Benefits of using Third Pillar of Health's sleep health self-assessment.

3rd Pillar of Health

HOW *TRANSPORT FOR LONDON* GAINED ORGANISATION-WIDE VISIBILITY OF FATIGUE RISK AND IMPROVED WORKFORCE SLEEP HEALTH



www.thirdpillarofhealth.com | 0845 686 0022 | marcus@thirdpillarofhealth.com

MAKING FATIGUE RISK VISIBLE, MEASURABLE AND MANAGEABLE

OVERVIEW

Transport for London (TfL) operates one of the world's most complex multimodal transport systems, including London Buses, London Underground, London Trams, Woolwich Ferry, DLR, Overground, Elizabeth Line, and extensive road networks. With more than 27,000 staff, many of whom work around the clock, fatigue had emerged as a significant safety and performance risk across several parts of the organisation.

This case study outlines how TfL's introduction of Third Pillar of Health's sleep health self-assessment became an integral part of a pan-TfL fatigue management programme, and contributed to measurable improvements in safety, culture, and operational reliability

BACKGROUND: THE TFL OPERATING ENVIRONMENT

TfL's network includes:

- 272 Underground stations and 402 km of track
- Trams, DLR, Overground and Elizabeth Line services
- 24/7 control centres managing incidents, signalling, and service coordination
- Frontline staff including drivers, signallers, controllers, engineers, station teams, and maintenance crews
- TfL also has oversight of 9,000+ buses operating across 675 routes.

The network's scale, shift patterns, and service pressures create conditions where fatigue can accumulate quickly if not proactively managed.

THE CHALLENGE

Fatigue in any operation, especially in safety-critical operations, has severe implications.

Fatigue can be caused by:

- Shift working, especially working irregular patterns including early, late, nights, split shifts and being on call
- Insufficient, poor quality and disrupted sleep
- Operational demands, including high cognitive loads, long periods of sustained attention, tight schedules and punctuality targets
- Company culture, where there is a barrier to reporting fatigue due to fear of disciplinary action or not wanting to let the team down

- Individual lifestyle factors
- Quality of the sleeping environment
- Medical and health conditions.

At individual level this can translate into:

- Difficulty maintaining alertness, especially during circadian low points
- Micro sleeps
- Reduced situational awareness in complex environments (e.g. platform-train interfaces)
- Rushed driving and reduced compliance with safety protocols
- Train operator errors and signal misjudgements
- Increased sickness absence with associated pressure on colleagues to cover absences
- Strained professional and personal relationships as well as increased incivility towards customers and members of the public.

At organisational level, in transport operations this can translate into:

- Increased risk of safety incidents and near misses
- Service delays, cancellations and reduced reliability
- Damage to public trust in the transport network
- Increased regulatory scrutiny
- Failure to respond to hazards
- Slower responses to operational issues
- Mismanagement of incidents as they arise
- Deterioration of physical and mental health, increased stress and sickness absence
- Higher overtime, wage costs, turnover and training
- Increased insurance claims and legal costs.

Across a workforce of 27,000+, these impacts can accumulate quickly – operationally and financially.

THE SOLUTION

TfL developed a comprehensive Fatigue Risk Management System (FRMS) with five core pillars:

1. New or modified rosters are fatigue risk assessed
2. Effective training at all levels, including manager specific training
3. Cultural change and reporting improvements
4. Enhanced wellbeing support.

In 2017, as TfL began building its FRMS, it needed **reliable, organisation-wide data** to identify fatigue hotspots and understand the underlying causes. After reviewing available options, TfL selected **Third Pillar of Health's Sleep Health Self-Assessment** because:

- They could be sure it was only TfL staff using the system and providing data for analysis
- Customisable question sets to identify high-risk roles, locations and worker groups
- A mobile-friendly, secure web app accessible anywhere with a data or wifi connection
- Respondents received immediate feedback via a personalised report
- Automated guidance and signposting to support resources
- Robust data security, validated through external penetration testing.

The tool aligned perfectly with TfL's wider health and wellbeing strategy and received strong support from Human Factors, Occupational Health, Safety, IT, Finance, Procurement, Communications, Clinical Psychology and the Unions.

Following a successful internal trial, the assessment was rolled out organisation-wide.

How the assessment works

The assessment asks staff about:

- Sleep health
- Commuting patterns and fatigue-related commuting incidents
- Lifestyle factors
- Life satisfaction.

Participants immediately receive a personalised report with:

- Their sleep health scores
- Risk indicators for three common sleep disorders
- Hyperlinked factsheets
- Practical lifestyle recommendations.

This empowers staff to make informed changes to improve their sleep, alertness and wellbeing.

For TfL, the assessment provides:

- A "state-of-the-nation" view of fatigue risk
- Insight into specific worker groups with elevated fatigue

- The ability to generate reports by job role, demographic or location (or combination of)
- Fully anonymised data with no access to personal information.

This visibility has been used to inform TfL's fatigue interventions.

RESULTS

Across the first five rounds of the assessment (8.5 years), **3,577 staff** completed their assessment. TfL observed:

1. Continuous improvement in key sleep metrics

Across all five rounds, staff reported improvements in:

- Sleep duration
- Sleep quality
- Daytime sleepiness
- Lifestyle factors
- Overall sleep health scores.

Participants who completed the assessment twice showed long-term behavioural improvements, suggesting the tool itself drives lasting positive change.

2. Growing engagement

Participation increased from 24 assessments per month in 2021 to 45 per month in 2025, driven largely by increased awareness and integration into fatigue training.

IMPACT

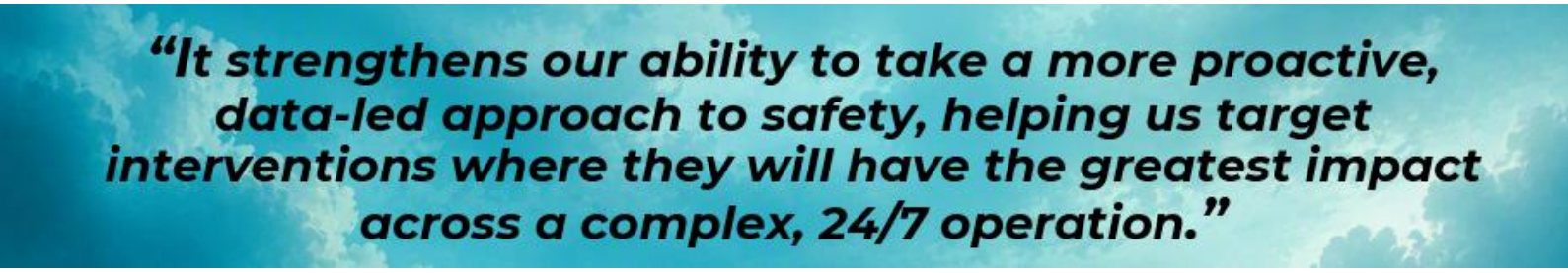
The sleep survey has been a key enabler within TfL's wider fatigue strategy, forming an integral part of a coordinated programme of engagement and support. While its impact cannot be isolated in absolute terms, its contribution has been significant; helping to raise awareness, prompt behavioural change, and provide meaningful, accessible support to individuals.

Commenting on how the sleep health self-assessment has played a role in TfL's overall fatigue management programme.



The Sleep Health Self-Assessment Tool has proven to be an invaluable source of insight into the fatigue-related challenges experienced by colleagues. It provides an effective way to raise awareness and enhance understanding of sleep health, helping individuals identify practical strategies to better manage and mitigate fatigue. The tool’s rapid, personalised feedback is particularly valuable, offering meaningful insights that encourage users to take greater ownership of the factors influencing their fatigue and overall wellbeing.

Ruth Turner
Human Factors Specialist



The sleep health self-assessment has become an important part of how we understand and manage fatigue risk across TfL. It gives us valuable insight into the real lived experience of our people, while also supporting individuals to take practical steps to improve their own wellbeing. Importantly, it strengthens our ability to take a more proactive, data-led approach to safety, helping us target interventions where they will have the greatest impact across a complex, 24/7 operation.

Chris Jones
SHE Business Partner, Customer & Strategy

KEY TAKEAWAYS

- Fatigue is a major safety risk in a 24/7 multimodal network like TfL
- The sleep health self-assessment provides both individual empowerment and organisation-wide visibility, enabling targeted interventions
- When fatigue is addressed proactively, the benefits extend far beyond safety — improving reliability, morale and long-term workforce resilience
- TfL's experience shows that large, complex transport systems can meaningfully reduce fatigue risk with coordinated, data-driven action.

CONCLUSION

Any organisation, especially those with shift or safety-critical workers will benefit from tackling fatigue and improving sleep health. TfL's experience demonstrates that the right tool can deliver both immediate value for staff and long-term strategic insight for leadership.

If you want to understand your fatigue risk, identify where it is greatest and empower your workforce to improve their sleep health, the Sleep Health Self-Assessment is the ideal place to start.

Begin your journey today: https://www.thirdpillarofhealth.com/contact

CONTACT DETAILS – IF YOU WOULD LIKE TO FIND OUT MORE

Third Pillar of Health
Marcus de Guingand

Managing Director, Third Pillar of Health

Email: marcus@thirdpillarofhealth.com
Office: +44 845 686 0022
Website: www.thirdpillarofhealth.com

Transport for London
Ruth Turner

Engineer Systems Performance & Integration - Human Factors

Email: ruthturner@tfl.gov.uk

Website: www.tfl.gov.uk