



# **CITIZEN JURY**

## **METROPOLITAN**

Infrastructure Recommendations

# THE SPIRIT IN WHICH WE OFFER THIS REPORT

We, the jury, acknowledge and pay our respects to the traditional owners and custodians of Victoria where this report was written and will have further impact.

We the jurors, a diverse group of Melburnians, have undertaken these deliberations with sincerity; mindful of all generations, past, present, and future. We appeal to you, the reader, to approach this report with a spirit of goodwill and respect for all people and the environment.

This report is about our shared future.

# OVERARCHING VALUES AND THEMES

We endorse an approach which is above party politics, and provides a long term strategy which can be adhered to by successive governments. Greater levels of coordination and cooperation across all levels of government and within agencies are essential to our progress as a state.

The strategy should be guided by evidence and research collated by stakeholders to ensure that all Victorians' basic needs are met at a social, environmental and economic level. We have endorsed options which will promote a Victoria which is progressive, sustainable and takes care of its most vulnerable citizens. All Victorians deserve a high standard of infrastructure.

We present this report to identify how we will achieve this, over the next thirty years to create the type of Victoria we deserve to live in.

Existing infrastructure (of almost all descriptions) across Victoria is frequently at or over capacity – we need significant and continuous investment and regulatory change in order to relieve our overburdened infrastructure and set up Victoria to cope with the growth of the next thirty years.

# TENSIONS

On most issues, general consensus was reached readily. However, some transport options presented a level of tension within the jury; we feel that the strength of our recommendation on these options reflects the divergence of opinion in the wider Victorian community.

## WHAT'S MISSING AND WHY

We acknowledge that our jury was unable to deliberate on every option and every need with the attention and discussion warranted; the areas we did address were determined in part by our priorities as representatives of a metropolitan population. We anticipate that some of our oversights would have been addressed by the regional Citizen Jury.

In addition to the presented recommendations there are options we would have liked to explore further but due to time constraints, not all options were investigated. The absence of recommendations on these options does not reflect the jury's awareness of and passion for them.

## WHAT WE'D LIKE TO HAPPEN WITH THIS REPORT

We strongly advocate a non-partisan approach to decision-making and prioritising of projects in Victoria.

This document should be used as critical input to the strategies of Infrastructure Victoria in planning future infrastructure projects in Victoria. It should be reviewed and updated regularly. We suggest a review of this report every four years, tabled in parliament by the Auditor General in the 3-6 months before each state election, giving a four year review cycle.

This will ensure accountability on the following:

- Committed options are implemented and maintained
- The desired outcomes which inspired the option choices are happening.

# GLOSSARY OF DEFINITIONS AND TERMS

## ENDORSEMENT

### **Strong**

The clear majority of jurors support the option.

### **Moderate**

The jury supported the option but without strong endorsement.

### **Mixed**

Jurors offered diverging points of view on this option.

### **Does not support**

The majority, or all jurors, did not support the option although this does not mean it was completely without merit. In consideration of all aspects, the option could not be supported in its current form.

## PRIORITY

### **High**

### **Medium**

### **Low**

The level of priority is reflective of the jury's assessment of importance for the options. It is acknowledged that some options may require a long period of planning and implementation regardless of their rated level of priority.

# ACKNOWLEDGEMENTS

The Citizens' Jury would like to acknowledge the support, assistance and contribution of a range of people involved in the workshop sessions. Thanks to Infrastructure Victoria, New Democracy, Nation Partners and staff for their admirable efforts in organising the six jury sessions, and for tirelessly answering queries from jury members between sessions.

The Citizens' Jury was fortunate to hear presentations from many members of the wider community across a range of issues. Thanks to all the speakers who volunteered their time, and shared their passion and insights in their respective areas of expertise. This formed the basis of our thinking and the evidence base for our recommendations.

Thanks to Melbourne Park Function Centre for the use of the meeting spaces, and to the catering staff for providing us with amazing food! Thanks to Jury member Georgia for volunteering her graphic design skills in the cover art and design of this report. Thanks to Jury member Ursula for taking on the challenge of editing our first draft for consistency and style.

And last but not least, thanks to our fellow Jury members for their commitment to this enormous task. The Jury members have all done a wonderful job, giving up their time for six whole Saturdays, and seeing it through with humour, grace, and mutual respect (despite some robust debates!).

# NEED 1: ADDRESS INFRASTRUCTURE DEMANDS IN AREAS WITH HIGH POPULATION GROWTH



## AST – Access To Services Through Technology And Ict

The jury recommends delivering information communications technology (ICT) infrastructure necessary to support the community's access to online services in the following ways:

- Provide internet access to people who might not otherwise have it via community accessible locations such as libraries, shopping centres, government service offices and facilitate device loan programs via schools or public services.
- Open source and Industry Standard solutions should be utilised to prevent vendor defined standards which could lead to future incompatibilities and inefficiencies.
- Improve physical infrastructure in areas currently lacking in quality internet service.
- Improve and standardise public service websites such as Centrelink, MyGov and Medicare to be easy to use, reliable and contain all relevant information in easily understandable language.
- Encourage the above measures for private service websites like e-commerce retailers, banks, communication service providers.
- Encourage remote work, networking and services

This option provides broad-ranging benefits for most needs by improving the efficiency of transferring information and reducing the need to travel for everyday business, specifically:

- Reducing the need for individuals to travel to a building to fill out a form, which would mean:
  - Less traffic and emissions (Need 18)
  - Reduced disadvantage for people with mobility issues (Need 6)
  - Reduced demand on health services (Need 3)
- Supporting the growth of a digitally connected workforce by making it easier to do business online (Objectives 4 and 5)
- Encouraging more efficient and effective communication between government services, for example:
  - Healthcare: better data sharing between hospitals, GPs and specialists (Need 3)
  - Justice: better information transfer between police, courts and lawyers (Need 8)
- Improving service resilience and availability in case of disruptions such as road closures, strikes, natural disasters (Need 19).

### References

**Shannon Thompson**, Senior Manager, Price Waterhouse Cooper

Speaking on: Communication problems in Healthcare ICT

**Christine Nixon**, former Victoria Police Commissioner

Speaking on: Making justice and policing easier

# NEED 2: ADDRESS INFRASTRUCTURE CHALLENGES IN AREAS WITH LOW OR NEGATIVE GROWTH



**CSU** – Community and Public Space Utilisation Deregulation

**CSR** – Community Space Refurbishment or Rationalisation

The jury recommends deregulation to enable the re-use and rationalisation of existing infrastructure to enable cost effective refurbishment, maximising community usage whilst meeting needs in low growth areas.

The Jury recommend these options for the following reasons:

- It makes best use of existing underutilised public spaces, like community halls and sports grounds.
- The associated costs are minimal.
- Community involvement and wellbeing will flourish (Need 4, 5).
- Helps to encourage regrowth by enabling vibrant communities.
- Adds ownership and amenities to communities.
- Petty crime may be reduced.
- Leasing of council buildings not meeting council needs for a limited time, for example 10 years, rather than sell off accommodates future population fluctuations.
- Existing amenities can be modernised to become more inclusive for mobility challenged (Need 6)

Jurors acknowledge the following potential concerns:

- Community consultation and involvement is needed.
- A bureaucratic top down approach seen as imposing unsuitable solutions on the community.
- Selling of community assets are lost to residents.

# NEED 3: RESPOND TO INCREASING PRESSURES ON HEALTH INFRASTRUCTURE, PARTICULARLY DUE TO AGING



## ACF (previously ACM) - Aged Care Facility Expansion

With Australia's growing aging population, the increased demand for aged care residential facilities cannot be met by the current supply. The jury recommends the improving existing aged care facilities and providing additional infrastructure across Victoria by:

- Developing appropriate infrastructure for the state to provide in-home care, reducing the demand on aged care facilities.
- Improving pre-existing aged care infrastructure.
- Engaging private organisations and not-for profits build appropriate accommodation and residential facilities to meet demand (refer to Option ACM).
- Co-locate facilities within retirement villages and community supports to improve quality of life.

The Jury recommends this option for the following reasons:

- The ability to respond to the likely higher care needs of those entering aged care with purpose-built facilities.
- Reducing hospital admissions by improving access to targeted health services.

The jury has concerns around the affordability of age care facilities for lower-income individuals.

### References

"New needs" document provides relevant supporting evidence. The jury believes this option will yield a greater impact if co-ordinated with options HAP, HIC, and HAC

# NEED 3: RESPOND TO INCREASING PRESSURES ON HEALTH INFRASTRUCTURE, PARTICULARLY DUE TO AGING



**HCA** – Health Care Alternative Delivery Options

**EEA** – (New Need) Ehealth Embedded Across New Health System

The jury recommends the delivery of a mobile and e-health network throughout Victoria, enabling people to be treated in a coordinated and controlled way by multiple practitioners within and outside the hospital environment by:

- Progressing with the implementation of patient administration systems and electronic medical records across the health system.
- Establishing a Health information Exchange (HIE) and the Research Information Exchange (RIE), enabling the electronic transfer of information across organisation within a region, community or hospital system.

The Jury believes that the benefits of e-health are sustainable and long-term, even when the implementation involves commitment and investment in terms of time, money and training, by specifically:

- Reducing medical and clinical errors, as well as duplication of referrals, prescribing and consultation by centralizing patient information.
- Creating centralised access to patient information with appropriate levels of security.
- Providing a platform for sharing patient information, irrespective of the provider or location.
- Promoting equity and access to healthcare, especially in rural and regional locations, via telehealth, including diagnosis results (Need 12, 2).
- Better and faster integration and interaction between acute, primary and secondary services.

The jury notes concerns regarding:

- The big investment required - it will take considerable time to implement properly and be widely used.
- The training of personnel.
- GP's bearing the brunt of the work collecting and using data.
- Ethical, privacy, security & confidentiality issues.
- Patient's access to their own data, such as psychiatric.

To counter these concerns, the jury suggests:

- Creating an opt-out model (rather than opt in) for reach, complemented by a public awareness campaign.
- Considering the option of patient consent to individual health care providers prior to disclosure, for example to nurses or pathology.
- Implement levels of security viewing certain information, patients can consent to different practitioners viewing information to address ethical and confidentiality issues.
- Providing incentives for GP's to implement.
- Implement a central, national e-health system.
- Considering gradual roll-out time to implement.

This recommendation complements:

HCT1 – Health Care Big Data Leverage

ACM, same foundation (staffing for aged care)

Cost Implications:

- Requires investment in new equipment and IT personnel
- Training personnel

# NEED 3: RESPOND TO INCREASING PRESSURES ON HEALTH INFRASTRUCTURE, PARTICULARLY DUE TO AGING



## HCT1 – Health Care Big Data Leverage

The jury recommends making better use of technology to collect, manage and analyse data, along with using new technology to improve service access and system integration.

The Jury recommends this option for the following reasons:

- It will provide a better understanding of where to allocate and divert funding, such as geographically or within specific health departments like the Emergency Department.
- Predictive analysis for individuals, health care practitioners or artificial intelligence systems will help advance what diseases patients have a propensity towards.
- Using Big Data for reporting on:
  - Activity of each health organisation/facility
  - Decision-making and trends for health organizations regarding patient/s and infrastructure, such as equipment, patient beds, allowing us to utilising facilities most efficiently.

The Jury acknowledges the following potential concerns:

- Data quality or human error issues; for example incorrect information input.
- Reliance on technology, such as in the instance of catastrophe scenarios.
- The Jury also notes concerns could arise around possible breaches of privacy; and recommends this responsibility is to be shared across government, health organisations and Information Technology Consulting organisations.

This recommendation complements the HCA/EEA, alternative delivery of healthcare.

The jury notes the following cost implications:

- Initial investment, training and process changes
- Data collection, refining, warehousing; e.g. IT infrastructure

# NEED 3: RESPOND TO INCREASING PRESSURES ON HEALTH INFRASTRUCTURE, PARTICULARLY DUE TO AGING



**MHA** (new option) – Mental Health & AOD\* Acute and Community Facilities  
\*(Alcohol and other Drug Dependency)

The Jury supports the expansion and provision of appropriate facilities and services to support an increased number of patients who are suffering from an acute mental health and / or alcohol and other drug dependency episodes. Facilities must be specific for different purposes, for example young people need to be in appropriate facilities rather than aged care.

The Jury recommends this option/s for the following reasons:

- Improve access to targeted health care services, resulting in less hospital admissions and therefore less expenditure.
- Creates more targeted jobs and personnel trained specifically in mental health.
- Will increase the number of acute hospital clinical mental health-based beds across the state (both in hospital and community environments).
- Better meet the needs of mental health and AOD patients through improving Emergency Department resources.
- An increase in the space for mental health treatment services by trained staff.
- Utilising pre-existing community spaces as safe places/peer support for mental health patients; benefit of affordability to lower-income individuals and being close-to-home.
- Virtual hubs and health services associated with health professionals, with clear communication channels between acute, primary and secondary health providers.
- Encourage and empower family support and education to help provide support from the home.

The Jury also acknowledges the following potential concerns:

- Affordability and access to services for lower income families.
- Adequate eHealth infrastructure (not yet existing) would create necessary communication between health care providers and patients and families.

The Jury acknowledges that MHA requires development and advocates further assessment into this option.

## References:

Ingrid Ozols, Mental Health Foundation

Speaking on: Mental health services

This recommendation complements EEA - eHealth embedded across the health system.

# NEED 4: ENABLE PHYSICAL ACTIVITY AND PARTICIPATION

**AEA** – Active Established Areas



The jury recommends retrofitting existing suburbs and towns to increase the opportunities for people to walk and cycle to local infrastructure and services.

The citizen's jury strongly endorses this option for the following reasons:

- Enabling physical activity and participation (Need 4).
- Increasing levels of exercise can improve community health and wellbeing, reducing pressure on health infrastructure, as well as promoting greater participation and community cohesiveness. (Need 3)
- Economic benefits from improved productivity related to better physical and mental health (Need 3).
- Improved public safety, reducing the associated health care costs (Need 3).
- Improving access to middle and outer metropolitan major employment centres, and access to jobs and services for people in regional and rural areas (Needs 11 and 12)
- Increasing walking and cycling as forms of transport, and thus reducing the proportion of shorter distance trips taken by car, therefore diminishing the carbon intensity of travel - improving air quality and environmental sustainability generally. (Need 18).
- Reducing the demand on roads (Need 1).
- Providing access to employment areas for people without access to a motor vehicle or public transport (Objective 4).
- Beautifying public spaces, encouraging more outdoor participation and communities coming together (Need 5)

Other considerations:

- Unlike new developments, AEA presents a challenge because coordination will be required across several levels of government with planning at local government level, and potentially funding and implementation at state level (where a road is VicRoads controlled, but planning needs to consider local Council issues).
- Building walking and cycling infrastructure in established areas is potentially more expensive than in new developments, so funding may be a challenge. However, the benefits in terms of health, accessibility, lifestyle and equitable access to public spaces and amenities are worth pursuing.
- Options to address this challenge may include identifying opportunities to package this with other projects underway for urban renewal and road upgrades. Planning may consider prioritisation of high traffic corridors, shopping and public amenity destinations, along with safety black spot areas.

AEA also supports options:

ALP – Active lifestyle infrastructure provision

New 4.1 – Establish a centre of best practice for physically active infrastructure design standardisation

BHT – Bicycle highways through the central city

BWP1 – Bicycle and walking path data capture

BWP2 – Bicycle and walking path expansion and improvement

BWP3 – Bicycle and walking path separation

Footnotes

Need 4: Enable physical activity and participation

Need 3: Respond to increasing pressure on health care, particularly due to ageing

Need 6: Improve accessibility for people with mobility challenges

Need 11: Improve access to middle and outer metropolitan major employment centres

Need 12: Improve access to jobs and services for people in regional and rural areas

Need 18: Transition to lower carbon energy supply and use

Need 5: Provide spaces where communities can come together

# NEED 4: ENABLE PHYSICAL ACTIVITY AND PARTICIPATION

**ALP** – Active Lifestyle Infrastructure Provision



The jury recommends making improvements to the amenity of public spaces, by improving lighting and streetscapes and providing facilities like water bubblers, showers, bike racks and lockers. ALR should mandate that developers must include these facilities in all new developments.

\*Immediate for existing walking and cycling networks, and to be planned alongside longer term BWP2/BWP3/BHT/AEA projects.

The citizen's jury strongly endorses this option for the following reasons:

- Providing supporting facilities such as bike racks, showers and lockers will ensure that the investment made in other options such as BWP2/BWP3/BHT gets the best return possible.
- Providing bike rack facilities on trains, trams and buses will encourage multi-modal transport.
- Improved streetscapes and lighting improves public safety.
- Encourages physical activity and participation (Need 4).
- Increasing levels of exercise can improve community health and wellbeing, reducing pressure on health infrastructure, as well as promoting greater participation and community cohesiveness. (Need 3)
- Economic benefit from improved productivity related to better physical and mental health (Need 3).
- Improves access to middle and outer metropolitan major employment centres, and access to jobs and services for people in regional and rural areas (Needs 11 and 12)
- Increasing walking and cycling as forms of transport, and thus reducing the proportion of shorter distance trips taken by car, therefore diminishing the carbon intensity of travel, as well as improving air quality and environmental sustainability generally. (Need 18).
- Reducing the demand on roads (Need 1).
- Enabling access to employment areas for people without access to a motor vehicle or public transport (Objective 4).
- Beautifying public spaces, encouraging more outdoor participation and communities coming together (Need 5)

ALP also supports options:

New 4.1 – Establish a centre of best practice for physically active infrastructure design standardisation

BHT – Bicycle highways through the central city

BWP1 – Bicycle and walking path data capture

BWP2 – Bicycle and walking path expansion and improvement

BWP3 – Bicycle and walking path separation

This recommendation also complements:

ALR – Active lifestyle infrastructure regulation

Footnotes

Need 4: Enable physical activity and participation

Need 3: Respond to increasing pressure on health care, particularly due to ageing

Need 6: Improve accessibility for people with mobility challenges

Need 11: Improve access to middle and outer metropolitan major employment centres

Need 12: Improve access to jobs and services for people in regional and rural areas

Need 18: Transition to lower carbon energy supply and use

Need 5: Provide spaces where communities can come together

# NEED 4: ENABLE PHYSICAL ACTIVITY AND PARTICIPATION

**ALR** – Active Lifestyle Infrastructure Regulation



The jury recommends principles of active design should be incorporated into the construction of new residential, commercial and industrial developments. This would involve providing cycle ways, parks and pedestrian infrastructure.

The citizen's jury strongly endorses this option for the following reasons:

- Enables physical activity and participation (Need 4).
- Increasing levels of exercise can improve community health and wellbeing, reducing pressure on health infrastructure, as well as promoting greater participation and community cohesiveness. (Need 3)
- Economic benefit from improved productivity related to better physical and mental health (Need 3).
- Improved public safety, reducing associated health care costs (Need 3).
- Improving access to middle and outer metropolitan major employment centres, and access to jobs and services for people in regional and rural areas (Needs 11 and 12)
- Increasing walking and cycling as forms of transport, and thus reducing the proportion of shorter distance trips taken by car, therefore diminishing the carbon intensity of travel, as well as improving air quality and environmental sustainability generally. (Need 18).
- Reducing the demand on roads (Need 1).
- Enabling access to employment areas for people without access to a motor vehicle or public transport (Objective 4).
- Beautifying public spaces, encouraging more outdoor participation and communities coming together (Need 5)

ALF supports options:

ALP – Active lifestyle infrastructure provision

New 4.1 – Establish a centre of best practice for physically active infrastructure design standardisation

BHT – Bicycle highways through the central city

BWP1 – Bicycle and walking path data capture

BWP2 – Bicycle and walking path expansion and improvement

BWP3 – Bicycle and walking path separation

AEA – Active established areas

Footnotes

Need 4: Enable physical activity and participation

Need 3: Respond to increasing pressure on health care, particularly due to ageing

Need: Improve accessibility for people with mobility challenges

## References

Bicycle Network evidence: 70% of the population who would ride, if the infrastructure was supportive

# NEED 5: PROVIDE SPACES WHERE COMMUNITIES CAN COME TOGETHER



## NEED 4: ENABLE PHYSICAL ACTIVITY AND PARTICIPATION

**BWP2** – Bicycle And Walking Path Expansion And Improvement

**BWP3** – Modify Bicycle And Walking Path Separation

The jury recommends expand the walking and biking path network, particularly where there are missing links. This includes modifying existing road, bike and walkway infrastructure to separate cycling and pedestrian use.

All new and improvement works should aim to achieve separation of cycling and pedestrian infrastructure (i.e., to achieve BWP2 and BWP3 simultaneously).

The jury recommends this option for the following reasons:

- Enabling physical activity and participation (Need 4).
- Increasing levels of exercise can improve community health and wellbeing, reducing pressure on health infrastructure, as well as promoting greater participation and community cohesiveness. (Need 3)
- Economic benefit from improved productivity related to better physical and mental health (Need 3).
- Improved public safety, reducing the associated health care costs (Need 3).
- Improving access to middle and outer metropolitan major employment centres, and access to jobs and services for people in regional and rural areas (Needs 11 and 12)
- Increasing walking and cycling as forms of transport, and thus reducing the proportion of shorter distance trips taken by car, therefore diminishing the carbon intensity of travel, as well as improving air quality and environmental sustainability generally. (Need 18).
- A reduced demand on roads and more efficient use of road space, improving travel times for public transport users and increasing the flow of people (rather than cars) on the road system (Need 1, Need 11).
- Providing access to employment areas for people without access to a motor vehicle or public transport (Objective 4).
- Beautifying public spaces, encouraging more outdoor participation and communities coming together (Need 5)

Other considerations:

This option requires the support of strategic end to end corridors. Strategic need for long term implementation for both high volume routes and outer-suburb support.

BWP2 & BWP3 supports options:

ALR – Active lifestyle infrastructure regulation

ALP – Active lifestyle infrastructure provision

New 4.1 – Establish a centre of best practice for physically active infrastructure design standardisation

BHT – Bicycle highways through the central city

BWP1 – Bicycle and walking path data capture

BWP2 – Bicycle and walking path expansion and improvement

BWP3 – Bicycle and walking path separation

AEA – Active established areas

RSA – Road space allocation changes

SIP – subregional infrastructure planning

#### Footnotes

Need 4: Enable physical activity and participation

Need 3: Respond to increasing pressure on health care, particularly due to ageing

Need 6: Improve accessibility for people with mobility challenges

Need 10: Meet growing demand for access to economic activity in central Melbourne

Need 11: Improve access to middle and outer metropolitan major employment centres

Need 12: Improve access to jobs and services for people in regional and rural areas

Need 18: Transition to lower carbon energy supply and use

Need 5: Provide spaces where communities can come together

# NEED 4: ENABLE PHYSICAL ACTIVITY AND PARTICIPATION



## NEW 4.1 – Establish A Centre Of Best Practice For Active (Cycling/Walking) Infrastructure Design And Standardisation

The Jury recommends establishing an independent, centralised body to research, document and advise on best practice design for cycling and walking infrastructure. Design guidance is to be provided to VicRoads, local councils, developers, civil engineers and related parties. The mandate for the centre for best practice should include:

- Design principles for walking paths.
- Design principles for cycling paths.
- Design principles for on-road cycling lanes.
- Appropriate circumstances for shared use paths, versus cycling/walking specific infrastructure.
- Design principles should include issues such as:
- Connectivity with adjoining roads and paths.
- Sight lines and corner angles.
- Drainage and storm water run-off.
- Incline angles.
- Crossover and intersection design.
- Lane width and separation.
- Specifically addressing the differing needs of cyclists and pedestrians.

The jury strongly endorses this option for the following reasons:

- Getting the design right will make the best use of investment made under Options BWP2 and BWP3. There is a risk that this investment could be a waste of resources if it doesn't meet user needs and is therefore under-utilised.
- Enabling physical activity and participation (Need 4).
- Increasing levels of exercise can improve community health and wellbeing, reducing pressure on health infrastructure, as well as promoting greater participation and community cohesiveness. (Need 3).
- Economic benefit from improved productivity related to better health and mental health (Need 3).
- Improving public safety and reduced associated health care costs (Need 3).
- Improving access to middle and outer metropolitan major employment centres, and access to jobs and services for people in regional and rural areas (Needs 11 and 12).
- Increasing walking and cycling as forms of transport, and thus reducing the proportion of shorter distance trips taken by car, therefore diminishing the carbon intensity of travel, as well as improving air quality and environmental sustainability overall (Need 18).
- Reducing the demand on roads and more efficient use of road space, improving travel times for public transport users and increasing the flow of people (rather than cars) on the road system (Need 1, Need 11).
- Enabling access to employment areas for people without access to a motor vehicle or public transport (Objective 4).
- Beautifying public spaces, encouraging more outdoor participation and communities coming together (Need 5).

Other considerations:

Community and end user consultation must be enshrined in the structure, membership and mandate of this advisory body. The membership of this advisory body should include representatives of established community

groups, for example local Bicycle User Groups (BUGs), cycling clubs, school and parent representatives.

Making use of the insights and experience of such users, in a voluntary capacity, may help alleviate any concerns regarding the cost of establishing another government funded organisation, by minimising the number of salaried public servants, while also ensuring the right advice is provided with real user input.

Further consideration should be given to the power/authority to be mandated for this advisory body. That is, clarity regarding the ability to advise versus enforce the guidelines developed, or if/how this organisation might work with other agencies to achieve implantation of the guidelines.

Supports other options:

ALR – Active lifestyle infrastructure regulation.

ALP – Active lifestyle infrastructure provision.

New 4.2 – Review traffic signalling principles and implementation.

New 4.3 – Review all Victorian road rules with a cycling safety lens.

BHT – Bicycle highways through the central city.

BWP1 – Bicycle and walking path data capture.

BWP2 – Bicycle and walking path expansion and improvement.

BWP3 – Bicycle and walking path separation.

AEA – Active established areas.

RSA – Road space allocation changes.

SIP – subregional infrastructure planning.

# NEED 4: ENABLE PHYSICAL ACTIVITY AND PARTICIPATION



## NEW 4.2 – Review Traffic Signalling Principles And Implementation

The Jury recommends a review of traffic signalling principles and implementation, to better prioritise: Safety for vulnerable road users such as pedestrians, cyclists, and people with mobility challenges. People movement, rather than vehicle movement.

Particular issues which can be addressed through this option include:

- Signal sequences which currently do not allow enough time for all road users to get through the intersection safely (e.g. pedestrians with mobility challenges)
- Signal sequences which are currently set to prioritise a particular direction of travel, without regard to the volume of traffic. This includes examples where the pedestrian call button has a very slow response. This can result in road users of all kinds waiting for a long time for a green, even if there's no cross traffic.
- Providing a head start to pedestrian and cycling traffic at the beginning of the green light cycle, in order to allow vulnerable road users to clear the intersection quickly for their safety.
- This may include wider implementation of bicycle lamps, including where cyclists are currently expected to press a pedestrian call button.

The jury strongly endorses this this option for the following reasons:

- Enabling physical activity and participation (Need 4).
- Increasing levels of exercise can improve community health and wellbeing, reducing pressure on health infrastructure, as well as promoting greater participation and community cohesiveness (Need 3).
- Economic benefits from improved productivity related to better health and mental health (Need 3).
- Improving public safety and reduced associated health care costs (Need 3).
- Improving access to middle and outer metropolitan major employment centres, and access to jobs and services for people in regional and rural areas (Needs 11 and 12).
- Increasing walking and cycling as forms of transport, and thus reducing the proportion of shorter distance trips taken by car, therefore diminishing the carbon intensity of travel, as well as improving air quality and environmental sustainability generally (Need 18).
- Reducing the demand on roads and more efficient use of road space, improving travel times for public transport users and increasing the flow of people (rather than cars) on the road system (Need 1, Need 11).
- Enabling access to employment areas for people without access to a motor vehicle or public transport (Objective 4).
- Beautifying public spaces, encouraging more outdoor participation and communities coming together (Need 5).

Supports other options:

ALR – Active lifestyle infrastructure regulation.

ALP – Active lifestyle infrastructure provision.

New 4.1 – Establish a centre of best practice for active (cycling/walking) infrastructure design and standardisation.

New 4.3 – Review all Victorian road rules with a cycling safety lens.

BHT – Bicycle highways through the central city.

BWP1 – Bicycle and walking path data capture.

BWP2 – Bicycle and walking path expansion and improvement.

BWP3 – Bicycle and walking path separation.

AEA – Active established areas.

RSA – Road space allocation changes.

SIP – subregional infrastructure planning.

## **References**

<http://denmark.dk/en/green-living/bicycle-culture/cycle-super-highway>

# NEED 4: ENABLE PHYSICAL ACTIVITY AND PARTICIPATION



## NEW 4.3 – Review All Victorian Road Rules From A Cycling Safety Perspective

The Jury recommends a review of all Victorian road rules, with a particular focus on cycling safety. All road rules are designed for motorised traffic, but are not necessarily appropriate for cyclists and some cycling-specific laws do not prioritise the best safety outcome. There is evidence that some road rules should be amended to improve safety outcomes for cyclists and other vulnerable road users and some have a negative impact of cycling participation rates. Examples include:

- Mandatory helmet laws.
- Idaho stop, a common law in the US that allows cyclists to treat a stop sign as a Give Way sign.
- Left turn on red signal, at appropriate intersections.
- Riding on the footpath, especially for children aged 12-18 accompanying a younger child.
- Requirement to give way to left turning traffic.

The Jury strongly endorses this this option for the following reasons:

- Enabling physical activity and participation (Need 4).
- Increasing levels of exercise can improve community health and wellbeing, reducing pressure on health infrastructure, as well as promoting greater participation and community cohesiveness. (Need 3).
- Economic benefit from improved productivity related to better health and mental health (Need 3).
- Improving public safety and reduced associated health care costs (Need 3).
- Improving access to middle and outer metropolitan major employment centres, and access to jobs and services for people in regional and rural areas (Needs 11 and 12).
- Increasing walking and cycling as forms of transport, and thus reducing the proportion of shorter distance trips taken by car, therefore diminishing the carbon intensity of travel, as well as improving air quality and environmental sustainability generally. (Need 18).
- Reducing the demand on roads and more efficient use of road space, improving travel times for public transport users and increasing the flow of people (rather than cars) on the road system (Need 1, Need 11).
- Enabling access to employment areas for people without access to a motor vehicle or public transport (Objective 4).
- Beautifying public spaces, encouraging more outdoor participation and communities coming together (Need 5).

This recommendation complements:

ALR – Active lifestyle infrastructure regulation.

ALP – Active lifestyle infrastructure provision.

New 4.1 – Establish a centre of best practice for active (cycling/walking) infrastructure design and standardisation.

New 4.2 – Review traffic signalling principles and implementation.

BHT – Bicycle highways through the central city.

BWP1 – Bicycle and walking path data capture.

BWP2 – Bicycle and walking path expansion and improvement.

BWP3 – Bicycle and walking path separation.

AEA – Active established areas.

RSA – Road space allocation changes.

SIP – subregional infrastructure planning.

References:

<http://www.bikelaw.com/2016/01/27/living-with-stop-as-yield-for-cyclists/>

<http://road.cc/content/news/198965-denmark-cyclists-allowed-turn-right-red-lights>

# NEED 4: ENABLE PHYSICAL ACTIVITY AND PARTICIPATION

## **BVA** – Bicycle And Vehicle Accident Fault Allocation



The Jury was unable to reach a recommendation regarding this option and recommends that further research be undertaken in order to determine the value of this option. The Jury strongly supports the aim of improving driver behaviour towards vulnerable road users and it is possible that this outcome of improved driver behaviour could be achieved through other means or in combination with BVA.

The jury was unable to reach a recommendation on this option for the following reasons:

- Behavioural change is the key goal of this option, however there is insufficient evidence available to determine whether BVA would change the behaviour of drivers.
- Comparisons to the driver behaviour seen in European examples where similar laws exist are examples of correlation, but there is insufficient evidence to prove causation.
- Comparisons to European examples of similar laws are problematic, due to the differing legal contexts.
- The existence of the TAC in Victoria already provides insurance against injury for cyclists, and it is not clear whether BVA would in fact improve the financial and other support outcomes for injured cyclists.
- Likewise, other insurance options are already available to protect against property damage in a car/bike collision, and it is unclear whether BVA would improve the cover available or the outcomes in the case of a claim.
- While the TAC scheme does not generally cover unregistered vehicle users who are injured off roads, those are not the road users that the BVA option seeks to assist in getting more people to cycle on roads for physical activity and transport purposes (in line with the infrastructure needs identified by IV).

Other considerations:

- An emphasis on vulnerable road user safety in the driver training and testing regime, ongoing education and awareness campaigns, driver training, and improved policing of existing road rules should be considered as part of the overall picture for ways to improve driver behaviour.
- Improvements to driver education and behavioural change programs should be pursued irrespective of the outcome of the BVA option.
- During deliberations, it was suggested that we should consider compulsory third party insurance for cyclists. However, there is substantial evidence to demonstrate that this is not a viable initiative, nor are there significant benefits likely to result from it. The costs of any such scheme would outweigh any benefit, and there are considerable practical constraints for its implementation. Queensland and NSW have recently considered registration and insurance for cyclists, and have found against it (see references).

References:

<http://www.parliament.qld.gov.au/documents/committees/THLGC/2013/INQ-CYC/rp-39-29Nov13.pdf>

<http://images.smh.com.au/file/2014/07/03/5566903/regotwo.pdf?rand=1404379505399>

# NEED 5: PROVIDE SPACES WHERE COMMUNITIES CAN COME TOGETHER



**CSS1** – Community Space Shared Use Agreements:

**SLR** – Schools With Low Enrolments In Rural Areas

**Also relates to CSU – Community and public space utilisation deregulation** (See Need 2 where this option is written up in detail)

CSS1 - Improve resources and governance processes that will assist in establishing share-use agreements for community spaces and facilities between different agencies and associations across Victoria.

SLR – (Need 2) Schools with low enrolment/attendance can be an example of an inefficiently utilised mass of land, that already exist and can be used or the above options, CSS1 and CSS2. We encourage an emphasis on the importance of having public facilities for communities to get together; sharing facilities could help reduce the need to build new buildings and duplicate spaces that service the same purpose.

The Jury recommends the implementation of these options in the near future because they are low cost and have immediate benefits at the individual and community levels. Making better use of existing infrastructure, these options have the potential to strengthen communities and build resilience through enabling community participation, volunteer groups and micro-industries to contribute to local communities in a number of ways. The Jury recommends these options for the following reasons:

- These are local facilities close to where most people live, promotes local community engagement.
- We are using buildings that already exist, therefore they are low cost options.
- By improving governance processes it reduces red tape, which decreases use of facilities.
- Fosters cooperation between difference sectors, such as primary school and adult education providers, arts providers and
- Increases the number of venues available for artistic and other cultural activities.

**CSR** – Community space refurbishment or rationalisation

In addition, the Jury endorses the following Option:

CSR – (Need 1) Refurbish or rationalise public community spaces across Victoria, which are no longer fit-for-purpose or meeting community need.

The Jury recommends this options for the following reasons:

- There is a recognised issue whereby community spaces are no longer meeting community needs, particularly for local councils. (1)
- Public spaces, and the community connection they enable, have been recognised a central to social cohesion. These spaces can include parks, libraries, community centres, sports facilities and arts and culture venues.

Further to the endorsement of the above options, the Jury considers the following option to have merit with moderations required.

## CSS2 – Community space statewide event planning

Develop a local annual community activities calendar for public spaces across Victoria. The events would align with the needs and demographics of local residents.

This option describes an online event calendar with mention of the potential need for community event coordinators. While a central, state-run online calendar could be useful, the Jury does not view it as high priority. The event coordination aspect is a higher priority, to solve the issue of existing facilities not being utilised to their full potential.

The Jury's response to option **CSS2** is as follows:

- There are many community and public spaces across Victoria which could be better utilised. This option maximises the use of existing community/public spaces through coordinated planning.
- Has the potential to reduce pressure on volunteers who are at risk of burn out.
- Potential to increase use of existing infrastructure.

As further evidence of the need for these options, the following outlines secondary benefits that positively influence the needs list below.

By activating community spaces such as skate parks, town squares and bushland reserves, public parks and town squares, people are encouraged to use the outdoors, to walk or cycle to them, and naturally become healthier. In turn, this supports the needs related to health care. For example Need 3 (Respond to increasing pressure on health care, particularly due to ageing) sites the following aims:

- Changes to stop people from entering a hospital in the first place
- Reduce total real annual health expenditure per capita in Victoria
- Improve the average time to clear waiting lists

Other considerations:

- Barriers include the cost of public liability insurance, working with children checks, agreements for how the facility can be used.

Footnotes: Also addresses the following options.

Need 4: Enable physical activity and participation

Need 3: Respond to increasing pressure on health care, particularly due to ageing

Need 6: Improve accessibility for people with mobility challenges

Need 11: Improve access to middle and outer metropolitan major employment centres

Need 12: Improve access to jobs and services for people in regional and rural areas

Need 18: Transition to lower carbon energy supply and use

(1) The 2015 ALGA State of the Assets reports that councils' self-reported 40% of community infrastructure is not fit-for-purpose and require significant maintenance or renewal works to bring it up to standard. (IV Draft Options Book, p.118)

# NEED 6 IMPROVE ACCESSIBILITY FOR PEOPLE WITH MOBILITY CHALLENGES



**PTV** - Public Transport Accessibility

**PTA** - Public Transport Alternative Use Of Taxis And Hire Cars

The Jury recommends the adoption of the PTV option in a phased approach. All new assets are recommended to be built in consideration of accessibility for all Victorians, enabling use by those with mobility challenges. It is required that accessibility be rolled out to all existing assets as well but as this is a high cost activity, a deliberate and planned retro fit should be done to minimise cost as much as possible, while still delivering the outcome in a timely manner. It is also expected that costs could be minimised by prioritising newest assets first as older assets will have the shortest lifespan and their replacements will be easier and cheaper to implement.

The Jury also recommends the implementation of the PTA as an accessible and flexible delivery option for transport services enabling support to Victorians facing isolation due to disability, location or income. Localised activities in Yarrowonga and Warrnambool have demonstrated the viability of this option. Market driven solutions such as Uber are also opportunities for the community to leverage support for this option.

The Jury recommends this option/s for the following reasons:

- Both PTV and PTA options directly support Need 6 (Improve accessibility for people with mobility challenges).
- \*PTA can assist in meeting Need 2 (Addressing infrastructure challenges in areas with low or negative growth) by providing affordable and flexible transport options without the need to invest in structured and comparatively expensive public transport systems.
- The Jury also acknowledges the following potential concerns:
- There may be objections from competing services however this is potentially an opportunity for free market competition to provide the volume and quality of services while maintaining price competitiveness.
- Possible solutions such as Uber will require satisfactory regulation to ensure suitability for service to Victorians that are disadvantaged and potentially vulnerable.
- The PTV solution is significantly expensive as an option however not implementing this will perpetuate existing difficulties experienced by mobility challenged Victorians.
- Changes to regulations and policies to support these recommendations will required detailed development to ensure fair and effective implementation.

This recommendation compliments Need 11 and 12, improving access to employment opportunities in both metropolitan and regional areas.

They also support Need 2 addressing infrastructure challenges in areas with low or negative growth alongside need 3 providing access options to Health services and infrastructure alleviating the possible need to relocate due to insufficient support in the current area.

# NEED 6: IMPROVE ACCESSIBILITY FOR PEOPLE WITH MOBILITY CHALLENGES



## SCC - Community Health And Facility Access

The Jury recommends implementing regulatory planning to ensure accessibility solutions are addressed in new development planning, i.e. employ universal design. Community infrastructure accessibility (CIM) – application of universal design principles to ensure that infrastructure enables higher levels of accessibility to support Victoria's diverse population. Jury recommends: Implementing both SCC and CIM.

Jury recommends these options for the following reasons:

- People of all levels of mobility should be accounted for in infrastructure developments including transport, buildings, and community facilities.
- Benefits wellbeing for mobility challenged individuals by ensuring access to and eradicating exclusion from spaces.
- Benefits a wide range of population, including those with physical disabilities and aging population.
- Particular emphasis on trams at major stops to allow for the elderly and disabled individuals to board and depart with ease.

Jury acknowledge potential concerns:

- The jury acknowledges it is difficult to accommodate for all mobility requirements
- PTV in particular will result in high costs to overhaul all stations, stops, and transport types (busses, trains, trains)
- Yet planning can be implemented for future stations and tram stops to be created for mobility challenges.
- This need complements:
- These options are grouped together because of their similar achieved benefits for mobility challenged individuals.

# NEED 7: PROVIDE BETTER ACCESS TO HOUSING FOR THE MOST VULNERABLE VICTORIANS



## AHR – Affordable And Social Housing Targeted Development

The jury recommends introducing inclusionary zoning, or the mandatory provision of more affordable rental housing through amendments to the State Planning Policy Framework and appropriate legislation.

### 7.1 – Rent to Buy (New Option)

Co-contribution for home ownership with priority to the most vulnerable in the community. Perhaps suggest means or needs testing if the background is disadvantage. The recipient contributes to the deposit on an existing house, unit or flat and the state or a housing organisation provides rest of funds required to purchase the property. The buyer then pays rent to the organisation. If the property is paid for in full, ownership transfers to the buyer (renter). If the buyer dies the property is sold and the contributions paid to the housing organisation plus a percentage of capital gains is paid to any beneficiaries.

The Citizen's Jury recommends these options for the following reasons:

- Currently there is not a well-developed plan to address the specific needs for social housing in Victoria.
- Ensures inclusion of social housing into the planning phase of new suburb/property development.
- Encourages social inclusion, ownership of property and diversity in the community.
- As part of the ageing population, women over the age of 55 are particularly vulnerable to the risk of homelessness. Statistically women will outlive men.
- Allows home ownership to people at risk (particularly women over 55) where the person has substantial deposit for a property but not eligible for a bank/housing loan because of age (possible banking reform for the ageing population e.g. generational transfer of housing loans).
- Has the potential to break the poverty cycle
- In addition to this recommendation, the jury proposes that social housing should represent 30% of new suburb/property development using the **Future Directions for Social Housing in NSW Report** as a reference. It should be noted that some members of the jury raised concerns on the 30% figure for social housing inclusion.

We believe that this could alleviate social housing being excluded and ignored by the Government and developers.

**AHR and Rent to Buy 7.1** is complementary to options:

SHS1 – Affordable housing sector regulatory amendment

ACM – Aged care and mental health residential care investments

References:

'Future Directions for Social Housing in NSW Report'

Martin Joyce, General Manager Strategy and Engagement, Housing Choices Australia (Speaker)

UK rent to buy model

<http://hoa.org.uk/advice/guides-for-homeowners/i-am-buying/shared-ownership-what-to-watch-out-for/>

<http://hoa.org.uk/advice/guides-for-homeowners/i-am-buying/rent-to-buy/>

# NEED 7: PROVIDE BETTER ACCESS TO HOUSING FOR THE MOST VULNERABLE VICTORIANS



**SAH** – Affordable Social Housing Development Incentives And Fund

**SHS2** – Social Housing Social Rental Model

The jury strongly supports these options in their aim to increase private sector investment into social and community housing by means of incentives.

They have the potential to reduce the percentage of low-income households spending a large proportion of their income on rent, improve the quality of social and community housing and reduce the number of people who are homeless in our communities. This would require funding levels over and above other allocated funding.

The Jury recommends these options for the following reasons:

- These are options that can be implemented immediately at a low cost to the government
- They deliver efficient ways of supplying social and community housing
- Developers are committed to assisting social housing within a community
- It encourages social inclusion and diversity in the community across a broad geographical area, reducing community stigma
- They will supply quality, modern facilities
- It provides housing close to job hubs and critical services.

The Jury also supports **GOM – Government owned and managed social housing provision to increase stock** provided the Victorian Government considers the following points:

- Make better use of government land, for example utilising vacant land along transport corridors
- Set a defined target to increase housing stock each election cycle
- Create an opt-out policy by where the developer pays a fee per square metre to opt out of supplying social housing in new developments. The State would then use the fees collected to invest into government owned social housing stock.

This recommendation also complements:

**AHR** - Affordable and social housing targeted development

**Need 11** – Improve access to middle and outer metropolitan major employment centres

## References

NSW Future Directions for Social Housing in NSW Report

**Martin Joyce**, General Manager Strategy and Engagement, Housing Choices Australia

Speaking on: Social housing

# NEED 7: PROVIDE BETTER ACCESS TO HOUSING FOR THE MOST VULNERABLE VICTORIANS



## SHS1 – Affordable Housing Sector Regulatory Amendment

The Jury recommends using the Victorian Planning Provisions to provide affordable housing in strategic urban renewal precincts and other areas of significant change.

The Citizen's Jury recommends this option for the following reasons:

- We believe that it is critical that the Victorian Government includes social housing in their planning processes
- It inserts social housing into the planning phase of new suburb and property development
- In addition to this recommendation, the jury proposes that social housing should represent 30% of new suburb and property development using the **Future Directions for Social Housing in NSW Report** as a reference. However, some members of the Jury felt the 30% percentage of social housing inclusion was too high.

The Jury believes that this could alleviate social housing being excluded and ignored by developers.

This recommendation also complements:

**AHR** - Affordable and social housing targeted development

**Need 11** – Improve access to middle and outer metropolitan major employment centres

### References

NSW Future Directions for Social Housing in NSW Report

**Martin Joyce**, General Manager Strategy and Engagement, Housing Choices Australia

Speaking on: Social housing

# NEED 8 – ADDRESS EXPANDING DEMAND ON THE JUSTICE SYSTEM



## NEW OPTION - Early Intervention Programs For At Risk Juveniles

The Jury recommends providing Police early intervention program into schools.

The role of the Police Liaison officer would be to demonstrate the role of a police officer in Australia. Which may be quite different from what they may have been used to. This role could be extended, where appropriate, to counselling and mentoring individuals or groups with a view to altering anti-social behavior. It would also be of value in areas of social disadvantage where unemployment is entrenched.

The Jury recommends this option/s for the following reasons:

- A similar program operated in Queensland between 2001 - 2011\*, focusing on families of Indigenous and socially disadvantaged students. The primary focus was on in school behaviors which improved markedly. While no official follow-up has been done, anecdotal evidence suggests that there was a noticeable improvement in out of school behaviors.
- Provides an unthreatening environment for introducing Australian Policing through well designed and maintained programs.
- Documented evidence proves prevention is better socially and financially - Professor Karen Gelb.
- This addresses social issues that feed into the criminal justice system and brings related services together including courts, police education and support services.
- Funds are better spent on diversion and prevention.
- Diversion rates have a 94% success rate for young offenders.(Gelb)
- Young offenders require different programs to adult offenders. (Australian Institute of Criminology).
- Community corrections provide economic advantages over the prison system.
- Diversion reduces the load on the justice system.

Other considerations:

One jury member recommends extending the definition of special needs to include children with disturbed backgrounds who may be at risk of becoming juvenile offenders. Early intervention programs are widely used in the education of children with special needs to great effect.

Linkages:

JDP - Justice diversionary policy and programs

JHS - Justice and human services joint planning

JCS - Justice and human services co-location

JFV - Justice family violence response

### References

Professor Karen Gelb, Australian Institute of Criminology

Speaking on: Justice system

Christine Nixon, former Victoria Police Commissioner

Speaking on: Making justice and policing easier

# NEED 8: ADDRESS EXPANDED DEMAND ON THE JUSTICE SYSTEM



**JDP** – Justice Diversion(Ary) Policy And Programs

**JHS** – Justice And Human Services Joint Planning

**JCS** – Justice And Human Services Co-Location

**JFV** – Justice Family Violence Response

The Jury recommends addressing the factors impacting the criminal justice system such as drug and alcohol abuse (**Christine Nixon**), homelessness, poverty, family violence, mental illness, and low education as a priority to reduce the risk of offending. Once a young offender is imprisoned, the justice system has failed both the offender and society as a whole. We strongly believe that prevention is better than cure. Combining these four options provides a comprehensive structure to reduce demand on the justice system.

The Jury strongly endorses all of these options for the following reasons:

- Documented evidence proves prevention is better socially and financially.( Dr. Karen Gelb )
- This addresses social issues that feed into the criminal justice system and brings related services together including courts, police, education, and support services.
- Funds are better spent on diversion and prevention.
- Diversion rates through the courts have a 94% success rate for young offenders (Dr. Karen Gelb )
- Offenders are prone to engage with further antisocial/criminal behaviours once they leave prison.
- Community corrections provide economic advantage over the prison system.
- Diversion reduces the load on the justice system.

This recommendation also complements:

Need 9 (Provide access to lifelong learning)

Need 7 (Better access to housing for the most vulnerable Victorians)

Objective 2 (Foster healthy, safe and inclusive communities)

Objective 3 (Reduce disadvantage).

## References

**Christine Nixon**, former Victoria Police Commissioner

Speaking on: **Making justice and policing easier**

**Professor Karen Gelb**, Australian Institute of Criminology

Speaking on: Justice system

# NEED 8: ADDRESS EXPANDED DEMAND ON THE JUSTICE SYSTEM



**JSD** – Justice Service Delivery Through New Technology

**CSC** – Justice Case Management System

**CMD** – Courts Maintenance

The jury believes that effective justice delivery requires well maintained facilities and technology that supports and provides a comprehensive view of the client.

The Jury recommends these options for the following reasons:

- It delivers a better use of resources.
- It provides an unthreatening environment for court attendees through well designed and maintained facilities.
- A universal justice record, giving one view of the client accessible to all necessary agencies would allow identification of both people at risk (for e.g. diversionary purposes) and offenders.
- It provides immediacy of information flow and a reduction of duplication and clerical error.

This recommendation complements:

JDP – Justice diversion(ary) policy and programs

JHS – Justice and human services joint planning

JCS – Justice and human services co-location

**JFV – Justice family violence response** Objective 2 (Foster healthy, safe and inclusive communities)  
Objective 3 (Reduce disadvantage).

## References

**Christine Nixon**, former Victoria Police Commissioner

Speaking on: **Making justice and policing easier**

**Professor Karen Gelb**, Australian Institute of Criminology

Speaking on: Justice system

# NEED 8: ADDRESS EXPANDED DEMAND ON THE JUSTICE SYSTEM

## PSS – Police Station Supersites



The Jury concludes that the relocation of police into larger super sites is an unnecessary expense. A better option is **JCS - Justice and human services co-location**, to provide community hubs for police, justice and social services.

The Jury does not support this option for the following reasons:

- Communities are better served by accessible, locally-based police stations.
- Supersites will not act to reduce demand on the justice system.
- Improved ICT infrastructure and staff training along with interagency community hubs would provide a better solution to addressing demand for a police presence.
- Accessing police services in local areas allows for policing that is targeted to community needs.
- Locals knowing their police can reduce the separation some communities can feel from police.

We recommend Option **JCS - Justice and human services co-location** as a stronger solution for reducing the demand on the justice system.

This recommendation complements:

Objective 2 (Foster healthy, safe and inclusive communities)

### References

**Christine Nixon**, former Victoria Police Commissioner

Speaking on: **Making justice and policing easier**

**Professor Karen Gelb**, Australian Institute of Criminology

Speaking on: Justice system

# NEED 9: PROVIDE ACCESS TO HIGH-QUALITY EDUCATION INFRASTRUCTURE TO SUPPORT LIFELONG LEARNING



## LLH - Lifelong Learning Hubs

The Jury recommends further development on this option and acknowledge that we need government programs that formalise lifelong learning as an overarching strategy in developing education infrastructure. It would harmonise assets and simplify access to programs that are already in operation.

The Jury recommends this option for the following reasons:

- Benefits all generations.
- Encourages better use of the existing facilities.
- It meets multiple learning needs.
- Provides an informal learning environment for people who would otherwise not participate.
- Provides broader community involvement.

This recommendation complements:

Need 4 – enable physical activity and participation.

Need 5 – provide spaces where communities can come together.

Objective 2 – foster healthy, safe and inclusive communities.

Objective 3 – reduce disadvantage.

Objective 4 – enable workforce participation.

### References

**Peter Goss**, Grattan Institute School Education Program Director

Speaking on: "550 schools needed in Victoria by 2031"

**Kathy Walker**, founding director of Early Life Education

Speaking on : Early childhood education

# NEED 9: PROVIDE ACCESS TO HIGH-QUALITY EDUCATION INFRASTRUCTURE TO SUPPORT LIFELONG LEARNING



## **SLR** – Schools With Low Enrolments In Rural Areas

Instead of closing schools, the Jury recommends adapting, re-using and sharing facilities where there is a successive low enrolment or attendance and stagnant or decreasing growth areas

The Jury recommends keeping schools open with low enrolments in rural areas for the following reasons:

- Quality schooling is the starting point of a life-long education and provides the foundation for the individual and their contribution to society, community, and our economy (Need 3 & 8).
- There are benefits to attending schools close to home.
- Helps to prevent populations in rural areas from diminishing further.
- Advancements in technology make it easier for individuals to work and study in rural areas.
- Making schools available for wider community use will allow the facility to stay open, both for education and other community activities (Need 4 & 5).

To get the most out of existing school spaces, this recommendation would be complemented by:

LLH - Life Long Learning Hubs

SCUI - Campus Utilisation School

SFU - School Facility Use for Out of Hours Care

CSU - Community and Public Space Utilisation Deregulation

# **NEED 9. PROVIDE ACCESS TO HIGH-QUALITY EDUCATION INFRASTRUCTURE TO SUPPORT LIFELONG LEARNING**

**SOO** - School Boundary Enrolment

The Jury agrees this concept needs to be addressed. We consider there is not enough information provided about this option to reach a valid conclusion. The Government needs to provide data on the causes of the problem; information about effective solutions; methods for collecting relevant data and how it would be disseminated.

# NEED 9: PROVIDE ACCESS TO HIGH-QUALITY EDUCATION INFRASTRUCTURE TO SUPPORT LIFELONG LEARNING

## SSS – School Shortages



The Jury recommends providing new schools to address demand in high growth areas.

Planning and projection are time critical, with the development of new schools to be staggered according to demand. The Jury also ask to consider better utilisation of existing facilities.

The Jury recommends this need for the following reasons:

- Quality schooling is the starting point of a life-long education and provides the foundation for the individual and their contribution to society, community, and our economy (Need 3 & 8).
- There are benefits to attending schools close to home.
- Ensures manageable class sizes
- To meet population growth projections
- Right for high quality education
- High cost and high contribution
- Importantly, this initiative will contribute to a number of the objectives, vis-à-vis Reduce Disadvantage, Enable Workforce Participation, Lift Productivity.

This recommendation would be complemented by:

LLH - Using new schools for Life Long Learning Hubs

SCUI - Campus Utilisation School

The Jury asks that the Victorian Government also consider that paying inflated costs to purchase land in inner city suburb, such as Fisherman's Bend, have a negative impact. To counter this, schools should be planned in initial stages of any new developments.

### References

Peter Goss, Grattan Institute School Education Program Director

Speaking on: "550 schools needed in Victoria by 2031"

# NEED 10: ACCESS TO ECONOMIC ACTIVITY IN CENTRAL MELBOURNE



**HCT3** – High Capacity Trains – 7-Car

**HCT2** – High Capacity Trains – 10-Car

**GWR** – Geelong And Werribee Rail Upgrade

**GFR** – Geelong Fast Rail

The Citizen Jury strongly supports these four options given the high population growth projections for metropolitan Melbourne, especially in the outer growth corridors and the inner city. The need for increased rail passenger capacity can be addressed by introducing longer trains (contingent upon lengthening of some platforms) and upgrading track infrastructure to the west of the city.

The provision of a Geelong Fast Rail (providing a rapid access link between the Melbourne CBD and a major regional centre) and the upgrade of the existing Geelong and Werribee lines offer the following benefits:

- A high-speed rail service between the Melbourne CBD and Geelong (a major regional centre) as well as stops at stations like Werribee (a key activity hub in Metropolitan Melbourne) will reduce congestion on the existing and projected road network.
- Increasing sections of the Werribee train line to dual rail track, for example, around the Altona Loop, will address the current shortfall in capacity for service provision along the Wyndham Growth Corridor as well as the stations leading into the Melbourne CBD.
- Train infrastructure will better meet the projected increase in demand flowing from continued growth in the corridor between Melbourne and Geelong.
- Whereas many platforms will fit 7-car trains, existing platforms are not long enough to support 10-car trains. Platform lengthening can be expensive, especially for underground stations. HCT2 and HCT3, therefore, should only be implemented after an assessment to identify stations requiring platform lengthening.
- The Jury envisage that these upgrades will be funded and financed from normal sources such as government borrowings and/or government earnings.

This recommendation would be complemented by:

RSF - Rail signals and Fleet Upgrade

PTT - Public Transport Train Timetabling

TPU - Train Platform Utilisation

# NEED 10: ACCESS TO ECONOMIC ACTIVITY IN CENTRAL MELBOURNE



**RSF** – Rail Signals And Fleet Upgrade

**PTT** – Public Transport Train Timetabling

**TPU** – Train Platform Utilisation

The Citizen Jury see these three options as a definite priority. Together they lay the foundation for other options that will boost capacity across the rail network. They include long overdue fixes to signalling equipment across the metropolitan train network, better timetabling to account for trends in patronage, and encouraging better use of existing platforms.

The Jury recommends these options for the following reasons:

- These rail 'tweaks' will provide capacity improvements.
- RSF and PTT allow for flexibility in service delivery as needs change into the future.
- RSF and PTT will create margin for ad hoc changes to scheduling and services where there are system issues or disruptions, which also relates to Need 19 (Improve the resilience of critical infrastructure) and is similar to what CRR1 (Key movement corridor incident management) seeks to address.
- Further delays in implementing these fixes will blow out the cost of implementing them in the future.
- These 3 options lay the foundation for future integration with BRG (Burnley rail group upgrades), HCT2 (High capacity trains – 10-car), MLC (Metropolitan level crossing removal completion), TTF (Tram and train fleet modifications) and SYM (South Yarra Metro Station). They will also enhance the benefits flowing from rail extension and rail electrification options should they be pursued in the future.
- These options will also address Need 11 (Access to middle and outer major employment centres) as a natural extension of increased capacity.
- Greater rail network capacity will likely expand capacity and ease congestion on the road network, which in turn assists in addressing Need 13 (Improve the efficiency of freight supply chains).
- Other options such as MMS (Melbourne Metro 2), DHR (Doncaster heavy rail line) and RHR (Rowville heavy rail line) are less effective without these three options.

# NEED 10: ACCESS TO ECONOMIC ACTIVITY IN CENTRAL MELBOURNE



## WTB – Water Taxis/Buses/Ferries To The Central City

The Citizen Jury supports the increased utilisation of Port Phillip Bay and the Yarra and Maribyrnong rivers. Melbourne's waterways are vastly underutilised as compared to other capital cities.

Water taxi services are currently subject to practical restrictions such as a 5-knot speed limit between the Bolte Bridge and Dight's Falls. We propose regulatory amendments to allow low wake boats to travel faster, cutting travel times. Water taxi services could operate Docklands-South Yarra and Docklands-Flemington, which would service inner-city commuters. Decisions about the precise routes, timing and operation can be left to private sector providers.

The Jury recommends this option for the following reasons:

- WTB maximises the use of an existing asset at minimal cost (small regulatory change to the river speed limit)
- Creates opportunities in the business sector for the provision of water-based transport services
- Introduces new public transport options

The Jury also notes the following potential concerns:

- The introduction of water taxis along the Yarra may affect school rowing teams that use the river for training. This can be countered by introducing river 'lanes'.
- Another possible effect is riverbank erosion in those areas where the river has an earthen bank (most lower reaches of these rivers already have timber, concrete or bluestone banks). This can be addressed by using low wake watercraft such as those used along the Brisbane River to alleviate riverbank erosion.

The cost of this option is negligible. It simply involves minor regulatory changes that will allow the private sector to step in and provide these additional services.

We envisage these upgrades will be funded and financed from normal sources such as government borrowings and/or government funds.

# NEED 10: ACCESS TO ECONOMIC ACTIVITY IN CENTRAL MELBOURNE



**DTS** – Doncaster Tram Service

**HSP1** – Hoddle Street/Punt Road Public Transport Prioritisation

**BHT** – Bicycle Highways Through The Central City

**CCT** – Central City Tram Network Extension

The Citizen Jury supports each of these options because they make better use of existing roads, and create new public transport alternatives for commuters in inner Melbourne. These options recognise that bus, tram and bicycle transport options can be more efficient at moving people than cars, and seek to make such options more attractive to commuters.

## Doncaster Hill

Doncaster is a growing major activity centre not serviced by heavy or light rail. It is, however, serviced by buses. We need to avoid a situation where new high density residential development leads to a huge increase in car traffic on Doncaster's roads, which will not be able to cope with increased road congestion. A minor extension to the existing tram network (for which land was set aside many years ago) will provide the following benefits:

- Increases the benefit of existing bus services.
- Increases the benefit derived from the existing park-and-ride.
- Improved access existing tram and train services.
- Improved access to Doncaster shopping centre, improving liveability in the northeast suburbs and promoting commercial activity in the Doncaster key activity hub.
- Caters to the many new residents of high density developments on Doncaster Hill and in the Tullamore golf course redevelopment.
- The jury would be equally open to a high frequency shuttle bus service covering the same route and serving the same function as an extension to the tram line. We would expect analysis to be conducted, and the better option (i.e. tram or shuttle bus) selected on its merit.

## Hoddle Street

Hoddle Street/Punt Road is one of the most congested thoroughfares in Melbourne. HSP1 provides the following benefits:

- Improves the reliability of bus services.
- Removes parked cars from Hoddle Street, which contribute to congestion.
- We note that plans to implement elements of HSP1 have already been announced.<sup>1</sup>

## Bicycle highway

- Many cyclists are put off the inner-city due to heavy car traffic. BHT provides the following benefits:
- Greater safety for cyclists.
- Makes cyclists feel safer, which will encourage a larger percentage of (mainly women and children) cyclists to consider cycling into the CBD (reference: Tess Alloway from Bicycle Victoria).
- Inner-city tram improvements
- Minor extensions to the tram network could improve access to the CBD from inner city redevelopment

<sup>1</sup> Radical plan to ease Hoddle Street gridlock, The Age, <<http://www.theage.com.au/victoria/radical-plan-to-ease-hoddle-street-gridlock-20150321-1m4iyz.html>>

and renewal areas including Footscray and Fisherman's Bend. CCT provides the following benefits:

- Prepares for population explosion in central Footscray residential regeneration and new Fisherman's Bend residential precincts.
- Improves access to commercial and employment opportunities in Fisherman's Bend.
- Bypasses the need to travel on the Williamstown line.
- Improves access to the Highpoint shopping precinct and western suburbs including Essendon and Niddrie.

We envisage these upgrades will be funded and financed from normal sources such as government borrowings and/or cash reserves.

# NEED 10: MEET GROWING DEMAND FOR ACCESS TO ECONOMIC ACTIVITY ON CENTRAL MELBOURNE



## TNP – Transport Network Price Regime

Overall pricing review to manage demand for travel at peak/non-peak times across the entire rail and road network.

The Jury recommends this option for the following reasons:

- Can be implemented and achieve benefits immediately.
- Possible to balance across socio economic groups.
- Allows existing infrastructure to be used more efficiently by managing the demand.

The Jury also acknowledges that this may have a negative impact on business and lower socio economic groups and suggests that this is mitigated by:

- Due consideration of impact of pricing on business and low income users, which can be addressed by differential (higher and lower than existing) pricing. We believe that if the pricing is increased at peak times, a corresponding decrease in charges at off peak times should be implemented so that this is not a revenue raising exercise.

Some jurors asked that the impact on the working poor be specifically noted as they may no option but to travel at peak times.

This recommendation complements the build options as identified by Infrastructure Victoria.

### References

Range of speakers have indicated that managing demand is one of the most effective methods for resolving congestion.

# NEED 10 – MEET GROWING DEMAND FOR ACCESS TO ECONOMIC ACTIVITY IN CENTRAL MELBOURNE

**CLR** - City Loop Reconfiguration



The Jury agrees with IVs assessment of this option as providing significant contribution to Melbourne's PT needs.

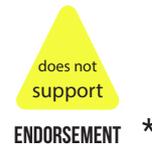
This is a long term option but will need to be planned for over the 30 year time frame.

# NEED 10 – MEET GROWING DEMAND FOR ACCESS TO ECONOMIC ACTIVITY IN CENTRAL MELBOURNE

**DHR** – Doncaster Heavy Rail

**RHR** – Rowville Heavy Rail

**DBI** – Doncaster Bus Improvement



\* Jury Does not support DHR and RHR, Moderate support for DBI, high priority for (DBI)

The Jury recognises that although there is strong community support for these options, IV has indicated that they are very high cost and long lead time options.

The jury recommends that other options that could address these needs be considered. For example,

- Enhanced bus services using existing road networks (DBI)
- Enhanced bus services using exclusive networks
- Adelaide style O-Bahn guided busways
- DBI would integrate well with proposed Metro II

The Jury acknowledges that these option deviate from the suggested, however while the need is acknowledged, the jury is of the opinion that the benefits do not justify the cost.

The jury would like to note that these options were not exhaustively researched and that jurors didn't have sufficient opportunity to consider these options.

A number of jury members consider due to future population growth of the catchments of DHR and RHR, expansion of the rail network is imperative within the next 10 – 15 years.

# NEED 10 – MEET GROWING DEMAND FOR ACCESS TO ECONOMIC ACTIVITY IN CENTRAL MELBOURNE



**GAT** – Growth Area Train Station Upgrade And Provision

**MRE1** – Melton Rail Electrification

Infrastructure Victoria's research to date, drawing on demographic and economic projections into the next few decades, strongly suggests a 'West Side Story', i.e. rapid growth in Melbourne's western suburbs. This will add to existing pressure on road and rail infrastructure. It is important that public transport options are attractive to new residents of the west and meet the projected needs into the future.

Firstly, the jury recommends that new stations be built in growth areas such as Truganina, Black Forest, Sayers, Davis and Doherty's Roads, and upgrades to existing overcapacity stations. These new stations and upgrades were recognised, in Infrastructure Victoria's analysis, as providing a significant contribution at a relatively low cost. The jury also suggests that the service to Tarnait be electrified and the tracks quadrupled to separate suburban and regional services. The estimated cost is \$100 – 500 million.

Secondly, the jury endorses the extension of the electrified suburban rail network from Sunshine to Melton, including the quadruplicating of tracks between Sunshine and Deer Park to maintain the separation of V-Line and Metro services. The work would also include the removal of three level crossings on the Ballarat Line between Sunshine and Deer Park West. The estimated cost is \$1-5 billion.

Additionally supporting bus services with priority access to train stations are required to alleviate pressure on car park facilities and access times. An integrated implementation of these two options is likely to create cost synergies (i.e. the total cost will be lower as compared to separate implementation of each option).

The Jury recommends this option/s for the following reasons:

- Increased transport capacity connecting middle and outer western areas to the city center.
- Increased density would reduce outwards pressure on the urban boundary.
- Improved public transport connectivity in the west will ease congestion on freeways.

The Jury also acknowledges the following potential concerns:

- There will be disruption to services as works are carried out, but these can be mitigated and minimised through careful project management, as has occurred in current works on level crossing removals
- The full benefit of these options will not be realised until other options (e.g. the Metro Metro tunnel) are completed. At the same time, there are quick wins from implementing aspects of GAT. New train stations in growth areas will help to integrate these burgeoning suburbs into the rest of the Melbourne, including improving access to employment opportunities in central Melbourne.

# NEED 10: MEET GROWING DEMAND FOR ACCESS TO ECONOMIC ACTIVITY IN CENTRAL MELBOURNE



## **BHT** – Build Dedicated Bike Lanes To Facilitate Better Travel Into And Across The Cbd

The jury recommends building dedicated bike lanes to facilitate better travel into and across the CBD.

The jury strongly endorses this this option for the following reasons:

- Examples of cycling “superhighways” in other places (e.g. London, Copenhagen, nine cities in Norway, Freiburg (Germany), the Netherlands) demonstrate that superhighways have the potential to significantly increase cycling participation rates, particularly for commuting purposes.
- Enabling physical activity and participation (Need 4).
- Increasing levels of exercise can improve community health and wellbeing, reducing pressure on health infrastructure, as well as promoting greater participation and community cohesiveness. (Need 3)
- Economic benefit from improved productivity related to better health and mental health (Need 3).
- Improving public safety and reduced associated health care costs (Need 3).
- Improving access to middle and outer metropolitan major employment centres, and access to jobs and services for people in regional and rural areas (Needs 11 and 12)
- Increasing walking and cycling as forms of transport, and thus reducing the proportion of shorter distance trips taken by car, therefore diminishing the carbon intensity of travel, as well as improving air quality and environmental sustainability generally. (Need 18).
- Reducing the demand on roads and more efficient use of road space, improving travel times for public transport users and increasing the flow of people (rather than cars) on the road system (Need 1, Need 11).
- Enabling access to employment areas for people without access to a motor vehicle or public transport (Objective 4).
- Beautifying public spaces, encouraging more outdoor participation and communities coming together (Need 5)

Supports other options:

ALR – Active lifestyle infrastructure regulation

ALP – Active lifestyle infrastructure provision

New 4.1 – Establish a centre of best practice for active (cycling/walking) infrastructure design and standardisation

New 4.2 – Review traffic signalling principles and implementation

New 4.3 – Review all Victorian road rules with a cycling safety lens

BWP1 – Bicycle and walking path data capture

BWP2 – Bicycle and walking path expansion and improvement

BWP3 – Bicycle and walking path separation

AEA – Active established areas

RSA – Road space allocation changes

SIP – subregional infrastructure planning

Other considerations:

- Implementation of cycling infrastructure, especially the build of significant new cycleways, has historically sometimes been tied to the funding and implementation of road projects. It can make sense to look for opportunities to coordinate with road projects and simultaneously improve the cycling infrastructure along the same corridor. However, the jury recommends that funding and planning for BHT should not be so linked to road projects that the failure to progress a particular road results in no cycling infrastructure proceeding. For example, the cancellation of the East West link also resulted in the cancellation of the cycling paths that were to go with it.

References:

<https://tfl.gov.uk/modes/cycling/routes-and-maps/cycle-superhighways>

<http://www.news.com.au/technology/innovation/motoring/superhighways-for-cyclists-could-be-coming-to-australia/news-story/2c190de14f460e2f4bc09fc478506347>

<http://denmark.dk/en/green-living/bicycle-culture/cycle-super-highway>

<http://www.livablecities.org/blog/bicycle-superhighways>

<http://inhabitat.com/norway-is-spending-almost-1-billion-to-build-ten-bicycle-superhighways/>

# NEED 10: ACCESS TO ECONOMIC ACTIVITY IN CENTRAL MELBOURNE

## HSR – High Speed Rail From Sydney To Melbourne

The air corridor between Sydney and Melbourne is the third busiest in the world and essential for commercial activity. The Citizens' Jury is generally in favour of rail infrastructure as a complement to road and air.

HSR provides the following benefits:

- Eases demand on Melbourne Airport at Tullamarine, removing or delaying the need for a second major airport
- Improves environmental outcomes due to reduction in domestic air travel and thus decreased jet fuel usage
- Improves access to regional centres such as Albury-Wodonga, promoting employment and regional development, which may in turn ease population growth pressures on Melbourne
- Decreases the travel time between Australia's two major financial centres, encouraging economic activity combined with GFR (Geelong Fast Rail) and electrification options, HSR will improve access to other parts of Victoria

Whilst the majority of jurors endorse this recommendation, there were a few concerns relating mainly to the business case and economic benefit.

We envisage these upgrades will be funded/financed through a public-private partnership (PPP) arrangement, and will involve state and Commonwealth involvement.

## NEED 10: MEET GROWING DEMAND FOR ACCESS TO ECONOMIC ACTIVITY IN CENTRAL MELBOURNE



## NEED 11: IMPROVE ACCESS TO MIDDLE AND OUTER METROPOLITAN MAJOR EMPLOYMENT CENTRES

**LBS** – Growth Area Bus Service Expansion

**SSP** - Smartbus Service Provision Increase

**MAM** - Melbourne Airport Metropolitan Public Transport Connections

**MII** – Multimodal Interchange Improvements

Addressing the lack of comprehensive coverage in the existing public transport system. Currently our public transport system covers the suburbs very scarcely – there is also no proper connection between the Tullamarine Airport and the wider Melbourne area.

We can increase the accessibility of the greater Melbourne through:

- Increasing bus services and extending hours of operation and frequency.
- Improving the connection between all modes of transport through better timetabling and parking facilities.
- Improving each form of public transport to make connection between different services for efficient.
- Cross-linking routes through areas such Melbourne Airport (shuttle/light rail on Tulla Freeway), the Northern and Western suburbs, with focus on connecting outer areas together without necessarily going through the CBD.

Benefits:

- Reducing dependency on cars, through providing better, reliable transport
- Reducing costs for road construction or maintenance.
- Increasing health outcomes – public transport users tend to walk approx. 40 minutes per day. Also encouraging social connections by getting people outside.
- Increasing accessibility to the airport until a train station is built
- Increasing the ability to move more people quickly to employment hubs
- Increasing tourism and business from outside and within Melbourne
- Assisting the transition to a low carbon economy
- Wide range benefits for low cost
- Ease in relocation of services if necessary

#### Concern:

- There is concern that airport and tollway owners have vested interested in lobbying against this option
- There is a risk that the new services will not be successful without sufficient promotion/awareness

#### Other considerations:

- Bus station parking, considering need for car space costs.
- Need for bike parking at bus interchange and stations.
- Need for improving inter-connection between routes e.g. bus interchange
- Bus service needs to operate before 6am, and after 9pm.
- Need to have clear bus lanes without disruptions.
- If we are unable to increase specifically SmartBuses, any other bus that utilizes technology is sufficient.

#### Complements:

Need 4 - Enable Physical activity and participation

Need 11

MAH – Melbourne Airport heavy rail line

Need 1

UDC – Urban Development in established areas (Links to Benefit 3)

SIP – Sub-regional infrastructure planning

Need 5

CSU – Community and Public Space Utilization Deregulation (Links to Benefit 4)

Need 18

EED – Energy efficient development (Links to Benefit 5, 6, 7)

#### Funding

- Increased patronage leads to cost efficiency
- Reduced need for new or improved roads due to reduced private transport.

# NEED 11: IMPROVE ACCESS TO MIDDLE AND OUTER METROPOLITAN MAJOR EMPLOYMENT CENTRES



## **ARN** – Arterial Road Network Employment Centre Enhancements

The jury provides conditional support for improving, expanding and connecting the road networks around major employment centres to meet growing demand for access.

The Jury recommends ARN for the following reasons:

- Connecting arterial roads will improve mobility between major employment centres, allowing more flexibility in work transport options.
- Business will be encouraged to locate in outer major employment centres, reducing the need to be based in the CBD (Need 10).
- It supports the concept of University Cities or Learning and Employment Clusters (as presented by Rob McGauran).
- Mobility into and out of high growth areas will also be improved as many major metropolitan employment centres are also areas of high population growth (Need 1).
- Freight efficiency will also be improved as employment centres are also centres for the movement of goods (Need 13).

To complement this need, the jury recommends that this option be implemented with a focus on improving existing roads, and only with similar investment in the equivalent public transport options as we consider this need best served by a mixture of:

- MTN (Employment centre mass transit network)
- SSP (Smart bus provision increase)
- LBS (Growth areas bus service expansion)

### **References**

**Rob McGauran**, Director of MGS Architects and Adjunct Professor of Architecture at Melbourne and Monash Universities  
Speaking on: University cities

# NEED 11: IMPROVE ACCESS TO MIDDLE AND OUTER METROPOLITAN MAJOR EMPLOYMENT CENTRES



**RCP** - Residential and Commercial Property Densification

**STO** - Strategic Transit-Oriented Development and Corridors

The Jury recommends better utilisation of existing inner suburban multi-mode transport hubs in areas such as Box Hill and Camberwell to encourage residential development which would reduce urban sprawl and provide convenient access to existing employment centres. By re-zoning these hubs and better utilising existing public transport corridors, we allow high commercial and residential density – encouraging more people to live near where they work, make the use of public transport more convenient and potentially eliminate private road traffic.

The jury recommends these options for the following reasons:

- Existing built infrastructure will be better used.
- Commute times will be reduced.
- It assists and reduces infrastructure and public services needs in (new) high population growth areas.
- Liveability is increased with more services, like shops and amenities, attracted to high population areas.
- Car usage and requirement for new and improved roads is reduced.
- Urban sprawl will be limited.
- Allows greening urban areas between growth corridors.
- Energy Efficient Housing (EED) Developments can be fostered.
- Increased resilience of existing infrastructure by greater usage/efficiency of existing.

The Jury acknowledges that existing residents may object to construction, however they feel they will ultimately benefit from future gains. By increasing business and residential developments in satellite hubs and making them economically self-sustainable, complementary needs may evolve from these such as:

- People who live closer to work are more likely to participate in active transport - build the bike path to satisfy a direct need. (Need 4)
- People have more time to participate in community activities, build new libraries with internet services for those that have no access.
- Higher densification may free up land for green wedge and parks. (Need 18)

This recommendation is complemented by:

Need 1

UDC – Urban Development in established areas (Links to Benefit 3)

SIP – Sub-regional infrastructure planning

Need 5, CSU – Community and Public Space Utilization Deregulation (Links to Benefit 4)

Need 18, EED – Energy efficient development (Links to Benefit 5, 6, 7)

Funding

Saving through using and expanding on existing infrastructure

Gaining council rates

# NEED 12 – IMPROVE ACCESS TO JOBS AND SERVICES FOR PEOPLE IN REGIONAL AND RURAL AREAS



## GPR - Gippsland-Pakenham Rail Shuttle

The Jury sees the benefits of converting the present Gippsland-Melbourne service to a linking Gippsland-Pakenham shuttle, allowing greater use of the high population Pakenham-Melbourne route by suburban commuter trains. It would also add a more frequent service to and from Gippsland which links with the metropolitan train system.

The Jury is not able to strongly endorse this project without proper community consultation, but recommends it to be actively explored. The Jury suggests that a small number of off-peak direct Gippsland-Melbourne services would be retained regardless, to meet specific demands. The Jury recommends this option for the following reasons:

- It builds a greater capacity along the whole route, albeit with a transfer at Pakenham.
- The increased capacity on the Pakenham-Melbourne segment of the route would encourage train usage, with flow on effects around the reduction of car usage.

It is noted that this Option could be implemented along with upgrades to existing tracks and signals.

## MPW – Mobile Police and Justice Workforce

The Jury was unable to reach a consensus on this option. Following consideration and debate, it was agreed that it would depend on the specific details of the program, and the manner in which it was implemented.

A number of jury members supported the concept of using ICT solutions to have more police in the field for longer periods. Others noted that this approach was specifically rejected by Christine Nixon during her presentation to the Jury, noting that “crime statistics increase as police numbers increase,” and that increased police don’t change that.

The jury recommends that further research and consultation by Infrastructure Victoria occur before proceeding with this option.

The evidence provided to the Jury was not supportive of this option, and the conclusions of the Jury after discussions showed there was a mixed view in the room.

# NEED 12 – IMPROVE ACCESS TO JOBS AND SERVICES FOR PEOPLE IN REGIONAL AND RURAL AREAS



**RBU** – Regional Bus Upgrades; and  
**HCP** – Healthcare Patient Subsidised Travel Program Extension

The Jury strongly endorses the concept of linking regional cities to each other, without the need to travel via Melbourne. The jury generally supports the option of a bus service to meet this need.

Bus upgrades allow for greater flexibility in routes and time-tabling, at a comparatively lower cost than alternate options such as Rail.

The jury recommends these options for the following reasons:

- There is a need to grow services in regional centers to avoid the growing reliance on services in Melbourne. This requires access to regional centers other than the traditional radial routes via Melbourne. This especially applies to healthcare services.
- Buses allow greater flexibility to service small communities between regional centers, in a way that fixed track rail cannot.
- It is understood by the Jury that upgraded bus services produce less emissions than older bus services; this is another reason to upgrade the system.

These upgrades complement and directly enable the subsidised healthcare patient travel program (Need 3), and these options are viewed as the most affordable and flexible way to achieve this.

It is noted that this option should be implemented in conjunction with options related to e-health, which are also supported by the Jury.

# NEED 12 – IMPROVE ACCESS TO JOBS AND SERVICES FOR PEOPLE IN REGIONAL AND RURAL AREAS



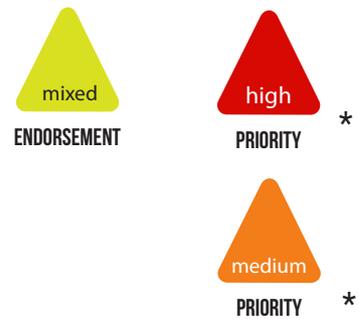
## **RRG** – Regional Rail Gauge Standardisation

The Jury strongly endorses this as a common sense improvement that will allow for greater development and utilisation of the regional rail network. This is seen as a clear and obvious first step for the rail network.

The Jury recommends this option for the following reasons:

- It enables the actioning of other associated priorities geared to expanding and improving other rail infrastructure.
- The current lack of standardisation leads to ongoing inefficiencies and lack of ability to improve the system (supports Objective 5).
- Standardisation improves travel times.

# NEED 13: IMPROVE THE EFFICIENCY OF FREIGHT SUPPLY CHAINS



## MAH - Melbourne Airport Heavy Rail Line (N11)

There is mixed community support for an airport heavy rail link. However, Melbourne Airport supports the rail link but a demand study needs to be undertaken to confirm usage.

## MAB – Melbourne Airport Dedicated Road Priority (N11)

Addressing the lack of reliable transport to the Melbourne Airport, through the city centre - without having to avoid matters such as traffic or unnecessary detours. Separate public transport (buses) from existing on road congestion by having dedicated busways into airport

## MAN - Melbourne Airport New Road Link (N13)

New roads from M79 (Calder Hwy) and M80 (Ring Road) to western side of airport to link with existing freight precinct and proposed new International Terminal (MAT)

## MAM – Melbourne Airport Metropolitan Public Transport Connections (N11)

Expansion of SmartBus services to airport from suburban areas to decrease reliance on taxis and cars.

## MAT - Melbourne Airport New International Terminal (New)

New International terminal located on western side of airport (similar to Sydney) with new road (MAN) and rail (MAH) connections to separate domestic and international traffic thereby reducing congestion.

## OMR - Outer Metropolitan Ring Road (N11 & N13)

The current single road access to the Melbourne Airport terminal is at capacity during peak periods causing significant delays and stress. Additional access options need to provide for passengers and freight to cope with ever increasing demand over next 30 years.

\*Priority high MAB and MAM, medium MAT and MAN

The jury recommends this option for the following reasons:

- Melbourne Airport is Victoria’s gateway to the rest of Australia and the world so therefore needs to provide the optimum ‘first & last impression’ experience that reflects well on Victoria to bolster economic growth
- Improving access to and from the economic and tourist centres of state
- Improving access and facilities for international and domestic travellers (both tourist and business)
- Improving access for freight and private vehicle movements thereby providing greater reliability and capacity during peak times to and from the Melbourne Airport.
- Reducing congestion along the Tullamarine freeway and access to domestic terminal
- Reduced need for new airport by better access and use of existing.

The jury notes that there are concerns regarding the following:

- There is significant cost associated with some of these options I.e. MAH and MAT
- SkyBus can be improved but may add to existing congestion on single road access
- Proposed route / directness of proposed rail link

Possible Counter Arguments:

- Better to keep terminals together and share amenities reduce terminal transfer traffic

Cost Implications

- Federal / State funding split for airport development
- Increased patronage leads to cost efficiency rail and bus
- Opportunities for PPP

These options complement:

NEL Need 13 to enable greater access to Melbourne Airport from SE suburbs via East Link and M80

OMR New Outer Ring Road located on northern side of airport with new road connections to separate domestic and international traffic thereby reducing congestion. Enabling greater access from regional areas for passengers and freight.

## **References**

Brisbane and Sydney airports have dedicated rail links and separate International Terminals I.e. MAH, MAT

Perth has multiple road accesses to separate terminals

# NEED 13 – EFFICIENCY OF FREIGHT

## EWE & NEL – Eastern Freeway Citylink connection & North-East link



Following detailed discussion across the whole Jury, there were divergent views on these options. However, it was very clear that the debate on these options should not be closed, and further informed debate on these options must continue; opinions remain too diverse to rule these options in OR out.

A slim majority of the Jury believes that these two infrastructure options are required to deliver an integrated freeway and freight system across Melbourne as the existing disconnected system constrains efficiency and requires a solution.

(Overall 22 were for, 6 neutral, and 12 against.)

If any further roads are to be built, these were seen as the priority. However, a (one third) minority of jury members, following presentations made during the entire Jury process, do not believe that any new roads should be built, and that any new roads only lead to increased cars on the roads. Both views were put with equal passion. It was also noted that some Jury members were more in favour of the NEL option than the EWE option, or one option but not the other, and that should be reflected. Overall, a consensus could not be reached on these matters. Those passionately in favour of these EWE & NEL options strongly recommend an integrated freeway infrastructure, and considers that both options are complimentary to this purpose. Nevertheless, there remained a minority of the jury (one third) that were against these options, both due to concerns about cost, and a concern that the building of new roads should not be a part of the infrastructure future.

- Improved connectivity across the city from east to west, and east to north.
- Meets the objective of prepare for population change (Need 1), facilitating movement across the city.
- Improves access to economic hubs, including airports, ports, etc.
- Lifts productivity with more efficient freight movement (supports Need 5 & Need 6).
- Reduces bottle necks.
- Reduced truck travel reducing emissions (supports Need 9).
- Improves amenity of adjoining suburbs with freight removed from suburban roads (supports Need 2).
- Reduces reliance on M1 corridor.

When the following caveats were made to the proposal, some of those jurors concerned about the options felt more comfortable, to varying degrees:

- The Jury notes that this should not be counted as building of new roads, but as the completion of existing roads and the existing Freeway network.
- The Jury stresses that support for these options does not preclude support for rail, and should not be seen as a choice of road over rail; simply as completion of the network.
- That the Jury would want proper environmental considerations to be taken into account when selecting routes for these options, including tunnel(s) similar to the Mullum/EastLink tunnel, which had similar environmental concerns.
- That the jury notes that funding mechanisms for these Options were complex, and did not agree on any funding source, and did not rule in or rule out tolls, or public-private partnerships.

# NEED 13 – EFFICIENCY OF FREIGHT

## NCP – New Container Port



The Jury endorses Infrastructure Victoria's concept of a new container port, allowing for freight growth, acknowledging the need for further development of this recommendation.

Whilst there was strong support over the need for a further deep water port, some members disagreed that Hastings remains the preferred option for the long term. The Jury suggests that further study of all options is required to progress development of this option and select the additional port site.

This option is favoured over PMC – expansion of the Port of Melbourne.

The Jury recommends this option for the following reasons:

- Freight is shifted away from the inner city, subsequently reducing traffic.
- The port and freight export and import capacity is increased, raising productivity (Need 5).
- Spreading freight across a new port moves capacity out of inner Melbourne, meaning greater livability (Need 2).
- It prepares for population growth with increased capacity and allowing for newer and properly planned supporting infrastructure (Need 1).

It is noted that this option (indeed, all port/freight options) benefits significantly from the implementation of the EWE & NEL Options to work properly in transporting goods to and from any Port.

The Jury endorses the **PMM (Port of Melbourne Metropolitan Container Shuttle) Option** as an interim measure to support freight movement until the development of a second Port.

The Jury remains open to the **PMC option**, noting Infrastructure Victoria's requirement for further development of the NCP option.

The Jury also notes the need for rail and road freight infrastructure support for any new port and contrasts this with the need for inner-city Freeways for Port of Melbourne.

## NEED 14: WATER SECURITY



**SRH** – Storm Water Harvesting And Reuse For Non-Potable Household Use.

**RTH** - Recycled Treated Wastewater For Non-Potable Household Use.

The Jury supports options to increase the efficiency of potable water usage by augmenting the sources of water for non-potable use, reducing the demand on potable water supply. This could involve mandatory storm water harvesting e.g. rainwater tanks and the installation of recycled water systems in all new builds and applicable renovations. There is also the potential to retrospectively install rainwater tanks for residential, industrial and commercial buildings.

The Jury recommends these options for the following reasons:

- Over the long term, these options are low cost and apply to readily available resources.
- Demand on potable water system is reduced.
- The use of potable water for non-potable requirements is cut down.
- Using grey water in the home encourages the expansion for recycled water in domestic use.
- Household costs are reduced in the long term.
- The need for expensive new infrastructure such as new dams is lessened.
- Consumers can decide where they want their water to go.
- It is more energy efficient to use than expensive desalination water.
- It supports improvement to the health of waterways and coastal areas
- Stored stormwater and recycled wastewater can optimise the maintenance of green spaces e.g. parks, gardens and especially in times of water shortage.

The Jury acknowledges the following potential concerns:

- Community resistance to uptake of non-potable water use.
- Perception of potential health risks.
- Elimination of plastic pollution.
- Added complexity to water system.
- Already built desalination plant in Victoria should be fully utilised.
- Without government subsidy to lower income households, this option could be difficult to fully implement.
- Added costs involved in installation of wastewater infrastructure.

SRH also addresses Need 17

# NEED 15: MANAGE PRESSURES

## ON LANDFILL

**FLS** – Waste Landfill Site Land Buffers

**FWL** – Future Waste Landfill Site Locations



The Jury recommends that the State assess the existing and anticipated capacity and viability of landfill sites, along with the development of buffer zones and new sites to avoid potential land use conflicts.

The Jury recommends these options for the following reasons:

- Increasing buffer zones around landfill sites (FLS):
- Reduces the potential for land use conflict in urban growth areas.
- Effectively secures the capacity of these sites into the future to address projected population growth.
- Provides a lower cost option than sourcing new sites and installing associated infrastructure.
- Postpones the requirement for new sites which would likely be further from urban areas.
- Potentially contributes to economy of scale, with fewer large sites limiting the impact on local communities and ecosystems.

Securing new landfill sites (FWL):

- Governments need to identify and secure suitable sites well in advance of needs.
- This should be carried out as part of a broad land use planning process and in conjunction with new developments.
- Forward planning ensures all stakeholders are informed well in advance of construction and funding sources can be determined.
- Infrastructure development at new sites should focus on integrated resource recovery solutions. For example, producing energy from waste alleviates landfill pressures and reduces the need to transport large quantities of material.

The jury acknowledges that FWL requires development and advocates further assessment into this option.

There is scope for these options to form part of a **Co-ordinated waste management strategy** that prioritises the promotion of sustainable practices for waste disposal as described in Options HWD and LLI.

In addition, this recommendation also complements:

OWM – Organic waste management

EWS – E-waste services

GFS – Greenfields development sequency – Need 1, Address infrastructure demands in areas with high population growth

OWE – Organic waste to energy – Need 18, Transition to lower carbon energy supply and use

EGW – Energy generation from waste, (New option) - Need 18, Transition to lower carbon energy supply and use

### References

Statewide Waste and Resource Recovery Infrastructure Plan 2015-2044, Sustainability Victoria

Re-thinking Cities: a strategy for integrated infrastructure, Infrastructure Partnerships Australia, 2012

# NEED 15: MANAGE PRESSURES

## ON LANDFILL

**HWD** - Household Waste Disposal Fees

**LLI** - Landfill Waste Levy Increase



The Jury does not support these options which suggest that household waste disposal fees are re-structured from a fixed fee to a variable charge and that the landfill levy charge is increased in order to reduce the amount of waste sent to landfill and promote recycling.

The Jury does not recommend these options for the following reasons:

- Additional costs incurred have the potential to discourage the disposal of waste material through legitimate pathways.
- Illegal dumping practices are likely to result when costs become prohibitive.
- As a consequence, the significant deterrent intention and potential of these options would be compromised.

The Jury recommends the following alternatives to HWD and LLI. In order to manage pressures on landfill, there is considerable potential to encourage reduction of waste at its source, as well as encouraging sustainable practices for disposal by:

- Requiring manufacturers and other industry groups through regulation to limit the amount of waste by selecting packaging that can be disposed of by sustainable means, such as biodegradable materials.
- Building in the cost of disposal into the purchase price of large, dangerous or complex products, such as, cars and batteries via regulation.
- Promoting responsible waste disposal through:
  - Organic waste management – Option OWM.
  - Consistent and appropriate utilisation of kerb side recycling bins.
  - Provision and enhancement of local government hard waste collections.
  - E-waste services – Option EWS.
  - Organic waste to energy – Option OWE, Need 18.
- Energy generation from waste – EGW (new Option, Need 18) **This option overlaps OWE, but it expanded to include sewage and sludge and household and green and industrial waste, however pollutants may be of concern here.**

### References

Statewide Waste and Resource Recovery Infrastructure Plan, 2015-2044, Sustainability Victoria

Regional Waste and Resource Recovery Implementation Plans, Sustainability Victoria

The Victorian Organics Resource Recovery Strategy, Sustainability Victoria

The Victorian Market Development Strategy for Recovered Resources, Sustainability Victoria

# NEED 15: MANAGE PRESSURES ON LANDFILL AND WASTE RECOVERY FACILITIES



## **RMU** – Recycled Material Usage in Building Construction

Encourage the use of recycled materials in building construction in the following ways:

- Create stronger market drivers for the use of recycled material via:
- Increasing the effective costs of using non-recycled options
- Providing incentives to developers for recycled material usage in new or low cost housing
- Mandate certain quantities of recycled material usage in building projects via industry standards and regulations

The jury recommends this option for the following reasons:

- Reduces the amount of waste going to landfill (Objectives 7 and 8)
- Reduces the amount of new raw materials being processed and hence reduces carbon footprint (Need 18, Objective 9)
- Creates new business opportunities within the recycling and construction materials manufacturing industry (Objective 6)

The jury also acknowledges the following potential concerns:

- May increase the cost of building in the short term until the market drivers have time to bring down the prices of new recycled options.

# NEED 16: HELP PRESERVE NATURAL ENVIRONMENTS AND PREVENT BIO DIVERSITY LOSS



**HCL** – Habitat Corridor Link Expansion and Improvement

**RFI** – Riparian Fence Investment

The jury recommends expansion and improvement of existing natural environments to assist growth of biodiversity particularly along waterways and in areas of urbanisation.

The Jury recommend these options for the following reasons:

- A linked habitat is more likely to have high biodiversity.
- It's timely to preserve what limited habitat we now have and improve their viability.
- The waterways provide the most abundant habitat for wildlife.
- Reduced access by life stock will assist in the repair of the natural habitats and improve water quality.
- Air quality is improved
- Potential for recreation

The Jury acknowledges the following potential concerns:

- Access to water / right
- Private land usage.
- Low certainty of supporting evidence.
- May involve land acquisition.
- Environmental infrastructure may need to be constructed.
- Ongoing management and maintenance required.

Some Jury Members raised concerns regards RFI evidence and impact

These options complement Need 17 – Improve the health of waterways and coastal areas.

# NEED 18: TRANSITION TO LOWER CARBON ENERGY AND SUPPLY USE

## EDM2 – Energy Demand Management Tariff Reform



This option changes energy tariff structures to target peak energy use. Peak and off-peak pricing will be used to change behavior. This option is targeted towards the commercial and industrial sector. The current system of tariffs is for quantity used and not specific to time of day.

The Jury does not recommend this option/s for the following reasons:

- At the moment large industrial users “shop around” their tariff (which is much lower than residential use; such as 35c charged per unit for a residential energy user, vs 12c charges for a commercial use) with leverage to negotiate their power contract needs.
- Intended effect/benefit are very low. The policy would be very difficult to achieve for a negligible benefit.

Note:

- The jury was unable to offer any option recommendation due to insufficient information and evidence.
- References

# NEED 18 – TRANSITION TO LOWER CARBON ENERGY SUPPLY AND USE

**UFF** – Urban Forest



The Jury recommends implementing an Urban Forest for Melbourne, with evidence suggesting that the impact goes well beyond lowering Energy supply and use. We believe that tightening regulatory requirements for business and property developers will increase the city's green space areas.

The Jury recommends this option for the following reasons:

- UFF will combat the urban heat island effect.
- Greenery provides insulation, reducing the need for heating and cooling for inner city buildings.
- Community health and wellbeing will be improved.
- Beautification of the city.
- The green lungs of the city reduce carbon emissions and filter air.
- Shade encourages walking for pedestrians.
- Liveability will be increased.
- Tourism & ecological-education opportunities will grow.

This option complements the following needs:

4 - Enable physical activity and participation

5 - Enable space where communities can come together

16 - Help preserve natural environments and minimise biodiversity loss

Successfully implemented in Europe (Madrid, London, Paris).

Refer to the **City of Sydney Urban Forest Strategy 2013** for more details on implementation and strategy.

See Council house 2 for a demonstration/reference model.

## References

**Michael Nolan**, Chair of the United Nations Global Compact Cities Programme, at RMIT

Speakin on: Cities

**Rob McGauran**, Director of MGS Architects and Adjunct Professor of Architecture at Melbourne and Monash Universities

Speaking on: University cities

# NEED 18: TRANSITION TO LOWER CARBON ENERGY SUPPLY AND USE



**BCL** – Brown Coal Licences

**ACG** – Aging Coal Generation Asset Transition

**GPS** – Geothermal Power Supply

**CWF** – Community Wind Farms

**LSE** – Local Solar Generation

**IPS** – Integrated Power Supply Augmentation

The Jury recommends the Victorian Government provide an appropriate regulatory framework to support a transition from fossil-fuel generated electricity to a range of renewable sources, to include a firm end date for the cessation of brown coal use in electricity generation.

It is important to note that less than 1% of the Jury disagrees with this recommendation.

The Jury recommends these options for the following reasons:

- It sets a clear timeline for Industry to transition to cleaner energy sources.
- An Integrated Power Supply is required to provide enough power to meet demand.
- It takes a positive step in addressing Victoria's greenhouse gas emissions.
- Air quality will be improved and pollution reduced.
- It highlights clear pathways for the establishment of geothermal, wave and tidal, wind and large-scale solar generation.
- De-centralised power generation improves network efficiency & reduces supporting infrastructure requirements.

The Jury acknowledges the following potential concerns:

- A perception of increased costs of power, however the cost of renewable electricity is reducing over time as opposed to coal-generation which continues to rise.
- The possible loss of jobs in the traditional electricity generation industry. The Jury counters that there are more jobs in solar & wind than in coal.

This recommendation complements:

ACG - Ageing Coal Asset transition

BCL - Brown Coal Licenses

NPC - Nuclear Plant Construction

Environment and Sustainability

## References

Lane Crockett, Head of Renewable Infrastructure at Impact Investment Group

Speaking on: Renewables

# NEED 18: TRANSITION TO LOWER CARBON ENERGY SUPPLY AND USE



## **NPC** – Nuclear Plant Construction

The Jury supports the need for an appropriate framework to support a transition from fossil-fuel generated electricity to a range of renewable sources, but not the Nuclear Plant Construction option.

The Jury is opposed to the nuclear power option for the following reasons:

- Strong community concerns over safety of storing nuclear waste.
- The high cost & long lead-time before power is generated.
- Potential social and environmental damage due to incidents.
- A long decommission time at the end of the plant's working life.

The Jurors acknowledge the following supporting arguments for nuclear power:

- It's a known technology, commercially available and viable.
- The infrastructure is sufficiently sized to replace existing brown coal power plant.
- A clean energy producer.

The Nuclear Plant Construction option also relates to:

ACG - Ageing Coal Asset transition

BCL - Brown Coal Licenses

IPS - Integrated Power Supply

# NEED 19: IMPROVE THE RESILIENCE OF CRITICAL INFRASTRUCTURE



**ITC** – Integrated Transport Control Centre  
To facilitate overall co-ordination of road and public transport.

**ETM** – Emergency Traffic Management  
Enable emergency services to control road flow and priority to improve emergency response times.

Provide the technologies and facilities that enable co-ordinated management of Melbourne's traffic flow that can give priority to emergency services vehicles to respond to emergencies in an ever increasingly congested road network over the next 30 years.

The jury recommends this option for the following reasons:

- Low cost that provides significant benefit to society.
- Enables general traffic management in normal (peak) and emergency situation (accidents etc.).
- Can be used to improve bus and tram times and speed through dynamic priority allocation.
- Enhance existing system to provide smooth run on freeways by rapid response to incidents affecting traffic flow.

The Jury also acknowledges the following potential concerns:

- Needs more evidence to support

This recommendation complements:

TNI (N10) increasing ICT infrastructure to provide commuters with real time information of traffic/network information across state

Cost Implications

- State funding for increased technology implementation across state

## References

Charles Waingold, Public Transport Victoria

Speaking on: Public transport

# NEED 19: IMPROVE THE RESILIENCE OF CRITICAL INFRASTRUCTURE



## DCD – Data Centre Location Diversification

That is location of backup sites to regional data centres e.g. Bendigo, Shepparton.

The existing government and private (I.e. Banks) have their datacentres located within Melbourne CBD or suburban areas that could be susceptible to see common catastrophic events (wild weather, inundation etc.) over the next 30 years.

The jury recommends this option for the following reasons:

- Preventative measures very important as high cost when lost or interrupted for extended period.
- Common sense to separate your eggs, eliminate single point failure
- Improving access and facilities for system users
- Increasing reliance on datacentres for government and private industry interactions
- Added employment opportunities to regional centres (Need 12)

There is significant cost associated with development of duplicate datacenters when struggling to fund any data center in CBD or elsewhere, 'cloud-based solutions' may future proof this requirement

Possible Counter Arguments:

- Better to keep data centres together and share amenities/access reduce network transfer traffic

Linkages:

ITT (N10) increasing telecommuting by strengthening IT network across state and NBN

Cost Implications

- State funding for duplicate data centres development
- Encouragement / Incentives for private enterprise

## References

- Major institutions already do have this but typically only within metropolitan area (e.g. CBD and middle metro centres or interstate cities)

