

Circular Economy in Action in South Australia



Domiciliary Equipment Service – supporting people's independence



Government
of South Australia
Green Industries SA



Domiciliary Equipment Service - Supporting Peoples Independence

OVERVIEW



The challenge for Domiciliary Equipment Service:

to ensure the South Australian community has accessible, affordable, safe and speedy assistive technology solutions AND to efficiently manage state government capital expenditure.



The answer for Domiciliary Equipment Service:

to invest in the purchase of a longer-lasting, single pool of high quality, durable and repairable assets AND to offer flexible and supportive hire, loan options to individuals and agencies AND to deliver this via in-house specialist personnel and a clever storage and logistics system.



The outcome for Domiciliary Equipment Service:

average customer wait of 2 days [compared to an industry average of 10 days]. This not only improves the immediate quality of life for individuals it also reduces the number of hospital days and medical/specialist support required whilst patients would need to otherwise wait longer in-care for assistive technology equipment.

>> FAST FACTS

Industry: Health Care & Social Assistance

Innovation Actions: improved equipment utilisation (refurbishment, repair, recycling)

Circular Economy Themes: service-over-ownership business model & collaborative platforms & equipment reverse cycles

Benefits: extended equipment utility, improved customer service without increased budgetary expenditure, reduced waste & landfill rates, lower greenhouse gas emissions, additional DES staff employment, positive return on investment and an average customer wait of 2 days rather than the industry average of 10 days or more.



BACKGROUND

More about the Challenge

Assistive technology equipment can be an expensive purchase and there can be very significant waiting times for people in need. Ensuring that bespoke solutions are only used when a specific need arises is essential Domiciliary Equipment Service (DES) aims to ensure that there is a broad range of readily available items in a single pool of items that are in stock, affordable, high quality, comfortable, safe and



fit-for-purpose. To achieve this the DES has invested in building a nationally leading business model based on Circular Economy principles and has demonstrated that reduced costs and wastage really can accompany meeting the needs of individuals more responsively and effectively.

“*Equipment in a more traditional Assistive Technology business is often bought by agencies in a reactionary way with a short-term focus to meet an immediate need and little regard for the life cycle of the item. So there tends to be very little infrastructure or logistics development within that business approach and unfortunately it is not always the best outcome for people or the environment.*

At DES we are finding that by investing in our refurbishment business model we have actually become more cost effective. But most pleasing of all, we now provide better services to our clients- and the environment also benefits. It really is one of those rare win-win-win situations. We would love to see this approach be adopted at a national level.”

Matthew Massy-Westropp (General Manager Domiciliary Equipment Service, Department of Human Services)

What is DES?

The Domiciliary Equipment Service (DES) is a business unit of the Department of Human Services (DHS). DES provides assistive technology. Services include the supply of a full range of equipment and home modifications, as well as repair services that allow people to maintain their independence and safety in the community.



DES currently manages the AT needs of more than 15,000 people in South Australia (SA). Domiciliary Equipment Service (DES) was established in 1996 and is a SA State Government based business unit of the Department of Human Services. DES provides assistive technology (AT) services and equipment to over 15,000 clients from the South Australian community.

DES is recognised nationally and internationally for its provision of assistive technology services that range from provision of equipment and home modifications, to a full range of technological solutions that allow people to maintain their independence and safety in the community.

Who are DES customers?

DES manages to supply over 50,000 items annually to its clients. Customers include people eligible for the DHS Equipment Program, the National Disability Insurance Scheme, the Lifetime Support Scheme, hospitals, community care agencies, as well as individuals privately hiring equipment.

DES services are provided to individual clients as part of a package of services that an agency is providing to support that individual to remain independent in the community.

What does DES do?

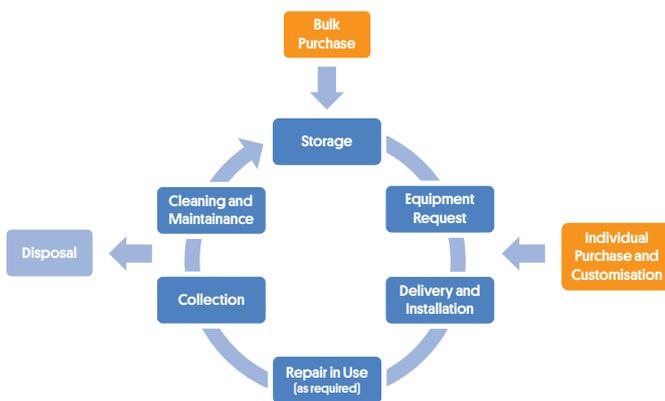
DES holds a pool of quality equipment in its Adelaide storage facilities. Readily available items include both loan equipment (suitable for reissue once returned) and consumable items (single use). Equipment types include shower chairs, toileting equipment, hospital beds, ambulant mobility aids, basic wheelchairs and small aids. DES also purchases specialised equipment that may be modified or customised to meet an individual's needs. Items include a full range of complex wheelchairs with customised seating, mobile shower chairs, walking devices and high-end pressure care devices.



THE DIFFERENCE AT DES

A Circular Business Model

The DES Service Model means that individual agencies and programs avoid capital outlay for equipment, much of which would lie idle as their clients' needs and agency activity levels fluctuate. Ownership of equipment is often not necessary, depending on the nature of the equipment supplied; DES items are normally rented or loaned to the individual with the agency funding this service on their behalf. This offers financial access to quality choices for individuals and also allows agencies using DES equipment to on-charge their own fees to their clients whilst utilising DES equipment - this way personal needs are met more fully and economic and material/resource viability are maximised.



The key ingredients to the DES model

- central warehouse and procurement of a pool of 400+ quality items which suit repair, modification and refurbishment
- inventory management and delivery service using an enterprise ICT system to track all business activity throughout the supply chain
- online equipment information, ordering and catalogue portal
- clinical and specialist staff and personnel to assist in the development of AT solutions for people with more complex needs



- trained technicians to ensure:
 - » equipment provided is pre-evaluated, cleaned, maintained and that people are instructed in its use
 - » returned items undergo a quality check and refurbishment assessment
 - » a speedy and mobile in-home repair/replace service
- regular activity reporting for agencies dealing with large number of clients utilising DES equipment

Multiple Benefits

To assist DES verify the benefits of its circular economy business model Green Industries commissioned an economic study by BDO EconSearch¹ to quantify the benefits across four measurable circular economy characteristics. This study analysed the performance of the DES service model against a standard government delivery of programs model, using a number of circular economy indicators, namely:

1. Relative life of equipment
2. Relative intensity of use of equipment
3. End of use fate of equipment materials
4. Lifecycle cost to deliver AT

¹ See GISA [and DES?] website location

Summary

The results are very encouraging...

Relative life of equipment

The average life of a piece of equipment was estimated to be 5.0 years under the DES service model compared with 2.7 years under the standard equipment supply model, meaning that equipment is used for 86 per cent more time under the DES service model compared to the standard equipment supply model.

Relative intensity of use of equipment

The estimated average number of uses per piece of equipment was estimated to be 8.1 uses under the DES service model and 1.1 uses under the standard equipment supply model, meaning that under the DES service model the same bundle of equipment is used by 7 times as many clients. With the same equipment purchase budget and equipment pool, DES is able to get more utility out of equipment using Government funding more effectively and, importantly, service twice as many clients².

End of use fate of equipment materials

End of use fate of equipment materials was analysed by estimating the proportion of equipment reused, recycled and unrecovered (i.e. sent to landfill) at the end of their use. The end of use fate of equipment was estimated to be:

- DES service model: 38 per cent to landfill, 38 per cent to recycling and 24 per cent to reuse
- Standard equipment supply model: 55 per cent to landfill, 37 per cent to recycling and 9 per cent to reuse.

These results demonstrate that the DES business model diverts a significant amount of material from landfill to reuse. This is consistent with the DES aim to maximise the useful life of equipment and components and maintain their value through reuse.

Lifecycle cost to deliver AT

The lifecycle cost indicator was estimated as the sum of investment, operating and social costs net of social benefits discounted to a present value. For the same equipment budget, the DES service model delivered approximately \$0.8 million annually in net benefits. Relative to the standard equipment supply model, increased costs of equipment refurbishment and facility operating costs (approximately \$1.6 million) were offset by approximately \$2.4 million in benefits from avoided welfare costs to clients (from reduced equipment supply times) and better use of clinician resources. This net benefit was achieved whilst servicing twice as many clients.

Green Industries SA

Green Industries SA is a South Australian government agency that is working with industry and government to advance a more circular economy in South Australia. A key focus is encouraging innovation and economic growth through the development of collaborative platforms, alternative business models, clever design and technologies which provide reverse pathways for materials.



2 Servicing an estimated 3,824 clients per year under the DES service model compared with 1,868 clients per year under the standard equipment supply model.