

Business Starts to Benefit From Dipping its Toes into Car Pooling

POOL CAR ▶▶ Whitepaper

Any Fleet solution that affords the opportunity to reduce the number of vehicles under management as well as lower costs, improve utilisation and optimise occupational health and safety just has to be worth considering. As a result of evolving technology and changing enterprise culture, corporate car-pooling solutions are starting to come of age.

Ever since the introduction of mobile carriage as a human enabler, there have been commercial applications for its use and this functionality dramatically broadened with the invention of motorised transport.

Similarly, good fleet management practices have allowed those commercial operations to be more efficient and cost effective thereby creating the opportunity for business growth, improved profit and competitive advantage.

Fleet management can be defined as a business process framework which allows organisations reliant on transportation in their business operations to remove or minimise risks associated with vehicle investment. Its core functions are to improve efficiency, increase productivity and reduce the full life-cycle costs of transportation.

It is a science that has evolved organically over the years driven by innovation using tools, systems and processes to optimise performance and usage of multiple vehicles.

Though not an entirely new application of fleet management, the practice of keeping a pool of cars for use by multiple employees is one that has become increasingly viable and, in some cases, a compelling option because of changing work trends and the application of new technologies.


It is not uncommon for modern work environments to have communal workstations and meeting rooms that can be booked and utilised as the need arises as opposed to being permanently held by individuals or work groups.

Now, through the use of cutting edge technology, so too can fleet assets be shared in a similar way with the end result being the need for less vehicles in the fleet and a much higher utilisation of those vehicles that are under management.

Ripe For Innovation

As mentioned previously, car-pooling, per se, is not new. There has always been the need for employees to access transport and for that conveyance to be in a shared vehicle. When we first started talking to customers about better ways





to manage pool cars, they were running systems off a whiteboard and/or an Excel spreadsheet.

More mature organisations were using Outlook in a similar way to co-ordinating a meeting or booking a meeting room with calendar entries supported by email-based notifications to relevant stakeholders. Such systems were okay for smaller establishment but for any larger organisation it soon became apparent a bespoke system was needed to meet their unique circumstances and requirements.

In today's world, we have the technology and need for a system to operate round the clock with no, or very little, hand-off from one person to another. With some of the technology that is evolving around swipe cards and smart phones and their almost ubiquitous use, it is not a quantum leap to integrate them into an automated car-pooling solution.

Most organisations today use a swipe card system to authenticate employees' access and for verification of identity. Meanwhile, smart devices are now so widely used that it is rare for an employee not to have one at their immediate disposal. Broad-based adoption of these technologies is already there and they are game changers when it comes to pool car solutions.

So with these technical foundations in place, the logic behind building a better, more efficient and cost effective pool car system for managing the transport needs of both an organisation and its personnel now makes more sense than ever. Fleet Management Organisations (FMOs) are now busily building and implementing the applications that will leverage these technologies to deliver positive business and safety fleet management outcomes.

Adding to the potential value of car pool systems, we are now also seeing the introduction of telematics into the equation. Telematics combines elements of telecommunications, vehicular technologies, road transportation, road safety, electrical engineering (such as sensors, instrumentation, wireless communications, etc.), and computer science (multimedia, Internet, etc.).

It means fleet managers now have the ability to gather enormous quantities of data about how their vehicles are being used. GPS tracking of a vehicle is the best example. It delivers you a wealth of information around each and every vehicle in regards to how it is used, when it is used, where it goes and so on.


It is, however, by no means the only way in which telematics can be utilised. Recorded odometer readings can be used to monitor fuel consumption, driver adherence to speed limits and to automate initiation of maintenance events. Engine analysis provides early warning of potential mechanical damage and, while the list goes on, there is still incredible opportunity for innovation there, especially when it comes to integrating telematics with mobile phone and authenticated access technologies.

Best of Breed Car Pooling

Having an ecosystem where user authentication, mobile phones and telematics are all integrated to manage bookings and vehicle access as well as monitor individual usage is the nirvana of car-pooling solutions.

Gone are the days where you need to have 20 cars for 20 people. Current technology will allow you to have a clear line of sight on every vehicle in your fleet at any time to know which people are using cars, how they are using them and for what purpose.

Using the 20 car example, telematics will most likely give you the insight that a large proportion of these vehicles' time is spent laying idle in the office car park.



With such basic data, you could immediately question whether you actually need 20 cars. Maybe, by eliminating the individual car allocation and better managing their usage for work purposes, you can get away with six pool cars that are used a much higher percentage of the time.

From a fleet management community perspective, this is also a steep change in thinking for the industry because it no longer means that buying more cars is necessarily the best solution in regards to delivering funding and unit-based management service fees which are staple revenue streams.

Best practice is now more about developing, implementing and managing the right, customised solution for the client to ensure they optimise fleet utilisation to run their business effectively and efficiently at the lowest possible cost.

This progression towards car-pooling is being directly driven by the data extracted via telematics and efficiencies gained in automated booking and access systems. Of course, pooled car solutions are not for every business but there is an accelerating adoption rate and there is a general willingness for other organisations to consider it because they can see that the business benefits are tangible.

Pool Car Drivers

Clearly it is new technology that is advancing the form and functionality of pooled car fleet solutions. However, there are also broader business imperatives such as cost reduction, improved productivity and operational efficiencies that are leading to adoption of management tools dedicated specifically to giving multiple drivers access to a pool of fleet vehicles.

Modern corporate cultures that are far more centred on good governance and occupational health and safety are also seeing car-pooling come into its own as a means to achieving that end. Being able to accurately allocate the costs of running a vehicle to business units or specific projects based on usage is another benefit while ensuring vehicles are properly registered, insured and maintained is a clear safety obligation.

Fringe benefits tax (FBT) is also a big piece of the puzzle. If you have assigned vehicles, there are all sorts of complexities in terms of FBT statutory requirements, administration costs and tax obligations. With a pool of vehicles that are coming back to base, FBT is no longer in the equation.

Any organisation that has a large, casual, transient workforce with needs to access transport on a demand basis can benefit from car-pooling as can, generally speaking, those with a purely urban/metro-based fleet. Perhaps the benefits are less so where an organisation is based in a rural area, where there are multiple dispersed locations or where there is long haul involved.

However, even in such circumstances, there are many operations where car-pooling would be viable and is being used. Naturally, it depends on the individual needs and objectives of the customer.

Integrated Functionality is the Key

There are three main pillars to a cutting edge car-pooling system; User Management, Booking Management and Key Management. All three need to be seamlessly integrated into an end-to-end solution for the full value to be unlocked.



User Management

At the foundation of a car pooling system is how you manage the users. There needs to be a defined set of rules that stipulates who the eligible users are and what they can use the vehicles for. Processes need to be put in place to guide the users through firstly registering for the system and then accessing it to book a vehicle.

As most organisations now have an active HR management system with a database of all employees, this is the starting point for authenticating users and defining which ones have the required permissions to access pool cars.

Relevant components of this existing data can be incorporated into the car pooling user management system with any additional fields that may be deemed necessary.

Booking Management

There are a range of structures that need to be developed around the management of bookings for pool cars. Flexibility is the key objective as there will invariably be a diverse array of transport needs within each organisation and from one organisation to the next.

When actioning on a transport need, the user needs to be able to customise a booking to access the right type of vehicle, to lock it in for the period of time they need it. Each user case is different and the system needs to be able to cater for everything from day-to-day bookings to weekend bookings, long term bookings, recurring bookings, con-jointed bookings and everything in between.

The booking management system also has to accommodate the ability to take cars out of the pool periodically for maintenance and cleaning while minimising any issues created by the temporary loss of availability of that vehicle.

Other factors that are key considerations in booking management include the potential need to manage the movement of vehicles across multiple sites and a charge-back system that allows the cost of using the vehicle to be allocated to the appropriate cost centre.

Then, of course, you need to outline the rules around pricing levers that are in your billing system. Are you charging by time, kilometres travelled or a combination of the two? Plus there needs to be clarity around penalties for a no-show, early pick-up or late return. Also, are there concessions for picking it up late, returning it early or any malfunction?

Key Management

Effective access or Key Management is the last core component of a car pooling solution and that is an area where service providers are currently focusing a lot of their efforts because it is where the critical user experience plays out.

While User Management and Booking Management are back-end systems, Key Management is the front end system that controls how users physically access vehicles. In a car pooling solution, Key Management can be as basic as somebody manually handing out keys or as cutting edge as using a mobile phone with an app installed and the latest Near Field Communication (NFC) technology to unlock and start a vehicle.

Of course, there are a lot of alternatives in between including a key locker system with access PINs distributed via text or email. We have also developed systems for customers that rely on RFID technology with a swipe card (staff card) used via a reader fitted to the vehicle. SMS-based systems have also been deployed in Australia.

At this stage most of the new development is focused on mobile technologies where a connected car is fitted with telematics and integrated with back-end systems with access achieved via a personal device. This is the future and there is still enormous potential for innovation to automate and achieve efficiencies that suit individual organisational requirements.



How Pool Car Systems Work

Using the example of one of our customers – a multi campus tertiary education institution – which has implemented a car pooling solution for its staff. As part of their working life, lecturers, academics, administrative staff and corporate services delivery personnel (such as maintenance and ICT etc) are regularly required to visit sites other than their home base. A pool of fleet vehicles is provided to meet these transport needs.

Their User Management function has been integrated with the organisation's broader user directory so all eligible people within the community can access the system. There is no additional set of credentials to administer and users have been profiled in regards to their system access permissions with individual acknowledgement of rules and the registering of details such as licence number and contact details.

This all makes it very simple for the user. They have already got an existing user name and password which opens up the Booking Management system which then uses a series of drop-down menus to define the nature of the vehicle use and assign charge back details. This includes how long the car is required for, the cost incurred, which cost centre is billed and other details.

There are a range of automated functions within this system including default settings as stored user details populate the booking form which makes the user experience as easy as possible.

In this particular case study, for Key Management, the booking system then issues an email with a PIN access code to the key locker for key retrieval and return. For all intents and purposes, the whole system is automated with no direct human involvement beyond the user making the booking online, accessing the key locker and driving away.

Telematics systems have been fitted to each car and are also integrated in the system in regards to maintenance of the vehicles. Our servicing partner has a direct line of sight into the system and whenever a vehicle reaches its defined time or kilometres travelled milestone for a servicing event an alert is triggered to them. They then simply log into the system, book the vehicle out, receive a PIN and retrieve the vehicle in the same manner as any other user would.

Similarly, a contracted mobile cleaning service provider has a predetermined schedule and they also access the booking, book the cars for one hour when they are not being utilised before arriving on-site at the specified time.

Meanwhile, there is a fuel card in the vehicle so when the car is low on fuel, the driver has responsibility to fill it up before returning with all fuel transactions reported back in an easily auditable format to ensure that there is no abuse of the system.

What Next for Car Pooling?

We are only just scratching the surface of the potential for pool car solutions and there is no doubt that there are business benefits to be reaped from adoption but the opportunity also goes well beyond just the commercial environment.

Existing systems are already delivering value to customers but the real quantum leap will be made when telematics become more prevalent with integration into the rest of the pool car and broader fleet management solution.

We are currently developing and deploying systems for customers where all the components of an effective pool car solution are integrated into a single



ecosystem that includes automated User Management, Booking Management and Key Management. These systems also incorporate telematics for real-time monitoring of drivers with alerts generated whenever safety, driver behaviour, maintenance or financial management thresholds are breached.

In the future, we envisage that pool car solutions will continue to evolve rapidly and that there will be a change of culture across enterprise and residential communities questioning whether they really need a car or just an alternative solution to their immediate transport need.

We see the day in the not-too-distant future where eventually groups of organisations located together in commercial estates or groups of government agencies will share vehicles to meet their transport needs rather than own them outright. Billing systems will be integrated into a user pays system in a similar manner to how the hire car industry operates today.

Much like public and private enterprises are benefiting from shared business services or office space today, so too will they embrace this similar concept of sharing vehicles and at the core of it all will be a cutting edge, end-to-end pool car management solution.

As large populations in our cities move to high rise centralised apartment living often close to their work place the whole dynamic is changing. A lot of people don't need to drive to work every day, instead preferring to walk, ride a bike or use public transport for most of their transport needs.

However, on the weekend they might need to drive 45 minutes to visit friends or family so it makes increasing sense to just use a share car arrangement when that transport need arises.

There has been some great car-pooling innovation in the consumer space so the challenge for fleet managers and fleet management service providers is to work out how similar applications can be developed to meet corporate objectives.

To achieve the full value of a car pool solution, it's not just a matter of bolting a Booking Management system onto existing fleet solutions. You have to think about it very differently to successfully embed this sort of service into that broader business model.

We are at the apex of the acceleration curve in development and adoption of pool car-based fleet solutions with a range of business benefits acting as the lure to a willing market-place. These benefits include overall cost reduction, operational efficiency, better financial governance of fleet assets, accurate charge-back, improved OHS and release from the administrative overhead of managing FBT.

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