Consumer Factsheet

Ramps or lifts for residential properties: comparing their costs and benefits

PEER REVIEWED

How are ramps and lifts different?

Ramps and lifts have a common purpose of assisting people with mobility impairments who have difficulty with, or are unable to, access stairs. Despite the same function they are completely different systems. While a ramp is an inclined surface on a continuous path, a lift is a mechanical device designed to raise and lower people. Ramps generally need a larger amount of space than lifts. Australian Standards suggest the gradient of ramps not to be steeper than a 1:14 incline ratio.

What costs are associated with ramps and lifts?

The design and construction of ramps or installing lifts may require structural alterations to a home and are considered costly compared with other home modifications. Based on the life-span of ramps and lifts, cost can be divided into three stages: initial installation, operation and maintenance, and disuse. Initial installation costs include purchase of the product, structural preparation such as clearing and levelling ground, and service costs such as wiring. Operation and maintenance costs involve expenses for routine maintenance, repair and replacement parts, and utility costs such as electricity use. Disuse costs mean the costs of retiring old devices or their eventual disposal including disassembly and removal.

What are the expected benefits of ramps and lifts?

Ramps and lifts are usually intended to improve accessibility at the entrance. The improved access to, from and within a property can enable people with disability and the frail aged to move around safely, increase independence and participation in the community. They remove or minimise the need for paid care and assistance from family and friends. Decreased injury and hospital admission rates are also key economic benefits.

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How do their installation costs compare?

It is hard to compare the costs between ramps and lifts because the installation cost of a ramp will depend on the size of the ramp and building materials used. Based on the prices of ramp materials, timber ramps cost the least, followed by steel and then concrete. Similarly, the installation cost of a lift will vary due to the various lift models and the mechanical function used, for example: electrical or hydraulic. Stair lifts are the cheapest, followed by wheelchair platform lifts and then elevators. Ramps are generally less expensive than lifts. However, the cost of installing ramps may exceed some types of lifts depending on the ramp size, design features and building materials.

(above) Stair lift

(above) Platform lift

(above) Elevator

Diagram 1: Images show three different types of lifts

How do their maintenance and operation costs compare?

Ramps and lifts require routine maintenance and repair in the event of break-down. Ramps generally require less frequent check-ups than lifts. For example, lifts need to undergo regular service and maintenance every six months by qualified people. In contrast, ramps are recommended to be checked every two to three years.

While the cost of maintenance is a concern of both ramps and lifts, operational costs generally apply to lifts only, because the operation of lifts involves energy consumption. However, some ramps have operational costs because they have heating coils installed into the surface materials to melt ice and snow.

What other things should be considered in estimating the overall costs?

The durability of a ramp is influenced by external conditions such as weather, and it's performance is influenced by rain, ice, and hot temperatures, etc. Therefore, outdoor ramps require special design considerations, which may increase their costs.

Life-span is also important because the disuse of ramps or lifts can involve a high disposal cost for demolition and removal. The life-span of ramps and lifts varies according to the material used in construction and the maintenance required and undertaken. Ramps in general last at least ten years, and lifts have a higher level of durability with most lasting over twenty years.

Safety is another costing issue because any incidence of unexpected injury might result in additional health care costs. Despite increased safety, neither ramps nor lifts remove all the risks. Accidents can occur during the use of lifts due to operational failure in the middle of travel. However, more accidents have been reported in the use of poorly designed ramps than in lifts, for example a loss of balance in a steep ramp. To prevent accidents, ramp design is recommended to comply with the safety requirements set by Australian Standards, which include incorporating grab rails, slip resistance treatment, and standard inclines. These special design considerations for safety can increase installation costs, and thus should be considered as cost factors.

How do their benefits compare?

It is more difficult to compare their economic benefits than costs because there are many intangible benefits which are hard to convert into dollar values such as independence, accessibility and comfort, and so this topic requires further investigation. However, an example might be that people with more mobility problems but less care assistance available such as manual wheelchair users who have to travel on their own could expect more benefits through installation of a lift rather than a ramp, because lifts are able to facilitate independent transfers from one level to another, and assistance from a carer is not generally necessary. As costs are attached to the use of care services, the long-term costs saved from a reduced level of care are expected to be higher in the use of lifts than ramps.

In addition, a small footprint of a lift makes it a more viable option when installing a ramp is difficult, for example, because the home is built close to a sidewalk, such as in a city. By installing a lift, people may negate the need to sell a home or move into a more accessible home.

What other things should be considered in comparing benefits?

Aesthetics of home modification is important, because unattractively designed ramps and lifts may have a negative impact on the look of a home and may reduce its market value. This is more a concern of ramps rather than lifts as ramps are more visible. Therefore, ramps should be designed so that the type and materials match the home's style and blend into the surroundings.

As ramps take up a larger space than lifts, they may restrict alternate uses of space for residents. For example, ramps may take up space that could otherwise be used for a yard or garden.

Where can I find more information?

- Home Modification & Maintenance service providers
- Occupational Therapists
- Architect or builder
- Resource library on the the HMinfo website at www.homemods.info

***This information was correct at time of printing.*