

From Multimodality To Seamless Intermodality In Urban Transport: A Difficult Transition

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MULTIMODALITY NOT ENOUGH

- ❑ Existence of several transport modes in an urban agglomeration is a trivial fact and a natural consequence expansion of the agglomeration
- ❑ Such a multimodal system can serve the city and region rather well while it is a rather monocentric city and most of their inhabitants carry on rather simple mobility patterns
 - But when multiple centers develop and people start having more complex trip patterns, failure to respond to this problem is one of the major reasons for quick growth of individual motorization

DIMENSIONS OF INTEGRATION

- ❑ The key concept for properly addressing this problem is ***integration***. But it may mean different things for different people. Two main dimensions to consider:
 - integration internally to the transport system, that is among its multiple components;
 - integration of transport policies with policies in other sectors: *land-use* policy and planning, *social* policies, *environmental and economic* policies

- ❑ We will mainly cover the internal integration level

MEANING AND PRESENCE OF INTEGRATION

- What is meant by a well integrated transport system
 - A transport system is well integrated when all (or the large majority of) its users consider that it does not impose unjustified **transition costs** on them

- The road system has been capable of providing it very effectively in all countries, for a little more than one century
 - But it is likely that in some years some roads with high levels of incorporation of electronic guidance systems will only allow properly equipped vehicles on them.
 - Nothing similar occurs in the other transport modes, railways being the less integrated one

THREE DIMENSIONS OF INTEGRATION

- ❑ **Physical integration**, meaning that the transfer process from one link to the next must be such that the user does not have to spend much time or effort in it
- ❑ **Tariff integration**, meaning that the traveler who would wish to be served by a direct link but could not, should be able to buy the transport title(s) at a single location and time, and not have to bear a tariff penalty on top of the physical penalty of the transfer
- ❑ **Logical integration**, meaning that the user should be able to perceive the service as whole unit, with available information about the whole chain of services as if it was a single through service

TRANSPORT INTERCHANGES

- ❑ Of fundamental importance, not least because of their symbolic nature, becoming the ***icons of the integration process*** that are visible to everybody, even to those who are not using the public transport system
 - should be transformed from a necessary evil in the journey of travelers to an element of added value to the region where they are located
- ❑ Should not only provide smooth transport connections for the transit passengers, but allow them positive experiences of leisure and consumption
 - in parallel, the large numbers of transit passengers can make those supplies more sophisticated, making them attractive to a wider public in the area

BARRIERS TO INTEGRATION

- ❑ Integration is a complex technical task, but the major barrier to successful integration ***is not in this technical dimension:*** integration creates
 - ***additional costs*** for the agents involved in public transport production,
 - ***vulnerabilities in quality*** of service and
 - ***constraints on commercial initiative*** to the operators, which constitute or generate multiple forms of inefficiency on the production side

COSTS OF INTEGRATION

- ❑ Integration has significant costs of the following natures:
 - Network planning
 - Preparation of contractual agreements
 - Information systems
 - Contingency planning
 - Operations staff that are especially dedicated to transfer clients

WHO BEARS THESE COSTS ?

- ❑ With State intervention in promotion of integration, a good part of the extra missions and costs of integration will be undertaken directly by that authority
 - Possible conflict of interests may rise between planning agents in the public sector
 - the best deal for a political circumscription which is part of a region may be different from the ideal contribution of that area to the larger set

- ❑ When there is no State push towards integration, private companies may still find it in their interest to adhere to integration, normally in association with acquisition or preservation of strong market positions
 - integration will be available only for some combinations of services, with either low marginal production costs or with high potential for client capture (a stronger form of loyalty)

ADVANTAGES FROM PRESENCE OF PRIVATE AGENTS

- ❑ They are more subject to the risks of poor economic performance, so more determined and capable in the ***pursuit of economic efficiency***;
- ❑ They can mobilize funds in private capital markets evading formal constraints on public borrowing and spending (***earlier entry into service*** of new transport components);
- ❑ In frequent search for improving their position in the market, often through ***innovation*** in the services supplied or on the ways to produce them.

COSTS AND DIFFICULTIES RELATED TO THE PRESENCE OF PRIVATE AGENTS

- ❑ Significant ***transaction costs***, related to the tendering and negotiation processes,
 - an attempt at quasi-definitive allocation of risks between the public and the private side is always made;
- ❑ ***Capital costs are higher***,
 - in direct relation with the remuneration of private capital, the commercial risk of the project and the (lack of) guarantees given by the State for the payback;
- ❑ ***Different objectives on the public and on the private sides***,
 - implies the need to design a balanced and effective set of contractual incentives so that those objectives can come closer.
 - especially delicate in integrated transport systems, where the performance of the agent responsible for each component may have implications on the performance of other agents.

STABILITY VS. INNOVATION

- ❑ In the provision of public transport, ***stability is a very important requirement*** as citizens must be able to easily identify at least the small set of services that are instrumental for their dominant mobility wishes
- ❑ ***Stability poses risks for the longer term***: system functions as a sequence of time-limited sets of spatial monopolies
 - strong disadvantage, both directly by ***prohibiting innovation***, and indirectly because it incorporates this prohibition into a ***mindset***, transforming those operators into simple vehicle pushers and cost-cutters.
- ❑ Some ***opening needed for innovation by the initiative of (private) operators***, not by specification of the authority.

MAIN INSTRUMENTS FOR INTEGRATION

□ Two Structural Instruments:

➤ **Clarity of purpose** on the public side

- what level of integration of transport services they require
- what instruments and at what cost can be mobilized for that, and
- what roles private agents are expected to play

➤ **Good institutional design** for the implementation and management

□ Then, a **set of agreements and contracts** must be prepared, involving public-public as well as public-private relationships

➤ Such contracts have several **special difficulties in the case of integrated transport systems**

LEVEL OF COMPETENCE REQUIRED ON THE PUBLIC SIDE

- ❑ Contracts should be designed so that they constitute **effective pressure** on the (private) service suppliers towards **high quality** services
- ❑ Proper management of these contracts over their lifetime requires technical, legal and managerial **skills on the public side in line with those available on the private side**
- ❑ **The public sector must keep its ability to procure efficiently**
 - **Requires people with know-how of the supply side**

TYPES OF CONTRACT

- The usual choice when there is ***significant investment*** supported by the private side – like in motorways, suburban railways lines or light rail systems - is for a ***concession contract with net costs***
 - but requires great care in the specification, design and performance of the elements of the transport system surrounding the sub-system that is put into concession
 - So, they are ***more frequently found in easily separable components of the transport system***

- Generally preferable alternative for engagement of private companies ***in integrated transport systems*** – which require periodic tuning and changing of traffic rules and relative prices - is to use ***gross cost contracts, with incentives related to quality***

DIFFICULTIES WITH GROSS COST CONTRACTS IN INTEGRATED SYSTEMS

- ❑ Quality based incentives difficult to apply, because in an integrated network, users perceive quality in an integrated way thus making ***operators' performances inter-dependent***

- ❑ Apparent dilemma between integration and innovation in the design of services
 - requirements of ***integration leave less room for experimenting*** new patterns of service

 - ***authorities tend to be less inventive***, they are further away from the field and the clients, and thus less aware of emergent mobility wishes

 - ***let operators suggest new types of services***, without special attention to integration – but not pre-emptying it or biting on territory served by other operators, allowing their introduction for a trial period, with commercial risk on the side of the operator

SECONDARY BENEFITS OF OPENING TO INNOVATION BY PRIVATE AGENTS

- A very positive secondary effect of this opening is to ***make the contracts an instrument for joining efforts towards better service for the public***, and not a basis for permanent adversarial positions, like in a zero-sum game

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