

Equitable transport provision for night-time workers in 24-hour London

UCL City Leadership Lab

Research report

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Executive Summary

Over the past decade, cities across Europe and the US have begun to take the notion of a ‘24-hour city’ more seriously. Having recognised the economic value of night-time activities, cities such as Amsterdam and London have appointed night-time mayors to help foster the Night-Time Economy (NTE). This short research report unpacks current understandings of the NTE in London, highlighting the discrepancies between NTE as framed in policy strategies and the real nature of the NTE. It seeks to understand to what extent planning for night-time transport caters to those working in the sectors that make up the most of the NTE (health and social care services, transport and logistics), identifying blind spots in London’s current approach to night-time transport. Whilst this research project is in its early stages, this report aims to provide new methodological insights on how spatial data analysis can be leveraged to map the transport needs of night-time workers, in order to inform the design of more inclusive transport policy. More broadly, the report highlights that

- more inclusive framings of night-time strategies are possible if the NTE is viewed from the perspective of labour and the transport demand generated by workers, rather than from the perspective of consumption and the leisure-based economy alone;
- in addition to investing in the extension of rail services to operate at night, policy development should include investigating options to improve night bus services further, such as express night buses to serve major night-time employment areas;
- access to transport needs to be understood and modelled not just in terms of access to consumption, the London Central Activities Zone or day-time destinations, but crucially include access to employment as a cornerstone.

Introduction

Since the 1950s, New York has been fondly known as the “city that never sleeps”. But over the past decade, cities across Europe and the US have begun to take the notion of a ‘24-hour city’ more seriously. Having recognised the economic value of night-time activities, cities such as Amsterdam and London have appointed night-time mayors to help foster the Night-Time Economy (NTE). In London, these efforts have taken the form of a Night Time Commission, set up by the previous mayor, Boris Johnson, just a few months before Sadiq Khan took over in 2016. Khan then appointed a Night Czar, Amy Lamé, to oversee the development of the capital’s first ever 24-hour/NTE strategy (GLA, 2017a) together with the Commission. One of the central manifestations of this night-time policy trend has been the expansion of the transport offer at night, with the launch of overnight London Underground services – also known as the Night Tube – on four lines during weekends. In December 2017, this service has been extended to include an additional Overground line during weekends.

It is readily acknowledged that transport and economy are interlinked (Banister, 2001; Cervero, 2001), and transport investment is frequently framed according to economic objectives. SACTRA (1994) scrutinised the relationship between transport and the economy, questioning how transport affects the level or efficiency of economic activities, focusing on the spatial organisation of production and distribution, effects on labour market catchment areas, costs of production and ‘circular causation’ of growth begetting growth. Yet, the night-time economy presents a challenge to existing paradigms for transport planning and governance, due to the nature of night-time activities and related transport needs. Indeed, the NTE rhetoric and the type of public policies that have been implemented to support it have predominantly focused on catering to the ‘consumer-side’ of the NTE (Chatterton and Hollands, 2001). This has led some scholars such as Shaw (2010, p.896) to argue that the 24-hour city agenda that started to infuse local politics in British cities in the 1990s already “*was aligned with other contemporarily popular concepts and policies, such as urban entrepreneurialism and inter-urban competitiveness (Jessop 1998)*” and that “*the NTE promises increased revenue through the entrepreneurial exploitation of new time-spaces*”. London’s 24-hour strategy (GLA, 2017a), released in July 2017, clearly emphasises the potential economic benefits that could be unlocked through an expansion of economic activities at night. The strategy focuses on supporting the arts, entertainment and hospitality industries favoured by a creative class, that supposedly helps cities to thrive. Economics is everywhere in the 24-hour strategy, according to which the NTE will create jobs in making London attractive for consumers from the city and abroad, beyond normal working hours. Yet, in reality, culture and nightlife are only one small part of the night-time economy. Indeed, the types of goods and services provided at night imply that the population of night workers (‘producers’) providing these have different socio-economic characteristics compared to NTE ‘consumers’. The largest NTE employers are in hospitality, transport, health and social care sectors. Jobs in these sectors tend to be lower paid, and workers are often living further from the workplace (Titheridge et al. 2014). Currently, many night-time workers rely on off-peak services and have very limited travel options.

A central concern and focus of transport planning for the night-time should thus be considering the transport needs of night-time workers. It is necessary to highlight 'blind spots' in both current NTE and transport policy agendas to identify opportunities for more equitable transport provision. This short paper aims to fill this gap by asking: whose needs is current policy for night-time transport in London catering to, and how could more equitable outcomes in transport provision at night be achieved through considering the needs of night-time workers?

What is the ‘economy’ in the NTE? Reflections on London’s 24-hour vision

“What makes a successful city? Undoubtedly cities need good homes, good jobs, safe streets and efficient transport. But successful cities are also creative cities. They feed our souls and inspire our minds. And creative cities thrive at night.”

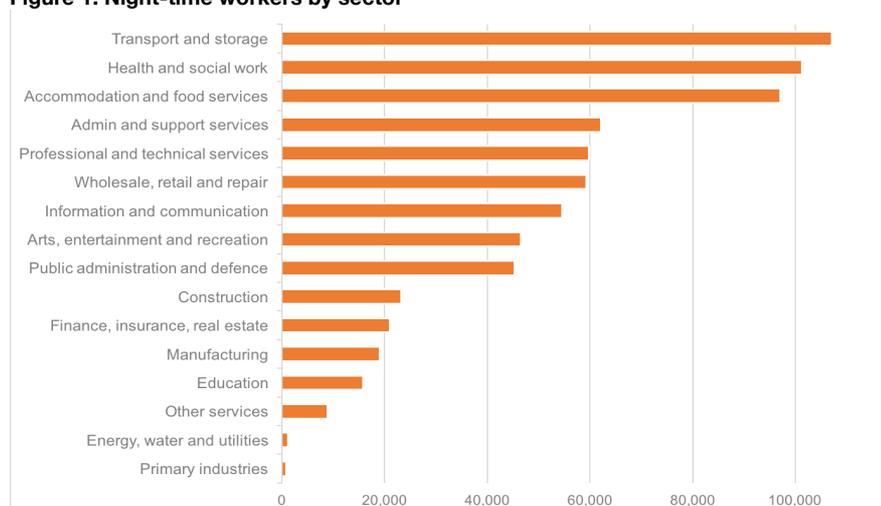
From good night to great night: a vision for London as a 24-hour city
(GLA, 2017a, p.5)

The concept of the NTE emerged in UK policy in 1991, with calls for a “*‘time-shift’ in socio-cultural policy*” (Comedia 1991, p.22). There are a wide range of perspectives on the NTE, ranging from critical views that it constitutes a ‘boosterist representation’ of urban entertainment and retail at night; a way of encouraging regeneration (and gentrification) of inner city areas; to more optimistic views of the NTE as an emancipatory move to ‘bring people back into the city’ for ‘promotion of the city as a culturally vibrant realm’ (Talbot, 2007 in Shaw, 2010). Our approach is grounded in the view that regardless of the intentions of the NTE as a concept, the occurrence of both production and consumption at night is an inevitable fact in most cities. We re-examine the nature of these activities and reflect on the appropriate and necessary provision of transport services for the NTE in its actual form. The discourse put forward in the London 24-hour strategy (GLA, 2017a) emphasizes two dimensions of the NTE:

- On the supply side, the strategy focuses on economic activities that support London’s nightlife: the primary businesses identified as playing an active role in generating economic activity at night are nightclubs, bars, cultural venues and restaurants;
- On the demand side, the strategy puts the night-time *consumer* at its heart, emphasizing the need to create *safer, more accessible* spaces for people to keep consuming at night – tourists and Londoners alike.

This framing of the NTE leads to a focus on issues such as *licensing*, while transport provision is framed as a question of allowing consumers access to hotspots of nightlife in London – **illustrating a rather consumption-focused appreciation of the types of economic activities that underpin the NTE**. In reality, the NTE is enabled and supported by the productive labour of night-time workers. Analysis by the Trades Union Congress shows that the “*number of people who work night shifts in London increased by nearly 30% between 2011 and 2016*”, with one in eight (12%) employees in London regularly doing night work (TUC, 2017).

Data from ONS (2015) shows that across all sectors featuring a higher likelihood of night-time work, there are many more employees in transport and storage, health and social, and administrative sectors. Arts, entertainment and recreation are important, but by no means the dominant sectors in London’s NTE. As shown in Figure 1 below, arts and entertainment only account for 6.4% of the employment in the NTE, and hotels, restaurants and bars for 13.4%.

Figure 1. Night-time workers by sector

Source: Adapted from London First (2016). Data from Labour Force Survey, Nomis 2016 data (<https://www.nomisweb.co.uk/>), CEBR analysis.

Evidence also shows that the sectors with the highest economic impact at night are logistics and deliveries, followed by professional and social services and health and social work (London First, 2016). While the entertainment and recreation industries may have a more visible presence on the city's streets, they actually generate the least economic activity, contributing only £1.3 billion to the total £40.1 billion estimated impact (see Table 1 below).

Table 1. London night-time economy economic impact (£ billion)

Sector	Direct economic impact	Indirect economic impact	Induced economic impact	Total economic impact
Logistics & deliveries	3,790	2,754	1,214	7,759
Professional & financial services	3,195	1,490	869	5,554
Health & social work	3,198	1,360	846	5,404
Information & comms	2,632	1,039	681	4,352
Accommodation & food	1,383	666	380	2,429
Facilities management	1,411	623	377	2,412
Retail	1,035	531	291	1,857
Entertainment & recreation	795	309	205	1,309

Source: Adapted from London First (2016) based on CEBR analysis.

The 24-hour London vision recognizes the diversity of what constitutes the night time economy in some instances, highlighting that “we can also do more for our vital nurses, police, freight and transport workers whose shifts go through the night” (GLA, 2017a, p.6). Yet, the concrete policy measures proposed as part of this strategic vision, these have predominately related to nightlife, pubs and clubs. This imbalance is also reflected in the Night Time Commission, which does not include representatives from sectors such as healthcare: “The vision will be realized by Night Czar Amy Lamé alongside the new Night Time Commission chaired by Philip Kolvin QC, which will include planners, licensing experts, venue owners, artists, the police, media entrepreneurs as well as leaders of major cultural organizations” (GLA, 2017c).

This narrow focus on nightlife as part of London's NTE agenda has led to the creation of a strategy which seeks to meet the needs of a relatively privileged part of the city's population, and fails to reflect the true nature and diversity of the NTE. We argue that the nature of current and proposed policies for night-time transport in London, such as the focus on night-time rail services on weekends, is reflective of that imbalance in focusing on increasing the transport offer for night-time consumers, and failing to cater for the transport needs of night time workers. These arguments are discussed further in the following sections.

Methods

Our London case study examines equity issues in night-time transport provision. We used a mixed methods approach to address the following research questions:

1. To what extent does current planning for night-time transport in London cater to night-time workers employed in low-paid sectors such as health and social care, hospitality, and transport and logistics?
2. What could planning and policy for equitable transport provision - that would actively consider the needs of night-time workers - look like?

Policy document review: In order to understand existing and proposed policies for night-time transport in London, two key policy documents were analysed qualitatively: the 24-hour vision for London, and the Mayor’s Draft Transport Strategy (GLA, 2017a). Publicly available reports by TfL provided important contextual information on night-time travel trends and current planning tools. While the Mayor’s Draft Transport Strategy (GLA, 2017b) has significant shortcomings in relation to transport provision for night time workers, it has to be acknowledged that this document does not capture or represent the full extent of transport policy and planning in London. Indeed, as a high-level policy document, it is inevitably limited in detail, while more specific planning and implementation work is undertaken at TfL. However, public documentation on these more specific aspects of transport planning is not always available and our analysis is based on GLA documents.

Spatial analysis: Spatial analysis of UK Census and Labour Force Survey data from the Office of National Statistics (ONS) examined the spatial distribution of night-time workers and jobs across Greater London to better understand how transport provision can cater for night-time workers’ transport accessibility. Data from the 2013 Census and Labour Force Survey was analysed and mapped using GIS software, overlaid with the current Night Tube lines and night bus routes. This approach generated preliminary findings in response to both research questions, and identified gaps in data collection and understanding of causal relationships, which need to be addressed to allow for transport accessibility planning. While this analysis uses data on the spatial distribution of jobs, workers and transport networks, there are other significant factors that influence transport accessibility such as housing costs, transport costs, reliability, quality and frequency. This static analysis gives a preliminary indication of London’s transport system: more in-depth analysis of user needs and the dynamics of housing, transport, and affordability, is necessary to support transport planning.

Call for evidence: a call for evidence on transport access for employees issued to labour organisations representing a high proportion of night-time workers yielded two responses from the Trades Union Congress and the Royal College of Nursing. This provided some insights into answering both questions 1 and 2. The questions posed as part of the call for evidence were:

- How do night-time workers feel about the quality of transport provision and the travel options that they currently have access to?
- How do night-time workers currently travel to work (bus/Underground/car/cycle/walk)?
- Do night-time workers use the Night Tube?
- Any challenges faced in getting to and from work, such as:
 - Distance to station
 - Frequency of service
 - Journey times
 - Affordability
 - Safety

Addressing gaps in London's current night-time transport strategy

As discussed in section 2, London's 24-hour strategy does acknowledge the importance of 'key workers' supporting the NTE. Principle 9 of the strategy focuses on serving a NTE beyond culture and entertainment and for those already working in other sectors (GLA, 2017a). The only mechanism presented for delivering on this is the Night Tube and the extension of this and other rail services (London Overground and DLR) to operate during the night.

The Mayor's Draft Transport Strategy published in June 2017 outlines plans for night-time transport (GLA, 2017b). The Strategy acknowledges that "*Londoners' travel habits are changing and off-peak, weekend and night-time public transport services also need to be better developed, enabling London to become a fully 24-hour city, with a strong night-time economy*" (p.126). Policy 17 of the Strategy states that "*the Mayor, through TfL and the boroughs, Network Rail and train operating companies, will seek the development of London's public transport services to support the growth of the night-time economy*" (p.185). Proposed policies to achieve this focus on the extension Night Tube services to include more lines, and the introduction of night-time services on the Overground (2017-2020) and DLR services (2020-2030). Bus services are only mentioned briefly: "*Night Bus services will be adjusted to complement night-time rail services and areas with a thriving night-time economy*" (p.185).

We argue that there is a clear discrepancy between the normative commitment to consider and provide for the travel needs of night-time workers in key service sectors, and the concrete policy measures that are proposed in both of these policy strategies for improving night-time transport. Proposals overwhelmingly centre on the extension of night-time rail services (London Underground, Overground and DLR). While such improved services are certainly a welcome addition to London's public transport connectivity, and may strengthen access to employment for some who work at night, there are many reasons to question whether these services will address the needs of large segments of the night-time working population that are employed in health care, hospitality and transport and logistics.

Firstly, the focus on weekend rail services means that any positive impact on night-time workers' transport access will be limited. The Night Tube currently only operates during the night hours between Friday evening and Saturday morning, and Saturday evening and Sunday morning. **The policy strategies do not mention whether extended hours of operation will include weekday services, which would clearly be more relevant to night-time workers.**

Secondly, ridership data for London night bus services point to the fact that night buses are heavily used by low-paid night-time workers: according to the latest TfL Bus User Survey, **51% of night bus passengers are travelling to and from work, and 57% of night bus passengers have an annual household income of less than £20,000 (TNS, 2015).** Transport planning for the night-time economy must thus acknowledge that focusing solely on rail services is unlikely to serve low-paid night-time workers, who may be reliant on bus services for various reasons. One reason may be affordability: rail fares are considerably more expensive than bus fares. The difference between the cost of an annual Bus and Tram Pass (£848) and an annual Zone 1-4 Travel Card (£1892) is equivalent to 5.2% of an annual household income of £20,000 (10.4% if assuming there are two commuters in the household).

Thirdly, **there is a lack of evidence in the Mayor's Draft Transport Strategy on the extent to which extension of night-time rail services actually improves connectivity to major places of night-time employment (e.g. hospitals, office districts and logistics centres).** There is no spatial analysis in either strategy regarding locations of employment, locations of residence and connectivity between them with respect to night-time workers. Proximity of rail stations at both the origin and destination of night-time workers' commutes affects overall journey times considerably, and there may be a lack of available onward

connecting bus services from rail stations during the night. This lacking consideration of the relationship between the places where night-time workers live and work is further reflected in the type of data used in GLA strategies. Indeed, as Figure 2 below shows, current GLA NTE policy focuses on improving connectivity to designated ‘strategic clusters’ of (consumption-based) night-time activity, rather than thinking about night-time clusters as locations of employment.

The focus of current transport planning for the night-time economy on weekend rail services appears to reflect the focus of London’s current NTE agenda on leisure and consumption activities, with concurrent priority placed on ensuring mobility for Londoners and visitors enjoying night-time activities in Central London. The proposed policies are unlikely to improve transport accessibility for low-paid night-time workers, who rely on limited services and may face limited travel options due to various reasons such as affordability.

Figure 2. NTE clusters in the London Plan

Map 4.3 Night time economy clusters of strategic importance



Source: GLA (2016a, p.160)

Evidence submitted to us by the Royal College of Nursing (RCN), a membership organization representing nurses and healthcare professionals across the UK, provides support for these arguments:

“The NTE is simultaneously reliant on the labour of health care workers, but as of yet, does not serve their needs adequately. Health care workers finishing shifts between 12am and 2am are left with a slimmer service, and for those requiring public transport into the outskirts of the city, it means extended waits, more changes and longer journeys... Higher housing costs and expensive travel... mean that more and more of the capital’s health care professionals are being forced to spend increasing proportions of their wage on travel” (RCN, 2017).

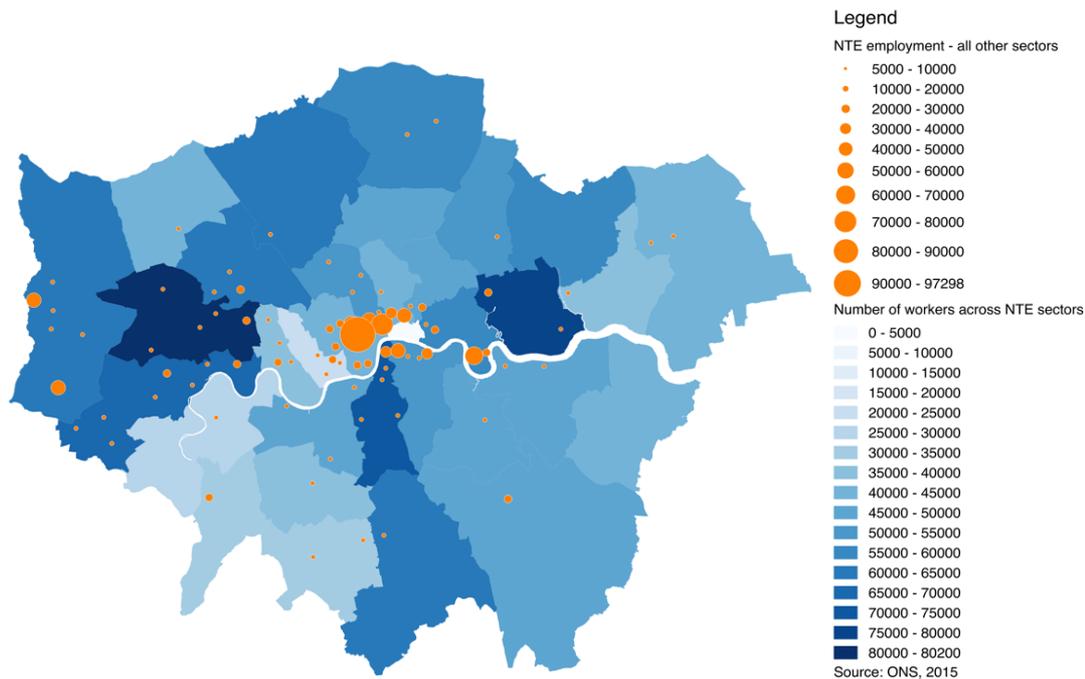
Reinforcing this qualitative evidence, a 2015 survey of nursing staff in London showed that while rail services are heavily used by staff for the commute to work, 49% of staff also use bus services to get to work; furthermore, 7% of the average London nurse’s pay is spent on transport (RCN, 2016). Given the above, transport policy and planning must consider the provision of intermodal night-time transport informed by some understanding and analysis of locations of residence and employment of night-time workers, in addition to paying more attention to issues related to transport affordability at night – which might in turn influence

night-time workers' modal choices. The next section illustrates an approach to mapping these relationships.

Spatial analysis of night-time workers commutes: an alternative approach

The spatial analysis presented in this section sought to understand who is served by the Night Tube, in light of the locations of night-time jobs (employment) and workers (residence).

Figure 3. Employment centres for NTE sectors

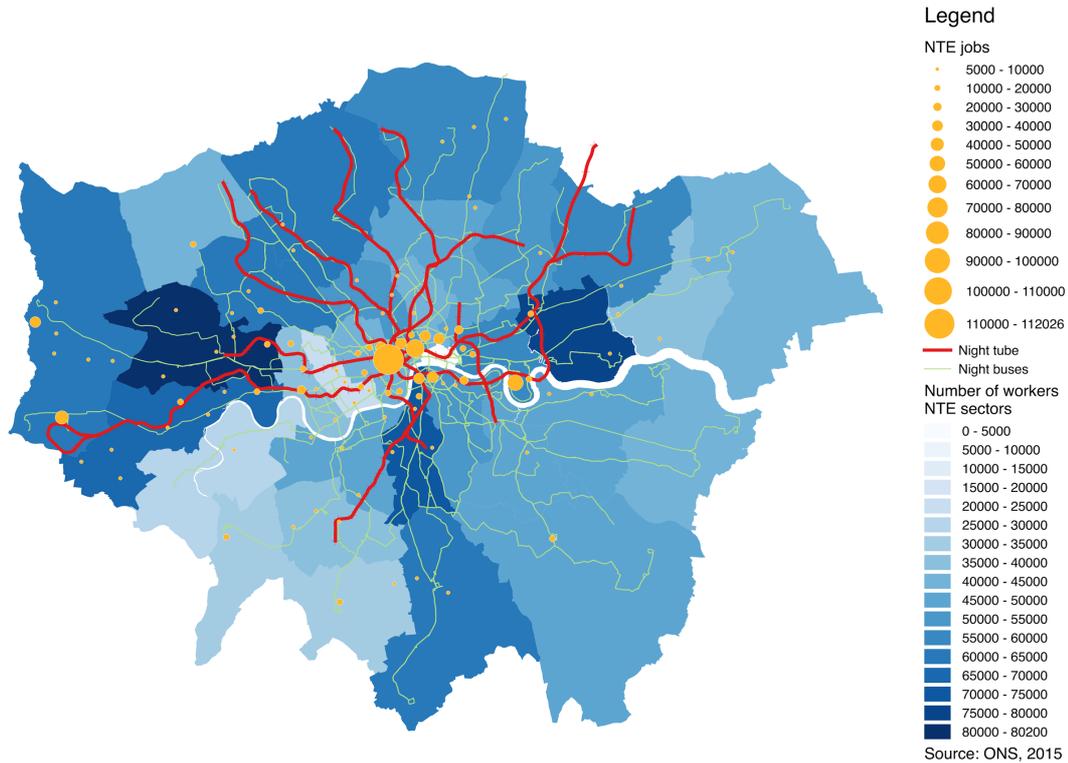


Source: Authors. Employment data sourced from Business Register and Employment Survey, October 2015, ONS. Residential data sourced from Annual Population Survey, April 2017, ONS. The NTE sectors referred to are based on ONS categories: transportation and storage; information and communication; wholesale and motor trades; retail; human health and social work activities; administrative and support service activities; accommodation and food service activities; arts, entertainment and recreation. These were chosen to correspond broadly to the biggest sectors represented in Figure 1 (categories not identical).

Figure 3 reveals the location of night-time employment (ward centroids), and residential location of night-time workers (by Borough), providing a contrast to the visualization of strategic clusters by the GLA (Figure 2). Showing not only where night-time economic activity is located, but also the residential location of workers, this map provides an alternative perspective on transport needs for the NTE. While linked origin-destination data is not publicly available (and TfL data was not requested for this paper), which would produce a more granular representation of night-time travel, it is nonetheless important to consider that residential locations of night-time workers are not evenly distributed across London, and that there are night-time employment clusters in both inner and outer London.

Figure 4 adds an overlay of the current Night Tube network, as well as night bus routes, to indicate the coverage of the network across locations of worker residential locations and employment locations. Without more granular, individual-level data, quantitative analysis is limited and subject to high uncertainty – however, the visualization does show that night time transport services are very limited, or even non-existent, for many outer areas of London. Routes also tend to take a radial form, running from the centre to the periphery with relatively limited lateral connectivity.

Figure 4. Residential location of workers, jobs, and night time transport services



Source: Authors. Employment data sourced from Business Register and Employment Survey, October 2015, ONS. Residential data sourced from Annual Population Survey, April 2017, ONS. NTE sectors as per Figure 3.

To further progress this analysis, detailed data is required on individual travel patterns, transport costs, frequency and reliability of transport services, as well as survey data on travel decisions for night time workers. The interdependence of housing costs, residential location and household formation, and travel choices is significant – transport planning should be cognisant of these relationships, to consider whether the appropriate intervention to improving transport may in fact lie with other sectors, such as the provision of affordable housing or changes to land-use policy.

Viewing the NTE from the perspective of London’s night-time workers: towards an equitable night-time transport strategy

The evidence and analysis provided in this paper outlines a research agenda to improve transport planning to support London’s Night-Time Economy. *Transport and the Economy* (SACTRA, 1994) marked a step-change in our conception of transport provision and how it relates to the economy, emphasising the importance of induced demand and countering the ‘accepted wisdom’ that mobility and economic growth were positively correlated. While this paper provides only preliminary analysis to inform transport planning and investment, considering the role of transport in the NTE is a useful case to highlight the need for more scrutiny of what transport is for, in terms of its impacts on people’s lives.

Taking a critical view on the NTE, **this paper shows how more inclusive framings of the NTE are possible, if the NTE is viewed from the perspective of labour and transport demand for workers, rather than the consumption side alone.** In contrast to the ‘boosterist representations’ that instrumentalise the NTE as a means of increasing business activity, our approach expands this frame to consider the NTE from the production side, looking at what goes into the economy. Viewing the NTE from the perspective of workers, the highest proportion of people are in social care and personal services, healthcare, security, logistics and transport. These sectors are not necessarily the most economically productive, according to output-based metrics, but undoubtedly provide essential services to support the population’s needs as well as the distribution of goods for consumption.

According to Mayor Sadiq Khan, the vision for a 24-hour London “*isn’t just about pubs and clubs – it’s about everything from museums and theatres opening later, being able to do your weekly shop after an evening shift, through to the safety of Londoners working and travelling at night and residents being able to get a good night’s sleep. We must create a life at night that works for everyone, showing the world that London is open for business, open for people and ideas, and open 24 hours a day*” (GLA, 2017c). This paper provides clear evidence that more needs to be done to achieve an equitable 24-hour city: there is a clear need for better planning to ensure equitable transport provision for night-time workers. As stated by the Royal College of Nursing (RCN, 2017): “whilst RCN London welcome the introduction and extension of the night-tube, there is still much to do to ensure that night-time health care workers are able to travel to work in a safe, efficient and affordable manner”.

An equitable approach to transport policy for the NTE should serve the needs of all Londoners and all sectors of the NTE and thus include intermodal and integrated planning of bus and rail services, to ensure adequate door-to-door connectivity and journey times for low-paid night-time workers. As is pointed out in the Draft Transport Strategy, “*London’s buses transport more people than any other public transport mode*” (GLA, 2017b, p.60). Bus services are acknowledged as important for the equity and affordability of travel in London, however, there are few concrete proposals regarding the development of night bus services. This is a significant issue considering the evidence on night bus use by night-time workers presented above. **In addition to investing in the extension of rail service operations, policy development should include investigating options to improve night bus services further.** One way to do this could be to provide express night bus services to serve major night-time employment areas. However, to inform planning, collection of more data is needed to understand the needs of night-time workers, and determinants of modal choice. Current planning tools used by Transport for London such as PTAL and TIM use morning or evening peak hour data (TfL, 2015), which are not relevant to planning night-time transport.

Finally, the case of night-time workers discussed in this paper points to that London transport policy and planning needs a more robust conceptualisation and operationalisation of transport access. **Access needs to be understood and modelled not just in terms of access to consumption, the London Central Activities Zone or day-time destinations, but crucially include access to employment as a cornerstone.** The possibility of extending London rail services to operate during the night is limited by technical constraints, particularly the need for maintenance of infrastructure. Considering this, providing for transport access for specific groups with specific needs may be easier through improving or modifying bus services, which are more easily adaptable. Transport affordability is also an important issue, and considering the ability of low-income night time workers to pay for the Night Tube is key: solutions for better night time transport may lie in changing the pricing, or providing reduced rates for workers reliant on these services. London boasts impressive public transport connectivity and capacity overall, however this paper illustrates the need to also consider and plan for transport accessibility for particular socio-economic groups. Only by recognising socio-spatial differentiation in travel needs can transport policy and planning ensure equitable transport provision and social outcomes.

References

- Banister, D. and Berechman, Y. (2001). Transport investment and the promotion of economic growth. *Journal of Transport Geography*, 9(3), pp. 209-218.
- Cervero, R. (2001). Efficient urbanization: Economic performance and the shape of the metropolis. *Urban Studies*, 38(10), pp. 1651-1671.
- Chatterton, P. and Hollands, R., 2002. Theorising urban playscapes: producing, regulating and consuming youthful nightlife city spaces. *Urban Studies*, 39(1), pp. 95-116.
- Comedia (1991). *Out of Hours: A study of economic, social and cultural life in twelve town centres in the UK*. London: Comedia and Calouste Gulbenkian Foundation.
- GLA. (2016). *The London Plan: the Spatial Development Strategy for London, consolidated with alterations since 2011*. Greater London Authority, March 2016. Available online at: https://www.london.gov.uk/sites/default/files/the_london_plan_2016_jan_2017_fix.pdf.
- GLA (2017a). *From good night to great night: a vision for London as a 24-hour city*. Greater London Authority, July 2017. Available online at: https://www.london.gov.uk/sites/default/files/24_hour_london_vision.pdf.
- GLA. (2017b). *Mayor's Transport Strategy: Draft for public consultation*. Greater London Authority, June 2017. Available online at: https://consultations.tfl.gov.uk/policy/mayors-transport-strategy/user_uploads/pub16_001_mts_online-2.pdf.
- GLA. (2017c). Mayor unveils first ever 24-hour vision for London. Press release, 25.7.2017, Greater London Authority. Available online at: <https://www.london.gov.uk/press-releases/mayoral/mayors-24-hour-vision-for-london>
- London First. (2016). *The Economic Value of London's 24 Hour Economy*. London First and EY. Available online at: <http://londonfirst.co.uk/wp-content/uploads/2016/08/Londons-24-hour-economy.pdf>.
- ONS (2015). UK Business Register and Employment Survey. Office for National Statistics, September 2015. Available online at: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/businessregisterandemploymentsurveybresprovisionalresults/previousReleases>.
- RCN. (2016). *Better Homes for Nurses*. Royal College of Nursing, June 2016. Available online at: <https://www.rcn.org.uk/professional-development/publications/pub-005653>.
- RCN. (2017). Response to UCL call for evidence: Research on transport access for night-time workers in London. Royal College of Nursing, London: United Kingdom.
- SACTRA. (1994). Transport and the economy. Standing Advisory Committee on Trunk Road Appraisal, Department for Transport, HMSO: London, United Kingdom.
- Shaw, R. (2010). Neoliberal subjectivities and the development of the Night-Time Economy in British Cities. *Geography Compass*, 4(7), pp. 893-903.
- TfL. (2015). Assessing transport connectivity in London. Transport for London, April 2015. Available online at: <https://files.datapress.com/london/dataset/public-transport-accessibility-levels/2017-01-12T15:59:45/connectivity-assessment-guide.pdf>.
- Titheridge, H., Christie, N., Mackett, R., Hernandez, D.O., Ye, R. (2014). Transport and Poverty: A review of the evidence. Available online at: <https://www.ucl.ac.uk/transport-institute/pdfs/transport-poverty>
- TNS. (2015). *TfL Bus User Survey 2014*. Transport for London. Available online at: <http://content.tfl.gov.uk/tfl-bus-users-survey.pdf>.
- TUC. (2017). Number of people working night shifts in London up by nearly a third since 2011, new TUC analysis reveals. Unpublished press release communicated as part of UCL call for evidence. Trades

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About the Lab

The **UCL City Leadership Laboratory** brings together world-class academic scholarship, public authorities, international organizations, the private sector and local SMEs to create a unique environment for urban experimentation, research, teaching and – most importantly – action. The Lab builds on three years of projects, grants and activities of the City Leadership Initiative, a joint effort of the World Bank Group and United Nations Human Settlements Programme (UN-Habitat), with funding from the UK Government's Economic and Social Research (ESRC) and Engineering and Physical Sciences (EPSRC) Research Councils. The Lab sits within UCL's policy-focused **Department of Science, Technology, Engineering and Public Policy** (UCL STEaPP) and has links across UCL's network of urban research and practice.

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