

Key Insights

A JUST TRANSITION ON THE ROAD: IMPACT OF AUTONOMOUS VEHICLES ON SINGAPORE WORKERS



Research Partnership between **National Trades Union Congress (NTUC)** and
Lee Kuan Yew Centre for Innovative Cities (LKYCIC), Singapore University of Technology and Design

AV deployment is set to reshape not only operational efficiency and safety, but jobs, skills, and career pathways across the transport sector. There is a need for greater understanding of how workers are experiencing and preparing for these changes.

This study examines the worker realities that will shape the effectiveness of these measures over time, and identifies the longer-term system conditions needed for a fair and future-ready transition.



Study Grounded in Broad Tripartite Consultation

- 1 Landscape Review**
Global and local evidence of AV labour transition
- 2 Sector Engagement**
25 participants & 21 observers across unions, operators, government, and workers to capture system-level needs, risks, and transition concerns
- 3 Worker Survey**
818 taxi, PHV, and public bus workers
- 4 Co-Design Workshop**
32 participants and 19 observers across unions, operators, government, and workers to shape transition pathways



Study Found That Action Readiness Varies By Sector and Workforce Needs



PHV Drivers

Show greater self-initiated exploration and career planning, but readiness remains fragile amid high uncertainty and weaker institutional support. Need flexible pathways suited to non-traditional work patterns



Taxi Drivers

Moderate readiness, with some exposure and self-directed preparation but unclear future pathways. Training is constrained by time and cost, while interest in non-driving roles signals a need for clear conversion pathways into adjacent jobs



Bus Captains

Remain the most transition-ready and institutionally supported, with stronger access to information and AV exposure. However, preparation is still largely passive and training participation low. Need paid training time and clearer progression into future driving or supervisory roles

Profiling the Workforce by Readiness



Concerned Observers 19.7%

Low confidence, high concern, limited active preparation

Best support

Reassurance, income security, one-to-one guidance



Cautious Adapters 62.6%

Open to change but held back by information gaps or confidence barriers

Best support

Clear pathways, job-linked training, transition navigator



Confident Champions 17.7%

More confident and already taking steps to prepare

Best support

Progression pathways, peer ambassador roles, higher-value opportunities

Key Study Insight: Increase Communication and Enable Concrete Action

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96.3% of surveyed workers reported some awareness of AV developments. Awareness of AVs remains largely indirect and passive, with most workers learning about AVs through media exposure (83.5%) or awareness of AV trials (71.5%) rather than official sources.



83.5%
through media exposure



71.5%
through awareness of AV trials



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Key Study Insight: Transition Pipeline Must Convert Intent Into Action

Many workers are exploring training and alternative career pathways, but only around one-third have taken active steps towards preparation. Clearer transition pathways may be needed to bridge the gap between intention and action.



Key Study Insight: Support Must Be Sufficient, Accessible, and Calibrated

Job security concerns and income loss were the primary concerns. Workers may be willing to reskill, but financial realities shape their ability to act. Income uncertainty, vehicle rental obligations, and competing responsibilities can limit participation unless support is timely, accessible, and sufficiently targeted.



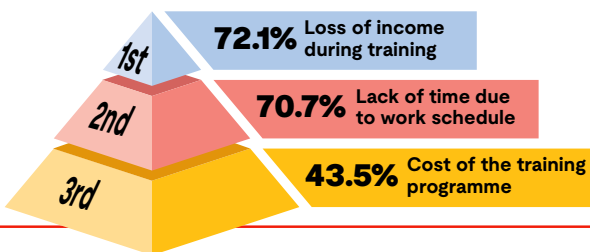
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Key Study Insight: Training Must Be Flexible, Embedded, and Outcome-Linked

Training participation is influenced not only by motivation, but also practical constraints. Time, cost and uncertainty about outcomes can prevent workers from pursuing opportunities even when they recognise the need to prepare.

Structural Barriers Outweigh Motivational Barriers



Key Study Insight: Transition is An Ecosystem Challenge—Coordinated Leadership, Worker Agency, and Skills-First System Must Evolve Together

Around 68.9% of workers assigned primary responsibility for managing the transition to the government, while only 16.7% believed responsibility lay mainly with themselves. Many workers viewed the AV transition as a large-scale structural transformation that individuals cannot realistically navigate alone.



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STUDY RECOMMENDATIONS



Concerned Observers:

Tripartite Partners to Anchor an AV Transition Compact

NTUC could actively represent driver interests in transition planning, surface ground concerns early, & guide workers towards suitable advisory, training, financial support, & placement pathways



Cautious Adapters:

Strengthen Worker Decision Support Beyond Information Provision

SWDA & NTUC's e2i could provide personalised insights on potential occupations, expected earnings, training requirements, skills gaps, & employment prospects, with access to career coaching & experiential opportunities



Confident Champions:

Normalise Transition Through Peer Influence

Tripartite partners could use Confident Champions as peer ambassadors, & visible placement stories to make preparation feel practical, credible, & socially accepted, including benefits & trade-offs involved in transitioning.



Enable Flexible, Multi-Stage, & Anticipatory Transition Pathways

Transport family including SWDA supported by NTUC's e2i could offer low-commitment transition pathways, including trial attachments, fractional roles, & task-based placements, enabling gradual steps towards workforce transition

Deliver Segmented Support by Readiness

NTUC could tailor support intensity: reassure & protect Concerned Observers; clarify pathways for Cautious Adapters; accelerate support for Confident Champions

Shift Towards Jobs in Demand & Skills Portability

SWDA could develop competency profiles & credentialing mechanisms that translate drivers' experiences, workplace learning into recognised portable skills, to ensure mobility into adjacent jobs in demand



Ensure Training is Work-Compatible, Trusted, & Outcome-Linked

Transport operators, employers in adjacent sectors, & training providers could complement short-form training incentives & CCP pathways, with off-peak modules, short job trials/apprenticeship, & staged pathways that workers can initially balance with driving, linked to actual vacancies

Monitor and Calibrate Income Protection During Transition

Tripartite partners should monitor whether income protection is sufficient, accessible, & calibrated to realities of different driver groups, to benefit all profiles

Call on MOT and MOM to Ringfence Proportion of Jobs for Human Drivers

(i) Workforce transition buffer & (ii) in longer term, maintaining strategic reserve of high-touch, higher-value human-operated transport roles

Detailed recommendations including an ecosystem map of longer-term transition priorities can be found in the report.

**Every
Worker
Matters**

