

# Intermodality for visitors: Policies in Destination Areas

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# Introduction

## Intermodality:

- One of the 4 key themes of DESTI-SMART
- Remains a neglected and under researched topic
- Significant scope to develop and improve strategies for the introduction of Intermodal solutions in Destination Areas.

# Introduction

- On-line search of 'Intermodality' identifies studies, articles and consultancy companies focusing on Freight Transport.
- Intermodal Solutions Ltd <https://intermodality.com/contact-us/>
- Interporto Padova (Logistics) <http://www.interportopd.it/en/intermodalita/>

# Introduction

- In addition there are specific examples promoting passenger transport integration, often focusing on specific modes.
- Rail and Air : Air Transport Action Group <https://www.atag.org/our-activities/intermodality.html>
- Bicycle use with public transport <https://ecf.com/what-we-do/urban-mobility/intermodality>
- Transport plans based on the complimentary of high-capacity modes – serving the densest zones along major transport arteries – and agile modes, interconnecting the rest of the region to absorb the weaker transport flows. Keolis. <https://www.keolis.com/en/our-services/transport-solutions/intermodality>
- RATPDev <https://www.ratpdevusa.com/expertises>
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# Definitions

- ‘Intermodality is the desire to make using more than one mode of transport during a single journey as easy as possible.’
- ‘An integrated approach between transport systems’
- Utilizes new, modern technology to connect passengers and operators to plan each passenger journey from first mile to last mile.

# Definitions

- ‘an "integrated approach" with a common information and distribution system ‘
- Intermodality concerns the integration of urban public transport (PT) services (e.g. bus and tram) with other modes of personal and collective transport such as Automated People Movers (APM), bicycles and private cars through bike/park-and-ride schemes and national/regional rail.

# Illustrations

- if you need to go from A to B, for some part of your journey you might take the metro, another part you might book a car-share near the station, and then for the last mile you could use a bike. All of these can be booked and paid for in one click in one app.

# Objectives

- The implementation of intermodal solutions is essential to meet customer demand. (Efthymiou & Papatheodorou 2015)
- Enhance the destinations competitiveness.  
(Perhaps greater impact on repeat visitors)
- Resolve transport supply and capacity issues.

# Objectives

- To allow passengers to benefit fully from a "seamless" travel experience.
- To increase both passenger numbers and achieve modal shift away from private transport
- The impact of intermodality on passenger numbers and modal share is difficult to measure as there are relatively few studies of detailed monitoring
- Intermodality is high on the political agenda

# Impact

- By coordinating fares and services for all routes, all types of public transport, and all parts of the metropolitan region, Verkehrsverbund systems in Germany, Austria, and Switzerland have greatly improved the quality of the public transport alternative to the automobile.’ (Pucher & Kurth 1995)
- the success of each Verbund in attracting more public transport riders and, in most cases, increasing or at least stabilizing public transport's share of modal split.
- Greater Bordeaux transport network: estimated 10% growth in both ridership and passenger revenue

# Examples.

- Transport Bordeaux Métropole (TBM) is a strong intermodal network, with an extensive array of transport modes that provide residents with maximum territorial coverage: trams, buses and bus rapid transit lines, river shuttles, a bikeshare scheme and park-and-ride (P+R) facilities.

# Requirements

- An environment with multiple modes of transport
- Literature infers it works best in large cities (Berlin, Paris, London)
- Both multimodal and multi-operator tickets
- Good information services for tourists
- Appropriate communication and social marketing strategies. (Le-Klähn & Hall 2015)

# Requirements

- Public sector & private sector co-operation
- Infrastructure investments such as stops or terminals

# Components

- ‘There are few examples of intermodal cooperation, and in many cases the infrastructure that would enable intermodal travel is insufficient.’

# Cities

- Research on Intermodality has focused predominantly on larger cities .
- there are differences in the level of PT use by visitors between rural and urban destinations. (Le-Klähn & Hall 2015)
- Public transport of greatest use in the city centres
- followed by towns of above 50,000 inhabitants.
- Smaller towns and suburbs saw little use.
- Le-Klähn (2012)

# Cities

- Mobility is an essential issue for tourists visiting large cities
- Good mobility facilitates accessibility of attractions and the spread of benefits across the city.
- Provides additional revenue for Public Transport services (often at off-peak periods of demand)
- Improves the image and attractiveness of the destination

# Cities

- Cities should have the highest levels of public transport supply and capacity.
- Furthermore tourist demand imposes external costs on resident users because of the overcrowding and congestion caused by supply constraints
- Cities do not seem to address this pressure by increasing services or capacity (Bel 2010).

# Destinations

- The literature suggests it works best in large cities, Intermodality transfers well to other urban destinations?
- Mid-sized cities like Karlsruhe (300,000 citizens), shortlisted for European SMART city has the highest rate of shared cars in Germany.
- Small island destinations with ambitious carbon targets need to develop intermodality public transport systems as a viable alternative to exploring using the private car.

# Destinations

- The concept may also be important for rural and remote destinations, particularly for ‘last mile’ of journey.
- MaaS with a private transport component will take on greater importance in rural and remote areas

# Tourist Behaviour in Destination

- Well planned tourist transport services should be demand-oriented. A good knowledge of customer behaviour is thus critical.'
- Many studies identify that this is a major gap in our knowledge:
- 'little is known about how tourists at an urban destination make their decision on the areas that they visit and transport modes used' (Le-Klähn, Roosen, Gerike & Hall 2015)
- The spatial behaviour of tourists within cities is not well understood, partly because of the complexities of cities as spaces and partly because few studies have addressed this phenomenon (Edwards & Griffen 2013)
- 'the mobility of tourists at their destination is an activity that has so far received very little attention from researchers' ([Gutiérrez](#) and [Miravet](#) 2016)

# Tourist Behaviour in Destination

- Tourist s use transport services differently to local residents and have different requirements
- The differentiation of tourists and non-tourists competing for transport and transport space is little researched (Hall 1999)

- DESTI-SMART feasibility schemes and demonstration projects will be informed by some background information about tourist transport use.
- The destination surveys will also provide useful information about tourists awareness of public transport in the destination and their information sources about transport services.

# Barriers to Intermodality

- Poorly thought-out transport interchanges can be a major deterrent to multi modal use and seamless travel.
- Some historical networks may be difficult to improve.
- Lack of knowledge of public transport systems and ticketing was a major constraint on public transport use. (Edwards & Griffin 2013)
- Single mode ticketing places severe constraints on flexibility and tourist use

# Interchange on Historical Networks

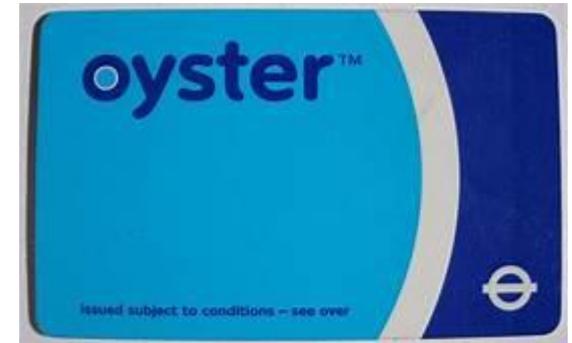


**Bank and Monument  
Interchange.**

# Ticketing



European Union  
European Regional  
Development Fund



# Ticketing and Revenue.

- It is important to distinguish between tariff integration and ticket integration.
- Some tickets charge per journey (Oyster)
- Others give unlimited access over a restricted time to the whole network or specific zones within the network (Travelcard in London)
- Some (like London) mix the two approaches.

# Ticketing and Revenue.

## **Card-based systems.**

- Seen by many software and IT companies as ‘old technology’.
- The technology faces a number of challenges.
- Pre purchase or payment on card
- Difficult to maintain long term
- ‘Contactless ‘ – an alternative?

# Ticketing and Revenue.

## Apps systems.

- Easier to adapt to new interfaces.
- Can offer **location based** services
- Could limit adoption from consumers less familiar with SMART phones.

# Ticketing and Revenue.

- All systems require the ability to allocate revenue.
- Who is trusted with the process of collecting, calculating and allocating?
- Multiple organisations (public and private) must act in collaboration.

# Mobility as a Service (MaaS)

- MaaS is the new Buzz word.
- It **extends** the concept of Intermodality to **explicitly** incorporate private transport options (car sharing, car hire, cycle hire etc.)
- These car options will be low carbon options
- Explicit on making one single door to door offering using one digital booking platform.

# Mobility as a Service (MaaS)

- More recently, its application in large urban areas has begun to be questioned (for example Helsinki)
- There is a possibility that it could encourage increased use of private transport (car club, car hire) at the expense of public transport.
- Greater potential where the final destinations are remote with poor public transport.
- MaaS will allow the majority of the journey to be on public transport with 'the last mile' using low carbon private transport

# Mobility as a Service (MaaS)

- ‘the **integration of different transport services** (such as public transport, ride-sharing, car-sharing, bike-sharing, scooter-sharing, taxi, car rental, ride-hailing and so on) **in one single digital mobility offer**’

# Mobility as a Service (MaaS)

- Requires an innovative digital platform
- That means moving outside the exclusive control of traditional company boundaries.
- MaaS requires a business ecosystem where multiple organisations (public and private) act in collaboration.

# Stages.

- Do not run before we can walk
- Despite a number of experimental schemes (Helsinki, Birmingham UK) uptake of MaaS remains low
- Greatest scope for modal shift in increasing numbers of destinations is to adopt, develop and improve Intermodality of public transport.
- This should be achieved in stages.



# Stages of Intermodality

1. Develop combined multi operator ticket for bus network. (Bournemouth)
2. Add in remaining public transport options where available (tram, LRT, metro, rail) to evolve into a multi modal ticket.
3. Extend to add in active transport (cycle hire, demand responsive cycle hire)
4. Move towards MaaS by adding bookings for car clubs, car hire and taxis (when an effective public transport system is up and running)

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