

The Sharing Economy and Its Impact on Transport

PATREC

Data shows that sharing economy, collaborative commerce has already made an impact

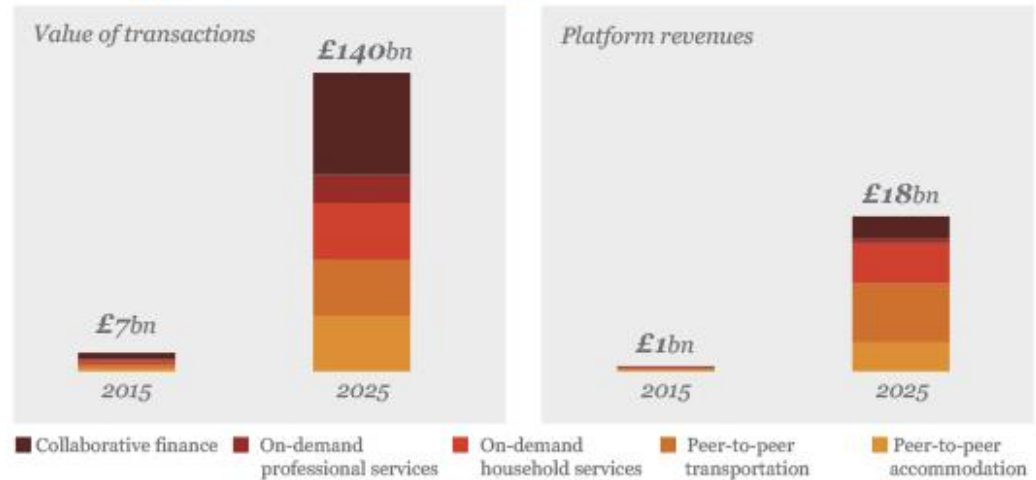
Sharing economy is predicted to expand by 30% per year over next ten years

Drivers: Economic and convenience

Demographics: Digital natives were the first to embrace the sharing economy

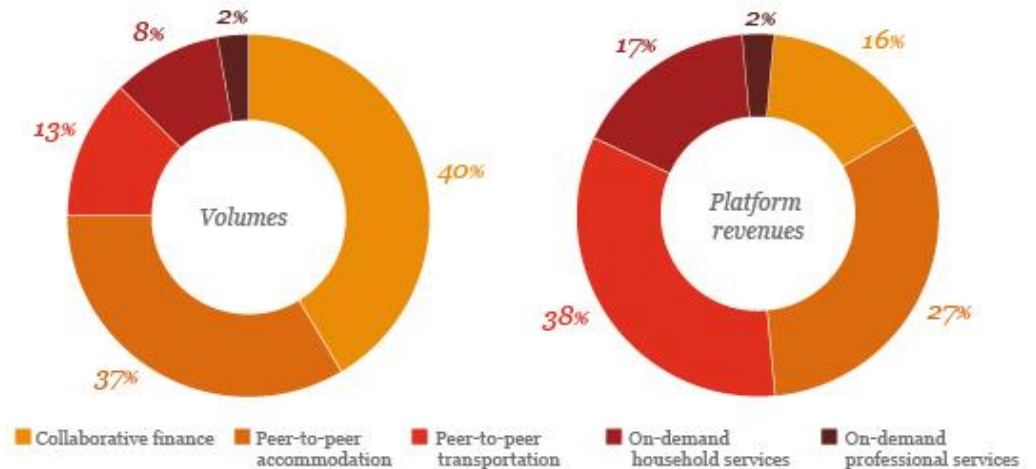
But now over 50's are the fastest growing group

Revenues and total transaction value facilitated by sharing economy platforms in the UK by sector



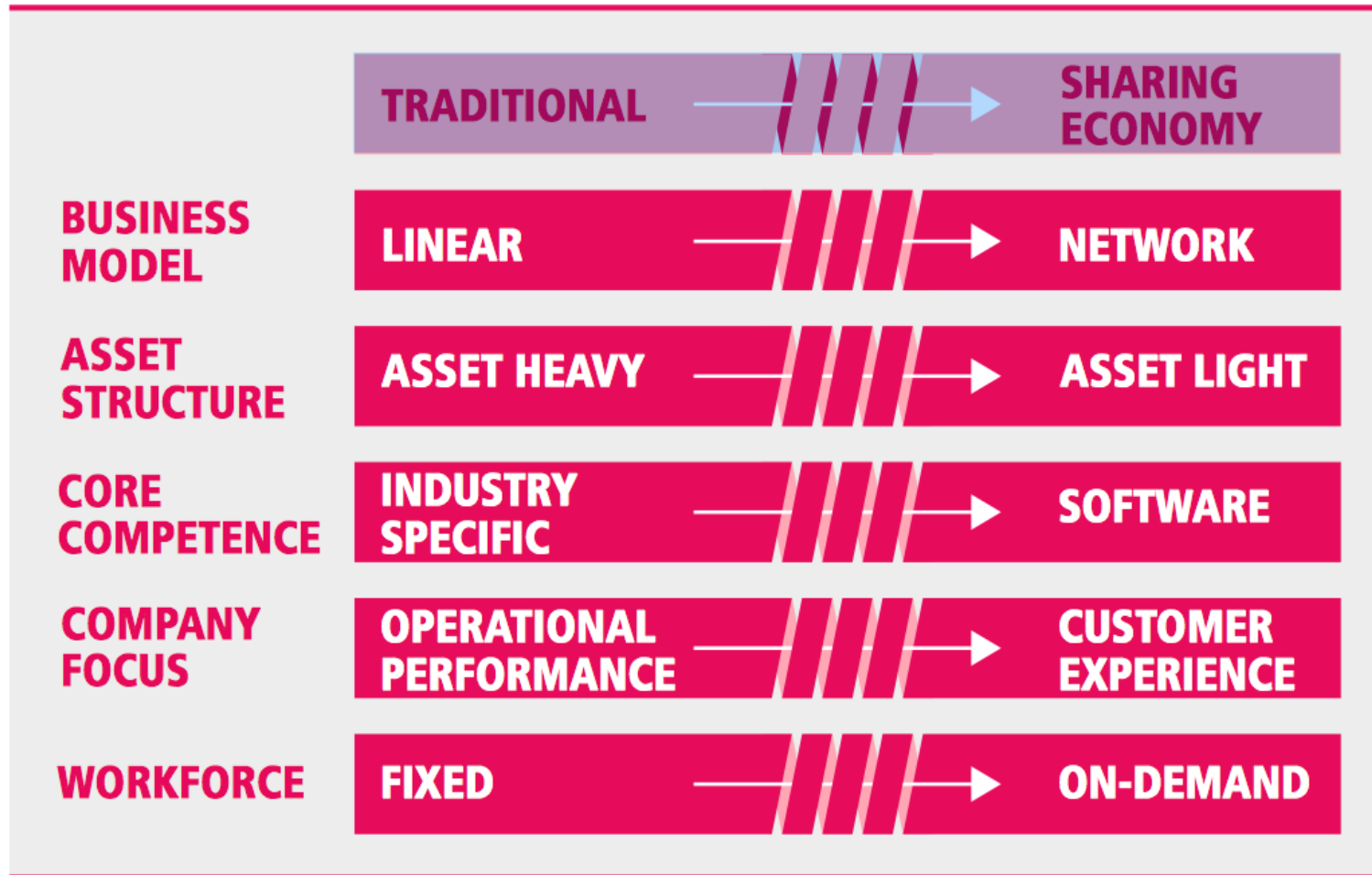
Source: 2016 PwC analysis

Revenues and transaction values facilitated by sharing economy platforms in the UK in 2015

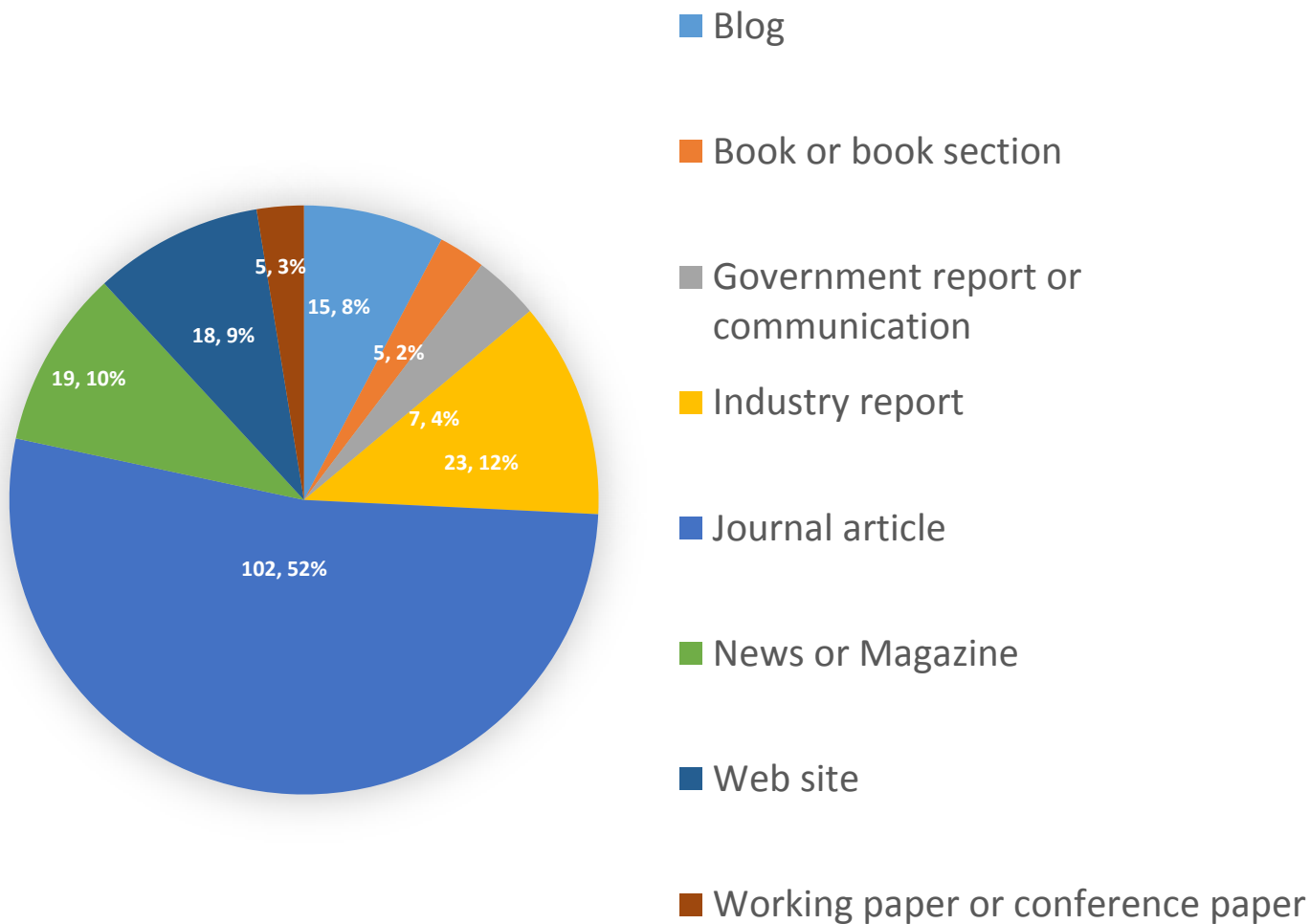


Source: 2016 PwC analysis

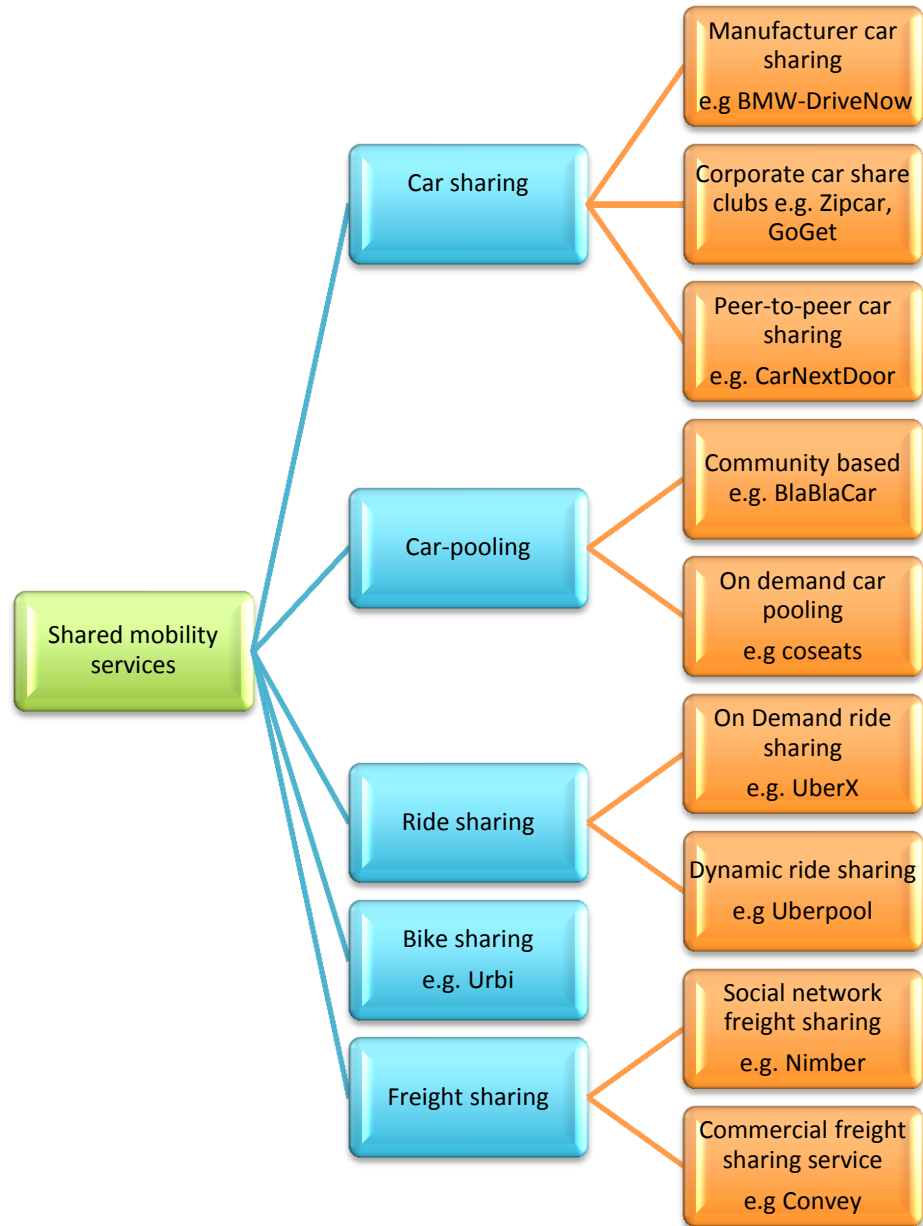
Comparison of traditional and sharing economy models



Sources of reviewed literature



Types of sharing



Common Scenarios from the Literature

- Reports that build scenarios for the future of transportation and mobility services tend to present three or four scenarios representing:
 - Small incremental change to behaviour and technology adoption, without any major innovation or disruption – a status quo scenario.
 - A small change in behaviour and adoption of innovative technology and some disruption beyond the status quo scenario.
 - A widespread change in behaviour and adoption of innovative technologies with disruption to existing patterns.

Business models

- Lerner ([2011](#)) likens the future business models for mobility suppliers to three technology companies:
 - *The Google of urban mobility: Built on a core asset of a user-friendly customer interface, it provides a single point of access for multimodal mobility and supplementary services to end consumers on a large scale to drive uptake.*
 - *The Apple of urban mobility: At the core of this business model are integrated mobility services and solutions to the end consumer or cities. Integrated mobility services for end consumers provide a seamless, multimodal journey experience such as public transport interlinked with car and bike sharing.*
 - *The Dell of urban mobility: This is a basic offering such as cars or bike sharing, without integration or networking.*
- The Google scenario presents the mobility as a service scenario that is the goal of many transportation providers.

Local and state government policy

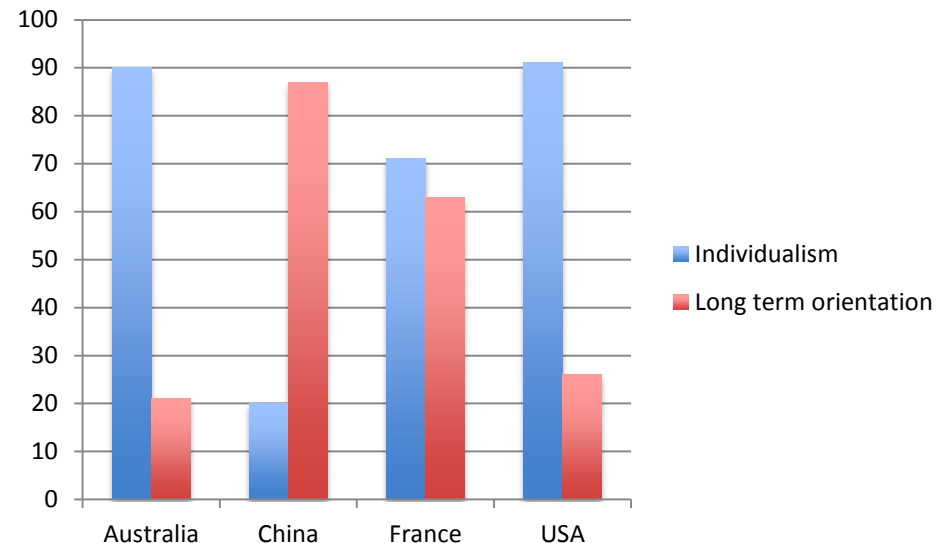
- Rauch & Schleicher ([2015](#)) categorise three types of local and state government policy that can be adopted for the sharing economy:
 - *Subsidizing sharing firms to encourage expansion of services that produce public goods*
 - *Harnessing sharing firms as a tool to achieve goals in terms of redistribution of services, e.g. to poorer suburbs; and/or*
 - *Contracting with sharing firms to provide traditional government services.*
- They point out that policies have to maintain an insistence on consumer and incumbent protections and that legal, political and ethical issues have to be addressed.

Electric and autonomous vehicles and ride-sharing

- A UC Davis report ([Fulton, Mason, & Meroux, 2017](#)) present three scenarios or “revolutions” in urban transport for the adoption of electric and autonomous vehicles and ride-sharing to 2050:
 - *Business as usual (BAU)* – No change in petrol/diesel vehicle sales/ownership or ride-sharing.
 - *2 Revolutions (2R)* – rapid vehicle electrification and the uptake of autonomous vehicles, and no change in ride-sharing over the BAU scenario
 - *3 Revolutions (3R)* – Rapid vehicle electrification and autonomous vehicles uptake combined with widespread ride-sharing and multimodal travel.

Contextual Issues

- WA has high levels of vehicle ownership
- People have an independent outlook
- Urban design is not high density – designed for private car
- Security conscious
- Moderately risk averse
- Low on collaboration
- Relatively affluent
- Technology users



Suggestions for transportation authorities in Western Australia

- The sharing economy has produced different business models and will continue to evolve as technology develops and behaviour changes.
 - These developments need to be integrated in transportation planning, balancing the need for modal choice and equality of service provision.
- Transport and planning authorities can work with commercial car-sharing providers to set up pilot schemes that can be monitored and evaluated.
- Investigate willingness of citizens to join car sharing and car-pooling schemes in the local context and community.
- Raise awareness of car-sharing and car-pooling and provide inducements to join. For example:
 - Road lane restrictions for vehicles carrying less than 2 passengers in peak hours.

- Car-sharing/car-pooling framed as creating independence and being cost effective.
- Significant scope exists for collaboration in the freight sector, particularly in terms of load sharing.
 - Determining the benefits, facilitators and barriers to collaborative commerce in the freight sector needs further investigation.
- Open transport data schemes should be investigated but usability of the data needs to be considered.
 - This could explore the development of apps and how they are used.
 - Expertise in data analysis (big data) and technology must continue to be developed.