



CETRA²⁰¹²

2nd International Conference on Road and Rail Infrastructure
7–9 May 2012, Dubrovnik, Croatia

Road and Rail Infrastructure II

Stjepan Lakušić – EDITOR



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Faculty of Civil Engineering
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CETRA²⁰¹²
2nd International Conference on Road and Rail Infrastructure
7–9 May 2012, Dubrovnik, Croatia

TITLE

Road and Rail Infrastructure II, Proceedings of the Conference CETRA 2012

EDITED BY

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ISBN

978-953-6272-50-1

PUBLISHED BY

Department of Transportation
Faculty of Civil Engineering
University of Zagreb
Kačićeva 26, 10000 Zagreb, Croatia

DESIGN, LAYOUT & COVER PAGE

minimum d.o.o.
Katarina Zlatec · Matej Korlaet

COPIES

600

A CIP catalogue record for this e–book is available from the National and University Library in Zagreb under 805372

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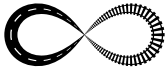
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EFFICIENT AND CUSTOMER FRIENDLY LUGGAGE LOCKING

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Abstract

Locking up luggage at a railway station is a basic service many passengers want to use. Especially when they try to use their time efficiently, like for shopping, for meetings, or for sightseeing, luggage often accommodates. Most of today's luggage lockers do not fulfil the needs of modern travellers. This paper gives an overview of all the passengers needs and expectations with regards to station luggage storage and benefits for station operators who offer suitable and accepted storage systems.

Keywords: luggage, lockers, customer friendliness, accessibility

1 Introduction

Long distance travellers, travelling by train, usually carry a lot of luggage. Depending on the travel purpose, the configuration of luggage items will vary, but on average every passenger has got one piece of hand luggage and every other passenger has an additional second piece of luggage.

There are many reasons why offering the possibility of locking up luggage at the station is meaningful and required. Business travellers, for example, may lock up their luggage during meetings, or tourists may want to use their waiting time for sightseeing. However, one reason which is interesting for both railway station operators and passengers alike is the waiting time at the station until the train departs.

Aircraft passengers are used to duty free and shopping areas in order to pass their time until departure. Modern railway stations are also turning more and more into shopping malls, offering train passengers the possibility of 'using' the time before departure by shopping, eating, drinking, etc. The big difference between services offered at airports and at train stations is that aircraft passengers already have checked in their luggage and are therefore able to go on a shopping tour without being handicapped by their belongings. Train passengers, however, always have to carry their whole luggage with them, which leads to the fact that passengers who arrive at the station early or who have to wait for a connecting train can hardly use all the attractions in the station.

Luggage is a big handicap because it's hardly possible to saunter with it through the narrow aisles of full shops. Passengers who have no free hands will wait outside of the shops and watch their belongings. Fig. 1 shows an example of countless passengers sitting around and waiting for departure. If passengers had no luggage they could spend their time shopping. This would lead to two advantages: (1) Waiting time is experienced as much shorter when strolling through shops instead of sitting on a bench in a cold departure hall. This would make the railway more attractive. (2) People sauntering through shops will increase the turnover of the shops.



Figure 1 Passengers killing time while waiting for departure

These thoughts show that a customer–friendly possibility of storing luggage, even for a short time, is necessary and meaningful for passenger comfort, for the railway undertakings, and for the station operators. However, the storage possibilities offered at train stations today do not fulfil, in any way, the requirements of modern travellers. Therefore a study funded by the Austrian Research Promotion Agency (FFG) and the Austrian Federal Ministry of Transport, Innovation and Technology (BMVIT) analyses the basic passenger needs with regards to luggage storage with the aim of designing a concept for a new customer–friendly locker system. This paper focuses on the passengers' needs and expectations.

2 Passenger needs and expectations

2.1 Use of waiting time

Depending on the age and the sex of passengers the use of waiting time differs. For example, younger men more often prefer to use the time for working than women or elder people. But in general every fourth passenger prefers to go shopping or strolling through the shops. About one third prefers to sit in a bistro or restaurant to eat something. An additional third prefers sitting in a waiting area or in a lounge (compare figure 2).

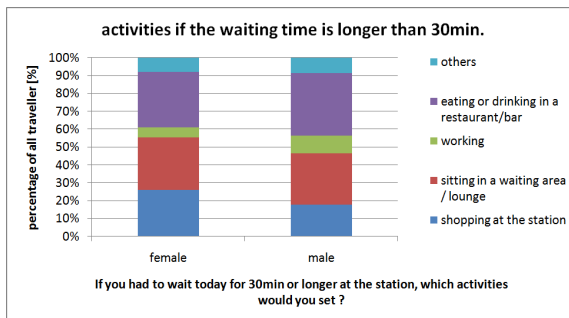


Figure 2 Activities if the waiting time is longer than 30 min (Question: 'If you had to wait for 30 min or longer at the station, which activities would you choose?')

Especially passengers who want to stroll around or go to a bistro say they feel handicapped by their luggage. In general more than one third of them feel handicapped or very handicapped. Also, every fourth passenger who wants to sit in a waiting area or who wants to work feels handicapped because of the same reason (see figure 3).

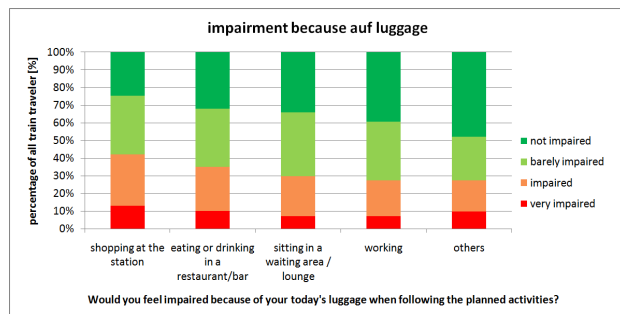


Figure 3 Percentage of all train travellers that felt impaired because of luggage while doing different activities

These numbers are an average of all passengers depending on the planned use of time. The perceived difficulties increase with the number, size and weight of luggage items. About 60% of passengers with large and heavy luggage items feel handicapped by the luggage when they want to use the time for shopping or going to a bistro or restaurant. And even 30% of passengers with medium sized luggage feel the same.

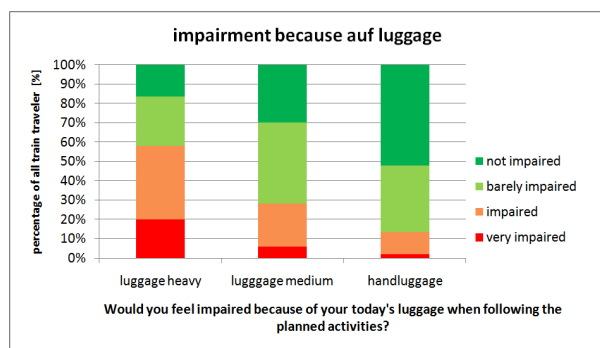


Figure 4 Percentage of all train travellers that felt impaired because of luggage weight/size while doing different activities

These figures illustrate the large number of potential consumers who want to go shopping or eat and drink but can't do that in most cases. This also points out the need and the significance of short term luggage lockers. But the offered service must be as close to the customer's needs and expectations as possible. What passengers expect under different circumstances will be pointed out below.

2.2 Main problems with usual lockers

Two main problems, regarding today's lockers, emerge. In general the handling of luggage is often very inconvenient and, especially for short term storage, the prices are relevant parameters of acceptance. There is no known railway stations system that offers short term storage for free or for a very low price.

2.3 Price

To make short term luggage storage attractive for travellers the price is one of the most important criteria. About 70% of all passengers in general name the price as an essential reason why they don't use a locker. The willingness to pay depends on the duration of storage. About one third of passengers who would like to use a locker for short term storage, to use their time at the station more pleasantly, does not want to pay for that service. More than one third is willing to pay one euro for one luggage item and hand luggage. Only one quarter is willing to pay more than one euro (see figure 5).

These research results show that, if station operators want to have as many shopping passengers as possible, short term storage up to two hours should be offered for free. The maximum acceptable amount is one euro. But it must not be forgotten that the deciding factor whether people will actually use the service or not will boil down to that one euro they would have to pay. So even if two thirds of passengers inquired say they are willing to pay one euro, many won't do so in reality.

It seems best to offer short term storage for free while taking into account that the lockers will pay off indirectly: since the number of passengers who will use the retail possibilities will greatly increase, the turnover and the profit will rise.

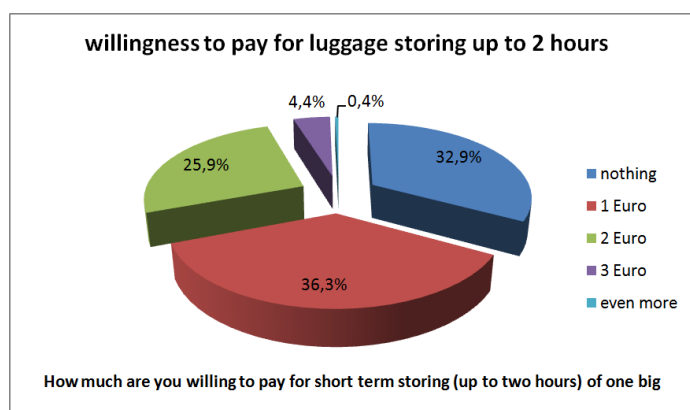


Figure 5 Willingness to pay for short term storage (Question: 'How much are you willing to pay for short term storing (up to two hours) of one big piece of luggage?')

For storage—in duration of one day passengers are willing to pay more. Only 15% are willing to pay only one euro, one third is willing to pay two euros and an additional third is willing to pay three or four euros. Since the station operator has no immediate benefits, like additional shopping passengers, a price between two and four euros seems to be acceptable (see figure 6). But of course passengers who lock up their luggage for several hours or a whole day will also come back before departure and might leave the luggage in the locker for doing some shopping at the station until departure.

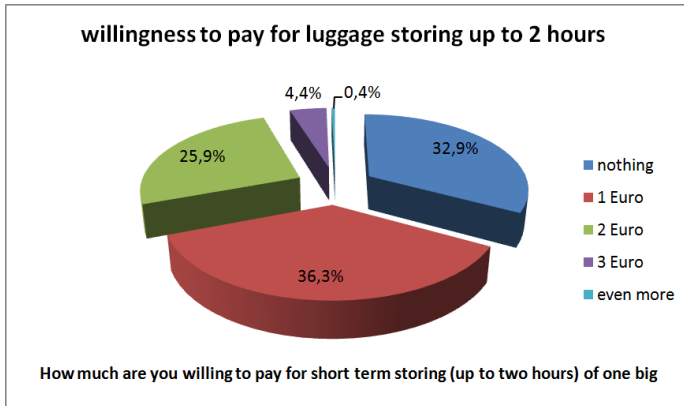


Figure 6 Willingness to pay for one-day luggage storing (Question: 'How much are you willing to pay for one day luggage storing, for one big piece of luggage plus one piece of hand luggage?')

2.4 Handling

Apart from the price, the handling of luggage lockers is an essential criterion for acceptance. The handling process consists of easy locating, the potential necessity of lifting up the luggage, the size of the lockers, the immediate handling (payment process, central touch screen etc.), the time duration of the locking process and the return of the luggage.

The most important factors are the size of the lockers and the fact whether the luggage must be lifted or not. For short term storage, the time needed for the storage process is also essential, especially when passengers want to pick up their luggage in order to catch the train.

2.5 Required lifting of luggage

Depending on the age and sex, travellers experience difficulties when lifting their luggage. For example about 50% of all female passengers with large luggage are not able or willing to lift it, about 20% are able or willing to lift it up to about one meter and only 30% are able to lift it higher.

For about 70% of all female and 40% of all male travellers, storing luggage at floor level is important or very important. Also for 70% of all passengers above the age of 60 this is a must.



Figure 7 Many passengers have troubles when lifting their luggage

2.6 Time needed

The time needed for storing and especially for retrieving the luggage is another very important criterion for acceptance. More than 25% of the asked train passengers say that luggage retrieval must not take longer than one minute, more than 50% would accept a retrieval time between one and three minutes (see figure 8). This time frame includes the whole process from arriving at the locker site to retrieving the luggage and leaving. Especially the perceived time needed when passengers are in a hurry and they are nervous because of the approaching departure of their train is very important. If passengers are in a hurry, one minute can be perceived as five minutes. For systems that may need a little bit longer – for example central locker terminals – a timer that tells the remaining time in seconds would be very meaningful.

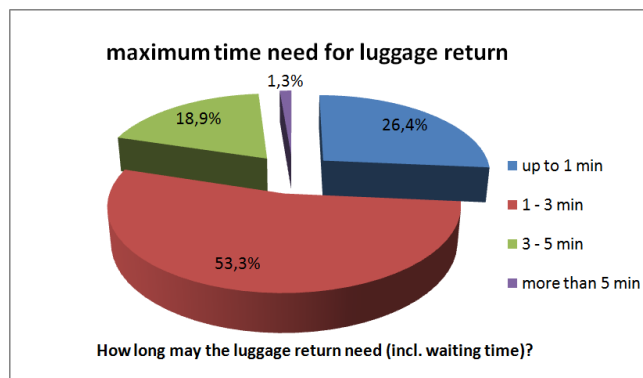


Figure 8 Maximum allowed time for luggage return (Question: 'How long should luggage return, including waiting time, last – at most?')

2.7 Need for space

Many of today's lockers are too small for common luggage items. The width of many lockers is 33cm, but 40% of all luggage items are bigger. That means that 40% of luggage items do not fit into normal lockers. Passengers either cannot store it or are forced to use a much more expensive locker for huge items.

3 Conclusions

About 80% of passengers, staying more than 30min at the station, consider using a short term locker in order to move around more easily when using the station's infrastructure like shops or bistros (see figure 9). For half of them the handling must be very quick. One third says they will use storage possibilities only if no fee is charged. Station operators are likely to benefit if they offer short term luggage storage for free since the number of potential retail customers at the station would greatly increase.

With regards to the acceptance of the system and to passenger comfort, needs, and expectations a locker system that allows floor level storage or storage at a very low height is required. The system must also serve different dimensions of today's luggage!

Therefore, many travellers would prefer central locking terminals like in Köln main station (see figure 10). But in this case the handling time is very important.

In order to fulfil all the different customer needs, an Austrian project consortium consisting of partners: Upper Austria University of Applied Sciences, the St. Pölten University of Applied Sciences and the consulter netwiss GesmbH are working on a completely new storage system

that allows customer friendly storage while being very efficient for station operators at the same time.

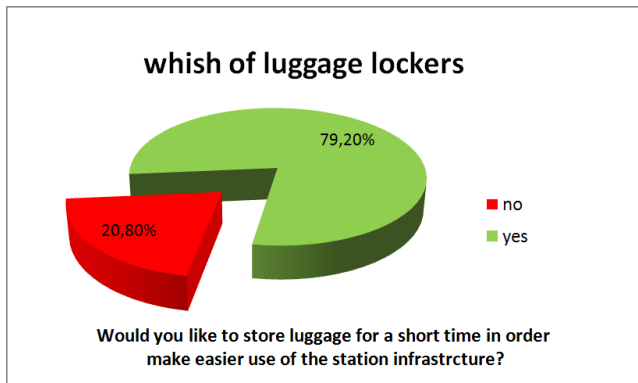


Figure 9 General wish of luggage locker consumers (Question: 'Would you like to store luggage for a short time, in order to use the station infrastructure more easily?')



Figure 10 Central luggage terminal in Köln

References

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