

Costs

Minimising the total cost of ownership

The total cost of ownership is potentially one of the most significant considerations for a business when purchasing a forklift. And so, forklift suppliers must aim to meet the customer's need – on a number of levels.

"An important factor driving developments is the total cost of ownership of the trucks," says Rory Harvey-Kelly, general manager of Baoli

Material Handling Europe. "This means that buyers are also considering the cost of maintenance and service. Accessibility of the components becomes



Rory Harvey-Kelly.

more and more important, because time is money. When developing Baoli forklifts, easy accessibility of components is a key factor."

BYD's Javier Conijoch says that buyers are simply looking for lower cost of operation.

"That is," he says, "to minimise the sum of the acquisition cost of the truck plus the operating costs – electricity consumption and with lead acid batteries costs related to distilled water, battery amortisation and labour time required to maintain and swap batteries."

Toyota's Tony Wallis identifies the operators as the biggest cost. "If you look at the total cost of ownership the highest costs are the operators so the maximum efficiency, productivity and safety of the trucks is critical," he says. "The training and operator efficiency is often overlooked and operator training is not just about complying with the legislation, it is also one of the best ways to help operators work productively, safely and reduce the amount of damage they cause."

He says that operators shouldn't just know how to operate a truck, but that they should also be familiar with specific truck features, and the environment they operate in.



Buyers look at the total cost of ownership and choose partners who help them understand and manage this.

Tony Wallis

describes the batteries as "100 per cent environmentally friendly" because they do not contain heavy metals or acids.

But it's not just electric or hydrogen powered trucks that are making moves in efficiency. IC and battery engines are also constantly being updated to ensure that they are as efficient and environmentally friendly as possible.

According to Yale's Matthew Allen, these engines will "continue to provide a tough workhorse for the materials handling industry." New generation engines guarantee low fuel consumption and vibration levels, as well as reduced exhaust and noise pollution, he says.

"Although fleet managers are sufficiently satisfied with today's FLT engines and the range of energy options available – as they provide the choice, versatility and capability that current forklift operations demand – it is clear that, as the value and economic payback of new technologies becomes more advantageous, new generation technologies will continue to emerge and will start to acquire greater market penetration," says Allen. "This can only be good news for the industry, and the environment."

The problems

It's easy to identify the problem, and the preferred outcome, but there are lots of elements to consider when tackling high energy consumption or emissions – and the solutions are multifaceted.

When producing an energy efficient machine, forklift



Trucks 'will continue to be the workhorse of materials handling.'

suppliers must take into consideration the fact that expensive solutions will not be popular, and neither will those that are difficult to operate.

"Companies look at a number of features when acquiring trucks, not only so they look at the product features and the impact they will have on the safety, productivity and efficiency of their operation, but they will also look the different finance options: purchase or rental and the service support they will receive," says Toyota's Tony Wallis. "Buyers look at the total cost of ownership and they choose partners who help them to understand and manage these costs."

Yale's Matthew Allen describes the ideal forklift as one with low, stable fuel prices with maximum fuel efficiency – identifying renewables as the "likely answer".

"Interestingly, there are a number of off-grid solar and other renewable charging sources being used, but the initial investment required can often show disappointing pay-back periods," said Allen. "Even so, most people believe that a mix of energies is a good thing."

The issue is not that there are not pioneering technologies and solutions being created – but that the balance between all the elements is difficult to achieve.

"Even when fuel costs and efficiency issues have been addressed there is a still more to consider," says Allen. "No operator is going to accept unreasonable inconvenience or inefficiencies created by power units that fail to deliver the level of duty, performance and refuelling times that conform to operational productivity patterns."

Whether battery, diesel or hydrogen is used, really depends on the company and project at hand. Space constraints, fuel availability, duty cycle and operating hours all impact on the decision.

Competition

Innovation spurs market growth

Innovation and technology are motivated by competition, as well as the drive for energy efficiency.

"There is mounting evidence that competition-induced innovation may become an important driver of market growth," says BITA's James Clark. "Our members are re-examining existing products to provide new offerings to customers."

He says that a broader counterbalance product range, with

lower prices will likely encourage orders because customers will then "find it easier to justify purchases". He adds: "Competition-inspired innovation should spur market growth and efficiency improvements which will provide incentives for firms to upgrade their fleets. The warehouse market may also witness innovation from competition in counterbalance as engineers realise the advantages of new designs."