

Move the City 2035

Minibus Taxi Scenarios

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Introduction

Purpose

This report is based on the outcomes of a scenarios exercise hosted by the South African Cities Network (SACN) that brought together mobility thought leaders from national government, the cities, the minibus taxi industry and civil society in two workshops to explore the possibilities for collaboration between South Africa's cities and minibus taxi industry with a focus on innovation, service improvement and integration of the industry with other public transport modes.

The report explores the major global and local trends affecting the future of public transport and assesses the potential of technology, leadership, incentives, regulatory reform and other interventions to improve service quality, safety and efficiency in the minibus taxi industry and its integration with other parts of the public transport system.

The scenarios – plausible alternative stories about the possible future of the minibus taxi industry in relation to public transport - highlight both the possibilities of bold action as well as the dangers of complacency.

The intention is to help initiate a deeper dialogue between the industry, the cities and other stakeholders about how the industry can be improved and better aligned within an integrated, commuter-centric public transport system.

The opportunity

The exercise recognises that rapid urbanization in Africa and South Africa is a key driver of the future and that finding appropriate South African solutions for more sustainable and inclusive urban growth is critical to the future of the country.

One key element is urban mobility. Technology, congestion, environmental concerns and changing social needs are combining to disrupt transport and new mobility alternatives are emerging that have the potential to dramatically change urban mobility and influence spatial form. The era when the private car was the dominant mode of transport in cities globally and was a primary shaper of urban form may be coming to an end as alternatives emerge and it is increasingly seen as unsustainable from an environmental, cost and quality of life point of view.

The minibus taxi industry potentially has a critical role to play in evolving a new system of urban mobility. The historic role of the industry as well as the broad-based nature of its ownership also makes it an important sector to be engaged on issues of economic transformation. It is and will remain the backbone of public transport in South Africa's cities for the foreseeable future. It is also an industry where there is huge scope for innovation and development despite the challenges that it faces. It has been the MBT industry's flexibility and ability to exploit gaps in the public transport system that enabled it to grow so rapidly and largely outcompete other public transport options despite the subsidies that these operators receive.

National policy and the National Land Transport Act have expanded the role of cities in public transport and seek to consolidate the planning, regulatory and contracting functions in regard to public transport with the metropolitan municipalities. This consolidation of functions potentially creates a unique opportunity for both the cities and the MBT industry (and other public transport operators) to develop a new vision and a fresh approach to the regulation of the industry, the infrastructure and regulation required to support it and how it might better complement and integrate with other public transport modes. Even if cities do not immediately accept the devolution of transport functions, there remains scope to incorporate the role of the minibus taxi sector into Integrated Development Plans, Integrated Transport plans and specifically spatial restructuring initiatives.

Report structure

The report firstly outlines common proposals regarding a vision for the MBT industry. It then outlines key uncertainties and assumptions influencing the future before proposing 3 possible scenarios for the future of urban mobility and the role of the MBTs in this. It concludes by highlighting a possible agenda for engagement going forward and highlighting critical questions raised by the scenarios.

A Common Vision

During the process, participants shared their visions for the minibus taxi industry going forward. It was noted that it was important to distinguish between the MBT sector as an organised **industry** with a history, capacities and resources (which could be involved in many areas of public transport services) and the minibus taxi as a particular **mode** of transport (non-scheduled services using mid-sized 10-18-seater vehicles).

There was considerable common ground regarding the industry becoming an innovative and modernised sector integrally part of a city-managed integrated public transport system. The vision ideas are summarised in the 12-point list below.

1. **MBT industry and mode as key component of integrated public transport system.** As cities grapple with the need to grow the share of public transport modal share it is evident that the MBT sector must be incorporated into the plans for integrated rapid public transport networks. The MBT mode will be an important part of the increasingly efficient public transport system that will emerge over the next decades. In all likelihood the MBT sector is likely to be involved in the provision of a variety of services which could include services using similar vehicles to existing MBT to provide both trunk and feeder services in a network. It is also possible that the MBT industry will also be involved in the delivery of other modes of public transport such as bus services and possibly non-motorised transport options as well.
2. **Strong metropolitan transport management built on partnership with MBT industry and other stakeholders.** This system will be developed and managed by a well-capacitated municipal transport entity with the necessary skills and mindsets to plan, regulate and develop the sector. It will do this in a collaborative fashion with the MBT industry and other stakeholders. The regulatory and contracting functions currently held by provincial authorities will have been transferred to the cities as envisaged in the National Land Transport Act (NLTA). In Gauteng, metropolitan structures will need to be supplemented by a provincial level mechanism to ensure coordinated planning and management given the level of cross-boundary commuting flows and interdependencies. The emergence of multi-modal public transport networks will help facilitate the spatial transformation of the city and better access by all urban residents to the economic and social opportunities of the City.
3. **Focus on customer service to deliver safe, convenient and car-competitive services to expanding customer base.** The MBT industry will have a strong focus on the commuter and will seek to improve its service offering and make it more commuter-responsive. This will include a strong focus on safety, better driving practices and commuter information. It will also be more accessible to mobility-impaired individuals. These improvements will assist expansion into new markets, will make public transport more car-competitive and will help attract a growing number of commuters onto public transport.
4. **Infrastructure development supportive of the growth and modernization of the sector.** The cities will improve support infrastructure for public transport in general and MBTs in particular in collaboration with the industry. MBTs will be advantaged over private cars through access to dedicated lanes and exemption from tolls, congestion charges and so on. There will also be increased public investment in upgraded high quality interchanges and commuter stops with good shelter and street furniture and partnerships with the industry to ensure high quality operations and maintenance at these facilities.

- 5. Regulatory modernization.** The cities and the industry will work to improve the regulatory and enforcement situation in a manner that ensures good service to commuters, reduces negative behaviours, establishes MBT operator rights and facilitates industry sustainability. This will involve looking at all elements of the regulatory process including policy and legislation, the data systems to support the system, the functioning of regulatory entities and enforcement.
- 6. New funding and business models.** New funding and business models that improve MBT services and reduce the cost for commuters will support the development of the industry. This will include finding ways to allocate transport subsidies in a more equitable manner focused on reducing the cost of transport for commuters and funding vehicle recapitalization in an affordable manner. Access to subsidies will require the MBT industry to be open to restructuring and re-organising itself.
- 7. Technological innovation and adaptation.** The industry will become highly ICT-enabled and will use mobile phone technology and other ICT innovations that may arise particularly to enhance both the commuter experience as well as vehicle operating efficiencies. Wifi, passenger information, passenger evaluation, driver communication, driver monitoring and electronic fare collection and ride-hailing will all be enabled over time through the use of cellphones. Technological innovation will also be accelerated in vehicle design (to make them more commuter convenient) and vehicle engines (to reduce emissions and improve fuel efficiency). The MBT industry in partnership with government and other partners will seek to facilitate the emergence of local industry producing locally developed good quality vehicles customised for local needs. As cities invest in technologies to enable “smart cities” the application of such investment to the issues of mobility should be considered in advance of purchasing and designing systems. The role of ICT in regulation, monitoring and evaluation could become increasingly central to cities.
- 8. Industry institutional development and improved governance.** The realization of this new vision will require mindset shifts on the side of both industry and government officials at all spheres. Government officials will need to embrace the new spirit of partnership and should be willing to see the industry as credible partners committed to improving public transport. Simultaneously, the industry will need to systematically improve governance practices, accountability and transparency. This will contribute to reducing corruption and violence within the sector. It will also become more formalised and consolidated including running current operations under consolidated entities (such as companies/cooperatives) to facilitate more efficient use of fleets, economies of scale and better management.
- 9. Human resource development and capacitation.** Both cities and the minibus taxi sector will have to invest time and effort in building the requisite skills to enable this new vision. The industry will work to establish a better human resource situation. This will include fairer remuneration arrangements and healthier working conditions for drivers and other staff together with a strong emphasis on improved training and management. Cities will need to invest in building the requisite skills amongst city staff that enable an effective working relationship that places the commuter at the centre of city transport and mobility planning. The cities at the same time will find ways to enable the industry to build technical capacity to support industry development and its engagement with government and other partners. This may include providing resources for the industry to employ technical capacity to assist it in its engagement with government as has been done with considerable effect in the BRT industry transition processes. It may also include facilitating access to training opportunities at all levels and providing exposure to new thinking through peer exchanges and study tours with innovative operators elsewhere in the world.

- 10. Service differentiation, diversification and partnership.** During the Confederations Cup 2009 and FIFA World Cup 2010 the ability of the minibus taxi industry working in collaboration with host cities to provide mobility services to non-traditional users through park and ride facilities etc was a major success. There are opportunities for the MBT sector to expand the range of services it delivers and to differentiate the current service offering to better serve different customer niches. It will enter into partnerships with other public transport entities to undertake a wider range of contracted public transport services including BRT and bus services. It will enter into more contracts with government. It will also diversify across the public transport value chain including bus operations, facilities management, maintenance and non-motorised transport.
- 11. Transformation as a process.** Real change requires a process that enables MBT operators to understand the need for change and what the change will involve, that builds trust between the industry and government based on a common intention and a commitment to advancing the industry not marginalizing it. This requires acknowledgement of the history of the industry and the struggles that operators have gone through to reach what they are today as well as an understanding of how the industry business models work. It also requires effective communication in a language that is accessible to members of the industry who often have limited formal education. Government needs to budget for the costs of this transformation and see it as an investment in broad-based economic empowerment.
- 12. Positive public perceptions of MBT industry.** For too long the South African discourse around the role of the MBT sector has been one-sided and negative. Whilst it is important to acknowledge the many shortcomings of the industry it is imperative that a more balanced picture emerges about the vital role of the MBT sector to mobility and the economy at present. Business leaders, academia and a range of other thought-leaders need to be actively engaged in the new vision. The changes envisaged above create the space for changing entrenched negative perceptions about the industry that exist in many parts of society. A process of creating a positive public image of MBT services so that it is seen by a growing number of commuters as a preferred mode of transport rather than a last resort will need to be built over time on the basis both of major improvements in the quality of service, legal compliance and good governance as well as through proactive efforts to market and publicise the industry.

Background to Scenarios

Critical Uncertainties

A number of key uncertainties were identified and researched through the exercise. The table below outlines 12 prioritised uncertainties that will drive the scenarios together with suggestions as to the possible directions into the future they might take. These uncertainties are described in more detail in annexure 1.

Critical uncertainty		Factor range		
1	Levels of private car usage and urban congestion	Increase	Stable	Decrease
2	Impact of rail, BRT and bus service expansion	High	Medium	Low
3	Degree of integration of MBT in public transport system	High	Medium	Low

Technology				
4	Adoption of ICT by MBT industry and cities to improve service quality and service efficiency.	High	Medium	Low
5	Impact of ride-hailing and ride-sharing platforms	High	Medium	Low
6	Impact of non-motorised and micro mobility solutions	High	Medium	Low
Markets/competition (economics)				
7	Demand for MBT services	Increase	Stable	Decrease
8	Extent of opportunities in local logistics industry	High	Medium	Low
Regulation of MBT industry (politics)				
9	Extent to which cities enabled with regulatory powers and capacity to manage public transport and MBT services.	High	Medium	Low
10	Cost of fuel based on both market dynamics and impact of GHG controls.	Rapid increases	Slow increases	Stable
Industry dynamics (social)				
11	Industry responsiveness to accountability and good governance (and reduction of violence)	High	Medium	Low
12	Degree of participation of drivers and commuters in industry going forward	High	Medium	Low

Assumptions

In addition, there are certain assumptions that will be common to all scenarios:

- There will be a slow consolidation of the urban form in the urban areas as urbanization and rate of sprawl slows and rate of densification increases particularly along core transport corridors gradually increases.
- Constrained public finances result in small real increases (at best) in capital or operating grants for public transport for foreseeable future.

Initial scenarios

Two key themes emerge out of 12 driving uncertainties as drivers of the future:

- **The nature of the impact of new technologies and the changing mobility marketplace.** The evidence suggests that technology (including ICT management tools, ride-hailing and ride-sharing apps) and changing market conditions (such as online shopping and local logistics, NMT and micro mobility, public transport innovations like BRT as well as tight economic conditions) are having a major impact on the commuter transport globally. The uncertainty is about what such change will mean for public transport and the MBT industry. Will it significantly disrupt existing private and public transport mobility practices so that very new patterns of mobility emerge? Or will it rather tend to enable current models to become more effective and efficient and thus serve to sustain them? In short, will innovation in the sector be disruptive and result in very new mobility service patterns or will it tend to consolidate and improve current arrangements?
- **The appetite for change and innovation amongst South African transport role-players.** The uncertainty is about how local role-players respond to the opportunities and risks of the new technology and marketplace changes. Is the general response reactive and defensive, focused on protecting existing rights, practices and habits? Or is the response much more proactive where change is embraced and innovation harnessed creatively to improve transport outcomes. In short, is there a reactive approach focused on suppressing innovation or is there strong proactive leadership at both government and industry level to harness change.

The scenarios were developed based on a 2 x 2 matrix with two axes based on :

- Disruptive innovation - Consolidating innovation
- Reactive leadership - Proactive leadership.

Three scenarios based on this matrix have been developed as reflected in the section that follows.

Move the City: Minibus Taxi Scenarios 2035

Three scenarios describing possible mobility futures for urban South Africa and its relevance for the minibus taxi industry are sketched out below in Figure 1.

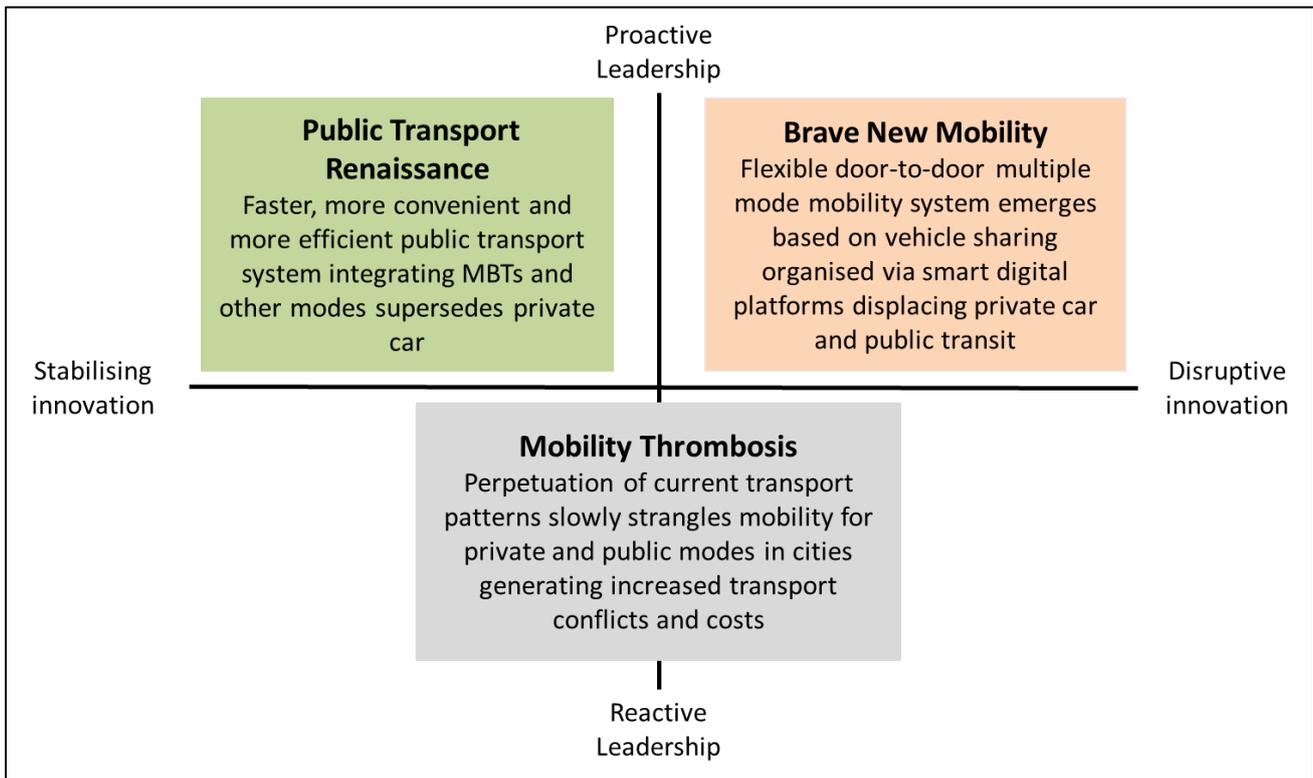


Figure 1: Minibus Taxi Scenarios 2035, graphic developed by the authors

Scenario 1 - Mobility Thrombosis

Mobility Thrombosis is the business as usual scenario. In it, mobility in 2035 looks much like 2015 but the negative features have been amplified - commuting using the road network is getting slower, more frustrating and more expensive.

The powerful car-owning aspiration of the growing middle class and perceptions that the public transport alternatives are not safe or convenient drive continued growth in commuting by private motorcars which accounts for an ever growing share of urban commuters. As a result, traffic congestion increases steadily leading to longer commuting times and higher transport costs. The rapid growth of ridesharing platforms like Uber has further contributed to the congestion problem by increasing traffic on the roads rather than reducing it. Gridlock is an increasingly common feature in rush hour.

The public transport investments in rail and BRT that commenced in 2010 but slowed significantly after 2015 due to the tough fiscal pressures have not been extensive enough to create a complete public transport network that is a car competitive alternative for car commuters. The BRT and rail system improvements have rather tended to draw passengers from the MBT sector. This process has been further hindered by the slow and limited increase in the capacity of the cities to manage the public transport system on an integrated basis.

There has been an incomplete transfer of public transport functions and funding to the cities from the provincial authorities and the cities have not built their internal capacity sufficiently.

There has also been great resistance by motorists to any moves that slow traffic or impose further costs on motorists. As a result, the cities have avoided taking measures that impact negatively on car commuters such as dedicating lanes on key corridors to public transport or imposing congestion taxes.

At the same time, little has been done to integrate the MBT industry within public transport beyond participation in BRT vehicle operating companies. The industry now sees public transport as its main competition and has adopted a protectionist and disruptive attitude towards new public transport investments and attempts to improve regulation. This has been reinforced by the pressure on operators because of the stagnation in the passenger base. This market pressure combined with the extensive congestion has pushed drivers to adopt more aggressive driving approaches that have reinforced negative perceptions of the industry. Similarly, the pressure has driven heightened competition between associations and led to an increase in violence on contested routes. There has been some adoption of information technology by innovative operators but this has not gone mainstream.

Scenario 2: Public Transport Renaissance

The Public Transport Renaissance Scenario reflects the vision ideas (summarised above) and involves the realization of the rapid public transport networks envisioned in the Public Transport Strategy (although with a much more explicit emphasis on a transformed MBT industry as a key integrated pillar in this system). **In this scenario, bold steps by city governments in the mobility space result in a faster, more convenient and more complete public transport system integrating MBTs and other modes by 2035.**

Integrated inter-modal public transport enabled by growing city capacity (both in terms of functional consolidation and technical capability) combined with technology innovation with the MBT industry as a key player, becomes the preferred commuting choice for a growing percentage of the urban population superseding the private car over time. Public transport has become cool and owning a car is no longer the aspirational status symbol it once was.

The more complete public transport networks and improved more reliable services as a result of the rail and BRT investments and the growing NMT infrastructure investments were critical factors. The range of measures to disincentivise private car use for commuting such as congestion taxes, increased urban parking fees and an increase in congestion as a result of public transport infrastructure interventions were also very important.

As important however was a major transformation of the MBT industry in the urban areas. The industry was incentivised to provide a quality service that complemented other public transport modes rather than competed with them - as supplements on trunks during peak hours, as feeders and as providers of a convenient point to point service. MBTs that complied with the new public transport specifications (quality vehicles, GPS-based monitoring and driver working conditions) were given access to dedicated lanes on key routes, improved capital subsidies and other incentives. This was accompanied by far-reaching change within the industry itself as it consolidated its operations, improved governance and began to manage its fleets on a joint basis to achieve economies of scale. These changes enabled the MBT industry to substantially grow its market, to provide additional contract services and to enter the growing package delivery sector.

Scenario 3: Brave New Mobility

The Brave New Mobility Scenario explores how mobility might evolve if the new technologies of recent years have a major and enduring disruptive impact on existing mobility patterns. **In the scenario, modernised versions of the minibus taxi using mobile phone based ride-sharing apps to fill their vehicles with ride-sharing passengers gradually becomes the dominant mode of public transport.**

The new MBT does not follow a fixed route or a schedule but undertakes journeys where the pick-up and drop-off points are determined in the course of the journey by passenger demand optimised by the technology. This flexible service has a point-to-point convenience very similar to a sedan taxi but at a much lower cost - close to what a traditional minibus taxi charges. The technology also helps ensure that the vehicle is driven safely in accordance with speed limits and traffic regulations. Driving improves as drivers are evaluated by passengers who can refuse a vehicle where the driver has a low rating. The flexibility, convenience and affordability of the service results in a significant shift of private car commuters to the new ride-sharing service that becomes the commuting mode of choice. The number of vehicles using the road network decreases and congestion is reduced.

The MBT Industry has transformed itself and become the primary provider of this new service (and other services in the value chain) while also continuing to operate traditional lower cost MBT services. These ride-sharing services both complement the improved rail and BRT services (particularly the long-haul trunks) by providing last km feeder services as well as drawing away passengers from scheduled public transport services because of their greater convenience.

The cities have taken over the regulatory powers to manage the planning and regulation of MBT and other mobility services and have responded very proactively to these new innovations. They have introduced enabling regulation and incentives that facilitate the new ride-sharing services. The cities have been supportive because they recognised that these services simplify regulation, reduce the need for city investment in public transport infrastructure and operations and substantially improve the mobility experience. Intelligent traffic management systems facilitate traffic flow by taxis on key routes (for example by “linking” vehicles on trunk routes using autonomous driving technology applications).

The new ride-sharing services also greatly reduce the need for parking in key commercial nodes that the cities are then able to densify and pedestrianise more easily. Leading cities have in fact developed their own uber-like apps to facilitate the service with which all MBTs that meet the standards can contract with and which also enables the cities to subsidise part of the cost that passengers have to pay.

Critical questions

The scenarios pose important questions for the cities and the MBT industry and their respective roles in advancing the issues. These include:

City powers and functions and capacity to lead reform

- What needs to be done to enable the cities to take on greater responsibilities for public transport envisaged in the NLTA including taking over the public transport regulatory and contracting powers currently residing with provincial governments?
- Pending the resolution of such powers and functions transfer processes, how can provincial and city governments as well as national government better co-ordinate their activities based on current powers and functions in order to improve governance, planning and regulation and ensure a common aligned approach to public transport reform and engaging with the MBT industry?
- What do cities need to do to ensure that they systematically develop the capacity to manage the public transport system, its different modes and networks? What work needs to be done to create the necessary mindsets and attitudes to work effectively with the industry?
- How can technology and the new mobility innovations particularly those using mobile phone platforms assist cities to undertake their transport planning, management and regulatory responsibilities more effectively?
- What can cities do using their powers and functions to improve the functioning and operations of the MBT industry including improving interchange and rank infrastructure and management and improving drop-off and pick-up points?

Spatial form and car-friendly context

- Is there a need for bolder action by city government to disincentivise private car use and to stop investments in office parks and retail complexes that reinforce urban sprawl and private car commuting.
- Is there a need for a bolder multi-stakeholder lobby to motivate for action to disincentivise private car use and promote public transport?
- What other measures can cities take to promote an urban form that is conducive to public transport?

MBT-public transport integration

- Is there a need for a new compact between the MBT industry and government and other stakeholders about the role of the MBT in the public transport system? How can such a compact be facilitated?
- What would this mean for regulation, enforcement, incentives, infrastructure and support?
- To what extent would it involve higher levels of integration with other transport modes and what would such integration involve? What is the optimal mix of the MBT mode and other transport modes in terms of efficiency, service quality and commuter responsiveness?
- What proactive short and medium-term steps can city government take to improve the operating environment of the industry and to promote more desirable practices within the industry?

Structure and functioning of MBT industry

- How do we modernise governance and legal compliance within industry to improve accountability and to reduce violence and extra-legal problem-solving?
- Is there a need to facilitate greater industry consolidation to achieve efficiencies and economies of scale, to improve standards and to enable investment and innovation? What forms could consolidation take and what regulatory and other changes could assist desired consolidation to occur? How can the inclusiveness of the industry and its low barriers to entry of poor low-skilled individuals be developed?
- What proactive short and medium-term steps can the MBT industry (national, provincial and at association level) take to facilitate innovation in the industry and to promote more desirable practices?

- Is there potential to change the current business model of the industry to improve its efficiency and profitability while providing improved service benefits to the commuter and the broader public? What changes might be involved and how could government support such change?

Service improvement, diversification, innovation

- How can the industry use the new ICT technologies to improve its offering in areas from vehicle maintenance, fleet management, driver behavior monitoring, ease of payment, customer information and ride-hailing? Which of these are the low-hanging fruit and are easily applied? Which require adaptations to current models and improved capacity?
- What opportunities exist for the MBT to grow its market, increase its footprint in the transport value chain and diversify into new markets? Can the MBT industry grow services that are competitive with the private car and sedan taxis as a way of attracting a larger middle class market? How can the industry position itself to complement BRT, rail and bus improvements as a feeder and to supplement trunk routes during the peak? How should the MBT involve itself in BRT and bus contracts going forward? In what ways can the industry use its position to expand into other parts of the transport sector? Is there any role for MBTs into “last mile” delivery of goods in the “clicks” economy? What other services can MBT operators provide?
- Is it realistic and appropriate at this stage of industry maturity to allow a more competitive context for the minibus taxi industry to emerge to improve efficiencies, service quality and competitiveness? What could this involve? To what extent do industry dynamics and mindsets prevent this and how can this be overcome?
- Does the one association per route rule that has been very important to stabilise the industry and prevent violent inter-association competition for routes require rethinking given changing conditions including the rise of new mobility technologies?
- What opportunities to adopt new vehicle types and technologies to improve efficiencies and reduce environmental impacts including increasing the range of vehicle sizes in order to optimise efficiencies on particular routes to adopting new lower emissions technologies (such as gas or electric)? What are the cost implications of adopting such technologies?
- What can government do to support service improvement, opportunities for market development and diversification and innovation?

MBT-community and commuter relationships

- Is there potential for a new relationship between the industry and the commuters they serve geared to better accountability to MBT commuters, an improved commuter experience, greater choice, better access and better service delivery? What would be involved and how can this be achieved? To what extent can mobile-phone based platforms assist this?
- How can the broader public perception of the MBT industry be improved in order to facilitate public acceptance of an expanded more integrated role for the industry within the public transport system? How critical is improving regulatory and traffic law compliance and improved service delivery in this? To what extent can marketing and public relations activities alter perceptions and reinforce better practices?

Owner-driver relationship

- Is there a need for a new relationship with drivers that may involve formalization and improvement of working conditions combined with improved training and driving performance requirements?
- Is there an alternative to the predominant “target” business model that appears to drive much of the negative driver behavior?
- What are the costs implications of a new approach? How can technology assist this?

An Agenda for Reform

Key immediate issues

A number of important immediate issues that needed to be addressed were identified including:

- 1. Regulatory reform.** It was noted that there are major challenges regarding the issuing of operating licenses. It was further pointed out that there was no effective platform where government and the industry could meet to resolve these issues and that SANTACO was in the process of initiating a legal challenge in regard to the relevant legislation. It was suggested that parties should explore whether this issue could be resolved in a cooperative manner and that this could help foster higher levels of confidence and trust.
- 2. Inclusive participation.** It was noted that an inclusive process to address a new dispensation for the MBT industry was required that included all relevant stakeholders including commuters and employees. It was noted that the commuter voice was often not strongly heard and that a commuter advocacy organization or a public transport lobby might be needed to strengthen this. Mobile phone applications that enabled detailed commuter feedback at scale could also be used to improve feedback and accountability.
- 3. Proactive partnerships and proposals from public transport stakeholders for innovation.** It was further suggested that cities might partner with innovators in the MBT industry to pilot potential innovations as a basis for testing approaches with a view to mainstreaming them where they were successful. It was also suggested that the MBT industry itself should take the lead in putting forward proposals for reform ideally in partnership with other public transport providers rather than waiting on government. A key challenge relates to the capacity of the cities to respond constructively to such partnerships and initiatives. Measures need to be taken to ensure that cities have the energy, flexibility and capability to engage, facilitate and drive such efforts. It is imperative that there is action and ongoing documenting, monitoring and learning from these efforts. The sharing of results from prototypes - both successes and failures - will require cities and the minibus taxi sector together to develop an understanding of the critical ingredients for incorporating the sector into overall integrated transport planning. These prototypes must move off paper into implementation if lessons are to be learned.
- 4. Positioning the cities to play leading role.** Whether the urban mobility future and the role of the MBT industry in this plays out will depend in large part on how cities position themselves in relation to the role of the sector in integrated rapid public transport networks. Key to these is working through the respective roles of the cities and provinces in this regard and concluding the process of consolidating the regulatory and contracting functions. There are a number of issues that cities should clarify, assess and deliberately build capacity for if they are opting for more than the business as usual scenarios. It is imperative that at the most senior political level in cities there is an understanding and buy-in and that there are political champions who understand the important role of the minibus taxi sector to overall city mobility and spatial planning. These political champions should be willing to support innovation, creativity and prototyping in finding models that look at the mobility, economic and spatial transformation possibilities inherent in including the minibus taxi sector in IRPTNs. Political champions should be willing to track progress, hold administrators to account and provide leadership and guidance on matters that may not have precedent and guide policy development as and when required. It is vital that each city in conjunction with role players and stakeholders develops a vision for the role of the minibus taxi sector within an integrated mobility system within a particular city. This vision may include a charter of commitments from different stakeholders for the roles, responsibilities each stakeholder grouping will play in realizing the vision. Issues such as the values underpinning the relationships, etiquette of working with each other, respect for respective protocols and procedures should be clarified early in the process so that the relationship

between cities and the minibus taxi sector are not purely dependent on individual personalities at any given point. The vision should be sufficiently compelling and the spirit sufficiently consensual that when difficulties do arise – all are committed to address them in a fashion that builds trust, co-operation and the ongoing desire to realise the greater vision. This will also need to be incorporated with the IDPs and Integrated Transport Plans (ITPs) of the different cities.

- 5. Creating resources and capacity to facilitate reform.** Cities will have to make budgetary provision to enable prototypes to be tested, learnt from, refined and scaled where appropriate. This would entail a particular understanding of budget provision – since not all prototypes would be successful and learning, even from failure will be an important component of the process for all parties. Inter-city sharing forums that share best practice, avoid duplication of effort and co-ordinate learning will be important. There is also potential for partnerships with the established private sector to help resource such prototypes. It would be advisable for each city to have clarity on the skills sets required not just for minibus taxi transformation activities but all aspects of transportation. Strategy, transport planning and engineering, land use planning, design, community consultation, stakeholder management, operational integration, transport economists, transformational change agents, fare management, marketing and commuter information would be amongst the toolbox required. Each city should have a clear understanding of the optimal skills set and the bare minimum required in a city. The ideal should be tested against the current reality and active steps should be taken to ensure that existing staff are placed on learning paths that start building the required skills set. Further recruitment should seek to actively fill the gaps that the transport skills audit reflects. It is imperative that cities build in-house capacity to manage complex, multi-stakeholder transition if these efforts are to be financially sustainable and knowledge be built over a period of time. The pool of qualified and competent transport professionals for the country must be actively grown and investment in the development of city officials through exposure to international best practice, ongoing interface with technology and innovation in the sector as well as the skills to work with the minibus taxi sector must be a priority for cities. Building a commuter-centric understanding of transport is key.

Phased incremental approach

It was suggested that a phased and incremental approach to better incorporating the industry needed to be adopted. The following phases were suggested:

First phase - Focused on creating stability and getting the basics right

In a first phase (short and medium term), the emphasis would be on creating the stability and foundations for innovation. This would include:

- Sorting out regulation and ensuring a functioning licensing system and consistent enforcement based on clear rules and procedures;
- Improving existing MBT services through partnerships and using ICT (particularly mobile phone applications) as an important enabler.
- Creating space for innovation and experimentation including piloting transformative projects on key routes such as giving MBTs access to dedicated lanes, introducing ICT tools to enhance tracking and monitoring and user accountability;
- Establishing sound national and metropolitan processes for engagement and consultation about MBT services between the cities, other government agencies and the industry. Such processes should also involve industry employees and commuter representatives.
- Research into optimal institutional and contracting models and an assessment of the efficiencies of the different modes.

Second phase - Focused on mainstreaming next level model

A second phase would focus on the implementation of a new model of integrated public transport that integrates the minibus taxi industry in a more comprehensive way. This phase would involve a diversification into larger even custom-made vehicles and new markets, a re-organisation of the industry in order to manage fleets more efficiently and the extension of public transport contracts to be more inclusive of the industry.

Next steps

The participants concluded that there was a need to continue the dialogue started during the scenario workshops.

It is proposed firstly that the SACN engage with cities, National Treasury and the Department of Transport in order to develop recommendations as to how this could best be undertaken and resourced.

In addition, it is proposed that this report be used to leverage broader debate and discussion about how the MBT industry can be better integrated as part of a revitalised system of public transport in a wide variety of different forums. Possible opportunities include:

- A roadshow to present the conclusions of the process to relevant national, provincial and city governments as well as national, regional and local minibus taxi associations and other transport role-players.
- The use of the report in training programmes directed at transport role-players.
- The dissemination of key ideas through the media including the writing of op-ed pieces.

Annexure 1

Overview of key trends

Uncertainty	Trends
<p>1 Levels of private car usage and urban congestion</p>	<ul style="list-style-type: none"> • Growing congestion on urban road system <ul style="list-style-type: none"> ○ SA has longest daily commutes of 40 countries surveyed (OECD 2012) ○ On-going growth of private car commuting at expense of public transport ○ Reduces revenue and increases costs of MBTs • High costs of commuting as result of apartheid legacy urban form and car-privileging infrastructure <ul style="list-style-type: none"> ○ In 2005/06 transport accounted for 20.8 percent of total annual household consumption expenditure in urban areas (Stats SA 2008) ○ More than 50% of poor urban residents spend more than 20% of income on transport (Kane 2010) ○ Public and private expenditure on public transport in 6 metros – R 26,2 bn per year (50% on MBTs) ○ Massive drag on economy, on people especially poor, on public finances • But emerging trend in developed world of declining private car ownership and use amongst “millenials” <ul style="list-style-type: none"> ○ Depends on availability of real alternatives and incentives/disincentives of public transport or other alternatives. ○ Strong aspirational demand for private cars amongst emerging middle class.
<p>2 Impact of rail, BRT and bus service expansion</p>	<ul style="list-style-type: none"> • Globally over the past ten years, BRT up 383 percent. • Major public investments in city BRT services and PRASA rail upgrades underway in SA. <ul style="list-style-type: none"> ○ However, fiscal constraints (at national and metro level) will constrain growth of BRT and rail services (operational sustainability and capital) ○ Investments supplemented over time by improvements in bus contracting and more competitive subsidised urban bus services (single branding, modal integration) • Improved PT could take away significant numbers of passengers from MBTs particularly if competitive pricing but vice versa • But potential of MBTs to grow market <ul style="list-style-type: none"> ○ Partnerships to supplement peak demand provision and render feeder services to the BRT and rail services ○ Involvement as operator of BRT and bus services

	<ul style="list-style-type: none"> ○ MBT consortiums could potentially compete for the subsidised bus contracts in due course when bus contracts tendered
<p>3 Degree of integration of MBT in public transport system</p>	<ul style="list-style-type: none"> ● Currently limited integration of MBT in public transport. ● Declining public investment in MBT infrastructure as shift to BRT approaches (focus on replacing MBTs rather than enhancing?) ● Global growth of integrated multi-modal transport – potential common ground for cities and MBTs ● MBTs could potentially be key partner in integrated car competitive public transport system <ul style="list-style-type: none"> ○ Reducing reliance on expensive BRT/rail infrastructure – peak supplement and feeder ○ Issue of access to subsidy and other incentives, regulation, service standards etc
<p>4 Adoption of ICT by MBT industry and cities to improve service quality and efficiency.</p>	<ul style="list-style-type: none"> ● Growing adoption of new ICT-based technologies is transforming transport in many areas globally with potential to catalyse major MTB change for benefit of cities/citizens in areas such as: <ul style="list-style-type: none"> ○ Vehicle efficiency and maintenance ○ Fleet management and deployment (including predictive use of big data) ○ Driver behaviour ○ Electronic payment ○ Passenger information ○ Ride-hailing and sharing ○ Customer evaluation and feedback ○ Additional services (wifi, pre-payment) ○ Incentive-schemes (for compliance, safety etc) ● Emerging capacity to drive far-reaching innovation in these areas: <ul style="list-style-type: none"> ○ High incidence of cellphone ownership by SA population as basis for inclusion ○ Growing city capacity re intelligent transport systems - control centres, automated ticketing etc
<p>5 Impact of ride-hailing and ride-sharing platforms</p>	<ul style="list-style-type: none"> ● Rise of TNCs (particularly Uber) as dominant global platform for ride-hailing over past two years very significant - disruptor <ul style="list-style-type: none"> ○ Very price and service competitive against sedan taxis ○ Has cracked whole customer experience ○ Focus on attracting a critical mass of drivers to generate network effects ○ Innovation to better match supply and demand (variable provision and dynamic pricing) ○ Evidence that it is expanding taxi market considerably

	<ul style="list-style-type: none"> ○ Global in nature but customised approach to local markets ● Local alternatives – Snappcab and Unicab but can local platforms compete? ● Current Uber-type services are alternative to sedan taxi and do not solve congestion issue – they rather increase it ● However, next wave of service innovation will be lower-price, vehicle-reducing ride-sharing <ul style="list-style-type: none"> ○ Potential competition for MBTs ○ New Uber service (UberPool) is already being piloted + dedicated ridesharing platforms ○ Key strategy for Ford ○ Also global growth in car sharing (Avis acquires Zipcar)
<p>6 Impact of non-motorised and micro mobility solutions</p>	<ul style="list-style-type: none"> ● Rapid growth internationally of non-motorised mobility and urban focus on creating better infrastructure for walking and cycling ● Emerging explosion of micro-mobility alternatives from electric bicycles, three-wheelers and minicars <ul style="list-style-type: none"> ○ Alternative last km or longer options emerging and likely to be strongly supported by SA cities. ○ Can increase attractiveness of public transport but also implications for MBT last km role ○ Autonomous vehicles as wildcard? ○ Micro-mobility and taxi services - Mellowcabs as SA innovation
<p>7 Demand for MBT services</p>	<ul style="list-style-type: none"> ● The number of minibus taxi commuters increased by just over 50% in the 10-year period between 2003 and 2013 ● But slower recent growth as economic realities squeeze poor and sustained low growth rates in low-skilled job market since 2008 ● Demand is also likely to be quite price sensitive in that transport costs already consume a significant proportion of household income in poor communities ● Job growth has been concentrated in higher paid and higher skilled sectors ● Represent possible market but requires higher quality service ● Loyalty of “captive” market not guaranteed ● HTS points to considerable dissatisfaction with the MBT service ● Improved public transport married with new cheaper options for the “last kms” potentially give such customers real price competitive alternative

<p>8 Extent of opportunities in local logistics industry</p>	<ul style="list-style-type: none"> • Major growth in decentralised distribution of goods and services particularly to service rapid growth of on-line shopping • Estimated that the global online retail sales will account for 16.6% of total retail sales by 2020 and up to 25% in countries like the US. • Potential MBTs involvement using surplus off-peak capacity for this purpose
<p>9 Extent to which cities enabled with regulatory powers and capacity to manage public transport and MBT services.</p>	<ul style="list-style-type: none"> • NLTA envisages that urban public transport management functions (including regulation and public transport contracting) will be consolidated within metropolitan municipalities. • Key principles of current MBT regulatory dispensation <ul style="list-style-type: none"> ○ One association per route (for stability) ○ Operating licenses issued on basis of supply and demand (to limit unregulated competition) ○ One operator one vote in associations (to limit power of fleet-owners) • But regulatory disarray <ul style="list-style-type: none"> ○ Poor dysfunctional systems ○ Lack of information and capacity of POLB ○ Limited arbitrary enforcement ○ Poor MBT compliance • Potential for new regulatory dispensation <ul style="list-style-type: none"> ○ Transfer of function to cities ○ Potential of vehicle monitoring technologies plus control centres to simplify and improve regulation and enforcement ○ How should competition and consolidation be dealt with?
<p>10 Cost of fuel based on market dynamics and impact of GHG controls.</p>	<ul style="list-style-type: none"> • Transport heavily dependent on fossil fuels and accounts for 13% of SA GHG emissions (and growing) • Reducing GHG emissions and other enviro impacts of urban transportation is urban policy priority globally – inevitable SA will need to take bold steps • Improving public transport usage is primary mitigator -but also: <ul style="list-style-type: none"> ○ Energy efficient driving practices ○ Fuel and engine standards ○ Energy efficient vehicles including electric, hydrogen fuel cell and other low emissions vehicles • Although petrol/diesel prices have dropped considerably over the past year, long-term trend many revert to historic above inflation increases. • What are opportunities and risks for MBT industry especially

	around costs?
<p>11 Industry responsiveness to accountability and good governance</p>	<ul style="list-style-type: none"> • Hierarchical and authoritarian culture in much of industry • Lack of internal democracy and accountability to members • Unequal distribution of benefits • Culture of resolving disputes or consolidating markets through violence • Reactive disruptive responses to change • Poor service culture • But signs of shifts <ul style="list-style-type: none"> ○ Stronger more innovative national organisations ○ Academies and improved training ○ Emergence of innovative associations • Wildcard: Impact of generational shift as industry matures and pioneers age
<p>12 Degree of participation of drivers and commuters in industry going forward</p>	<ul style="list-style-type: none"> • Current “target-based” business model drives negative driver behaviours • Drivers often experience poor working conditions and income is unstable and poor. • Some current instability currently as drivers demand access to operating licenses in context of maturing market and falling operating license availability.

Annexure 2

Scenario storyboards

		Mobility thrombosis	Public Transport Renaissance	Brave New Mobility
1	Levels of private car usage and urban congestion	Increase	Decrease	Stable
2	Impact of rail, BRT and bus service expansion	Low	High	Medium
3	Degree of integration of MBT in public transport system	Low	High	Medium
4	Adoption of ICT by MBT industry and cities to improve service quality and service efficiency.	Low	Medium	High
5	Impact of ride-hailing and ride-sharing platforms	Medium	Low	High
6	Impact of non-motorised and micro mobility solutions	Low	Medium	High
7	Demand for MBT services	Decrease	Increase	Stable
8	Extent of opportunities in local logistics industry	Low	Medium	High
9	Extent to which cities enabled with regulatory powers and capacity to manage public transport and MBT services.	Low	High	Medium
10	Cost of fuel based on market dynamics and impact of GHG controls.	Stable	Slow increases	Rapid increases

11 Industry responsiveness to accountability and good governance	Low	Medium	High
12 Degree of participation of drivers and commuters in industry going forward	Low	Medium	High