



## 3<sup>rd</sup> UITP Design Day

*Design on your whole journey experience!*

Lisbon, 8-9 November 2007

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*Session n° 1*

*More customers by design*

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### **1. BIOGRAPHICAL NOTE**

Siep worked with the Netherlands Railways as Design Partner for 20 years where he initiated and implemented the Netherlands Railways corporate identity programme, including signposting systems that received worldwide acclaim. His work also included a number of train interiors and exteriors, trams and buses. In 1984 he joined a design consultancy as Director of Transport Design, where he was responsible for a wide range of transport design projects.

In 1986 he formed Design Triangle with two other partners. Siep has been responsible for a wide range of projects in the rail, bus and truck industries in Hong Kong and America and throughout Europe. Recent projects include the Heathrow Express for BAA, TfL Tram Customer Environment Specification, the Airport Express trains and other metro rolling stock for MTRC in Hong Kong, various trams, Metro trains for Madrid and Brussels, automotive projects for Daimler Chrysler and Evobus, etc.

### **2. ABSTRACT**

Good design is good business. Automotive manufacturers could not survive in the very competitive market without design.

Public transport companies may be aware of the virtues of design but design is not seen as a major requirement.

This paper will give examples of successful use of design in the public transport systems.

Through these examples, it will become clear that success through design is very dependant on a professional design management.



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Design of the rolling stock and other equipment like passenger information systems and shelters cannot be left to the various manufacturers. Firstly, the visual presentation of the total transport system will become very disjointed. Secondly, manufacturers are not equipped nor inclined to look after the Public Transport operators' customers. They are in business to make money and standard solution is what they will offer in the highly competitive market they operate in. Indeed standard "platform" solution is what we need to guarantee mechanical quality and keep the cost down.

The automotive industry has taught us this. But again, the car industry shows us that through professional design management, a huge variety of appealing exteriors and interiors can be created

### **3. FULL TEXT**

## **MORE CUSTOMERS BY DESIGN**

### **Design**

Manufacturers of consumer products make extensive use of design. Televisions, kettles, hairdryers and food processors would not sell if they did not look attractive.

As Harley Earl once said: "The essence of design is to give the customer a visual receipt for his money."

Who was Harley Earl?

Harley Earl was the founder of design as a profession in the automobile industry. He worked for General Motors and his design studio, founded in 1927, assured that General Motors had a 50% share of the US market for decades. Ever since, the importance of design in the car industry has grown. Car manufacturers no longer advertise their products on technical merits. Instead, the emphasis is on the design of the vehicle. Car manufacturers now compete on design and the success of their marketing has been at the cost of public transport.



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### **Design in Public Transport**

Unfortunately, public transport does not give the customer “a visual receipt for his money”. Urban public transport in particular fails to do this.

Instead, we offer our customers bus and train exteriors which look like brightly coloured fairground rides. The interiors are either dull, dirty, drab and dilapidated or the colours are garish and unsophisticated, with patterns that hurt your eyes.

The dogma that this “cheery” visual presentation is desired by the customer is wrongheaded. Take a look at the customer’s preferred mode of transport – it is his highly sophisticated, beautifully designed car.

When you think about the time and money the car industry puts into design, this is hardly surprising.

The fact that people are so attached to their cars does have one positive outcome for public transport. Road congestion.

### **Overcrowding**

Road congestion has led to public transport becoming popular during peak travel times.

In urban areas, public transport has become so popular that it now suffers from overcrowding.

Design can offer creative solutions. Take passenger flow, for example. The Docklands Light Railway had a serious problem with passenger capacity. The vehicles were not achieving anything like their target crush capacity during peak periods. At Design Triangle, we were asked to analyse the problem and propose practical solutions.



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### **Methodology**

Our team carried out a research and analysis programme in order to understand the problem and its causes. We then proposed solutions and Bombardier converted a prototype car to help us to carry out some tests.

### **Results**

Design Triangle's practical testing process and innovative layout concepts resulted in a successful solution to the problem. The prototype achieved its targets for capacity and the trains were refurbished to the new tested layouts, followed by a new build to the same principles.

The reality is this: snarled up traffic, pollution and road pricing in congestion zones will continue to increase the problem of overcrowding. Investment alone will not be enough to resolve this issue.

What is desperately needed is research and innovative thinking in this area and there are various ways in which design could help.

### **Seats**

Slimmer seats could be placed at a tighter pitch, resulting in a higher number of seats.

- A more upright sitting posture could also help.
- Being able to stand in greater comfort, a bizarre concept, admittedly, could also alleviate stress. Increasingly, you will find dedicated standing areas with extra handrails and perch seats on urban buses and trains. Which begs the question: what is the most comfortable standing position? And what is the best perch seat?



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There is already research in this area and there are existing designs but so much more could be done. The challenge, surely, is to create genuinely integrated solutions.

Then there is the passenger's desire for privacy. Introducing screens in the standing areas could begin to address the problem.

Whatever the layout solutions to these problems are, they will have to be attractively designed. However ergonomic and safe the necessary stanchions, handrails and handgrips may be, it is imperative that every single detail should be of the highest design quality. The dedicated standing areas should not in any way resemble racks in the slaughterhouse.

### **Profit by Design**

When design is taken seriously and professionally in public transport, the results are positive in terms of increased passenger numbers and sometimes even in financial income.

A good example is Heathrow Express:

The Heathrow Express management was very clear that for this 15-minute journey airport link, it did not want an ordinary standard train, but a train interior which had the same visual quality as airline travel.

The investment was not really different from any typical intercity train, it merely had a more sophisticated design quality.

Heathrow Express (HEX) is one of the few rail operators in the world which makes a real and substantial profit. Admittedly, being the fastest connection from Heathrow Airport to Central London and the fact that HEX can ask a fair ticket price contributes to the positive financial results. Nevertheless, HEX is convinced that the high quality design of the train and the train



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environment is a major contributing factor to the success. HEX guards and maintains its design quality with great care and attention.

Another clear positive financial result is the Route 36 buses, operated by Blazefield in Harrogate. For this express service, Blazefield invested in a well-designed leather upholstered seat. In the first year of operation, the passenger number increased by 15%. Over the following years, this growth continued. Blazefield had estimated five years before seeing a return on their investment. In reality, it took only three years. Good design is good business.

Other companies such as RATP and Hannover Public Transport have a strong design policy and both have seen advantageous results. However, they only measured the increase in customers, rather than the financial returns.

Public transport is a complicated product to sell. While the actual vehicles - the trams, buses or metro trains – are the main focal points for the customers, elements such as punctuality, costs, timetable, stations and stops, signposting etc. all play a significant part in the appeal of the total system to customers. Design cannot help you with punctuality. Good design however, can contribute not only to an attractive vehicle, but it can also shape the total visual presentation of the system and it can give the customer a positive visual receipt as Harley Earl advises.

If you look at trams, you will see that these are vehicles that get a great deal of attention from the operator and the manufacturer. Sadly, what is usually lacking, is an integrated design management programme.

**Total Design**



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Successful companies in our field – transport – make good use of a total uniform and controlled visual presentation. Wherever you happen to see Shell or British Airways, Esso or Lufthansa, you get the same visual image and the same positive visual message. To achieve this professional design, cohesive management is needed.

These companies are convinced of this necessity and they have made sure that it is part of their management structure.

In public transport, this belief in total design can be seen at RATP in Paris and also at Transport for London. Both have a longstanding management tradition in design. Transport for London design has become part of the face of London. The Grenadier Guards and the red double decker bus personify London.

Any city should consider using design to attract travellers to public transport. At the same time, any investment in design will also succeed in visually putting the city on the world map.

### **Design Management**

If design has transformed car sales and brand loyalty, why should it not be used to create a surge in ticket sales on public transport? Design creates differentiated brand growth in the competitive car industry. This industry understands that if design is at the root of commercial success, then design management needs to have a crucial role in the overall management structure. Indeed, public transport can and sometimes does copy successful trends from its competitor (metallic silver exteriors, leather seats). But this is not the real issue. The real issue is whether design is the basis of the product management or just veneer over products which are essentially engineering and operations based.



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In order to prise the car driver out of his car, design will have to be integrated in the management procedures – and on a professional level. Design will also have to be at the root of the product. If the company is too small for a permanent member of staff, then it is vital to have an ongoing relationship with a part time design manager. This person will maintain an objective view of what is needed, but this person will also be able to act as an integrated part of the management team. This role is not a luxury. It is essential.