sharing was common practice long before we had paper money and modern-style companies. The shared use of resources was based on personal ties (primarily friendship) and/or geographic proximity (primarily the circumstance of being neighbors). And to this day, books, garden shears and items of clothing still change hands – temporarily and mostly free of charge – in the same way.

Now, however, new communication technologies are radically changing the playing field – in a positive

sense. The fact that every aspect of life seems to be going online is acting as a catalyst for the shared economy, which is transforming the world into one huge network: People, machines and systems are now constantly connected and communicate with each other in real time. The internet, smartphones and mobile positioning services are shrinking the entire planet to the size of a neighborhood.

Anyone can find and use what they are looking for in a matter of minutes. Ubiquitous social media has breathed new life into a notion of community that had long seemed confined to private spaces and a distinctly modest scale. Now, online platforms and marketplaces are spawning new relationships that, in the past, would never have been conceivable without face-to-face contact.

The shared economy is now an integral part of the global economy. It is plotting a steep and stable growth curve, largely bucking the normative trend of cyclical ups and downs. The landscape of shared economy offerings is already very extensive, and fresh-faced entrepreneurs are adding new services by the month. **A**

A

# THE WORLD OF THE SHARED ECONOMY

KEY SEGMENTS OF A PARTICULAR NEW ECONOMY

## GOODS

Peers trade pre-owned goods  
People lend/borrow goods to/from peers  
Peers produce goods and sell them  
online to one another

### COMPANIES

eBay, Etsy, Craigslist,  
Rent the Runway

## ACCOMMODATION

Peers offer housing to peers,  
thus replacing hotels  
People rent work/storage space

### COMPANIES

Airbnb, LiquidSpace,  
ShareDesk,  
Couchsurfing

## MOBILITY

People use or provide mobility services  
(e.g. ride sharing or shared parking)  
People lend/borrow vehicles  
from enterprises/from peers

### COMPANIES

Spinlister, Lyft, Uber,  
tamyca, car2go, Sixt,  
ParkatmyHouse

## SERVICES

Peers offer professional  
or personal services to  
one another

### COMPANIES

Elance, crowdspring,  
TaskRabbit, Freelancer

## MONEY

Peers replace banks when  
it comes to money lending  
Peers provide start-up funding,  
thus crowding out VC funds

### COMPANIES

Kickstarter, Lending Club,  
CircleUp, Prosper,  
TransferWise

This publication zooms in on mobility markets within the shared economy – for at least three very good reasons:

## **1. In terms of revenue, the mobility sector is one of the fastest-growing segments of the shared economy**

It also offers the highest growth potential for the years ahead. Part of this dynamism is rooted in creative ways of using and linking different transportation infrastructures and products, many of which already exist. There is no need to build new rail tracks, roads and parking lots; and cars, buses, trains and bicycles are already there too.

At the same time the key factor driving the trend toward sharing is a fundamental shift in attitudes toward property and ownership: People still want to drive cars and ride bikes. The difference is, they no longer have to own these vehicles if they can borrow them easily and at low cost from someone else.

## **2. In no other sector of the shared economy are so many established players entering the market**

More and more auto makers, railways, airlines and tech companies are stepping into the ring wielding new business models. All of which makes the mobility market the most exciting arena to show which "rules of the game" incumbent providers and agile start-ups play with, how they compete with each other and with what prospects of success.

## **3. The mobility sector is a testing ground for the software and hardware solutions of tomorrow**

And because that is the case, there are myriad ways to enter the market. When customers book shared cars, borrow bicycles or submit carpooling requests via online channels, a host of players take the stage: online platform operators, IT technology providers and the

suppliers of (industrial) hardware (a designation that includes the vehicles themselves) and even insurance companies. Alternatively, you might encounter companies that offer one-stop shopping. Since shared mobility companies gather huge volumes of customer information online, they also set an example of how big data can be analyzed intelligently and put to good strategic use.

This publication analyzes the background to and prospects for new and innovative mobility services. It is intended as a basic "user manual" for businesses, financial investors and start-up entrepreneurs who are keen to understand the mechanisms, points of access and management requirements that apply in the rapidly changing world of mobility. One key focus is on the requirements placed on management. Drawing on its extensive experience as an international strategy consultancy with mobility, logistics and transportation projects, Roland Berger Strategy Consultants ultimately identifies ten principles that are critical to the success of shared mobility offerings.

# CREATIVE, BOLD, CLEVER

## A CROSS-SECTION OF THE NEW SHARED MOBILITY BUSINESS WORLD

Heard about  
the challenge  
to taxis?

### PORTRAIT 1

#### COMPANY:

Uber, founded in the USA in 2009

**IDEA:** Customers use a smartphone app to order journeys and can choose between anything from basic cars to luxury limousines, between professional drivers and private individuals who use their own car. The app shows how long they will have to wait, profiles the driver and displays customer evaluations. Payment is made via the app, with 20% of the journey price going to Uber. The company sees itself solely as an agent: Drivers supply their own vehicles and work for their own account.

**MILESTONES:** By mid-2014, the company already had a presence in more than 30 countries. Its app currently attracts over a million inquiries per week. Uber's 550 staff generated revenues of nearly EUR 160 million in fiscal 2013, doubling every six months. However, European expansion is progressing less rapidly than expected as local governments and taxi drivers' associations are putting up a fight, accusing the newcomer of side-stepping transportation industry rules and regulations.

**OUTLOOK:** Long-standing market entry plans for peer-to-peer carpooling have been recently realized. The company is targeting vigorous growth in the future, principally in Europe and Asia. Collaboration with Google has been announced, though the details have yet to be disclosed.

Heard about  
the smart  
bicycle lock?

### PORTRAIT 2

#### COMPANY:

BitLock, founded in the USA in 2013

**IDEA:** BitLock has developed a bicycle lock that can be closed and opened by smartphone. Bikes are hired out to third parties via an app that locates them and opens the lock for each new user. The hope is that this innovation will inject powerful momentum into peer-to-peer bike sharing.

**STATUS:** The smart lock is due to go on sale worldwide in late summer 2014. The associated app will be launched at the same time. Interestingly, the San Francisco-based start-up has collected part of its initial investment capital on the crowd funding portal Kickstarter – sharing not only its bikes but its financing too.

**OUTLOOK:** A lucrative new market for high-tech hardware is taking shape in the shared economy. To take just one example: Anglo-German start-up Lock8 plans to go to market with a similar lock system in summer 2014.

Heard about  
the parking space  
optimizer?

### PORTRAIT 3

**COMPANY:**

ParkatmyHouse, founded in the UK in 2006

**IDEA:** On this online platform, private individuals and companies hire out vacant parking spaces by the hour or day, setting the rental fees themselves. ParkatmyHouse levies a service charge of between 6% and 40% of the total rent, depending on location and size. In return, it handles all dealings with the "tenant" and offers a money-back guarantee if the reserved parking space turns out to be occupied.

**MILESTONES:** By mid-2014, the British company had already expanded into 16 (mostly European) countries. Further afield, it currently has a footprint only in the US and New Zealand. 250,000 customers already use the online search function, which covers around 60,000 parking spaces at the present time.

**OUTLOOK:** Plans exist for further rapid internationalization in collaboration with German auto maker BMW, which signed up as one of the company's investors in 2011. End-to-end mobility management will be available in the future, with BMW offering customers of its DriveNow car-sharing operation vehicles by the minute or hour and a parking space near their destination.

Heard about  
the e-bike wave  
in Aachen,  
Germany?

### PORTRAIT 4

**COMPANY:**

Velocity, founded in Germany in 2014

**IDEA:** By offering 1,000 e-bikes and 100 rental stations (featuring 1,750 charging points), Velocity is seeking to position Aachen – a 250,000-strong university town near Germany's border with Belgium and the Netherlands – as a model of e-mobility. The tightly meshed network is intended to ensure that no customer has to go more than 300 meters to find the nearest pedelec (short for "pedal electric cycle": a bicycle with an add-on electric motor).

**STATUS:** The test phase, involving a selection of customers and a handful of rental stations, goes live in fall 2014. In the course of 2015, the official service should then open with 25 stations to begin with. Much of the funding is sourced via the solidarity of Aachen's students, who pay a little more on top of the flat rate for local public transportation. In return, they can use the e-bikes for free.

**OUTLOOK:** Once the full configuration is in place, Germany will boast the world's first city-wide pedelec rental system.

# The mobility transition. On the private transportation front, the shared economy has already made remarkable advances. The element of innovation lies in taking what is there and making something new out of it.

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Although sharing is often perceived as the figurehead of a completely alternative economic system, shared mobility has nothing to do with non-profit community market aspirations. Essentially, the new mobility market works along the same lines as existing economic mechanisms and by no means overrides the logic of the marketplace. Offerings in this sector will be sustainable only if they yield tangible benefits for providers and users alike. And, as an exponential increase in the number of users shows, customers clearly accept the commercial, profit-driven motivation that underpins shared mobility. At the same time, these customers are very demanding, insisting on offerings that are simple, fast and flexible and prices that are fair and transparent.

The shared mobility sector is initially taking root in selected markets. It is bringing specific entrepreneurial principles sharply into focus – and is benefiting from megatrends that are linked to exceptional opportunities for business growth:

## 1. What factors are driving growth

Both revenues and customer numbers are growing very fast in the nascent shared mobility sector. The car-sharing segment, for example, is expanding at an-

nual rates of as much as 30%. Four socioeconomic megatrends are contributing to this development, with rapid growth set to continue.

**A NEW CONSUMPTION CULTURE.** In the industrialized nations and other highly developed countries in particular, a generation of consumers has emerged that is often content merely to use a product rather than to own it. As a result, former status symbols – such as owning your own car – have seen their significance eroded. The findings of one recent survey are nothing short of astonishing: In the industrialized world, about 50% of car owners today could imagine sharing their vehicle in the future. While sharing does not necessarily mean less consumption, it does change the nature of consumption.

**SCARCE RESOURCES.** This trend comprises three distinct developments. First, scarce raw materials are driving up energy prices and increasing demand for efficient – and hence low-cost – mobility services and technologies. Second, many cities today lack the space to substantially expand their traffic infrastructures. And third, they mostly also lack the money they would need to invest in new and expensive infrastructures. Many private households are similarly short of funds, as global economic growth has slowed noticeably since the financial crisis. And since this particular



trend is likely to persist, the practice of sharing things, of using them temporarily, becomes a regular part of the economic equation.

**DIGITALIZATION.** Innovation in the realms of communication technology continues at a rapid pace, creating ever more extensive ways of connecting things and processes over the web. Information, booking and ticketing processes are becoming increasingly comprehensive, ever faster, more intuitive and more individual. What are referred to as generations Y (the "millennials") and Z (born after the year 2000) feel utterly at home in this digital world. And even adherents of generation X (the baby-boomers) are gaining more of an online foothold: For them too, smartphones, tablets and laptops are becoming the central control panels for their everyday private and professional life.

**DEMOGRAPHIC TRENDS.** An influx of new residents is swelling the size of cities around the globe. Even urban regions in industrialized nations whose overall population is shrinking and aging are experiencing the same trend, all of which points to two key consequences for the coming decades: First, cities will be forced to wage war on traffic congestion, noise and pollution, and are therefore looking out for intelligent, low-carbon mobility solutions. Large Asian cities in particular are facing ecological and environmental protection challenges of gigantic proportions. Second, the growing number of single-person households and people's longer life expectancy is causing demand to shift toward even more individual mobility services that are adapted to users' specific life circumstances. Rural regions will probably benefit less from shared mobility due to their inability to scale such offerings. This in turn will widen the existing gulf between urban and rural areas.

## 2. What principles apply

Shared mobility is organized almost exclusively via online marketplaces, which bring offerings together with users' wishes. As widely as the precise modes of sharing differ from product to product, all business models nevertheless have three principles in common.

### SHARED MOBILITY SERVICES ...

**... ARE BASED ON MOBILE SOLUTIONS.** Software programs, smartphones and apps are indispensable if providers and users are to be brought together quickly and conveniently. Essentially, every customer wants to be able to conclude hire or usage contracts informally, at virtually any time and from any place.

**... ALWAYS INCLUDE A SOCIAL ELEMENT,** because they are rooted in the fact that people trust each other enough to share (in some cases personal) information. If you let someone else use your car, you expect them to treat your property with care. Evaluation and feedback channels provide a kind of "insurance": Unreliable providers and users are exposed for all market players to see.

**... NEED GOODS AND SERVICE OFFERINGS THAT ARE READILY DIVISIBLE.** This argument is self-explanatory. In many quarters, it is assumed that the possibility of shared usage is underpinned by acts of altruism. Nothing could be further from the truth: People who hire out their car or garage in return for an hourly fee are acting in line with the market and in their own economic interests. They are doing something about inefficiencies and dead, wasted capital.

## 3. What are the most important markets

Double-digit annual growth is the order of the day for revenues in the shared mobility sector. Start-ups dominated the market in the early days, but more and more well-heeled automotive and transportation groups are now also wanting a piece of the action. Incumbents and newcomers alike focus on four markets: car sharing, ride sharing, bike sharing and shared parking. A brief summary of each one is provided hereafter. **B**

B

# \* SHARED MOBILITY 4x GROWTH OPPORTUNITIES



## CAR SHARING

**Potential:** Every single car stands idle in some form of parking space for 23 hours a day on average. Accordingly, there are many and varied ways to organize more individual mobility by sharing vehicles and letting others use them by the hour.

**Business models:** These are very diverse, ranging from fleet management (B2B) through traditional car rental (B2C) to peer-to-peer rentals (P2P). This variety in turn opens up additional offerings and areas of specialization, such as vehicle delivery, servicing during operation and customer care.

**Providers:** Vehicle manufacturers, car rental firms and internet companies. The private car rental segment has so far been dominated by start-ups.

**Revenue forecast for 2020:** EUR 3.7 – EUR 5.6 billion

**Projected market growth:** 30% per annum

**Outlook:** Hybrid business models are increasingly emerging that combine B2C offerings with P2P services.



## RIDE SHARING

**Potential:** Ride sharing organized in real time is becoming an important element in smart mobility networking for short to medium distances. Buses, trains and taxis have dominated this segment to date, but are either too inconvenient and inflexible or too expensive.

**Business models:** Three approaches have been tried out: private ride sharing with private drivers, professional ride sharing with employed drivers and different variations of carpooling.

**Providers:** Start-ups have so far ruled the roost, although companies like Uber and carpooling.com have now outgrown the start-up phase.

**Revenue forecast for 2020:** EUR 3.5 – EUR 5.2 billion

**Projected market growth:** 35% per annum

**Outlook:** If private ride sharing can emerge from its current legal no-man's land, especially in Europe, a boom primarily in urban usage is likely.



## BIKE SHARING

**Potential:** In many European and, in particular, US cities, bicycles are becoming a popular mode of inner-city transportation. Many large cities have ambitious plans to boost cycle traffic: Copenhagen, for example, is targeting a 50% share of inner-city traffic by 2025.

**Business models:** B2C offerings with permanent rental stations or completely flexible systems are widespread. New technologies (such as smart locking) are adding to the attraction of P2P models.

**Providers:** These are mainly railways, municipalities and outdoor advertising companies, plus start-ups for service and high-tech hardware.

**Revenue forecast for 2020:** EUR 3.6 – EUR 5.3 billion

**Projected market growth:** 20% per annum

**Outlook:** The more widespread use of e-bikes will attract new customers that demand greater comfort and convenience. It will also open up cities whose topography has so far positioned them as difficult markets.



## SHARED PARKING

**Potential:** As much as 30% of city-center traffic is trying to find a parking space at any given time. Smart communication and the use of private parking spaces thus opens up a huge new market.

**Business models:** Mostly P2P offerings to date. Online platforms handle the agency function, service and invoicing.

**Providers:** Start-ups predominate, but established players are quickly sitting up and taking notice. Automotive groups and parking lot operators are just beginning to enter the fray.

**Revenue forecast for 2020:** EUR 1.3 – EUR 1.9 billion

**Projected market growth:** 25% per annum

**Outlook:** Smart links to other mobility offerings such as car and bike sharing are in the pipeline, as is automated integration in "connected cars".

Growth and sales figures refer to the global market between 2013 and 2020

Source: Roland Berger

# A landscape of new beginnings.

Conditions could not be better for newcomers to shared mobility. This hugely dynamic market leaves plenty of room for innovation. Here is a brief outline of the major opportunities and strategic options for companies.

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The shared mobility sector has long since reached its tipping point and is now attracting more and more established companies and innovative start-ups. Business media's news pages are bursting with reports of pioneers, innovators, new entrants from other industries, partnerships and mergers. 

## 1. Opportunities

The breakneck speed of growth is no coincidence. Entering the market is a lucrative proposition for companies eager to exploit any or all of at least three favorable circumstances:

**SCALABILITY.** Shared mobility business models are almost all easily scalable. Once they have weathered the start-up phase, companies can thus expand quickly and easily in order to service a larger market. The first set of success stories emanating from the shared mobility sector shows that companies have initially focused on a given regional market or a specific segment (B2B, B2C or P2P). Growth has then really begun to take off in the second phase, when firms have ramped up their geographic coverage or rolled up additional customer groups with hybrid offerings.

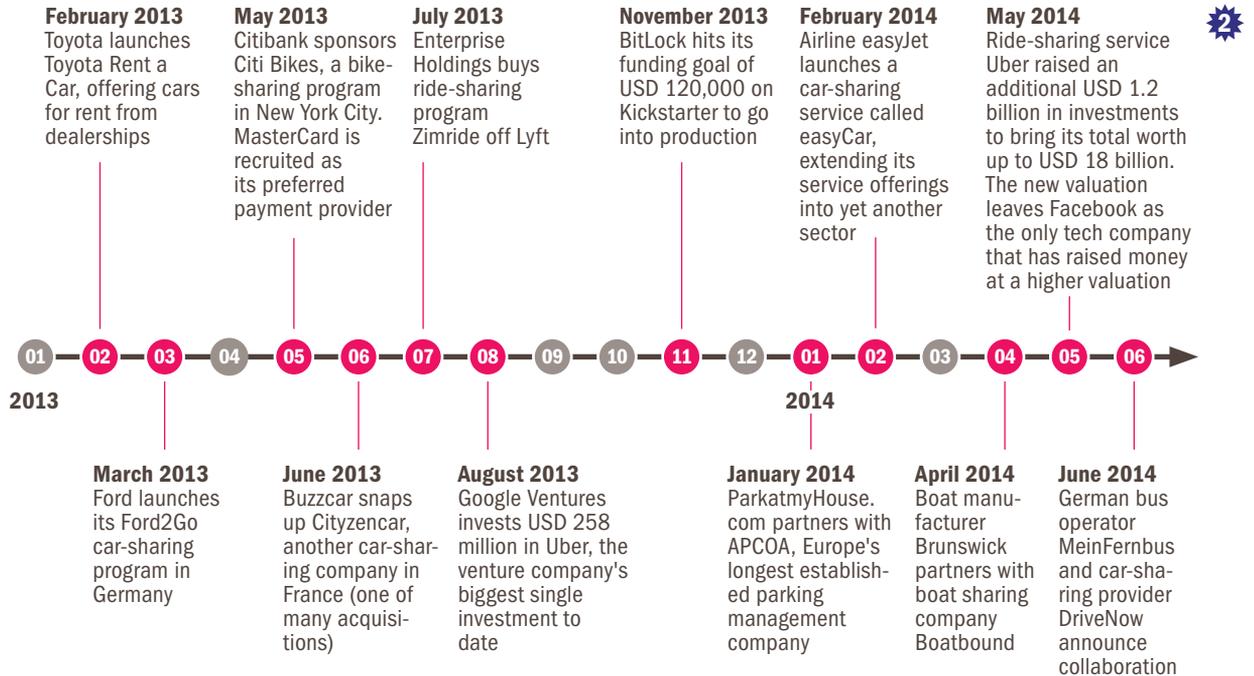
**ASSET-LIGHT BUSINESS.** Companies can enter the shared mobility market without needing an abundance of assets, as there is no need to invest heavily in staff and production. The majority of firms set out with a small team and effectively operate as start-ups, even when they have the backing of large corporations. Most capital is needed to buy a vehicle fleet and build a network of rental stations. In practice, the former item is usually handled in the context of cooperation models and partnerships with OEMs. To cover the latter costs, some companies agree fair cost-sharing models with local governments and municipalities.

**CUSTOMER PROXIMITY.** Shared mobility paves the way to valuable contacts with customers from generations Y and Z. Especially for longstanding companies, some of which have tenuous links or no links at all to this group in their existing markets, such opportunities are golden. Young people set the trends for years to come. They have grown up with the possibilities afforded by the internet, are conversant with social networks – and are thus accustomed to swapping and sharing over smartphones and apps. Knowing their preferences will undoubtedly alter companies' offerings above and beyond the shared mobility market itself.

C

PACE-SETTERS

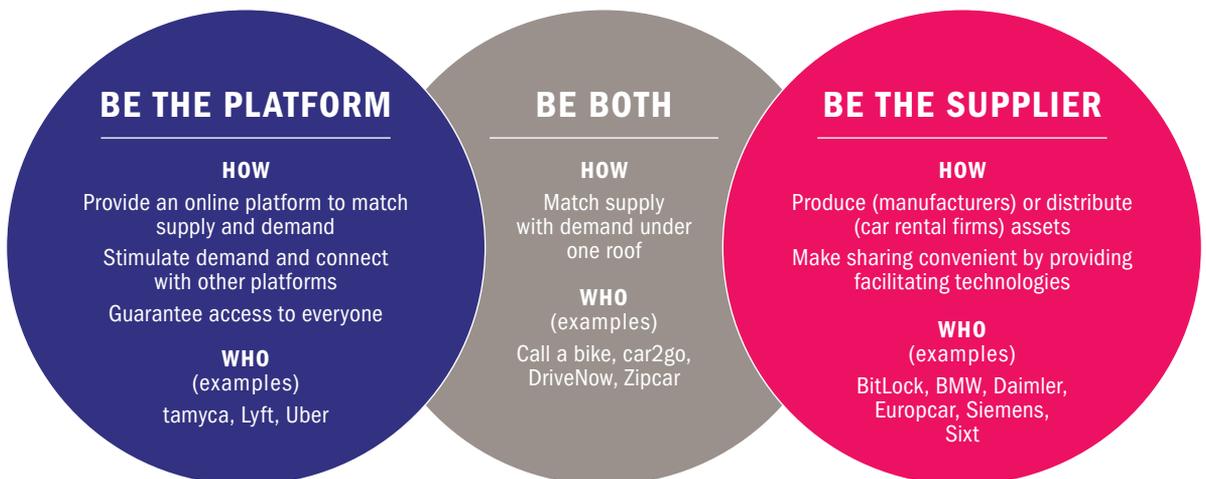
Shared mobility highlights since 2013



D

ACCESSING THE MARKET

The three answers to the "what to be" question of shared mobility



## 2. Strategic options

There are essentially three ways in which companies can enter the shared mobility market. The figure on the previous page outlines these different approaches. **D**

This initial strategic decision relates closely to further choices about the how and when of market entry. Start-up entrepreneurs can usually bypass this phase because they know what they want: to get their good idea to market as quickly as possible – and then go full steam ahead. Established players who would rather intelligently add innovative mobility services to their business model than throw it overboard do have to decide what direction they want to take, however.

The fundamental questions they must answer before entering the market are these: Should we launch our own company or buy a player that already has some experience of the market? Do we want to position ourselves as a market pioneer, or do we want to be smart and wait until the first wave of start-ups has washed over?

There are no generally valid answers. Each company must think through the long-term strategic implications of the various options and then make its choice. Here is a rapid-fire overview of the basic choices facing them when they think about the how and when of entering the shared mobility market:

### LAUNCHING YOUR OWN COMPANY...

- > Gets people excited: You can develop the shared mobility business model in-house using your own people.
- > Yields synergies: You can optimize the alignment with your existing business.
- > Lets you save money: Ultimately, building a business cautiously is usually less expensive than acquiring another firm.

### ACQUIRING A COMPANY...

- > Keeps you from bleeding your other business dry: Some of your best people end up leaving your core business to join the new venture.
- > Gives you a knowledge lead: You gain access to new data about markets and mechanisms, as well as benefiting from an enlarged customer base.
- > Minimizes conflicts (due to the "not invented here" syndrome) and path dependencies (due to the competency trap).

### ACTING AS AN EARLY MOVER ...

- > Sets standards: You establish technical solutions and user habits that others then have no choice but to follow.
- > Cements customer loyalty: Your first contacts are the most valuable ones, because they usually last the longest.

### WAITING AND THEN ENTERING THE MARKET AS A SECOND-WAVE PURSUER...

- > Avoids mistakes: By this time, the pitfalls and those areas of business that fall short of expectations will have been discovered.
- > Benefits from better conditions: Pursuant to lobbying activities, unfavorable rules and regulations should have been adapted or eliminated altogether.

# Good idea, poor execution? Business success in shared mobility hinges on excellent, systematic implementation. Both established players and start-ups alike must master ten key challenges along the way.

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**3** Our market study is very broad-based. An exhaustive process of research and analysis identified a good 200 shared mobility business models in total and examined those factors that set the most successful companies apart from their rivals. At the same time, the findings from more than 100 detailed interviews with academic experts, top managers from the industry and Roland Berger knowledge from around the globe were also channeled into the study.

Ultimately, we identified ten management principles that make the difference in shared mobility (as opposed to "traditional" management practices in incumbent industries) – and that enable firms to rise to the top of their markets.

## 1 PRINCIPLE

### First think big, then think profits!

#### BACKGROUND

Unlike in many other industries, the start-up and growth phases merge into one in the shared mobility sector. Newcomers who take the time to calmly lay a firm foundation for their new business run the risk of

being left behind. Especially in the booming market for shared mobility, people anywhere in the world can come up with the same good ideas and quickly put them into practice. In principle, everyone has access to the same new technologies and financial backers are seldom hard to find.

The critical factor, then, is to go to market and stake your claim as quickly as possible. The courage to think big is vital at this stage: Your business must be designed for size and scalability from the word go. Only later do successful companies enter the phase in which they must make the transition from extremely rapid growth to steady expansion. This transition necessitates a shift of entrepreneurial mindset, leading to a focus on operational excellence, profitability and cashflow.

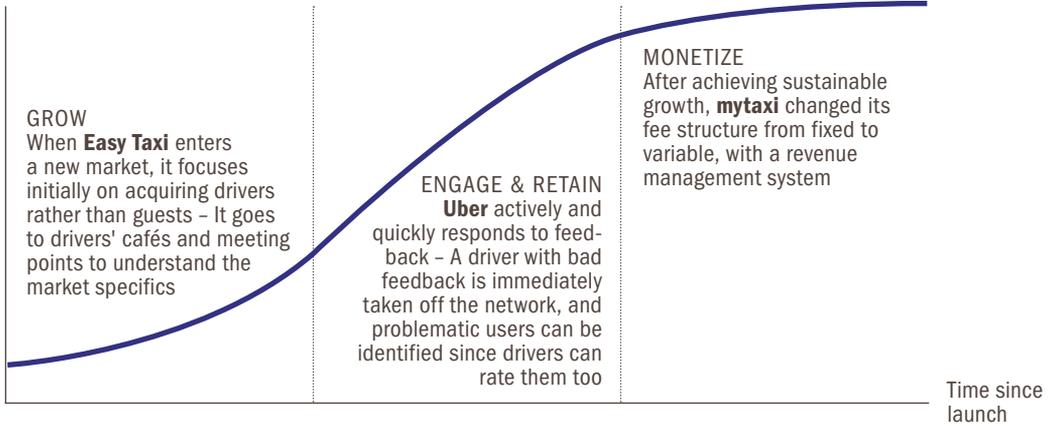
#### CONCEPT

The figure on the next page shows the copybook phases through which companies go in the shared mobility sector. Best practice examples are described for each phase. **E**

**E**

THE LIFECYCLE SCHEME OF SHARED MOBILITY  
Best practice examples of growth and monetization

No. of active users



**F**

THE SECRET OF SUCCESS

How supply drives demand – bike-sharing programs as an example

DEMAND

No. of trips per bike and year



1) Only call-a-bike offers included

## 2 PRINCIPLE

### Push supply to pull demand!

#### BACKGROUND

This rule doesn't mean that the new service necessarily has to be rolled out on a broad front: A presence in all relevant cities and everywhere else is not needed the moment you enter a new national market. A shared mobility business model can and indeed should be launched on a regional or, even better, local scale, even if it is inherently dimensioned for scale. In pioneer markets, the critical success factor is to start out with a tightly meshed infrastructure network (which usually means sufficient vehicles and stations) and full service (which usually means mobile applications and a customer hotline).

"No half-measures" is perhaps the best way to describe the ideal growth strategy for shared mobility. An attractive range of offerings is needed if critical mass is to be reached on the customers' side. Why? Because close contact and constant interaction between consumers is the lifeblood of shared mobility. Few other industries can boast network effects on a similar scale. That is why offerings must hit their mark and cause a stir immediately in the community. If that does not happen, people will discard a company's offerings as lackluster and uninteresting – and then it becomes immensely difficult to turn opinion around.

#### EXAMPLE

Our analysis of bike-sharing models in numerous large cities worldwide clearly shows the extent to which demand is driven by the attractiveness of offerings. Indeed, a correlation coefficient of 0.7 is almost enough to establish this close connection. **F**

## 3 PRINCIPLE

### Build trust in your community!

#### BACKGROUND

To share is to trust. That, in a nutshell, is the fundamental principle on which all shared mobility business models are positioned. The companies that serve as mobility agents and managers must take this core principle to heart and live it out from day to day. First and foremost, they themselves must prove to be trustworthy, keeping business partners, customers and both the local and global public clearly and comprehensively informed about their goals and the way they work. Second, and even more important, this same trust must spill over beyond the company's own narrowly defined business activities and into the wider community.

Successful shared mobility companies are the ones that manage to firmly establish this community of trusting users. They nurture a sense of belonging to a "family": Customers rely on each other, and assume that everyone else will act more or less as reliably and prudently as they themselves do. None of the many business models work without mutual trust; and this is especially true of peer-to-peer rental models, where private individuals share their bicycles, cars and rides with others. US ride-sharing provider Lyft has even introduced a general-purpose trust-building ritual, with drivers and passengers "fist bumping" each other before each journey begins.

The bottom line is that, in practice, it is vital for shared mobility firms to cultivate trust on several different levels, three of which are pivotal. A few practical examples and recommendations illustrate how community trust can be reinforced:

#### 1. TRUST IN REPUTATION

- > In P2P sharing contexts, users review each other after transactions. The resultant "reputation capital" makes future listings/requests more attractive.
- > Start-ups (such as Fidbacks) consolidate reputation capital from all sharing websites in a single trust profile.

> Commercial mobility sharing also gets reviewed on social media websites, in forums and in magazines, etc., so reputation capital can be inherited from the strong brands of corporate parents.

## 2. TRUST IN SUPPLIERS' PROCESSES

> Shared mobility providers verify both the identity of their users (including service providers) and all appropriate legal documents (e.g. drivers' licenses) to prevent illegal or unauthorized use.

> In the context of more sensitive mobility services (such as ride sharing and P2P car sharing), automated criminal and financial background checks are mandatory to guarantee safe use. Increasingly sophisticated and reliable systems are therefore used to this end.

## 3. TRUST IN THE NETWORK

> Integrating users' social media profiles in their P2P mobility sharing profiles can magnify the "small world" effect, enabling total strangers to become friends of friends of users' friends, for example.

> References and "vouching" are another alternative to boost network trust: Friends and acquaintances can vouch for users even without having had a sharing experience with them.

ers, although that does not mean they have to offer every service themselves. Instead, they need to cooperate or engage in loose affiliations with other providers. The important thing is for companies to look beyond their own offerings to forge and manage smart links with other infrastructures. There are two key dimensions to this form of connection:

### 1. THE TECHNICAL DIMENSION

Companies must leverage leading-edge technologies and applications to enable users to find, book and pay for relevant "downstream services" for which demand exists. As far as possible, all information and services should be available in real time and must be accessible from mobile devices.

### 2. THE INTERMODAL DIMENSION

The company's infrastructure should be synchronized with existing local offerings and possibilities. The trend that is seeing different mobility services congregate around central hubs will continue in urban settings. As a result, customers can save time by easily switching between different modes and systems of mobility.

## EXAMPLE

A number of companies are demonstrating what links to other mobility services could look like. 

# 4 PRINCIPLE

## Interact, integrate and connect with other mobility modes!

### BACKGROUND

The desire for personal, individual mobility is as strong as ever. People are in perpetual motion – as is the world around them, with data and knowledge spreading and migrating at an ever faster pace. People therefore now expect more of mobility services: Customers want to get from A to B quickly, conveniently and in the most resource-friendly way possible. Since there is no longer a single, superior mode of mobility, intelligent integration is crucial. Shared mobility providers must organize this mobility chain on behalf of their custom-

# 5 PRINCIPLE

## Study your customers – then study them some more!

### BACKGROUND

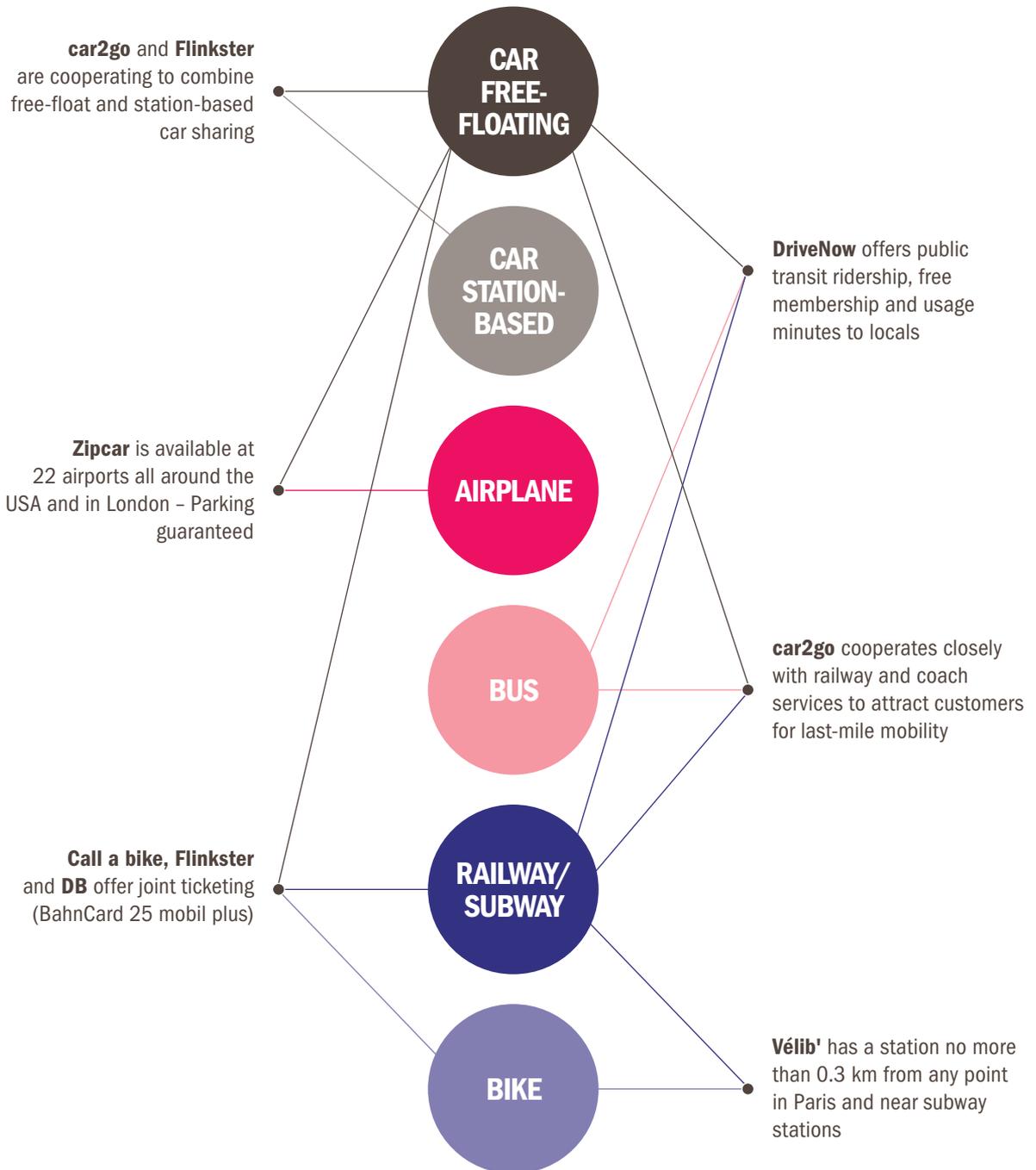
If you don't know your customers and what they want, you will not make the grade in this industry. There are two reasons why this constitutes such a stiff challenge in the shared mobility sector:

**FIRST**, shared mobility generally brings together a large group of customers with different goals. You have both people who want to rent something out and others who want to rent. Companies must act as mediators and organizers to consistently set up and maintain

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# CONNECTED MOBILITY

## BEST PRACTICE EXAMPLES OF INTERMODAL CONNECTIVITY AND INTEGRATION



contacts within this community. If they're unable to do so, their business model is at risk.

**SECOND**, generations Y and Z – the core customer base for shared mobility services – are a choosy bunch whose behavior can be likened to the shyness of deer in the forest. The slightest change in offerings that doesn't go down well, the merest shift in fee models that is not accepted and you will never see them again. Longstanding loyalty is not high on their list of priorities. Accordingly, companies have to keep their finger on the pulse of the market at all times.

One key to success is to make systematic but above all intelligent use of big data. To do so, suitable infrastructures naturally have to be built and all technical possibilities exploited.

Having said that, the market leaders in shared mobility also set themselves apart from rival firms by combining big data with a clear corporate strategy: Their aim is to channel the rising tide of digital information about customers and their behavior into ever better and ever more individual offerings. In the end, shared mobility providers are "tech companies", just like the Googles, the Apples and the Facebooks of this world.

## CONCEPT

Specifically, these insights lead to three concrete steps for identifying the needs of customers and adapting to these:

### 1. KEEP IT BASIC BUT MOVE FAST

#### WHEN YOU START

- > Providers should initially focus on key functionalities, adding few frills or none at all. Basic products (beta versions) have shorter times to market. Don't survey and analyze the customer too extensively early on as comprehensive insights will become apparent very soon anyway.
- > Make sure you have enough users to enable representative behavioral analysis and glean genuinely useful insights.
- > Focus on "educating" the customer with an easy-to-understand product. Then start the following iterative cycle.

## 2. TEST AND ANALYZE REGULARLY

- > Continuously implement new changes – both gradual and disruptive ones – driven by clear hypotheses regarding their impact on customer behavior.
- > Use big data technology to store and analyze customer reactions and test the formulated hypotheses about these new features right from the start (e.g. by using data cubes).
- > Monetize the insights generated.

## 3. ADAPT WHENEVER POSSIBLE

- > Reverse or enhance gradual changes as a function of customers' reactions. Use the insights gleaned from your analysis to identify promising disruptive changes and look out for game changers.
- > Establish a truly data-driven decision process. Accept and advance disruptive changes only if testing yields solid evidence that backs your initial hypotheses.

# 6 PRINCIPLE

## Keep it simple and convenient!

### BACKGROUND

If you put all observations and research findings concerning the wishes and preferences of shared mobility customers into the mixer, three stark imperatives come out that fairly accurately sum up what these internet-savvy users want: Get to the point! Keep it simple! And don't waste my time! That, however, is easier said than done. Market analysis shows that the fast-growing companies in this sector score very highly on all three counts. Clarity and transparency on all service levels evidently serve as powerful success factors.

To put that into more concrete terms, the need is for compelling solutions in three areas:

### 1. LOW BARRIERS TO ACCESS AND USAGE

- > Keep pre-registration lead times as short as possible. Only ask for details when they are really needed, and do so as late as possible.

> Pre-registration with longer lead times (e.g. access codes sent by post, etc.) alienates short-term users (e.g. tourists but also early adopters) and last-minute organizers.

## 2. TRANSPARENT SEARCH AND BOOKING SYSTEMS

> Strike a healthy balance between detailed information and relevant information. Give customers control over what information is displayed without overwhelming or distracting them.

> Hidden costs and charges discourage skeptical generation Y customers.

## 3. SHORT AND FOOLPROOF BOOKING AND BILLING PROCESSES

> Minimize the number of steps needed to complete booking and billing. Automate processes wherever possible.

> Compile short and concise instructions with little or no complexity to guide customers through the process. Always keep the end of the transaction clearly visible.

## EXAMPLES

Barclays Cycle Hire users need only a credit card to hire a bicycle in London – alternative pre-registration is available for locals. car2go shows customers all cars in their vicinity on a clear, interactive map – useful information such as fuel level and car type is displayed. Zipcar condenses its booking process into four easy-to-understand steps – latest technology simplifies processes (e.g. keyless car entry).

# 7 PRINCIPLE

## Build your own ecosystem!

### BACKGROUND

If companies are to properly fulfil their role as mobility managers, they need to demonstrate excellent networking capabilities. As we have already seen, customers want extensively integrated offerings. Strategic partnerships are therefore essential if the complex tech-

nical requirements are to be mastered and economies of scale realized – and if intensive use is to be made of all key marketing channels.

Shared mobility companies' online platforms are the visible part of a largely invisible ecosystem that spans products, services, functions and technologies. Companies that "go it alone" are often doomed to failure simply because they lack the skills and points of access they need to put together really attractive mobility offerings.

Customers accept, value and indeed want providers to collaborate with other organizations. After all, they too understand shared mobility as a kind of like-minded community. The ecosystem is an essential part in building loyalty, increasing switching costs and surviving long term.

### CONCEPT

The figure on the right-hand side highlights the component parts of the shared mobility ecosystem. These partnerships are actually very logical, because they bring together things and services that belong together. This creates a stable chain of (business) relationships that is then difficult to break up. This ecosystem constitutes a win-win situation for all parties involved.

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# 8 PRINCIPLE

## Lobby the authorities right from the start!

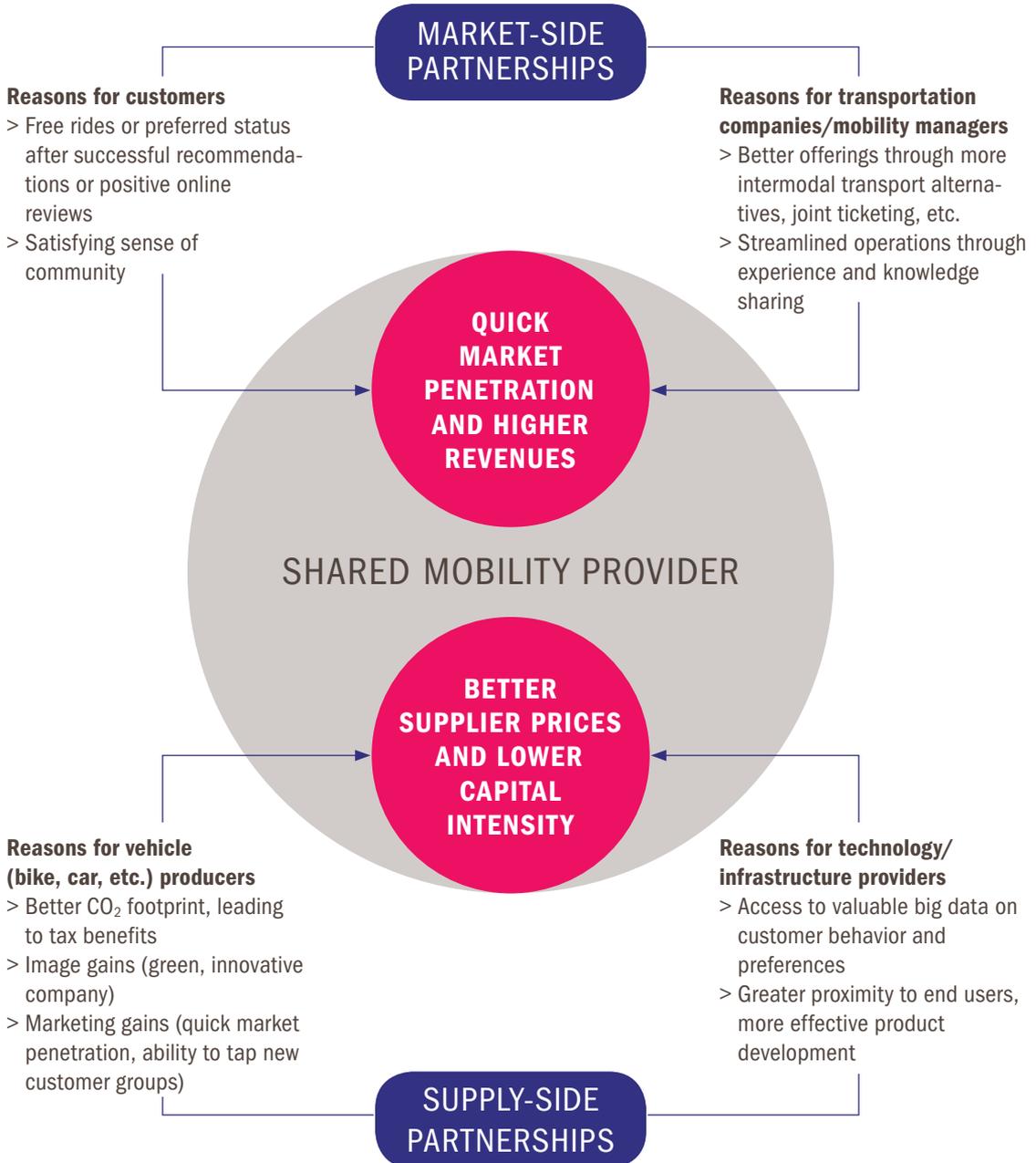
### BACKGROUND

Shared mobility creates new, innovative offerings, mainly for people in large cities and urban regions. In these settings, both the infrastructure and a number of mobility service providers are usually either publicly owned or at least operated as public-private partnerships. This, then, is where mobility firms must look to get a foot in the door: They should get decision makers and local administrations on their side and get them

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# THE SHARED MOBILITY ECOSYSTEM

THE LOGIC AND GOALS OF PARTNERSHIPS



## 9 PRINCIPLE

excited about their business idea and service offering. In other words, they need to secure the backing of local governments. There are four main ways to do this:

**MARKETING SUPPORT.** Municipal or state-owned passenger transportation companies can be a powerful partner for joint advertising activities and reciprocal links between offerings. The latter can go so far as to make bookings possible at any link in the entire mobility chain, and to sell tickets that can be combined with each other.

**OPERATIONAL SUPPORT.** Most of the land used for car-sharing parking spaces and bicycle-hire stations belongs to municipal authorities. If you want to offer your customers attractive locations on favorable terms, you will therefore have to approach the local authorities and political decision makers and thrash out sound contracts with them.

**FINANCIAL SUPPORT.** To keep traffic from grinding to a complete standstill and to improve the overall quality of urban life, city leaders are turning to solutions that reduce CO<sub>2</sub> emissions, particulate matter and noise. Hence they are more than willing to sponsor efficient mobility services, and may even contribute taxpayers' money by way of start-up funding.

**LEGAL SUPPORT.** Given that some offerings are breaking new ground, shared mobility needs a secure political and legal framework. To this end, existing rules and regulations need to be liberalized, albeit not at the expense of citizens' safety and (data) protection. The major issues at stake far exceed the local government sphere of influence, so relevant lobbying must target national parliaments and ministries.

### Think, act and recruit like a start-up!

#### BACKGROUND

Agility is the trump card that every shared mobility provider must be able to play. It is therefore no coincidence that many successful firms began as (or still are) start-ups – a breed of companies that normally master the art of agility. Their staff see themselves as fighting together for an idea. Hierarchies are flat. Creative freedom rules, and is flanked by the will to roll up the market.

Reaching the next stage of business development is one of the biggest challenges, because it involves reconciling two conflicting ambitions: On the one hand, companies want to stay agile and keep alive their strong focus on growth. On the other hand, they also have to create the structures needed to bring stability and constancy to both growth and processes. This is precisely the challenge facing large companies and corporations that want to penetrate the shared mobility market: They too need to strike the right organizational balance in order to deliver profitable growth.

#### CONCEPT

There is no patent recipe for established firms' market entry, as they all come from different backgrounds and face widely varying conditions in the different segments of shared mobility. Having said that, analysis of a good 200 business models does enable us to identify a few generally valid recommendations for action, which are summarized in the figure below. 

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# ENTREPRENEURIAL MANAGEMENT IN DETAIL

## RULES AND ACTIONS

### RULE 1 BE LEAN, QUICK AND AGILE

Corporations need more time to make decisions and implement them – rules and regulations restrict quick changes

Shared mobility units, however, need to respond quickly and dynamically to market developments, competition and customer needs – big corporations' governance is a real obstacle



**ACTION:**  
**Keep a "protective cover"**  
– Acquired or launched mobility units should remain independent of their parent company's governance

### RULE 2 DON'T FOCUS ON SYNERGIES UNTIL LATER

Corporations actively (and sometimes even obtrusively) look for synergies, trying to realize them to justify the acquisition or launch of a new unit

Such behavior will undermine the control and autonomy of the business unit – this impairs the freedom and aggressiveness needed to explore shared mobility opportunities



**ACTION:**  
**Don't force synergies, but enable them**  
– Mobility units can make use of their parent companies' capabilities and scale without their authority

### RULE 3 CULTIVATE BRAND ASSOCIATION

Shared mobility is considered new and fashionable – companies have loyal customers who experience a strong sense of community

Association with parent company brands has both advantages (strong brand, high recognition, trust) and disadvantages (big, formal, heavily regulated companies with lengthy response times)



**ACTION:**  
**Keep brands separate but clearly associated**  
– Make sure ownership is well-known while keeping brand design separate, for example

# 10 PRINCIPLE

## Harness a jaw-dropping look and feel!

### BACKGROUND

Shared mobility companies claim that their efficient, resource-friendly, networked and – above all – community-oriented offerings are ushering in a new era in passenger transportation. This ambition must be reflected in every aspect of their image and market presence. For them, leveraging cutting-edge technologies and realizing the latest design trends is more than just a marketing imperative: It also communicates an attitude that says "We are different to the incumbent mobility providers" and, as ride-sharing service Uber claims, "It feels like magic!".

The saying "You can't get others excited unless you're excited yourself" succinctly encapsulates the forceful energy that the shared mobility market leaders pump into their endeavors. The very presentation of their offerings is so lean, elegant and innovative that, ideally, customers cannot help but be astonished and fascinated. This is most readily apparent when one examines their website designs: Far beyond the confines of their own industry, shared mobility companies' long scrolling websites, instructional animated videos, simple color schemes, dropping sidebars and manipulated images genuinely set a new standard.

### CONCEPT

In practice, the following successful approaches can be identified:

**INNOVATE.** Use a smart combination of new technologies (e.g. big data analysis, heat mapping, omniscient mass tracking, in-door maps, etc.) for a more focused approach to product innovation.

**ATTRACT.** Leverage your interfaces (website, app, etc.) as marketing tools by applying the newest design trends and investing to make sure merely using them treats customers to a "magical", intriguing experience.

**SUPPORT.** Anticipate your customers' next move within your interface. Actively show them useful shortcuts, and help them finish transactions quickly, without errors and without hassle.

**PACKAGE.** Hide your complex technology, infrastructure and processes behind a crisp facade that shows customers only what they need. Don't bother them with "what's under the hood".

2025

**Hitting the big time.** Shared mobility is gaining ground. By 2025, millions of people will be using and linking products and offerings in smart and creative ways as a matter of course. Here is a sneak preview of what the future may hold.

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"In major cities across North America, Europe and Asia, shared mobility companies today handle around 10% of public passenger transportation, up from less than 1% in 2014. This huge leap forward is reflected primarily in large urban cityscapes, where distributed rental stations for e-cars and e-bikes have sprung up on every corner. This has proven to be the most convenient way to recharge batteries and provide customer service, and is now the established modus operandi for electric vehicles.

The triumph of shared mobility has also given electromobility its long-awaited breakthrough. In big cities, e-cars are far more widespread than conventional autos: You sometimes consciously have to look out for the old gas guzzlers. Shared mobility networks boast a

high vehicle density, and the next shared vehicle is on average never more than 200 meters away. That is one reason why many urban residents have given up owning their own car, with more people following their lead all the time. Even older people have caught the shared mobility bug. It has been a rerun of what happened with smartphones a good 15 years ago: Youngsters from the digital generation were the first to excitedly embrace the technology, and all the others followed gradually in their wake. Today, no one can imagine a world without smartphones. Shared mobility too can now rightly be deemed a mass phenomenon.

One of the most compelling attractions of the new mobility offerings is that they are so convenient. Comparison portals let people pick their vehicle of choice

from a pool of providers – anything from a snappy two-seater to a station wagon and trailer to top-of-the-range luxury models. Different service and quality levels can also be booked using mobile apps: Peer-to-peer rental is the most economical option, and the price scale goes up as companies offer new vehicles in every conceivable category, complete with ultramodern satnav devices that broadcast traffic congestion news in real time. Add-on offerings also let customers book other links in the mobility chain, from bikes to local public transportation to flight tickets.

Looking for a parking space – the bane of city-dwellers' lives back in the 2000s – is no longer an issue for car sharers: Simply punch your destination into your rented vehicle and the console immediately suggests a selection of available parking spaces nearby. One click and one of these spaces is yours. For short-distance travel, trial runs with driverless vehicles have been so successful that they are now in regular operation. One of service providers' premium offerings is ensuring that the shared vehicle booked by a customer rolls up at their front door on the dot.

The taxi landscape with which North Americans and Europeans grew up for decades has experienced radical change. Above all, taxi services have become more diverse, more comprehensive and more flexible. Pick-up and delivery services – to go shopping or visit the doctor, say – have become commonplace. Community shuttles – modern electric vehicles that pick up three or four customers from the same neighborhood – provide low-cost travel to the airport. The art of ride sharing has likewise been perfected for longer journeys, and customers can choose to be the only passenger or travel in a group. Mobile apps also make short work of organizing suitable onward transportation in the shape of further ride sharing, buses or individual itinerary services at the destination.

Comfortable e-bikes are the most popular option for short- and middle-distance urban travel. Their technical development over the past decade has been singularly impressive: Customers can now choose between two-wheelers, three-wheelers and Segway-like scooters, some of which even have lightweight carbon shells to protect the rider from wind and weather. Businesspeople in particular enjoy "biking" from meeting to meeting.

The most successful shared mobility companies are posting sizeable revenues and have a footprint in almost every major city. Corporate customers appreciate being able to activate familiar, reliable procedures and enjoy consistent vehicle quality almost anywhere in the world. And providers have wisely linked their offerings to the customer loyalty systems operated by various airline alliances: Miles are now worth even more.

The bottom line is that shared mobility has ushered in a new age in people movement. A new and lucrative age, indeed: This year, in 2025, the sector broke through the EUR 30 billion barrier for the first time. Over the years, shared mobility has also taken on a pronounced social dimension, finding innovative ways and means to organize mobility while also reducing pollution, conserving resources and saving space." ♦

### **THIS IS OUR VISION FOR 2025!**

Visit the Roland Berger expert site to learn more about shared mobility:

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## Further reading



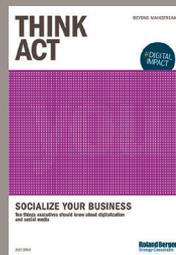
### STUDY: CHINESE CAR SHARING MARKET

The car-sharing market in China is growing at an above-average rate: In their new study "Sharing the future – Perspectives on the Chinese car-sharing market", the experts at Roland Berger Strategy Consultants predict annual growth of about 80% for the next five years.



### STUDY: CONNECTED MOBILITY 2025

In the world's 30 biggest megacities, paralyzed traffic flows generate annual costs of more than USD 266 billion. The answer to how to get a grip on the problem of increasing passenger transportation lies with networked mobility. This is the key finding of a study entitled "Connected Mobility 2025" by Roland Berger Strategy Consultants.



### STUDY: SOCIALIZE YOUR BUSINESS

New publication from Roland Berger and the University of Münster analyses how social media creates new opportunities for customer retention and innovation management. The authors' conclusions: Companies must open themselves to this new reality and not see it as a threat.

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