



ANNUAL BUSINESS PLAN 2024

FINAL

December 2023





ANNUAL BUSINESS PLAN 2024

FINAL

Prepared by

Sharon Biermann

Version control

FINAL

About PATREC

The Planning and Transport Research Centre (PATREC) is a collaboration between the Government of Western Australia and local universities, constituted to conduct collaborative, applied research and teaching in support of policy in the connected spaces of transport and land use planning. The collaborating parties are: The University of Western Australia, Curtin University, Edith Cowan University, Department of Transport, Main Roads Western Australia, Western Australian Planning Commission and the Western Australian Local Government Association.

Publisher

Planning and Transport Research Centre
The University of Western Australia (M087)
35 Stirling Highway, Crawley, WA 6009
+61 8 6488 3385
patrec@uwa.edu.au
<https://patrec.org/>

Table of Contents

Table of Contents	3
1. INTRODUCTION	4
1.1. Background.....	4
1.2. Outputs achieved in relation to previous Plan (2023).....	4
2. STRATEGIC UPDATE.....	4
3. KEY RESEARCH ACTIVITIES FOR 2024.....	5
3.1. Core research projects.....	5
3.2. Climate action program.....	6
3.3. External research projects.....	6
4. SUPPLEMENTARY ACTIVITIES FOR 2024	7
4.1. Communication.....	7
4.2. Human resources	7
5. BUDGET 2024.....	8
6. KPI TARGETS 2024.....	9

1. INTRODUCTION

1.1. Background

According to the Collaborative Agreement executed on 8 December 2016, annual business plans will be presented to the Board at the last meeting of each calendar year for approval and will direct business for the following year. They should include a description of the program of research to be undertaken by PATREC during that year, a budget for that year, planned targets for agreed financial and non-financial key performance indicators, and any update of the Strategic Plan for that year.

Annual business plans are prepared in the context of the prevailing strategic plan which is revised every three years. The current strategic plan is valid for the three-year period 2023-2025 and was approved by the Board on 23 March 2023. Any interim strategic updates are included as part of the annually prepared business plans.

The purpose of this Business Plan 2024 is to:

- update the strategic drivers which could impact on PATREC's research plan for 2024
- outline the research project program for 2024
- provide a working budget for 2024
- outline the human resources plan for 2024
- set key performance indicator targets for 2024

1.2. Outputs achieved in relation to previous Plan (2023)

Key outputs for 2023:

Towards the achievement of the three-year strategic plan 2023-2025, key accomplishments for 2023 included:

- Commenced three of the seven core projects approved as part of the PATREC-iMOVE 2023-2025 core program of research
- Commenced and progressed three foundation climate action projects
- Completed six core projects from the 2021-23 research program
- Completed the three-year collaborative Australian Transport Research Cloud project with the Australian Urban Research Infrastructure Network (AURIN)
- Appointed a programs leader to focus initially on the climate action program
- Completed or substantially progressing nine external projects
- Progressed in securing National Collaborative Research Infrastructure Strategy funding (NCRIS) in partnership with AURIN to establish a WA research infrastructure node for climate action in transport and land use planning
- Organised the Australasian Transport Research Forum conference to be held in Perth 29 November – 1 December 2023

2. STRATEGIC UPDATE

Most PATREC core projects as well as a number of external projects, run through the iMOVE CRC, collecting Commonwealth leverage. On 24 October 2023, iMOVE CRC Managing Director, Ian Christenson circulated a letter to iMOVE CRC participants to advise a change to the iMOVE leverage allocation process in view of the June 2027 end of the CRC:

- Three and a half years left of iMOVE's funded operating period, obliging the CRC to consider the arrangements that are needed to conclude the CRC activities in an orderly and timely manner

- Advising that from 1 January 2024 there would be a change the way in which leverage funds to new projects are allocated
- To ensure that all projects are completed prior to the end of the CRC (June 30, 2027), intension is to close project formation process by December 2025 at the latest - this operational deadline means identification and contracting of the remaining projects needs to be expedited
- iMOVE contribution to projects (sourced from our Commonwealth funding) is committed at the time of signing the project agreement. The change to be made from 1 January 2024, is to allocate iMOVE funds to projects (@25%) on a 'first come, first served' basis for all projects
- Whereas currently, and in the past, the project research participants and iMOVE have both contributed 25% of project cash costs, from the beginning of next year the Researcher contribution will remain at 25% but the iMOVE 25% will only be provided if we have the funds available. This applies only to newly formed projects; existing projects will not be affected
- Time is 'of the essence' thus encouraged to progress the formation of the remaining projects to ensure execution in the available time and to maximise access to the Commonwealth leverage funding

Implications for PATREC:

- remaining 2023-25 core project agreements to be executed by 31 December 2023 or as soon as possible thereafter
- process for the 2025-27 core program to be fast-tracked and streamlined, possibly focussing on extension of current projects (by mid-2024)
- agreements for any external projects need to be fast-tracked, with a particular focus on the next round of climate action projects (by mid-2024)

3. KEY RESEARCH ACTIVITIES FOR 2024

3.1. Core research projects

Complete remaining core projects from 2021-23 core research programs:

- Model for estimating delays at traffic signals
- ML for road maintenance decisions
- Transport and Kids – 15 years on
- Freight network to support NW freight task

Re-commence the last remaining project of 2019-2021 program of research: Enhanced Vehicle Detection (2019-21), dependent on deployment of sensors by Main Roads WA.

Commence and significantly progress projects from the 2023-25 core research program, not yet commenced:

- Automated intersection parameter measurement using aerial photography and computer vision - pilot
- Evaluation of road safety treatments - road safety trial design and evaluation
- Designing a sustainable last kilometre freight and parcel delivery system for Perth and Peel

Identify, negotiate and commence a project to replace (due to no longer having resources to support the project within Main Roads WA):

- Evaluate the efficiency and economic benefit of spray injection pothole repair

Significantly progress already commenced projects from the 2023-25 core research program

- Impacts of e-rideables on the transport task in WA
- Micromobility and freight – exploring opportunities in WA

- Transport mode choice development using PATHS data

3.2. Progressing the new program: Climate action in transport and land use planning

Building on the impetus achieved in 2023 with the strategic plan process and commencement of 3 foundation projects, the primary activities in 2024 will include:

- Extending the appointment of the program leader
- Completing the strategic plan for the climate action program
- Securing an extension of the program with external funding support
- Completing the three foundation projects
- Securing and commencing a second round of projects, fast-tracked to optimise the opportunity to leverage iMOVE CRC funding, most feasibly focussing on already identified project and extension of current projects

3.3. External research projects

External projects already secured/under negotiation for 2024 will commence, be completed or progressed, including:

- Completed:
 - Improved Roundabout Modelling using Drone Video analytics (Lead: Chao Sun; iMOVE, MRWA, UWA, Aimsun) (\$392k)
 - Innovation Connection (Metrocount) – Video analytics application (Lead: Chao Sun) (\$100k)
 - AI-assisted Model Calibration for Real-time Traffic Simulation (Lead; Chao Sun; iMOVE, MRWA, Aimsun, UWA, \$400k)
 - Optimising video analytics for traffic data collection and calibration incorporating fixed camera videos (Lead: Chao Sun; MRWA, iMOVE, UWA, \$200k)
 - Application of Biochar Waste in Pavement Design (Lead: Yuxia Hu; iMOVE, MRWA, UWA, \$200)
- Commencing:
 - Freight route priority trial evaluation (Lead: Tele Tan; iMOVE, MRWA, Curtin, \$140k)
 - ARC Linkage Infrastructure, Equipment and Facilities 2024 round 1 (LIEF24): National Cycling Data and Analysis Platform (NCDAP) (Lead: UNSW, Sharon Biermann UWA lead; Curtin separately involved)
 - ARC Industrial Transformation Training Centre for Automated Vehicles in Rural and Remote Regions (Doina Olaru, Sae Chi, Thomas Braunl, Paul Roberts involved from UWA - \$5 million, led by QUT)

PATREC will continue to pursue external project opportunities ie. those projects which do not receive any PATREC core funds. External projects can be funded by PATREC collaborating partners by contributing additional funds (to subscription payments) and/or by other external funding agencies including the Commonwealth.

The primary opportunity to be secured in 2024 is the National Collaborative Research Infrastructure Strategy funding (NCRIS), with the AURIN facility, to set up an AURIN WA Node to support climate action in land use and transport planning research:

- For the past around 4 years, PATREC has been in discussions with AURIN (2 consecutive Directors) about establishing some sort of WA Node at PATREC with NCRIS fundings. AURIN is an NCRIS-funded facility.

- It was announced on October 2023 that AURIN received \$25million (4 years) from NCRIS and has allocated \$620k for the WA Node to focus on data and tools for climate action in LU and Transport Planning; leverage from WA State Gov and unis being coordinated by UWA – business case submitted to JTSI on 20 November 2023

4. SUPPLEMENTARY ACTIVITIES FOR 2024

4.1. Communication

PATREC will step up its efforts to increase visibility, reputation and profile and through, amongst others:

- Infographic presentation of annual reports, strategic plans to replace/enhance written executive summaries
- Briefing notes including amongst others impact and financial ROI to partner principals
- Formally include a last step for project steering committees to provide a 1-page close-out report including an impact statement to be used in communication of research outcome
- KPIs – consider the inclusion of indicators of leverage and impact (collective benefit to the State)
- Updating/refresh of website
- Media statement/briefing of Ministers eg. in relation to the climate action program once the strategic plan has been approved
- Host PATREC seminars of completed projects

4.2. Human resources

In addition to the usual project-specific casual and fixed term appointments and renewals, a key HR activity will be to extend the appointment at Curtin of the PATREC Programs Leader to provide additional capacity in leading and managing PATREC projects across both programs but focussing initially on the climate action program. With the position at Curtin, the purpose of the extension would further be aimed at working with Curtin's Urban Planning team to draw in Urban Planning expertise to strengthen PATREC's land use research capability to supporting WAPC and DPLH, in the climate action as well as the more traditional PATREC program of research.

4.3. Streamlining collaboration processes

Contracting and financial arrangement between collaborating universities is slow, cumbersome, inflexible and onerous. Assistance will be sought from partner university research offices to implement an improved formal process of working together more efficiently.

5. BUDGET 2024

Increased subscription payment for 2024 as per signed variation agreement have been included in the budget as well as the new climate action program (Table 9). A few amendments (indicated in yellow) have been made to the 2024 budget included in the Strategic Plan 2023-25 – shifting some budget items between categories as well as the balance brought forward amount to reflect the forecast closing balance as at 31 December 2023.

Table 9: Budget 2024

PATREC Income and Expenditure 2024	Budget 2024 (Strat. Pl)	Budget 2024 updated
INCOME		
WA Government Grants (core subscriptions)	300,968	300,968
Universities Sponsorship (core subscriptions)	217,127	217,127
iMOVE/PATREC core projects	370,000	300,000
External Research Grants & Contracts	950,000	950,000
Climate action (WA gov core)	290,000	290,000
Climate action (WA uni core)	72,500	72,500
Climate action external income	185,000	255,000
Accrued Interest	0	
Total Income	2,385,594	2,385,594
EXPENDITURE		
PATREC OFFICE	298,327	298,327
Director (0.4)	104,092	104,092
Programs Director (0.4)	84,244	84,244
Administrative support (0.6)	76,223	76,223
General Office Costs	5,000	5,000
Board Chair Stipend	28,767	28,767
RESEARCH PROJECTS	2,192,505	2,192,505
Research Co-ordination (Dir. 0.6)	156,139	156,139
Research Co-ordination (Programs Dir.0.6)	126,367	126,367
iMOVE participation & add. Project contrib.	550,000	600,000
PATREC Research Fellows	410,000	410,000
Researcher Assistants, Services, Expenses	650,000	650,000
Climate action researchers, services, expenses	300,000	250,000
Total Expenditure	2,490,832	2,490,832
YTD BALANCE	-105,237	-105,237
Balance Brought Forward	149,098	476,762
CLOSING BALANCE (incl Balance B/F)	43,861	371,525

6. KPI TARGETS 2024

Performance indicators include essential academic and policy impact indicators with focus on outputs and outcomes rather than inputs.

Table 10: Key Performance Indicator Targets 2024

Performance Indicator	Target 2024
<i>Academic Performance Indicators</i>	
Number of journal papers published	10
Number of peer-reviewed book chapters published	0
Number of peer-reviewed conference papers published in proceedings	0
Number of post graduate research students attracted, retained (and graduated)	8
Value (\$) of [non-core] research funding secured (through PATREC account)	\$1,867,500
<i>Policy Impact Performance Indicators</i>	
Number of high impact, policy-informing projects/sub-projects completed	12
Number of substantive Technical Reports/Working Papers accepted/published	12
Number of PATREC Perspectives/iMOVE news articles published on PATREC website	5
Number of presentations at PATREC and other connection events (including conference presentations not published)	10
Number of connection events arranged and held	3
Number of short courses, unit contributions presented	0
<i>Stakeholder (academic and policy) satisfaction indicator</i>	85%