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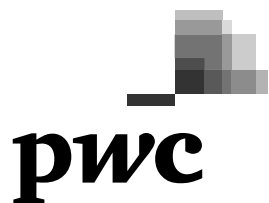
11 November 2014

Beijing, P.R. China

The Future of Car Sharing in China

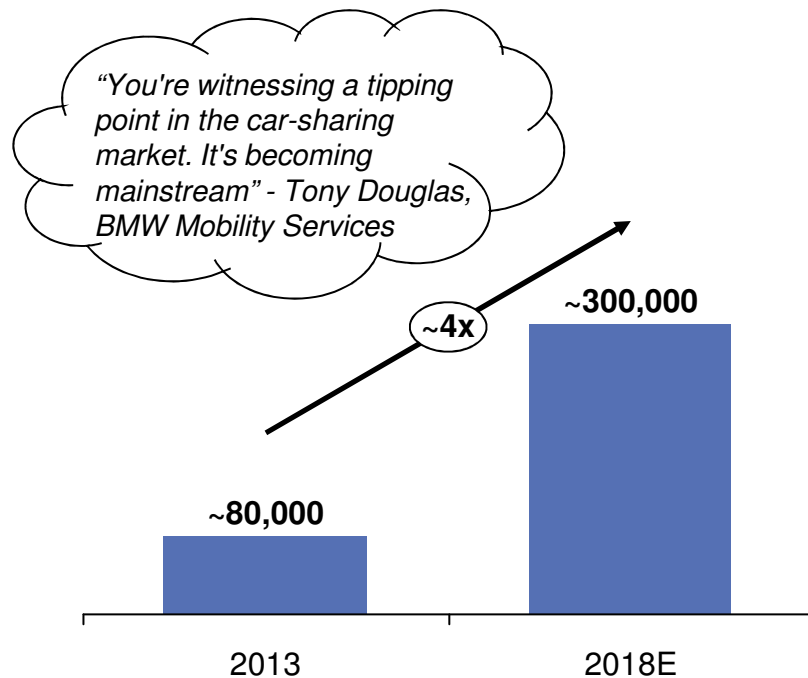


Automotive Finance
Executive Roundtable



Car sharing has gained considerable momentum recently - the global fleet may quadruple over the next five years

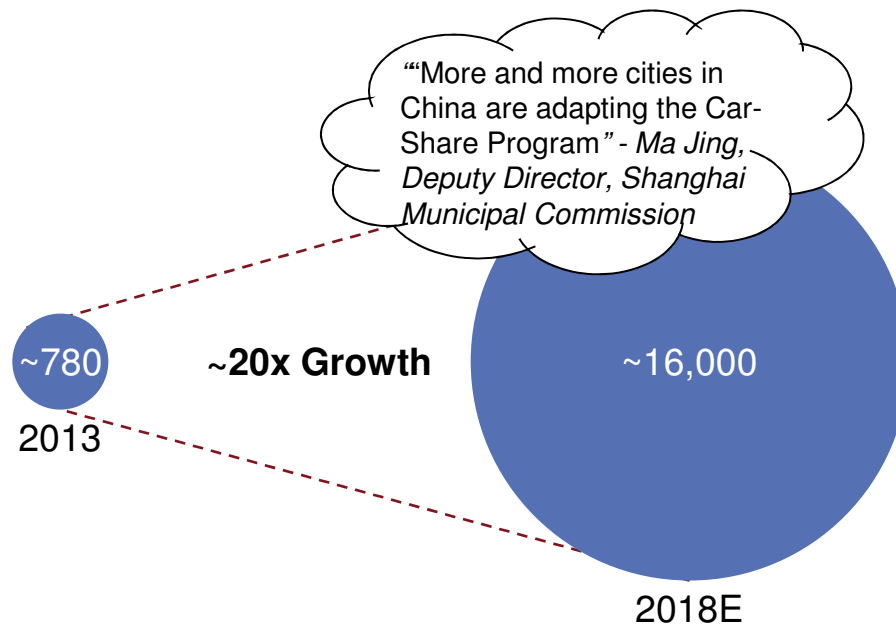
Global Car Sharing Fleet Size
(Units, 2013, 2018E)



- Car sharing refers to a business model where customers rent vehicles for short periods of time – often by the hour
 - Occasional use of a vehicle
 - Occasional access to a different type of vehicle
- Car sharing began over 65 years ago in Switzerland and has become a mainstream transportation mode over the past two decades
- Many industry experts expect significant growth over the next five years

Potential growth rates in China are even higher

China Car Sharing Fleet Size (Units, 2013, 2018E)



China Market Overview

- **Car sharing sector still nascent**
 - Introduced only recently (Car Clubs, 2011)
 - Low concentration (~10 players)
 - Small fleets (50-100 vehicles)
 - Little consumer awareness
 - Usage limited primarily to a few large tier-1 and tier-2 cities
- **Strong growth fundamentals and future government support**
 - Traffic congestion and pollution
 - Automotive affordability
 - Enabling technology

Numerous studies have demonstrated the potential social and environmental impact of car sharing programs

Car Sharing Impact		Europe	North America
Traffic Congestion	Number of private cars a car sharing vehicle replaces (sold/forgone purchase)	4~10 cars	9~13 cars
	Sold vehicle due to car sharing	15.6~34%	25%
	Forgone vehicle purchase due to car sharing	N/A	25%
Vehicle Emissions	Carbon dioxide emission reduction	39~54%	27~56%


Source: International Journal of Sustainable Transportation Vol.7, No.1, 2013

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However, success in China is by no means guaranteed, as car sharing programs elsewhere have frequently failed

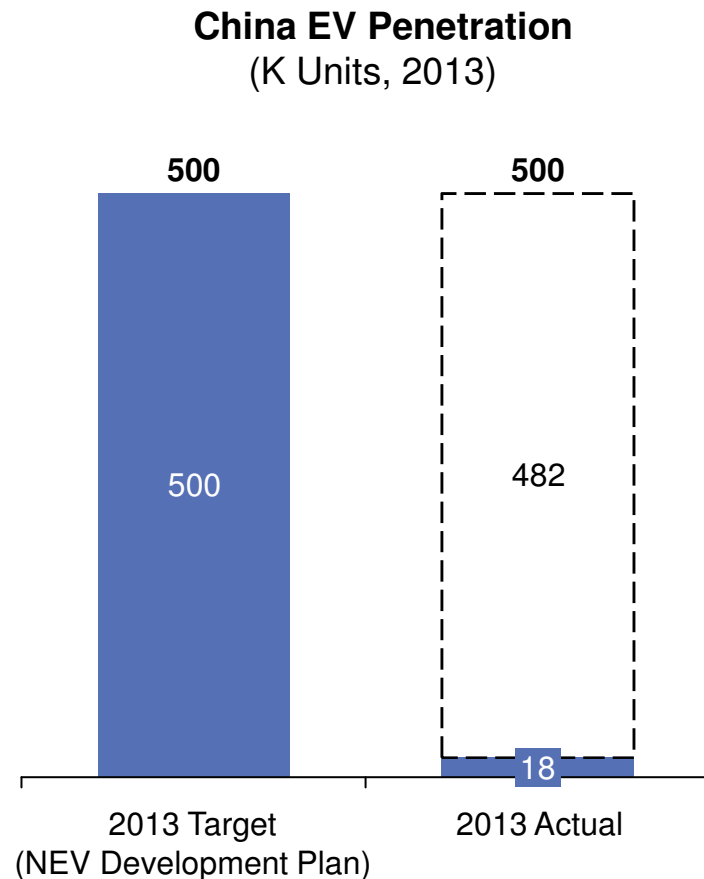
**Discontinued Car Sharing Programs
(sample)**

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- Sefage (Switzerland, 1948- 98)
 - Prototip (France, 1971-73)
 - Witkar (Netherlands, 1974-88)
 - Green Cars (Great Britain, 1977-84)
 - Bilpoolen (Sweden, 1976-79)
 - Short-Term Auto Rental (U.S., 1983-859)
 - Mobility Enterprise (U.S., 1983-86)
 - Vivallabil (Sweden, 1983-98)
 - Bilkooperative (Sweden, 1985-90)

Common Root Causes

- 
- Flawed business case
 - Insufficient scale
 - Underdeveloped technology
 - Lack of government support
 - Poor financial management
 - Poor planning

In addition, it is important to note that Beijing's related EV adoption targets have, thus far, been wide off the mark



- China has taken a leading role in promoting EV technology
 - Mitigate negative impact of rapid industrialization and urbanization (e.g., traffic congestion, vehicle emissions, land use)
 - Potential leapfrog technology in a strategic industry with significant spillover effects to other sectors
- Actual EV sales have been minimal however, despite strong central and local subsidy programs
 - Poor underlying economics due to low energy density of even advanced battery technology
 - Need to replace existing ICE infrastructure
 - ...

In reality, car sharing will have to overcome significant demand- and supply-side adoption barriers in China

Demand-side Barriers

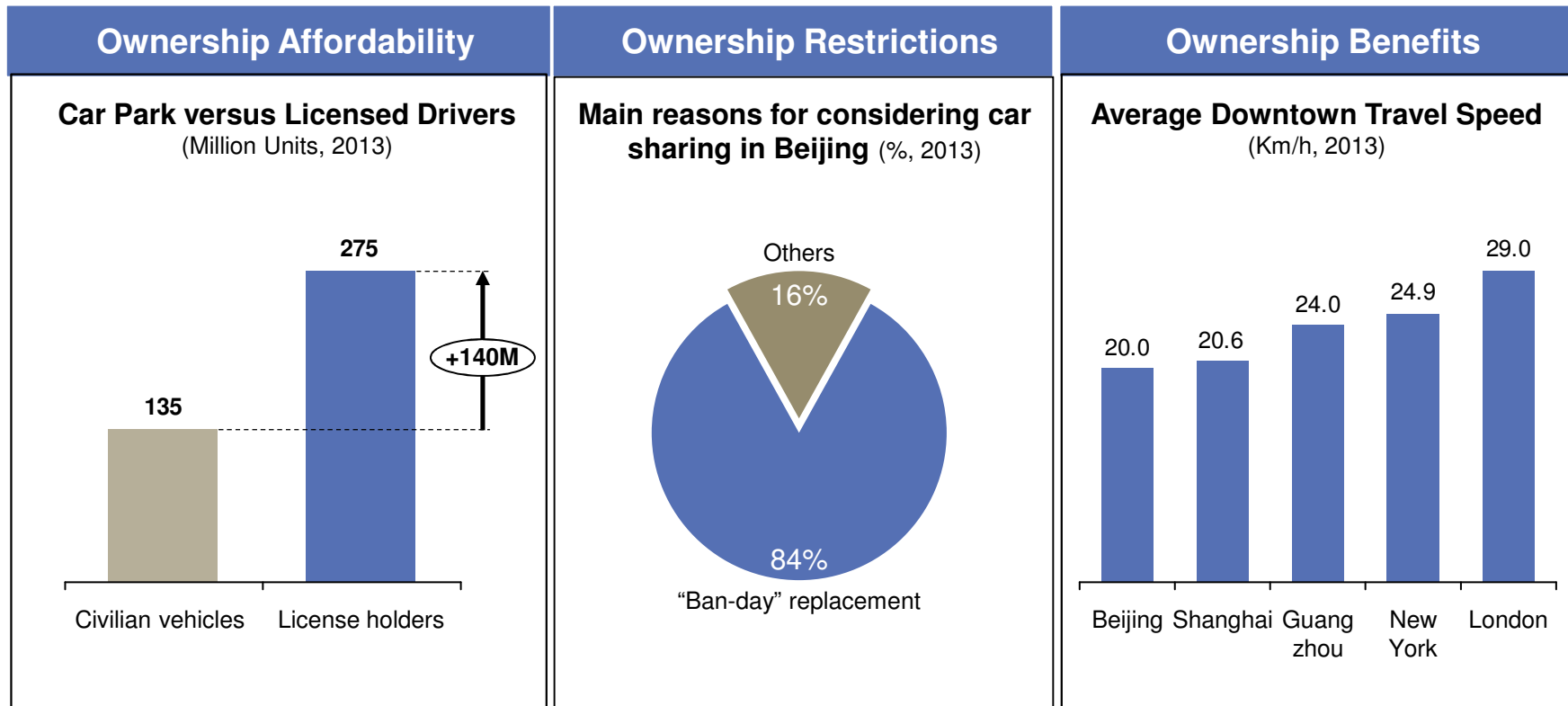
- **Lack of awareness/understanding**
 - 80% of Chinese consumers unaware of car sharing
 - 47% of unaware or disinterested consumers changed their minds after a brief explanation of car sharing's benefits
- **Strong car ownership culture**
 - 59% of Chinese consumers view car ownership as an important status symbol
- **Low risk tolerance**
 - 51% of Chinese consumers would rather borrow a friend's car, due to potential financial and legal costs in case of an accident



Supply-side Barriers

- **Low-cost competition**
 - Taxis fares are much lower in China than in, for example, the U.S. and Europe
 - Significant investment in public transportation
- **Immature financial system**
 - Low penetration of credit/debit cards
 - Limited availability of personal credit records
- **Insurance / Leasing penetration**
 - Low penetration of automotive insurance policies
 - Low penetration of leasing products in general

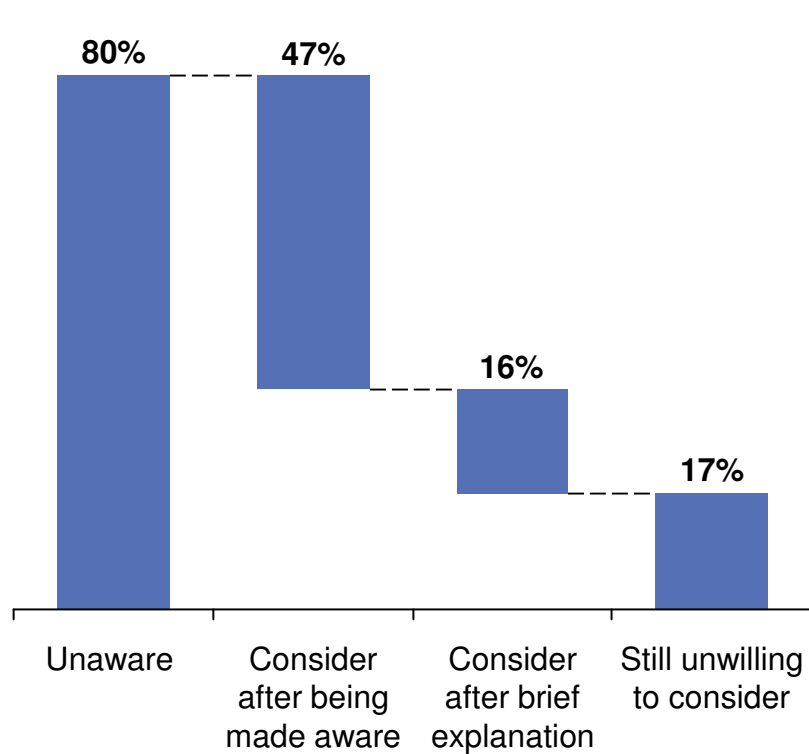
Nevertheless, underlying demand for car sharing should, in theory, be higher in China than in many other countries



Source: Ministry of Transportation; Strategy & analysis
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In fact, there does appear to be considerable latent demand for car sharing in China

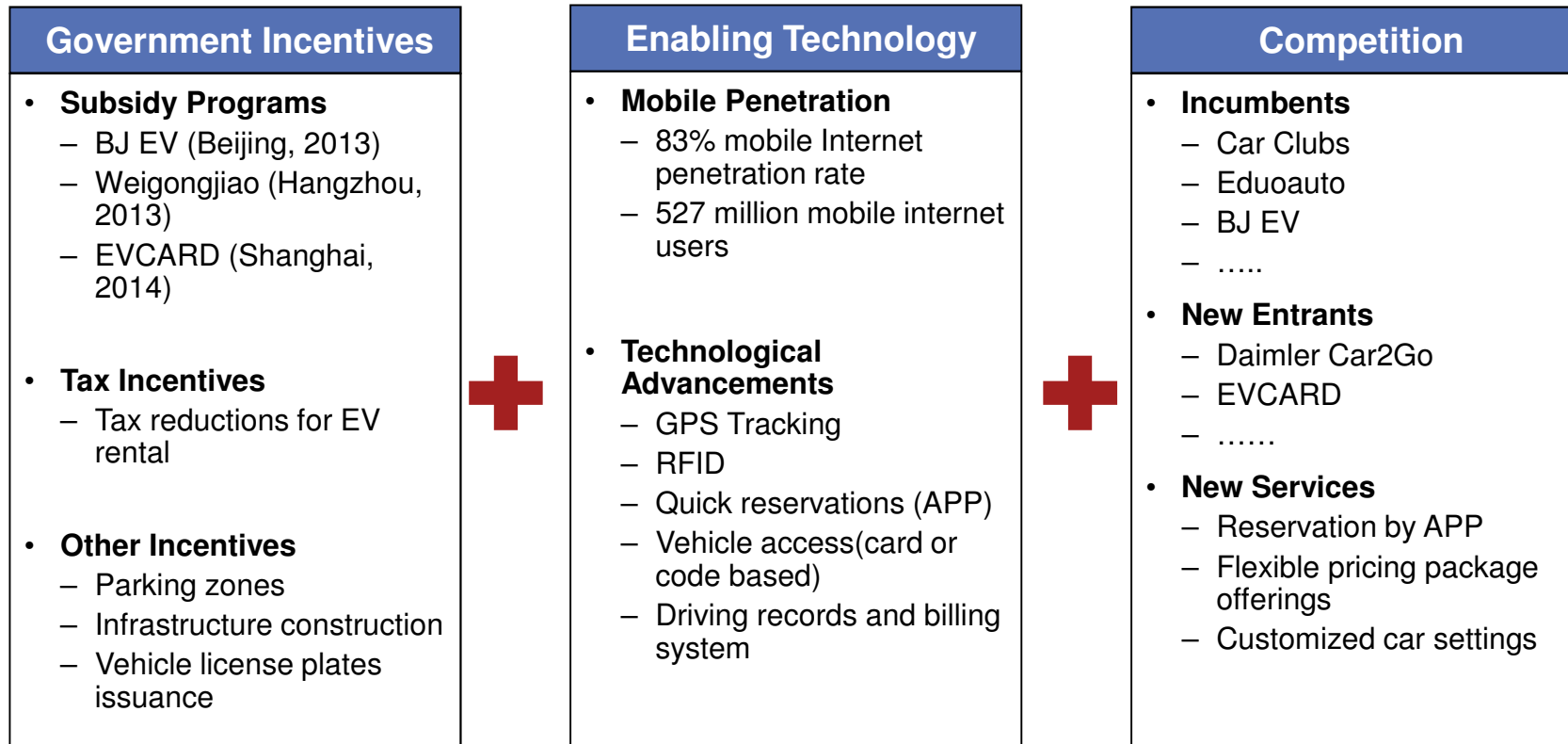
Latent Demand for Car Sharing



Purchase Drivers	
• Leisure travel	65%
• Price	55%
• Business travel	48%
• Environment	10%

Source: PwC 2014 customer survey on car sharing
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Several supply-side drivers should further stimulate and enable growth over the next few years



Source: Strategy& analysis

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Firms must develop their strategies and make investment decisions under conditions of significant uncertainty



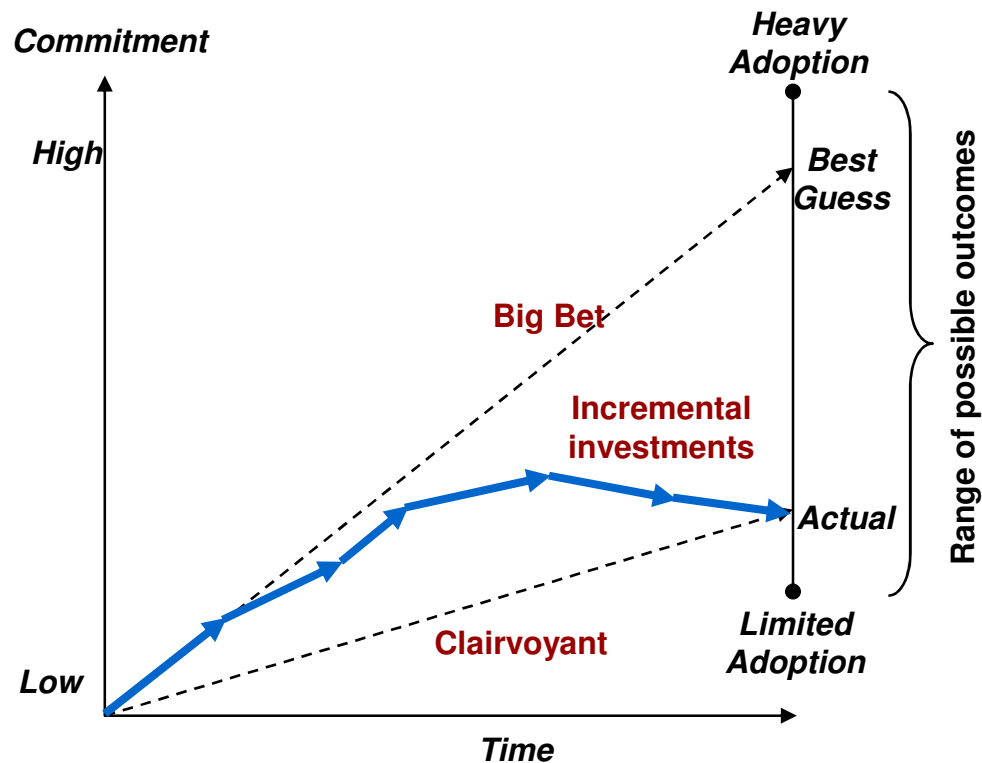
- How much uncertainty exists? What is knowable and unknowable?
- Which factors will drive alternative future scenarios?
- What would our strategy be under each scenario?
- Are there investments that we would make under any scenario?

- What should our strategic posture be (commit, hedge)?
- Which segments should we target (B2C/B2B/P2P, quick trip vs. leisure)?
- What is the optimal business model (free-floating vs fixed stations, pricing)?
- Do we have a compelling value proposition? Do we have a Right-To-Win?

- Which critical resources do we need (e.g., license plates, parking spaces)?
- Which capabilities do we need (e.g., logistics, electronic payment, lobbying)?
- Which technologies should we invest in? How much should we invest?
- Whom should we partner with? Should we insist on exclusivity?

- How should we position car sharing (e.g., rational vs. emotional appeal)?
- Does our current brand image support or hinder customer adoption rates?
- How can we influence other stakeholders (e.g., regulators)?
- Which cities should we target first?

The key strategic decision is whether to offensively commit or defensively hedge



▪ Difficult trade-offs

- First-mover advantages => commit
- Uncertainty => hedge

▪ Different strategic postures

- Pure play vs diversified business
- Core vs ancillary business
- New entrant vs incumbent

▪ Required strategy tools

- Scenario Planning
- Latent demand analysis
- New product diffusion models
- Real options / game theory
- ...

Not surprisingly, the major automakers have adopted very different strategic postures

Strategic Posture of Major Automakers



- BMW, Ford, Toyota, Volkswagen, Renault have entered but with very small fleets (less than 500)
- These automakers mainly aim to test the waters and promote their EV models
- They choose to be followers, waiting for a potential tipping point before making a significant commitment
- Daimler is more optimistic about car sharing and strongly promoting its Car2Go program
 - Launched globally in 2008 and currently the market leader
 - Covering 31 cities with a fleet of ~10,000 vehicles
- Entered China in 2013
 - Pilot program with a fleet of ~50 vehicles
 - Significant localization (e.g., closed community, fixed stations)

The choice of target customer is crucial, as each segment requires very different capabilities – e.g., B2B vs. B2C

	B2C Segment	B2B Segment
Target Customers	<ul style="list-style-type: none"> • Individuals 	<ul style="list-style-type: none"> • Business, government, and institutions
Current Market Share	<ul style="list-style-type: none"> • ~30% 	<ul style="list-style-type: none"> • ~70%
Competitors	<ul style="list-style-type: none"> • Public transportation 	<ul style="list-style-type: none"> • Traditional car rental companies
Customer Characteristics	<ul style="list-style-type: none"> • Focus on cost, convenience and diverse vehicle selection • High price-sensitivity • Low switching costs 	<ul style="list-style-type: none"> • Focus on efficiency, service, accuracy, and vehicle quality • Relatively loyal • Relationship can be important
Required Organizational Capabilities	<ul style="list-style-type: none"> • Flexible pricing • Vehicle selection • Network coverage • ... 	<ul style="list-style-type: none"> • Vehicle availability • High-quality service • Key account management • ...

Source: Strategy& analysis

Similarly, different segments will require different business models – e.g., urban quick trip vs leisure

	Urban Quick Trip	Leisure
Customers	<ul style="list-style-type: none"> • Open community 	<ul style="list-style-type: none"> • Closed community
Service	<ul style="list-style-type: none"> • Short trips (e.g., 1-2 hours) • Primarily one-way 	<ul style="list-style-type: none"> • Longer trips (e.g., day trip) • Primarily return trips
Pricing	<ul style="list-style-type: none"> • Per minute/hour • Standard fee + usage (time) 	<ul style="list-style-type: none"> • Per day • Standard fee + usage (mileage)
Competitors	<ul style="list-style-type: none"> • Public transportation • Taxi 	<ul style="list-style-type: none"> • Tour bus • Traditional rental car
Location	<ul style="list-style-type: none"> • Free-floating 	<ul style="list-style-type: none"> • Station-based
Fleet	<ul style="list-style-type: none"> • Large fleet • Small vehicles (e.g., EV, Smart) • Limited vehicle selection 	<ul style="list-style-type: none"> • Small to medium-sized fleet • Larger vehicles • Broad vehicle selection

Source: Literature research; Strategy& analysis

The major tier-1 and selected tier-2 cities will remain the best candidates for initial program pilots and rollouts

Typical Selection Criteria
<ul style="list-style-type: none">▪ Market Characteristics<ul style="list-style-type: none">– Urban population / vehicle density– Average downtown travel speed– Air Quality Index– ...▪ Regulatory Restrictions<ul style="list-style-type: none">– License plate restrictions– Ban days– ...▪ Customer Adoption<ul style="list-style-type: none">– % of awareness / acceptance– Smartphone penetration– Disposable income / price sensitivity– ...

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- **Beijing**
 - **Shanghai**
 - **Guangzhou**
 - **Shenzhen**
 - **Tianjin**
 - **Hangzhou**
 - **Wuhan**
 - **Changsha**
 - ...

Summary

- Car sharing has gained considerable momentum during the last few years
 - Reduce traffic congestion
 - Lower vehicle emissions

- The Chinese market is still nascent with significant adoption barriers
 - Lack of awareness, strong car ownership culture, low risk tolerance
 - Low-cost competition, immature financial system, insurance/leasing penetration

- Nevertheless, future growth potential is significant
 - Considerable latent customer demand
 - Strong government incentives and other supply-side drivers

- As a result, firms must develop their strategies and make investment decisions under conditions of significant uncertainty
 - The key strategic decision is whether to offensively commit or defensively hedge
 - The choice of target customer is crucial as different segments will require very different business models and capabilities
 - The major tier-1 and selected tier-2 cities will remain the best candidates for initial pilot programs and rollouts

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