



The Insider: Cost Benefits of MRL

In the [last edition](#) of The Insider, we discussed the overall benefits of Machine Room-Less (MRL) elevators. In this issue, we're digging a little deeper to illustrate how the [benefits of MRLs](#) can translate into significant cost savings for building owners and managers. While MRLs can positively impact cost in a variety of ways, improvements in safety, energy efficiency and building design are three key areas for discovering meaningful savings.

As you've heard from *NEII*® many times before, elevators are the safest way in the world to travel from point A to B. Technological innovations such as MRLs move the industry forward by enhancing safety and performance. This can simultaneously improve the experience of the riding public and translate into actual cost savings for building owners.

Safety

But how does MRL safety contribute to cost savings? When this technology is integrated, building owners can benefit from:

- Increased reliability in performance
- Reduced volume of maintenance call-backs
- Less need for spare parts and repairs

The resulting increase in uptime provides better traffic handling and productivity throughout the elevator's lifetime. In addition, along with the adoption of the latest safety codes without modification, keeping up with the latest elevator technology can reduce the risk of injury for both passengers and maintenance workers considerably.

“We have evidence that for elevator company employees, [accident rates](#), including time lost, have significantly declined for the better part of a decade,” explains Corey Ward (KONE, Inc.), Chair, *NEII*® Field Employee Safety Committee. “What's interesting is that this decline in accident rates coincides with the [rise in sales](#) of MRL elevator over that same time period. History has shown that MRL technology is a safe and effective means of elevator installation and maintenance.”

Energy

Along with cost benefits derived from improved safety, MRL elevators also offer superior energy performance. Operating with 90-95% energy efficiency, MRL elevator technology eliminates the heavy, geared machines of the past in favor of smaller, more efficient and economically beneficial elevator systems. When paired with other energy efficient technology like regenerative drives, permanent magnet motors and destination dispatch, the energy savings can reach 60% or more compared to some traditional elevator systems.

“For years, nobody really cared how much energy elevators took, since it generally hovers around four-to six percent of a building’s energy use,” says Barry Blackaby (Otis), *NEII* Performance Standards Committee. “Today, building owners are increasingly focused on every line item to help reduce energy consumption and overall cost. Advanced technology, including the MRL, has allowed the machines to become much smaller, with tighter tolerances, resulting in a natural advantage over traditional systems.”

“MRLs in a typical high-traffic mid-rise building, operate on significantly less energy than traditional systems,” Blackaby continues. “All the technologies available for elevators now afford greater traffic control, in addition to the energy savings from not having to light, heat, cool, and maintain a machine room.”

Market pressure also drives the need for more elevator traffic control and energy savings in a building. The American Society of Heating, Refrigeration and Air-Conditioning Engineers ([ASHRAE](#)) is working with the ISO Energy Committee to align with and determine a worldwide rating system of energy standards. ASHRAE consideration then naturally flows into LEED Certification by the United States Green Building Council ([USGBC](#)).

“When a building is LEED-certified, this is very attractive for prospective tenants,” said Blackaby.

Real Estate

What else makes a building attractive to tenants? Increased floor space, freedom of building design and the very latest technology. MRLs contribute to revenue generation as another great amenity for prospective tenants.



The freedom of design enabled by MRLs can be very attractive to architects as well. “Architects want to keep that bump off the top of their buildings,” said Steve Edgett, President and Co-Founder of Edgett Williams Consulting Group.

While MRL elevators impact aesthetics of a building on the outside, they also open up space inside the building to be used for other resources. The amount of space saved could mean significant additional rentable square footage, possibly even an additional floor (depending on the jurisdiction) representing thousands of potential dollars in additional revenue.

The cost savings aren’t limited to after the elevator is installed, however. “MRLs hit the market right in the sweet spot, the cost benefits come from saving space while operating with superior performance,” explains Edgett. “The increasing volume of buildings that MRLs serve is a great way to challenge manufacturers to keep installation time and cost down, resulting in overall costs during construction.”

So what does this all mean for building owners? The bottom line is that if MRLs are not a part of the consideration process when renovating or in new construction projects, they should be. MRLs offer many benefits to low- and mid-rise buildings as tenants continue to seek buildings offering greater flexibility, top-of-the-line technology and lower operating budgets gained by the energy efficiency of the technology.

Have a comment or question for the experts? Want to submit a topic for a future issue of the newsletter? Send

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