



Policy Framework for Smart Public-Use Bike Sharing

European Cyclists' Federation

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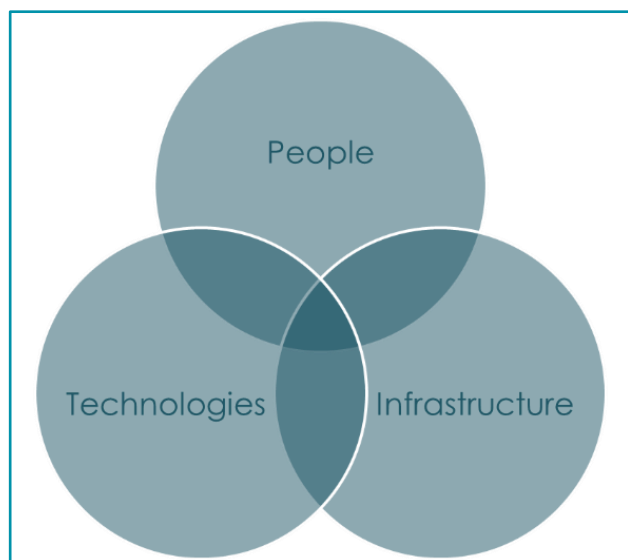
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Introduction



The policy position of the European Cyclists' Federation (founder of PEBSS¹) is that public-use bike sharing should be fully embraced as a critical component of a city's public transport network, extending that network flexibly, cost-effectively and efficiently, beyond traditional multi-user mass transport.

It should receive policy and funding support commensurate with that "public good" status, and contribute towards the objectives set forth in a city's sustainable urban transport policy (SUMP²).

However, to analyse the impact of new technologies on the uptake of cycling and to encourage widespread modal shift towards cycling, a wider analysis can be made using the well-established tool "Cycling as a System".

Cycling as a System identifies that behaviour change towards cycling is most effective when the measures in place consider the needs of the users or specific groups of users, their access to bicycles and equipment relevant to their needs, and the creation of an environment in terms of suitable fit-for-purpose infrastructure, bicycle parking, dedicated cycling lanes, appropriate street signs, etc.

Mapping this analysis on to bike sharing is relatively straightforward:

Public Cycling as a System: We believe that there are three (3) main pillars to building a smart public-use bike share system for any city or metropolitan area; its overlapping dimensions requiring a

¹ Platform for European Bicycle Sharing & Systems

² Sustainable Urban Mobility Plan

holistic eco-system framework perspective. 1) Consumer (rider) choice and satisfaction, 2) How the PBS system interacts with the city environment (“the public realm”), and 3) Equipment providers and those technological innovations to ensure lasting, sustainable service and access. Balancing the priorities and strengths of each is what PEBSS proposes in this policy framework.

The 3 Pillars of a great Smart Public Bike Sharing System

Rider Priorities: Shared bicycle mobility should meet, or ideally exceed, the best practice standards for any public transport system: experience shows that such bike share services must be perceived as safe, reliable, comfortable – with the greatest flexibility possible regarding location pick-up / drop-off, pricing, interoperability with other modes of public transport, and data privacy³. Interoperability with public transport ticketing is highly valued and essential for wider service development such as MaaS (Mobility as a Service). Any such registration system should contemplate both local residents, and visitors.

A choice of operators or services is often welcomed by consumers, as is the ability to use services regionally, nationally and internationally without having to register across multiple systems. Pricing and availability should encourage use and access by all groups in society, and preferably promote use in under-represented demographics whether they be gender, age, race and / or income. Systems should also not be to the detriment of existing private cyclists and the facilities they rely on; as a result any new public-use bike sharing implementation should never remove, reduce or divert cycling infrastructure or bicycle parking used by private cyclists beforehand and into the future.

City Environments (“The Public Realm”): Public authorities have a requirement to create conditions that encourage sustainable and effective mobility within the context of their overall transport planning system, and be done so through the optic of climate change, public health, improving air quality, reducing vehicle congestion, and enabling social inclusion.

This can be delivered by bike sharing solutions that optimize public access, funding, and land use for cycling together with all other users of the city infrastructure. And one that ideally integrates as closely as possible the other public transport options, providing the user with a seamless $A \rightarrow B$ or $A \rightarrow B \rightarrow A$ transport or commuting solution. Overall, a sustainable, equitable use of public resources, be those direct, or indirect, taking into consideration all costs of such systems, and not socialising private costs while maximising private profits⁴. Cities should focus on “outcome objectives”, and not unnecessarily prescribe input constraints that over-night begin to become dated as technology evolves rapidly.

Technology / System Providers: As a part of public transport, bike sharing allows for a wide range of commercial opportunities from completely independent and competitive business models to public-private partnerships. The European Union supports a range of policy frameworks relevant to the shared mobility market that encourage competition, fair market access, green public procurement and the development of the digital economy.

Commercial opportunities can provide sustainable shared bicycle mobility solutions to as many users as possible, driving innovation and a growing market to leverage these technological investments. A

³ European laws on data privacy must be fully respected and implemented.

⁴ Economics’ “Free Rider” problem.

regulatory framework that is as frictionless as possible places emphasis on the creation of innovative transport options that achieve business, public, and consumer / social goals.

As a result of these three (3) pillars of a smart public-use bike share eco-system, PEBSS suggests a set of approaches for cities to manage solutions and new developments.

Recommendations for a Smart(er) Public Bike Share System

Historically, cities have successfully implemented mono-operator systems, but we believe municipalities should explore alternative models; and analyse the possibility to create a potential multi-player eco-system where fair, level-playing field competition can occur, and generate best-service solutions to the citizen, and city itself. Eco-systems need to be created to allow, if not actually incentivise, multi-competitor environments, to drive innovation and service to the community. A carefully designed service area strategy for all forms of public-use bike share is a critical component of a wider urban mobility strategy (SUMP) for any city / metropolitan area, tailoring it to local needs and desired outcomes. One such strategy is the continual calibration, analysis, and construction of sufficient bicycle parking areas (space) for a growing use of base of cyclists, be those private or public. In general, cities' forward planning should allow for growing bicycle parking requirements so there is always capacity over and above current cycle use, to accommodate the accelerating growth of cycling well into the future.

As a minimum, cities should have the regulatory authority that enables:

Registration / licensing. Cities should license shared public-use bicycle operators working across their urban / suburban territory(ies), wherever bicycles are to be hired or de-hired, even if a particular system originates from another adjacent area. This would not mean bikes passing through or being used to access the city and return (e.g. $A \rightarrow B \rightarrow A$), it only means where a commercial transaction (hiring or de-hiring) takes place in the actual jurisdiction (city, or greater metropolitan area where transport responsibility is pooled). Such licensing parameters should take into consideration a phased approach to the quantity of shared bicycles per annum, or user, while monitoring the efficiency of the fleet. Having too many bikes, ridden insufficiently so, does not make a successful eco-system. Balance, proportion, and an evolutionary approach to increasing the size of the fleet are vital concepts within the registration and licensing / permitting perspective. Cities can then adopt their policies and enforcement capabilities, while remaining agile to dramatic shifts in consumer behaviour and bike share usage, and how each varies with seasonal weather, for example.

Such operators must commit to providing a 24-hour local / national contact point for all issues of safety or public nuisance to be addressed. The city can require proof that the operator is in compliance with all relevant national or international regulations in relation to bicycles and business practices such as a legal bicycle (for example with lights and brakes to national / international standards and national road rules), data protection, public liability insurance, and financial protection for consumers (e.g. deposits, refunds), etc.

In the event that the operator is not able to provide proof or is non-compliant, the relevant public authorities should identify enforcement measures including action by police or consumer protection bodies. Relevant powers could be extended to city agencies such as parking enforcement officers to remove non-compliant bicycles, and to eventually dispose of them to minimise public costs. Overall, a

public-use bicycle share system should not be divorced from larger transportation planning and municipal needs, both in the short-term, and longer-term.

Orderly streets have demonstrably positive affects (and can be contrasted negatively) on public safety, local tourism (and its economy) and sanitation. Therefore the city should have the authority and capacity to enforce removal of shared bikes that cause a significant negative impact on the public realm, but this should be balanced with a policy to encourage more bicycle use and provide more parking. Where public-use bike share system's actual bicycles cause a significant public nuisance, cities should have the powers to charge operators for the removal costs of those "offending" bicycles (illegally parked, dumped, deposited, discarded). The infrastructure through which riders cycle is equally vital to ensuring capacity in providing for increased, safe cycling. Cycling infrastructure is clearly a necessary condition to creating a sustainable eco-system, but not sufficient in itself. Cities should consider requesting that operators put monies in escrow to ensure that there are funds to cover municipal costs enforcing licensee obligations, especially relevant when operators exit or cease business activities locally, or globally. Upfront, bi-lateral coordination with local PTAs is expected, to ensure full 360° analysis of secondary effects, albeit unintentional.

Riding (Rolling) Stock: Cities should mandate that operators ensure that their bicycle equipment, the "riding stock", is of sufficient quality built to withstand the rigours of constant public use and exposure to the elements, in location, meeting rider safety and comfortable standards. A typical acceptable time frame would be of a physical quality / robustness to tolerate 4-5 years of standard use. Extending this to e-bikes and connected bikes will be critical. Moreover, the bicycle used conforms to current bicycle standards (or better): currently the ISO 4210 framework for city bicycles is the standard required across the EU. Bicycles not complying with these EU safety norms should be subject to immediate withdrawal, with corresponding penalties that cover the removal costs to cities.

Servicing / Mechanical Integrity: The on-going servicing of these shared bicycles is a vital aspect of the process; prospective operators must demonstrate a robust system for ensuring that the bicycles are kept in working order proactively, and that any faults / damages can be quickly identified, removed from the "fleet", and replaced to ensure the committed number of bicycles. Suppliers should be able to integrate on-bike location-technologies, and eventually on-board wireless diagnostics, to more easily identify mechanical failure, and proactively intervene through preventive maintenance.

Re-Balancing: Where the bikes are, and where they end up habitually, is equally if not more compelling to ensure a sustainable eco-system. This will decide whether bike sharing is really a reliable public transport service, because it has the same expectation as a bus or metro service – the standard offered should be maintained. Consistent with creating sustainable consumer (rider) habits, actually finding the bicycles where the rider reasonably expects, is vital to ensuring a successful system. This cannot be stressed enough. Cities can identify certain "key" locations where the bicycles should generally be found, respecting reasonable expectations.

Consumer pricing / Protection: Local authorities should strongly consider establishing minimum pricing tariffs, at least on an average rider / use over a periodic basis, to ensure fair-market competitive environments, avoiding the negative consequences of predatory pricing, and thus monopolistic behaviour, once smaller competitors have been driven out of the market. Below-cost price "dumping"

may seem beneficial, at first, to the rider community, but remains so only until there are no viable competitive alternatives.

Ideally, interoperability and full cross-platform ticketing of public transport should be the ultimate goal for all urban mobility providers, via MaaS⁵, or similar solutions. New entrants to bike share must show technological / system paths towards integration of single-source ticketing outside of membership agreements between the rider and actual provider.

Ensure the sharing of data vis-à-vis system rider usage to city government so that the city / PTA (Public Transport Authority) can better calibrate its urban mobility strategy / infrastructure⁶, and integrate with other transit applications. Smarter, effective public-use bicycle share will be highly dependent on digital and ubiquitous tools which facilitate the efficient management of the fleet for all stakeholders. Such tools could include geo-location, theft-prevention or monitoring unauthorised use, and the detection of crashes or near crashes in real-time, with automated reporting to city officials.

Use of private data should be in accordance with EU data security and privacy legislation, including the hosting of such data within the EU political / regulatory geographical space, not remotely where legislation cannot be applied. Individual privacy rights relating to that rider / subscriber data must be respected and guaranteed. Data cannot be shared with, or sold to, third parties without the consent of the user.

OVERALL CONCLUSIONS

Only through a strategic policy and regulatory framework can a smart public bike share eco-system be developed and evolved, to meet the needs of any urban area over time. As by definition, public bike share is in fact a public transport mode; as such it needs to be planned, coordinated, and progressed across the entire mobility eco-system of any given area. PEBSS is committed to ensuring that the entire stakeholder portfolio is given its appropriate relevance in any decision-making and information-gathering process by authorities in granting operating licenses. Only through that, can public bike share flourish and nurture a sustainable mobility orientation without damaging other aspects of the public realm.

⁵ Mobility-as-a-Service.

⁶ Operators must provide jurisdictions with bicycle / system usage through the GBFS (General Bikeshare Feed Specification), or similar format, to foster data interoperability, with a reciprocal exchange of data from the city itself.