

**Submission
No 9**

**EXAMINATION OF THE AUDITOR GENERAL'S PERFORMANCE AUDIT
REPORTS AUGUST 2019 - JUNE 2020**

Organisation: Transport for NSW

Date Received: 1 June 2021

Mr Greg Piper, MP
Chair, Public Accounts Committee
Legislative Assembly
Parliament of NSW
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SYDNEY NSW 2000
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Performance Audit Report – Train Station Crowding

Dear Mr Piper

I write in response to your correspondence regarding the Auditor-General's Report on Train station crowding (the Report), tabled on 30 April 2020.

I thank the Committee for the opportunity for Transport for NSW to provide a submission outlining its response to the Report, including actions taken to date.

Transport for NSW and Sydney Trains have been implementing a number of initiatives to address the recommendations outlined in the Report. I am pleased to advise the Committee that Transport for NSW has completed five out of the seven recommendations. A high-level summary of the actions implemented are outlined below:

Recommendation 1: 'Systematically collect information on the use of crowd management interventions at stations and assess the impact of these interventions'.

Status – Complete - Front-line station staff are using an App on their mobile phone to record interventions due to crowding. This information is downloaded into corporate reporting systems for reporting and trend analysis. Periodic reviews of this data will occur to determine whether other stations may also benefit from this initiative.

Recommendation 2: 'Enhance existing procedures to require staff to make an assessment on whether crowding was a contributing factor in safety incidents and near-misses and code these incidents for crowding'.

Status – Complete - Incident work instructions and injury reporting forms have been changed to add 'Station Overcrowding' as a contributing factor. Data for both these categories are reported and discussed monthly.

Recommendation 3: 'Develop a policy for customer management plans'.

Status – Complete - Sydney Trains has developed a Customer Management Plan (CMP) Framework to define the process and governance. These plans outline the

actions to be undertaken by station management and staff in the event of customer crowding as well as other scenarios.

Recommendation 4: 'Evaluate Travel Choices to determine the overall impact of the program'.

Status – Complete - An evaluation was completed of Travel Choices via URBIS with the final report issued in December 2020. **(Attachment 1)**

The evaluation found that overall, the Program design can be described as data led and adopting a multi-pronged, customer-focussed and precinct specific approach, in line with identified best practice for Travel Demand Management (TDM) Programs. The evaluation concluded the potential of TDM approaches to achieve a number of outcomes, including alleviating station crowding, and provided recommendations for future TDM programs.

Recommendation 5: 'Evaluate the Wayfinding strategy to determine the impact on the program'.

Status – Complete - Evaluation of the program has been completed with a final report issued in November 2020. **(Attachment 2)**
Feedback on the Wayfinding Program outcomes were extremely positive and 'lessons learnt' will be included in future activity and programs.

Recommendation 6: Develop a direct performance measure for station crowding and collect data to measure performance'.

Status - In progress - Crowding and the thresholds for crowd interventions will be defined by the internationally recognised benchmark for public space crowding (Fruin Levels of Service). A Key Performance Indicator to reflect how Sydney Trains will manage crowding is anticipated to be developed by the first quarter of Financial Year 2021/2022. Tactical measures to quantify and support customer crowding have been implemented.

Machine learning algorithms and other technologies are under assessment. The rollout of any technology solution is subject to funding availability, procurement activities and operationalisation activities. Due to the length of time these activities will take, closure of this item is anticipated to take 12-18 months.

Recommendation 7: Work with Airport Link Company to develop a comprehensive crowd management strategy'.

Status - Substantially complete - Customer Management Plans and the framework which govern their creation have been developed for Airport Link Stations. These plans were based on the Sydney Trains Customer Management Plans. Sydney Trains will continue to share findings with the Airport Link Company related to 'Recommendation 6'.

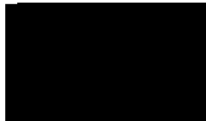
The next stages of More Trains, More Services program will deliver an 80 per cent uplift to peak services at Airport stations, meaning a service every three to four minutes, in response to current and forecast customer demand. These service increases will be delivered progressively from late 2022 and will help to prevent station, platform and on board train crowding. Construction is also underway on the \$39 million makeover of Mascot Station, which will reduce crowding for train commuters and congestion for road users at this key precinct.

The upgrade includes an additional entrance on the western side of Bourke Street, additional ticket gates, new escalators and a lift to the paid concourse area to provide an easy flow and access for customers in and out of the station.

Further detail is available in the attached implementation of recommendations table.

If the Committee has any further questions, [REDACTED] Director, Delivery Support, Sydney Trains, would be pleased to take your call on [REDACTED].

Yours sincerely

A black rectangular redaction box covering the signature of Rob Sharp.

Rob Sharp
Secretary
Encl

31 May 2021



IMPLEMENTATION OF RECOMMENDATIONS

Transport for NSW

Train Station Crowding

RECOMMENDATION		ACCEPTED OR REJECTED	ACTIONS TO BE TAKEN	DUE DATE	STATUS (completed, on track, delayed) and COMMENT	RESPONSIBILITY (Section of agency responsible for implementation)
1	Systematically collect information on the use of crowd management interventions at stations and assess the impact of these interventions	Accepted	Work with Sydney Trains' most impacted stations to identify ways to record which and the number of times interventions are used. A trend analysis of the data will provide visibility of an increasing, constant or decreasing number of interventions and will support an assessment of their impact.	December 2020	Completed. <ul style="list-style-type: none">The ability to record interventions has been provided via a tool in the MyStation mobile application used by our frontline station staff.The tool has been rolled out to staff at the seven most impacted stations.Captured data is being entered into DOMO, Sydney Trains' corporate data warehouse and reporting suite/tool. Future continuous improvement activities: <ul style="list-style-type: none">The data will be automatically extracted from the vendor and entered into DOMO at regular intervals.Sydney Trains is working with the Stations leadership group to determine how to best visualise the data, to provide highest value.A periodic review will be undertaken to identify if similar capture and analysis would benefit other stations.	Service Experience, Customer Operations, Sydney Trains

	RECOMMENDATION	ACCEPTED OR REJECTED	ACTIONS TO BE TAKEN	DUE DATE	STATUS (completed, on track, delayed) and COMMENT	RESPONSIBILITY (Section of agency responsible for implementation)
2	Enhance existing procedures to require staff to make an assessment on whether crowding was a contributing factor in safety incidents and near-misses and code these incidents for crowding	Accepted	Amend the incident and injury recording processes to prompt staff to consider whether "Station Overcrowding" could have been a contributing factor.	December 2020	<p>Completed.</p> <ul style="list-style-type: none"> • Incident reporting –<i>Station Overcrowding</i> included as a contributing factor. • Injury recording – <i>Station Overcrowding</i> added as a contributing factor to the Customer Injury Form. • The data for the above two is collated monthly for reporting at the monthly stations safety meeting. <p>Note: The reduction in patronage during COVID-19 has seen no incidents or injuries coded for crowding to date.</p>	Service Experience, Customer Operations, Sydney Trains
3	<p>Develop a policy for customer management plans. The policy should include:</p> <ul style="list-style-type: none"> • a process for identifying stations requiring a customer management plan • essential elements of a customer management plan • requirements for the review and approval of customer management plans • the requirement to centrally store all customer management plans 	Accepted	<p>Engage with Sydney Trains Safety function to develop a policy for Customer Management Plans (CMPs) that articulates:</p> <ol style="list-style-type: none"> 1. The threshold that will require a station to produce a CMP. 2. The minimum requirements for a CMP, e.g. location of staff, gate-line directions, indicators for staff to initiate interventions. 3. The approvals required and the approach for the centralised storage of CMPs. 	December 2020	<p>Completed.</p> <ul style="list-style-type: none"> • Sydney Trains has developed a CMP Framework and a CMP Template. • The CMP Framework defines the process and governance, and guides the future creation and update of, CMPs, identifying: <ul style="list-style-type: none"> - triggers for the creation and subsequent updates of a CMP; - who is to be involved in the development and approval of a CMP; and - factors impacting and items to consider when developing a CMP. • The CMP Template is designed to ensure the delivery of comprehensive and consistent CMPs, prescriptive section headings and help notes, and standardised nomenclature. • All CMPs are now stored on Sydney Trains' Stations SharePoint site. <p>Ongoing works:</p> <ul style="list-style-type: none"> • Alignment of all existing CMPs to the new CMP Template is progressing. • Periodic reviews will be scheduled to determine whether: <ul style="list-style-type: none"> - existing CMPs require updates; and - stations previously without a CMP require one. 	Delivery Support, Service Experience, Customer Operations, Sydney Trains

RECOMMENDATION		ACCEPTED OR REJECTED	ACTIONS TO BE TAKEN	DUE DATE	STATUS (completed, on track, delayed) and COMMENT	RESPONSIBILITY (Section of agency responsible for implementation)
4	Evaluate Travel Choices to determine the overall impact the program has on distributing public transport use out of peak AM and PM periods and its impact on station crowding	Accepted	Undertake an independent evaluation of the Travel Choices Program and submit the final report in response to the Audit	December 2020	<p>Completed. Evaluation completed by URBIS and final report submitted by December 2020.</p> <p>The evaluation found that overall, the Program design can be described as data led and adopting a multi-pronged, customer-focussed and precinct specific approach, in line with identified best practice for Travel Demand Management (TDM) Programs.</p> <p>The evaluation concluded that the evaluation demonstrated the potential of TDM approaches to achieve a number of outcomes, including alleviating station crowding, and provided recommendations for future TDM programs.</p>	Travel Demand Management Team, Customer Journey and Planning, Greater Sydney Division, Transport for NSW
5	Evaluate the Wayfinding strategy to determine the impact of the program and to identify any lessons learnt for future wayfinding strategies	Accepted	Complete the already in-flight corporate evaluation of the Wayfinding Program's customer impact and cost benefit in line with the end of the Program's rollout phase in June 2020.	December 2020	<p>Completed. Evaluation completed and final report submitted November 2020.</p> <p>Feedback on the Wayfinding Program outcomes was extremely positive and lessons learnt from this process will continue to be incorporated into future updates to wayfinding and wider customer information, systems and deliverables.</p>	Customer Experience & Design, Customer Strategy & Technology, Transport for NSW

	RECOMMENDATION	ACCEPTED OR REJECTED	ACTIONS TO BE TAKEN	DUE DATE	STATUS (completed, on track, delayed) and COMMENT	RESPONSIBILITY (Section of agency responsible for implementation)
6	Develop a direct performance measure for station crowding and collect data to measure performance	Accepted	Sydney Trains will work with Transport for NSW's Advanced Analytics & Insights team to develop a direct performance measure for station crowding and will implement a process for collecting and analysing data to measure performance.	December 2020	<p>In progress.</p> <ul style="list-style-type: none"> • Crowding and the thresholds for interventions will be defined in terms of Fruin Levels of Service (LoS), the internationally recognised benchmark for public space crowding. • A KPI to reflect how Sydney Trains is managing crowding is expected to be developed by Q3-2021. • Sydney Trains has initiated immediate, tactical and strategic responses to measure and support the management of crowding. • Immediate – Local staff observation and estimation <ul style="list-style-type: none"> - Identify and document localised hot-spots and estimation techniques to help staff quickly estimate numbers on platforms. • Tactical – Predict platform loadings <ul style="list-style-type: none"> - Machine-learning based algorithms have been/are being developed to predict loadings on platforms. - In Phase 1, next-day predictions are calculated based on historical data - The data is being stored in DOMO, Sydney Trains' corporate data warehouse and reporting suite/tool. - Dashboards have been developed to inform Stations leadership about: <ul style="list-style-type: none"> ▪ pre-event – predicted levels of crowding using historical data; and ▪ post-event – estimated levels of crowding using actual data, supporting a measure of crowding performance. - The data is expected to be made available to our frontline staff at the seven most impacted stations via the corporate version of the NextThere mobile application in Q3-2021. - Access to this data may allow staff to initiate interventions pre-emptively. 	Service Experience, Customer Operations, Sydney Trains

					<ul style="list-style-type: none">- In Phase 2, near real-time predictions will be calculated based on real-time Opal gate-line and Waratah carriage load, Q1-2022.- This is expected to improve accuracy, particularly during disruptions.• Strategic – Technology/system-based crowd measurement<ul style="list-style-type: none">- Trials are currently underway to determine if technology can be used to accurately count, in near real-time, the numbers and distribution of people at and approaching stations.- Two technologies are being investigated:<ul style="list-style-type: none">▪ CCTV analytics▪ Mobile-device detection technology.- Assuming the technology proves capable, Sydney Trains will develop a concept of operations which will determine how the captured data will be used by its:<ul style="list-style-type: none">▪ Rail Operations Centre (ROC);▪ Stations leadership; and▪ frontline station staff.- Timeframes for rollout of the technology would be subject to funding availability, procurement processes and systems/engineering design approvals.- In addition, use of the data operationally would require approval of the operational concept, the completion of a safety case and consultation.	
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	RECOMMENDATION	ACCEPTED OR REJECTED	ACTIONS TO BE TAKEN	DUE DATE	STATUS (completed, on track, delayed) and COMMENT	RESPONSIBILITY (Section of agency responsible for implementation)
7	<p>Work with the Airport Link Company to develop a more comprehensive crowd management strategy for Airport Link stations that includes:</p> <ul style="list-style-type: none"> • a crowd management plan for each station, with clearly described roles and responsibilities • a service level indicator or KPI relating to station crowding at Airport Link stations 	Accepted	<p>Sydney Trains will work with the Airport Link Company (ALC) to develop:</p> <ol style="list-style-type: none"> 1. Crowd Management Plans (CMPs) that are in line with Sydney Trains' policy and which incorporate the same minimum requirements. 2. An appropriate measure in line with that which Sydney Trains will use to measure crowding performance. <p>More Trains More Services Stage 2 will support the introduction of new suburban and intercity trains and allow the delivery of more frequent train services, with less wait times for customers on the T4 Illawarra, T8 Airport and South Coast lines.</p> <p>Mascot Station Project will construct a new station entrance (including two pairs of escalators, lift, reconfigured gateline with additional gates) to resolve overcrowding on the station concourse and reduce traffic congestion outside the station.</p>	December 2020	<p>1. Complete</p> <ul style="list-style-type: none"> • ALC has created a version of Sydney Trains' CMP Framework applicable to its operation. • All ALC CMPs are now aligned with Sydney Trains' CMP Template. <p>2. In progress</p> <ul style="list-style-type: none"> • Sydney Trains has and will continue to share its findings with ALC in relation to Recommendation 6. <p>In progress</p> <ul style="list-style-type: none"> • TfNSW has awarded two construction contracts as part of More Trains More Services Stage 2 to modernise and upgrade infrastructure on the rail network. These were awarded in the first half of 2020 with a scheduled completion date in the second half of 2021. The timetable change is planned for October 2021. • Mascot Station Project is currently undertaking service relocations and road enabling works to establish site compound in May 2021. • Sydney Trains Customer Operations have been engaged to update the current Customer Management Plan in consultation with ALC to ensure minimal impact during construction and integrate the new station entrance upon completion • Enabling works are underway to deliver an 80% service uplift at Airport stations in the morning peak, meaning a service every 3 to 4 minutes. Service improvements will be delivered in stages from late 	<p>Service Experience, Customer Operations, Sydney Trains</p> <p>Greater Sydney TfNSW</p> <p>Infrastructure & Place TfNSW</p>

					<p>2022.</p> <ul style="list-style-type: none">• Major construction will start in June 2021 for Mascot Station upgrades and take approximately 18 months to complete.	
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