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Prepared by MRCagney Pty Ltd
INTRODUCTION

*The University is currently preparing a new Master Plan for the St Lucia campus. The Master Plan presents a long-range vision for future development and sets out UQ’s high level planning objectives for access and movement throughout the campus.*

Improved transport connectivity and movement to/from the St Lucia campus and between precincts such as Long Pocket are critical to the ongoing success of the University. They are key enablers of a vibrant, healthy and sustainable campus.

MRCagney was engaged to provide strategic and technical advice relating to traffic, transport, connectivity and parking, to inform the Master Plan.

STRATEGIC OBJECTIVES:

UQ aims to:

• Create an energetic, fun destination that contributes to the life and value of Brisbane City;
• Leverage the significant knowledge, economic, environmental and community contribution of the campus;
• Look outward and respond to both global trends and community desires;
• Demonstrate leadership;
• Reinforce and celebrate the fine physical setting and planning of the campus;
• Create a diverse and inclusive campus;
• Open the campus’s edges to integrate it seamlessly into the surrounding city and community; and
• Provide a flexible framework that reduces reliance on private vehicle transport and accommodates a range of possible local and state government strategic transport projects.

SCOPE

Understanding, predicting and responding to traffic and transport challenges and issues in a city experiencing significant change requires a comprehensive approach.

Six separate transport strategy reports/discussion papers have been prepared to cover the full spectrum of accessibility, connectivity, and mobility options to inform the Master Plan. The strategies consider the role different modes can play in achieving UQ’s master planning objectives. How these modes can act collectively is considered in the Travel Demand Management Strategy.
Sustainable transport planning assumes each transport mode has a role to play and then seeks to create a balanced system in which each mode is used for what it does best, providing a range of travel choices.

Modes should complement each other, rather than compete, to maximise benefits.

The over-arching Travel Demand Management Strategy shows how these multi-modal investments can work synergistically, and how travel behaviours can be incentivised, to reduce congestion, and enhance accessibility and connectivity.

The following pages summarise the key opportunities and recommendations from the six strategy reports.
TRAFFIC AND ACCESS STRATEGY

Purpose:

While demand-driven staff and student growth at UQ may (all other factors remaining equal) result in increased demand for private vehicle travel, such an outcome is by no means a foregone conclusion. Indeed, the events of the last decade suggest vehicle travel demands can decline even as total travel demands grow, largely because of sustained investment in public and active transport infrastructure/services and a commitment to, and implementation of, travel demand management policies.

The key purpose of this strategy is to consider:

- Internal vehicle circulation and service vehicle routes on the campus; and
- UQ traffic on the external network.

The current internal vehicle circulation and access to the university precinct has been examined to identify current constraints and opportunities for optimising access and movement. Network and road improvements for the purposes of improving safety for pedestrians and cyclists, and improving vehicle circulation and carrying capacity are also considered.
OPPORTUNITY

*Private vehicle travel* is still a necessary component of travel demands for the St Lucia campus. For transport demand beyond the reach of public and active transport modes, either due to a lack of accessibility, timeliness or convenience, private vehicle travel bridges the gap. There are, however, significant network and topographic constraints that preclude significant capacity improvements for motorised traffic, both for the local community and UQ.

*A minimum of vehicular* intrusion into the campus core is a key planning objective, however it must be ensured that people with disabilities and necessary maintenance and service providers are provided with appropriate access and that emergency vehicle access is available to all parts of the campus.

As a guiding principle, the Master Plan will preference support for sustainable transport options such as walking, cycling and public transport, over single occupancy private vehicle demand. The focus needs to be on moving people, not vehicles.

As such, while this strategy concentrates on private vehicle travel, any recommendations to improve or manage traffic flows to and from the St Lucia campus are not to be viewed in isolation and are to consider all modes of travel and/or the amenity impacts on the local community.

RECOMMENDATIONS FOR CONSIDERATION

**External Network**

- Adopt a Travel Demand Management Strategy to reduce car usage to the University;
- Encourage more sustainable modes of travel and reduce the reliance of car travel by:
  - investigating options to improve the UQ to Toowong cycling and UQ to Indooroopilly cycling connections.
  - in collaboration with Council and the State, supporting key public and active transport infrastructure projects to connect the St Lucia campus with the surrounding region, including: connections with the future Cross River Rail and Brisbane Metro concepts; a cross campus bus connection; a potential active transport bridge to West End; and upgrading bicycle facilities on select major roads leading into the campus.
- Consider adjusting student scheduling to influence peak hour traffic demands.
- Consider opportunities to influence traffic demand and hourly traffic distribution by reviewing parking policies.
- Liaise with the relevant stakeholders to support upgrades at key intersections to alleviate capacity constraints, to improve bus service travel times and reliability and improve pedestrian/cycling connectivity.
- Intersections identified for investigation include (Figure 1):
  - Toowong- Coronation Drive / Benson Street/ High Street; and
  - Taringa- Swann Road/ Gailey Road/ Indooroopilly Road.
• Intersections and road upgrades that consider and improve the full spectrum of travel modes should be prioritised over car-only solutions.

• Review crash history data and UQ related traffic on the local street network and recommend mitigation measures to improve local street amenity and the safe movement of people to, from and within the University.

**Internal Network**

• Develop a pedestrian only Campus Core supported by a pedestrian only primary circulation route and support this route with clear wayfinding devices.

• Prevent private vehicle traffic from intruding into the wider campus primary circulation routes through traffic control devices or road closures.

• Introduce appropriate traffic calming measures, including closures in some instances and access threshold treatments at key entrances, to ensure adherence to the 30km/hr speed limit.

• Establish a primary cycling circulation route distinct from the primary pedestrian circulation route to reduce conflict and support this route with clear wayfinding devices.

• Review the function of Sir William Macgregor Drive to discourage traffic speed and use and prioritise cyclists of all abilities. Over time, this may result in the relocation and consolidation of some kerb-side parking spaces.

• Improve the cycling route which connects Macquarie St, Eleanor Schonell Bridge, and Esplanade/Upland Road BCC cycling routes by providing dedicated cycling infrastructure to reduce pedestrian/cyclist conflict and vehicle/cyclist conflict.

• Examine existing service bay locations and service routes for opportunities to minimise pedestrian/service vehicle and cyclist/service vehicle interaction.

• Ensure vehicle access into the campus core for people with disabilities and that parking is accommodated close to building entrances and prominent areas of activity.

• Limit coaches/special event vehicles to the connector roads and remove access for these vehicles to Chancellor’s Place (as they interfere with TransLink bus services).

• Further investigate and prioritise intersection and street improvement projects. These include, but are not limited to:
  • Sir William Macgregor Drive – making it more bicycle friendly;
  • Pedestrian safety – safer/improved pedestrian crossings at select locations on Sir Fred Schonell Drive (within campus), Carmody Road, and Coldridge Street to name a few; and
  • Streetscape improvements on campus and at the St Lucia Village (including access to/from campus) to improve accessibility and amenity, and ultimately achieve safer and more vibrant places of activity.

• Reconfigure internal roads, including the realignment of Colleges Road and closure of the southern section of Sir William Macgregor Drive, to create new open space.
Partnerships

The St Lucia campus is part of a wider transport network. UQ-related traffic both affects and is affected by external traffic. Delivering a sustainable traffic network in the St Lucia surrounds is therefore the result of a collaborative approach between key stakeholders and delivery partners. Therefore, it is recommended that a traffic management framework is prepared in conjunction with Brisbane City Council (as the primary regulator) that sets out any planning, monitoring, mitigation, and management of traffic related impacts associated with the St Lucia campus. Managing community expectations can only be achieved through strong working relationships and collaboration between the university and Council.

Brisbane City Council and the Queensland Department of Transport and Main Roads jointly manage the metropolitan multi-modal transport operations via the Brisbane Metropolitan Transport Management Centre (BMTMC). It is recommended that UQ establish a dialogue, and ongoing collaborative working relationship with the BMTMC to ensure the most efficient movement of traffic to and from the campus.
Purpose:
An assessment has been conducted of the suitability of current and proposed parking provisions to meet expected demand and mitigating strategies and opportunities for parking supply management to cater for future demand within the UQ St Lucia campus. This strategy considers over-arching policy, pricing, and product interventions with the potential to deliver major improvements on the status quo. The key intention of this strategy document is to provide overall guiding principles for parking management within the UQ St Lucia campus and to inform the development of specific parking recommendations to support UQ’s Master Plan.
OPPORTUNITY

Parking is an essential component of UQ’s transport network and is intrinsically linked to vehicular traffic demands to/from and within the St Lucia campus. However, managing car parking effectively is crucial to achieve positive outcomes, especially to realise the full economic potential of the campus and reduce pressures on the external and internal road networks.

The over-arching principle is to achieve a more efficient use of existing parking resources and balance accessibility needs without leading to an over-reliance, or over-dependency on the use of private vehicles (which generate traffic). Parking management strategies that, firstly, encourage more efficient utilisation of parking resources and, secondly, manage demand, are more cost effective than simply increasing supply. They also support more strategic planning objectives, such as:

• reduced development costs;
• providing a compact, multi-modal campus (more accessible and more efficient land use development);
• pro-active encouragement of alternative modes and reduced reliance on private vehicle use (thus reducing traffic congestion and pollution);
• more amenable and attractive campus, and more connected communities; and
• more space to accommodate new uses and respond to new demands.

Better parking management, pricing and design/layout of parking can improve the accessibility and amenity of the campus as well as maximise the existing investment in parking provisions.

The right amount of parking supports local accessibility and economic activity without compromising the safety and efficiency of the transport network.

The right place for parking depends on wider urban design outcomes to create a vibrant and attractive place, especially for pedestrians.

The right price for parking will aim to keep occupancy levels sufficiently high to maximise parking utilisation (but not saturated) resulting in a situation where there is always an adequate quantity of parking available for those who are willing to pay for them. Revenues generated from priced parking may also be hypothecated by UQ for further investment in alternative travel options such as public and active transport improvements.

RECOMMENDATIONS FOR CONSIDERATION

Parking Study:

• Undertake detailed parking surveys to assess current occupancy and turnover for all types / locations of parking on campus. Alternatively, (if available), obtain parking data from existing parking systems.

Campus Supply:

• Parking supply may gradually reduce as parking spaces are consolidated – i.e. Daily and hourly priced on-street casual parking along Sir William MacGregor Drive to be (gradually) removed or reduced.
• Parking to be consolidated in larger parking facilities at the western edge of the campus (Figure 2).

• The 1 1/2 P Short-term parking zones on campus at University Drive and on Campbell Road to be converted to a combination of loading zones (allowing for drop-offs) and restricted parking.

• Review uptake of permit schemes by university staff, to consider whether additional capacity for general (casual) parking might be drawn from permitted parking if it is underutilised.

Demand Responsive Management / Pricing:

• Shift pricing regime from predominantly daily (all-day) rates to hourly rates to spread the traffic load and support a higher turnover of parking spaces.

• Convert existing daily parking on William MacGregor Drive to hourly parking, in the run-up to the removal of parking along the riverfront, to activate the river’s edge and prioritise riverfront for recreational engagement and active transport use.

• For the consolidated parking facilities, it is advised that a conversion from daily (unless permit parking) to hourly is implemented to increase the utilisation of parking, and allow users to weigh up costs compared to public transport and active transport, to support a modal shift in journeys to / from the UQ St Lucia campus.

• Ensure signage and parking information clearly highlights priority parking, locations, pricing, and options to improve compliance, reduce unnecessary circulation of vehicles, and assist people in making better decisions.

• Seek to improve public transport and active transport (i.e. walking and cycling) infrastructure to ensure acceptable overall movement to / from and within the UQ St Lucia campus and actively promote and encourage more sustainable access modes.

Smart Parking and Enforcement:

There may an increased need for monitoring / enforcement of casual parking spaces and / or the introduction of an improved parking management system, with the following potential features:

• Boom gates at large parking buildings and outdoor car parks to ensure compliance with the hourly parking tariffs, instead of the existing pay and display system.

• Pay-by-plate technologies for on-street parking and small off-street parking areas.

• Virtual permit system to streamline management of the existing permit system and provide new products such as temporary / guest permits. Consider the compatibility of smart parking technologies with the existing campus parking, and whether they can facilitate better enforcement, utilisation and management of supply and demand.

• Enable future parking management systems to have the capability to integrate with other systems (i.e. student card, future public transport card) and other emerging technologies.

Embracing sustainable travel choices:

• Consider initial provisions (i.e. pilot programs) for embracing emerging trends in motor vehicle technology and travel behaviour to better understand the potential demand and operational requirements.
Examples of emerging motor vehicle technology and travel behaviour include:

- Electric vehicles: While hybrid (typically electric and petrol / diesel power) vehicle technology is common, full electric vehicles are currently a relatively new technology. Provision for electric vehicle charging stations within significant parking structures / areas (particularly linked to solar power collection) would cater for these types of vehicles.

- Car-share schemes: It is noted that UQ has recently introduced provision for car-sharing through GoGet within the St Lucia campus. This could be expanded (based on demand) and/or rolled out to Long Pocket and/or other UQ off-site facilities.

- Autonomous vehicles: While a technology currently in its infancy, there are currently several companies well advanced in the development of autonomous / driverless / self-driving vehicles. These vehicles do not require direct driver input while travelling between destinations, relying instead on monitoring cameras and intelligent processing to control the vehicle.
Purpose:

UQ’s public transport network represents an opportunity to enable UQ’s vision for the future. Public transport can facilitate UQ’s vision of a “community within a city”, increase UQ’s connectivity with the city and the local community and assist in activating the river’s edge. UQ’s accessibility via public transport also represents a tremendous opportunity to facilitate more sustainable attitudes and behaviours in daily life. UQ can lead the state and country in sustainability and campus environmental performance.

The purpose of this strategy is to align the vision for the St Lucia campus with a public transport environment that will support this vision. Consideration will be given to the existing public transport environment, UQ’s position within the wider transport framework and the drivers of the public transport mode choice.
To align with master plan objectives, UQ requires a high frequency, well-connected public transport network and a shift towards a more sustainable transport system for users of the St Lucia campus.

RECOMMENDATIONS FOR CONSIDERATION

Demand Management

- Include the ferry services in UQ’s travel behaviour change incentives strategies.
- Investigate opportunities to implement a subsidised student transport scheme in collaboration with TransLink and other relevant third parties post TransLink’s shift to an account based system. This scheme should consider the impacts of TransLink’s recent fare reductions on the UQ student / staff public transport mode share as a test case of responsiveness to fare initiatives.
- Investigate opportunities to utilise TransLink real-time data through the development of mobility management apps and the implementation of real-time public transport information boards throughout campus.
- Consider opportunities for UQ to demonstrate leadership in service delivery by investigating “mobility on demand” solutions to supplement service offerings.

Leadership

- Consider opportunities for UQ to demonstrate leadership in environmental sustainability by incorporating innovative environmentally sustainable technology into their service offerings and station design.
- Deliver opportunities for industry to physically occupy space on campus, and establish a Living Lab centre for industry and university collaboration and excellence in the areas of Total Mobility Management and use of alternative fuels and vehicle technologies.
- Replace existing low-quality diesel shuttlebus services between the main campus and Long Pocket with high-quality electric (or other environmentally friendly fit for purpose fleet) to raise service profile, reduce environmental impact and deliver leading edge transport infrastructure and technology outcomes to the University community.

Strategic Opportunities

- Explore leveraging opportunities arising from significant PT projects in the SEQ region:
  - Cross River Rail is currently the Queensland Government’s highest priority public transport infrastructure project, linking southern and northern rail networks, via a Dutton Park to Bowen Hills direct connection. This project will significantly enhance connectivity within Brisbane, particularly between knowledge and technology precincts and the CBD. The proposed new Boggo Road station will boost interchange opportunities and take public transport access for students/staff/visitors to the University to the next level.
  - Brisbane Metro is Brisbane City Council’s concept, currently at the business case stage. It aims to cut bus travel times, increase capacity, and provide significantly more buses to service the suburbs. The Brisbane Metro concept has
recently evolved to an expanded network of high frequency services over 21 kilometres linking Eight Mile Plains, RBWH and also UQ Lakes busway stations.

- An active transport bridge between St Lucia and West End has been recommended in the Active Transport Strategy as part of short- to medium-term transport initiatives. Notwithstanding, given the success of existing public transport connections such as the existing Eleanor Schonell Bridge, it would be prudent to investigate the potential for future public transport links connecting West End and St Lucia, and beyond, as part of long term-planning of the St Lucia campus and surrounding suburbs.

**Infrastructure**

- Investigate options to connect UQ Lakes Bus Station and Chancellor’s Place Bus Station via either an above ground or underground link:
  - A cross-campus link could result in a mode shift to public transport of at least 10%.
  - All things being equal, a cross campus link could reduce private vehicle traffic on the St Lucia road network near the campus by up to 20%.
- Upgrade Chancellor’s Place bus interchange to increase capacity, improve operations and activate the plaza at Chancellor’s Place.

**Services**

- Investigate options to provide increased accessibility from north-west and southern suburbs prior to and following the implementation of a Chancellor’s Place to UQ Lakes connection.
- Investigate options to provide increased temporal accessibility to the campus following the implementation of a Chancellor’s Place to UQ Lakes connection.
- Work with TransLink to identify service design enhancements and marketing opportunities to improve the customer experience and grow patronage and ferry mode share. Key recommendations:
  - Extend night servicing to better serve student/staff travel needs;
  - Investigate potential to introduce some limited stops or some express services between the CBD and UQ campus; and
  - Investigate potential to commence a frequent cross-river connector ferry service between UQ and West End terminals during the off-peak and after 6.30pm.

**Partnership**

- Establish market relevant conferences/ facilities to capture industry and corporate events and provide an integrated learning and demonstration environment.
- Partner with the Department of Transport and Main Roads and Brisbane City Council to improve public transport linkages between the campus and the wider region.
- Integrate new and emerging flexible transport options that can complement traditional scheduled services and meet the diverse needs of the individual customer more efficiently.
- Evaluate new revenue models and opportunities to offset the costs of passenger transport provisions.
- Consider funding partnerships with key businesses for long term PT investment opportunities.
FIGURE 3: UQ & BRISBANE CITY CENTRE - FREQUENT PT SERVICE NETWORK

FIGURE 4: PASSENGER BOARDINGS

- Boardings
- Alightings
ACTIVE TRANSPORT

Purpose:

This purpose of this strategy is to review current active transport provisions at the St Lucia campus to assess current constraints and future opportunities to increase walking and cycling to, from, and around campus.
OPPORTUNITY

Efforts to encourage students, staff, and campus visitors to decrease their reliance on personal vehicles by promoting and incentivising active transportation have multiple benefits: inviting and attractive places for learning and activity; quality of life improvements in the community and on campus; long term behaviour change for students; financial savings for the university; and environmental advantages.

The University of Queensland already has significant policies that help to achieve these goals and has been most successful in achieving a relatively high active mode share (24%). However, to remain competitive and be a leader in smart growth sustainable development, UQ is keen to continually strive to increase amenity to encourage even great travel behaviour changes.

A successful active transportation strategy must comprise of multiple approaches to be effective. Dedicated walking and cycling infrastructure cannot be built without complementary strategies that dissuade private vehicle use and promote and normalise the active and healthier modes.

RECOMMENDATIONS FOR CONSIDERATION

Infrastructure Improvements:

Campus Improvements
The goal of all infrastructure, to support both cycling and walking, should be to slow speeds down and reduce traffic. A street hierarchy should be established that has three types of streets: connectors (defined as “The Boulevard” in the Draft Master Plan document); access roads; and campus streets (defined as either “Circuit Drive” or “The Promenade” in the Draft Master Plan document). These streets will have a defined speed and intended mode use, with campus streets only accessible to pedestrians and cyclists and selected service vehicles. Where the speed environment and vehicle volumes are high, cycle lanes should be installed. Opportunities to increase the interconnectedness between the pedestrian pathway system and the street network should be sought where possible.

End-of-trip facilities must also be provided throughout the campus to meet anticipated demand.

External Improvements
• Improve perceived safety of cycle routes to attract a wider population of users (all ages and abilities).
• Provide high quality facilities that minimise exposure to traffic stress.
• Prioritise routes that provide direct access to key destinations and follow corridors of high demand.
• Prioritise routes that link up to other parts of the network to form a coherent and legible network:
  • Build new links with nearby suburbs across the Brisbane River by building new active transport (and potentially public transport) only bridges; and
  • Open and grow the campus as a destination and entertainment precinct by having a network of cycleways that connect the campus with the wider communities.
• Establish an appropriate network density, with a fine-grained network in areas of high demand.
• Select routes that are attractive for users and that offer a pleasant, interesting, safe, and secure environment.
Select routes that minimise major gradient changes.

Prioritise network improvements along streets with high crash occurrence.

New Connections

Additional ‘green’ walking and cycling bridges can further strengthen the interconnection between the campus and surrounding communities. A bridge from West End to St Lucia will assist in achieving this aim by providing improved accessibility to and from the UQ campus for study or work from the centrally-located West End. Over time, a pedestrian and walking bridge between UQ and West End would also encourage more staff and students to live closer to UQ creating a greater share of sustainable transport trips in the future.

Key UQ and city-wide benefits of this bridge would include:

1. Improved accessibility to and from UQ as well as between the St Lucia community, the West End peninsula, QUT, the City and the Royal Brisbane Hospital (RBH).

2. Improved accessibility between the West End/ South Brisbane peninsula and key hubs such as Toowong, Taringa, and Indooroopilly.

3. Safer cycling options - providing a safe, connected network encourages people of varying cycling abilities to cycle as a means of transport.

4. The provision of high quality recreational infrastructure.

5. Connectivity to public transport, parks, markets and other local recreational or commercial facilities.

6. Activation of streets or parklands near the bridge landing points which in turn increases passive surveillance and safety, creating more vibrant precincts.

A potential bridge between West End and Toowong would be strengthened by an additional bridge connection between Toowong and West End, as proposed in the Brisbane City Council’s bicycle network overlay map and Council’s River’s Edge Strategy.

In addition to this new recommended bridge to West End, another bridge option that may be investigated for the longer term includes a green bridge to Yeronga. A bridge to Yeronga would provide many of the same benefits as a bridge to the West End would (such as safer cycling options and enhanced connectivity), albeit to a less centrally-located area.

It is also highly recommended that direct walking and cycling links to UQ facilities at Long Pocket are provided.

Services

Cycle share services should be expanded, either with CityCycle or through a university purchased fleet and service. Station locations should be placed at destinations and origins that integrate with transit.

Enforcement:

Targeted enforcement of infringements that affect pedestrians and cyclists predominantly on streets should be undertaken to promote a safe environment for vulnerable users.

Regulatory Improvements:

Slowing speed limits will encourage
a safer environment and should be determined based on the established street hierarchy, with maximum speeds of 30kph retained. Encouraging mixed use land development, with more residential colleges on campus, increases the potential population that can walk and cycle to nearby destinations.

**Promotions/Education:**
Adopting positive campaigns that are targeted at populations most susceptible to behaviour change, including incoming students and those that live within a cyclable distance, will help to promote cycling, and walking as a normal and enticing behaviour.

In addition, cycle counters, and other public relations campaigns that continually celebrate the steps taken to set up an environment where cycling and walking are commonplace, are encouraged. Generally, route information should be easily accessible, including low stress cycling route maps and pleasant walking routes maps.

In addition, events such as car free days and walk/bike to work/university day serve to further normalise active transport. These measures should be incorporated within smart phone applications and promoted via social media.

**Active Travel Partnerships**
The State and Brisbane City Council’s Principal Cycle Network Plans, Active Transport, Unique Window of Opportunity, and River’s Edge Strategies present significant opportunities not only to improve regional-wide accessibility but also to enhance the amenity of the city’s urban realm.

As part of Master Planning, UQ should explore leveraging opportunities arising from significant public transport and active transport projects in the SEQ region and work collaboratively with government and industry partners to achieve a city transformative level of connectivity.
MOBILITY MANAGEMENT

Purpose:

With the development of new, innovative technologies there are significant opportunities to harness these new technologies and provide an improved mobility experience for UQ staff and students. A Mobility Management Framework will assist UQ in leading by example, facilitating transformative changes, and achieving its Smart Growth and sustainability objectives. This strategy has been prepared to outline broadly these emerging technologies and implications, and to discuss the concept of a Mobility Management service delivery model.
OPPORTUNITY

**Mobility Management** is a design methodology to define and deliver integrated mobility products and services. A Mobility Manager aggregates infrastructure, services, technology, data, and information. It brings together transport operators and third parties for a seamless provision of service, information, booking, payment and customer relationship management services between transport modes.

Through innovation and multi-agency activity, resources can be coordinated efficiently, customers can make better decisions, and better travel demand management is achieved.

**A Mobility Management framework:**

- places individual user needs at the heart of the transport experience;
- supports a one payment account for the user;
- exploits rapidly advancing technologies to re-imagine the travel experience and expand transport options;
- provides continual feedback to the user;
- incentivises sustainable travel behaviours; and
- provides travel and complementary lifestyle services according to user defined segments.

**Among its benefits, mobility management:**

- coordinates an array of multimodal options;
- improves the effectiveness and efficiency of the whole transport system;
- promotes a business strategy that addresses consumer needs by forming alliances among public and private organisations to support and contribute to the financing of the total mobility offer;
- personalises the mobility offer to align with user behaviours, preferences and lifestyle needs; and
- identifies and levers value for the customer thereby encouraging more sustainable travel behaviours.

The University of Queensland is ideally positioned to champion the development of a Mobility Management framework to achieve a sustainable and vibrant campus and contribute to the wider region’s urban sustainability and economic competitiveness.

![FIGURE 6: KEY COMPONENTS OF A MOBILITY MANAGER](image-url)
RECOMMENDATIONS FOR CONSIDERATION

- Adopt a Mobility Management framework with value-added incentives to encourage sustainable transport choices and manage travel demand, in collaboration with government agencies and private sector partners.

- This entails aggregating multimodal options and supporting travel demand management and behaviour change initiatives under the one comprehensive and integrated delivery platform:
  - Aggregate the Offer – offer a one-stop shop by bringing together the currently disaggregated transport services to enable more intelligent use - including the provision of integrated, multi-modal customer information, relationship management, journey planning, booking and payment;
  - Design in Value – understand what the customer needs and incentivises active travel and public transport usage; and
  - Personalise the Offer – target the individual rather than promote generic messages.

- Facilitate the creation of a “Living Lab” to progress a Mobility Management framework.

Key steps include:

- Understand the impact and the potential of transformative technologies, the changing demographic, and retailing and socio-economic trends;

- Critically examine (and future proof) infrastructure and services through the lens of future mobility;

- Continue to progress and integrate the suite of existing UQ apps to assist and influence sustainable travel choices;

- Incorporate smart parking and connected vehicle technologies as part of the package;

- Identify new funding and revenue streams;

- Develop business case for a collaborative Mobility Management trial;

- Form partnerships with public and private sectors;

- Develop a Mobility Management pilot in conjunction with State Government, TransLink, technology, and other lifestyle service providers:
  - Establish the key business systems to achieve this user-led product approach;
  - Develop the technical platform that is required to facilitate segment based products, service delivery and revenue generation;
  - Design a number of products/services that directly deliver value to travellers to/from the University campus, which can be expanded and joined-up over time, noting that each will have its own costs and benefits/revenues;
  - Ensure Mobility Manager incentivises sustainable travel behaviours; and
  - Implement, monitor and review to assess performance and transferability.
FIGURE7: LIVING LABORATORY CONCEPT
Purpose:

Travel Demand Management refers to the application of strategies and policies to reduce travel demand (particularly single-occupancy private vehicles), or to redistribute this demand in space or time. In other words, Travel Demand Management is about changing the behaviours of commuters to achieve that elusive ‘perfect’ blend of walking, biking, transit, and driving.

The key purpose of this strategy is to recommend ways in which reliance on the private vehicle can be reduced and thereby assist in achieving a balanced sustainable transport system to and within the University of Queensland campus.
OPPORTUNITY

Key mechanisms for achieving a balanced system are via:

• The development of a clear overarching and integrated Travel Demand Management policy framework;

• Investment in a variety of infrastructure and service initiatives that prioritise and expand public transport and active travel choices;

• The creation of compact, walkable, self-contained, and mixed-use communities that assist in reducing the need to travel to access services and facilities;

• The provision of sustainable travel behaviour change incentives; and

• The development of a Mobility Management system which aggregates the above to provide an integrated mobility offering and a powerful travel demand management tool.

Travel Behaviour Change programs provide the following benefits:

• They are flexible, and can be customised by user group, purpose, place, and time;

• They can be planned and implemented relatively quickly, compared with infrastructure and land use measures;

• They are relatively inexpensive and scalable – able to be scoped according to available resources; and

• They support positive outcomes of infrastructure and services investment initiatives by establishing a public outreach presence to influence and assist travellers in making sustainable travel habits.

FIGURE 8: ELEMENTS OF TRAVEL BEHAVIOUR CHANGE
RECOMMENDATIONS FOR CONSIDERATION

- Improve and promote sustainable travel options for UQ students and staff by implementing the key directions of the Master Plan (and the supporting Transport Strategies which have been developed to inform the Master Plan):
  - Demand Management Measures – addressing vehicle dependency and incentivising sustainable travel behaviours.
  - Modal Measures – improving public and active travel options and access.
  - Outreach Measures – reaching target audiences through marketing, promotions, journey planning, and way finding applications.
  - Leadership Measures – demonstrating smart growth principles, planning and development.
  - Implement a stronger over-arching branding/positioning statement to increase the reach and frequency of UQ’s sustainable travel outreach messaging in the marketplace.
  - Implement improved parking management and pricing in keeping with the goal that sustainable transport is prioritised.
  - Apply the following guiding principles to facilitative transit-oriented development that reduces the need to travel and encourages more sustainable travel choices:
    - Encourage near to or on campus student housing ‘hubs’.
    - Facilitate self-containment by locating dining and retail activities at (or adjacent to) key interchange locations.
  - Put public and active transport at the centre of land use planning and development.
  - Consolidate and encourage more efficient use of current parking supply at the edges of campus.
  - Prioritise pedestrians and cyclists over vehicular access routes throughout the campus, where moving people is the primary aim.
  - Pursue other ‘travel’ reduction/demand management strategies such as lecture/work schedule changes and further investment in online/remote learning opportunities.
  - Establish a Travel Demand Management Fund with contributions from parking and infringement revenues, government agencies, and local businesses.
  - Adopt a Mobility Management framework to provide a personalised, seamless customer ‘lifestyle’ service with value-added incentives to encourage sustainable transport choices and manage travel demand, in collaboration with government agencies and private sector partners.
  - Integrate Travel Behaviour Change Plans into the Mobility Management framework to shape sustainable travel behaviour and patterns.

The focus should not be limited to transport, or even to transit, but instead be on mobility, connectivity, and sustainability.
The key steps to implementing a comprehensive Travel Demand Management program are:

- **Step one:** Set direction—Articulate the campus’ Travel Demand Management vision, goals and objectives, and identify its most important opportunities and challenges;

- **Step two:** Progress recommendations from the supporting Strategy Papers;

- **Step three:** Assess and prioritise supporting Travel Behaviour Change initiatives—Consider how different Travel Behaviour Change initiatives could help the campus achieve its Travel Demand Management goals by using a range of criteria to evaluate them – e.g. cost, expected mode share shift, feasibility and ease/immediacy of implementation, risk, value, and strategic importance; and

- **Step four:** Identify actions—Build a plan of action that explains what Travel Demand Management measures will be implemented and how the Travel Demand Management program will strengthen over time.

**FIGURE 9: BEHAVIOUR CHANGE WHEEL (UCL CENTRE FOR BEHAVIOUR CHANGE)**