

GLOBAL NIGHTTIME RECOVERY PLAN

CHAPTER 7

LEARNING AS WE GO: MEASURING AND ANALYSING THE NIGHTTIME CITY

WHAT IS THE GLOBAL NIGHTTIME RECOVERY PLAN?

“THE NIGHTCLUB AND THE BAR ARE AMAZING, SPECIAL THINGS - THEY’RE FUNDAMENTAL TO OUR CULTURE. THEY’RE WHAT DRAW PEOPLE TO CITIES, THEY’RE WHAT MAKE PLACES FEEL VIBRANT.”

– ANDREW TUCK, HOST OF MONOCLE’S THE URBANIST

The **Global Nighttime Recovery Plan** is a collaborative practical guide that aims to provide all members of the nighttime ecosystem the knowledge and tools to aid their cities in planning for safe, intentional, and equitable re-opening.

Opportunities to Reimagine

Nighttime industries are facing unique pressures, but are also led by strategic and creative problem solvers and collaborative, resourceful organisers. By considering both spatial and temporal dimensions of the 24-hour city, these cross-sector leaders can enable cities to rebound from COVID-19 stronger and more resilient than before.

Each chapter includes:

Guidance from re-opening to re-imagination:

1. **RESOLVE: Analysis** of cities’ immediate actions to contain COVID-19.
2. **RESILIENCE and RETURN: Tools and strategies** to shape recovery.
3. **REIMAGINATION and REFORM: Scenario planning** to define next normal.

Not “Best Practice,” but “Practice”: No one has all the answers yet—the plan highlights various workable approaches in an ongoing, collective learning process.

Challenging “the way things were”: Pre-pandemic, nightlife was already vulnerable, and working close to the margin. As we return, how do we re-envision a better “normal”?

Never one-size-fits all: We know what works in one political or cultural context may not work in all. These models are a starting point for cities to modify and re-contextualise in service of more equitable, just, and inclusive nightlife scenes.

Suggestions for measuring progress: Both stories and data—quantitative and qualitative—are essential to capture progress and success in nightlife landscapes.

Harm-reduction mindset: We recognise that people will always want to gather. Rather than denying that impulse, we wish to help people do so safely. This guide should always be used in the context of local public health guidelines.

We hope this resource is of use in your city, and we’d love to hear how you’re putting it to work. Please stay tuned at nighttime.org, and reach out to us with questions, ideas, and interest: hello@vibe-lab.org.

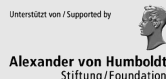
With warm wishes,
The Global Nighttime Recovery Plan team.

THE GLOBAL NIGHTTIME RECOVERY PLAN WILL BE RELEASED CHAPTER-BY-CHAPTER OVER THE COURSE OF 2020 AND 2021. FIND THE LATEST INSTALMENT ON [NIGHTTIME.ORG/RECOVERYPLAN](https://www.nighttime.org/recoveryplan).



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INTRODUCTION

The Covid-19 crisis has highlighted many governments' poor understanding of systems and stakeholders in the nighttime city. During the deepest months of the crisis, many governments, foundations, and non-governmental organisations (NGOs) lacked the data needed to make *well-informed* decisions. But decisions had to be made. Governments needed to make complex decisions regarding issues such as nighttime transit and commerce, public assembly in venues and other spaces, and financial support for businesses and communities. The real outcomes of these decisions will not be understood for years.

Rigorous data collection and analysis related to the nighttime sector is critical to its health. To create or synthesize useful data, one must ask the right questions. One must understand the parameters, values, and geography of the nighttime city. But because of poor measurement or lack of interest prior to 2020, our understanding of urban nights around the world before Covid-19 is limited. Most data collectors or analysts have not recognised certain aspects of urban life as being distinctly “nighttime,” so many existing urban or economic data are not categorised or collected in a way that is useful for nighttime-specific analysis.

The insufficient policies of the Covid-19 era speak to the consequences of insufficient data and insufficient understanding about our nighttime world. As we endure the second year of the pandemic, improving our approach to collecting and analysing nighttime data will be essential to recovery and a better future.

WHY ARE DATA AND MEASUREMENT IMPORTANT?

“DATA ARE POLITICAL.”

– PAUL OWENS, 2021

Data are one of the key languages of public policy — spoken as facts, figures, maps, reports, charts, and tables. Data are the precursors to political action. Governments need information and knowledge to govern effectively and to implement responsible policies. Communities and organisations need data to participate in public debate and to assess and better their practices.

Measurement informs policy setting, decision-making, and resource allocation for governments. Implementing a data-driven approach to political decision-making, which also integrates community engagement and participation, is a strong corrective to the politically safe, “business-as-usual” approach. Data-informed governance can result in increased transparency and a better return on investment for taxpayers and stakeholders. However, creating the governance and capacity to do this work — not just in nighttime sectors but in general — is costly and politically fraught.

Communities can benefit from data when they are able to inform or participate in the data collection process — or provide the “nighttime lens” that many analysts and politicians lack — and use data to translate their stories into the language of decision-makers. However, nighttime communities, businesses, and organisations may lack the resources to collect, manage, and analyse data properly. They may also be newcomers to the public conversation about urban life, if they are included at all. Often, they must build data-informed arguments and advocacy organisations from scratch to try and fight the predominantly negative public perceptions of nighttime activities.

While achieving a data-driven approach to governance and advocacy presents various challenges to governments and communities, the pandemic has shown us the necessity of having good data to inform policies during crises. We hope that this chapter of the Global Nighttime Recovery Plan (GNRP) contributes to bridging the knowledge gap about our nighttime world by offering strategies for how communities and governments can better use data to understand and improve urban life at night.

WHAT CAN I LEARN FROM THIS CHAPTER?

This chapter is about decision-making and political advocacy. It contains data-related concepts and practices that governments, communities, and organisations can use to improve their local nighttime economies, and life at night in their cities. A common observation from the first six chapters of the GNRP has been the lack of a data-based understanding of cities at night. This chapter seeks to empower communities and encourage governments to better address this gap. This document is designed for multiple audiences. We created it to help people in governments, community organisations, NGOs and trade groups create, analyse or interpret data about nighttime cities and communities.

This document draws on the previous chapters of the GNRP and from work done around the globe, both during and before the pandemic. It features case studies and analytical methodologies. We also reference resources throughout the chapter for readers to learn how to create, analyse, and visualise data. By investigating these references and examples, a reader can learn from and duplicate best practices. There are open-source analysis workflows referenced throughout the document, which are available for your use. Sharing knowledge and skills is foundational to improving our nighttime world — we hope to model this spirit of open-source collaboration through this chapter.

It is divided into four sections, the first section, “Nighttime Governance - Evidence-Based Decision-Making” is about how governments and NGOs make decisions using data. The second and third sections are for all audiences - “What Are Nighttime Data?” contains a dictionary of useful data sources. “Measuring The Night” has methodologies and strategies for creating and analyzing data. The last section, “Recommendations” contains recommendations for governments and for communities.

This chapter also notes specific kinds of practices, arguments, data sets, and analyses to avoid or treat skeptically. There are many ways that data can be misinterpreted, manipulated, or used to mislead audiences.

Whether you are a nighttime advocate, government officer, or business leader, we hope that you find useful data and measurement-related concepts and practices that you can incorporate into your work. The diagram below summarises the various questions that may be of interest to different readers:



Figure 1. Questions we seek to answer in this chapter.

NIGHTTIME GOVERNANCE: EVIDENCE-BASED DECISION MAKING

How do policy-makers in cities make decisions? Ideally, engagement, evidence, and data inform priorities, forecasts, and programs created with a proactive approach. The evidence-based approach to policymaking is supported by a culture of norms and processes called “data governance.” How is data governance linked to the urban night?

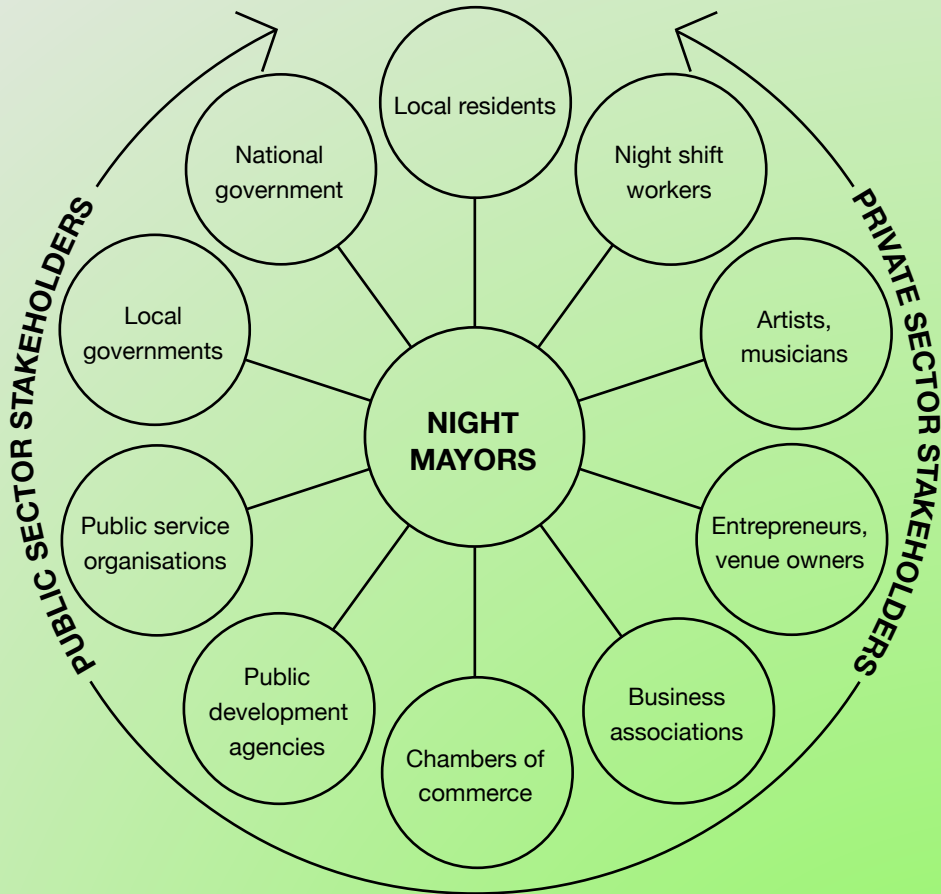


Figure 2. The “ecosystem” of actors described in GNPR Chapter 6 - centered around the “night mayor,” a relatively new but important figure that has emerged within many cities’ nighttime governance systems.

Nighttime governance refers to the complex cast of public and private actors involved in managing the city at night. This system was described in GNRP Chapter 6 and is visualised in Figure 2). As nighttime governance becomes a part of urban agendas, we must advocate for an evidence-based process to governing cities after dark (data governance), supported by the necessary resources.

Transparency and data-oriented governance can help combat negative perceptions of the city at night, and put a professional face to nighttime offices which may be perceived as simply concerned with nightclubs and partying. Perceptions regarding nighttime activities and communities are often ruled by grievances, anecdotes, fears, and emotions. For example, place-based fear of crime is the source of many prohibition-oriented nighttime regulations. However, evidence shows that fear of crime is strongly linked to exposure to personal or media stories about crime, regardless of the reported frequency of crime. An evidence-based policy to combat crime in nightlife areas can act as a corrective. While data does not always win arguments or change minds, it can encourage a facts-based dialogue in a fraught area of public debate.

A data-driven approach in any field can be summarised as an iterated cycle of measurement, programming, evaluation, and adjustment. This decision-making approach has become standard in the world of business, where outcomes are measured in dollars and incentives favour analysis and adjustment. In government, it’s more challenging. Public policy is about “multiple bottom lines” - safety, inclusion, tax revenue, and happiness, to name a few - and it requires more than technical expertise. Data analysts in this field must understand the policy issues and the communities and workings of the nighttime city - failure to do so can lead to bad outcomes for public stakeholders.

Doing good evidence-based policy making is difficult. Many governments do not have a willingness to accept or commit to evidence-based decision-making. Those that do may not have the personnel and resources to create and analyse relevant data. The process of creating, implementing, measuring and adjusting a data-informed programme is often disrupted by political cycles, crises and changing priorities.

Government nighttime offices worldwide are too new to have gone through full cycles of programming, measurement, evaluation, and re-adjustment. Some have progressed through many steps. In 2019, The New York City Mayor's Office of Media and Entertainment (MOME) published a report documenting its first three years of work, placing the office in the middle of this cycle. After conducting an economic impact study, planning studies, surveys, and qualitative research, strategic initiatives were created to improve New York's nighttime sector. These initiatives were transformed into programming and they are currently being measured, adjusted and evaluated.

There are not many examples of a full cycle in the field of nighttime studies, but we can draw on examples from adjacent fields. Public health and other well-funded, research-oriented domains provide some examples of cyclical data-driven decision making. The Swedish STAD programme (Stockholm förebygger alkohol- och drogproblem) has numerous harm-reduction programmes which follow this model. Their Responsible Beverage Service (AAS) programme was created in 1995 in conjunction with numerous government, health, and industry partners. The programme was designed to reduce alcohol related violence by training establishments to reduce over-service and service to minors. The programme was implemented, partners studied violence patterns and intensities, and the programme was then adjusted and scaled. Since 2002, the programme has spread beyond Sweden and is now in implementation as STAD in Europe with 7-pilot programmes designed with an evaluation component. Reading about the STAD program can allow one to diagram a similar plan for cyclical data-driven governance.

While this chapter does not attempt to provide a single model of data-driven nighttime governance for cities to adopt, it demonstrates the need for data and measurement to become a central practice in the field. In the next two sections, we explore examples of relevant nighttime data types, and methods of measurement and analysis. We also explore common problems or issues regarding data and specifically nighttime-related data and analysis.



TIME
IS
PRECIOUS.

Photo: Eunice Lui - Vancouver Canada

WHAT ARE NIGHTTIME DATA?

Nighttime data are extremely varied. Depending on what one is interested in understanding, nighttime data can be any of the following - interviews with third-shift workers, spatial distributions of performance venues, locations of reported sound complaints, zoning and licensing administrative data, or satellite images of nighttime light intensities. Relevant data can be nighttime-specific (e.g. total employment numbers in different nighttime industries) or more general but potentially useful for nighttime-related analysis (e.g. Covid-19 infection rates in a city). The most impactful data in the nighttime world are those which have specific time-related indicators.

TIME-SENSITIVE DATA ILLUMINATE THE NIGHTTIME

How do we paint a picture of the city at night using data? We need to know *when* things are happening. One nighttime-critical attribute of data is that they have a time component. That means having access to raw, time-stamped observations of events like transit trips or police incidents (or data lightly aggregated for privacy protection). However, most general use data sources, like data from the census or economic reports, don't tell you whether some business or worker is operating at daytime or nighttime.

The consequence of the lack of time-sensitive data is that it is difficult to make clear data arguments about nighttime. Many nightlife communities found themselves trying to tell policy-makers about the impact of Covid-19 on their industries using very general data. For example, the Philadelphia City Council's Arts and Culture Task Force (of which I chaired the nightlife committee) was arguing for millions of dollars in relief for artists, but could only point to general trends in tax revenue by month by sector - Arts and Entertainment, Restaurants, Hotels. A shrewd critic could have pointed out that there was no way to know what in that analysis was nighttime activity, nor was there a way to tell what types of workers were affected in the arts. Note the chart in Figure 3 - the most granular data available to the public upon a records request is at the "industry" level.

What are the possibilities when you have very detailed time data? The accompanying figures (Figures 4 and 5) give a sense of what is possible when you have access to time-sensitive data for a bike-share system. With time-stamped data, one can understand how the system is being used by time of day, and by day of the week, and how that changes month over month. With time *and* space data, one can see that nighttime transit intensity is increasing month over month in the city centre. Conversely, if you only have access to summarised data, like average daily trips per month, or daily averages

for each month - there is no real way to understand the nighttime-specific trends in the bike-share system. Without the time-sensitive data, one cannot understand how people are getting around at night nor can one plan the system to accommodate or encourage nighttime mobility.

Philadelphia Wage Tax Receipts for Three Hospitality Industries
Dollars unadjusted for inflation. Source: Philadelphia City Controller's Office

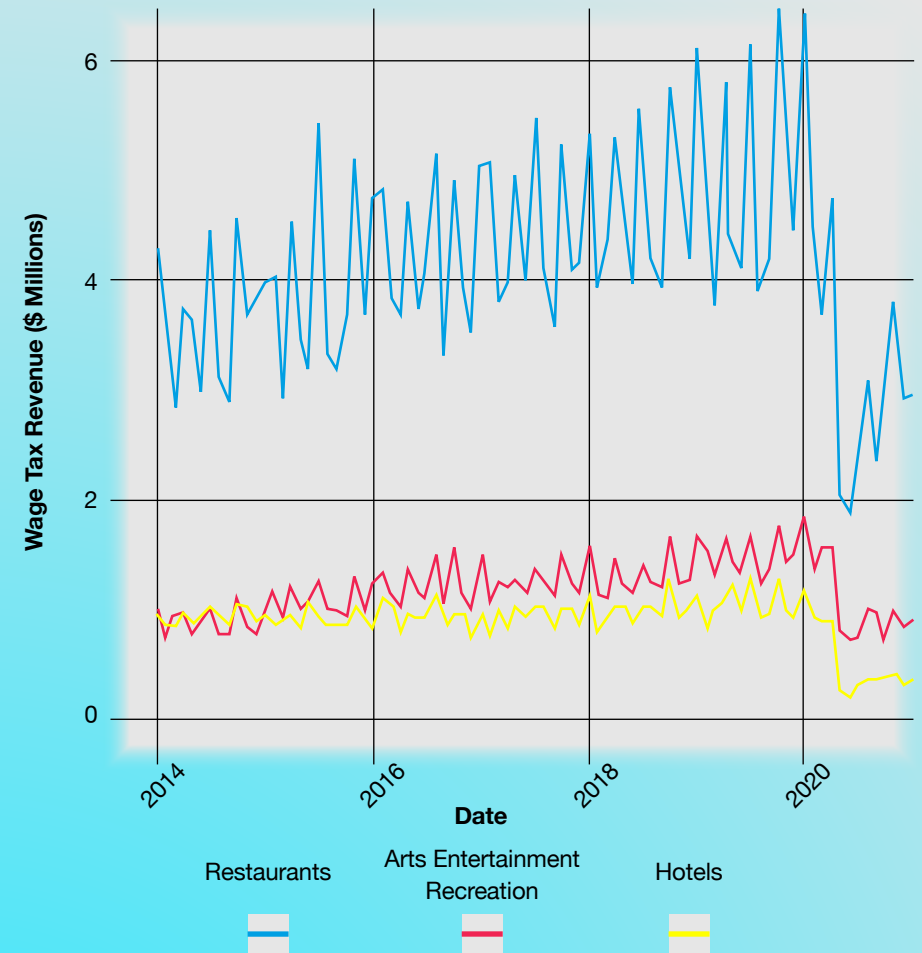


Figure 3. General use economic data that do not contain specific indicators of "nighttime" activity. An open source code base for manipulating these data can be found in the end notes.

	Trip ID	Duration	Start Time	End Time	Start Station	Start Lat	Start Lon	End Station	End Lat	End Lon	Bike ID
1	373614767	7	4/1/2021 0:44	4/1/2021 0:51	3213	39.93887	-75.16663	3000	NA	NA	18928

Figure 4. Example of raw time-space data from Philadelphia's IndieGo Bike Share system

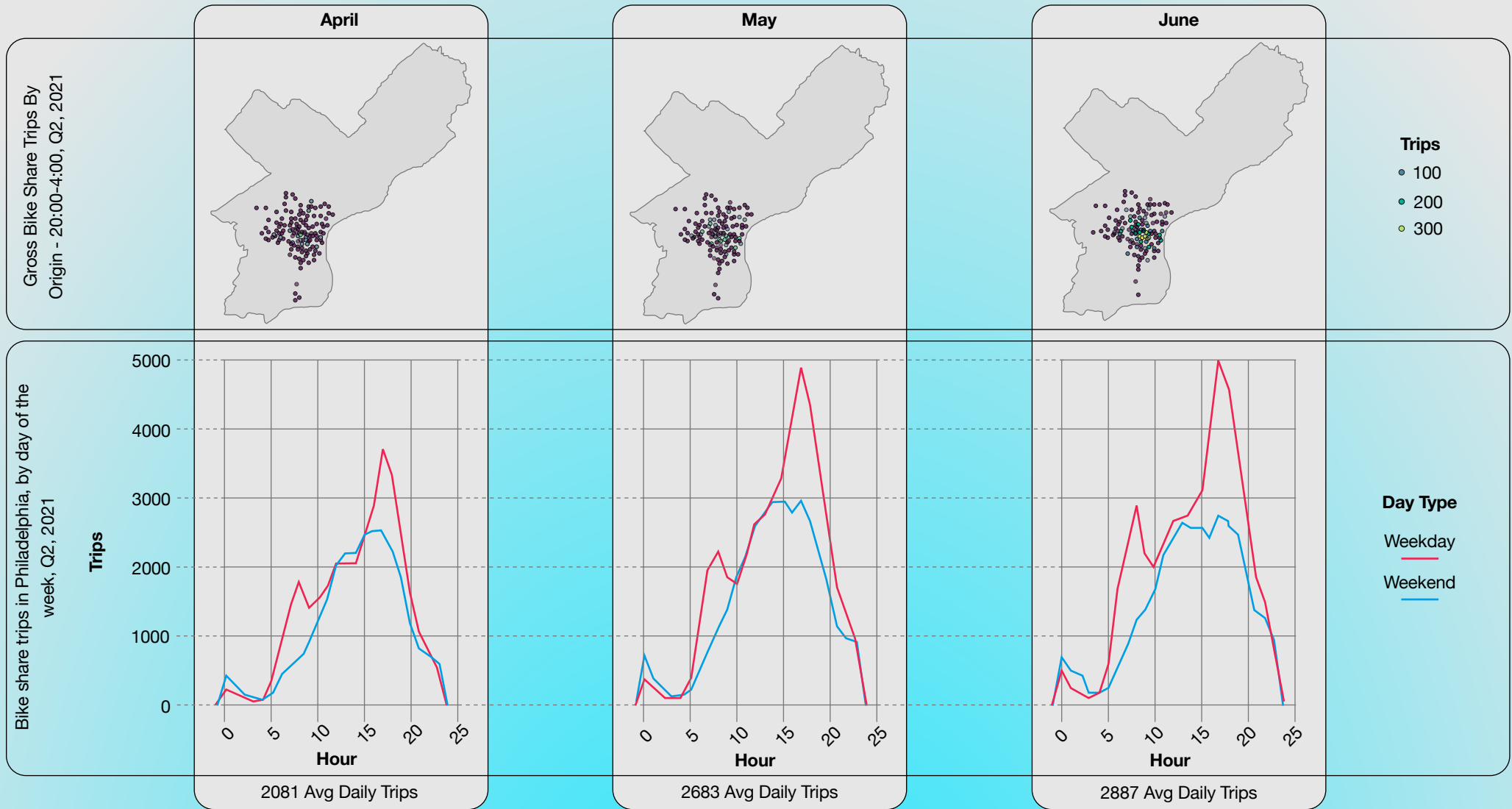


Figure 5. A quality continuum for time-sensitive data. IndieGo Bike Share Trips, Philadelphia, Q2, 2021. Open source code demonstrating these time-space data routines can be found in the end notes.

WHO MEASURES? IT MATTERS

It is important for nighttime government officers and nighttime advocates to take a role in data creation. Many data collectors lack the lens to “see” nighttime in the city. As a consequence many people and activities go uncounted and unnoticed. Chapter 4 of the GNRP discusses many of the ways that systems of measurement have failed to account for nighttime workers - many of whom are in a “grey area” of economic or social legitimacy - that left aid out of reach for many who were off the books, undocumented, freelancers, or part-timers.

Common government measurements of urban systems or economic activity do not explicitly consider nighttime or the arts. For example, Canada, Mexico, and the United States use the North American Industry Classification System (NAICS), to measure workers and firms. The NAICS does not distinguish between nighttime or daytime workers, and classifies DJs and comedians with pro athletes, clowns, and radio presenters. Parsing these data to create night-centric insights is of limited impact. Those who understand the night must be empowered to create innovative new data and take new analytical approaches to reveal what many others the rest of the world cannot see well enough to quantify.

QUANTITATIVE AND QUALITATIVE DATA

Quantitative (numeric) data alone can’t describe the city at night. Qualitative data - stories, images, and feelings are crucial to animate important issues and shine light on complex themes around culture and community. These data can be collected through interviews, focus groups, observations, surveys, and desk research.

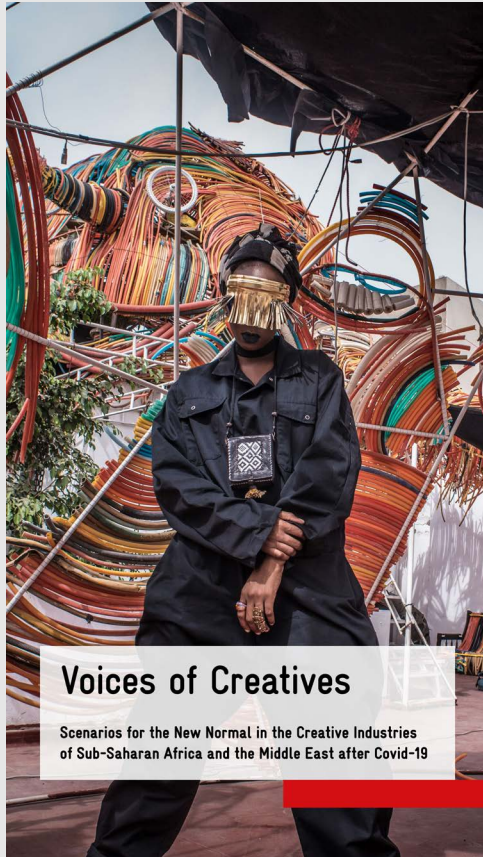
Profound and provocative ideas emerge from deep forms of research. Ethnographies of nighttime workers, such as those documented on film by JC MacQuarie in *Nightshift Spitalfields*, bring issues to light (and to life) in a way that numbers cannot. Film and other media have the advantage of being accessible and emotionally impactful. Print media can be useful as well. Deep interviews in the recent book *Culture Is Bad For You* form the basis of an outline of structural inequality in the creative industries.

There are methodologies and standards for using qualitative data. Criminologist Laura Huey establishes a hierarchy of qualitative data for policy decision-making, which suggests avoiding a reliance on anecdotes, commercially commissioned studies, and single-method studies of qualitative data. If you are consuming qualitative data, prioritise studies which bring together many sources and methods for analysing qualitative information - interviews, focus groups, field research, literature reviews - the more sources the better.

Combining quantitative and qualitative data — a “mixed methods approach” - is an attractive idea. To read about a mixed-methods study in action, see the case study on the *Voices of Creatives* (p. 22).

VOICES OF CREATIVES - DATA AND STORIES BUILDING ACTION IN AFRICA AND THE MIDDLE EAST

Wambui Kinyua & Thomas Scheele



Voices of Creatives

Scenarios for the New Normal in the Creative Industries of Sub-Saharan Africa and the Middle East after Covid-19

THE GOVERNMENT PUT OUT MONEY TO GET INTO THE CREATIVE INDUSTRY WHICH ONLY REALLY MADE IT INTO A SELECT FEW POCKETS.

– WAMBUI KINYUA

Voices of Creatives (VoC) was a research project conducted in early 2021 to capture the impact of Covid-19 on the music, fashion, and design sectors in Kenya, Iraq, Lebanon, Jordan, Senegal, and South Africa. Commissioned on behalf of and in collaboration with the German Ministry for Economic Cooperation and Development (German: Deutsche Gesellschaft für Internationale Zusammenarbeit; GIZ, hereafter). The research was conducted by VibeLab and PennPraxis and supported by the Goethe-Institut. The goal was to understand what adjustments these countries needed for their creative ecosystems to recover and build more resilient, post-pandemic futures.

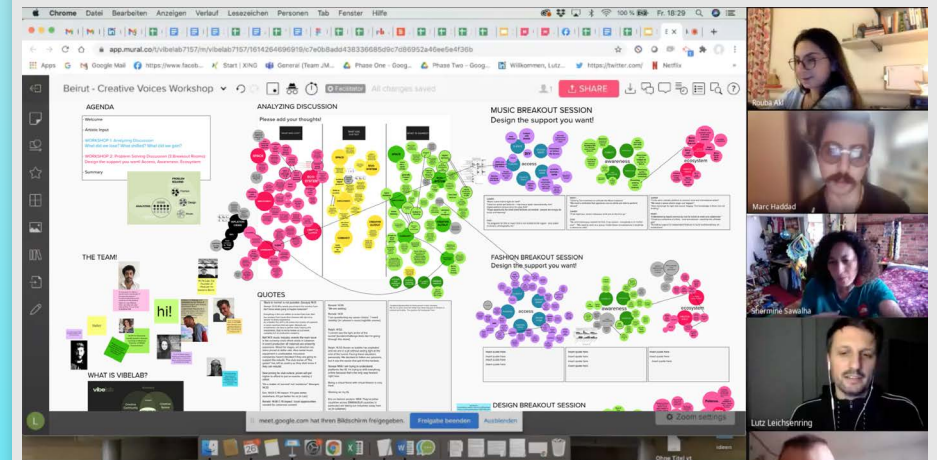


Figure 6. An online focus group from the Voices of Creatives Project

For each location, we combined four sets of data. Our country analysis was informed by government and NGO-created **macroeconomic data**. To capture more specific figures on the economic impact of Covid-19, we collected **survey data** from 604 participants. We also conducted 42 hours of **focus group interviews** with a total of 133 participants, which allowed us to contextualise our survey and macroeconomic data to inform the report's recommendations. Finally, we mapped the **spatial distribution** of cultural and creative industries (CCI) in each city to better understand where creative hubs are located, how CCI sectors interact, and which infrastructure is most relevant or vulnerable.

BEIRUT

Before Corona, in 2019, did you work in any of the following areas of your city?

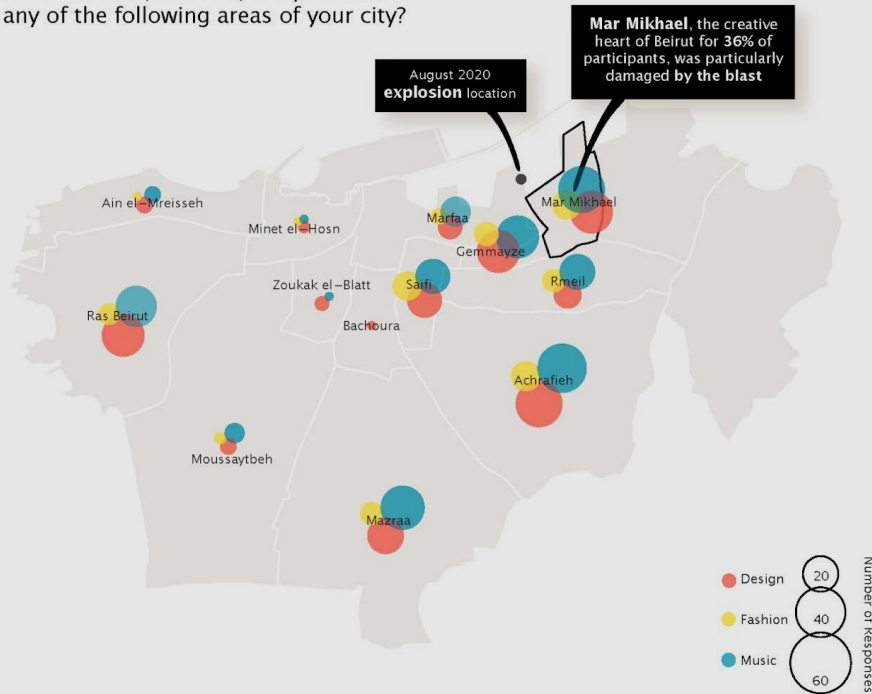


Figure 7. A map of creative industry clusters in Beirut.

The project emphasised the voices of local stakeholders and grassroots communities in all steps of the research: from formulating questions, to facilitating an online survey and interviews, to interpreting the data and proposing recommendations for local governments and the GIZ. Local project coordinators played a key role in enabling a participatory process.

The conclusions were troubling. More than 90% of music, fashion, and design business owners in every city reported a year-over-year loss of income. Over 70% in each city reported that their income was reduced by more than half. **The music sector in general and physical space in all sectors were particularly impacted.**

Across all six countries, CCI professionals said that digital infrastructure, access, and know-how were top needs for their business success. Digital markets — especially for producers in the Global South — will play a fundamentally different role in the post-pandemic future. This shift will have repercussions on communities, training, funding, and the usage of physical space.

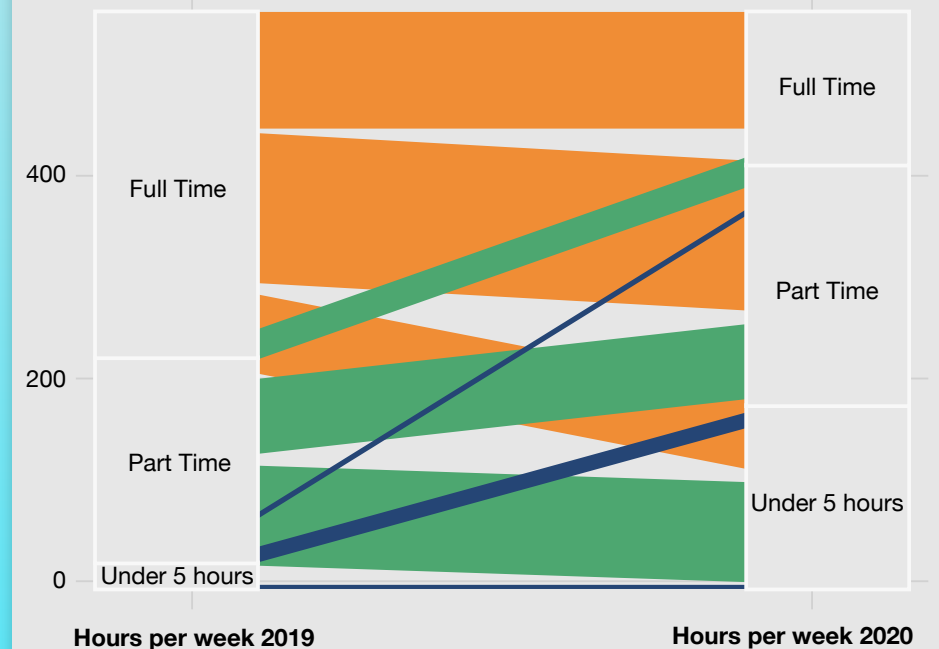


Figure 8. Change in work status from 2019-2020 for Voices of Creatives survey subjects. Full-time denotes 35+ hours per week. n = 552

CONTEXT FOR NIGHTTIME DATA

Nighttime analysts, advocates, and government officers are interested in a very broad range of subjects and data sources. Some are interested in “life at night” in a city very generally, in the “nighttime economy” as a category of economic activity or in the arts, culture, and hospitality associated with “nightlife.” While all of these concepts are interrelated, clarifying them is a good way for nighttime governance organisations, community groups, or trade organisations to formulate research questions or data collection priorities. **The diagram below (Figure 8) helps visualise the relationship between these different terms:**

Gears for Nighttime governance



Figure 9. The relationships between conceptual spheres of nighttime study

Here are some simple definitions (Drawn from the VibeLab Glossary except where noted):

Life at night: The entire scope of human-urban-natural interactions after dark.

Nighttime economy: Activities, businesses and workers operating specifically at night, including nightlife, hospitality and leisure as well as night shift workers, late-night transportation, retail, logistics and other activities. Other words used to describe the nighttime economy include the nighttime sector, social economy, hospitality sector, and 6-to-6. This would likely include activity in the arts and culture sector, referred to in this document as “nighttime arts and culture.”

Nightlife: The social and creative culture traditionally expressed and experienced at night.

Nighttime governance: The cast of public and private actors - independent organisations or specialised government offices - involved in managing the city at night.

NIGHTTIME DATA DICTIONARY

Below is a (non-exhaustive) table of the different data types that are relevant in the field of nighttime studies. Together, all of these data sources represent the current extent of the “data picture” one could construct of the city at night - people moving through various transport systems, transactions taking place at establishments where programming is being offered, communities gathering and sharing experiences, governments regulating sound, and development, and policing the streets.

Most of these data types appear in examples throughout the chapter. These data fall into many categories — mobility, economic activity, culture, public safety and health, and more. Data which are marked as “public” are available in many countries as a matter of governance practice or through a data request. If these data sources are not available, it can be an advocacy objective to secure their publication. Transportation data are particularly notable in this list, as they are an excellent proxy for “activity” in the nighttime economy when economic data aren’t nighttime-sensitive.

Category	
Data type	Description
Communities	
Census	Vast, government-collected databases on location, demographics, and economic characteristics of populations. Publicly available, linked to spatial data sets, available on long time-scales.
Survey data	Deeper analysis of sentiments, values, characteristics, and preferences of individuals - ideally collected with alignment to other data sources (e.g. the same income categories as the census).
Creative Space	
Establishments	Databases of licensed or unlicensed nighttime establishments. Collected through survey research, public licensing listings or third party business lists and categorised by type. Usually not nighttime-sensitive.
Space Characteristics	The age, size, nature, operating hours, and function of creative spaces. Collected through survey research or administrative licensing databases.
Programming	The frequency and type of programme offered at a creative space.
Public Space	
Lighting	The type, intensity, location and usage patterns of lighting in the urban environment, collected from survey research, satellite imagery, sensors, or public infrastructure databases.
Usage of space	Behavioural mapping of the type or intensity of use of public space, collected via survey.
Sound	Sensor measurements of sound in the urban environment are preferable to data based on complaints (which are biased and selective.)
Regulation	
Licensing	Public databases of licenses for entertainment, assembly, occupancy, outdoor sound, liquor sales and other permissions. Usually contain spatial or address data.
Zoning and land use (public)	Public databases of zoning (what types of buildings and uses are allowed in a place) and land use (the activity in a given place). Useful for planning and development processes. These data are usually spatial in nature.

Regulation	
Complaints and violations	Time-stamped, geo-located information on incidents, including sound complaints, code violations. These data are often publicly available, but subject to strong bias in observation and reporting. Use with caution.
Built environment	
Building footprints	Spatial data on the extent of buildings - useful for planning, land development, and licensing processes. Usually publicly available.
Infrastructure	Spatial data on the location and characteristics of parks, lighting, and other elements of the urban system. Useful for policy and business analytics.
Mobility and Transportation	
Infrastructure	Spatial data on the location and characteristics of roads, rail, bus, and other transport lines and stops. Publicly available.
Micro-mobility and ride-share	Time-stamped origins and destinations of rides on mobility systems using public right-of-way. Often publicly available. Best analyzed as anonymised information using the Mobility Data Standard (MDS).
Parking	Time-stamped, geo-located public parking transactions at digital kiosks.
Transit Ridership	Time-stamped on-off data volumes for public transit trains, busses. Most useful when available raw (each trip) or lightly aggregated (trips by hour or station). Often publicly available.
Devices	Time-sensitive data on device location (e.g. individual travel) collected from smartphone GPS and anonymised for sale to business analysts. Sometimes available through public-private partnership. Subject to strict regulation in many countries.
Vehicle Traffic	Data collected from third party traffic apps or sensors, often available to cities through data sharing agreements with road mapping/directions app companies. Subject to data privacy concerns and complex data sharing agreements.
Public Safety and Public Health	
Public safety incident reports	Geolocated, time-stamped reports of reported crime, reported traffic crashes and other incidents. Often publicly available. These data are subject to strong biases in reporting and should be used with great caution (e.g. noise complaints are a product of noise and the presence of an observer who decides to file a complaint, crime reports are related to patterns of police deployment and police tactics).

Public Safety and Public Health	
Covid-19	Published data from local and national health bureaus about the number and rate of cases, hospitalisations and deaths. Publicly available, and best understood at the smallest levels of geography available
Economic Activity	
Credit card transactions	Transaction data from firms (as individual transactions from point-of-sale devices) or from credit-card companies. Useful for deep consumer analytics, but detailed data can be a privacy liability.
Closures	Information on the open/closed status of a business - collected by survey research, or through analysis of third party listings like Google or Yelp.
Housing or real estate values and sales	Time-stamped, geo-located records of property sales, or property tax value records. Publicly available. Useful for relating to nighttime land uses and real estate trends.
Night-shift work	Workers are seldom categorised as night-time only in employment classification systems, but analysis of transportation data (nighttime trips) or economic census data on transportation behaviour might contain useful data.
Sales and taxes	Income information related to nighttime-relevant firms, collected by government controller agencies at local, provincial, and national levels. Publicly available, difficult to parse into nighttime and daytime data.
Numbers of workers and firms	National employment surveys of the numbers of firms and workers in various industries. Usually difficult to parse into nighttime and daytime data. Usually publicly available.
Engagement & Events	
Event count	Numbers of programmed events by an organisation or government office.
Attendance	Count and characteristics of attendees to events - either through live counts, or ticket sales. Best collected as time-stamped information.
Social media and streaming platform	Numbers of clicks, views, visitors, or followers to digital events or sites related to engagement
Interview/focus group	Qualitative read-outs of opinions, stories and ideas
Programme subjects	Numbers of volunteers, participants in programming

THIRD PARTY DATA SOURCES

Data sources from non-governmental actors are becoming more common and available. These “third party” data sets can include business listings (e.g. Yelp), mobility data sets (e.g. Uber, TomTom, Safegraph), credit card data, marketing data, social media posts — all items that can be bought, scraped, or accessed via API¹ given the right expertise. These data can be used very creatively, and may be useful when government data standards are lacking. Institutional partners like universities may have not-for-profit data licenses to use some of the private sources for free. Some of these data sources are incredibly powerful, such as origin/destination transit data, which has been invaluable to understanding the transmission dynamics of the pandemic.

Other times, municipalities might have access because mobility services use public infrastructure or because of other leverage. The New York City Recovery Data partnership is a good example of a public-private partnership which has been able to open up powerful third party data sets. This has created beneficial partnerships between community organisations, government and private data partners like Safegraph, Foursquare, and Mastercard.

In many places around the world, there are low levels of business registration and little formal accounting or publication of administrative or economic data. Third party data are especially important in these circumstances. Chingiz Batyrbekov, a nightlife organiser and consultant in Bishkek, Kyrgyzstan, says “commercial trade data would be useful to fill this gap. It is useful to governmental organisations in order to see what’s going on in the industries. It’s also useful for businesses to plan their investments. In Kyrgyzstan right now, business has just started to move from this ad hoc, accidental and emotional investments, and it’s going to more data-driven approaches and learning the market first, and then investing into the entertainment business.”

In Thailand and elsewhere, data scientists have used various text-mining techniques to understand how tourists are talking about their trips on social media. This approach can yield information about attitudes and preferences at a price far lower than survey research.

¹An Application Programming Interface (API) allows for third party developers to call data directly in their own programs and analysis workflows, rather than downloading it by point-and-click.

DATA PRIVACY VERSUS DATA UTILITY

However, there are profound privacy issues that arise if these data are mishandled or abused. As cities and the world at large have decided to try to apply “smart” tech solutions to just about everything, the results for data security and privacy have been extremely uneven. These days, a menu is accessed with a QR code, a ticket to an event with an app. Most digital transactions leave a signature, and this leaves the consumer exposed to their data being published, sold, linked together or used in other ways which might not be in line with the consumer’s sense of informed consent. Even with some relatively well-regarded data privacy policies in places like the EU, there are not enough security technologists or public-minded individuals on guard to protect consumers in the nighttime space. This creates a serious liability in situations where privacy is integral to communal and expressive experiences, such as nightlife.

Consider a scenario where an individual visits an LGBTQIA+-friendly bar or club. Imagine that this person lives in a society where being “out” exposes them to serious social or legal consequences. The role of such spaces are integral to a city’s vibrant nightlife, and nightlife sometimes serves as a place of refuge for many communities. If there is a digital record of this visit under these conditions, the consequences may be very serious. This is why it is important to have certain standards for nighttime and nightlife which are more specific and sensitive. (See the case study by Mark Adam Harold (p. 34) for discussion of a “nighttime data protection standard.”)

Ultimately, the discussion about privacy involves a value judgement about the trade-offs between privacy and utility. Plentiful amounts of quality data can be very useful - in ways documented throughout this chapter, but detailed data can come at a cost. What is the equilibrium point (Figure 10)? This is a discussion that happens at multiple levels - societies and governments decide on regulatory data protection standards, like the EU’s GDPR. There are also decisions to be made on the part of businesses - where one can implement technical solutions or business practices for individual privacy protections. This trade-off must be considered carefully - both to make the best decisions for the survival of nightlife (by using apps and personal data to keep establishments running), and to protect our communities and their privacy.

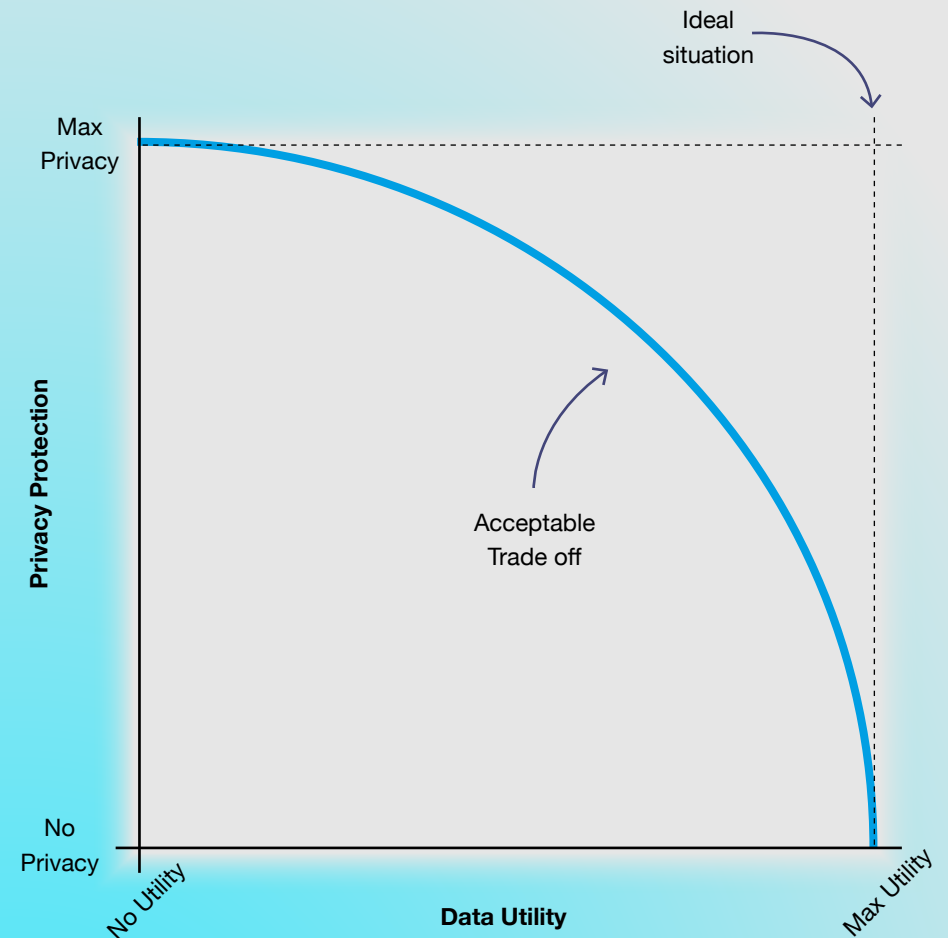


Figure 10. A value tradeoff between data utility and privacy protection. Figure adapted from Nelson (2015)

TOWARDS A NIGHTTIME DATA PROTECTION STANDARD

Mark Adam Harold

When people go out at night, they are constantly giving away data. Taxi companies and bus companies know where people travel, mobile phones track their owners' locations, ticket sellers know who buys which tickets, venues know who's inside and what they are drinking, private and state-owned security cameras are recording people's clothes and faces, people are taking photos and catching other people in the background, card providers and banks are logging all the monetary transactions that pay for all these things, and social networks are cataloguing all the events that people attend and "like."

In the battle for people's attention and money, all of this data is powerful. The more a company knows about consumers, the more it can target and optimise marketing resources to get the biggest response for the smallest cost. In some cases, the entire purpose of a service, especially a free service, is to collect and monetise data.

This is not necessarily a bad thing, as most people like to have relevant information and be offered useful products and services. A bar can adapt its menu and special offers to its chosen audience. A venue can book a better events programme. A municipality can plan bus timetables. Urban planners can see what districts are growing in popularity. A government can better allocate funding and resources.

What could possibly go wrong?

The night is a time when people seek privacy, to escape from the "real world," to form new communities, to experiment in dark spaces with strangers and even to change their identity. The potential for misuse of nightlife data is huge and dystopic. This information could potentially be used to identify and persecute minority communities, crack down on political dissidents, expose and ridicule people, censor the content of artistic expressions and restrict access to nightlife. Nightlife data protection deserves special attention.

Nightlife Data Protection Promise

During a recent workshop I led at the Reeperbahn Festival with Michael Fichman and the VibeLab team, I discussed the idea of a nightlife-specific data protection standard, building on ideas in the European General Data Protection Regulation (GDPR). The aim of the scheme is to increase trust in the businesses collecting data and then to allow the data to be used in advocating for better nightlife. The draft list of promises turned out like this:

- Data will not be collected without a specific purpose relevant to improving the nightlife experience.
- Data will not be sold to or commercially exploited by third parties without opt-in consent.
- Data will not be held for longer than necessary.
- Data may be anonymised and then analysed, aggregated, shared, and/or published for the purposes of advocating for better nightlife.
- Communications require opt-in consent.
- Consent for communication from one venue does not imply consent for any other venue, even if operated by the same company.
- Communications will not be more frequent than is useful to the recipient.
- Communications and special offers must not encourage excessive consumption of drugs or alcohol.
- Camera bans, if announced, must be respected and enforced.
- CCTV footage must be used responsibly.



Photo: Chingiz Kol fest

MEASURING THE NIGHT

There are many challenges to measuring, describing, and analysing the nighttime city. As mentioned in the previous section, these challenges include data privacy concerns that are unique to studying nightlife subcultures and the general lack of available, nighttime-specific data. It is important to empower communities and nighttime advocates to understand existing data, and to create new and innovative data by becoming part of the measurement process.

To develop your own measurements and data-informed arguments about nighttime activity in your city or community, you should figure out what kinds of indicators are useful to describe the people, and activities, and trends that are important to you. The previous section discussed available data sources, this section describes the analysis that goes into creating indicators, and explains the types of methods that data scientists, community groups, governments, and social scientists use to collect and understand data.

Transparency is key to the process of creating, analysing, and publishing data. Not only does transparency about sources and methods make your work clear and honest, it allows others to replicate it. The community of nighttime advocates and governance offices is small, and using services such as Github to post open-source computer code used in analytics allows others to do the same in their community.

When you create your own data, it's useful to consider several things. These data should relate to existing data sources. For example, a survey of a nightlife community should ask about race, or income, or employment classification in a way that lines up with census data. For others to replicate your analysis, it's useful to make your data "machine readable" - a data science term which means using clean, organised spreadsheets and files that are easily used by others.

MEASUREMENT AS A PROCESS

It is not a simple thing to create or implement a measurement practice. It is especially difficult when you are trying to measure something elusive like community values or cultural activity. The following case study, by Paul Owens, lays out a set of steps for developing an analysis of cultural industries:

BEST PRACTICES TO MEASURING CULTURE: MEASUREMENT AS PROCESS NOT PRODUCT

Paul Owens

Culture can be difficult to measure: it is a nebulous (and sometimes contested) concept, and the conventional instruments of measurement can rarely produce an accurate picture. Yet culture can be measured, as the thousands of studies that have appeared around the world in the past twenty years can attest to: from the global statistics produced by The United Nations Educational, Scientific and Cultural Organization (UNESCO), The United Nations Conference on Trade and Development (UNCTAD), or the World Cities Culture Report, to countless national economic studies and local impact studies. This growing body of evidence has led to a new level of understanding about the value of culture, to changes in policy and legislation, and to increased investment.

Best practices in culture, at the technical level, are no different from the general best practices in research. But there is now a widely understood playbook, which goes beyond studying culture and doing research in general, on how to go about the process of measurement to achieve particular goals. The playbook can be summarised into the following six principles:

1. See measurement as a process and not as an end-point.

Just by deciding to undertake a study, you have started a process of engagement and advocacy. Use it as an opportunity to build coalitions and to educate partners and stakeholders. Think beyond your immediate study outputs to how you can create an ongoing source of evidence and understanding for the long-term.

2. See measurement as a process and not as an end-point.

Clarity about what needs to be proved and what needs to change is essential. There may be a single 'pain point' or objective, like introducing a new policy or regulation. There may be a broader agenda, like raising awareness or demonstrating impact. Measurement is not pursuing knowledge for its own sake. There is insufficient time or resources to be fully comprehensive. The study output needs to address urgent, practical questions.

3. Identify the target audience(s)

The focus of the study will partly be dictated by the audience(s) you target. Identify key audience(s) in advance, what matters to them, what type of evidence will attract their attention and how they are used to seeing it presented.

4. Use recognised data sources and research methods

As much as possible, use methods and data sources that are recognised by technical experts. If your methodology and data sources are questioned, so too will the findings. There is, of course, room for innovation, especially today with the availability of many (often digital) new sources of data. But take care to assure the quality of your approach.

5. Bring together domain and technical experts

Technical experts will help ensure robust methods that are also trusted by your audience. But their work and the analysis of the data will be greatly enhanced with domain experts, who have deep knowledge of the sector and how it operates.

6. Include more than numbers

Evidence is not just data. Data are not just numbers. Numbers on their own can be compelling and persuasive, but numbers need explanation and contextualisation. There is a wide range of other sources that can help present a data-driven story: personal testimony, case studies, and press coverage, to name a few.

METHODOLOGIES AND RESEARCH DESIGNS

There are many different methods that one can employ to collect data for nighttime-related analysis. The research design, data collection methodologies, and type of analysis conducted depends on the data one is working with, the goals of the research, and the resources available.

There are many resources available to learn about specific designs, methods, and types of analyses, some of which we reference throughout the document. While some of these techniques could be accomplished individually or with a grassroots collective, others require the expertise and technical skill that government, university, NGO, or private partners could help provide. This section offers an overview of these different topics using examples pulled from nighttime-related studies. Just like the table describing various data types (p. 28), the following (non-exhaustive) tables are a reference for those interested in seeing what kinds of studies have been done to analyse the nighttime city. We hope that this inspires ideas for studies or projects to be done in your city.

Research design. The research design is your strategy for collecting and analysing data. Experimental designs are usually the domain of academic experts, but experimental analysis can have strong influence in policy discussions, and programmes can be designed in consultation with academics to accommodate experimental measurement. However, there are many situations in which “experiments” are unethical - for example, one should not deny a badly needed service simply for the purpose of preserving an experimental setup. It is also useful to set up an analysis that allows for comparison with other cities or tracks trends through time. This makes for compelling story-telling.

Design	Definition	Examples
Experimental design	Setting up strict conditions to understand the effect of a variable on a specific outcome	Randomly distributing a grant to some artists and tracking their outcomes alongside those of a control group who didn't receive a grant.
Cross-sectional design	Measurements of the same variables across multiple populations or subsets of populations	Tracking the artist grant programme across multiple cities

Design	Definition	Examples
Longitudinal design	Repeated measurements on the same subjects over time	Tracking the artist grant programme over the course of many years

Research methods. Sometimes you need to do your own field research to collect data. Here are some examples of methods referenced in this text, categorized and defined:

Category		
Method	Definition	Examples
Quantitative		
Structured interviews	A formatted interview which is designed to be quantified	<i>Culture Is Bad For You</i> (p. 20)
Surveys	Questionnaires designed to understand the probability that subjects in a population hold certain beliefs or have certain characteristics. ²	24HrPHL Community Survey (p. 66)
Structured observation	Collecting data on human subjects by passively observing and cataloguing behaviour.	OvalPHL Observational Mapping (p. 55)
Qualitative		
Ethnography and participant observation	Process-oriented study of a social or cultural group through participation in (ethnography) or deep observation of it.	Nightshift Spitalfields (p. 20)
Interviews	In-depth fact finding with single subjects	<i>Culture Is Bad For You</i> (p. 20)
Focus groups	Interaction-driven interviews with a small group	Voices of Creatives (p. 22)
Content analysis	Systematic analysis of texts, documents, or field data.	Sentiment analysis of foreign tourists to Bangkok (p. 31)

²For a good personal reference book on survey design, consult *Internet, Mail and Mixed Mode Surveys* by Dillman, Smyth and Christian

Analytical Frameworks For Quantitative Data

When you embark on research with a goal in mind, you need to find the kind of analysis that will fit your needs. While many want to show some proof that “A causes B” in order to support an argument or policy, keep in mind that proving cause and effect is incredibly difficult and often impossible to do. Here are some analytical frameworks you can use to approach your research, and some ideas for partnerships you can form to execute your project:

Name	Definition	Examples	If you are interested in conducting this kind of analysis, go to...
Associative or Correlative Analysis	Examining the statistical relationships between multiple variables	City of Westminster Cumulative Impact Assessment (p. 46)	A city planning, economics, or policy consultancy or an academic researcher.
Causal Analysis	Statistically isolating the effect of one variable on another.	Effects of population on urban brightness (p. 55)	An academic researcher
Descriptive Analysis	Creating or collecting indicators describing the tendencies and the distribution of data.	Nanjing, China Nighttime Economy Index (p. 44)	A data analyst with background in public policy or economics
Predictive Analysis	Forecasting some phenomenon based on its statistical relationships to other data	University of Pennsylvania Urban Spatial Analytics Practicum (p. 53)	A data scientist or data-oriented social scientist at a university, consultancy or analytics firm
Spatial Analysis	Relating multiple pieces of information that have a geographic component.	The Creative Footprint Project (p. 61)	A data analyst or firm with experience using Geographic Information Systems (GIS)

INDICATORS

Studying nighttime or arts and culture is exciting (and difficult) because of the complexity of the concepts. How do you measure something as nebulous as culture or creativity? How do you communicate complicated ideas about identity and community?

Indicators are essential to understanding and communicating data. Ken Steif describes an indicator as a “stylized fact that gives simple insight into a complicated phenomenon.”

Indicators can take the form of simple statistics. For example, The Creative Footprint Project (CFP) indexes the nature of programming at venues. The CFP uses focus groups to log the number of programming types used in each space - some might have films, DJ performances, or live music. The number of multi-use spaces can then be summarised for each nightlife district, and a city as a whole as a simple *indicator* of resilience.³ The CFP is described in-depth as a case study on p. 61.

The more complex the indicator, the more energy and technical expertise is required to create it, the more difficult it may be to explain it to audiences, and the more difficult it may be to promote its usefulness. The European Culture and Creative Cities Monitor’s Composite Indicators, for instance, indexes dozens of metrics about arts and culture resources into city scores in an interactive dashboard. This includes rankings for counts of creative jobs per city, and for counts of institutions. It includes metrics for tolerance and trust in government. Individually, each metric is interesting, as a whole the set can be intimidating.

For more on the creation and communication of indicators, see the case study on Nanjing, China’s Nighttime Economy Index by Paul Owens (below).

INDICATORS IN ACTION - NANJING, CHINA NIGHTTIME ECONOMY INDEX

Paul Owens

As with measurement more generally, choosing and constructing indicators is a political process that is undertaken with the intended message and audience in mind at the outset. In 2020, the City of Nanjing commissioned UK-based cultural

³GNRP Chapter 2 notes that programming flexibility of creative spaces was a key factor in resilience through the pandemic.

research firm BOP Consulting to undertake a ‘health check’ of its nighttime economy, which was to be launched at an international event hosted by the city. For international audiences, the intended message was that the Nanjing NTE was world-class and comparable to other global cities. The message for internal stakeholders was that the city needed to focus more on building its nighttime cultural offerings. BOP devised a ‘Night-Time Economy Index,’ made up of five composite indicators drawing on 30 data points, and compared Nanjing to nine other cities in China and globally across these indicators. To achieve these goals, we first selected a set of indicators for which data was widely and easily available, for the purpose of comparison between cities. Then we organised these indicators in composites which enabled a clear story about Nanjing’s international performance and its relative strengths and weaknesses to come through.

NTE City Index: New York, Tokyo, Amsterdam, Melbourne, Nanjing

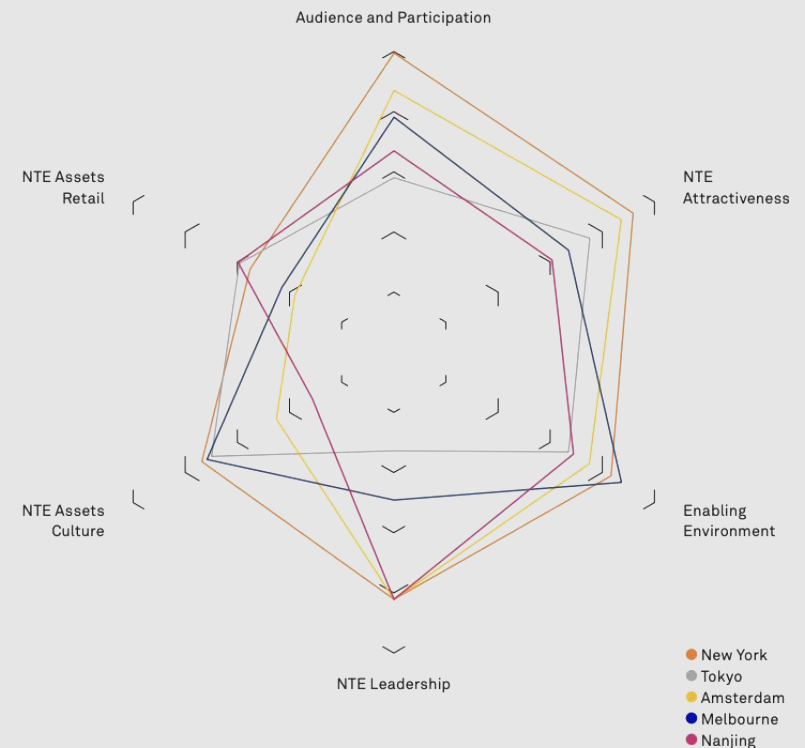


Figure 11. BOP Consulting Nighttime Economy City Index (2020)

BEWARE OF BIAS

Data collection and analysis can always be prone to bias, and bias is *everywhere*. A biased statistic is one that incorrectly estimates the true value of a certain thing. There are some common sources of bias - incidents that are unevenly reported, surveys that over-sample a certain segment of the population, data that are faulty or incomplete. Anybody working with data should be vigilant - biased data or methods lead to misguided analysis, and misguided action.

In the field of nighttime studies, the most common example of bias is in incident data, such as sound complaints and crime reports. This data can be *under-reported* (is every assault the source of a police report?), *unobserved* (is every loud sound the source of a complaint?), or *selectively observed* (are reported crimes a function of the intensity of policing?).

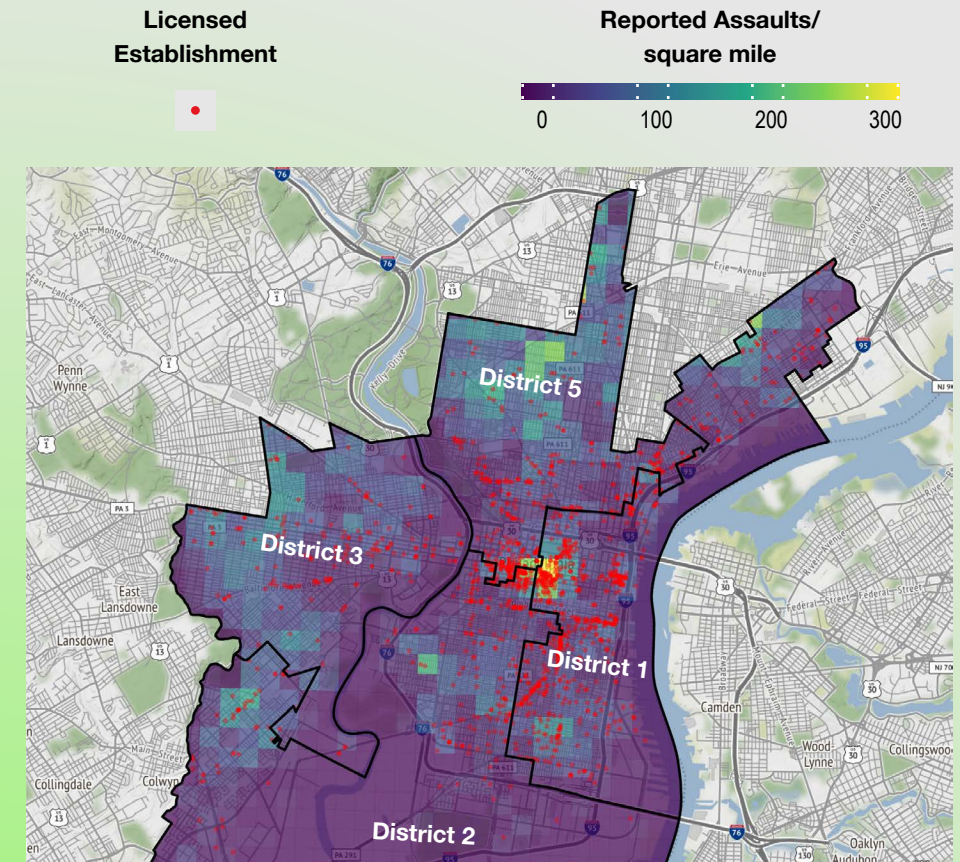
Some broadly used frameworks have bias baked in. The UK's Policing and Crime Act of 2017 requires the Licensing Authority to produce Cumulative Impact Assessments of incidents in areas with concentrations of licensed establishments (Figure 12). The City of Westminster's 2020 Cumulative Impact Assessment has a wide-ranging set of time-space analyses on nuisance incidents and their relation to licensed premises. Almost all types of nuisance being analysed are unevenly observed and reported - drug offences, sound complaints and more. Many of the statistical analyses in the Cumulative Impact Assessment that relate the incidence of nuisance as a function of the presence of licensed premises should also be carefully scrutinised for a variety of reasons including a lack of statistical controls for license density and other factors.

There is a constant political demand to analyse and statistically model reported incidents of public nuisance in order to understand causality or predict future nuisance. *This should be avoided* - the underlying data are biased. A list of sound complaints is just as much a list of people who are inclined to complain as it is a record of loud sound. This can lead to the misinterpretation of facts and inappropriate policies.

The risk of bias is not a reason to avoid using or collecting data. Certain biases cannot be helped. Instead, it is a reason to emphasise honesty about the limitations of data, encourage intelligent data consumption, and be self-critical and open about our biases as researchers.

Reported 6PM–6AM Assaults In Central Philadelphia Council Districts, 2021

Licensed food and assembly establishments in red.



Data: City of Philadelphia, Philadelphia Police Department, Basemap – Open Street Map

Figure 12. A map of reported 6PM-6AM reported assaults in Central City Philadelphia Council Districts, 2021. This map is designed to be similar to those seen in UK Cumulative Impact Assessments. Note that assault reports co-locate with licensed restaurant and assembly establishments in some places, but not others. License density varies widely throughout the city and the highest reported assault levels appear to co-locate with transit hubs and urban density. Open source code for the creation of this map using Open Data can be found in the end notes.

RECOMMENDATIONS: DATA GOVERNANCE FOR NIGHTTIME OFFICES

In this section, we discuss seven strategies for government actors to build a strong data governance culture that benefits stakeholders in the nighttime city. Universities and other research institutes may find these recommendations helpful as well. The utility of these strategies will vary from city to city, from country to country. The capacity for governments to build and maintain a data-driven approach to policy-making for the nighttime sector varies across cities and depends on local politics, finances, and technology. The recommendations for government nighttime offices are as follows:

1. **Create the infrastructure for data governance**
2. **Create quality open data portals and dashboards**
3. **Define nighttime and arts and culture-specific indicators**
4. **Map cultural and economic assets**
5. **Commit to long-term monitoring**
6. **Use data to plan in the nighttime city**
7. **Embed data collection in a process of meaningful engagement**

1. CREATE THE INFRASTRUCTURE FOR DATA GOVERNANCE

If a government has a nighttime-focused office, it should have its own data analyst⁴, and it should have cooperative relationships with technology and planning departments. This will allow the office to participate in integrated data creation, sharing, and analysis.

This data culture needs to start at the top of a governmental organisation. Michael Schneurle, the Director of Open Source Operations at the Open Mobility Foundation (and formerly the Chief Data Officer of Louisville, Kentucky (US)), says that an effective civic data operation involves good leadership in the form of a chief data officer supervising good practices:

⁴ Understandably, budgets do not always allow for a nighttime office to have its own analyst, or analytical capacity from other government departments. An alternative, quality approach is a data science department like Washington DC's "The Lab" for cross-governmental data governance and analysis support. See the section on Building Skills-Based Coalitions (p. 65) for ideas on building extra-governmental capacity.

“THE CHIEF DATA OFFICER... IS THE PRECURSOR TO HAVING A GOOD DATA WAREHOUSE... IF YOU CAN HAVE SOMEBODY MANAGE THE PROCESS AND CHECK FOR DATA QUALITY AND AUTOMATE THE PROCESS, IT’S VERY USEFUL. ONCE YOU DO THAT YOU CAN HAVE PERFORMANCE IMPROVEMENT PROGRAMS AROUND POLICY AND PRACTICES.”

Transparency is critical to data-driven governance. Departments should keep data standards, share data with each other, and publish them when it is reasonable to do so. Open data portals and published studies allow community members to see what is being documented about their world and serve information that businesses and government partners can use to plan and make decisions. The ongoing use of public data in rhetoric and community engagement encourages a fact-based set of discussions about big-picture issues and everyday governance events like licensing or zoning decisions.

2. CREATE QUALITY OPEN DATA PORTALS AND DASHBOARDS

Well-maintained, publicly available data sets that conform to good standards are valuable to local communities, consultants, NGOs, and other partners who are working adjacent to local governments. Many municipalities have open data portals or dashboards where public data sets can be downloaded, visualised, and manipulated. Nighttime offices should collect and serve data to these portals (See Page p. 28 for examples of nighttime data often available to the public). Open data portals also serve to present and synthesize the data and indicators relevant to a city's services, goals, and policies. In cities where the capacity, infrastructure, or governance prevents the creation of such portals, there may be NGOs, such as US Ignite or the World Resources Institute, which can offer support to municipal leaders and technology partners.

London's Nighttime Data Observatory (Figure 13) is an example of a nighttime focused open data solution. Built on the platform of the London DataStore, the city's open data portal, the Nighttime Data Observatory presents data sets collected by the Greater London Authority and the Mayor of London's Night Czar's office. The portal includes data sets monitoring the nighttime economy (e.g. pub closures or nighttime establishment floor area, and wage data) alongside relevant data sets from other sources (e.g. national tourism data sets, GIS spatial data, and night bus data). Although this data portal serves as a collector and does not offer night-specific

dashboarding or analysis, it provides an easily accessible starting point to examine, download, and analyse data related to London's nighttime, serving communities and government officials alike.

The Nighttime Data Observatory still leaves some things to be desired - it is less complete than it could be because of the tangled web of government actors in London - some data from Councils or transit authorities should be, but are not included, largely because of segmentation between government offices. It also lacks a complex data viewer or dashboard to integrate the data into a real decision-making tool.

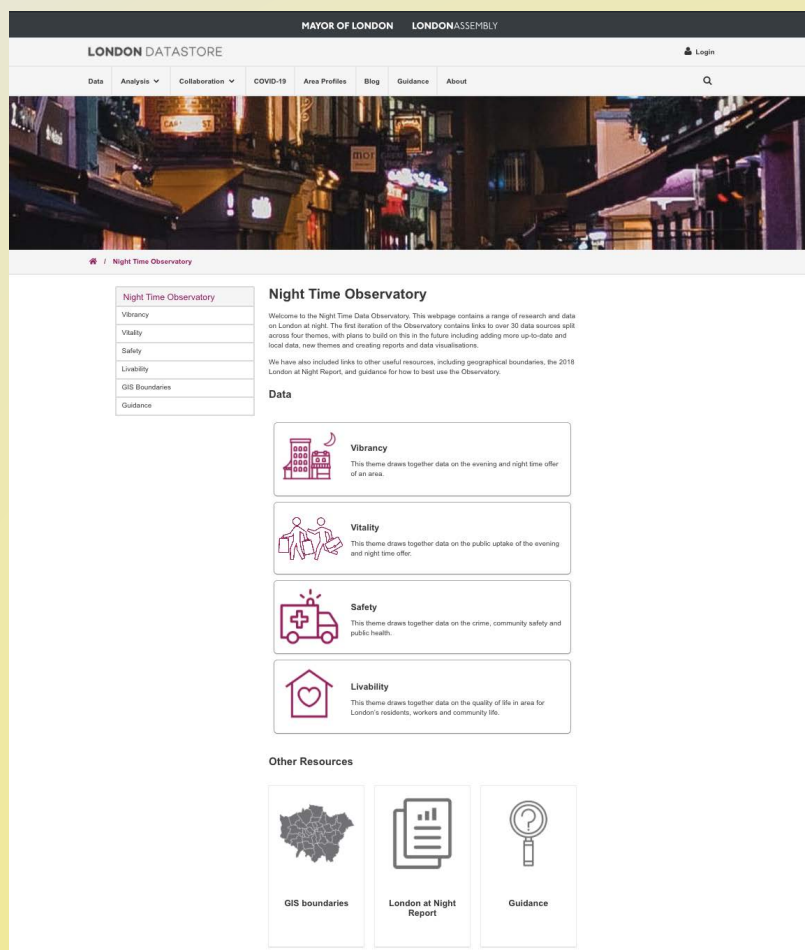


Figure 13. The user interface for the London nighttime data observatory

A data portal is only as good as the data it contains. It is crucial that standards are enforced to ensure that data are complete, consistent, and can be joined and related to other government data sets using standardised identifiers. Consider the example of a survey of entertainment venues - if each observation is not addressed in a way that exactly matches a city's database of properties, they may not be relatable to zoning or licensing databases or mappable in an accurate way. Similarly, an incomplete data set, when analysed, might present misleading results.

Since many of the nighttime relevant dimensions of a city or its communities are seldom measured, there is an imperative to create, maintain, and serve new and important data sets. It is important to publish the methodology by which data were collected and maintained, and any open source code associated with analysis. This will allow for less biased analysis by third parties.

3. DEFINE NIGHTTIME AND ARTS AND CULTURE SPECIFIC INDICATORS.

One of the emerging challenges to the field of nighttime studies is the lack of a standard set of indicators (For a thorough discussion of indicators, see p. 44). Cities often measure similar phenomena in different ways. This decreases the ability for cross-sectional comparisons between cities (see the section on research design p. 41 for more on cross-sectional comparisons). Governments can benefit from defining clear and specific nighttime and arts and culture-related indicators and borrowing indicators from elsewhere to make city-to-city comparisons possible. Good indicators enhance governments' strategic nighttime planning approaches, and allow for ongoing monitoring and policy adjustment. A movement towards a standard set of indicators should be a focus for nighttime-focused conferences and governance communities. Despite the competitive environment amongst consultants in measuring nighttime economies, their proprietary indicators are generally similar.

4. MAP CULTURAL AND ECONOMIC ASSETS

By combining public data and on-the-ground surveys, a community or government can produce a geographic map of cultural and economic assets that supports policy making and programming. This map can be overlaid on top of other data about demography, income levels, or zoning and building codes. This allows one to better understand culture, music and the nighttime economy in terms of city planning, policy, investment, and neighbourhood change.

This approach is used in both the Huntsville Music Audit (See case study, below) and The Creative Footprint Project (see case study page xx).

MAPPING ASSETS - THE HUNTSVILLE MUSIC AUDIT

Shain Shapiro

In 2019, the City of Huntsville, Alabama commissioned international economic consultancy Sound Diplomacy to deliver a music audit for the city. Over the course of 16 months, the firm mapped all physical assets in the city, engaged in stakeholder engagement, and produced an economic impact assessment, which placed music firmly in the economic development strategy of the city.

Central to this process was ensuring that *all* physical assets of relevant industries were mapped. This includes creative businesses of all kinds as defined by the government statistical code (like the NAICS). This can be cross-referenced through a variety of third-party providers that have listings of art spaces or events.

One decision taken as a result of the findings was to invest \$40m in a city-owned 8000 capacity amphitheatre, due to open in 2022. By understanding the city's wider music and cultural assets, it was able to perform a cost-benefit analysis as to the market opportunities and community impact the venue could have, which confirmed the economic and cultural justification for the investment in the city's 10 year capital plan.

5. COMMIT TO LONG-TERM MONITORING.

A “point in time” measurement is only so interesting. Greater understanding comes with seeing whether an indicator increases, decreases, or changes in character over time. Repeated measurements through time — longitudinal measurements — can be understood as a health assessment of the nighttime economy (For notes on longitudinal measurement, see p. 41). Longitudinal measurement can drive the cycle of evidence-based decision making described on p. 12.

The Covid-19 impact studies that have emerged throughout the pandemic can be an opportunity to set up replicable, ongoing monitoring of cities' nighttime sectors. Many governments, industry groups, and communities struggled with establishing a baseline measurement to assess the impact of the pandemic. Studies commissioned in the last few years can be replicated to get a “health assessment” of nighttime in a city. Some

surveyors, like Europe's Live DMA, had previous economic surveys to draw upon for a pre-pandemic snapshot of live events industries in 16 European countries. However, many others had to forensically reconstruct the baseline. Some examples include BOP and UNESCO's estimation of economic loss in cultural industries - an analysis they conducted based in part on data from social networking platforms. The South African Department of Sport, Arts and Culture (DSAC) estimated economic loss by surveying widely about the nature and cost of lost live gig work (see case study in GNRP Chapter 4).

6. USE DATA TO PLAN IN THE NIGHTTIME CITY.

In this section, we explore several scopes where cities can integrate data to better plan the nighttime city. Cities need quality data to make good planning decisions. Whether they want to enhance their nighttime lighting, make nighttime mobility safer, revitalize 24-hour public spaces, preserve cultural spaces, or promote nighttime economic development, they need quality research to make reasonable plans for the future. Chapter 3 of the GNRP offered a wide range of urban planning and design ideas for cities seeking to support their nighttime economies through and beyond the pandemic. There is an increasing volume of high quality literature on the subject.⁵

Plan for districts, cities, and regions after dark. Planners and government officers want to know the character and location of nighttime activity happening in the city or region. Where can programmes or resources be allocated? Where can zoning be changed to allow for cultural spaces? Increasingly, cities are integrating nighttime-specific planning in areas where there are nightlife clusters. In these areas, data are gathered about parking, sound, transit, economic activity, and public space usage.

Modern planning tools are becoming more technologically sophisticated and offer new opportunities. Models which incorporate big data sources and complex algorithms are being used to forecast trends in the urban environment. Urban Spatial Analytics Practicum students at the University of Pennsylvania recently developed a nighttime scenario-planning tool using Safegraph GPS data and machine learning methods to allow business corridor managers to understand how changes in retail mix along Philadelphia's high street areas might affect the amount and patterns of visitation (Figure 11). These kinds of scenario planning tools allow for pro-active allocation of resources, such as safety ambassadors, lighting, and sanitation.

⁵ Marion Roberts and Adam Eldridge's *Planning the Night-time City* is a good resource for a diverse set of indicators and research designs related to urban planning for nighttime.

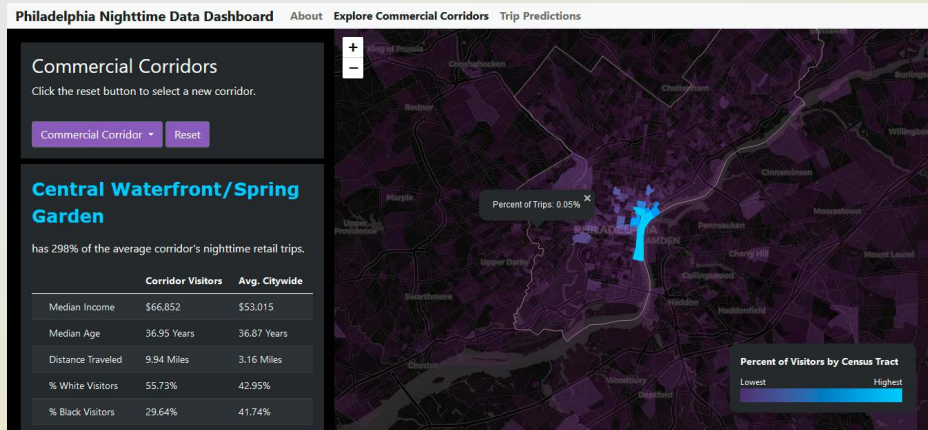


Figure 14. A nighttime mobility dashboard by University of Pennsylvania graduate students Kornhauser, Rawn and Lee, (2021) that uses origin-destination data to describe and algorithmically model commercial activity at night in Philadelphia.

Nighttime-sensitive planning needs to focus beyond nightlife business clusters. Large-scale decisions about the future of development — at a district, city, or regional level — are often made without any nighttime-specific analysis. The result is that high level planning and policy decisions often leave the future of nighttime industries and communities to chance.

Plan public spaces after dark. Data collection and analysis (in combination with good engagement and design) can be used to enhance public spaces' nighttime function. Public spaces are crucial to nighttime cities - plazas where people hang out, bus stops where people wait for nighttime transport - all of these spaces need to be well-designed, well-lit and well maintained in accordance with how they are used. Observational data collection methods that are traditionally employed during the day are ill-equipped to measure public space usage after dark. This measurement involves recording who is doing what, where, and when in a public space, and helps inform the types and intensities of use of a park, plaza, or streetscape.⁶

These methods take on a different character when night is involved, as complex effects of lighting affect patterns of use and feelings of safety. Integrating

⁶ For more on Whyte's work measuring public spaces, watch the 1979 documentary "The Social Life of Small Urban Spaces," which is hard to find, but worthwhile to watch.

observational studies with surveys to understand user sentiments can lead to nighttime-sensitive designs for districts, parks, bus stops, corridors, and plazas. This integrated approach can be seen in the tactical design work done in Philadelphia's Eakins Oval, which is redesigned and refined each year using PennPraxis' and Port Urbanism's integrated public space data analysis (Figure 15).

Further refinement of these methods for night could involve the integration of the work of nighttime lighting designers, and urban soundscape designers and modelers. Urban lighting design and measurement is discussed in depth in GNRP Chapter 3 and in the work of Leni Schwendinger and her "Shades of Night" measurement rubric.

Measuring light at a large scale can require lots of specialised technical know-how. There are many strong examples of work with satellite data on nighttime lights, including those which relate economic activity and brightness but they involve complex GIS data sets that require a skilled spatial analyst.

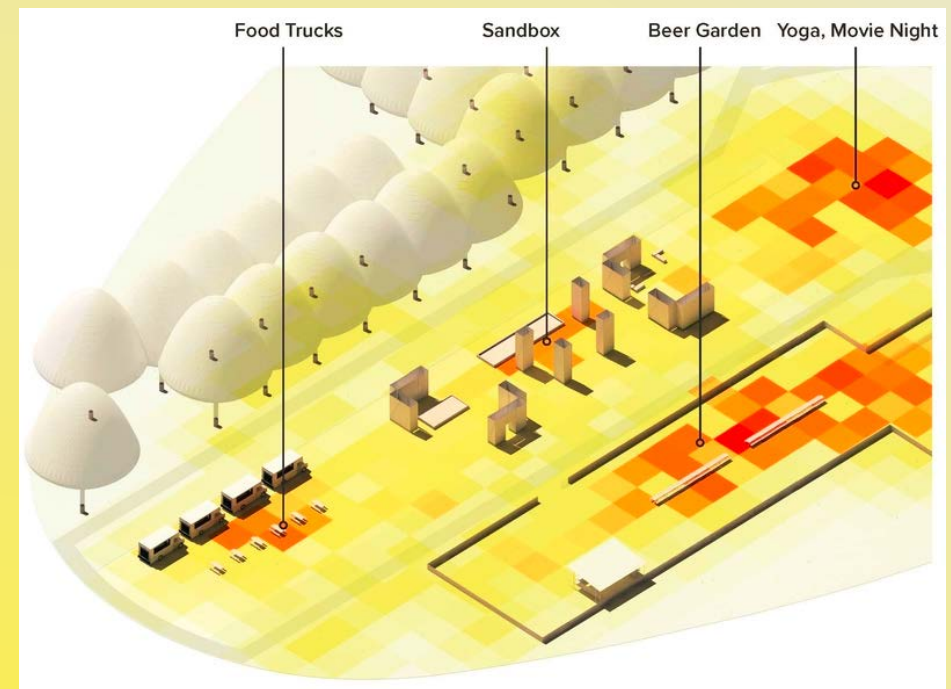


Figure 15. A heatmap of types and intensities of pedestrian activity in Eakins Oval, a programmed public space in Philadelphia

Measuring sound has been democratised by new sensor technologies. Design and measurement of urban soundscapes are discussed in depth in a 2013 article in EchoPolis by Chourmouziadou and Sankantamis, and the availability and price of passive audio sensors has made sound measurement methods increasingly accessible.

Plan for 24-hour transportation. Safe, reliable, frequent, and accessible transportation is crucial to the functioning of cities, day and night. This is especially important in places with intense congestion, where commuting begins very early and ends very late because of long travel times (see the case study on Lagos’ pandemic experiences in GNRP Chapter 3). For most cities, unfortunately, transit planning and measurement is frequently built around times and routes of heavy demand and around the needs of 9-to-5 commuters. In the last several years, however, cities are beginning to explore transportation patterns of late-night commuters to plan for a more supportive 24-hour transportation infrastructure.

The American Public Transportation Association, for example, released some of the most useful data on night-shift workers across the U.S. based on their transportation patterns, measured using fine-grained Census information known as micro-data. The introduction of night-specific analysis resulted in recommendations for many improvements to nighttime service, especially flexible and frequent night bus service.

Transportation surveys can form a strong basis for assessing demand for nighttime amenities. The City of Sydney Council’s 2010 late night pedestrian footfall analysis integrates behavioural observations, traffic counts, and intercept surveys across a number of sites and time periods. A repeat survey documented the impact of lockout laws on behaviour and activity volume in the following years and a Nighttime Economy Cost Benefit Analysis incorporated traffic volumes in its analyses.

Transit surveys can also be used as the rationale for improving nighttime service to meet or induce demand for nighttime economic activity. The Tokyo Creative Footprint Project contained an analysis of transit lines to determine which might benefit most from extended hours for a pilot period during the 2020 Olympic Games. This was done by doing point-pattern and cluster analysis of venue locations and demographic analysis in relation to existing transit infrastructure. The analysis suggested specific lines that could have the highest impact on nighttime sectors if service was extended to later hours.

Create analytical frameworks for strategic planning. Many governments and NGOs use strategic planning processes to outline actions designed to achieve various mission-oriented objectives. This process should be informed by the best available data.

Sydney’s 24-Hour Economy Strategy from the New South Wales Government is a good example of a data-informed strategic plan. The purpose of the document is to prescribe a set of actions for the 24-Hour Economy Coordinator General to undertake in order to improve a wide scope of conditions in Sydney after dark. Importantly, the plan contains a “Measurement Framework” with key social, economic, and cultural indicators linked to the plan’s objectives (Figure 16). The strategies are informed by existing conditions research in a number of fields and surveys about attitudes towards nighttime safety and vibrancy, planning, goal-setting, and progress tracking. Quantitative data and domain expertise inform the strategies and goals, and related metrics are set out to monitor progress.

SOCIAL MEASURES	ECONOMIC MEASURES	CULTURAL MEASURES
<p>Objectives</p> <ul style="list-style-type: none"> Foster social inclusion Improve diversity of patrons participating in the night-time economy (age, income, ethnicity) Improve accessibility to night-time hubs, venues and entertainment. Enhance community wellbeing, resilience and connectivity Increase liveability scores Ensure our town centres are safe, welcoming and functional 	<p>Objectives</p> <ul style="list-style-type: none"> Increase trade efficiency improve yield per hour open at night Attract the best global talent Grow the number of non-traditional NTE businesses Increase the proportion of Sydney’s economic value that can be attributed to night-time spend Spread NTE value-generating activities across Greater Sydney hubs 	<p>Objectives</p> <ul style="list-style-type: none"> Increase the volume of cultural activities on offer Increase the affordability of cultural activations Increase the representation of Aboriginal and Torres Strait Islander storytelling and art Increase the number of opportunities to engage with culture and creativity Maintain places of cultural significance Enable increase re-use of space for cultural activation
<p>Key indicators</p> <ul style="list-style-type: none"> Participant demographic study Night-time Economy (NPS)/ Satisfaction score Sentiment analysis Reduction in alcohol and drug-related violence and crime 	<p>Key indicators</p> <ul style="list-style-type: none"> Number of ‘core’ NTE businesses (food, drink and entertainment) and ‘non-core’ or ‘supporting’ businesses operating between 6.00pm and 6.00am. NTE sub-sector value and growth Total consumer spend between 6.00pm and 6.00am Number of people employed in the Greater Sydney NTE NTE participation numbers and Creative sector contribution to Gross State Product 	<p>Key indicators</p> <ul style="list-style-type: none"> Number of cultural activities or attractions by local government area/region. Number of tickets sold to cultural activities City’s cultural reputation score Additional public space created Public space activated at night

Figure 16. A set of objectives and indicators from Sydney’s 24-Hour Economy Strategy

Be wary of economic impact studies. Economic impact studies are a common tool by which industries or institutions establish value by attempting to calculate the economic benefit associated with their activities. They can be informationally and politically useful. However, they can also mischaracterise and mismeasure economic activity, offer a false sense of economic promise, or prioritise the wrong community values.

Economic impact studies are commonly commissioned as a way to animate action in support of nighttime industries. These studies can provide a good basis for cataloguing as much data as possible about the nighttime economy - number of establishments, number of transit trips - all of which provides useful baseline information for future work. For example, the impact of New York's nightlife industry, as established by a 2019 study, was 299,000 jobs, \$13.1 billion in employee compensation, and \$35.1 billion in total economic output. These eye-catching figures are frequently invoked as an assertion of value in public discussions and their publication generated considerable press attention (Gothamist, among others, touted the figures in an article entitled *Report: Despite Venue Closures, The State Of NYC Nightlife Is **DJ AIRHORN***).

However, economic impact studies are prone to mismeasurement brought about by knowing or inadvertent misclassification of activities. Where does one draw the line as far as what is “nighttime” or “nightlife” - especially when night-specific measurements of economic activity by governments are known to be poor? How can economists from mainstream firms reasonably understand the often obscure or secretive nature of many nightlife activities well enough to measure them?

Furthermore, the establishment of nightlife's value as being purely economic causes two distinct problems: First, it's perhaps cynical or unhelpful to focus the civic discussion of cultural and artistic activity as a commodity. Second, the establishment of a dollars-first approach to nighttime in a city with intense competition for space and political support is a huge risk. Markets do not necessarily favour cultural activity in many circumstances, and framing the importance of cultural production in economic terms means confronting other industries with higher economic multipliers in a competition for political priority.

7. EMBED DATA COLLECTION IN A PROCESS OF MEANINGFUL ENGAGEMENT

Genuine engagement is the key to good planning and policy. Without it, there is no buy-in, no trust, and no dedication to citizen-focused democracy. Arnstein's Ladder of Citizen Participation — a canonical planning framework for empowering communities — ascribes a higher benefit to the delegation of power to or partnership with communities than it does to consultation. Giving communities a seat at the table at all points of a data governance cycle will keep studies and plans from collecting dust on the shelf.

However, meaningful, sustained community participation in governance is lacking in public life. Engagement is incredibly hard for governments or NGOs to do well, even when there is earnest commitment. Partnering with, deputising, and *paying* communities as co-leaders in the process of data collection, data analysis, and formulation of research and evaluation questions is a way to bring communities into the process of governance. This approach is far more inclusive than treating communities as mere subjects of research.

Integrating engagement brings about better research questions, better outcomes, and better stewardship of the outcomes. For instance, the Raze Collective's ongoing London Queer Nightlife Research Study offers financial incentives to participation, which yields higher quality data from a broader sample than does a “free” survey. Involving communities also ensures that the issues that are being captured are those that actually matter to the community, and that their reality is reflected as best as possible.

RECOMMENDATIONS: DATA ADVOCACY FOR COMMUNITIES AND ORGANISATIONS

Nightlife advocacy organisations, pressure groups, and community collectives can use data as an advocacy and communication tool. Over the last fifteen years, as nighttime issues have become a new part of urban agendas, many of the methods for measuring, describing, and analysing the nighttime city were developed by advocates and community groups. The following section details the following four strategies for strengthening data advocacy for non-governmental actors:

1. **Measure what matters to your community.**
2. **Build skills-based coalitions.**
3. **Engage in data-driven storytelling and visual communication.**
4. **Use data to inform Covid-safe nightlife.**

1. MEASURE WHAT MATTERS TO YOUR COMMUNITY.

Many of the communities and activities in the nighttime city go unnoticed by your average observer. When the nightlife community gets involved in the data collection and analysis process it helps to ensure that the right issues are highlighted. There are several examples in the following sections of ways in which communities have used measurement to draw attention to the things that they believe are important. Some of these issues include venue closures, harassment, wages, and carbon footprints.

It's unlikely that government officers, economists or other "outsiders" will ask the right questions, emphasise the right issues, or identify less visible communities, especially given the lack of engagement with nighttime communities. It's up to the community to set priorities, and to find the partners and measurement tools to create data and data-informed arguments. One such tool is the Creative Footprint Project, which is a community-driven census of music venues. This tool brings together advocates and analysts to put issues like gentrification, venue closures, and government policy in front of policy-makers. (See the case study following this section for more on the Creative Footprint.)

THE CREATIVE FOOTPRINT PROJECT - A MULTI-SOURCE METHODOLOGY FOR CITIES AND COMMUNITIES

Michael Fichman

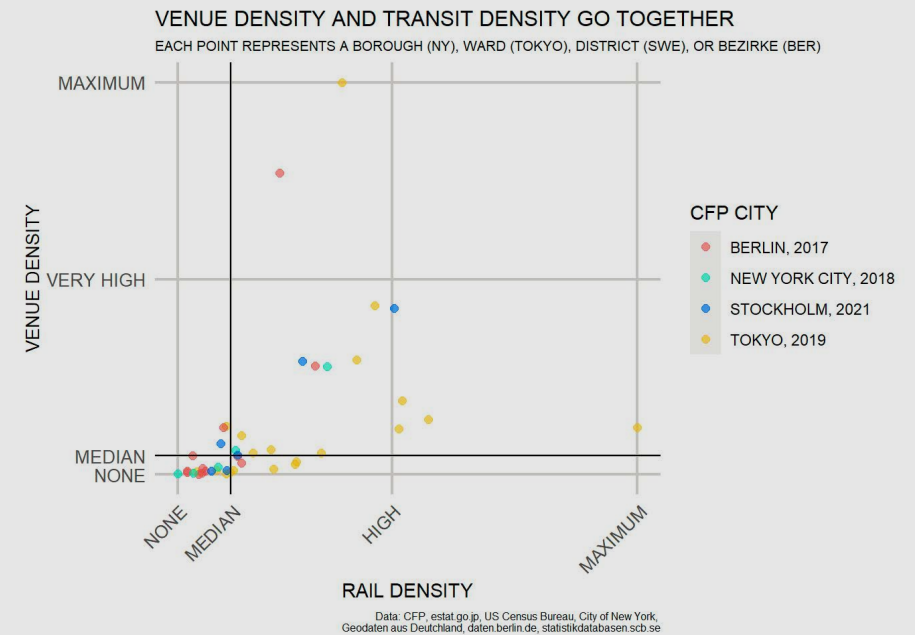


Figure 17. An exploration of the relationship between rail density and venue density for four Creative Footprint cities.

Founded in 2017 by VibeLab, the Creative Footprint Project (CFP) is a deep, community-sourced census of music venues. The project has been fully executed in New York, Berlin, Tokyo, and Stockholm and has been done in miniature by local groups in several other cities. Conducted in partnership with PennPraxis, the CFP does more than just identify the sites of a city's creative space, it uses a focus group model to measure several things which have known value to "insiders" but are usually unmeasured. For example - this instrument measures the multidisciplinary use of a space's use - a key factor in resilience. The study integrates over a dozen factors, including governance "framework conditions" into a composite score and a set of indicators.

Furthermore, the methodology uses open census and economic data to analyse spatial factors affecting creative space in a city - proximity to transportation, status of real estate markets, and demographic factors are all considered. The New York CFP was instrumental in identifying the ways in which urban agglomeration effects (e.g. the tendency of economic actors to cluster) were exposing venues to competition with other, more profitable land uses for transit-accessible real estate. The Tokyo CFP identified gaps in late night train service and found the ways in which famed small venues with experimental programming were at risk from conflicts with neighbours in mixed use urban development areas with rising rents.

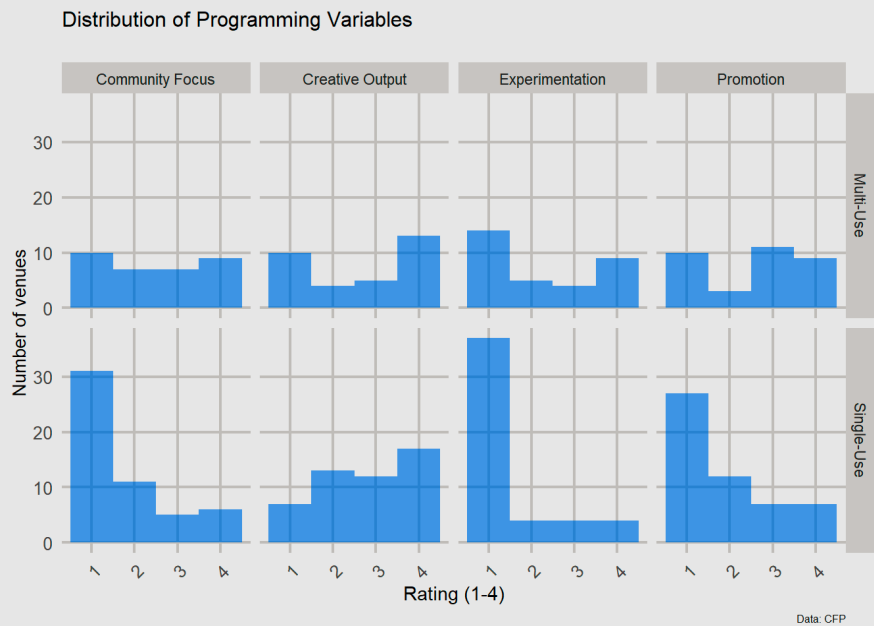


Figure 18. Community-created programming variables for Stockholm's multi-disciplinary and single-use spaces.

In cross-section, this methodology allows cities (and districts within them) to compare themselves to one another. Longitudinally, a repeated CFP analysis would allow for a city or communities to track closures and compare its conditions over time - part of the "virtuous cycle" mentioned in this document.

But does this methodology work on "an outlier?" To test the CFP's capabilities, versatility and preciseness, Salzburg – an Austrian city of around 120,000 inhabitants – was chosen to be the focal point of this examination - by a community researcher (Max Guntert) executing the method with advice from its founders.

VENUE DENSITY - TOKYO, 2019

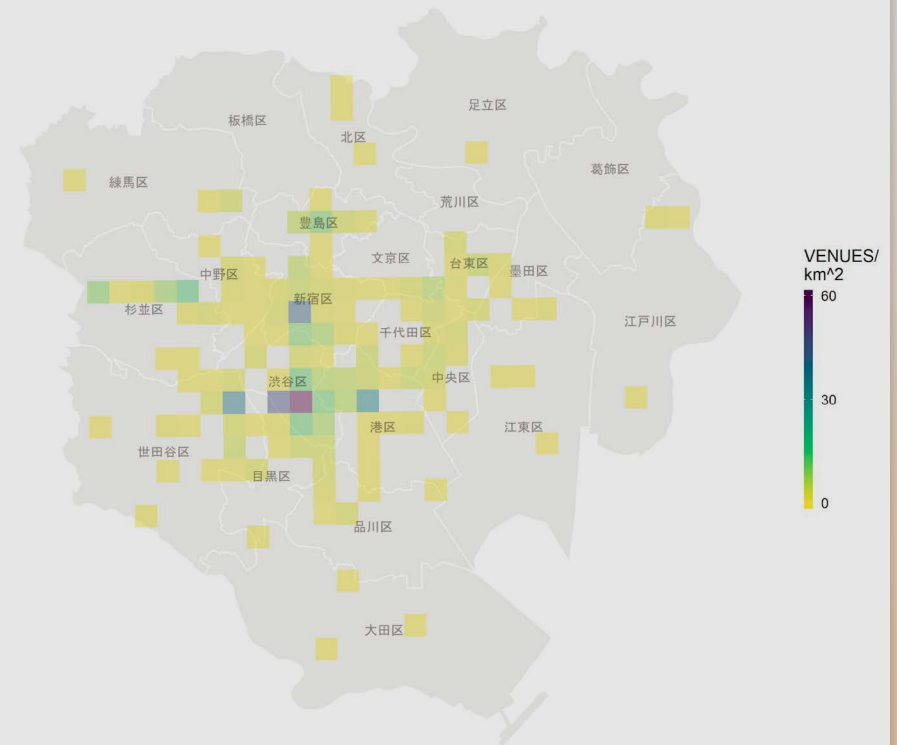


Figure 19. A heatmap of venue density in Tokyo.

A grassroots example of community data collection comes from climate action organization Clean Scene, who analysed the carbon footprints of DJ tour itineraries in order to highlight the carbon-intensity of the nightlife industries. Their methodology involved scraping tour dates from Resident Advisor and merging it with airport data from Google Places. The report was notable for its honesty and transparency about the limitations and quality of the data they could access. They published their code, methodology, and list of assumptions and limitations on Github, a collaborative hosting platform for computer code. This open-source platform allows anyone to challenge their method, replicate the analysis with their own data set, or update it as needed.

A similar example of “open analytics” in community measurement comes from a workshop done by GNRP authors (Tara Duvivier, Mark Adam “Matt” Harold, and Michael Fichman) at Reeperbahn Pop-n-Politics in May 2021. At the workshop, our group collected quick survey data from the participants to enable discussion of pressing issues in a live community setting. We coded the analysis, and posted the code on Github — providing a code base from which workshop participants (and readers of this chapter) can build, analyse, and map their own surveys using Google Forms and R.

During the pandemic, many communities have issued surveys to take stock of nighttime communities, businesses, and industries. There are numerous examples of useful surveys from which to learn, from community to industry-led ones (see examples from the Raze Collective (p. 65), South African Department of Sport, Arts and Culture (GNRP Chapter 4), and 24HrPHL (p. 66)).

While surveys can be a great tool to collect a lot of data quickly, community or industry-led surveys are often prone to bias, and results should be reported with care. Non-representative or non-random samples and findings should not be described as somehow “significant” or equated with professional polling results, unless they were conducted using rigorous sampling methodologies.

The results of “biased” surveys can still be useful as long as you are transparent about your methods. In Chapter 4 of the GNRP, for instance, we conducted a non-random survey of nightlife cultural industry workers. There were numerous sources of bias: the sample was a biased product of the networks through which the survey was distributed; it was limited to the six languages in which it was published; and our personal experiences probably led us to fail to ask some important questions. We are unable to tell whether this survey is generalisable to places and people who were not represented. However, given the alternatives — to do no survey at all, or broadly survey every country in every language — this was the best course, provided we were clear about the limitations.

Doing data collection and analysis is difficult but important. One way to make community data work easier and more robust is to build coalitions within your community and/or with local institutions

2. BUILD SKILLS-BASED COALITIONS.

Multi-skilled people are crucial to building coalitions that can do high-level work on nighttime data and policy projects. Many of these people are probably already in your nighttime community: students from the local university who can help with data collection; volunteers who are willing to give surveys in clubs; data scientists who can help analyse data; graphic designers who can show data in evocative ways; writers who can prepare dissemination reports; and city planners who can help contextualise nighttime issues into urban policy and governance terms. At night, these people are also the clubbers, DJs, promoters, bartenders, and awareness teams that make up our scenes. The key trait that they all share is their intimate knowledge of the nighttime world and the issues that matter.

Universities, foundations, and NGOs can provide expertise and an imprimatur of legitimacy to community technical work. Raze Collective and University College of London (UCL)’s Queer Nightlife Research study is a good example of a joint-coalition between nighttime people and university researchers. VibeLab’s work with the GNRP, Creative Footprint Project, and GIZ’s Voices of Creatives has been done in partnership with PennPraxis at the University of Pennsylvania’s Weitzman School of Design (a sponsor of this report), where our urban planning graduate students with a strong affinity for nighttime issues are becoming the next generation of experts in the field.

3. ENGAGE IN DATA-DRIVEN STORYTELLING AND VISUAL COMMUNICATION.

Data analysis is useless if it cannot be communicated effectively. A powerful story is enhanced by data, but the data itself is not the story.. While data can make stories more “factual” or “credible,” the story itself is central, and must be wrapped up with compelling elements of text and design.

Telling a good data story sometimes involves starting at the end - there is some kind of problem in need of solving. For example, many small or mid-sized cities lose artists and creative professionals to larger markets. The community has several remedies in mind (More creative spaces? Grants and subsidies? Better wages?). This problem contains a hypothesis that needs data for confirmation - are people in fact leaving?

Now data sources (economic census, surveys, tax rolls) can be accessed or created, and the story can be written in reverse and explored in detail. What kind of people are leaving? Did they leave *before* the pandemic? Did more leave *during* the pandemic?



Figure 20. A one page info-sheet from 24HrPHL's Nightlife Community Survey, 2019

Surveys are a perfect tool to turn community needs into policy priorities. 24HrPHL undertook a Philadelphia nightlife community survey in 2018-19. The priorities which polled the highest became the basis for the Philadelphia City Council's Arts and Culture Task Force's 2021 proposal of a Nighttime Economy Office. The survey included questions which asked subjects to rank the relative seriousness of issues such as sexual harassment and working wages. It put a number to the "everybody knows" phenomenon of artist exodus to larger US markets, and demonstrated the community's desire for licensing reform. Ultimately, the survey was communicated in a stylised one-page info-graphic which was readily consumable as a quick fact sheet by politicians and the general public. (Figure 20)

Good design and clear writing are key to making technical communications accessible and intelligible. Standalone charts, informational graphics, animations, and one-page info sheets are all useful tools for communicating data-driven ideas. Web-based data dashboards and interactive maps are easier to develop than ever, but require skill to execute correctly. Graphics packages in open source software languages have

powerful tools available, and tutorials are easy to find.⁷ Fortunately, graphic designers, data scientists, and UI/UX developers are often the kind of people one might find in the nightlife community.

The Berlin Clubcommission's *clubkataster* dashboard is a good example of how clear web design can be used to communicate a simple informational issue using open data. Clubkataster is designed to animate and monitor the potential conflicts between cultural venues and urban development. The data viewer (Figure 21) contains a simple overlay with areas of planned development and existing clubs. This publicly-available resource allows a viewer to monitor potential conflict points and acts as a simple resource during the increasingly common discussions about the issue of *Clubsterben* ("club death").

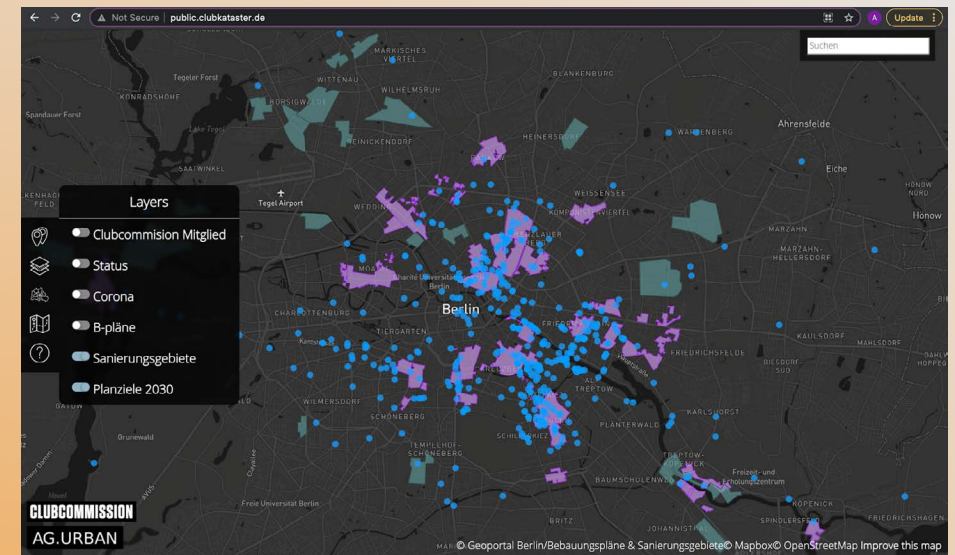


Figure 21. A screen shot of the clubkataster user interface.

4. USE DATA TO INFORM COVID-SAFE NIGHTLIFE

Nighttime communities face the challenge of safely and responsibly operating performance venues in the late-and-post-pandemic era. Safe and sustained re-opening means engaging with data from public health authorities, and from technologies used in venue operation. Thinking in terms of risk and probabilities is helpful when

⁷ A useful and simple primer on data visualization for novice data scientists is Data Visualization, by Kieran Healy.

interpreting public health statistics and data about the effectiveness of various health and safety operating procedures. Multiple probabilities need to be considered when making decisions about operating one's venue, or making public arguments in favour or against certain types of restrictions. These include the effectiveness rates of vaccines; transmissibility of current Covid-19 variants; rates of infection in the public at large; rapid and PCR test error rates; and the probability of infection based on published results of test events under varying conditions. The following case study from Lutz Leichsenring explores the various technological issues important to safe operations.

TECHNOLOGICAL TOOLS ARE THE KEY TO A SUSTAINED REOPENING

Lutz Leichsenring

As many experts claim, the Covid-19 crisis will most likely not be the only pandemic our generation could experience. Since the production and equitable distribution of vaccines to nearly 9 billion people is not possible in a short period of time, we will inevitably face lockdowns — especially our creative and cultural spaces. Improving our digital methods and technology is thus essential for enabling cultural events during pandemic.

The Covid-19 pandemic has shown that we already have the technology to deploy several tools and strategies to provide safe cultural spaces during a pandemic:

1. Rapid tests, which can be easily distributed and used, and carried out in high numbers or the “gold standard” Polymerase Chain Reaction (PCR) test, the most reliable commonly-used method of detecting a virus (more expensive, limited laboratory capacity);
2. Tracing apps, which can provide a record of rapid tests, PCR tests, and vaccinations, as well as generate and issue temporary digital passes (QR code).

Rigid lockdowns with continued closures of creative and cultural spaces can be avoided if the detection of early infections can be individualised. Preventing virus transmissions should not be implemented by means of crude, undifferentiated bans against entire populations when more finely granulated instruments are available.

Using the test results and other information, tracing apps can generate *temporary green passes*, which is a reliable proof if a person is clear of an infection. Thanks to the low-threshold rapid tests and their immediate recording in the app, green passes can be generated on demand and almost spontaneously. In addition, test results can be connected with information from tracing apps.

Used in this way, tracing apps can relieve public health departments of tracking participants of events. Lock-down measures would be irrelevant then. In the event of future pandemics with new viruses, cultural spaces would be able to open for the public and could completely dispense with a rigid lockdown from the moment a test procedure for detecting the new virus is available.⁸

Showcase “Clubculture Reboot” in Berlin

The pilot event “Clubculture Reboot” on 6 August.2021 was initiated by the Clubcommission Berlin, the Berlin Senate Department for Culture and Europe along with scientists from the city's Charité hospital. The idea of the study is to determine how to safely reopen nightclubs by creating temporary SARS-CoV-2 free cohorts. The 2,110 participants, all above 18 years of age, agreed to get tested twice, pre and post event, irrespective of their vaccination status. When the result of the first test was negative, they received an admission ticket to the nightclub event. Seven positive cases were identified ahead of the weekend, three of whom had been infected at least ten days prior, as well as four new cases. One of them was fully vaccinated.

Why is there a need to talk about this now?

If we want to be prepared to prevent cultural lockdowns in a next pandemic we need to ensure a granulated prevention of viral transmissions in cultural spaces. Mandatory tracing apps for everyone who would like to access cultural spaces, could be a (temporary) solution. However, this requires that all test results (PCR and rapid test) be recorded in an app and that they are fraud-proof. However these technical solutions will also imply new data concerns. To be well prepared for a future pandemic, there is a need now to carefully and conscientiously compare available service providers that allow users to control and encrypt their personal data. (See the case study on a Nighttime Data Protection Standard on Page XX).

⁸ Detailed procedures on testing, tracing, and green passes which formed the basis for this case study are noted in the references section.

CONCLUSION

The focus of many nighttime communities over the past year has centred on surviving the pandemic. Even if Covid-19 becomes a managed constant in the background of our lives, the next crisis could be right around the corner. This means that for the foreseeable future, pandemic management will become an integral part of nightlife's diverse health and safety agenda. Meanwhile, we must continue the hard work of advocating for the nighttime city and nightlife, an effort that long preceded the Covid-19 pandemic.

Without data, and a process to collect, manage, and analyse it, little can be done to make strategic, community-based decisions to enhance nightlife and nighttime economies' resilience and sustainability. Instituting a robust, intentional data strategy, integrated within a wider city data and intelligence plan, will aid and accelerate recovery. Cities and communities can improve the collection and how they analyse it, but increasingly, third-party data and technologies are becoming vital to understanding how and where people experience the nighttime in cities. Handheld technologies have deeply embedded themselves in our lives and they are not going away. Thoughtful consideration must inform future action.

There is a critical cost-benefit calculus that communities everywhere must make in our modern era. Privacy, safety, opportunity, and other values must be carefully balanced when considering how and when technology is to be a part of our lives. Fortunately, the best values associated with nightlife and artistic communities can be a guide - the same ethos that inspires on-premise drug testing, "Ask for Angela," and harm-reduction-oriented safe-space codes can show us that inclusive care for one another is the leading principle.

Above all, we need leadership and empathy. Leadership will allow us to make the best of our situation and create thoughtful and well-informed action. Empathy will guide us towards a path where all boats are lifted by the rising tide.

Data are not the panacea to our problems. As urban theorist Shannon Mattern says, "the city is not a computer." The city of the night is too joyously vibrant, complicated, and multi-faceted to be completely quantified. You cannot put a number on that complexity. However, our self knowledge and compassion can be the lens through which we take our numerical accounting of ourselves to the public.

Special Thanks to: Riccardo Ramello, John Michael LaSalle, Julie Donofrio, Ellen Neises, Ken Steif, Alessio Koliulus, Siphon Sithole and Tara Duvivier, for their advice and counsel on writing this work.

This work is dedicated to my dear departed friends Oronde Gibson and Ken Steif and to all those from our nightlife communities who have passed before their time.

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(Photo credit: Lora Reehling / Soul Clap Records)

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(Photo credit: Paul Owens)



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Shain Shapiro, PhD is the Founder and Group CEO of Sound Diplomacy. Sound Diplomacy is the leading global advisor on growing music and night time economies in cities and places. He has defined a new way to think about the value of music in cities and places and through it, influenced over 100 cities and places to invest in music and culture as part of overall growth strategy. He is also the co-founder of Music Cities Convention, the world's largest event bringing together the music industry with city planners, developers, policy makers and executives, the Music Cities Community, the leading online platform for music and public policy to intersect and the Music Cities Awards. He is also the Founder and Executive Director of the not-for-profit global Center for Music Ecosystems, launching in 2021.

Through Sound Diplomacy, he has consulted in over 75 cities and countries, in every continent bar Antarctica (and he'll get there). He delivered the first ever music presentation at a United Nations' World Urban Forum and consulted at length with the Greater London Authority, including working on the development of London's Night Czar and across the Mayor of London's music policy. His work has influenced the UN, OECD, European Commission and he has spoken at hundreds of global conventions, including delivering a Tedx talk on music's role in cities. He is an accomplished writer, contributing to Forbes, World Economic Forum and has authored authoritative reports on the role of music in cities, tourism, the night time economy, real estate and recovery.

Shain holds a PhD from the University of London and was one of the top 10 Creative Entrepreneurs in Britain in the British Council's h100 list. Lastly, he is currently writing a book about music ecosystems and their impact on cities and communities.

(Photo credit: Shain Shapiro)



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(Photo credit: CPCS)



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(Photo credit: Mark Adam Harold)



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Thomas is a Berlin-based cultural manager, performer, and mental health advisor. He spent 2016-19 in the Middle

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(Photo credit: Nobusama Fotografie)



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(Photo credit: selfie)



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Lutz is a partner at VibeLab and based in Berlin. Since 2009, Lutz has been the spokesman and Executive Board Member for the Berlin Clubcommission and member of the city's Musicboard and Chamber of Commerce and fought tirelessly for the rights of Berlin's vast club scene by organizing protests and speaking up in public.

(Photo credit: Lutz Leichsenring)

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(Photo credit: Maxim Tarnalitsky)



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Michael Schnerle the Director of Open Source Operations at the Open Mobility Foundation, a non-profit that builds data standards for cities, mobility service providers, and software companies to manage scooters, bikes, ride hail, and delivery robots in the public right of way. He was Louisville's first Chief Data Officer in the Office of Civic Innovation and Technology, and worked to use data to improve government performance and transparency, with responsibility for open data, city-wide data strategy, and fostering employee data-driven decision-making. He has spent 14 years in civic tech, and 24 years working on internet projects for Fortune 500 companies and startups. This grew into open data advocacy and building civic services around real-time transportation, public safety, geocoding, data standards, and APIs, and led to co-founding Louisville's first Code for America brigade.

(Photo credit: Louisville Metro)



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Alistair is a night-time urbanist and the founder of MAKE, the night-time economy consultants. He created the world's first night-time strategy in 1995 for Leeds and has since completed over 100 projects worldwide to improve cities 'after dark'. Recent high-profile projects he has worked on include the 'Later Opening London Plan' and 'Night-time Workers Study' – both for the Mayor of London, The Global Night-time Recovery Plan and new research into how destinations can respond to the Covid19 pandemic by maximising their night-time assets.

(Photo credit: L Westwood)



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Leni Schwendinger is a published, award-winning authority on issues of city lighting, with worldwide experience creating illuminated environments. This work is shared through Leni's public speaking and envisioning engagements, including the "NightSeeing™, Navigate Your Luminous City" program. Her projects can be experienced at sites such as parks, subways and bridges. She directs International Nighttime Design Initiative to establish an interdisciplinary profession for transformation of neighborhoods after dark. Projects for the Initiative include Smart Lighting Guidance for New York State and advising think-tank New Urban Mobility. Leni is a Visiting Research Fellow at the London School of Economics and holds fellowships at NYC Design Trust for Public Space and Urban Design Forum.

(Photo credit: Randall Whitehead)

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THE PREVIOUS CHAPTERS OF THE GLOBAL NIGHTTIME
RECOVERY PLAN ARE AVAILABLE AT [NIGHTTIME.ORG](https://www.nighttime.org)

**CHAPTER 1: OPEN-AIR NIGHTLIFE AND COVID-19: MANAGING
OUTDOOR SPACE & SOUND**

**CHAPTER 2: THE FUTURE OF DANCEFLOORS: BUILDING MORE
FLEXIBLE, OPEN, AND INNOVATIVE CLUBBING EXPERIENCES**

CHAPTER 3: INNOVATING FOR 24-HOURS CITIES

**CHAPTER 4: SUSTAINING OUR NIGHTLIFE SCENES: SUPPORT
MODELS FOR NIGHTLIFE INDUSTRY WORKERS, INDIVIDUALS,
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CHAPTER 5: NIGHTTIME GOVERNANCE IN TIMES OF COVID-19

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