

Problem Description

Question	Response
Description of the problem and purpose of the proposed research	<p>Sydney Trains invests a significant amount of resources in security programs and activities to provide a safe and secure rail network. Such programs and activities are developed based on incident data and include:</p> <ul style="list-style-type: none"> • Security management, advice and planning • Security intelligence support and liaison with the NSW Police Force • Maintenance and live monitoring of over 750 customer Help Points, security alarms at over 500 sites, over 11,500 station-based CCTV cameras and various train-based CCTV systems through 24-hour Control Centres • Intelligence-led contracted security officer patrols • Frequent security announcements at high-risk locations • Installation of high-intensity lighting and high security fencing • Continuous investment in deployable and covert detection systems • Greater visibility of frontline staff • Customer security awareness and media campaigns • Working closely with the NSW Police Force and national security agencies <p>Despite ongoing and significant investment, customer perception of safety and security on the rail network remains largely unchanged, with a customer satisfaction result of between 89 and 91% each quarter since 2014.</p> <p>These results conflict with the NSW Bureau of Crime Statistics and Research crime data, which indicates that rates of 'personal violence' on rail premises, for example, have been consistently trending downward over the past 10 years, with rates of incidents decreasing from 6.5 incidents per million passenger trips in the 2007/2008 fiscal year to 3.6 in the 2016/2017 fiscal year. With a continued downward trend in security incidents, it would be expected there would be a subsequent increase in customer perception, and therefore satisfaction, of security.</p> <p>An overall aim of the proposed research is to inform solutions and strategies that target unrealistic perceptions of risk, and that can be implemented by Sydney Trains and potentially across the broader transport cluster.</p> <p>More specifically, the focus of the proposed research project is to:</p> <ol style="list-style-type: none"> 1. Examine whether there is a real gap between customer perception of security on the metropolitan rail network and actual incident data; and 2. Identify ways Sydney Trains and other transport operators can close this gap by building a stronger correlation between security activities and customer perceptions. There are likely to be existing (and potentially effective) interventions and strategies that can target unrealistic perceptions of risk.

Hypothesis & Variables

Question	Response
For explanatory research, please describe a clear hypothesis with variables for testing	The focus of the proposed research project is to: <ol style="list-style-type: none">1. Examine whether there is a real gap between customer perception of security on the metropolitan rail network and actual incident data, and2. Identify ways Sydney Trains and other transport operators can close this gap, aligning customer perceptions of safety with actual incident data (realistic perceptions).
For exploratory research, please describe how the proposed research will contribute to future explanatory research	

Strategic Criteria & Alignment

Question	Response
Alignment with strategic theme	This Problem Statement aligns to the Transport for NSW (TfNSW) Strategic Research Theme of 'Safety and Security' as it relates to ensuring that our security programs and activities remain relevant and effective for our customers. This problem statement also aligns with the 'Future Transport Safety and Performance' outcome.
External driver of change analysis Outline how the research will better position TfNSW to respond proactively to macro drivers of change	Growth in housing, population and increased investment in public transport infrastructure by the NSW government has seen an 8% increase in train services and patronage. This growth is likely to continue, and improving the perception of safety and security by customers will remain a priority for public transport operators.
Forward looking	While this Problem Statement is focused on reviewing current customer perception, security activities and past incident data, it is also future-oriented as it seeks to identify potential future initiatives that will assist in improving customer perception of security on the rail network.
Potential research impact	The potential research impact of this project is significant. If there is a strong alignment between: (a) security activities implemented, (b) a continued decrease in security incidents, and (c) customer perceptions of security, this will demonstrate the increasing need for ongoing investment in security programs with a direct correlation to customer satisfaction (e.g. it will validate the need and usefulness of security programs). There are also behaviours associated with 'inflated' perceptions of crime (such as driving instead of using a train, travelling with someone or a hesitance to attend evening events) that are likely to be reduced. Following the results of this study, there is scope for future research to explore whether this 'gap in perception vs. reality' only applies to rail. For example, do people hold the same views of crime on ferries or buses?

Technical Criteria

Question	Response
Innovation Outline how the proposed research will result in new knowledge	<p>At present, customer perceptions of security is incorporated into a high-level customer satisfaction survey, and an understanding of what makes up this perception is anecdotal at best. The proposed research will result in the generation of new insights insofar as:</p> <ol style="list-style-type: none">1. It will ascertain what elements impact on customer perceptions of security on the rail network2. It will help drive future investment in security activities to focus not only on decreasing crime and security incidents, but also positively impacting on customer perception of safety and security.
Basis in completed research and/or observed practice	<p>Various perception-based surveys on Australian populations have indicated that there is a significant gap between perceptions of safety on public transport (particularly at night) and actual performance (Currie & Delbosc, 2015, accessed at http://publictransportresearchgroup.info/benchmarking/internationalcities/user-perceptions-of-public-transport-performance-2/).</p>
Feasible data requirements	<ol style="list-style-type: none">1. NSW Bureau of Crime Statistics and Research crime data. Also possibly Vanguard data (Transport Coordination, TfNSW).2. Survey data on perceptions of crime on public transport (including railways) in NSW.

Level of Collaboration & Resource Requirements

Question	Response
Level of collaboration Please select the level of collaboration required to complete the proposed research	<p>1. ‘Quick-Fire’ Research <input type="checkbox"/></p> <p>Intense bursts of research activity (e.g. under 8 weeks). Intended to make use of ‘hackathon’-type environments, where students/researchers work collaboratively and intensely on particular problems involving data interrogation and visualisation.</p> <p>2. Undergraduate Final-Year Research <input checked="" type="checkbox"/></p> <p>Suitable for final-year undergraduate students (e.g. capstone, Honours) as part of the research requirements for their undergraduate degree (i.e. 1 to 2 semesters).</p> <p>3. Higher Degree Research <input checked="" type="checkbox"/></p> <p>Project may form whole or part of a postgraduate research degree (i.e. Masters, PhD), and contribute to new knowledge (i.e. 1 to 3 years).</p> <p>4. Major Collaborations and Funded Research <input type="checkbox"/></p> <p>Project may form the basis for a significant collaboration agreement between TfNSW and the relevant research institution, including major competitive grant funding (e.g. Australian Research Council funding with TfNSW as an industry partner).</p>
Comments	<p>There is the potential for a research program to develop from these research questions.</p> <p>Stage 1: investigation of the extent of the gap between perceptions of crime and reality of statistics on our railways.</p> <p>Stage 2: a series of empirical experiments could be conducted, trialling various methods of reducing the gap (attitude/perceptual change) including training and awareness programs or advertising/ promotional campaigns.</p> <p>Instead of controlled experiments, there is also the possibility of correlational studies to examine methods of changing perceptions of crime. Studies that have examined bias reduction techniques may be informative.</p>
Supporting TfNSW resources	<p>Depending on the program of research, potentially 1 to 2 hours per week could be devoted by a TfNSW Research Manager and/or a senior project officer to this project. A project officer and research manager will also be available to assist with reviewing and editing the final reports.</p> <p>There may be some support available from Sydney Trains and access to internal data (Transport Coordination).</p>