Safeguarding the competitiveness of light rail

With the rise of non-rail ‘electro-mobility’ and new approaches to urban transport such as car sharing and taxi apps, light rail and trams are facing increased competition. Where should the rail supply industry put its focus to ensure the attractiveness and competitiveness of light rail vehicles?

Looking forward

Interestingly, the respondents focused on the arguments that are key for tomorrow’s mobility and not simply fixing yesterday’s weaknesses.

Fig 1 shows that the clear priority is to lower operating and maintenance costs through longer life cycles, reduced wear and tear. This would help public transport operators to ensure that their tram and light rail services are competitive with other transport modes.

But when it came to defining the second criteria, there were differing views; three options all received similar support, with the margins between them being very small.

In a world where speed is of the essence, many respondents supported greater segregation of tracks on new and existing lines, in order to improve speed and reliability and ensure that light rail can help to solve traffic congestion as efficiently as possible. However, this approach is clearly controversial, as it had the highest standard deviation.

In third place was the need to enhance passenger comfort, with lower entrance heights, better interior design and seating, as well as on-board information and entertainment systems to meet the demands of an ‘ever-connected’ generation. The recent tender for new trams in Wien saw fierce competition based on improvements for passengers. Other respondents favoured improvement in energy efficiency through lower weight and better energy management. This would have a direct impact on operating costs.

Our experts felt that increasing capacity was not at the top of the agenda for future developments. A growing number of cities are now operating 40 m long seven-section cars, while Budapest even has nine-section vehicles of more than 50 m. Similarly, given the cost competition seen in recent years, purchase price ranked relatively low.

More surprisingly, given the substantial attention and investment in research and development over the past decade, our panel reached a consensus that promoting catenary-free operations to improve city ambience should be the lowest priority for the tram industry.

Our panel clearly believes that improvements in both cost and performance (speed as well as comfort) are the key levers to keep trams and LRVs competitive with new mobility offers. Their ranking suggests that the greatest room for improvement is in lowering operating costs over the life of the vehicle, rather than the initial purchase price. But these are only a few of the prerequisites to ensure that trams and LRVs can effectively play an integral role in urban mobility for 21st century cities.

Unife Director-General Philippe Citroën feels that ‘urban policies, planning and financial instruments should encourage sustainable modes of transport, such as light rail, metros and commuter trains. In addition to the clear environmental benefits of electric transport, urban rail contributes to easing congestion, bringing positive impacts in terms of quality of life and productivity, as well as energy security.’