

# A paradigm shift is still required

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Railway assets have a long life. Rolling stock, track, electrification and control systems can last for at least 30 years, and often 40 or more, while structures can last much longer. The costs of operation and maintenance therefore assume a significant role relative to the initial capital outlay — in the case of vehicles the purchase price typically accounts for only 40% of the total life-cycle cost.

Yet despite growing evidence of the financial advantages of adopting a life-cycle cost approach when planning procurement and spending, it seems that many operators and infrastructure managers have been slow to do so. We asked our panel of senior executives what steps they felt would facilitate more rapid progress towards an LCC-oriented rail sector.

It is particularly notable that only 4% of survey respondents felt that their customers already had an advanced understanding of the impact of life-cycle costs, while a similar proportion said that they were already providing their customers with tools to calculate the possible savings in operating and maintenance costs.

A vast majority of the respondents (85%) felt that a cultural change was needed among railway operators and infrastructure managers. Organisations that are owned by national or local governments have traditionally planned expenditure on the basis of annual budgets rather than depreciating investments over a long period. In addition, the tendency to specify tender requirements in great detail can constrain the suppliers' ability to deliver LCC-optimised solutions. Governments that want to transform their state-owned railways into modern businesses need to consider changing both the corporate objectives and management culture in order to inculcate a focus on life-cycle costs.

While culture is the leading concern, 41% of respondents believe that manufacturers had to do more to make their customers aware of life-cycle cost impacts. Many manufacturers already promote the maintenance cost advantages or provide LCC calculation tools. Other steps could include the provision of case studies with real data to show the development of key performance indicators over time compared to assets

Despite widespread promotion of the benefits of using life-cycle costs to inform investment decisions over many years, more work is needed by suppliers, operators and independent advisors to emphasise the importance of LCC-oriented procurement strategies.

## RAIL SUPPLY INDUSTRY WATCH



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with a lower purchase price and higher operating costs. In terms of vehicles, the metrics could include life-cycle cost per vehicle-km or per seat-km, for example.

In a similar vein, 37% felt that more independent reviews should be undertaken to provide evidence of the economic benefits. It is understandable that some potential customers may be concerned about the accuracy of manufacturers' claims, whereas independent reviews by academics or service providers may be more likely to convince them. The question then arises as to who should finance such independent reviews. If they are funded by the supply industry, it may be appropriate to involve operators in steering the project to ensure a neutral perspective.

However, almost one fifth of the respondents thought that the benefits of LCC orientation should not be overstated, because the savings are only realised after a long period. This can be an adverse incentive for railway managers to authorise higher expenditure upfront, as it is likely to be their successors that reap the benefits. One factor that may convince operators with a high risk

aversion and a corresponding high discount factor in their Net Present Value calculations is a relatively short pay-back period.

In summary, it seems clear that all the main stakeholders have to pull together in order to achieve a greater understanding of LCC across the rail sector. As UNIFE Director-General Philippe Citroën suggests, 'systematic application of the EU's new principles on Most Economically Advantageous Tenders is essential in order to make the rail sector more LCC-oriented. Such an approach would be beneficial not only for the rail sector, but for the whole of society, as it would help to prevent wage and social dumping and strengthen the regional economic structure.'

Enhanced exchange of data and experience with operations, maintenance and engineering is also important, and here the independent players can contribute by providing a neutral benchmarking platform for the industry with guarantees over data confidentiality.

If various operators, including startups, have access to comprehensive data, it becomes possible to experiment and simulate innovative methodologies which can trigger technical evolution. This should in turn result in further improvements in life-cycle cost, which as the Shift2Rail programme has pointed out are essential to ensuring the competitiveness of the rail mode at a time when other mobility concepts are evolving rapidly. ■

Fig 1. Possible steps to facilitate more rapid progress towards an LCC-oriented rail sector.

