

Towards a More Collaborative Transport Economy in Scotland

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Summary

The transport sector is experiencing a rapid shift towards more collaborative and integrated delivery models to connect people to places. The core concept of the collaborative economy is that the focus shifts from value being created by products and services to value created by networks. In the collaborative transport economy, new types of provider are emerging from technology, insurance, telecoms, retail and other sectors to enable more collaborative and integrated approaches built on the value of transport to people and places.

If the development of railway and road networks were integral to the growth of the production and consumption economy, the growth of electronic networks, social spaces and collaborative business models look set to have an equally important impact on the networked economy. The new providers have been managing the logistics of movement more efficiently, the value chain more effectively and personal and social relationships more interactively.

The new more collaborative organisations including technology providers have worked around legacy regulatory and taxation systems. As these approaches start to mature, it has become clear that current legislative and administrative frameworks no longer serve the needs of the new collaborative organisations adequately. To ensure that the new approaches can thrive changes are needed. New approaches to regulation require a more joint approach to investment risk, regulatory functions and performance management.

The economic value of network effects has long been recognised in transport. The impact of many small changes to a network is often greater than the sum of the individual parts. This internet enables network effects to be applied at much greater scale by technology providers. This could make providers of network services immensely powerful, particularly if the emerging monopolies and patents being used to create value in new companies are defended, so government needs to act now to serve the public interest.

Transport remains a dominant economic player in connecting people to places, but that role is increasingly being squeezed. In the new networked economy, the role of the transport sector will be very different. As the possibilities for travel expansion or reduction grow, so does the need for more collaborative approaches to manage supply and demand. Without a stronger social lead, travel demand could grow inefficiently as connected technologies expand travel possibilities, and opportunities for improvements in prosperity, fairness and collaboration could be missed.

In the 10 years since the Cabinet Office announced the need for the transport sector to transition from a manager of infrastructure to an

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enabler of connections there have been many examples of successful change. The logistics model has emerged as a particularly successful approach to collaborative business, but the mainstream focus of the transport sector remains the management of transport assets: roads, railways, ports, airports, trains, buses, trams and planes.

To realise the vision of transport in the 21st century as more collaborative and connected, a new narrative is needed about the future of transport to guide policy and practice. This should clarify how social value relates to transport delivery, and how collaborative regulatory approaches could support the new practices. Success depends on achieving better joint working between the transport marketplace, government, and non-market activities.

Earlier in 2016 the Scottish Government announced that its future transport policies would include a fresh focus on prosperity, fairness and participation. The urgency of delivering these changes has been shown by the growing conflict within Scotland's transport economy. Allocation of road space for bus and cycle lanes, and problems with train punctuality and road maintenance are just a few of the symptoms of the current weak collaborative governance framework. A new approach is needed where all partners share the benefits of success, and accountability for failure. To achieve this several key changes are required.

New terms of engagement are needed to enable transport and technology companies to work collaboratively with transport authorities to deliver rewards for everyone. Transport authorities should clarify transport performance requirements to provide frameworks for partnership delivery. Transport employment is also changing and there is a need to identify how the employment and benefits system relates to transport delivery.

Taxation reform is needed to enable more equitable transport investment and to protect vulnerable travellers and suppliers, ensuring that collaboration delivers benefits for all people and business. Clearer policies on sharing key assets such as road space could be used to identify how the value of social well-being is measured and managed, and risk is allocated.

Better transport should be for everyone to help deliver. New more collaborative business models are needed backed up with clear audit mechanisms to check that transport delivery can demonstrate transparency in the way it manages efficiency, effectiveness and social value.

Perhaps the first step will be to build a consensus for change by developing a narrative around which all partners can unite based on the key principles identified in this report.

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1.0 Introduction

- 1.1 Integrated transport is a widely stated policy aim but the delivery usually does not match the aspirations. Business structures that define success for those working in transport continue to be largely organised around separate modes, sectors and infrastructure assets such as: roads, railways, buses, trains, ports, and airports. These structures are now facing a challenge from more integrated delivery models. New types of provider are emerging to enable more collaborative and integrated approaches built on stronger customer relationships.
- 1.2 The new providers are using the power of internet connections to join up the economy and society providing a more cross disciplinary delivery approach. With its relatively high scope for adding value from integration compared to other sectors, transport has become a priority delivery area for these new providers. There are already many new technology organisations rapidly growing their stake in transport.
- 1.3 As traditional boundaries are eroded, transport authorities and companies need to take a fresh approach. This paper considers the possibilities and prospects.
- 1.4 Policies already highlight the need for new approaches and people are embracing change by adopting new patterns of travel behaviour. The scale and scope of the possibilities are huge, but there are major uncertainties about almost every aspect of transport supply and demand in the years ahead. Faced with this uncertainty, most transport authorities and operators have decided to wait and see how things progress before taking definitive action. There are however dangers in this approach as new players enter the industry with little clarity about how public policy and governance will respond.
- 1.5 There is an appetite for change amongst consumers. For the last decade transport authorities and providers have been observing a spiral of decline in standards of delivery where longer travel times, higher travel costs, declining air quality and increasing conflict between road users have been harming the wider economy and quality of life. In contrast, new providers have been managing the logistics of movement more efficiently, the value chain more effectively and personal and social relationships more interactively.
- 1.6 This paper reviews how the economy is changing, what that means for transport, what is already changing and what further action is needed. It looks at how to build a more collaborative networked approach to transport delivery changing the way that transport is regulated, financed and managed.

2.0 The Rise of the Networked Economy

The Information Technology Revolution

- 2.1 Transport was essential for all long-distance communication until the telegraph network started an information technology revolution that has continued progressively over the last 200 years. These changes mean that almost instant verbal and visual communication is now possible between people across the world. During the last 200 years many technologies have come and gone, as they have offered new social and economic value and then been replaced. The latest generation of internet technologies is set to transform the economy to an even greater extent than any previous network.
- 2.2 Each technology change has substituted electronic communications for some travel, but also developed complementary networked capabilities that have allowed the economy to grow generating more travel. At the start of the 21st century the value of fast-growing technologies was characterised as part of a transition to a knowledge economy¹. The changing economy was described by three main economic eras:
- Land and labour – Value in most economies could be related back to either land or labour. This was sometimes also called the feudal era.
 - Production and consumption – Although land and labour continued to be important for the economy, industrialisation started to create even greater new value in the economy through mechanisation and economies of scale.
 - Knowledge, experience and quality of life – By the end of the 20th century it was recognised that the greatest value being added to the economy and society used an array of new networks and technologies with the potential to make a high quality of life abundant across the world.
- 2.3 The third era is still defining itself. In 2016 we might describe it as the networked or collaborative economy. If the development of railway and road networks were integral to the growth of the production and consumption economy, the growth of electronic networks, social spaces and collaborative business models look set to have an equally important impact on the networked economy. Economies of scale added value in the era of production and consumption but it is economies of scope that are set to add the greatest value in the years ahead.
- 2.4 However, the new era creates challenges for the way value is created and managed. It is these challenges that are now central to virtually all transport investment decisions. Old investment approaches and rules from the land and labour and production and consumption economies continue to dominate public investment. However, a fresh

¹ BCSC 2005. Access, Information and Flexibility. The Future of Retail Transport. London

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approach is needed with more explicit collaboration between government, citizens and enterprises.

Problems of Scarcity and Abundance

- 2.5 Economic value in the economy has generally been created through scarcity. The laws of supply and demand have traditionally determined price levels, and markets have been regulated to allow them to function for the benefit of society.
- 2.6 However, these approaches have increasingly been failing. Pervasive information, technology and automation has had a downward impact on the cost of production. The economic response has been to produce more, but there are practical limits to how much 'stuff' human beings can consume and how much production can be accommodated by the environment and society. Current business models are failing to capture the value of the things people value most. There have been growing adverse external effects from transport affecting health, wellbeing and quality of life. These compound market failures have not proved to be easy to fix through government spending, regulation or taxation.
- 2.7 The failure mechanism is perhaps most easily seen for walking, but similar principles apply to all transport. It is because walking is so valuable to everyone that it is unthinkable that it should not be free, and because it is free that it is not valued, and because it is not valued that it is starved of investment, and because it is starved of investment many social and economic problems result.
- 2.8 In other sectors, lack of value due to abundance has been solved using mechanisms that put a price on necessary elements. There has been considerable success in waste management by regulating markets to make recycling of waste paper, metals and other materials profitable. By regulating the demand for waste products through obligations to purchase them government has ensured functioning markets.
- 2.9 There is no conceptual reason why government could not make similar structural changes in the transport economy but, so far, governments across the world have not chosen this path. Governments have been unable to manage the problem alone because the regulatory action needed has required a greater level of collaboration with voters and businesses than has been achievable. Although governments manage levels of motorised travel by licensing vehicle use, there has only been limited success at building more circular economies, where the cost and supply of licenses is linked to progress with social goals such as reducing carbon emissions.
- 2.10 However, the pressures for new systems are growing. Like walking, internet connections provide access at a cost close to zero with few capacity constraints to create scarcity. Connections have become cheap and abundant (e.g. video conferencing), the need for labour is being eroded by automation, and smart use of capacity levers value from under-utilised resources.

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- 2.11 Technology businesses have been able to work around the regulatory and taxation systems to build new collaborative business models. These businesses have used monopolies and patents to capture value. As these approaches start to mature, it has become clear that some restructuring is needed of economic systems to enable sustainable development of the emerging collaborative networked economy.

Value from networks

- 2.12 Fortunately, just as information technology has eroded value in transport markets, it has also started to enable organisational and business models where collaboration is more important than price or value. Collaborative business models create value through network effects.
- 2.13 Network effects have long been recognised in transport. The impact of many small changes to a network is often greater than the sum of the individual parts. For example, installing a direction sign at a road junction has a local benefit, but it is of much greater value if signs are installed at all junctions so that users have a route to follow. The behavioural impact of signing a whole route influences the value of the system. The new information technology networks allow these concepts to be developed at a new scale, routing people with a new range of integrated products and packages linked to wider social and economic goals.
- 2.14 If value can be measured it can also be managed and information technology helps both with better information about value and with the management of the value. Value chain management and supply chain management are well established disciplines within logistics but less so within passenger transport. As technologies have evolved, each new type of connection has initially been construed as a replacement for some existing connection (faster than horses), but greater opportunities have in practice come from wider benefits, not least land value changes. These patterns look to set to continue with the networked collaborative economy yielding opportunities for more integrated delivery across sectors.
- 2.15 The new networks are re-distributing value and disrupting the balance of power. Transport remains a dominant economic player in connecting people to places, but that role is increasingly being squeezed. In the new networked economy, the role of the transport sector could change. Transport providers could step forward to deploy strong skills and capabilities in network management to play a key role as leaders and organisers of the new economy². There are some signs that this is already happening, but also doubts that skills and capabilities are developing fast enough in the transport sector to manage the required level of change³.

² Levinson and Krizek 2014 – The End of Traffic and the Future of Transport

³ Halden 2013. Shaping the Future. Case Studies in Accessibility Planning.

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- 2.16 Within these complex and evolving networks new collaborations are emerging between technology providers, (e.g. Uber and Tripadvisor), but less so with public authorities. Given the power of the new networks there are complex questions still to be answered about the changing roles and responsibilities needed to achieve the transition to a transport economy which unleashes the potential of information technology, for productivity, wellbeing and culture.
- 2.17 The providers of the new low cost IT networks could become immensely powerful. Partly to avoid this happening open source software has developed to power much of the technology revolution (Linux, Wikipedia, and others). The open source community acts as a control on the abuse of monopoly power by providing a competitive alternative delivery approach to dominant providers of IT. Other controls are needed on the new networks, and new collaborative approaches to regulation could cover not just the IT networks but start to address the regulatory failures which are undermining policy goals for sustainable transport.
- 2.18 The remainder of this report discusses what is already happening and what could be done to develop a more collaborative transport economy.

3.0 What is the Collaborative Economy?

Is the collaborative economy new?

- 3.1 A new approach to creating value is starting to have a major impact on the economy. Companies such as Uber, AirBnB, Task Rabbit and others are growing rapidly, based on their ability to create value from underused human and physical resources, such as unemployed people and under-occupied vehicles⁴.
- 3.2 The core concept is that value is created collaboratively, shifting the focus from value being created by products and services to value being created by networks. The services offered by these companies broadly follows long established business models renting labour, goods and services, with commission being taken for marketing and retailing, but new technology has unlocked more collaborative approaches where the rights and responsibilities of each stakeholder are more evenly balanced.
- 3.3 However, as these companies grow, the spirit of collaboration could easily be undermined. The collaborative economy began with locally based, grassroots-funded initiatives such as community car sharing and time banking. The new approaches are rapidly growing the business potential, but have found it increasingly difficult to sustain their initial social value⁵.
- 3.4 The collaborative economy has been able to grow rapidly by exploiting gaps or weaknesses in transport and employment legislation. Until the regulatory framework catches up with the collaborative economy it is not clear how different it will ultimately turn out to be⁶.
- 3.5 It may be that ultimately the collaborative economy will be more about a shared approach to developing and improving transport. Rather than attempting to use regulation to frame transport markets, a more collaborative approach could share investment risk, regulatory functions and performance management.

The role of partnerships

- 3.6 For nearly 20 years, government has promoted policies for partnership to develop a more collaborative transport economy. The theory of these partnerships has been that transport operators, users and transport authorities can agree shared goals, allocate responsibility and resources for achieving them and share value in the improved performance. However, successful partnership delivery has depended on several critical factors not present in all parts of the country:

⁴ Riquet 2016. New opportunities for small transport business, including collaborative business models EU TRAN. This report suggest that 17% of European Consumers have used services provided by the sharing economy while 52% are aware of the services offered.

⁵ RSA 2016 Fair Share?

⁶ Case law is being used to help the legislation evolve such as a recent challenge by drivers for car share company Uber in London demanding better employment conditions.

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- A clear strategic focus on shared performance goals
 - Active promotion by key individuals including political leaders
 - A shared capacity to deliver the goals so all parties have a clear stake in delivery
 - Strong incentives not to default on commitments
- 3.7 To address the challenges of what happens when partners cannot reach an agreement, over the last decade various statutory partnerships have been created. These seek to strengthen collaborative working by giving the partnerships some status independent of the roles defined by the separate partners through the partnership agreements.
- 3.8 The huge potential of partnerships has not been realised, although many successful joint projects have been achieved. Travellers continue to receive confused messages about accountability when problem occurs, social entitlement to transport is unfair, and there remains a widespread absence of leadership to deliver many potential transport improvements.
- 3.9 These problems are extensively documented in the experiences of community planning. Despite legislation requiring transport authorities and operators to collaborate there remains a lack of incentives and capacity. It remains common for transport authorities to express concerns about how private transport operators share their profits, and for transport operators to cite a lack of clarity from authorities about their share of accountability for transport performance.
- 3.10 After 20 years of weak partnership delivery practical delivery arrangements should recognise the capabilities of local authorities, regional authorities, transport operators and national government to design and deliver systems which succeed in nurturing collaboration.

Sharing

- 3.11 Perhaps the greatest reason for the failure of partnerships is that the frameworks governing sharing have been poorly defined. Many of the longest standing and most controversial issues relate to how road space is shared. Consumer demand has been the major driver of decisions about sharing. This means that the sharing of road space is largely managed by the most inefficient mechanism possible – queuing.
- 3.12 Instead of the political process being used to refine, check and modify a working model for sharing road space, in the absence of effective governance of sharing, politics has become the frontline management level. Faced with more complexity than can be easily managed in the political arena, government has adopted several defensive strategies including:
- Dividing the lobby industry into groups (motorists, cyclists, greenies, industry, etc) and playing them off against each other.

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- Investing in railways and suggesting that a good rail network is an alternative to a good road network.
 - Spending public funds so that intensive activity building things will deflect attention from the lack of a coherent strategy for making better use of existing assets such as sharing road space.
- 3.13 Observations of travel behaviour and opinions shared through surveys show that public views about sharing are much more sophisticated, and governance approaches to manage sharing appear to be both feasible and socially beneficial. Most citizens drive cars, ride bikes, use taxis and have a balanced view of social, economic and environmental needs.
- 3.14 The lack of a managed approach to sharing is accepted by people only because the potential management arrangements do not instantly appear attractive to voters. The potential loss of autonomy associated with new management arrangements for travel has not proved to be socially desirable. Technology could help to distribute the accountability for managing sharing across society making a wide range of new policy possibilities more attractive. Improvements could be made using new economic levers such as pricing, or smarter technologies to target accessibility improvements amongst those who could benefit most, if the mechanisms for determining priorities could be trusted.

The Growing Challenges of Automation

- 3.15 Many new technologies are already capable of wider deployment but the social rules remain immature. The potential gains for prosperity and fairness from better management of collaboration are growing to a point at which they can no longer be ignored.
- 3.16 Technology changes the balance of control towards the people who programme the technology, but governance structures separate from those who programme technology may be better placed to manage the social, economic and environmental needs of the whole population.
- 3.17 It will be increasingly impossible to continue to manage demand by queuing. Autonomous cars without drivers could help to improve transport operation and receive priority, but they could fuel transport growth since valuable human time since automated vehicles will tolerate much longer delays due to congestion. The priority given to autonomous vehicles cannot be decided by the technology alone. Decisions about ownership of roads and railways cannot be separated from these new performance management considerations.
- 3.18 Also, air space needs to be better managed to ensure safety and noise from drone transport is managed. Some of these changes may require new regulation and ownership structures.
- 3.19 To avoid the raft of potential problems, governments have so far allowed only pilot operations of many new technologies whilst rules are developed governing:

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- Safety and vehicle form
 - Priority over capacity/allocation of space/redesign of the built environment/rules governing parking/pickup/drop-off
 - Operation of vehicles without people
 - Social benefits of driverless vehicles carrying people who would otherwise be immobile
 - Costs and taxation
 - Rights and responsibilities of designers/builders/owners/users.
 - New uses for transport – mobile offices/new leisure activities/nomad lifestyles.
- 3.20 Insurance offers a promising economic system within which to manage the risks. Some risks could be carried by government where regulated control is used to manage systems for the public benefit. However, many other risks require new more sophisticated approaches to distributing risk across the population.

Managing change

- 3.21 To manage such major changes smarter citizens and consumers need to engage with more progressive businesses under better regulation. Collaboration requires changes to promotion and provision to enable the new approaches to be publicly acceptable. Collaborative business models shift perceptions about mobility and pose questions to long held practices amongst existing transport providers.
- 3.22 Rebound effects to changes have resulted in protectionist approaches in several European cities, but the new collaborative approaches have so far always found a way round the legislative barriers. Companies such as Uber which have grown rapidly have been able to draw from their large customer base to demonstrate strong public support. However, despite many companies being marketed as providers of 'collaboration' and 'sharing', some commercial enterprises have sought to establish monopoly positions with little scope for collaboration.
- 3.23 Many of the new so called collaborative business models have been less about collaboration than tackling gaps in transport delivery where current service provision is weak, particularly technological development, smart payment, smaller vehicles and demand responsive travel.
- 3.24 The new services are not designed within existing regulation, but instead exploit the gaps in the frameworks, needs of vulnerable users such as disabled and elderly people or to sparsely-populated areas are sometimes omitted.
- 3.25 The current lack of a clear legislative framework is set to create growing problems as the networked economy grows. A balance should be struck that allows new platforms to challenge and innovate. The capacity within existing transport operators and structures also needs to change to make the best of both old and new approaches.

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Regulators will need to consider carefully how to encourage approaches that enable new and existing transport providers to co-exist.

- 3.26 Perhaps the most damaging approach might be to place existing restrictions on existing operators in response to the new market pressures without considering the regulatory needs of the new provision. This applies to all decisions about regulation and ownership of existing bus and rail provision. The function and delivery of public transport is changing faster than some attitudes towards the role of buses and train creating potentially politically unstable systems. Change management should recognise these pressures and plan for them.
- 3.27 Perhaps the most damaging options possible may in the short term appear to be politically attractive. For example, attempts at greater state ownership of traditional public transport services combined with unconstrained growth of technology businesses providing mobility services could be the fastest route possible to an unregulated free market. New entrants such as Uber would be able to run bus services without falling under the new regulatory constraints so would be offered a competitive advantage relative to current providers. Private enterprises running commercial services would leave the public sector to cater for what it perceives are socially necessary services, resulting in unaffordable unmet social needs.
- 3.28 The European Parliament has taken the view that solutions are unlikely to be achieved by sector-specific regulation nor regulation aimed solely at platforms, but rather that the 'mobility system' needs to be addressed as a whole.

Collaborating to Manage Travel Demand

- 3.29 There are growing pressures for both increases and reductions in travel demand. The effects which will dominate depend on how travel is managed. People are travelling less because:
- Changing demographics mean there are less people engaged in the highest trip generating activities.
 - The changing nature of work reduces the need to move people and things and including more home working.
 - The retail and leisure economies are changing with relatively more online activity.
 - Higher fuel prices increase travel costs and reduce demand with demand for energy continuing to grow faster than supply.
 - Less things are being moved with local production becoming more economic and online networks dominating communication.
- 3.30 People are also travelling more because:
- Increasing specialisation demands longer trips to more specialised activities.

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- More comfortable vehicles mean that people accept longer journeys.
 - A global economy has increased the need for people to connect across longer distances.
 - Greater vehicle efficiency means that longer travel is more economic.
 - New technology enables new types of travel to new places.
 - Commuter catchments are being pushed further from employment centres as the balance of transport costs and house prices push people towards longer journeys.
- 3.31 As the possibilities for travel expansion or reduction grow, so does the need for more collaborative approaches to manage supply and demand.
- 3.32 Collaboration on demand management has been growing. Omni-channel retailing, has been enabling more dynamic interactions between customers and businesses. Smarter travel innovations include employers working with staff to make employee travel more efficient, providers engaging with customers to integrate travel decisions with the timing of other activities, new pricing strategies to manage demand in line with supply, and information systems to share user and management information for mutual benefit.
- 3.33 To enable the required level of targeted personalised communications customer accounts with clear rules on data sharing are central to successful collaborations. One of the key questions facing transport is how to enable collaborative management of these travel accounts. However, a balance must be struck between the potential benefits of data sharing for society and the commercial benefits (passed on through lower travel costs) from commercial exploitation of customer information.
- 3.34 Most transport authorities have required accounts for people receiving social benefits from the transport system, such as concessionary travel. Accounts are widely used to manage differential pricing for long distance air and rail travel. Social networking, route finding and other online accounts are widely used to track travellers to provide them with relevant timely information. Many of these systems allow communications between information providers and users but the accounts are not used dynamically to manage transport supply and demand.
- 3.35 Collaboration managing supply and demand is also growing rapidly with operators such as Uber and BlaBlaCar making better use of underused system capacity.

Exploiting Underused Capacity

- 3.36 The scope for better use of underused capacity is vast⁷:

⁷ Levinson and Krizek 2014 – The End of Traffic and the Future of Transport

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- Infrastructure is used well below capacity. Most roads and railways are under-used most of the time. There are large gaps between vehicles both in terms of the headway between vehicles and the lateral spacing between vehicles. Many roads are so wide that they are used for vehicle storage (parking).
 - Vehicles are also vastly underused. Most seats in most cars are unoccupied most of the time. There is excessive delay at traffic lights to allow for human error. Scheduled buses and trains often have low occupancies.
 - Labour is also being underused and this is causing distortions in the economy that have been recognised by government⁸.
- 3.37 To make better use of this capacity a collaborative approach is needed. It would not be socially acceptable to regulate car travel to demand drivers share their cars, but the benefits of more sharing can be socially beneficial.
- 3.38 The collaborative transport economy is where government regulation and taxation meet personal choice and the desire of people to behave socially. To understand how the collaborative economy might work each of these three influences must be balanced.
- 3.39 Ride sharing platform Uber recently was found by an employment tribunal to have exploited its collaborators⁹. The tribunal found that Uber drivers were being treated more like employees but were not receiving benefits they would be entitled to as employees. Uber is appealing and in the meantime it will probably also change its terms to calibrate its practices to UK employment law. However, the judgement illustrates several key principles about how collaboration could work:
- What are workers? – An individual can be employed as a ‘worker’ or ‘self-employed’. Self-employed people have few rights and workers have many. There are grey areas about how each category is defined and as work practices have changed these grey areas are of increasing importance. People with little personal wealth are vulnerable to exploitation so employment law and the benefits system are closely linked.
 - What level of influence comprises excessive exploitation? - For many years volunteer drivers have made a critical contribution to the transport system. Sometimes community transport organisations need to encourage their volunteers to make trips that would not be their first choice. Pressure meters are needed to help manage the collaboration. In the case of the recent Uber judgement the court highlighted the penalties placed on drivers if they did not follow pre-determined routes suggesting the drivers had a lack of autonomy.

⁸ Matthew Taylor has been asked by the Prime Minister to lead a Review on Modern Employment

⁹ Bull 2016 5 things that could be learnt from the Uber judgement in the UK. RSA

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- Does the law protect vulnerable people – Case law is a flexible way to ensure that the law can adapt and evolve to a changing world. However this can also mean that the law evolves to fit the preferences of those that can afford the best lawyers. Uber has a huge budget for fighting legal cases as do many of the new technology companies working in the collaborative transport economy. Equally important is the long time that it takes to resolve issues under the legal system. Collaboration needs more dynamic interactive processes.
 - Are gaps in existing regulation sufficient to allow innovation? – To create more collaborative approaches, new ways of interacting may be needed that may not fall neatly within existing laws. Some grassroots providers advocate blatant breaches of the law¹⁰ to help reveal the need for change in the law.
- 3.40 The rapid growth of the collaborative economy is exposing many ways that transport could become more efficient and effective. Many of the issues will take years to resolve but there are changes which can be made now to ensure that collaboration is nurtured where possible within existing systems.

¹⁰ Warhurst 2014 – The Story of Incredible Edible

4.0 What Needs to Happen?

- 4.1 In the 10 years since the Cabinet Office announced the need for the transport sector to transition from a manager of infrastructure to an enabler of connections there have been many examples of successful change. The logistics model has emerged as a particularly successful approach to business¹¹. However, the mainstream values in the transport sector remain the management of transport assets: roads, railways, ports, airports, trains, buses, trams and planes.
- 4.2 Earlier in 2016 the Scottish Government announced that its future transport policies would include a fresh focus on prosperity, fairness and participation. The urgency of delivering these changes has been seen during 2016 by the growing conflict across Scotland's transport economy¹².
- 4.3 To realise the vision of better connected transport, a new framework is needed with sharper accountabilities for partnership working. Legislation, funding and administration should be used to support joint working. To achieve this several key changes are required:

Prosperity

- **New terms of engagement** are needed to enable transport and technology companies to work collaboratively with transport authorities to deliver rewards for everyone. The costs of transport can be an overhead on a prosperous economy, but many transport business models still treat transport investment as if it is separate from the wider economy. These problems are being exacerbated by declining budgets for transport authorities, causing inefficient constraints within the economy.
- Transport authorities should clarify transport performance requirements to provide frameworks for partnership delivery. Innovation towards better performance can come from any provider, so the **new performance management frameworks** could increasingly replace current adversarial approaches to regulation and procurement that stifle progress. The partnerships for place-making being developed through city deals and in some of Scotland's towns, are a promising first step to involve more partners, but are currently weakened by the continuing lack of priority for partnership approaches within mainstream spending programmes.
- Identify how the employment and benefits system relates to transport delivery, taking into account the UK government **review of modern employment**.

¹¹ E.g. DHL's sustainability as a service offer

¹² Allocation of road space for bus and cycle lanes, and problems with performance frameworks for road maintenance and rail operations are just a few of the symptoms of the current weak collaborative governance framework.

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Fairness and consumer protection

- **Reform taxation** to enable more equitable transport investment. Taxation should be based on the benefits of transport for people and places and could be much more progressive. An element of land value taxation could be applied to places and the burden of taxing travellers should be borne more heavily by those who travel most. A root and branch review of transport taxation should cover fuel tax, new vehicle purchase tax, VAT, and air passenger duty seeking to match the burden of taxation better to the accessibility/connectivity benefits and the equitable distribution of taxation.
- New **protection is needed for vulnerable travellers and suppliers** to ensure collaboration delivers benefits for all people and business. New types of transport service and greater automation of vehicles, drones and other emerging transport technologies are being accompanied by increasing legal costs to resolve rights and responsibilities. Case law helps legal systems to evolve, but vulnerable travellers have less ability to defend themselves in shaping the new laws and need extra protection.
- Clarify **policies on sharing**, describing how they can be applied in practice. Identify how the value of social well-being is measured and managed, and identify how risk is allocated, including the scope for collaboration between commercial and social insurance systems.

Participation

- New **more collaborative business models** are needed to supplement or replace the current transport delivery structures. Better transport should be for everyone to help deliver. Rather than people and organisations being restricted in their opportunities to partner and invest in better transport, new platforms for organising shared transport are needed where integrated services can be managed and retailed.
- Set up clear **audit mechanisms** to check that transport delivery can demonstrate transparency in the way it manages efficiency, effectiveness and social value.

4.4 Success depends on achieving new collaborations between the transport marketplace, government, and other non-market activities (produced and consumed outside of monetary exchange). Perhaps the first step will be to build a consensus for change by developing a narrative around which all partners can unite based on the key principles identified in this report.